UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK

IN RE ARQIT QUANTUM INC. SECURITIES LITIGATION	No. 22-cv-02604-PKC-MMH **CLASS ACTION** **JURY TRIAL DEMANDED**

CONSOLIDATED CLASS ACTION COMPLAINT FOR VIOLATIONS OF THE FEDERAL SECURITIES LAWS

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1. Court-appointed Lead Plaintiff Chris Weeks ("Weeks" or "Lead Plaintiff") and named plaintiffs Patrick Hagemeister ("Hagemeister"), Erwin Jay Lack ("Lack"), and Walter Littlejohn ("Littlejohn," and collectively with Lead Plaintiff, Hagemeister, and Lack, "Plaintiffs"), individually and on behalf of all other persons similarly situated, allege the following based upon personal knowledge as to themselves and their own acts, and upon information and belief as to all other matters. Plaintiffs' information and belief is based on the investigation of their undersigned attorneys, which includes, *inter alia*, a review and analysis of: (i) Defendants' publicly available documents, (ii) Defendants' public filings with the U.S. Securities & Exchange Commission ("SEC"), (iii) Defendants' other public statements, including press releases and other announcements, conference call transcripts, presentations, and social media posts; (vi) reports of securities and financial analysts, news articles, government publications, and other commentary and analysis concerning Arqit Quantum Inc. ("Arqit Quantum" or the "Company") formerly known to investors as Centricus Acquisition Corp. ("Centricus"), Arqit Quantum's predecessor-turned-subsidiary Arqit Limited, and the industry in which Arqit Quantum operates; (v) interviews with individuals who are former employees of Arqit Quantum, Arqit Limited, or Centricus, or with current or former competitors to Arqit Quantum or Arqit Limited; and (vi) information readily obtainable on the Internet.

2. Lead Counsel's investigation into the matters alleged herein is continuing, and many relevant facts are known only to, or are exclusively within, the custody or control of the Defendants.

3. Plaintiffs believe that substantial additional evidentiary support will exist for the allegations set forth herein after a reasonable opportunity for discovery.

I. INTRODUCTION

4. Plaintiffs bring this federal securities class action individually and on behalf of the following three classes:

a) Section 14(a) Class: a class consisting of all beneficial holders of Centricus securities as of the July 26, 2021 record date for the special meeting of shareholders held on August 31, 2021 to consider approval of the merger between Arqit Quantum and Centricus (the "Merger"), which resulted in the public listing of Arqit Quantum's ordinary shares and warrants on the NASDAQ Global Markets exchange ("NASDAQ") on September 7, 2021. The Section 14(a) Class asserts claims pursuant to Section 14(a) of the Exchange Act, 15 U.S.C. §78n(a), and Rule 14a-9 promulgated thereunder by the SEC, 17 C.F.R. §240.14a-9.

b) Section 10(b) Class: a class consisting of all persons or entities who purchased or otherwise acquired Arqit Quantum securities in connection with the Merger or on a U.S. stock exchange between September 7, 2021 and December 13, 2022, inclusive (the "Class Period"). The Section 10(b) Class asserts claims for violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 (the "Exchange Act"), 15 U.S.C. §§78j(b) and 78t(a), and Rule 10b-5 promulgated thereunder by the SEC, 17 C.F.R. §240.10b-5.

c) Section 11 Securities Act Class: a class consisting of all persons or entities who purchased or otherwise acquired Arqit Quantum securities pursuant or traceable to the effective "Registration Statement" and "Prospectus" (as defined herein at paragraphs 178-180, and collectively the "Offering Materials") filed with the SEC for the September 2, 2021 offering (the "Offering") of Arqit Quantum securities in connection with the Merger. The Securities Act Class asserts claims pursuant to Sections 11, 12(a)(2), and 15 of the Securities Act of 1933 (the "Securities Act"), 15 U.S.C. §§77k, 77l(a)(2), and 77o.

d) The Section 10(b) Class and the Section 14(a) Class are referred to herein as the "Exchange Act Classes." The Securities Act Class and the Exchange Act Classes are referred to herein as the "Class" or the "Classes."

5. As described in Arqit Quantum's public statements, the Company is a cybersecurity company. Arqit Quantum claimed to have "pioneered a unique quantum encryption technology which makes the communications links of any networked device secure against current and future forms of cyber attack."

6. Traditional encryption methods in use at the time of the Offering, as well as today, are vulnerable to attack (i.e. hacking) from a quantum computer, which is more powerful than even supercomputers. Arqit Quantum claimed to have created technology and a protocol to make communications "quantum safe," or safe from attack by a quantum computer.

7. Arqit Quantum's technology and protocol involved two pieces—software and satellites. Distribution of encryption keys (*i.e.* passwords) by satellites using lasers and the principles of quantum physics was not a new idea, and had been discussed as early as the 1980s. The idea is attractive because, by transmitting keys using the principles of quantum physics, the transmission itself is secure, and the users do not have to worry about an eavesdropper or a hacker intercepting the key. However, as Arqit acknowledged, there is a known "'key distribution' problem" in the cybersecurity industry because while "computationally secure" symmetric keys can be created, "to date there has been no secure way to create and *distribute* those keys electronically."

8. Arqit claimed to solve "all known problems" with its flagship software program, QuantumCloud, and its patented encryption algorithm and quantum protocol ARQ19, through which Arqit would deliver random numbers to users, who would use QuantumCloud software to

create identical encryption keys at separate locations using separate devices, allowing them to communicate and transfer data securely through Arqit's QuantumCloud platform. While Arqit started by transmitting the random numbers terrestrially, Arqit touted that its soon to be launched quantum satellites would beam the random numbers to users on Earth, which would be more secure than the terrestrial transmission of random numbers.

9. As alleged herein, at the time of the Merger and throughout the Class Period, the Defendants informed the public and investors that, among other things, that: (a) Arqit had "pioneered a unique quantum encryption technology which makes the communications links of any networked device secure against current and future forms of cyber-attack – even an attack from a quantum computer;" (b) Arqit's technology and software "has been launched live to customers" and is "being sold to and used by customers today;" (c) QuantumCloud, as designed to include the use of satellites, would create encryption keys "that are low cost," "in infinite volumes at minimal cost," and was "easily scalable," including that Arqit itself was "capable of hyper scaling" its operations; (d) QuantumCloud "solves all previously known problems of quantum key distribution;" and (e) Arqit Quantum had a "backlog of $130 million of binding revenue contracts…where the revenues will definitely be delivered."

10. As alleged herein, Defendants' statements were untrue or misleading statements of material fact, and omitted to state material information to make the statements not misleading, in violation of federal securities laws. In truth, at the time of the Merger and Arqit Quantum's September 7, 2021 listing on the NASDAQ, Arqit's software was nothing more than a prototype not fit for commercial use; no customers were using its software with live data; the British Government and the scientific community had raised concerns about Arqit's method for delivering/creating keys; and Defendants knew that the use of satellites would not only cost

thousands of dollars per transmission in perfect conditions, but that in real world conditions satellite transmission might only work 50% of the time due to atmospheric conditions, rendering Arqit's purported satellite technology even more expensive and less reliable. The security of Defendants' concept had also been questioned by the scientific community, but Arqit was able to silence the critique before the Merger was completed and Arqit became a publicly traded company.

11. Defendants did not inform investors of any of this information. As a result, Defendants' statements to investors about its encryption and key distribution technology, prospects, customers, and satellite program were materially false and misleading in violation of federal securities laws.

12. On April 18, 2022, before the U.S. market for Arqit Quantum securities opened for the day, *The Wall Street Journal* (the "*WSJ*") published an article titled "British Encryption Startup Arqit Overstates Its Prospects, Former Staff and Others Say"[1] (the "*WSJ* Article") which revealed, *inter alia*, that the Defendants' prior public statements concerning Arqit Quantum's encryption and key distribution technology, prospects, customers, and other subjects contained material misrepresentations and failed to disclose material facts necessary to make the prior statements not materially false and misleading. Specifically, the *WSJ* Article revealed that:

a) "British cybersecurity officials questioned the viability of Arqit's proposed approach to encryption technology in a high-level evaluation they privately shared with the company in the summer of 2020;"

b) "In April 2021, Arqit's chief revenue officer resigned after raising concerns with [Defendant David Williams, the co-founder and CEO of Arqit Limited] that

[1] Bryan Tau and Dustin Volz, *British Encryption Startup Arqit Overstates Its Prospects, Former Staff and Others Say*, *WSJ* (Apr. 18, 2022), available at www.wsj.com/articles/british-encryption-startup-arqit-overstates-its-prospects-former-staff-and-others-say-11650274200.

[Williams] was overstating contracts and giving unrealistic revenue projections to potential investors;"

c) When Arqit Quantum stock started trading in September 2021, "its signature product was an early-stage prototype unable to encrypt anything in practical use;"

d) "No commercial customer was using Arqit [Quantum]'s encryption system with live data when it made its market debut in September [2021], and the system couldn't meaningfully use any of the common internet protocols required to do nearly anything online;"

e) The "bulk" of Arqit Quantum's "committed revenue isn't from selling its product" to actual, revenue-generating customers. "When the company secured its Nasdaq listing [in September 2021], its revenue consisted of a handful of government grants and small research contracts," and "[s]everal clients the company lists—including a number of British government agencies—are simply giving Arqit research grants, nonbinding memorandums of understanding or research agreements that come with no funding, not contracts for its encryption product;" and

f) "The encryption technology the company hinges on—a system to protect against next-generation quantum computers—might never apply beyond niche uses, numerous people inside and outside the company warned, unless there were a major overhaul of internet protocols" and "[t]he encryption system—with or without its satellite components—depends on the broad adoption of new protocols and standards for telecommunications, cloud computing and internet services that currently aren't widely supported."

13. On Monday April 18, 2022, Arqit Quantum ordinary shares fell $2.57 per share, or 17%, from a closing price on Thursday April 14, 2022 (the previous trading day) of $15.06 per share to a closing price of $12.49 per share on Monday April 18, 2022. Likewise, Arqit Quantum warrants fell $1.4479 per warrant, or 37.6%, from a closing price on April 14, 2022 of $3.85 per warrant to a closing price on April 18, 2022 of $2.4021 per warrant.

14. On December 14, 2022, before the U.S. market for Arqit Quantum securities opened for the day, Arqit Quantum filed its Annual Report pursuant to Section 13 or 15(d) of the Exchange Act for the 2022 fiscal year ending September 30, 2022 with the SEC on Form 20-F ("2022 20-F").

15. The 2022 20-F disclosed that "Arqit [Quantum] is also cooperating with an SEC investigation relating to the business combination between Arqit [Quantum] and Centricus Acquisition Corp., including by voluntarily producing documents. The SEC has informed Arqit [Quantum] that this is a fact-finding inquiry."[2]

16. The 2022 20-F, as well as a December 14, 2022 press release Arqit Quantum issued before the U.S. market for Arqit Quantum securities opened for the day, and December 14, 2022 conference call Arqit Quantum held at approximately 11:00 a.m. ET, also disclosed that the Company had significantly altered its technology strategy and core product, QuantumCloud, to abandon quantum satellite technology completely.

17. On December 14, 2022, Arqit Quantum ordinary shares fell $1.10 per share, or 17.6%, from a closing price on December 13, 2022 of $6.25 per share, to a closing price on December 14, 2022 of $5.15 per share. Likewise, Arqit Quantum warrants fell $0.418 per warrant,

[2] 2022 20-F at 55.

or 34.8%, from a closing price on December 13, 2022 of $1.20 per warrant to a closing price on December 14, 2022 of $0.782 per warrant.

18. As a result of Defendants' false statements and omissions of material fact, and the precipitous decline in the market value of the Company's securities, Plaintiffs and other Class members have suffered significant losses and damages.

II. JURISDICTION AND VENUE

19. This Court has jurisdiction over the Exchange Act claims pursuant to 28 U.S.C. §1331 because the Exchange Act claims arise under the laws of the United States, and Section 27 of the Exchange Act (15 U.S.C. §78aa), which vests exclusive jurisdiction for claims for violations of the Exchange Act in the district courts of the United States.

20. This Court has jurisdiction over the Securities Act claims pursuant to 28 U.S.C. §1331 because the Securities Act claims arise under the laws of the United States, and Section 22 of the Securities Act (15 U.S.C. §77v), which vests jurisdiction for claims for violations of the Securities Act in the district courts of the United States.

21. Venue is proper in this judicial district pursuant to 28 U.S.C. §1391(b), Section 27 of the Exchange Act (15 U.S.C. §78aa(c)), and Section 22 of the Securities Act (15 U.S.C. §77v) because the Defendants transact business in this District, the alleged misstatements and the subsequent damages took place in this District, the offer or sale of Arqit Quantum securities at issue in this action took place in this District, and/or a substantial part of the events or omissions giving rise to the claims occurred in this District.

22. In connection with the acts, conduct, and other wrongs alleged in this complaint, Defendants, directly or indirectly, used the means and instrumentalities of interstate commerce, including but not limited to, the United States mail, interstate telephone communications and the facilities of a national securities exchange.

III. PARTIES

A. Plaintiffs

23. Lead Plaintiff Chris Weeks, as set forth in his certification attached hereto and incorporated by reference herein, has received an assignment of claim from his wife, Judy L. Smith, who purchased Arqit Quantum securities during the Class Period and pursuant or traceable to the Offering Materials, and was economically damaged thereby.

24. Plaintiff Patrick Hagemeister, as set forth in his certification attached hereto and incorporated by reference herein, purchased Arqit Quantum securities during the Class Period and pursuant or traceable to the Offering Materials, and was economically damaged thereby.

25. Plaintiff Erwin Jay Lack, as set forth in his certification attached hereto and incorporated by reference herein, purchased Arqit Quantum securities during the Class Period, and was economically damaged thereby.

26. Plaintiff Walter Littlejohn, as set forth in his certification attached hereto and incorporated by reference herein, held Centricus units as of the July 26, 2021 record date for the Merger. Pursuant to the Merger and Offering, Littlejohn received Arqit Quantum Securities in exchange for his Centricus units at the start of the Class Period, and was economically damaged thereby.

B. Corporate/Issuer Defendant

27. Arqit Quantum described itself in the Offering Materials as a cybersecurity company that purportedly "has pioneered a unique quantum encryption technology which makes the communications links of any networked device secure against current and future forms of cyber attack — even an attack from a quantum computer."[3]

[3] Registration Statement at 146.

28. Arqit Quantum was incorporated on April 26, 2021 in the Cayman Islands and its principal executive offices are located in London, United Kingdom. Arqit Quantum's common shares trade on the NASDAQ under the ticker symbol "ARQQ" and Arqit Quantum warrants trade on the NASDAQ under the ticker symbol "ARQQW." Each Arqit Quantum warrant offers its owner the right to purchase one common share of Arqit Quantum at $11.50 per share.

29. Arqit Quantum was formed for the sole purpose of merging with Centricus and acquiring Arqit Limited. Through the Merger and the acquisition of Arqit Limited, Arqit Quantum is the successor to Centricus and Arqit Limited, and Arqit Limited is a wholly-owned subsidiary of Arqit Quantum.

30. Herein, when referring to "Arqit" prior to the Merger, the reference is to Arqit Limited, unless otherwise specified. When referring to "Arqit" after the Merger, the reference is to Arqit Quantum.

C. Individual Defendants

31. Defendant David Williams ("Williams") was a co-founder and Chief Executive Officer ("CEO") of Arqit Limited. Williams was named in the Registration Statement as about to become, upon completion of the Merger, a director of Arqit Quantum, and served as the Chairman of the Board of Directors of Arqit Quantum (the "Board") and CEO of Arqit Quantum from the completion of the Merger to the date of the filing of this Complaint.[4] Williams signed the Registration Statement.[5] "Prior to founding Arqit, from 2002 to 2017 Mr. Williams was the co-founder and CEO of Avanti Communications Group plc, which pioneered the use of Ka-band satellite communication. Mr. Williams also served as Founder Chairman of the Advisory Board of

[4] Registration Statement at 158.

[5] Registration Statement at II-4.

Seraphim Space Ventures, a $100 million high technology venture capital firm based in London, which he initiated with UK Government support in 2014. Prior to this, Mr. Williams was an investment banker specializing in financing international telecom businesses."[6]

32. Defendant Nick Pointon ("Pointon") served as the Chief Financial Officer ("CFO") of Arqit Limited from March 2021 through the Merger, and was named in the Registration Statement as about to become, upon completion of the Merger, a director of Arqit Quantum and the CFO of Arqit Quantum.[7] Pointon served as the CFO and a director of Arqit Quantum from the completion of the Merger to the date of the filing of this Complaint. "Prior to joining Arqit, from 2017 to 2021 Mr. Pointon was the Group CFO of Privitar, a venture capital-funded data privacy company, and from 2011 to 2016 was the Vice President of Finance at King Digital Entertainment plc, which listed on the NYSE prior to being bought by Activision Blizzard, Inc."[8]

33. Defendant Carlo Calabria ("Calabria") was named in the Registration Statement as about to become, upon completion of the Merger, a director of Arqit Quantum.[9] Calabria served as a director of Arqit Quantum from the completion of the Merger to the date of the filing of this Complaint. According to the Offering Materials, Calabria "ha[d] close to four decades of experience in the financial services sector and has held multiple senior leadership positions at some of the world's largest financial institutions."[10]

34. Defendant Stephen Chandler ("Chandler") served as a director of Arqit Limited from 2019 through the date of the Merger and was named in the Registration Statement as about

[6] Registration Statement at 158.

[7] Registration Statement at 158.

[8] Registration Statement at 158.

[9] Registration Statement at 159.

[10] Registration Statement at 159.

to become, upon completion of the Merger, a director of Arqit Quantum.[11] Chandler served as a director of Arqit Quantum from the completion of the Merger to the date of the filing of this Complaint. According to the Offering Materials, Chandler "[was] an entrepreneur, investor and company builder, with 20 years of experience in forming, funding, running, advising and investing in technology businesses…Since 2009 he has been the Co-founder and Managing Partner at Notion Capital, a venture capital firm focused on Cloud Computing and Software-as-a-Service"[12] Notion Capital, through its investment funds, was an investor in Arqit Limited.

35. Defendant Manfredi Lefebvre d'Ovidio ("Lefebvre") served as the Chairman of the Board of Directors of Centricus from December 2020 through the Merger, including at the time the Registration Statement was filed with the SEC, and was named in the Registration Statement as about to become, upon completion of the Merger, a director of Arqit Quantum.[13] Lefebvre served as a director of Arqit Quantum from the completion of the Merger to the date of the filing of this Complaint. According to the Offering Materials, Lefebvre "[was] Chairman of Heritage Group, a diversified conglomerate with interests in the cruise industry, property and financial investments."[14]

36. Defendant Lt. General VeraLinn Jamieson (Ret.) ("Jamieson") served as a director of Arqit Limited from April 2021 through the Merger, and the Registration Statement stated that she would continue to serve as a director of Arqit Quantum after the completion of the Merger.[15] Lt. Gen. Jamieson served as a director of Arqit Quantum from the completion of the Merger to the

[11] Registration Statement at 159.

[12] Registration Statement at 159.

[13] Registration Statement at 159.

[14] Registration Statement at 159.

[15] Registration Statement at 159.

date of the filing of this Complaint. According to the Offering Materials, Lt. Gen. Jamieson "is experienced in data management, cloud technology, artificial intelligence and machine learning, with over 37 years of government experience…[and] served as the Director of the United States Air Force's Intelligence Surveillance, Reconnaissance and Cyber Effects enterprise, conducting operations for the Department of Defense from 2016 to 2019."[16] Lt. Gen. Jamieson signed the Registration Statement.[17]

37. Defendant Garth Ritchie ("Ritchie") was the CEO and a director of Centricus from December 2020 through the Merger, including at the time the Registration Statement was filed with the SEC, and was named in the Registration Statement as about to become, upon completion of the Merger, a director of Arqit Quantum.[18] Ritchie served as a director of Arqit Quantum from the completion of the Merger to the date of the filing of this Complaint. According to the Offering Materials, Ritchie "has over 25 years of experience in banking and finance where he has held a number of senior leadership positions."[19]

38. Defendant Gen. Stephen Wilson (Ret.) ("Wilson") served as a director of Arqit Inc., a subsidiary of Arqit Limited, from April 2021 through the Merger, and the Registration Statement stated that he would continue to serve as a director of Arqit Quantum after the completion of the Merger.[20] Gen. Wilson served as a director of Arqit Quantum from the completion of the Merger to the date of the filing of this Complaint. According to the Offering Materials, Gen. Wilson

[16] Registration Statement at 159.

[17] Registration Statement at II-4.

[18] Registration Statement at 160.

[19] Registration Statement at 160.

[20] Registration Statement at 160.

"served as [a] Four-Star U.S. Air Force General until December 2020 and has over 39 years of military service."[21] Gen. Wilson signed the Registration Statement.[22]

39. Defendants Williams, Pointon, Calabria, Chandler, Lefebvre, Jamieson, Ritchie, and Wilson are collectively referred to herein as the "Securities Act Individual Defendants."

40. Defendants Arqit Quantum and the Securities Act Individual Defendants are collectively referred to herein as the Securities Act Defendants.

41. Defendants Williams, Pointon, Lefebvre, Ritchie, Jamieson, and Wilson are collectively referred to herein as the "Section 14(a) Individual Defendants."

42. Defendants Arqit Quantum and the Section 14(a) Individual Defendants are collectively referred to herein as the "Section 14(a) Defendants."

43. Defendants Williams and Pointon are collectively referred to herein as the "Section 10(b) Individual Defendants."

44. Defendants Arqit Quantum and the Section 10(b) Individual Defendants are collectively referred to herein as the "Section 10(b) Defendants."

45. The Section 10(b) Defendants and the Section 14(a) Defendants are collectively referred to herein as the "Exchange Act Defendants."

46. The Securities Act Defendants, the Section 14(a) Defendants, and the Section 10(b) Defendants are collectively referred to herein as the "Defendants."

47. The Securities Act Individual Defendants, the Section 14(a) Individual Defendants, and the Section 10(b) Individual Defendants are collectively referred to herein as the "Individual Defendants."

[21] Registration Statement at 160.

[22] Registration Statement at II-4.

48. Arqit Quantum is liable for the acts of the Individual Defendants and its employees under the doctrine of *respondeat superior* and common law principles of agency because all of the wrongful acts complained of herein were carried out within the scope of their employment.

D. Relevant Non-Parties

49. Non-party Barry Childe ("Childe") joined Arqit in 2018 and served as Chief Innovation Officer ("CIO") of Arqit Limited until the Merger. Childe also served as the CIO of Arqit Quantum from the completion of the Merger to the date of the filing of this Complaint. Childe is also listed as a Co-Founder on Arqit's website, and was listed as a co-inventor for Arqit's patent filing for its ARQ19 quantum protocol. As Arqit's CIO and thereby a top-ranking senior officer of Arqit, Childe worked intimately with and reported to Defendant Williams.

50. Confidential Witness ("CW") 1 was employed by Arqit Quantum through subsidiary Arqit Limited as a Blockchain Developer from September 12, 2022 to March 17, 2023. As a Blockchain Developer, CW-1 was part of a team based out of Arqit Quantum's headquarters in London, U.K. named the Innovation Team. CW-1's responsibilities as a member of the Innovation Team included the research into and development of blockchain-based products into which QuantumCloud could potentially be implemented. These blockchain products included namely a Digital Bill of Exchange ("DBOE") and a Digital Bill of Lading ("DBOL"), implementations of QuantumCloud encryption into blockchain-based alternatives to traditional asset exchanges used in business and finance and to bills of lading used in the shipping industry, respectively. CW-1 reported to Guillermo Amodeo Ojeda, Arqit Quantum's Head of Applied Innovation, who in turn reported directly to Childe. However, according to CW-1, Guillermo Amodeo Ojeda was originally given the title of Blockchain Developer, and Childe was the actual top manager of Arqit Quantum's Innovation Team.

51. CW-2 worked for Arqit Limited from November 2019 to November 2020 as a Blockchain Secure Terrestrial Communications Technician. Though CW-2 did work on blockchain technologies, CW-2 was asked to wear many different hats at the then-fledgling company. CW-2 was tasked with a wide-ranging set of responsibilities including development of QuantumCloud software, research and development of blockchain-based projects within which to implement QuantumCloud, the planning and setup of the architectural aspects for positioning satellites for Arqit Limited's satellite quantum key distribution technology, and general information technology setup for the Company. CW-2 met at least once per month with Childe and Defendant Williams to provide progress updates on projects CW-2 was assigned.

52. CW-3 was, at all relevant times, a Director of Strategic Quantum Initiatives at ID Quantique SA ("IDQ"). IDQ is a leader in the fields of quantum-safe cryptography, scientific instrumentation and random number generation, and is headquartered in Geneva, Switzerland. IDQ's products are used by governments, enterprises, and industrial customers and by academic research labs in more than 60 countries and on every continent. CW-3 is an expert in Quantum Communication and Quantum Cryptography both at the technical level and regarding practical applications with significant experience in fiber-based and space-based Quantum Cryptography. Thus, CW-3 is knowledgeable about all aspects of optical fiber applications with respect to telecommunications, aviation, and aerospace. CW-3 obtained an Engineer's Degree from CentraleSupélec, and a Doctor of Science in Physics from Technion – Israel Institute of Technology. CW-3 presented at a cybersecurity industry conference, QCrypt 2021, on August 25, 2021, 13 days before Arqit Quantum's debut on the NASDAQ, wherein CW-3 raised concerns about scientific flaws within Arqit's patented ARQ19 protocol for quantum key distribution via

satellite. There was no news or analyst coverage of the conference or CW-3's statements, and as alleged herein, Arqit was able to silence CW-3's critique.

IV. CLASS ACTION ALLEGATIONS APPLICABLE TO ALL CLAIMS

53. Plaintiffs bring this action as a class action pursuant to Federal Rule of Civil Procedure 23(a) and (b)(3) on behalf of the three Classes consisting of:

a) The Section 10(b) Class comprised of all persons or entities who purchased or otherwise acquired Arqit Quantum securities in connection with the Merger or on a U.S. stock exchange during the Class Period of September 7, 2021 through December 13, 2022, inclusive;

b) The Section 14(a) Class comprised of all beneficial holders of Centricus securities as of the July 26, 2021 record date for the special meeting called to consider approval of the Merger; and

c) The Securities Act Class comprised of all persons or entities who purchased or otherwise acquired Arqit Quantum securities pursuant or traceable to the effective Registration Statement and Prospectus filed with the SEC for the September 2, 2021 offering of Arqit Quantum securities in connection with the Merger.

54. Excluded from the Classes are Defendants, the current and former officers, directors, and employees of Arqit Quantum, Arqit Limited, and Centricus, (the "Excluded Persons"), members of Defendants' and Excluded Persons' immediate families, legal representatives, heirs, successors or assigns, D2BW Limited, Notion Capital Managers LLP, Notion Capital II GP LLP, NML Limited, MNL Nominees Limited, Centricus Heritage LLC, the Heritage Group, and any other entity in which Defendants or the Excluded Persons have or had a controlling interest.

55. The members of the Classes are so numerous that joinder of all members is impracticable. Prior to the Merger, on February 8, 2021, Centricus held its initial public offering ("IPO") and issued 34.5 million Centricus units, with each unit consisting of one Centricus Class A ordinary share and one-fourth of one Centricus warrant. Centricus units, ordinary shares, and warrants traded on the NASDAQ, under the symbols "CENHU," "CENH," and CENHW," respectively. Arqit Quantum issued 43,125,000 ordinary shares (common shares) and 14,891,667 warrants to purchase ordinary shares through the Registration Statement for the Merger. During the Class Period, Arqit Quantum's common stock was actively traded on the NASDAQ under the symbol "ARQQ" and Arqit Quantum warrants were actively traded on the NASDAQ under the ticker symbol "ARQQW."

56. While the exact number of the members of the Classes is unknown to Plaintiffs at this time and can only be ascertained through appropriate discovery, Plaintiffs believe that there are at least hundreds, if not thousands, of members in the proposed Classes. Record owners and other members of the Classes may be identified from records maintained by Arqit Quantum or its transfer agent and may be notified of the pendency of this action by mail, using the form of notice similar to that customarily used in securities class actions.

57. Plaintiffs' claims are typical of the claims of the members of the Classes as all members of the Classes are similarly affected by Defendants' wrongful conduct in violation of the Exchange Act and the Securities Act complained of herein.

58. Plaintiffs will fairly and adequately protect the interests of the members of the Classes and have retained counsel competent and experienced in class and securities litigation.

59. Common questions of law and/or fact exist as to all members of the Classes and predominate over any questions solely affecting individual members of the Classes.

60. Among the questions of law or fact common to the Section 10(b) Class and its claims for violations of the Exchange Act are:

a) whether the Section 10(b) Defendants violated Section 10(b) of the Exchange Act and/or Rule 10b-5 promulgated thereunder;

b) whether statements made by the Section 10(b) Defendants to the investing public in the Offering Materials, Other Prospectuses, SEC filings, press release, investor conference calls, and other public statements identified herein were untrue statements of material fact or omitted to state material facts necessary to make the statements made not misleading;

c) whether the Section 10(b) Defendants acted with scienter when making materially false or materially misleading statements;

d) Whether the prices of Arqit Quantum securities during the Class Period were artificially inflated because of the Section 10(b) Defendants' conduct complained of herein;

e) whether the Section 10(b) Individual Defendants were control persons of Arqit Quantum for purposes of Section 20(a) of the Exchange Act; and

f) to what extent members of the Section 10(b) Class have sustained damages, and if so, the proper measure of damages.

61. Among the questions of law or fact common to the Section 14(a) Class and its claims for violations of the Exchange Act are:

a) whether the Section 14(a) Defendants violated Section 14(a) of the Exchange Act or Rule 14d-9 promulgated thereunder.

b) whether statements made by the Section 14(a) Defendants to the investing public in the Proxy Statement (as defined in paragraph 180) and the Other Proxy Solicitations (as defined in paragraph 232) identified herein were untrue statements of material fact or omitted to state material facts necessary to make the statements made not misleading;

c) whether the prices of Arqit Quantum and/or Centricus securities were artificially inflated at the time of the Merger because of the Section 14(a) Defendants' conduct complained of herein;

d) whether the Section 14(a) Individual Defendants were control persons of Arqit Quantum and/or Centricus for purposes of Section 20(a) of the Exchange Act; and

e) to what extent members of the Section 14(a) Class have sustained damages, and if so, the proper measure of damages.

62. Among the questions of law or fact common to the Securities Act Class and its claims for violations of the Securities Act are:

a) whether the Securities Act Defendants violated Sections 11 and/or 12 the Securities Act;

b) whether statements made by Securities Act Defendants to the investing public in the Offering Materials and the Other Prospectuses (as defined in paragraph 232) were untrue statements of material fact or omitted to state material facts necessary to make the statements made not misleading;

c) whether the Securities Act Individual Defendants have a viable "due diligence" defense to the strict liability imposed by Sections 11 and 12(a)(2) of the Securities Act;

d) whether the Securities Act Individual Defendants are control persons of Arqit Quantum for purposes of Section 15 of Securities Act;

e) whether the Securities Act Defendants were statutory sellers of securities pursuant to Section 12(a)(2) of the Securities Act; and

f) to what extent members of the Securities Act Class have sustained damages pursuant to Sections 11(e) or 12(a)(2) of the Securities Act.

63. A class action is superior to all other available methods for the fair and efficient adjudication of this controversy since joinder of all members is impracticable. Furthermore, since the damages suffered by individual Class members may be relatively small, the expense and burden of individual litigation makes it impossible for members of the Classes to individually redress the wrongs done to them. There will be no difficulty in the management of this action as a class action.

V. FACTUAL ALLEGATIONS COMMON TO ALL CLAIMS

A. The Threat of Quantum Computers to Traditional Encryption

64. Many forms of sensitive electronically-stored information, such as data collected by healthcare and financial institutions and government agencies, are protected by what's known as "encryption." Encryption is a cryptographic method in which a computer algorithm converts data into secret code, which obscures the true meaning of the information and requires the use of an "encryption key," or simply a "key" to unlock its meaning, just as an analog key might be used to lock or unlock a safe and reveal its contents. Encryption keys protect sensitive data from hackers and other malicious actors so they cannot read the information without either (a) having the key to decrypt the data, or (b) using brute force—*i.e.*, using a computer to exhaustively generate and try encryption keys until they guess the key.

65. Traditional computers store information in binary code, a coding system that relies on units, or "bits," which are comprised of binary digits (*i.e.*, zeros and ones) used to represent alphanumeric letters, digits, or other characters on the computer. Newly-emerging computers called quantum computers, on the other hand, rely on quantum bits ("qubits") to represent and store information, which allows quantum computers to harness the laws of quantum mechanics and physics to run quantum algorithms.[23] Thus, quantum computers can theoretically be used to solve extraordinarily complex problems that traditional computing devices—including large, powerful supercomputers—cannot solve.[24]

66. One of the most popular forms of encryption technology used today, including at the start of the Class Period, is what is known as public key infrastructure ("PKI"). Arqit described PKI in its Offering Materials:

> [PKI] involves two parties sharing the performance of a calculation which is difficult to emulate in a practical time period. The internet has driven the adoption of PKI, not because it was the most secure, but because it was flexible enough to be reverse engineered into something that was already created. PKI is a flexible tool, but it is vulnerable to attack, especially given the development of the Internet of Things, cloud-based interfaces and other transformational technologies.[25]

67. As Arqit Quantum stated in the Offering Materials, "PKI is becoming less secure as new technologies develop, and is not secure against quantum computers, which are expected to be of sufficient scale to break PKI within the next few years."[26]

68. Thus, as of the time of the Offering, there was a growing fear of the "quantum threat" that quantum computers posed to traditional encryption methods such as PKI, which has

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[23] *See* IBM, *What is Quantum Computing?,* www.ibm.com/topics/quantum-computing (last accessed May 24, 2023).

[24] *Id.*

[25] Registration Statement at 148.

[26] Registration Statement at 146, 2022 20-F at 23.

intensified the need for a "quantum-resistant encryption" solution as a countermeasure to make devices "quantum safe"—*i.e.,* able to resist attacks from quantum computers.

69. Indeed, at the time of the Offering, public and private-sector experts in the cybersecurity and defense industries and in the U.S. government prophesized that quantum computers would soon be able to, or potentially already could, use "brute force" to calculate or guess encryption keys used in current encryption technology, thereby breaking the encryption and revealing the underlying information in a cyberattack method called a "quantum attack."[27] If quantum computers are able to break common encryption technology, it could have devastating consequences for militaries, governments, and businesses across the world who rely on such technology to keep their data secure.

70. For example, the U.S. National Security Agency (NSA) within the U.S. Department of Defense wrote in an August 4, 2021 publication that a sufficiently-powerful quantum computer "would be capable of undermining the widely deployed … algorithms used for … exchanges and digital signatures" used in transactions on the internet, adding that:

> National Security Systems (NSS)—systems that carry classified or otherwise sensitive military or intelligence information—use [PKI] as a critical component to protect the confidentiality, integrity, and authenticity of national security information. Without effective mitigation, the impact of adversarial use of a quantum computer could be devastating to NSS and our nation, especially in cases where such information needs to be protected for many decades.[28]

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[27] *See* IBM, *What is Quantum Computing?,* www.ibm.com/topics/quantum-computing (last accessed May 24, 2023); *see also* U.S. Department of Commerce, National Institute of Standards and Technology, *Post-Quantum Cryptography,* csrc.nist.gov/projects/post-quantum-cryptography (last updated May 19, 2023); Cisco Systems Inc., *Quantum computers will crack your encryption-maybe they already have*, newsroom.cisco .com/c/r/newsroom/en/us/a/y2022/m03/is-2022-the-year-encryption-is-doomed.html (Apr. 1, 2022).

[28] United States Department of Defense, National Security Agency, *Quantum Computing and Post-Quantum Cryptography*, media.defense.gov/2021/Aug/04/2002821837/-1/-1/1/Quantum_FAQs_20210804.PDF (Aug. 4, 2021).

71. Likewise, the U.S. Department of Commerce's National Institute of Standards and Technology ("NIST"), which leads U.S. government efforts on mitigation of the threat quantum computers pose to cybersecurity, predicted in an April 28, 2021 white paper that "any information … considered to be private or otherwise sensitive will be vulnerable to exposure and undetected modification" if and when quantum computers are able to break traditional encryption methods.[29] Arqit's Offering Materials noted that NIST globally "leads efforts on mitigation of the quantum threat to cyber security,"[30] and therefore NIST's findings and opinions on whether new encryption methods are truly secure against quantum attacks are valuable to the global cybersecurity industry. Indeed, as former Arqit employee CW-1 confirmed, NIST "is the ultimate organization in terms of standards," "the best in the world … that's where you go" to obtain validation on new encryption technologies.

72. NIST reiterated as recently as April 24, 2023 that "[a]dvances in quantum computing could compromise many of the current cryptographic algorithms being widely used to [encrypt] digital information,"[31] "such as online banking and email software" and information concerning national security.[32]

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[29] U.S. Department of Commerce, National Institute of Standards and Technology, *Getting Ready for Post-Quantum Cryptography: Exploring Challenges Associated with Adopting and Using Post-Quantum Cryptographic Algorithms*, csrc.nist.gov/publications/detail/white-paper/2021/04/28/getting-ready-for-post-quantum-cryptography/final (Apr. 28, 2021).

[30] Registration Statement at 146.

[31] U.S. Department of Commerce, National Institute of Standards and Technology, Preliminary Draft NIST SP 1800-38A, *Migration to Post-Quantum Cryptography*, www.nccoe.nist.gov/sites/default/files/2023-04/pqc-migration-nist-sp-1800-38a-preliminary-draft.pdf (Apr. 24, 2023).

[32] U.S. Department of Commerce, National Institute of Standards and Technology, *NIST Announces First Four Quantum-Resistant Cryptographic Algorithms,* www.nist.gov/news-events/news/2022/07/nist-announces-first-four-quantum-resistant-cryptographic-algorithms (July 5, 2022).

73. While it is disputed whether quantum computers are already being used in nefarious hacking efforts, cybersecurity industry and government counterparts alike agreed at the time of the Offering through the present that quantum computers pose a nascent but real threat to current widely-used encryption methods.

74. To address this concern, NIST is in the midst of a multi-year initiative, which started in 2017, dubbed the "Post-Quantum Cryptography Standardization," the purpose of which is to "solicit, evaluate, and standardize one or more quantum-resistant public-key cryptographic algorithms."[33] Pursuant to the Standardization process, NIST solicited four rounds of submissions for new encryption standards from researchers, academics, and leading technology companies, with submission deadlines of November 30, 2017, March 15, 2019, October 1, 2020, and October 1, 2022,[34] three of which were before the Merger and Arqit's Offering. NIST has leveraged the breadth and knowledge of the cybersecurity to evaluate the candidates for standardization by continuously soliciting public comments and hosting four conferences with industry experts.[35] NIST has projected that it will select candidates for standardization and publish drafts of the new standards by 2024.[36]

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[33] U.S. Department of Commerce, National Institute of Standards and Technology, *Post-Quantum Cryptography Standardization*, csrc.nist.gov/projects/post-quantum-cryptography/post-quantum-cryptography-standardization (last accessed Aug. 11, 2023).

[34] Round 1: Nov. 30, 2017 - csrc.nist.gov/News/2016/Public-Key-Post-Quantum-Cryptographic-Algorithms; Round 2: March 15, 2019 - csrc.nist.gov/News/2019/pqc-standardization-process-2nd-round-candidates; Round 3: Oct. 1, 2020 - csrc.nist.gov/News/2020/pqc-third-round-candidate-announcement; Round 4: Oct 1, 2022 - csrc.nist.gov/News/2022/pqc-candidates-to-be-standardized-and-round-4; U.S. Department of Commerce, National Institute of Standards and Technology, *Post-Quantum Cryptography Workshops and Timeline*, csrc.nist.gov/Projects/post-quantum-cryptography/workshops-and-timeline (last accessed Aug. 11, 2023).

[35] U.S. Department of Commerce, National Institute of Standards and Technology, *Post-Quantum Cryptography Workshops and Timeline*, csrc.nist.gov/Projects/post-quantum-cryptography/workshops-and-timeline (last accessed Aug. 11, 2023).

[36] *Id.*

75. Accordingly, at the time of the Merger and throughout the Class Period, there was a significant unmet need for new encryption technologies and algorithms that could withstand the threat of a quantum attack and protect sensitive data.

B. Arqit Quantum Estimated the Potential Untapped Market for Quantum-Safe Encryption Technology Was in the Hundreds of Billions of Dollars

76. At the time of Arqit's Offering in September 2019, the Company noted that there was significant market opportunity for quantum safe cryptography products, a trend that was expected to grow the cybersecurity market significantly.

77. The market for "traditional" encryption products is very competitive, and includes both hardware-based and software-based encryption products. As of 2022, the global market for hardware-based encryption products was estimated to be $293.8 billion and was expected to grow to $1.46 trillion by 2032.[37] Likewise, the global market for software-based encryption products was estimated at $10.9 billion in 2021 and was expected to more than double to $22.1 billion by 2026.[38]

78. Arqit stated in the Offering Materials that "the global addressable market for information security services," which includes cybersecurity, "will be $197.9 billion by the end of 2024."[39]

79. Collectively, the highly-competitive encryption products industry includes hardware- and software-based offerings from numerous major technology companies, including

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[37] GlobeNewswire, *Global Hardware Encryption Market Size To Surpass USD 1463.72 Billion By 2032 | CAGR 17.42%*, www.globenewswire.com/news-release/2023/05/16/2669727/0/en/Global-Hardware-Encryption-Market-Size-To-Surpass-USD-1463-72-Billion-By-2032-CAGR-17-42.html (May 16, 2023).

[38] GlobeNewswire, *Global Encryption Software Market (2021 to 2026) – Increased Adoption of Encryption Software Across Verticals Presents Opportunities*, www.globenewswire.com/en/news-release/2022/04/22/2427179/28124/en/Global-Encryption-Software-Market-2021-to-2026-Increased-Adoption-of-Encryption-Software-Across-Verticals-Presents-Opportunities.html (Apr. 22, 2022).

[39] Registration Statement at 76.

Broadcom Inc., Microsoft Corporation, Cisco Systems, Inc., Dell Technologies Inc., Samsung Electronics Co., Ltd., Toshiba Corporation, Intel Corporation, and IBM Corporation.

80. However, because at the time of the Merger there was no proven secure and cost-efficient quantum-safe solution, there was a large untapped market for firms that could develop quantum-resistant encryption technology. Thus, at the time of the Offering, Arqit set out to be the first to market with a "world-leading" quantum-safe encryption product.[40]

C. Arqit Limited Purports to Develop the First Ever Quantum-Safe Encryption System

81. According to the Offering Materials,[41] Arqit claimed to have "pioneered a unique quantum encryption technology that makes the communications links of any networked device secure against current and future forms of cyber attack—even an attack from a quantum computer."[42]

82. At the time of the Offering in September 2021, Arqit described its QuantumCloud technology as being comprised of two fundamental components: "a new form of quantum satellite and a software agent…"[43]

83. According to Defendants, the software agent component of QuantumCloud, which purportedly includes both Arqit's patented "ARQ19" quantum protocol and a quantum encryption algorithm, can be loaded "onto any form of device or integrated into any piece of software" to

[40] Registration Statement at 146.

[41] The Offering Materials include: (i) the final amended Registration Statement as filed with the SEC on Form F-4/A on July 29, 2021 (Registration No. 333-256591); (ii) the final amended Prospectus as filed with the SEC on Form 424(b)(3) on July 30, 2021, which forms part of the Registration Statement; and (iii) all documents incorporated by reference to the Registration Statement and Prospectus.

[42] Registration Statement at 146.

[43] Registration Statement at 146.

make that device or software capable of using quantum encryption technology to protect data.[44] Through QuantumCloud software, a device is integrated into Arqit's QuantumCloud platform, and that device can then communicate with Arqit Quantum's QuantumCloud to generate a symmetric encryption key (interchangeably referred to by Arqit as "quantum keys"). A symmetric encryption key, which NIST has described as "the gold standard," is where two parties communicating have an identical random key number that they use to communicate and encrypt and exchange data.

84. In order for two users to communicate and exchange data using symmetric encryption, they ***both*** must have the encryption key.[45] However, as Arqit stated in the Offering Materials, there is a known "'key distribution' problem" in the cybersecurity industry because while "computationally secure" symmetric keys can be created, "to date there has been no secure way to create and *distribute* those keys electronically."[46] Keys cannot be securely transmitted over the world wide web, for example, because the internet is prone to interception and hacking. As a result, organizations in the defense, financial services, and national infrastructure sectors have traditionally had to resort to physically transporting encryption keys to avoid the risk of them being intercepted.[47]

85. One solution for an electronic means of key distribution—"quantum key distribution," or "QKD"—harnesses the laws of quantum physics to distribute keys to both users of symmetric encryption. Arqit described QKD as follows in the Offering Materials:

> "Quantum key distribution" or "QKD" was first proposed as a solution in the 1980s. The laws of physics tell us that an eavesdropper cannot intercept, read and use quantum information, therefore we know with certainty that it cannot be stolen and

[44] Registration Statement at 146.

[45] IBM, *Symmetric cryptography*, www.ibm.com/docs/en/ztpf/2020?topic=concepts-symmetric-cryptography (last updated Mar. 1, 2021).

[46] Registration Statement at 149 (emphasis added)..

[47] Registration Statement at 151.

> used. One method of QKD is through the use of fiber optics, however there are significant limitations on the physical length of the fiber, which makes it impractical for large scale adoption. The use of satellites for QKD overcomes that problem, but still has known limitations.
>
> The basic principle of satellite QKD relies upon encoding random numbers on board a satellite into the quantum mechanical properties of individual photons. These are transmitted from space to earth in the form of a laser beam and are received by an "optical ground receiver" or "OGR" containing a telescope and a quantum detector. Two recipients will each host an OGR, receive the same quantum information, and each down convert it to digital bits. After reaching agreement on which bits of information they both received in common (information transmitted attenuates in transit when it hits other particles), they store the information in the form of digital keys consisting of a long string of randomly created and securely delivered ones and zeros to be used in encrypting and decrypting data across any classical internet communications channel.[48]

86. However, as leaders in the cybersecurity industry know, and Arqit's Offering Materials admit,[49] there are "known problems" and "implementation flaws" with QKD such that "symmetric encryption keys could be sent through satellite QKD either globally or in a provably secure way, but not both, which is a material drawback for practical use."[50] Arqit identified two flaws with QKD: the Decoy State Protocol and the Entangled Photon Protocol:

> Decoy State Protocol: In the decoy state protocol, or "BB84", when the satellite moves over head it sends key data to the "A" OGR. It then stores the key and continues in its orbit until it is over the "B" OGR and then sends the key data again. This means that the satellite can distribute keys globally. But because it remembers the key during transit between A and B, theoretically the satellite could be attacked in transit and the key could be copied. Therefore, using this protocol symmetric encryption keys can be distributed globally, but cannot be called "provably secure".
>
> Entangled Photon Protocol: In the entangled photon protocol or "E91" and "E92", the satellite sends key data using two transmitters simultaneously to the A OGR and the B OGR. Thus, the satellite does not need to remember the key and it cannot be intercepted in transit. However, in order to use this protocol, A and B must simultaneously be in direct line of sight of the satellite. From a low orbit of 750 km, the A and B point cannot be further than approximately 700 km from each other. Thus, in this protocol, keys cannot be sent globally, however they are "provably

[48] Registration Statement at 149-50.

[49] Registration Statement at 149.

[50] Registration Statement at 150.

secure." This protocol also has impractically high loss rate to be of significant utility even in limited geographies.

87. Simply put, if two users want to use the QKD encryption key to communicate, then either the satellite can transmit the key to both users at the same time (the Entangled Photon Protocol), or transmit to one, then travel in orbit until it can transfer to the other (the Decoy State Protocol). If the key is transmitted to both users at the same time, then both users must be in direct line of sight with the satellite at the time of transmission. Due to the limitations of line of sight in low earth orbit, the users could not be more than 700 kilometers away from one another (or 425 miles). To put this distance in perspective, New York City and London are approximately 5,570 kilometers away from one another; therefore the Entangled Photon Protocol method of QKD is not viable for communications between these two major cities. If instead the satellite uses the Decoy State Protocol to transmit the key to one user, and then orbit until it can transmit the key to the second user, then a different issue arises: the satellite "knows" the key during that intervening orbit, and could be subject to interception or hacking wherein the key could be stolen.[51] Thus, while symmetric keys themselves may be secure against quantum attacks, at the time of the Offering and throughout the Class Period, there was a need in the cybersecurity industry for a key distribution method that is quantum safe, global, and commercially and logistically practical.

88. Defendants claimed in the Offering Materials that the quantum satellite component of its QuantumCloud product "solves all known problems with QKD" and can provide a secure key distribution channel to ensure users have the encryption key needed for communication and file transfer,[52] and is "an almost universal solution to previously identified issues with delivery of

[51] United States Department of Defense, National Security Agency, *Quantum Key Distribution (QKD) and Quantum Cryptography*, www.nsa.gov/Cybersecurity/Quantum-Key-Distribution-QKD-and-Quantum-Cryptography-QC/ (last accessed Aug. 10, 2023).

[52] *See* Registration Statement at 149-151.

symmetric encryption keys … a simple, cost-effective and secure way… that can be applied universally across geographies, industries, and devices…"[53]

89. As Arqit explained in the Offering Materials, its technology and innovation through ARQ19 and QuantumCloud was "a new concept called 'quantum key infrastructure' or 'QKI' whereby the system does not distribute keys."[54] Instead, according to Arqit's Offering Materials, Arqit's system used Arqit's patented ARQ19 protocol to distribute quantum random numbers in a process known as replicated entropy, which were then input into Arqit's software. Through the software, random numbers were used to generate encryption keys on the devices used by the end users. Arqit's software allowed different end users to communicate and create the same key so that they can communicate securely.[55] Thus, according to Defendants, by using Arqit's technology, no encryption key was ever transmitted across any network, and "[i]t is therefore not possible for any third party to know or guess the key.…"[56]

90. In the Offering Materials, Defendants touted Arqit's ability to use quantum satellites and the ARQ19 protocol to distribute such encryption keys without the risk of interception, representing that "[t]he answer" to making devices safe from quantum attacks "lies in finding a secure way to create and *distribute* … keys, which is what Arqit has invented" through its satellite technology.[57]

[53] Registration Statement at 147, 148.

[54] Registration Statement at 149.

[55] *See* Registration Statement at 149-51.

[56] Registration Statement at 152.

[57] Registration Statement at 148.

91. Arqit also stated in the Offering Materials that, while it would launch its services with terrestrial distribution of quantum random numbers, which would be secure, the quantum satellite version of QuantumCloud would be more secure:

> During the second half of 2021, Arqit plans to launch an interim version of QuantumCloud™ that will operate prior to the launch of its satellites, which is targeted for 2023. The source of root keys will be simulated until the satellites launch. The root keys are simply supplied by a terrestrial quantum random number generator distributing key data through symmetric encryption key algorithm channels to the QuantumCloud™ node in each data center. Although it is still a significant improvement over existing technology, it is not quite as secure as the quantum satellite version of QuantumCloud™ will be.[58]

92. Arqit's use of the term "launch" in this and other public statements led investors to believe that the "interim version of QuantumCloud" was commercially viable.

93. Former Arqit employees who worked on developing Arqit's satellite and QuantumCloud technology prior to and throughout the Class Period, confirmed that, contrary to Defendants' statements in the Offering materials, neither Arqit's interim QuantumCloud product nor its satellite protocol were commercially viable.

94. CW-2 was hired to work at Arqit from November 2019 through November 2020 as part of the "Innovation Team." According to CW-2, CW-2 was Childe's "right-hand" and, because Childe got involved with "every single IT element of the company" (i.e. information technology), CW-2 became involved with a wide range of tasks and responsibilities that gave CW-2 insight into Arqit's divisions and operations. CW-2 stated that during CW-2's tenure at Arqit, CW-2 was tasked with, *inter alia*, setting up IT security measures including encryption and anti-ransomware software for Company hardware and file storage, setting up security cameras in the Arqit office,

[58] Registration Statement at 151.

developing products based on blockchain technology,[59] buildout of the architecture for the positioning of Arqit's satellites for ground visibility, and helping Childe build out the QuantumCloud product and team.

95. CW-2's work with Childe in building the satellite positioning architecture involved discussions and development of how to control satellites, how to beam information from satellite to earth, how to charge potential Arqit customers for the encryption keys, and the application programming interface ("API") that would allow potential customers to upload keys to be beamed via satellite. CW-2 explained that the Innovation Team's work on satellite control mainly concerned theoretical components of satellite positioning.

96. CW-2 also worked on QuantumCloud, which CW-2 explained was not originally Arqit's primary business as of late 2019. CW-2 described that, when the witness joined Arqit in November 2019, Arqit Limited was focused primarily on developing a satellite-based QKD technology product. At the time, the witness described, Arqit's satellite QKD technology was not named "QuantumCloud," and QuantumCloud was originally just a software developed as a secondary "add-on" for Arqit's flagship satellite technology.

97. In late 2019, CW-2 was tasked by Childe to develop a cloud communications and information storage product based on blockchain technology, and to figure out how that blockchain-based product could then use encryption keys from Arqit's satellite QKD technology. Thus, according to CW-2, the QuantumCloud software was initially conceived of merely to serve

[59] A blockchain is a computer technology for a distributed database or a ledger which is shared among a nodes in a computer network. Blockchains are best known for their crucial role in cryptocurrency systems, such as Bitcoin, for maintaining a secure record of transactions, but they are not limited to cryptocurrency uses. Adam Hayes, *Blockchain Facts: What Is It, How It Works, and How It Can Be Used,* Investopedia (last updated Apr. 23, 2023), www.investopedia.com/terms/b/blockchain.asp

as a practical example of how the blockchain product could use keys generated with Arqit satellites.

98. CW-2 explained that traditional blockchain technology is known to be susceptible to quantum attacks, so Arqit, per Childe, sought to develop a quantum safe blockchain product. Specifically, CW-2 was instructed that Childe wished to infuse a "secret sauce," *i.e.* an encryption technology to make a blockchain product safe against quantum computers. Arqit was already developing satellite QKD technology to generate encryption keys, so there needed to be a piece of encryption software that would use those keys to secure a blockchain.

99. Pursuant to Childe's direction, CW-2 first used knowledge of blockchains to design a mockup of a blockchain prototype product for Arqit. Then, in order to demonstrate how that blockchain prototype could work with Arqit's satellite QKD technology, CW-2 and Childe developed a prototype encryption software. At the time, the blockchain product and accompanying encryption software were collectively dubbed "Quantum Cloud" by Childe. According to CW-2, Arqit adopted the name "Quantum Cloud" because Childe wanted to "make it seem that blockchain [at Arqit] was being done in some way" that was safe against quantum attacks.

100. CW-2 stated that, in order to build the blockchain product prototype in 2020, CW-2 and Childe initially "piggybacked" on the quantum key technology developed by Arqit's satellite division. As CW-2 reiterated, as of 2020 Arqit's core technology was its satellite QKD technology that purportedly allowed Arqit to create a symmetric encryption key for users in two different locations on Earth and then use those keys to make a secure direct channel of communication between the users. CW-2 was tasked with experimenting how to use Arqit's satellite key technology to encrypt and protect information contained within a blockchain.

101. Pursuant to the blockchain project, CW-2 needed encryption software to serve as an intermediary between Arqit's satellite-based quantum key technology and the blockchain, to encrypt the information used by that blockchain. CW-2 originally chose to use code from a publicly-available encryption software called "BIKE" —which would later be used to make Arqit's QuantumCloud software—for this purpose, which was not developed by Arqit.

102. BIKE is an encryption software developed by an international team of researchers and academics unaffiliated with Arqit, which purports to be a quantum-safe encryption technology. According to the official website for the BIKE project, the team behind BIKE has twice submitted the code for BIKE to NIST's Post-Quantum Cryptography Standardization Process, so that BIKE could be considered a candidate for review and adoption as a standard for U.S. government and commercial use.

103. CW-2 recounted developing a modified version of BIKE code to be used as the software basis for the "Quantum Cloud" blockchain prototype. CW-2 described "changing a few algorithms inside, changing the information storage from off-chain to the blockchain, and … trying to prove that it can work in commercial environments at some point."

104. In early January or February 2020, CW-2 and Childe showed an early version of the blockchain project to Defendant Williams in a monthly progress meeting, including the "Quantum Cloud" encryption element. At the early 2020 progress meeting, Williams told CW-2 that "this Cloud thing looks interesting, I want you to start working on it" more than other tasks CW-2 was assigned. CW-2 explained that Williams asked for "feasibility studies and a prototype, to see how it works." Subsequently, starting in February 2020, CW-2 was instructed by Childe to switch from handling IT and other miscellaneous projects to mainly focus on developing the "Quantum Cloud," which at the time remained a prototype for a blockchain product.

105. Following that status meeting with Williams, CW-2 recounted developing a modified version of BIKE code to be used as the encryption software for the "Quantum Cloud," though at the time CW-2 did so only with the intention to use BIKE code to study the feasibility of the blockchain prototype as Williams had asked. CW-2 described "changing a few algorithms inside" BIKE, "changing the information storage from off-chain to the blockchain, and … trying to prove that it can work in commercial environments at some point." CW-2 also leveraged code from the New Zealand-based company, Mega Ltd., to enable the software to work with the Microsoft Windows operating system. Like with the BIKE code, CW-2 explained that Arqit did not develop the Mega Ltd. code; the Mega Ltd. code was freely-available and the public license allowed individuals to use the code, but the license strictly prohibited commercial use of the code. This did not concern CW-2 at the time, because again CW-2 was only asked by Williams to prove the feasibility of an internal prototype—not a product ready for commercialization.

106. According to CW-2, around the same early-2021 period, Arqit hired a dedicated cryptographer to collaborate with CW-2 to piece together the BIKE-based "Quantum Cloud" prototype with Arqit's satellite technology. Towards the end of CW-2's tenure, CW-2 also helped Arqit recruit additional developers to work on the project, though Childe instructed CW-2 to continue working on the BIKE-based software separate from the dedicated developer team.

107. According to CW-2, by November 2020, the "Quantum Cloud" blockchain project based on BIKE was still a prototype and not ready for commercial applications. CW-2 stated that "tons of other things" needed to be designed and implemented before blockchain storage/secure transmission of information was possible and before one can claim the technology was quantum-safe for customers. CW-2 continued that the version of QuantumCloud software based on BIKE "was an ad-hoc, quick and dirty proof of value, not even a proof of concept, to prove that you

could upload a file and share it with someone at some point using the BIKE as an encryption algorithm" at the time. Simply put, the Quantum Cloud software based on BIKE was "very far from being a commercially-ready algorithm," a fact that both Childe and Williams were aware of through regular progress discussions with CW-2.

108. According to CW-2, Childe and other developers at Arqit took the BIKE code for QuantumCloud and modified it into a new code known within Arqit as "SUPERBIKE." Though CW-2 was never given access to the SUPERBIKE code, CW-2 learned of it through discussions with Childe, who told CW-2 that SUPERBIKE was supposedly an improved version of BIKE, "apparently the next big thing."

109. CW-2 learned from conversations with Arqit's cryptographer in November 2020 that even the cryptographer was not given access to SUPERBIKE. CW-2 thought it strange that, if such technology actually existed and worked as intended, that Arqit would keep its supposedly superior encryption software (SUPERBIKE) from its dedicated cryptographer, which made CW-2 skeptical whether SUPERBIKE was quantum safe, or even whether SUPERBIKE actually existed. CW-2 raised these concerns with Childe because CW-2 was concerned Arqit was cutting corners rather than testing SUPERBIKE to see if it truly worked in a quantum-safe manner. As CW-2 explained, typically technologies at the level Arqit claimed to be developing are published or otherwise subjected to scientific peer review within the cybersecurity industry—something Arqit had not done with the SUPERBIKE algorithm for QuantumCloud. As CW-2 stated, "I couldn't see that kind of push from Arqit to do a proper assessment of that [SUPERBIKE] algorithm, to bring a lot of university specialists to the table and giving them tasks around the algorithm from an assessment point of view."

110. CW-2 confirmed that during CW-2's tenure, Arqit lacked a functioning, quantum safe encryption software, stating that "I never saw anything which could be remotely considered as … intellectual property solely made by Arqit in general cryptography." Indeed, CW-2 recalled that Arqit engaged with a semi-retired cryptographer from the U.K.'s Government Communications Headquarters ("GCHQ"), the U.K.'s intelligence, security, and cyber agency, who the witness encountered one day in an elevator with Childe. CW-2 stated that Childe made introductions and stated that he and the ex-GCHQ cryptographer had just left a meeting about SUPERBIKE, to which the cryptographer commented that "there's still tons of work to be done to be [quantum] safe, you guys need to still do work, it's not going to be easy." CW-2 understood the cryptographer's comment to mean that the cryptographer did not think the encryption software component for QuantumCloud was commercially viable either.

111. CW-1, who worked as a Blockchain Developer for Arqit between September 12, 2022 and March 17, 2023, similarly was tasked with the development of blockchain-based projects as referenced by CW-2, and managing a third party company, Fathom, to which Arqit outsourced most of the coding for the projects.

112. According to CW-1, because QuantumCloud was Arqit's "flagship" product, CW-1 was instructed by their manager, Arqit CIO Barry Childe, to tie QuantumCloud into the blockchain projects with the goal of making the eventual blockchain products quantum safe. As a result, CW-1 was given access to the QuantumCloud software. According to CW-1, Childe, said that integrating QuantumCloud would be "good for marketing." As CW-1 recalled, "that was the theme coming through from the top, to incorporate [QuantumCloud]" into any possible product prototype at Arqit. "No one really questioned it or whether it would work" CW-1 stated, recalling being told by Childe "it's just something you need to do."

113. CW-1 likewise confirmed that during CW-1's tenure, CW-1 discovered that QuantumCloud software was still a prototype and not ready for commercial use. CW-1 explained that during CW-1's tenure, QuantumCloud "was a real piece of software," meaning actual lines of code were written for the product, but "that doesn't mean it would work in the real world," "that's not to say it can go into production and be ready to be sold to customers." As CW-1 elaborated, during CW-1's tenure the QuantumCloud software had not been proven quantum safe and "was often offline." Thus, CW-1 confirmed that QuantumCloud was not fully functional and could not be used by large commercial enterprises, governments or militaries. Moreover, CW-1 stated that the QuantumCloud software, "incredibly, was not properly documented," which the witness found surprising given that software documentation is necessary for both internal development purposes and for external purposes of helping customers install, use, and troubleshoot software. CW-1 elaborated that the lack of internal documentation on QuantumCloud was surprising, because CW-1 was tasked with working with QuantumCloud, yet was provided no internal documentation from previous or current Arqit developers detailing how the software was designed, built, maintained, or operated. Moreover, CW-1 was not aware of any external documentation that Arqit customers, prospective or otherwise, would need to install, use, and troubleshoot the software. That the QuantumCloud software lacked any kind of documentation for both internal developers and customers further indicates that the software was not commercially viable at any time during CW-1's tenure ended March 2023.

114. CW-1 also stated that in the weeks leading up to December 14, 2022—when Arqit announced its financial results for its fiscal year 2022—CW-1 was told by CW-1's direct manager, Guillermo Amodeo Ojeda, to focus on Arqit's blockchain-based financial product projects because, as CW-1 stated, "the idea" coming from Arqit management "was to quickly bring in some

revenue, get customers, help the share price." Accordingly, CW-1 was pressed by Ojeda and Childe to "deliver something quickly," *i.e.* a product with which Arqit could generate revenues.

115. Thus, CW-1 and CW-2, who were intimately familiar with the development and capabilities of Arqit's purported quantum-safe encryption technology prior to and during the Class Period, confirmed that Arqit did not have a viable, quantum safe technology at the time of the Offering or at the end of the Class Period.

D. Defendants Forge Ahead with Product Development While Ignoring Warnings from Employees, the British Government, and the Scientific Community That Arqit's Technology Was Not Viable

116. On July 30, 2019, Arqit entered an agreement with the European Space Agency (ESA) "whereby [Arqit] has undertaken to carry out all work necessary to design, develop, manufacture, assemble, integrate, verify, obtain licenses and launch a satellite ('QKDSat'), and to deploy and pilot the operations of the QKDSat system."[60]

117. The Arqit Quantum ESA contract is a research and development grant aimed at validating Arqit's technology. According to Arqit's Offering Materials, "ESA has undertaken to pay specified amounts to Arqit upon the achievement of specific milestones as set out in the agreement. QKDSat is constituted under the ARTES 33-11 programme line, which ESA has created with the objective of validating Quantum Key Distribution technologies."[61]

118. Arqit's Quantum's satellite contract with the ESA accounted for a majority of Arqit Quantum's reported operating income until Defendants ultimately abandoned the technology in December 2022.

[60] Registration Statement at 196 and Ex. 10.5 (ESA Contract dated July 30, 2019 between Arqit Limited and the European Space Agency).

[61] Registration Statement at 196.

119. According to the April 2022 *WSJ* article, during the Summer of 2020, British cybersecurity officials began questioning the viability of Arqit's proposed encryption technology in a high-level evaluation they privately shared with Arqit. A spokesperson for Britain's National Cyber Security Centre ("NCSC") stated for the *WSJ* Article that these types of reviews are done on a "case-by-case basis, and in confidence" to "help[] companies understand the security properties of their products and systems, including those in the quantum sector."

120. The NCSC's concerns, according to the *WSJ* Article, related to "the viability of Arqit's proposed approach to encryption technology." As Arqit described in the Offering Materials, its approach to encryption involved the use of satellites to transmit random numbers to end users, who would use the QuantumCloud software to create encryption keys and communicate.

121. According to the *WSJ* Article, Defendant Williams was "apoplectic" when learning of the NCSC's concerns, and disparaged the technical directory of NCSC:

> When Britain's NCSC unfavorably evaluated the company's proposed technology nearly two years ago [2020], Mr. Williams was apoplectic, according to people who worked for Arqit at the time. He convened a virtual company meeting in which he dismissed the letter and referred to Ian Levy, the British cyber agency's technical director, as a "f— Jewish c—," the people said. (Mr. Levy isn't Jewish, according to people who know him.) Mr. Williams continued to denigrate Mr. Levy and the NCSC for weeks after the rebuke, some of the employees said.

122. The *WSJ* Article further reported that "[e]mployees who witnessed Mr. Williams's reaction were concerned that the incident showed an inability to respond constructively to legitimate feedback, blunting the company's prospects."

123. CW-2 raised concerns as early as June 2020 that Arqit's satellite QKD technology was not commercially viable due to cost and functionality, concerns which were communicated to Defendant Williams by Arqit CIO Barry Childe.

124. CW-2 stated that this witness attended a multi-day, in-person, off-site Arqit meeting in July 2020. CW-2 stated that the offsite was attended by Childe and Defendant Williams.

125. On one day of the multi-day off-site meeting, CW-2 attended a meeting session wherein CW-2 engaged in technical conversations about the suitability of the satellite QKD element of Arqit's QuantumCloud offering. During that discussion, which was attended by a project manager who reported directly to Defendant Williams, CW-2 made calculations about commercial pricing for and inefficiency of distributing encryption keys through a satellite. According to CW-2, Childe joined the meeting session with CW-2 during the last ten minutes, having come back from a different meeting held in parallel.

126. During the meeting session, CW-2 raised a point of discussion about how much it would cost to beam the encryption keys in perfect atmospheric conditions, assuming that everything else as part of Arqit's software worked. CW-2 relayed at the meeting that the cost of using satellites to achieve quantum key distribution was "staggering, absolutely crazy," making Arqit's entire model of using satellites "dubious." CW-2 deduced in the technical meeting that multiple factors made satellites expensive for Arqit, taking into account that low orbit satellites, such as the ones Arqit was developing, are known in the space industry to have a limited shelf life of just a few years before they need to be relaunched or replaced. CW-2 explained that, given QuantumCloud users would constantly need new keys to keep their information secure, a single user could need "hundreds of keys." According to the back-of-envelope calculations CW-2 made with other Arqit employees at the technical meeting, the meeting group roughly estimated that a single key could cost thousands, if not tens of thousands of dollars to generate using Arqit's satellites. This rough cost estimate was just factoring in the satellite element, and did not include the terrestrial infrastructure that would be needed to position, control, and communicate with satellites.

127. CW-2 added that these cost estimates assumed that Arqit satellites always performed in perfect atmospheric conditions and line-of-sight alignment with ground infrastructure, which could not be the case most of the time. CW-2 explained that the discussion at the Arqit off-site meeting included making realistic assumptions about satellite operation. According to CW-2, the group at the meeting discussed accounting for items such as clouds and other high level atmospheric conditions, which made it more realistic that Arqit's satellite-based technology would only work about 50% of the time due to atmospheric conditions. This lower efficiency would render the satellite transmission even more expensive, because failed transmission due to poor atmospheric conditions would essentially have to be repeated under better atmospheric conditions, or until the transmission was successful. As CW-2 summarized at the technical meeting, "[a]ll of the costs of … the satellite … must work out within [the satellite's] lifespan and still make a profit, otherwise the business makes no sense," concluding "[i]t is cheaper to take a secure suitcase, rent a private jet with a person and a whole security detail" to transmit quantum keys "than it is to use [Aqrit's] technology."

128. Following CW-2's presentation, there was discussion in the room about how difficult it would be to find customers willing to pay such high costs.

129. CW-2 reported that after the off-site meeting wherein the witness raised the satellite cost issue, "everyone was super upset." In CW-2's opinion, the cost issue "was so obvious." Following the presentation, CW-2 raised the cost issue with Barry Childe due to the poor reception the concern had gotten in the technical meeting. CW-2 also "had the feeling that no one was looking for any interaction with me or with reality."

130. CW-2 was then told by Childe that CW-2 should not come to the next day of the offsite meeting and CW-2 should just continue working in the background. A few days after CW-

2's presentation, CW-2's regular progress meetings with Williams and Childe were cancelled indefinitely, and CW-2 was instructed to begin handing over projects to a newly-established development team. As CW-2 later came to learn at the end of this witness' contract at Arqit, heard that Defendant Williams was unhappy and disappointed with CW-2.

131. CW-2 was gradually sidelined from working on major projects at Arqit until the end of CW-2's contract in November 2020, at which point the witness was told that Arqit no longer required CW-2's services and that the witness' contract was not going to be renewed.

132. CW-3, an expert in Quantum Communication and Quantum Cryptography both at the technical level and regarding practical applications with significant experience in fiber-based and space-based Quantum Cryptography, warned that Arqit's satellite technology was not viable before Arqit shares were listed on the NASDAQ. CW-3 became aware of Arqit's ARQ19 patent for satellite QKD as soon as it was published on the U.K. Intellectual Property Office website in June 2021. According to CW-3, a patent for a space-based cryptographic solution such as the one Arqit claimed would have been "groundbreaking" and indeed "created a lot of noise" in the quantum cryptography industry.

133. CW-3 immediately recognized irregularities concerning Arqit's patent for ARQ19. For example, after filing a patent, it is standard practice that patent owners publish their scientific discoveries in a scientific journal and encourage peer review and discussion, a practice which CW-1 and CW-2 corroborated. Arqit never did this, and Arqit's patent was never followed by any scientific disclosure, so no independent experts were given the opportunity to comment on it. CW-3 believed this was suspicious because it was to Arqit's benefit to be open about its findings; only by successfully defending critiques and attacks would the scientific community, investors, and customers believe the Company's purported technological breakthrough was robust, correct, and

quantum safe. CW-3 stated "it's not accepted in the community that you keep something secret and say it's correct. Arqit's behavior was very strange."

134. Arqit has stated that its patented ARQ19 protocol for satellite QKI "permits random numbers" used for generating encryption keys "to be sent globally *and* in a provably secure manner" using satellites. Arqit's protocol was described as "global[]" because the satellite could allegedly put encryption keys in user devices at "any location in the world," a capability that customers would need in order to conduct international business or defense operations.[62] ARQ19 does this, the Company claims, by having the "satellite send random numbers" for key generation which users, such as "Alice" and "Bob,"[63] use to "create [encryption] keys in a manner which is entirely isolated from the satellite."[64] To enable Alice and Bob to create an encryption key, ARQ19 involves what is known in cybersecurity as a "trusted" communications link between Alice and Bob, such that the users (Alice and Bob) are trusted to be "the only entities that can ever know the [encryption] keys created."[65] Thus, while the QuantumCloud satellite is involved to the extent that it provides random numbers to Alice and Bob as building blocks to make the encryption keys, the final step of actually making the keys exists only in the trusted communication directly between Alice and Bob using the QuantumCloud software, and the QuantumCloud satellite is therefore "untrusted."

[62] Registration Statement at 148.

[63] In the cryptography community, "Alice" and "Bob" are hypothetical names used as examples of two human users or computers on either end of encrypted communications. For example, "Alice" might represent a person who encrypts a file or message and sends it to "Bob," a person on the receiving end that then decrypts the file or message. In order for Alice and Bob to encrypt and decrypt information sent between each other, both Alice and Bob need to have the same encryption key.

[64] Registration Statement at 150.

[65] Registration Statement at 150.

135. Arqit's claim of using "untrusted" satellites in the ARQ19 patent stands in stark contrast to other methods of satellite QKD, wherein the satellite is trusted and transmits the keys either to both Alice and Bob at the same time or to Alice, then to Bob once Bob is in line of sight with the satellite. *See* paragraphs 85-87, above. Indeed, as Arqit's Offering Materials acknowledge, satellite QKD is not a new concept in-and-of itself; CW-3 also noted that Chinese firms have developed such technologies, and European governments have been working to do the same. However, in other QKD solutions, ordinarily the satellite must be "trusted" (*i.e*, the satellite knows the encryption keys) so that the satellite can send the keys to users Alice and Bob, thereby enabling Alice and Bob to make encrypted communications.

136. Satellite QKD systems using trusted satellites contain major vulnerabilities and flaws, which Arqit sought to avoid with its QuantumCloud product. As Arqit's Offering Materials stated, "[t]o date, symmetric encryption keys could be sent through satellite QKD either globally or in a provably secure way, but not both, which is a material drawback for practical use." Using trusted satellites either had a significant geographic limitation (of approximately 700 kilometers) for a key to be transmitted to both Alice and Bob at the same time, or using trusted satellites for QKD was not "provably secure" because "theoretically the satellite could be attacked in transit and the key could be copied," thus compromising the security of the system.[66] CW-3 confirmed this to be accurate, and that the cybersecurity industry has been searching for a satellite QKD technology that solves the satellite vulnerability problem.

137. From CW-3's perspective, the crucial claim Arqit made about its product was that when cryptographic keys were transmitted via QuantumCloud satellite, Arqit's satellite would be "untrusted"—meaning the Arqit satellite would only know the random numbers used for making

[66] Registration Statement at 150.

encryption keys, but the satellite would never know the completed encryption key users Alice and Bob would use. CW-3 stated that Arqit's claim to have developed a quantum safe satellite QKD technology using untrusted satellites was "totally against what the whole quantum key distribution community was thinking" was possible.

138. CW-3 believed that, due in part to the importance of Arqit's alleged technology, it was the scientific cybersecurity community's responsibility to vet Arqit's claim. CW-3 confirmed that scientific peer review is a common practice in the global cybersecurity community. Accordingly, on August 25, 2021, CW-3 voiced concerns that Arqit's patent was scientifically flawed while presenting as a guest speaker at the annual QCrypt Conference. The QCrypt Conference is a yearly international scientific conference presenting updates and results in quantum cryptography, which is attended by researchers and academics in the cybersecurity industry, representatives from major technology companies, and government organizations including NIST, the ESA, and the United States Air Force. The QCrypt 2021 conference at which CW-3 presented was held remotely via video conference due to the COVID-19 pandemic.

139. In CW-3's PowerPoint presentation given at the QCrypt Conference, entitled "QCrypt 2021 Industry Session News from the Quantum Cryptography Industry," CW-3 discussed Arqit's ARQ19 patent for use of untrusted satellites to generate encryption keys. There was no media or analyst coverage of CW-3's comments about Arqit at the QCrypt Conference, or the QCrypt Conference in general.

140. On CW-3's Slide 13, entitled "Untrusted Satellites… Really?," CW-3 explained a fatal flaw in Arqit's ARQ19 patent. Specifically, CW-3 explained that because the satellite in Arqit's ARQ19 patent was untrusted, the ARQ19 protocol had to include a confidential "reconciliation" channel, or communication channel, between two users of QuantumCloud

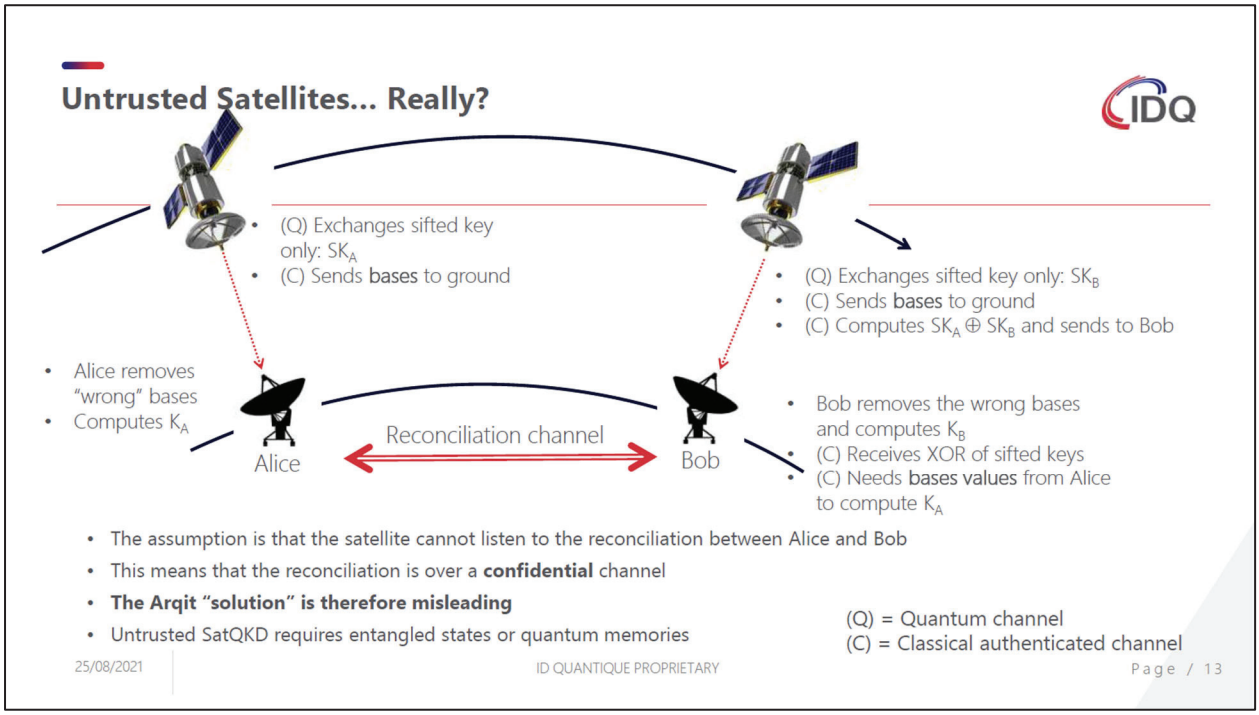
technology such as Alice and Bob that enabled Alice and Bob to actually create encryption keys based on code from the satellite.

141. The flaw, CW-3 concluded, was that Arqit's protocol assumed that the reconciliation channel between Alice and Bob was quantum safe. But if that were true and the reconciliation channel between Alice and Bob was already quantum safe, then Alice and Bob could already communicate between them and exchange a symmetric encryption key without fear of the key being stolen, making the satellite transmission of random numbers by Arqit duplicative and unnecessary.

142. Moreover, if the reconciliation channel was not a quantum safe communication channel, then it was instead only protected by traditional encryption methods which were not safe against quantum attacks, and to which an eavesdropper could listen in to the key reconciliation and potentially steal the key. CW-3, thus, concluded that contrary to Arqit's representations it had a quantum-safe technology, the reconciliation channel between Alice and Bob was, in fact, not quantum safe and there was no evidence in the ARQ19 patent that it was, meaning the satellite implementation of QuantumCloud over the ARQ19 protocol could not be quantum safe and Arqit's claims to the contrary appeared to be misleading.

143. As CW-3's slide elaborated, because satellites for ARQ19 are "untrusted" when compared to "trusted" devices like those used by Alice and Bob, "the satellite cannot listen to the reconciliation between Alice and Bob." According to CW-3, this means that between Alice and Bob the "the reconciliation is over a confidential channel" hidden to the satellite, and the only way to establish that confidential channel is using "classical" encryption technology, not quantum-safe technology. As CW-3's slide concluded, because not all communication channels used in Arqit's

ARQ19 patent are quantum safe, "[t]he Arqit 'solution' is therefore misleading." Slide 13 illustrates:



144. On August 25, 2021, the same day as the QCrypt Conference and shortly after CW-3's presentation at the conference, Arqit's legal counsel, the Dentons law firm, contacted CW-3 by letter, in which Arqit threatened to sue CW-3 for defamation, claiming CW-3's analysis was unfounded. Notably, according to an Arqit July 27, 2021 press release, Dentons had also signed a contract with Arqit Limited just one month earlier "to co-develop a quantum safe, self-sovereign identity system ("SSI"), which allows users to control their own identities and selectively grant access permissions to firms." Arqit and Denton's letter can, thus, be viewed as an attempt to silence CW-3's critique of Arqit 13 days before Arqit's debut as a publicly-traded company.

145. Although knowing CW-3's analysis of Arqit's patent was correct, CW-3 removed the slide concerning Arqit from his presentation and did not speak about Arqit's patent again for fear of the costs of litigation. Arqit was therefore able to silence CW-3 critique less than two weeks

before the Merger was completed and Arqit's securities became publicly listed and traded on the NASDAQ.

146. Therefore, as of August 25, 2021, Arqit knew about issues the scientific community had raised with its satellite protocol and patent, but was able to silence the critique.

147. Although CW-3 was temporarily silenced by the chilling letter from Arqit, after the letter CW-3 still believed it was important for the cybersecurity community to vet Arqit's claims. Accordingly, CW-3 solicited input from numerous cybersecurity professionals and researchers to develop a scientific paper further evaluating Arqit's ARQ19 patent. CW-3, along with a cohort of authors from Switzerland, France, the U.K., Austria, and the Netherlands, confirmed the flaw CW-3 had raised at the QCrypt 2021 conference. Following a customary peer review process, the cohort submitted their findings in a proposed article on May 2, 2022 to the scientific journal NPJ QUANTUM INFORMATION, which is a partner journal of the British journal NATURE. The authors sent a copy of the article to Arqit before its publication, but according to CW-3, Arqit did not contact the authors in response either before or after the article's publication on September 9, 2022. The article was titled "Long-range QKD without trusted nodes is not possible with current technology."[67] There was no analyst or further news coverage of the article after its publication.

148. Thus, as of May 2, 2022, Arqit was aware that a growing portion of the cybersecurity community had raised concerns with the security of its satellite protocol and patent Despite this, Arqit continued to eschew the scientific peer review process that is customary in the cybersecurity community and ignored numerous warnings from employees, the British government and industry experts, while Defendants forged ahead and continued to invest in the ESA satellite contract well into FY2022.

[67] Available at www.nature.com/articles/s41534-022-00613-4#citeas.

E. Defendants Tout Arqit's Purported Quantum-Safe Technology to the Market, While Not Disclosing its Shortcomings and Risks

149. Despite numerous private warnings from employees and the British government, throughout the Class Period, Defendant Williams frequently touted the supposed importance of Arqit's satellite technology compared to existing methods of QKD. For example, Williams explained to industry publication Space.com in June 23, 2021, prior to the Merger, that "[t]he problem[] with fiber optic" cables, the traditional method of transmitting computer data, "is that at above about 300 kilometers (186 miles)" in cable length, "it's possible to get some quantum information transmitted but at less than about one bit per second," which is too slow. As Williams explained, "[i]n a world that talks about megabits per second or gigabits per second"—*i.e.*, significantly faster speeds needed for modern day communications—data transmitted by fiber optic cables are "not a practical product. In order to do [Quantum Key Distribution] on a global scale, ***the only solution is to use satellites***."[68] To put the distance of 300 kilometers in perspective, Burlington, VT and New York City are approximately 300 kilometers apart.

150. Arqit also stated in the Offering Materials that while its interim terrestrial distribution of quantum random numbers was "still a significant improvement over existing technology, it is not quite as secure as the quantum satellite version of QuantumCloud™ will be."[69] touting that the satellite transmission of the quantum random numbers was essential to its product.

151. Industry media and analysts believed Defendants' unsupported claims. Indeed, in a September 2, 2021 article, Capacity stated:

> Arqit [Quantum]'s priority is a quantum-based cloud encryption system, with a limited number of satellites, now under development, to deliver vital information to clients."

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[68] Tereza Pultarova, *UK Company to start sending secret quantum keys with satellites in* 2023, Space.com (June 23, 2021), available at www.space.com/arqit-quantum-key-distribution-space (emphasis added).

[69] Registration Statement at 151.

> In a recent interview with Capacity, Williams said that Arqit [Quantum] can deliver QuantumCloud keys in "unlimited group sizes.[70]

152. Early private investors in Arqit also cited satellites technology as a reason they invested in Arqit prior to the public Offering. On September 21, 2021, Mark Boggett, CEO of Seraphim Space (Manager) LLP, the Company's investment manager, commented:

> Arqit is building the world's first global quantum key distribution network – delivering quantum safe cryptographic services from a constellation of low earth orbiting small satellites from 2023. This British company has the potential to revolutionise the transfer of secure data worldwide. We backed this company from seed stage investing every round up to its Nasdaq admission. We have great conviction in its outlook and in particular the ability of the experienced management team to execute against their growth plans. It has over $130 million in contracts already from blue chip enterprise and government customers and $1.1bn in the pipeline. We are very proud to be a continuing part of its growth story.[71]

153. Arqit Quantum's research partners and grant distributors cited satellite technology as their primary interest in Arqit Quantum. According to a February 7, 2022 article in Airforce Technology discussing how "Arqit has signed a new cooperative research and development agreement (CRADA) to demonstrate its QuantumCloud platform for US military applications:"

> The agreement will see the company showcase the practical usability of its product in securing communications links of the USAF's networked devices against threats, as well as for broader US Department of Defense (DoD) systems. In line with this, the company will upgrade its QuantumCloud platform to incorporate quantum satellites and then explore the space-to-ground quantum encryption links. Air Force Research Laboratory captain Steven Long said: "The planned collaboration with Arqit [Quantum] under this agreement will highlight the performance and configurability of the Research Lab's ground to space quantum infrastructure.' 'This opportunity provided by Arqit [Quantum] gives us the ability to demonstrate a quantum communications channel with a commercial partner and conduct various scientific research experiments at the same time."[72]

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[70] Capacity, Arqit gets shareholders' approval for quantum encryption deal (Sept. 2, 2021).

[71] SpaceRef, Seraphim completes its Investment in Arqit Quantum Inc (Sept. 21, 2021).

[72] Air Force Technology, Arqit [Quantum] to demonstrate its QuantumCloud platform for USAF and DoD use (Feb. 7, 2022).

154. Despite the fact that Arqit sought to do business with the U.S. government, Arqit notably did not submit any part of its QuantumCloud product to NIST's Post-Quantum Cryptography Standardization process (3 rounds of which occurred prior to the Offering), meaning QuantumCloud was never evaluated or scientifically reviewed by NIST or by members of the global cybersecurity community participating in NIST's initiative. A review of all four rounds of submissions on NIST's webpage[73] indicates that Arqit never submitted QuantumCloud for evaluation,[74] and moreover CW-1 and CW-2 confirmed that they were not aware of any plans to submit QuantumCloud to the NIST initiative during their tenures at Arqit.

155. Arqit's lack of submission to the NIST initiative means that QuantumCloud was not a candidate on NIST's shortlist to become a new encryption standard for the U.S. government, which significantly limits the possibility that Arqit's QuantumCloud solution will ever be widely adopted by the U.S. government. Further, lack of submission evidences concern by the Defendants that QuantumCloud would not pass the NIST assessment.

F. Arqit Limited's Chief Revenue Officer Resigns Shortly Before the Offering Citing Concerns that Defendant Williams Was Giving Unrealistic Revenue Projections to Potential Investors

156. According to the April 2022 *WSJ* Article, in April 2021, right before the Offering, Arqit's Chief Revenue Officer resigned over concerns that Defendant Williams was giving unrealistic revenue projections to potential investors.

[73] Round 1: Nov. 30, 2017 - csrc.nist.gov/News/2016/Public-Key-Post-Quantum-Cryptographic-Algorithms; Round 2: March 15, 2019 - csrc.nist.gov/News/2019/pqc-standardization-process-2nd-round-candidates; Round 3: Oct. 1, 2020 - csrc.nist.gov/News/2020/pqc-third-round-candidate-announcement; Round 4: Oct 1, 2022 - csrc.nist.gov/News/2022/pqc-candidates-to-be-standardized-and-round-4.

[74] U.S. Department of Commerce, National Institute of Standards and Technology, *Post-Quantum Cryptography*, csrc.nist.gov/projects/post-quantum-cryptography (last accessed Aug. 21, 2023).

157. Also, according to the *WSJ* Article, "several other former employees said they had similar concerns about both the business model and the maturity of the technology, prompting them to also leave since then."

158. The Chief Revenue Officer's resignation corroborates former employee accounts that, at the time of the Offering and throughout the Class Period, Arqit's technology was merely an unproven prototype, making any revenue in the near term unlikely and undermined Arqit's projected revenue growth rate in the Offering Materials.

159. The fact that Defendant Williams and Arqit were giving unrealistic projections to potential investors is evidenced by comparing Arqit's projections in its Offering Materials and its actual results. For example, in the Offering Materials, Arqit projected that it would earn revenue of $14 million in the calendar year ended December 31, 2021, $32 million in the calendar year ending December 31, 2022, and $153 million for the calendar year ended December 31, 2023.[75] However, according to Arqit's annual reports and earning press releases, Arqit missed these projections by an enormous margin. Arqit earned revenue of only $47,910 in Fiscal 2021 (ending September 30, 2021), $7.2 million in Fiscal 2022 (ending September 30, 2022), and $19,000 for the first six months on 2023 (ending March 31, 2023).[76]

160. Defendant Williams was Arqit's CEO and one of its only salespeople. On August 18, 2021, Arqit Limited and Centricus held a joint Public Investor and Analyst Day, wherein Defendants Ritchie and Williams gave a presentation titled "Arqit, Stronger Simpler Encryption, August 2021." During the presentation, Williams revealed that up until the Offering Arqit had "just two salespeople," one of which was Williams himself. Thus, Williams was intimately

[75] Registration Statement at 108.

[76] December 2021 20-F (as defined herein) at 44; 2022 20-F at 38; Arqit May 17, 2023 Press Release.

involved with and had knowledge of the development and capabilities of Arqit's software and the terms of Arqit's contracts.

G. Centricus Goes Public as a SPAC for the Purpose of Acquiring or Merging With a Private Company

161. According to the Offering Materials, Centricus was incorporated on November 24, 2020 as a Cayman Islands exempted limited liability company, with headquarters in London, United Kingdom.[77]

162. Centricus was a special purpose acquisition corporation ("SPAC"), or blank-check company, with no business operations of its own.

163. SPACs are a way for companies to transition from privately held to publicly traded in a quicker and a less complicated manner than an IPO.

164. A SPAC is a publicly-traded shell firm that lists publicly with the sole intent of merging with a private company to take it public. After the acquisition or merger with the private company, the private company "goes public" by replacing the SPAC in the stock market. A SPAC has the sole purpose of raising money and acquiring an existing private company.

165. A SPAC is formed by a group of sponsors. SPACs go through the typical IPO process, although the sponsors don't publicly identify companies they are eyeing for an acquisition. The IPO price of a SPAC is typically $10.00 per share. The SPAC is assigned a ticker symbol, trades publicly, and most of the money invested by shareholders in the SPAC's IPO is held in escrow.

166. SPACs generally have two years to search for a private company with which to merge or acquire, bringing it public in the process as it becomes part of the publicly traded SPAC.

[77] Registration Statement at 23.

This timeline may be very easy to meet as sponsors may already have a specific company or industry in mind at the outset. However, if a SPAC hasn't merged with a company within two years, the money raised through the SPAC's IPO is returned to shareholders. This, in theory, makes SPACs less risky than traditional IPOs—if an acquisition doesn't materialize, the shareholder gets their money back. Traditional IPOs, on the other hand, grant a shareholder publicly traded stock that offers no guarantee of a return of investment.

167. When a SPAC's sponsors identify a company for acquisition, they formally announce it and a majority of shareholders must approve the deal. The SPAC may need to raise additional money (often by issuing more shares) to acquire the company.

168. SPACs typically afford their investors the opportunity to either accept the deal and become a shareholder in the post-merger public company (i.e. the SPAC combined with the previously privately held company), or to redeem their shares at the IPO investment price, typically $10.00 per share

169. Centricus was organized for the purpose of acquiring all or substantially all of the assets of, or engaging in any other similar initial business combination with one or more businesses or entities. Centricus was not limited to any particular business, sector or geography, though its intent is to capitalize on the ability of its management team to identify, acquire and manage a growth-oriented, market leading business.[78]

170. On February 4, 2021, Centricus began its IPO of Centricus units, which began trading on the NASDAQ under the symbol "CENHU."[79] Centricus announced the close of its IPO on February 8, 2021, having sold 34.5 million units at an offering price of $10.00 per unit, with

[78] Registration Statement at 23.

[79] Registration Statement at 23.

each unit consisting of one Centricus Class A ordinary share of and one-fourth of one Centricus warrant. The proceeds of the Centricus IPO were held in an account for the benefit of Centricus' public shareholders (the "Trust Account").[80]

171. On March 29, 2021, the securities comprising the Centricus units began trading separately on the NASDAQ, with Centricus Class A ordinary shares trading under the ticker symbol "CENH" and Centricus warrants trading under "CENHW."[81]

H. Arqit Merges With Centricus to List Arqit Securities on the NASDAQ

172. On May 12, 2021, at approximately 7:29 a.m. Eastern Time, Centricus and Arqit Limited issued a joint press release titled "Centricus Acquisition Corp. to Combine With Arqit Limited, a Leader in Quantum Encryption technology."[82] The press release announced that Arqit Limited and Centricus had "entered into a definitive agreement that would result in Arqit Limited becoming a publicly listed company (the "Business Combination Agreement")," and that "[u]pon closing of the transaction, a newly formed Cayman holding company, Arqit Quantum Inc., will merge with Centricus, acquire Arqit [Limited] and register its shares for listing on the Nasdaq Stock Market."

173. Pursuant to the Business Combination Agreement as described in the Offering Materials: (i) the Merger would be effectuated such that Centricus would be merged with and into Arqit Quantum, with Arqit Quantum surviving the Merger; (ii) the holders of Centricus securities who did not elect to redeem their Centricus ordinary shares would become holders of Arqit Quantum securities; and (iii) Arqit Quantum would acquire all of the issued and outstanding share

[80] Registration Statement at F-20.

[81] Registration Statement at 133.

[82] Available at ir.arqit.uk/news-events/press-releases/detail/19/centricus-acquisition-corp-to-combine-with-arqit-limited.

capital of Arqit Limited in exchange for Arqit Quantum ordinary shares, such that Arqit Limited would become a wholly-owned subsidiary of Arqit Quantum.[83]

174. Because Arqit Limited was to be acquired by Arqit Quantum and become a wholly owned subsidiary of Arqit Quantum through the Merger, statements by the Defendants about Arqit Limited were effectively statements about Arqit Quantum.

175. On May 28, 2021, Arqit Quantum filed a Form F-4 registration statement with the SEC for the shares and warrants it would issue in connection with the Merger. The Form F-4 also contained a preliminary proxy statement for the Merger addressed to holders of Centricus securities, as well as a preliminary prospectus disclosing the securities being offered and information on Arqit Quantum's, Arqit Limited's, and Centricus' financials and operations.[84]

176. Approval of the Business Combination Agreement and Merger proposal required the affirmative vote of the holders of at least a majority of all then outstanding Centricus ordinary shares who were present or represented at the special meeting of shareholders.

177. On July 9, 2021, Arqit Quantum filed a Form F-4/A with the SEC, amending the Company's Registration Statement for the first time.[85] Arqit Quantum subsequently filed Forms F-4/A on July 26, 2021[86] and July 29, 2021,[87] amending the Registration Statement for the second and third times, respectively.

[83] Registration Statement at 24.

[84] Available at www.sec.gov/Archives/edgar/data/1859690/000110465921073788/tm2117366-1_f4.htm.

[85] Available at www.sec.gov/Archives/edgar/data/1859690/000110465921090574/tm2117366-4_f4a.htm.

[86] Available at www.sec.gov/Archives/edgar/data/1859690/000110465921095781/tm2117366-8_f4a.htm.

[87] Available at www.sec.gov/Archives/edgar/data/1859690/000110465921097220/tm2117366-10_f4a.htm.

178. On July 30, 2021, the SEC declared the Registration Statement as amended on July 29, 2021 (the "Registration Statement") as effective.[88] Pursuant to the Registration Statement, Arqit Quantum registered 43,125,000 ordinary shares of Arqit Quantum and 14,891,667 warrants to purchase ordinary shares of Arqit Quantum.

179. The Registration Statement was signed by Defendant Williams in his personal capacity, and was also signed by Defendants Jamieson and Wilson through Defendant Williams as their attorney-in-fact. Defendant Jamieson also signed the Registration Statement as an Authorized Representative of Arqit Quantum located in the United States.

180. Also on July 30, 2021, Arqit Quantum filed a joint Proxy Statement for the Extraordinary Meeting of Shareholders of Centricus to consider the Merger and Prospectus for the 43,125,000 Arqit Quantum ordinary shares and 14,891,667 Arqit Quantum warrants to be issued in connection with the Merger on Form 424(b)(3) with the SEC (the "Prospectus" or the "Proxy Statement"). [89] The Prospectus was incorporated into and formed part of the Registration Statement.[90]

181. On August 23, 2021, Arqit Quantum filed Supplement No. 1 to the Prospectus on Form 424(b)(3) with the SEC ("Supplement No. 1").[91] On August 30, 2021, Arqit Quantum filed Supplement No. 2 to the Prospectus on Form 424(b)(3) with the SEC ("Supplement No. 2").[92]

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[88] Available at www.sec.gov/Archives/edgar/data/1859690/999999999521002999/xslEFFECTX01/primary_doc.xml.

[89] Available at www.sec.gov/Archives/edgar/data/1859690/000110465921098253/tm2117366-13_424b3.htm.

[90] Prospectus at 1.

[91] Available at www.sec.gov/Archives/edgar/data/1859690/000110465921108515/tm2125697d1_424b3.htm.

[92] Available at www.sec.gov/Archives/edgar/data/1859690/000110465921110876/tm21265341_424b3.htm.

182. As stated in the Offering Materials, the record date for holders of Centricus ordinary shares to vote on the Merger was July 26, 2021.

183. On August 31, 2021, Centricus stockholders voted to approve the Merger.[93]

184. Immediately prior to the Merger, all Centricus units were separated into their component securities of one Centricus ordinary share and one-fourth of one Centricus warrant.[94]

185. On September 2, 2021, Centricus merged with and into Arqit Quantum, with Arqit Quantum surviving the merger. Other than holders of Centricus securities that elected to redeem their Centricus ordinary shares for cash, all security holders of Centricus became holders of Arqit Quantum securities. In consideration for the Merger, each Centricus shareholder received one Arqit ordinary share and one Arqit warrant for each ordinary share and warrant they held in Centricus, respectively.[95]

186. On September 3, 2021, Arqit Quantum acquired all of the issued and outstanding shares of Arqit Limited from Arqit Limited shareholders, such that Arqit Limited became a wholly-owned subsidiary of Arqit Quantum. Each ordinary share of Arqit Limited was acquired by Arqit Quantum in exchange for 46.06 ordinary shares of Arqit Quantum. Consequently, Centricus' units, ordinary shares, and warrants ceased trading on the NASDAQ after the market closed on September 3, 2021.

187. On September 7, 2021, Arqit Quantum ordinary shares and warrants began trading on the NASDAQ under the ticker symbols "ARQQ" and "ARQQW," respectively.

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[93] Available at www.sec.gov/Archives/edgar/data/1859690/000110465921111837/tm2126769d1_8k.htm.

[94] Registration Statement at 9.

[95] Available at www.sec.gov/Archives/edgar/data/1859690/000110465921112955/tm2126997d1_6k.htm.

I. Post Offering Events

1. Williams Gives an Interview to CNBC on September 7, 2021

188. On September 7, 2021, the day that Arqit securities started trading on the NASDAQ, Defendant Williams appeared for an interview on CNBC to discuss Arqit's NASDAQ market debut and business. A video recording of the interview is available on youtube.com.[96] During the interview, Defendant Williams touted Arqit's technology while misrepresenting to investors that Arqit's technology was live and operational, and despite how costly Arqit's satellite technology was, that Arqit had plenty of money to rollout and scale Arqit's technology without ever having to raise more capital (emphasis added):

> Arqit's invented some new technology which is called quantum encryption - we found a way to make keys that can be deposited onto any device, could be your mobile phone or a fighter jet, doesn't matter, and those keys are unbreakable and it's not possible to steal them. And we do that by combining quantum delivery of information from satellites to data centers and then a little piece of software on your device which borrows the information in the data centers and uses it as an ingredient in the creation of these new keys.
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> ***
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> ***That product is live today*** in two years time, when we launch our satellites with Virgin, those satellites basically upgrade the network - they add an extra piece of security as a result of that quantum delivery of information. ***So, we've got a product that's live today***. Its technology gets upgraded in two years time but fundamentally it's just the same product throughout the model. So, we're very focused on selling a single product selling that in scale and the great benefit of coming to the NASDAQ market is that ***we now have comfortably more money than we need to execute our plan so we don't need to raise any more money ever***. We have about twice the money that we need to take this business to scale and because the global addressable market for our software is basically every device in the world, we're pretty convinced that this can be Britain's biggest ever tech scale-up.
>
> (Emphasis added).

[96] Available at www.youtube.com/watch?v=U7xwc8l6Fj0&t=85s

2. The Wall Street Journal Publishes an Expose on Arqit

189. On April 18, 2022, before market opened, the *WSJ* published the *WSJ* Article. The *WSJ* Article reported that "according to former employees and other people familiar with the company[,]" "Arqit has given investors an overly optimistic view of its future revenue and the readiness and workability of its signature encryption system." The *WSJ* Article stated, in relevant part (emphasis added):

> When the company secured its Nasdaq listing last autumn, ***its revenue consisted of a handful of government grants and small research contracts, and its signature product was an early-stage prototype unable to encrypt anything in practical use***, according to [former employees and other people familiar with the company]. The encryption technology the company hinges on—a system to protect against next-generation quantum computers—***might never apply beyond niche uses***, numerous people inside and outside the company warned, ***unless there were a major overhaul of internet protocols***.
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> ***
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> ***British cybersecurity officials questioned the viability of Arqit's proposed approach to encryption technology*** in a high-level evaluation they privately shared with the company in the summer of 2020, according to people familiar with the matter.
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> The U.S. National Security Agency and the NCSC published separate assessments in recent years warning against using satellite-based encryption systems like those Arqit is proposing to integrate into its current product in the next few years. The NSA said its warning was unrelated to any specific vendor, a spokesperson said.
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> ***In April 2021, Arqit's chief revenue officer resigned after raising concerns with Mr. Williams that he was overstating contracts and giving unrealistic revenue projections to potential investors***, people familiar with the matter said. ***Several other former employees said they had similar concerns about both the business model and the maturity of the technology,*** prompting them to also leave since then.
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> ***
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> ***The encryption system—with or without its satellite components—depends on the broad adoption of new protocols and standards for telecommunications, cloud***

computing and internet services that currently aren't widely supported, people familiar with the matter said.

***

Steve Weis, a San Francisco-based cryptographer and entrepreneur, said that ***what Arqit was proposing—relying in part on transmitting quantum information from satellites—is a well-known 1980s-era technology with limited real-world application***. "There have been many proofs of concept and companies trying to sell products," he said. "***The issue is that there is no practical-use case.***"

***

Key to the company's pitch was its claim that it had a large stream of future revenue locked in as the product was live and already selling well. "Customers are using the Arqit products today—and they are universally finding it to be an important part of their technology future," Mr. Williams said in an August investor presentation shortly before the merger closed. He added, ***"The Quantum Cloud product is live for service and we already have $130 million in signed committed revenue contracts."***

***

"These are contracts where the revenues will definitely be delivered," the CEO said.

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The people familiar with the matter said that the bulk of the company's committed revenue isn't from selling its product and that at its public launch, the company had little more than an early-stage prototype of its encryption system. Several clients the company lists—including a number of British government agencies—are simply giving Arqit research grants, nonbinding memorandums of understanding or research agreements that come with no funding, not contracts for its encryption product, they said.

***

No commercial customer was using Arqit's encryption system with live data when it made its market debut in September, the people said, and the system couldn't meaningfully use any of the common internet protocols required to do nearly anything online. They said it has signed two master distribution agreements with BT Group PLC [] and Sumitomo Corp. [] for the still-unrealized satellite component of its technology that are cancelable under certain conditions.

190. On Monday April 18, 2022, the day of the *WSJ* article's publication, Arqit Quantum ordinary shares fell $2.57 per share, ***or 17%***, from a closing price of $15.06 per share on Thursday

April 14, 2022 (the previous trading day), to a close at $12.49 on Monday April 18, 2022. Similarly, Arqit Quantum warrants fell $1.4479 per warrant, or ***nearly 38%***, from a close at $3.85 per warrant on April 14, 2022 to a close at $2.4021 per warrant on April 18, 2022.

3. Arqit Claims Security Proof From the University of Surrey, Yet Does Not Release Findings Publicly

191. In response to the *WSJ* Article, on April 18, 2022, at approximately 8:00 a.m. Eastern Time, before the U.S. market for Arqit Quantum securities opened for the day, Arqit Quantum issued a press release stating:

> Arqit Quantum Inc. ("Arqit"), a global leader in quantum encryption technology, notes the article in today's Wall Street Journal which seems to be based on little more than the unsubstantiated and out of date comments of two long departed and disgruntled former employees. We were disappointed that the *WSJ* failed to make reference to the numerous positive announcements made by the company in recent months or other data shared with them. For example the article criticizes a technology category ("QKD") that Arqit does not even sell, as it in fact notes in its own article. The Wall Street Journal story was comprehensively and categorically rebutted with verified evidence offered. When considering the efficacy and relevance of its products, Arqit is content to let its customers and results do the talking and looks forward to its forthcoming results announcement in May.

192. Arqit Quantum did not identify or release the "verified evidence" it claimed rebutted the claims in the *WSJ* Article.

193. On May 11, 2022, at approximately 8:00 a.m. Eastern Time, before the market for Arqit Quantum securities had opened for the day, Arqit Quantum issued a press release titled "Arqit Quantum Inc. Announces Independent Assurance Report on its Technology."[97] The press release stated that the Company had obtained an "independent assurance report undertaken by the University of Surrey" (the "Surrey Report"), which Arqit Quantum claimed reviewed "the technology protocols used by Arqit to enable symmetric key agreement over classical IP network

[97] Available at www.globenewswire.com/news-release/2022/05/11/2440733/0/en/Arqit-Quantum-Inc-Announces-Independent-Assurance-Report-on-its-Technology.html.

infrastructures." Specifically, Arqit Quantum boasted that the report "confirms the security proof of Arqit's customer end point symmetric key agreement software in that it creates keys which are zero trust and computationally secure."

194. The Press Release also included comments from Defendant Williams, who remarked that:

> The completion of the independent review and validation of our security proof is an extremely important moment, demonstrating that our software delivers precisely the benefits we have described. We prepared a summarised version of this with our consultants which can be accessed by prospective customers here: https://arqit.uk/investors/resources/. It is very timely since the White House announced a National Security Memorandum last week advising agencies to upgrade to symmetric key encryption – which is precisely what Arqit does. Our key agreement software produces keys which are used within symmetric key algorithms which are already globally standardised and widely used – it is the method of scaled end point creation of keys that is novel with QuantumCloud™. We are ready to solve the problems of legacy encryption, and moving to market in partnership with some great companies, and this week demonstrated the ease with which our products can be integrated with vendors' products.[98]

195. On May 12, 2022, Arqit filed the May 11, 2022 press release with the SEC as an attachment to a Form 6-K. That Form 6-K was signed by Defendant Williams.

196. Despite these claims, Arqit did not publish the full Surrey Report publicly; at the time, Arqit explained that the Surrey Report had been "summarized by independent consultants" at PA Consulting "in a format suitable to be shared with customers."

197. The consultants' summary of the Surrey Report, which was a one-page document published on Arqit's website at the time of the May 11, 2022 press release, in fact indicated that the Surrey Report was completed as of January 31, 2022, and that PA Consulting had been engaged by Arqit to "build[] upon [the] technical review by University of Surrey." The one-page summary

[98] Available at www.globenewswire.com/news-release/2022/05/11/2440733/0/en/Arqit-Quantum-Inc-Announces-Independent-Assurance-Report-on-its-Technology.html.

document also confirmed that the Surrey Report was authored by academics from the University of Surrey, including Professor Liqun Chen.

198. Arqit also did not disclose in either the May 11, 2022 press release or the one-page summary document that Arqit had connections to the University of Surrey, instead describing the authors of the Surrey Report as having been "independent" of Arqit. To the contrary, Arqit had previously issued a July 23, 2021 press release indicating that Arqit's then-Chief Product Officer, Stephen Holmes, had co-authored a paper on quantum technologies with the same Professor Liqun Chen, Professor in Secure Systems at the University of Surrey, that had co-authored the Surrey Report. The July 23, 2021 press release also stated that Stephen Holmes had "conducted his PhD research in post quantum cryptography … at the University of Surrey."

199. Therefore, given Arqit's Chief Product Officer Stephen Holmes had conducted his PhD at Surrey, and given the Surrey Report was co-authored by a collaborator who had worked with Holmes on prior papers for Arqit, it was questionable whether the Surrey Report was actually an "independent" review.

4. Arqit Reveals that it is Being Investigated by the SEC, and that it is Abandoning its Key Satellite Technology

200. On December 14, 2022, at approximately 6:07 a.m. Eastern Time, before the market for Arqit Quantum securities had opened for the day, Arqit Quantum filed its 2022 Form 20-F with the SEC. The 2022 20-F was signed by Defendant Williams.

201. In the 2022 20-F, Arqit Quantum disclosed that "Arqit is also cooperating with an SEC investigation relating to the business combination between Arqit and Centricus Acquisition

Corp., including by voluntarily producing documents. The SEC has informed Arqit that this is a fact-finding inquiry."[99]

202. The 2022 20-F also disclosed that "In December 2022 Arqit updated its technology strategy to eliminate quantum satellites and the associated ground infrastructure from its core QuantumCloud™ product offering."[100] "It has removed, through innovation, the costly and complex satellite component from the tech stack of QuantumCloud™, its software platform as a service."[101]

203. Also on December 14, 2022, at approximately 8:05 a.m. Eastern Time, before the market for Arqit Quantum securities had opened for the day, Arqit Quantum issued a press release titled "Arqit Quantum Announces Financial and Operational Results for the Fiscal Year 2022."[102] In that press release, Arqit Quantum stated that "as a result of further innovation in our technology, we no longer need to build or operate quantum satellites."

204. Also on December 14, 2022, at approximately 11:00 a.m., while the market for Arqit Quantum securities was open, Arqit Quantum held an investor conference call to discuss its fiscal 2022 financial results. Defendants Williams and Pointon participated in the call for Arqit Quantum. A transcript of the conference call was prepared by Bloomberg.

205. On the conference call, Defendant Williams discussed Arqit's purported reason for abandoning its satellite technology:

> In addition to the acceleration of our go-to-market strategy, innovation in our technology is resulting in changes to the financial profile of the company. We announced today under a separate press release that, as a result of additional

[99] 2022 20-F at 55.

[100] 2022 20-F at 9.

[101] 2022 20-F at 22.

[102] Available at www.sec.gov/Archives/edgar/data/1859690/000110465922126813/tm2232467d3_ex99-1.htm.

> innovation, Arqit no longer requires satellite delivery of replicated randomness to datacenters as part of the symmetric key agreement process at endpoints. Arqit sometime ago developed a terrestrial method of delivering this replicated randomness to datacenters. The security of encryption keys created on the endpoint using our lightweight software agent is as strong with the terrestrial method as with the satellite method. The security proof work that we published earlier in the year satisfied us of this. Therefore, we concluded that we do not require satellites and associated ground systems in the background of our technology stack.[103]

206. Notably, prior to December 14, 2022, Arqit Quantum had never referred to its satellite program as costly or complex. Rather, it had stated that the launch of satellites would make its QuantumCloud product more secure, and that its product was low cost and easy or hyper-scalable.

207. On this news, Arqit Quantum's ordinary shares declined from $6.25 per share on December 13, 2022 to $5.15 per share on December 14, 2022, a decline of $1.10 per share, or ***nearly 18%***. Similarly, Arqit Quantum's warrants fell from $1.20 per warrant to $0.782 per warrant over the same period, representing a drop of $0.418 per warrant, or ***almost 35%***.

5. May 17, 2023 Q2 2023 Investor Call

208. On May 17, 2023, at approximately 6:07 a.m. ET, Arqit Quantum issued a press release to discuss its financial and operational results for the first six months of fiscal 2023, or through March 31, 2023.[104] In that press release, Arqit Quantum reported revenue and other operating income for the six-month period ended March 31, 2023 of $19,000 and $2.6 million, respectively. Also on May 17, 2023, at approximately 11:00 a.m. Eastern Time, while the U.S. market for Arqit Quantum securities was open, Arqit Quantum held an investor conference call to discuss its fiscal second quarter financial results. A transcript of the conference call was prepared

[103] 12/14/2022 Tr. at 3.

[104] Available at ir.arqit.uk/news-events/press-releases/detail/57/arqit-quantum-inc-announces-financial-and-operational.

by Bloomberg. On that conference call, Defendant Pointon reported that the $2.6 million in operating revenue was "primarily resulting from Arqit's ongoing project contract with the European Space Agency associated with the development of our offset satellite." QuantumCloud revenue for the period totaled $90,000.[105]

VI. ADDITIONAL ALLEGATIONS RELATING TO PLAINTIFFS' CLAIMS UNDER SECTIONS 11, 12, AND 15 OF THE SECURITIES ACT OF 1933

209. As alleged above, on July 30, 2021, the SEC declared the Registration Statement effective. Also on July 30, 2021, Arqit filed the Prospectus with the SEC. The Prospectus formed part of the Registration Statement.[106]

210. The Registration Statement made numerous untrue statements of material fact or omitted to state material facts necessary to make the statements made not misleading in subject matters such as Arqit's technology, business, revenues, and prospects.

211. Further, Defendants Arqit Quantum, Williams, and Ritchie made oral and written statements after the Registration Statement was deemed effective and the Prospectus was issued, but prior to the Merger, that were materially false and misleading. Pursuant to SEC Rule 425 (17 C.F.R. §230.425) and SEC Rule 165 (17 CFR §230.165), communications concerning a business combination that are made after a Registration Statement is filed are prospectuses.

A. False Statements in the Offering Materials[107]

212. The Offering Materials (the Registration Statement filed with the SEC on July 29, 2021, and the Prospectus filed July 30, 2021 which was incorporated into the Registration Statement) contained untrue statements of material fact or omitted to state material facts necessary

[105] 5/17/2023 Tr. at 4.

[106] Prospectus at 1.

[107] The statements Plaintiffs allege are false and misleading are bolded, underlined and italicized and prefaced with "***{FS ___}***" for numbering purposes. All other statements are provided for context.

to make the statements made not misleading. Not only were the statements in the Offering Materials untrue or misleading when made in July 2021, but Arqit did not correct them by the date of Arqit's NASDAQ listing on September 7, 2021, and thus the statements were untrue or misleading as of Arqit's Offering.

213. In the Offering Materials, the Securities Act Defendants repeatedly stated that Arqit had "pioneered unique technology" or created a "groundbreaking" protocol that had "universal application" that would protect any networked devices from a cyber attack from a quantum computer, stating, in relevant part:

> [Arqit Limited] is a cybersecurity company ***{FS1}*** ***that has pioneered a unique quantum encryption technology which makes the communications links of any networked device secure against current and future forms of cyber attack***.[108]
>
> ***
>
> Arqit [Limited] is a cybersecurity company ***{FS2}*** ***that has pioneered a unique quantum encryption technology which makes the communications links of any networked device secure against current and future forms of cyber-attack — even an attack from a quantum computer.*** ***{FS3}*** ***The software has universal application to every edge device and cloud machine in the world. {FS4} Arqit has not only invented a ground-breaking new quantum protocol, but it has also found a way to translate the benefits of quantum security to end point devices.***[109]
>
> ***
>
> ***{FS5} Arqit [Limited]'s platform creates symmetric encryption keys, which is a cyber-encryption technology that is secure against all forms of attack including by quantum computers.***[110]
>
> ***

[108] Registration Statement at 12, 23.

[109] Registration Statement at 146, 186.

[110] Registration Statement at 151.

> As a result [of QuantumCloud], ***{FS6}*** ***Arqit [Limited] can store and transact data securely in the cloud and to include any form of end point device within this security boundary***.[111]
>
> ***
>
> ***{FS7}*** Arqit has ***invented a unique quantum encryption technology which makes the communications links of any networked device secure against current and future forms of cyber attack — even an attack from a quantum computer***.[112]
>
> ***
>
> ***{FS8}*** ***QuantumCloud™ provides some very significant advantages to such organizations, even though its root source of entropy is not as fully quantum safe as satellite delivery will be. As a result, Arqit [Limited] believes a very significant early source of revenue will be simply upgrading existing symmetric key systems to Metro QuantumCloud™ which can be done remotely at low frictional and financial cost***.[113]
>
> ***
>
> Arqit plans to launch its first two quantum satellites by 2023, ***{FS9}*** ***which will lead to a significant increase in the level of security offered by its end to end system and improve the attractiveness of its products to potential customers***. During the second half of 2021, Arqit will launch an interim version of QuantumCloud™ in which the source of root keys will be simulated until the satellites launch and supplied by a terrestrial quantum random number generator. Although this is a significant improvement over existing technology, it is not as secure as the quantum satellite version of QuantumCloud™ will be.[114]

214. FS1-9 were untrue statements of material fact and omitted to state material facts because, *inter alia*, at the time they were made and at the time of the Offering, Arqit's QuantumCloud product could not encrypt data in a quantum-safe manner, did not have universal application to every edge device and cloud machine in the world, and would not provide an early source or revenue, as evidenced by:

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[111] Registration Statement at 151.

[112] Registration Statement at 187.

[113] Registration Statement at 151.

[114] Registration Statement at 188.

a) According to the April 2022 *WSJ* Article, the *WSJ* interviewed several former employees and reviewed internal Arqit documents which revealed that, at the time of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data, and the success of Arqit's system required widespread adoption of new communications protocols and standards before QuantumCloud could be functional and thus QuantumCloud was not universally applicable to every edge device and cloud machine in the world;

b) As reported by the April 2022 *WSJ* Article, British cyber security officials questioned the viability of Arqit's encryption technology in a meeting with Arqit in the summer of 2020;

c) Arqit's Chief Revenue Officer resigned in April 2021 over concerns about the lack of maturity of Arqit's encryption technology and related revenue forecasts;

d) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use;

e) According to CW-3, who was later corroborated by additional members of the global cybersecurity community who published a scientific article alongside CW-3, a review of Arqit's ARQ19 patent for satellite-based quantum key distribution revealed that Arqit's proposed satellite protocol was not truly quantum safe; and

f) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the

QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology, and as confirmed by CW-2, the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making the satellite technology more expensive and less reliable.

215. Throughout the Offering Materials, the Securities Act Defendants also repeatedly stated that Arqit's platform, which included software and delivery of random numbers by satellite, could create symmetric encryption keys "in infinite volumes at minimal cost," "at scale," and at "low cost:"

> ***{FS10}*** Arqit [Limited]'s product, called QuantumCloud™, ***creates unbreakable software encryption keys that are low cost and easy to use with no new hardware required.***[115]
>
> ***
>
> ***{FS11}*** Arqit's product, called QuantumCloud™, ***creates unbreakable software encryption keys that are low cost and easy to use.***[116]
>
> ***
>
> ***{FS12}*** ***The importance of Arqit [Limited]'s platform lies in its ability to "distribute" symmetric keys securely at scale by creating them at end points***. Although symmetric encryption keys are secure, to date there has been no secure way to create and distribute symmetric keys electronically. ***{FS13}*** ***Arqit [Limited]'s groundbreaking technology has solved these known issues. Its innovations create symmetric encryption keys at end points when they are needed, at scale, securely, at any kind of end point device and in groups of any size. With Arqit [Limited]'s technology, symmetric encryption keys are never "delivered", they are created at endpoints, and so they cannot be intercepted. This is a completely new way to create and distribute unbreakable symmetric keys that represents a groundbreaking, novel technology. The keys are created with what is known as a "mixed trust model" which means that no third party computer ever has the key, or sufficient information to recreate or guess the key. The key***

[115] Registration Statement at 146, 186.

[116] Registration Statement at 187.

is never transmitted in creation across any network. It is therefore not possible for any third party to know or guess the key during creation.[117]

***

Easily Scalable. Arqit's software, fulfilled from the cloud, ***{FS14}*** ***automatically creates keys in infinite volumes at minimal cost, resulting in low capital expenditure once deployed***. From an operating cost perspective, there is no human analysis or information processing required by Arqit's product, so personnel costs are limited to maintaining core infrastructure, marketing and customer support. ***{FS15}*** ***These factors make Arqit's products easily scalable for both Arqit and its customers***.[118]

***

{FS16} ***Arqit's pioneering technology "provides a simple, cost-effective and secure way to create and distribute symmetric keys electronically that can be applied universally across geographies, industries and devices, making it well placed to take advantage of this significant upcoming market opportunity."***[119]

***

{FS17} The service is sold and fulfilled on a self-service basis in the cloud ***making it an easily scalable business model***.[120]

***

{FS18} Arqit plans to launch its first two quantum satellites by 2023, ***which will lead to a significant increase in the level of security offered by its end to end system and improve the attractiveness of its products to potential customers***.[121]

***

{FS19} ***QuantumCloud™ provides some very significant advantages to such organizations, even though its root source of entropy is not as fully quantum safe as satellite delivery will be. As a result, Arqit [Limited] believes a very significant early source of revenue will be simply upgrading existing symmetric key systems***

[117] Registration Statement at 27, 151-52.

[118] Registration Statement at 152.

[119] Registration Statement at 147.

[120] Registration Statement at 146, 186.

[121] Registration Statement at 188.

> ***to Metro QuantumCloud™ which can be done remotely at low frictional and financial cost.***[122]
>
> ***
>
> ***{FS20}*** "Arqit's ARQ19 protocol is a fundamental cryptographical discovery, and ***its DSCC invention allows quantum cryptography to be commercialized for the mass market.***"[123]

216. FS10-20 were untrue statements of material fact and failed to disclose material information because at the time they were made and at the time of the Offering, Arqit's QuantumCloud product as designed with satellites was not easily scalable, and could not create keys "in infinite volumes at minimal cost" or at "low cost," and therefore could not take advantage of upcoming market opportunity or be commercialized for the mass market, as evidenced by:

a) According to the April 2022 *WSJ* Article, the WSJ interviewed several former employees and reviewed internal Arqit documents, which revealed that, at the time of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data, and the success of Arqit's system required widespread adoption of new communications protocols and standards before QuantumCloud could be functional and thus QuantumCloud was not universally applicable to every edge device and cloud machine in the world;

b) As reported by the April 2022 *WSJ* Article, British cyber security officials questioned the viability of Arqit's encryption technology in a meeting with Arqit in the summer of 2020;

[122] Registration Statement at 151.

[123] Registration Statement at 149.

c) Arqit's Chief Revenue Officer resigned in April 2021 over concerns about the lack of maturity of Arqit's encryption technology and related revenue forecasts, which would have been based in part on Arqit's pricing for encryption keys;

d) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use;

e) According to CW-3, who was later corroborated by additional members of the global cybersecurity community who published a scientific article alongside CW-3, a review of Arqit's ARQ19 patent for satellite-based quantum key distribution revealed that Arqit's proposed satellite protocol was not truly quantum safe; and

f) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology in December 2022, and as confirmed by CW-2, the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making it more expensive and less reliable.

217. The Offering Materials falsely claimed Arqit had solved "all" the ongoing problems of safely distributing the encryption key by using quantum satellite technology, which included the issues identified by Arqit of geographic limitations of line of sight for simultaneous transmission and the risk of theft/hacking in the intervening time between transmissions, and that the addition of satellite transmission would increase customer security at low cost:

> Arqit [Limited]'s solution combines world-leading innovation in two areas: a new form of quantum satellite and a software agent that can be downloaded onto any device. ***{FS21}*** **Arqit [Limited]'s *quantum satellite technology solves all***

> ***previously known problems of quantum key distribution*** and puts identical copies of quantum safe keys into each data center in a network.[124]
>
> ***
>
> Prior to launch of its satellites, Arqit's quantum encryption platform, QuantumCloud™, will use machines in data centers to generate a terrestrial simulation of the quantum satellite technology. ***{FS22}*** By 2023, it plans to launch its first two quantum satellites, ***which will generate a significant increase in the level of security offered by the end-to-end system.***[125]
>
> ***
>
> Prior to Arqit's planned satellite launches in 2023, the source of root keys used in data centers will occur through terrestrial transmission which is secure but not quantum safe. ***{FS23}*** By 2023, Arqit intends to upgrade its transmission to satellite, ***which will provide provable security in the delivery of key data into the data centers as a result of its ARQ19 algorithm. The end point keys are then created in a manner that means that no third party can ever know them and they are computationally secure even against a quantum attack***."[126]

218. FS13 (alleged above in paragraph 215) and FS21-23 were untrue statements of material fact and omitted to state material facts because at the time they were made and at the time of the Offering, QuantumCloud had not solved all issues with distributing encryption keys using satellites, and its satellites would not generate a significant increase in the level of security of QuantumCloud or even provable security, as evidenced by:

a) According to the April 2022 *WSJ* Article, the WSJ interviewed several former employees and reviewed internal Arqit documents, which revealed that, at the time of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data,

[124] Registration Statement at 146, 186.

[125] Registration Statement at 146, 186.

[126] Registration Statement at 148.

and the success of Arqit's system required widespread adoption of new communications protocols and standards before QuantumCloud could be functional and thus QuantumCloud was not universally applicable to every edge device and cloud machine in the world;

b) As reported by the April 2022 *WSJ* Article, British cyber security officials questioned the viability of Arqit's encryption technology in a meeting with Arqit in the summer of 2020;

c) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use;

d) According to CW-3, who was later corroborated by additional members of the global cybersecurity community who published a scientific article alongside CW-3, a review of Arqit's ARQ19 patent for satellite-based quantum key distribution revealed that Arqit's proposed satellite protocol was not truly quantum safe; and

e) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology, and as confirmed by CW-2, the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making the satellite technology more expensive and less reliable.

219. In addition to the claims discussed *supra*, Arqit's Offering Materials claimed to warn investors of various risk factors, yet the Securities Act Defendants' supposed risk disclosures

were also false or misleading because either the Securities Act Defendants had no reasonable basis to support their beliefs or the Securities Act Defendants failed to inform investors that those risks had already materialized. One such disclosure purported to warn investors that the Company ***{FS24}*** "***may not be able to convert its customer orders in backlog or pipeline into revenue***":

> As of April 30, 2021, Arqit's backlog estimates consisted of approximately ***$130 million in customer contracts, and Arqit had an estimated $975 million in pipeline***, consisting of customer contracts in various stages of negotiation and initial revenue indications from potential customers that have not been contractually committed. ***There is no assurance that its backlog will materialize in actual revenues, or that Arqit will be able to convert its pipeline into executed contracts that will generate revenues***.[127]

220. FS24 was materially false and misleading because at the time it was made and at the time of the Offering, the risk that Arqit would not be able to convert customer orders in backlog into revenue had already materialized, as evidenced by:

a) According to the April 2022 *WSJ* Article, the WSJ interviewed several former employees and reviewed internal Arqit documents, which revealed that, at the time of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data, and the success of Arqit's system required widespread adoption of new communications protocols and standards before QuantumCloud could be functional;

b) Arqit's Chief Revenue Officer resigned in April 2021 over concerns about the lack of maturity of Arqit's encryption technology and related revenue forecasts;

[127] Registration Statement at 35, 43.

c) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use; and

d) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology, and as confirmed by CW-2, the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making the satellite technology more expensive and less reliable.

221. Thus, Arqit would not be able to convert its purported contracts into revenue based on its current technology as represented.

222. Arqit's Offering Materials also falsely claimed in a risk factor that the satellite technology would be more attractive to customers and thereby increase Arqit's customer base because it was more secure than Arqit's existing technology at the time of the Offering:

> Arqit intends to launch its first satellite in 2023. Prior to launching its satellites, Arqit's quantum encryption platform, QuantumCloud™, will use machines to generate a terrestrial simulation of the quantum satellite technology. ***{FS25}***. ***There are some differences in the level of security provided by QuantumCloud™ when using the terrestrial simulation compared to delivery by satellite, and Arqit therefore expects that the satellites it is building will generate an improvement in the attractiveness of its products to customers***.[128]

223. FS25 was materially false and misleading because at the time it was made and at the time of the Offering, Arqit's satellites would not generate an improvement in the attractiveness of Arqit's products to customers due to the prohibitive cost and low reliability of transmitting data

[128] Registration Statement at 44.

by satellite, not to mention that Arqit's software was only an early stage prototype, as evidenced by:

a) According to the April 2022 *WSJ* Article, the WSJ interviewed several former employees and reviewed internal Arqit documents, which revealed that, at the time of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data, and the success of Arqit's system required widespread adoption of new communications protocols and standards before QuantumCloud could be functional;

b) As reported by the April 2022 *WSJ* Article, British cyber security officials questioned the viability of Arqit's encryption technology in a meeting with Arqit in the summer of 2020;

c) Arqit's Chief Revenue Officer resigned in April 2021 over concerns about the lack of maturity of Arqit's encryption technology and related revenue forecasts;

d) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use;

e) According to CW-3, who was later corroborated by additional members of the global cybersecurity community who published alongside CW-3, a review of Arqit's ARQ19 patent for satellite-based quantum key distribution revealed that Arqit's proposed satellite protocol was not truly quantum safe; and

f) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the

QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology, and as confirmed by CW-2, the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making it more expensive and less reliable.

224. The Securities Act Defendants also purported to warn its investors of potential issues with inoperability with customer computer systems:

> ***{FS26} If Arqit's network and products do not interoperate with its customers' internal networks and infrastructure or with third-party products, websites, or services, its network may become less competitive and its results of operations may be harmed,***
>
> Arqit's network and products must interoperate with its customers' existing internal networks and infrastructure. These complex internal systems are developed, delivered, and maintained by the customer and a myriad of vendors and service providers. As a result, the components of its customers' infrastructure have different specifications, rapidly evolve, utilize multiple protocol standards, include multiple versions and generations of products, and may be highly customized. Arqit must be able to interoperate and provide products to customers with highly complex and customized internal networks, which requires careful planning and execution between its customers, its customer support teams and, in some cases, its channel partners.[129]

225. FS26 was materially false and misleading because at the time it was made and at the time of the Offering, it did not disclose the then-existing facts that demonstrated the risk had already materialized, Arqit's software was only an early stage prototype that could not encrypt anything in practical use, the software could not operate using common internet protocols, and Arqit's software would require the widespread adoption of new communications protocols to be effective and operational, as evidenced by:

a) According to the April 2022 *WSJ* Article, the *WSJ* interviewed several former employees and reviewed internal Arqit documents which revealed that, at the time

[129] Registration Statement at 54.

of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data, and the success of Arqit's system required widespread adoption of new communications protocols and standards before QuantumCloud could be functional and thus QuantumCloud was not universally applicable to every edge device and cloud machine in the world;

b) As reported by the April 2022 *WSJ* Article, British cyber security officials questioned the viability of Arqit's encryption technology in a meeting with Arqit in the summer of 2020;

c) Arqit's Chief Revenue Officer resigned in April 2021 over concerns about the lack of maturity of Arqit's encryption technology and related revenue forecasts;

d) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use;

e) According to CW-3, who was later corroborated by additional members of the global cybersecurity community who published a scientific article alongside CW-3, a review of Arqit's ARQ19 patent for satellite-based quantum key distribution revealed that Arqit's proposed satellite protocol was not truly quantum safe; and

f) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology, and as confirmed by CW-2, the

satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making it more expensive and less reliable.

226. Thus, the Securities Act Defendants failed to disclose that the risk of QuantumCloud not being interoperable with third party products and services had already materialized.

227. Finally, the Offering Materials contained untrue statements of material fact concerning Arqit's forecasted earnings. In the Offering Materials, Arqit projected that it ***{FS27}*** ***would earn revenue of $14 million in the calendar year ended December 31, 2021, $32 million in the calendar year ending December 31, 2022, and $153 million for the calendar year ended December 31, 2023.***[130]

228. To further entice investment in Arqit Quantum, the Securities Act Defendants falsely assured investors that ***{FS28}*** ***"The Company's management prepared such financial information based on their judgment and assumptions regarding the future financial performance of the Company"*** and ***that the projections, "in the view of the Company's management, was prepared on a reasonable basis, reflects the best currently available estimates and judgments, and presents, to the best of management's knowledge and belief, the expected course of action and the expected future financial performance of the Company."***[131]

229. Moreover, even though Arqit's encryption technology was still a prototype, Defendants falsely stated that ***{FS29}*** "***[t]he key elements of the Company's projections assume***

[130] Registration Statement at 108.

[131] Registration Statement at 107-08.

the start of commercialization of the Company's products in the second half of the 2021 calendar year."[132]

230. While FS27-29 may be forward looking statements, they were materially false and misleading because at the time they were made and at the time of the Offering, the Securities Act Defendants did not have an adequate or reasonable basis to make these projections, as evidenced by:

a) According to the April 2022 *WSJ* Article, the *WSJ* interviewed several former employees and reviewed internal Arqit documents which revealed that, at the time of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data, and the success of Arqit's system required widespread adoption of new communications protocols and standards before QuantumCloud could be functional and thus QuantumCloud was not universally applicable to every edge device and cloud machine in the world;

b) As reported by the April 2022 *WSJ* Article, British cyber security officials questioned the viability of Arqit's encryption technology in a meeting with Arqit in the summer of 2020;

c) Arqit's Chief Revenue Officer resigned in April 2021 over concerns about the lack of maturity of Arqit's encryption technology and related revenue forecasts;

[132] Registration Statement at 108.

d) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use;

e) According to CW-3, who was later corroborated by additional members of the global cybersecurity community who published a scientific article alongside CW-3, a review of Arqit's ARQ19 patent for satellite-based quantum key distribution revealed that Arqit's proposed satellite protocol was not truly quantum safe; and

f) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology, and as confirmed by CW-2, the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making it more expensive and less reliable.

231. That FS27-29 are false and misleading is further evidenced by the fact Arqit missed these projections by an enormous margin. Arqit reported revenue of only $47,910 in Fiscal 2021 (ending September 30, 2021), $7.2 million in the Company's Fiscal Year 2022 (ending September 30 2022), and $19,000 for the first six months on 2023 (ending March 31, 2023). Adding all three of these revenue numbers together does not even reach the revenue projected in the Offering Materials for 2021 or 2022 alone.

B. False Statements in Other Prospectuses/Other Proxy Solicitations

232. On August 2, 3, 9, 11, 18, and 19, 2021, Defendants Williams, Richie, and Arqit Quantum/Centricus made oral and written statements that were materially false and misleading or omitted material facts. These statements are collectively referred to herein as the "Other Prospectuses" or the "Other Proxy Solicitations."

233. On August 2, 2021, at approximately 12:04 a.m. Eastern Time, Arqit Limited issued a press release titled "Arqit Registration Statement Related to Business Combination with Centricus Acquisition Corp. Declared Effective by SEC." On August 3, 2021, Arqit Quantum filed a copy of the press release with the SEC pursuant to Rule 425 under the Securities Act and deemed filed pursuant to Rule 14a-12 under the Exchange Act.[133] As such, the press release was a prospectus under SEC Rules and the Securities Act.

234. In the press release, Defendant Ritchie was quoted as falsely claiming Arqit's encryption technology was ***{FS30}*** "***launched live for customers***" when, in fact, the technology had not gone live because it was still merely a prototype that required significant upgrades and protocol enhancements before it was ready for commercial use:

> We are pleased to be moving into the final stage of our proposed Business Combination which will bring Arqit to the public markets…. Arqit is well positioned to operate as a public company and, if approved by our shareholders, ***{FS31} this transaction will enable Arqit [Quantum] to accelerate adoption of its encryption technology which launched live for customers today***. ... The cyber threat continues to escalate globally, with almost weekly headline grabbing breaches of key technological infrastructure in the public and private sectors – ***{FS32} Arqit [Quantum]'s ability to deliver symmetric key encryption to any end-point users, coupled with company's ability to win blue chip customers***, has allowed the board of Centricus Acquisition Corp. to unanimously recommend this transaction to shareholders.

235. Also in the press release, Defendant Williams was quoted as stating:

> ***{FS33} Arqit [Quantum] has invented transformational technology, and early blue-chip customers are clearly recognising it's importance, as we announce today the software is now live for commercial use.*** ***{FS34} QuantumCloud™ can secure every connected device in the World with far more security and far less processing and energy than any possible alternative. I am delighted that this transaction will now deliver the resources we need in our objective to scale up.***

[133] Available at www.sec.gov/Archives/edgar/data/1859690/000110465921099103/tm2123893d1_425.htm.

236. FS30, which informed the public that Arqit was selling a fully operational product, was false and misleading because at the time it was made and at the time of the Offering, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use, no commercial customer was using Arqit's software with live data, Arqit's system could not meaningfully use common internet protocols, and the success of Arqit's system required widespread adoption of new communications protocols, as evidenced by:

a) According to the April 2022 *WSJ* Article, the *WSJ* interviewed several former employees and reviewed internal Arqit documents which revealed that, at the time of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data, and the success of Arqit's system required widespread adoption of new communications protocols and standards before QuantumCloud could be functional and thus QuantumCloud was not universally applicable to every edge device and cloud machine in the world;

b) As reported by the April 2022 *WSJ* Article, British cyber security officials questioned the viability of Arqit's encryption technology in a meeting with Arqit in the summer of 2020;

c) Arqit's Chief Revenue Officer resigned in April 2021 over concerns about the lack of maturity of Arqit's encryption technology and related revenue forecasts;

d) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use;

e) According to CW-3, who was later corroborated by additional members of the global cybersecurity community who published a scientific article alongside CW-3, a review of Arqit's ARQ19 patent for satellite-based quantum key distribution revealed that Arqit's proposed satellite protocol was not truly quantum safe; and

f) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology, and as confirmed by CW-2, the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making it more expensive and less reliable.

237. Also on August 2, 2021, at approximately 12:20 a.m. Eastern Time, Arqit Limited issued a press release titled "Arqit releases QuantumCloud™ to deliver stronger, simpler encryption." On August 3, 2021, Arqit Quantum filed a copy of the press release with the SEC pursuant to Rule 425 under the Securities Act and deemed filed pursuant to Rule 14a-12 under the Exchange Act.[134] As such, the press release was a prospectus under SEC Rules and the Securities Act.

238. The press release stated in relevant part:

> Arqit Limited ("Arqit"), a leader in quantum encryption technology announces the release of the first version of its service, QuantumCloud™ 1.0. ***{FS35}*** ***This Platform-as-a-Service software enables customers to secure the communications channels and data of any cloud, edge or end-point device.***
>
> ***
>
> ***{FS36}*** ***The release of QuantumCloud™ 1.0 allows customers to secure devices globally by providing a strong device authentication capability, over which is***

[134] Available at www.sec.gov/Archives/edgar/data/1859690/000110465921099110/tm2123893d2_425.htm.

> ***layered the agreement of symmetric keys between authenticated and authorised devices.*** Importantly, since there are no asymmetric cryptographic primitives used within the trustless key agreement protocol, the keys can be regarded as safe against future attack using Shor's algorithm running on a quantum computer.
>
> ***
>
> David Williams, Founder Chairman and CEO for Arqit said, ***{FS37}*** "***A growing number of customers in many sectors are now getting exposure to the transformational levels of security that can be provided by QuantumCloud™. The version released today delivers stronger, simpler key agreement technology to counter the threats that we read about every day, and it has built in protection against the future threats from quantum attack***. I believe that the transparency that a NASDAQ listing will bring is a great advantage for Arqit in promoting game changing technology, and ***{FS38}*** ***we are now ready to scale up our platform for revenues this year***."

239. FS35-FS38 were materially false and misleading because, at the time they were made and at the time of the Offering, QuantumCloud could not "enable customers to secure the communications channels and data of any cloud, edge or end-point device," could not "allow customers to secure devices globally," did not "deliver stronger, simpler key agreement technology," and was not being "integrated into live environments," and Arqit was not "ready to scale up," as evidenced by:

a) According to the April 2022 *WSJ* Article, the *WSJ* interviewed several former employees and reviewed internal Arqit documents which revealed that, at the time of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data, and the success of Arqit's system required widespread adoption of new communications protocols and standards before QuantumCloud could be functional and thus QuantumCloud was not universally applicable to every edge device and cloud machine in the world;

b) As reported by the April 2022 *WSJ* Article, British cyber security officials questioned the viability of Arqit's encryption technology in a meeting with Arqit in the summer of 2020;

c) Arqit's Chief Revenue Officer resigned in April 2021 over concerns about the lack of maturity of Arqit's encryption technology and related revenue forecasts;

d) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use;

e) According to CW-3, who was later corroborated by additional members of the global cybersecurity community who published a scientific article alongside CW-3, a review of Arqit's ARQ19 patent for satellite-based quantum key distribution revealed that Arqit's proposed satellite protocol was not truly quantum safe; and

f) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology, and as confirmed by CW-2, the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making it more expensive and less reliable.

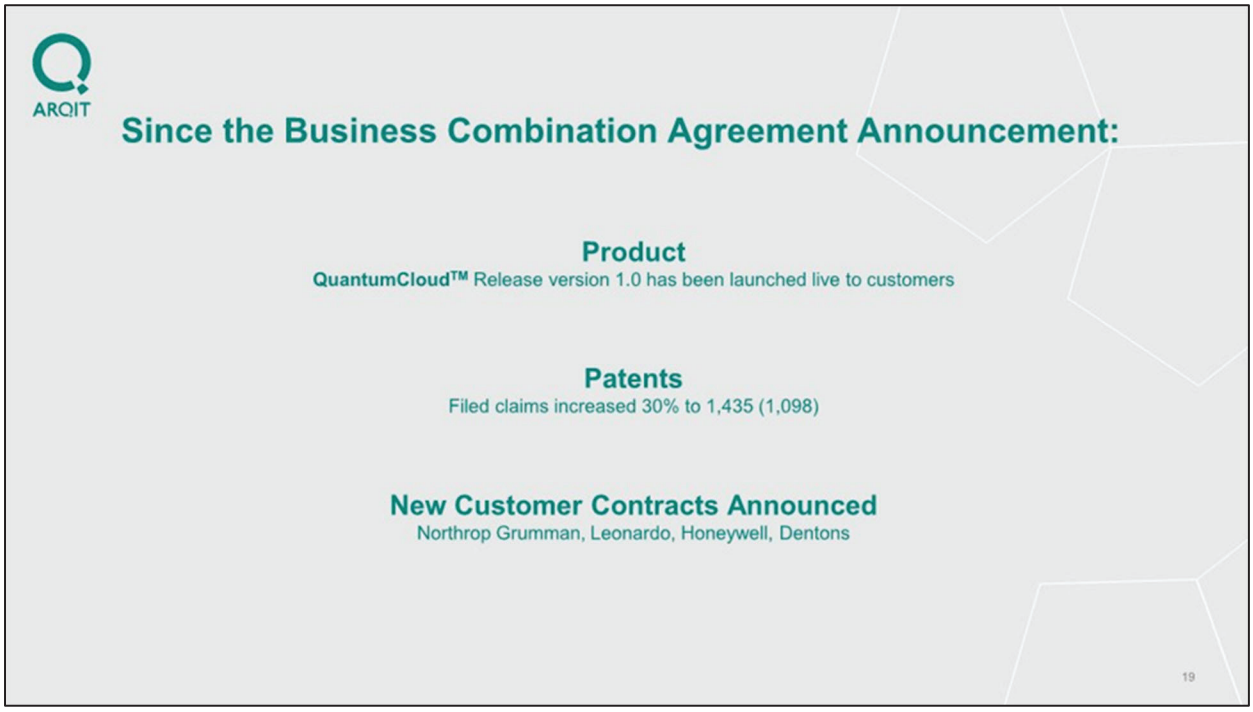
240. For the same reasons, FS35-38 were materially false and misleading because they informed the public that Arqit was selling a fully operational product when it was not.

241. Also on August 3, 2021, Arqit Quantum filed with the SEC a presentation titled "Arqit, Stronger simpler encryption, July 2021." The presentation slides listed Defendants Ritchie and Williams as presenters. The presentation was filed pursuant to Rule 425 under the Securities

Act and deemed filed pursuant to Rule 14a-12 under the Exchange Act.[135] As such, the August 3, 2021 presentation was a prospectus under SEC Rules and the Securities Act.

242. Slides 5 and 23-27 of the presentation discussed Centricus, the proposed Merger, and reasons for the Merger. For example, Slide 27 was titled "Transaction represents an attractive valuation to peers."

243. Slide 19 of the presentation stated that since the Merger announcement, ***{FS39}*** "***QuantumCloud™ Release version 1.0 has been launched live to customers***":



244. FS39, which informed the public that Arqit was selling a fully operational product, was an untrue statement of material fact and omitted to state material facts because, at the time it was made and at the time of the Offering, QuantumCloud was still an early-stage prototype unable to encrypt anything in practical use, no commercial customer was using Arqit's software with live

[135] Available at www.sec.gov/Archives/edgar/data/1859690/000110465921099247/tm2123893d3_425.htm.

data, Arqit's system could not meaningfully use common internet protocols, and the success of Arqit's system required widespread adoption of new communications protocols before it could be ready for commercial use, as evidenced by the following:

a) According to the April 2022 *WSJ* Article, the *WSJ* interviewed several former employees and reviewed internal Arqit documents which revealed that, at the time of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data, and the success of Arqit's system required widespread adoption of new communications protocols and standards before QuantumCloud could be functional and thus QuantumCloud was not universally applicable to every edge device and cloud machine in the world;

b) As reported by the April 2022 *WSJ* Article, British cyber security officials questioned the viability of Arqit's encryption technology in a meeting with Arqit in the summer of 2020;

c) Arqit's Chief Revenue Officer resigned in April 2021 over concerns about the lack of maturity of Arqit's encryption technology and related revenue forecasts;

d) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use;

e) According to CW-3, who was later corroborated by additional members of the global cybersecurity community who published a scientific article alongside CW-3, a

review of Arqit's ARQ19 patent for satellite-based quantum key distribution revealed that Arqit's proposed satellite protocol was not truly quantum safe; and

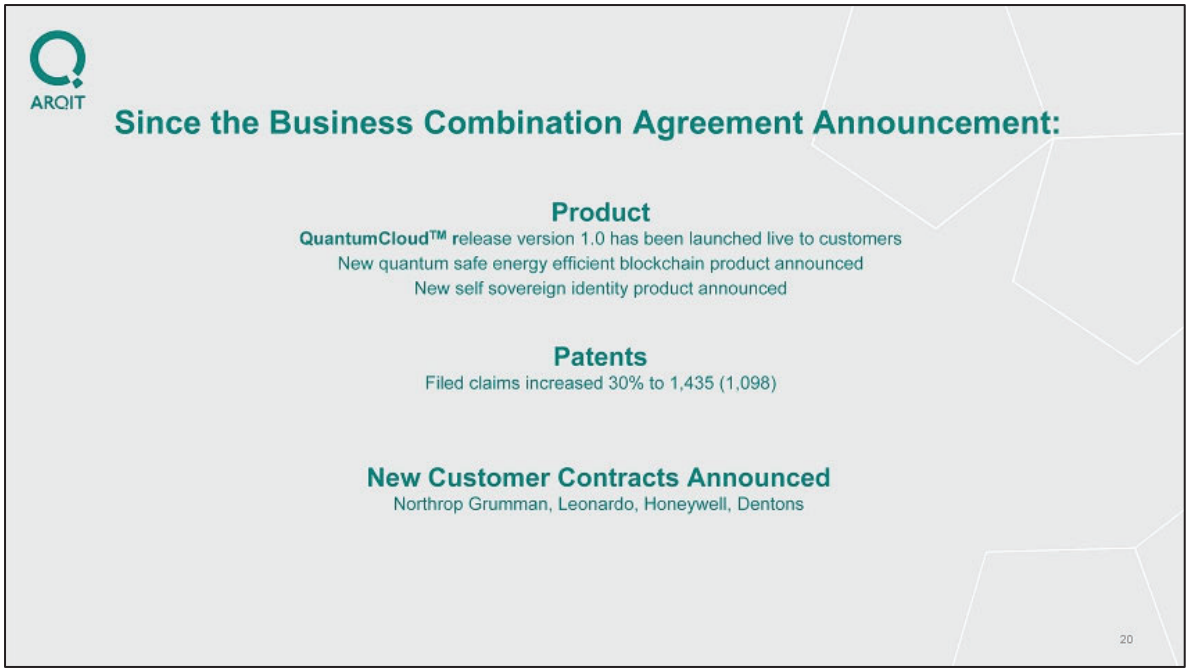
f) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology, and as confirmed by CW-2, the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making it more expensive and less reliable.

245. On August 9, 2021, Defendants Ritchie and Williams gave an investor presentation titled "Arqit, Stronger simpler encryption, August 2021." On August 11, 2021, Arqit filed a copy of the slide deck used for the presentation and a transcript of the presentation with the SEC filed pursuant to Rule 425 under the Securities Act and deemed filed pursuant to Rule 14a-12 under the Exchange Act.[136] As such, the presentation and transcript were prospectuses under SEC Rules and the Securities Act.

246. Slides 5 and 23-28 of the presentation discussed Centricus, the proposed Merger, and reasons for the Merger. For example, Slide 24 was titled "Highly Attractive Investment Case" and Slide 28 was titled "Transaction represents an attractive valuation to peers."

247. Slide 20 again stated that since the Merger announcement, ***{FS40}*** "***QuantumCloud™ Release version 1.0 has been launched live to customers***":

[136] Available at www.sec.gov/Archives/edgar/data/1859690/000110465921103311/tm2124825d2_425.htm.



248. According to the transcript of that August 9, 2021 presentation filed by Arqit Quantum with the SEC, Defendant Ritchie opened the presentation by stating:

> I am the Chief Executive Officer of Centricus Acquisition Corp. Our Board has unanimously recommended a merger with Arqit…. The merger application to the SEC has been approved and the transaction has now been deemed effective…. As a sponsor group, we're incredibly enthused by the opportunity that we believe Arqit will be delivering to our shareholders.

249. According to the transcript of that August 9, 2021 presentation filed by Arqit Quantum with the SEC, Defendant Williams stated during the presentation:

> ***{FS41}*** ***We recently announced that the QuantumCloud™ product is live for service*** and we already have over $130 million of signed committed revenue contracts but take a look at what our customers are saying about our products.
>
> ***
>
> ***{FS42}*** ***So, customers are using the Arqit products today*** and they are universally finding it to be an important part of their technology future.
>
> ***
>
> ***{FS43}*** ***The product that is in the market today being sold to and used by customers today.***

250. FS40-43 informed the public that Arqit was purportedly selling a fully operational product. They were untrue statements of material fact and omitted to state material facts because, at the time they were made and at the time of the Offering, QuantumCloud was still an early-stage prototype unable to encrypt anything in practical use, no commercial customer was using Arqit's software with live data, Arqit's system could not meaningfully use common internet protocols, and the success of Arqit's system required widespread adoption of new communications protocols before it could be ready for commercial use, as evidenced by:

a) According to the April 2022 *WSJ* Article, the *WSJ* interviewed several former employees and reviewed internal Arqit documents which revealed that, at the time of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data, and the success of Arqit's system required widespread adoption of new communications protocols and standards before QuantumCloud could be functional and thus QuantumCloud was not universally applicable to every edge device and cloud machine in the world;

b) As reported by the April 2022 *WSJ* Article, British cyber security officials questioned the viability of Arqit's encryption technology in a meeting with Arqit in the summer of 2020;

c) Arqit's Chief Revenue Officer resigned in April 2021 over concerns about the lack of maturity of Arqit's encryption technology and related revenue forecasts;

d) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use;

e) According to CW-3, who was later corroborated by additional members of the global cybersecurity community who published a scientific article alongside CW-3, a review of Arqit's ARQ19 patent for satellite-based quantum key distribution revealed that Arqit's proposed satellite protocol was not truly quantum safe; and

f) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology, and as confirmed by CW-2, the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making it more expensive and less reliable.

251. On August 18, 2021, Arqit Limited and Centricus held a Public Investor and Analyst Day, where Defendants Ritchie and Williams gave a presentation titled "Arqit, Stronger Simpler Encryption, August 2021." A copy of the slide deck used for the presentation and the transcript of the presentation were filed by Arqit Limited with the SEC on August 19, 2021 pursuant to Rule 425 under the Securities Act and deemed filed pursuant to Rule 14a-12 under the Exchange Act.[137] As such, the presentation and transcript were prospectuses under SEC Rules and the Securities Act.

[137] Available at www.sec.gov/Archives/edgar/data/1859690/000110465921107718/tm2125500d1_425.htm

252. Slides 4 and 22-27 of the presentation discussed Centricus, the proposed Merger, and reasons for the Merger. For example, Slide 23 was stated "Highly Attractive Investment Case" and Slide 27 was titled "Transaction represents an attractive valuation to peers."

253. Slide 19 in the presentation for Investor and Analyst Day was identical to the slides discussed above at paragraph 247 and falsely stated that ***{FS44}*** "***QuantumCloud™ Release version 1.0 has been launched live to customers***."

254. According to the transcript of the August 18, 2021 presentation filed by Arqit Quantum with the SEC, Defendant Ritchie opened the Investor and Analyst Day by stating:

> I'm Garth Richie and Chief Executives of Centricus Acquisition Corp. On behalf of our board and our chairman Manfredi Lefebvre, we are delighted to bring, um, the business combination, which we are presenting to you today, which is Arqit. Um, the founder and CEO David will talk to you in a second. I would just say to you that we are, um, have $345 million in trust. Um, we have already had our record date and we expect the AGM to be the last day of the month, the 31st of August. Um, we are currently trading in the market. Uh, we have reasonably good liquidity, we're trading just in and around the bond flow or the trust value.

255. According to the transcript of the August 18, 2021 presentation filed by Arqit, Defendant Williams, again, falsely claimed Arqit's encryption technology was "live with customers":

> ***{FS45} The product is live with customers today. We're already taking the software to market. … {FS46} The backlog, or rather the pipeline also includes a backlog of $130 million of binding revenue contracts. So these are contracts where the revenues will definitely be delivered.***

256. FS44-46, which informed the public that Arqit was selling a fully operational product, were untrue statements of material fact and omitted to state material facts because, at the time they were made and at the time of the Offering, QuantumCloud was still an early-stage prototype unable to encrypt anything in practical use, no commercial customer was using Arqit's software with live data, Arqit's system could not meaningfully use common internet protocols,

and the success of Arqit's system required widespread adoption of new communications protocols before it could be ready for commercial use, as evidenced by:

a) According to the April 2022 *WSJ* Article, the *WSJ* interviewed several former employees and reviewed internal Arqit documents which revealed that, at the time of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data, and the success of Arqit's system required widespread adoption of new communications protocols and standards before QuantumCloud could be functional and thus QuantumCloud was not universally applicable to every edge device and cloud machine in the world;

b) As reported by the April 2022 *WSJ* Article, British cyber security officials questioned the viability of Arqit's encryption technology in a meeting with Arqit in the summer of 2020;

c) Arqit's Chief Revenue Officer resigned in April 2021 over concerns about the lack of maturity of Arqit's encryption technology and related revenue forecasts;

d) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use;

e) According to CW-3, who was later corroborated by additional members of the global cybersecurity community who published a scientific article alongside CW-3, a review of Arqit's ARQ19 patent for satellite-based quantum key distribution revealed that Arqit's proposed satellite protocol was not truly quantum safe; and

f) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology, and as confirmed by CW-2, the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making it more expensive and less reliable.

257. Further, the statement in FS46 that "***The backlog, or rather the pipeline also includes a backlog of $130 million of binding revenue contracts. So these are contracts where the revenues will definitely be delivered***" was materially false and misleading because, at the time it was made and at the time of the Offering, as later revealed by the *WSJ* Article and confidential witnesses, the contractual revenue was not guaranteed to be delivered because, *inter alia*, Arqit's technology was still a mere prototype, lacked a safe channel to distribution encryption keys and required implementation of additional protocols and standards in order to work and be widely used across all customer devices.

VII. INAPPLICABILITY OF THE STATUTORY SAFE HARBOR

258. The federal statutory safe harbor provided for forward-looking statements under certain circumstances does not apply to any of the allegedly false statements pleaded in this Complaint. The statements alleged to be false and misleading herein all relate to then-existing facts and conditions. In addition, to the extent certain of the statements alleged to be false may be characterized as forward-looking, they were not identified as "forward-looking statements" when made, and there were no meaningful cautionary statements identifying important factors that could cause actual results to differ materially from those in the purportedly forward-looking statements.

259. In the alternative, to the extent that the statutory safe harbor is determined to apply to any forward-looking statements pleaded herein, the Defendants are liable for those false forward

looking statements because at the time each of those forward-looking statements was made, the speaker had actual knowledge that the forward-looking statement was materially false or misleading, and/or the forward-looking statement was authorized or approved by an executive officer of Arqit Quantum who knew that the statement was false when made.

VIII. CLAIMS FOR RELIEF UNDER THE SECURITIES ACT

260. The Securities Act Class asserts claims for strict liability under Sections 11, 12, and 15 of the Securities Act in connection with Arqit Quantum's Offering Materials, prospectuses, and Defendants Williams, Ritchie, and Arqit's oral communications made in connection with or pursuant to the Offering. Plaintiffs expressly disclaim any assertions of fraud or intentional or reckless conduct involving scienter as to the Securities Act claims.

COUNT I
For Violations of Section 11 of the Securities Act
(On Behalf of the Securities Act Class Against All Securities Act Defendants)

261. Plaintiff repeats and realleges each and every allegation contained in paragraphs 1 through 260 above as if fully set forth herein.

262. This Count is asserted on behalf of Plaintiffs and the Securities Act Class against all the Securities Act Defendants pursuant to Section 11 of the Securities Act, 15 U.S.C. §77k.

263. This Count expressly excludes and disclaims any allegation that could be construed as alleging fraud or intentional or reckless conduct, as this Count is solely based on claims of strict liability and/or negligence under the Securities Act. For purposes of asserting this Count, Plaintiff does not allege that the defendants named in this Count acted with scienter or fraudulent intent, which are not elements of a Section 11 claim.

264. Section 11(a) of the Securities Act provides that:

> In case any part of the registration statement, when such part became effective, contained an untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein not

> misleading, any person acquiring such security (unless it is proved that at the time of such acquisition he knew of such untruth or omission) may, either at law or in equity, in any court of competent jurisdiction, sue—(1)every person who signed the registration statement; (2)every person who was a director of (or person performing similar functions) or partner in the issuer at the time of the filing of the part of the registration statement with respect to which his liability is asserted; (3)every person who, with his consent, is named in the registration statement as being or about to become a director, person performing similar functions, or partner;…

265. At the time the Registration Statement became effective, the Registration Statement contained untrue statements of material fact or omitted to state a material facts required to be stated therein or necessary to make the statements therein not misleading.

266. Plaintiffs and the other members of the Securities Act Class purchased or otherwise acquired Arqit Quantum securities pursuant or traceable to the Registration Statement.

267. Arqit Quantum is the registrant for the securities registered in the Registration Statement for the offering of securities in connection with the Merger.

268. The Securities Act Defendants, individually and in concert, directly or indirectly, disseminated or approved the untrue statements of material fact in the Registration Statement specified above or omitted to state material facts required to be stated in the Registration Statement necessary to make the statements in the Registration Statement not misleading.

269. As the issuer of the securities, Arqit Quantum is strictly liable to Plaintiffs and the Securities Act Class for the untrue statements of material fact and material omissions contained in the Registration Statement.

270. The Securities Act Individual Defendants were signatories of the Registration Statement, were directors of Arqit Quantum or Centricus at the time the Registration Statement was filed with the SEC, or were named in the Registration Statement, with their consent, as about to become directors of Arqit Quantum. As a result, the Securities Act Individual Defendants are

liable to Plaintiffs and the Securities Act Class for the material misstatements and omissions in the Registration Statement.

271. The value of Arqit Quantum securities has declined substantially as a result of the Securities Act Defendants violations of the Securities Act.

272. As a result of the wrongful conduct alleged herein, Plaintiffs and other members of the Securities Act Class have suffered damages in an amount to be established at trial.

273. Less than one year elapsed since the time that Plaintiffs discovered, or could reasonably have discovered, the facts upon which this Complaint and the first complaint alleging violations of the Securities Act are based, and the date the first complaint alleging violations of the Securities Act was filed. Less than three years elapsed since the time that the securities at issue in this Complaint were bona fide offered to the public.

274. On April 14, 2023, the date the first complaint alleging violations of the Securities Act was filed, Arqit Quantum ordinary shares closed at $1.24 per share and Arqit warrants closed at $0.33 per warrant.

275. By reason of the foregoing, the Securities Act Defendants are each jointly and severally liable for violations of Section 11 of the Securities Act to Plaintiffs and the other members of the Securities Act Class for substantial damages pursuant to Section 11(e), which they suffered in connection with their purchase of Arqit Quantum securities.

COUNT II
For Violations of Section 12(a)(2) of the Securities Act
(On Behalf of the Securities Act Class Against
Defendants Arqit Quantum, Williams, and Ritchie)

276. Plaintiff repeats and realleges each and every allegation contained in paragraphs 1 through 275 above as if fully set forth herein.

277. This Count is asserted on behalf of Plaintiffs and the Securities Act Class against Defendants Arqit Quantum, Williams, and Ritchie pursuant to Section 12(a)(2) of the Securities Act, 15 U.S.C. §77l(a)(2).

278. This Count expressly excludes and disclaims any allegation that could be construed as alleging fraud or intentional or reckless conduct, as this Count is solely based on claims of strict liability and/or negligence under the Securities Act. For purposes of asserting this Count, Plaintiffs do not allege that defendants named in this Count acted with scienter or fraudulent intent, which are not elements of a Section 12(a)(2) claim.

279. Section 12(a)(2) of the Securities Act provides that:

> Any person who…offers or sells a security (whether or not exempted by the provisions of section 77c of this title, other than paragraphs (2) and (14) of subsection (a) of said section), by the use of any means or instruments of transportation or communication in interstate commerce or of the mails, by means of a prospectus or oral communication, which includes an untrue statement of a material fact or omits to state a material fact necessary in order to make the statements, in the light of the circumstances under which they were made, not misleading (the purchaser not knowing of such untruth or omission), and who shall not sustain the burden of proof that he did not know, and in the exercise of reasonable care could not have known, of such untruth or omission, shall be liable, subject to subsection (b), to the person purchasing such security from him, who may sue either at law or in equity in any court of competent jurisdiction, to recover the consideration paid for such security with interest thereon, less the amount of any income received thereon, upon the tender of such security, or for damages if he no longer owns the security.

280. Defendants Arqit Quantum, Williams, and Ritchie issued the Prospectus on July 30, 2021 and made oral and written communications in the Other Prospectuses on August 2, 3, 9, 11, 18, and 19, 2021 for the purpose of offering Arqit Quantum securities in connection with the Merger.

281. The Prospectus and the Other Prospectuses contained untrue statements of material fact or omitted to state material facts necessary in order to make the statements, in the light of the circumstances under which they were made, not misleading.

282. The statements made by Arqit Quantum, Williams, and Ritchie in the Other Prospectuses were made in connection with the Merger and the Offering.

283. Arqit Quantum was a statutory seller because it transferred title in Arqit Securities from itself to members of the Securities Act Class.

284. Williams and Ritchie were statutory sellers under Section 12(a)(2) because they actively solicited the exchange of Centricus securities for Arqit Quantum securities for their own financial benefit. Williams had a financial interest in the completion of the Merger and Offering, as his share of Arqit Limited would be acquired as part of the Business Combination Agreement and become publicly tradeable (i.e. liquid). Ritchie had a financial interest in the completion of the Merger and Offering because after the Merger he would become a director of Arqit Quantum and a merger was necessary for Centricus to avoid having to return the money from the Trust Fund to Centricus investors.

285. Less than one year elapsed since the time that Plaintiffs discovered, or could reasonably have discovered, the facts upon which this Complaint and the first complaint alleging violations of the Securities Act are based, and the date the first complaint alleging violations of the Securities Act was filed. Less than three years elapsed since the time that the securities at issue in this Complaint were bona fide offered to the public.

286. By reason of the foregoing, Arqit Quantum, Williams, and Ritchie are liable for violations of Section 12(a)(2) of the Securities Act to Plaintiff and the other members of the Securities Act Class who purchased or otherwise acquired Arqit Quantum securities pursuant to the Prospectus and who were damaged thereby.

287. By reason of the foregoing, Arqit Quantum, Williams, and Ritchie are liable to Plaintiffs and the Securities Act Class for the consideration paid for Arqit securities in and/or

traceable to the Merger, with interest thereon, less the amount of any income received thereon, upon the tender of such security, or for damages if Plaintiffs or the member of the Securities Act Class no longer owns the security.

COUNT III
For Violations of Section 15 of the Securities Act
(On Behalf of the Securities Act Class Against the Securities Act Individual Defendants)

288. Plaintiff repeats and realleges each and every allegation contained in paragraphs 1 through 287 above as if fully set forth herein.

289. This Count is asserted on behalf of Plaintiffs and the Securities Act Class against the Securities Act Individual Defendants based upon Section 15 of the Securities Act, 15 U.S.C. §77o.

290. This Count expressly excludes and disclaims any allegation that could be construed as alleging fraud or intentional or reckless conduct, as this Count is solely based on claims of strict liability and/or negligence under the Securities Act. For purposes of asserting this Count, Plaintiffs do not allege that defendants named in this Count acted with scienter or fraudulent intent, which are not elements of a Section 15 claim.

291. As set forth above, Arqit Quantum is strictly liable under Sections 11 and 12(a)(2) of the Securities Act for untrue statements and omissions of material fact in the Offering Materials.

292. The Securities Act Individual Defendants participated in the operation and management of Arqit Quantum, and conducted and participated, directly and indirectly, in the conduct of Arqit Quantum's business affairs. Because of their senior positions, they knew the adverse non-public information about Arqit Quantum's misstatements of its business, operations, and prospects.

293. As officers and/or directors of a publicly owned company, the Securities Act Individual Defendants had a duty to disseminate accurate and truthful information with respect to

Arqit Quantum's business, operations, and prospects, and to correct promptly any public statements issued by Arqit Quantum, which had become materially false or misleading.

294. Because of their positions of control and authority as senior officers, the Securities Act Individual Defendants were able to, and did, control the contents of the Offering Materials and the Other Prospectuses.

295. By virtue of the foregoing, the Securities Act Individual Defendants were "controlling persons" of Arqit Quantum within the meaning of Section 15 of the Securities Act.

296. The Securities Act Individual Defendants also had the power and influence, and exercised the same, to cause Arqit Quantum to engage in the acts described herein, including by causing Arqit Quantum to conduct the offering of securities pursuant to the Offering Materials.

297. Less than one year elapsed since the time that Plaintiffs discovered, or could reasonably have discovered, the facts upon which this Complaint and the first complaint alleging violations of the Securities Act are based, and the date the first complaint alleging violations of the Securities Act was filed. Less than three years elapsed since the time that the securities at issue in this Complaint were bona fide offered to the public.

298. By reason of the above conduct, the Securities Act Individual Defendants are liable for Arqit Quantum's wrongful conduct to the same extent Arqit Quantum is liable under Sections 11 and 12(a)(2) of the Securities Act to Plaintiffs and members of the Securities Act Class who purchase or otherwise acquired Arqit Quantum securities pursuant or traceable to the Offering Materials.

IX. ADDITIONAL ALLEGATIONS PERTAINING TO PLAINTIFFS' CLAIMS UNDER SECTIONS 10(b) AND 20(a) OF THE EXCHANGE ACT AND SEC RULE 10b-5

A. Materially False and Misleading Statements in the Offering Materials and Prospectuses

299. On July 29 and 30, 2021, Arqit Quantum issued the Offering Materials as indicated above in paragraphs 178 and 180, that contained untrue statements of material fact or omitted material facts to make the statements therein not misleading.

300. Defendant Williams is liable under the Exchange Act for the statements in the Offering Materials as he signed the Registration Statement and therefore made the statements in the Offering Materials.

301. Defendant Pointon is liable under the Exchange Act for the statements in the Registration Statement because, as the CFO of Arqit, he had authority over statements being made in the Offering Materials.

302. Arqit Quantum is also liable under the Exchange Act for the statements in the Offering Materials as a maker of the statements therein.

303. As alleged above in Section VI.B, on August 2, 3, 9, 11, 18, and 19, 2021, Arqit Quantum, and Williams made public statements orally, in writing, or in SEC filings in the Other Prospectuses. Arqit Quantum and Williams are liable under the Exchange Act for these statements as the makers of the statements.

304. To avoid duplication, Plaintiffs incorporate FS1-46 in the Offering Materials and other Prospectuses and the allegations of the reasons that these statements were untrue statements of material fact or omitted to state material facts alleged in Section VI, *supra*.

B. Materially False and Misleading Statements in September 2021

1. September 7, 2021 CNBC Interview

305. On September 7, 2021, Defendant Williams appeared for an interview on CNBC to discuss Arqit's NASDAQ market debut and business. A video recording of the interview is available on youtube.com.[138]

306. During the interview, Williams stated:

> ***{FS47}*** ***Arqit's invented some new technology which is called quantum encryption - we found a way to make keys that can be deposited onto any device, could be your mobile phone or a fighter jet, doesn't matter, and those keys are unbreakable and it's not possible to steal them. And we do that by combining quantum delivery of information from satellites to data centers and then a little piece of software on your device which borrows the information in the data centers and uses it as an ingredient in the creation of these new keys***.
>
> ***
>
> ***{FS48}*** ***That product is live today. In two years' time, when we launch our satellites with Virgin, those satellites basically upgrade the network - they add an extra piece of security as a result of that quantum delivery of information. So, we've got a product that's live today. Its technology gets upgraded in two years' time but fundamentally it's just the same product throughout the model. So, we're very focused on selling a single product selling that in scale*** and ***{FS49}*** ***the great benefit of coming to the NASDAQ market is that we now have comfortably more money than we need to execute our plan so we don't need to raise any more money ever. We have about twice the money that we need to take this business to scale*** and because the global addressable market for our software is basically every device in the world, we're pretty convinced that this can be Britain's biggest ever tech scale-up.
>
> ***{FS50}*** ***Services are available now and producing revenue, but will be scaled tremendously in 2023 with the launch of 2 quantum satellites***.

307. FS47-50, which informed the public that Arqit was purportedly selling a fully operational product, was false and misleading because, at the time they were made and throughout the Class Period, QuantumCloud was only an early-stage prototype unable to encrypt anything in

[138] www.youtube.com/watch?v=U7xwc8l6Fj0&t=85s

practical use, no commercial customer was using Arqit's software with live data, Arqit's system could not meaningfully use common internet protocols, and the success of Arqit's system required widespread adoption of new communications protocols, as evidenced by:

a) According to the April 2022 *WSJ* Article, the *WSJ* interviewed several former employees and reviewed internal Arqit documents which revealed that, at the time of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data, and the success of Arqit's system required widespread adoption of new communications protocols and standards before QuantumCloud could be functional and thus QuantumCloud was not universally applicable to every edge device and cloud machine in the world;

b) As reported by the April 2022 *WSJ* Article, British cyber security officials questioned the viability of Arqit's encryption technology in a meeting with Arqit in the summer of 2020;

c) Arqit's Chief Revenue Officer resigned in April 2021 over concerns about the lack of maturity of Arqit's encryption technology and related revenue forecasts;

d) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use;

e) According to CW-3, who was later corroborated by additional members of the global cybersecurity community who published a scientific article alongside CW-3, a

review of Arqit's ARQ19 patent for satellite-based quantum key distribution revealed that Arqit's proposed satellite protocol was not truly quantum safe; and

f) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology, and as confirmed by CW-2, the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making it more expensive and less reliable.

308. Further, FS49 (that ***"we now have comfortably more money than we need to execute our plan so we don't need to raise any more money ever"***) was also an untrue statement of material fact because, as confirmed by CW-2, Arqit's satellite technology was very expensive which was compounded by the realities of atmospheric conditions, and therefore the technology was unlikely to be used or adopted outside of niche use cases.

2. September 9, 2021 Gateway Conference

309. On September 9, 2021, at approximately 10:30 a.m., while the U.S. market for Arqit Quantum securities was open, Defendant Williams presented on behalf of Arqit Quantum at the 10th Annual Gateway Conference. An audio recording of the presentation is available through Bloomberg. During that presentation, Williams falsely claimed that Arqit's satellite technology was "very low cost" and capable of "hyperscale," stating:

> ***{FS51}*** ***And very low cost. So this is a low variable cost model, and therefore it's eminently capable of hyperscale***. Finally, we only need two [of] the satellites to deliver enough randomness to create two quadrillion keys per annum. So you are not going to see Arqit suddenly producing a requirement for large volumes of CapEx. ***{FS52}*** ***This company is capable of hyper scaling with the capital that it's already raised***. And as I as I said, in the press release earlier this week, the capital that we raised in this bank transaction funds the business plus very significant contingency of approximately two times the funding requirements.

310. FS51-52 were untrue statements of material fact and omitted to state material facts necessary to make the statements not misleading because, at the time these statements were made and throughout the Class Period, Defendants Williams and Arqit knew that Arqit's technology as designed with the use of satellites would be so expensive that it was unlikely to be used or adopted outside of niche uses, and the satellite transmission of an encryption key would likely only be successful 50% of the time due to atmospheric conditions. Further, at the time FS51-52 were made, Arqit's software was an early stage prototype that could not encrypt anything of practical use, the success of Arqit's system required widespread adoption of new communications protocols, Arqit would not be able to scale its technology, as represented, and given the enormous cost of the satellite technology, the capital raised in the Offering was grossly insufficient to scale Arqit's technology. These conclusions are evidenced by:

a) According to the April 2022 *WSJ* Article, the *WSJ* interviewed several former employees and reviewed internal Arqit documents which revealed that, at the time of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data, and the success of Arqit's system required widespread adoption of new communications protocols and standards before QuantumCloud could be functional and thus QuantumCloud was not universally applicable to every edge device and cloud machine in the world;

b) As reported by the April 2022 *WSJ* Article, British cyber security officials questioned the viability of Arqit's encryption technology in a meeting with Arqit in the summer of 2020;

c) Arqit's Chief Revenue Officer resigned in April 2021 over concerns about the lack of maturity of Arqit's encryption technology and related revenue forecasts;

d) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use;

e) According to CW-3, who was later corroborated by additional members of the global cybersecurity community who published alongside CW-3, a review of Arqit's ARQ19 patent for satellite-based quantum key distribution revealed that Arqit's proposed satellite protocol was not truly quantum safe; and

f) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology, and as confirmed by CW-2, the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making it more expensive and less reliable.

3. September 2021 20-F

311. On September 10, 2021, after the U.S. market for Arqit securities had closed for the day, Arqit Quantum filed its Shell Company Report Pursuant to Section 13 or 15(D) of the Exchange Act on Form 20-F with the SEC (the "September 2021 20-F").[139] The September 2021 20-F was signed by Defendant Williams. As stated in the September 2021 20-F, the date of the event requiring the issuance of the shell report was September 1, 2021.

[139] Available at www.sec.gov/Archives/edgar/data/1859690/000110465921114717/tm2127142d1_20f.htm.

312. The September 2021 20-F specifically stated (at 1) that the "risks provided under the 'Risk Factors' section in the [Prospectus], which section is incorporated herein by reference."

313. FS24-26, alleged above, were made in the Risk Factors section of the Prospectus, and were therefore incorporated by reference into, and restated in, the September 2021 20-F.

314. The September 2021 20-F also stated (at 4) that "[i]nformation regarding the Company's business is included in the [Prospectus] under the sections titled 'Information Related to Arqit' and 'Arqit's Management's Discussion and Analysis of Financial Condition and Results of Operations'" was "incorporated herein by reference," and that (at 5) "[t]he discussion and analysis of the financial condition and results of operations of the Company is included in the [Prospectus] under the section titled 'Arqit's Management's Discussion and Analysis of Financial Condition and Results of Operations,'" which was "incorporated herein by reference."

315. FS2-6, 8-10, 15-17, and 19-23 alleged above, were made in the Information Related to Arqit section of the Prospectus, and were therefore incorporated by reference into, and restated in, the September 2021 20-F.

316. FS2-4, 7, 11-13, 17-18, and 21-22, as alleged above, were made in the Arqit's Management's Discussion and Analysis of Financial Condition and Results of Operations section of the Prospectus, and were therefore incorporated by reference into, and restated in, the September 2021 20-F.

317. The false statements incorporated by reference into the September 2021 20-F were materially false and misleading when restated in the September 2021 20-F for the same reasons as why they were materially false and misleading in the Prospectus, and because, at the time they were restated and throughout the Class Period, QuantumCloud was an early-stage prototype unable to encrypt anything in practical use, no commercial customer was using Arqit's software with live

data, Arqit's system could not meaningfully use common internet protocols, and the success of Arqit's system required widespread adoption of new communications protocols, Arqit's satellite technology was so expensive that it was unlikely to be used or adopted outside of niche uses, and the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, as evidenced by:

a) According to the April 2022 *WSJ* Article, the *WSJ* interviewed several former employees and reviewed internal Arqit documents which revealed that, at the time of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data, and the success of Arqit's system required widespread adoption of new communications protocols and standards before QuantumCloud could be functional and thus QuantumCloud was not universally applicable to every edge device and cloud machine in the world;

b) As reported by the April 2022 *WSJ* Article, British cyber security officials questioned the viability of Arqit's encryption technology in a meeting with Arqit in the summer of 2020;

c) Arqit's Chief Revenue Officer resigned in April 2021 over concerns about the lack of maturity of Arqit's encryption technology and related revenue forecasts;

d) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use;

e) According to CW-3, who was later corroborated by additional members of the global cybersecurity community who published a scientific article alongside CW-3, a review of Arqit's ARQ19 patent for satellite-based quantum key distribution revealed that Arqit's proposed satellite protocol was not truly quantum safe; and

f) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology, and as confirmed by CW-2, the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making it more expensive and less reliable.

C. Materially False and Misleading Statements in the Fourth Quarter of 2021

1. December 16, 2021 Press Release

318. On December 16, 2021, at approximately 8:00 am Eastern Time, before the U.S. market for Arqit Quantum securities opened for the day, Arqit Quantum issued a press release titled "Arqit Quantum Inc. announces financial and operational results for the fiscal year ended 30 September 2021."

319. Also on December 16, 2021, before the U.S. market for Arqit Quantum securities opened for the day, Arqit Quantum filed a Form 6-K with the SEC.[140] The Form 6-K attached the December 16, 2021 press release as an exhibit. The Form 6-K was signed by Defendant Williams.

320. In the press release, Arqit stated that ***{FS53}*** "***QuantumCloud™ Release 1.0 launched in July with full commercialisation in September***."

[140] Available at www.sec.gov/Archives/edgar/data/1859690/000110465921150275/tm2135516d1_6k.htm.

321. FS53 informed the public that Arqit was selling a fully operational product. It was false and misleading because, at the time it was made and throughout the Class Period, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use, no commercial customer was using Arqit's software with live data, Arqit's system could not meaningfully use common internet protocols, and the success of Arqit's system required widespread adoption of new communications protocols, as evidenced by the following:

a) According to the April 2022 *WSJ* Article, the *WSJ* interviewed several former employees and reviewed internal Arqit documents which revealed that, at the time of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data, and the success of Arqit's system required widespread adoption of new communications protocols and standards before QuantumCloud could be functional and thus QuantumCloud was not universally applicable to every edge device and cloud machine in the world;

b) As reported by the April 2022 *WSJ* Article, British cyber security officials questioned the viability of Arqit's encryption technology in a meeting with Arqit in the summer of 2020;

c) Arqit's Chief Revenue Officer resigned in April 2021 over concerns about the lack of maturity of Arqit's encryption technology and related revenue forecasts;

d) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use;

e) According to CW-3, who was later corroborated by additional members of the global cybersecurity community who published a scientific article alongside CW-3, a review of Arqit's ARQ19 patent for satellite-based quantum key distribution revealed that Arqit's proposed satellite protocol was not truly quantum safe; and

f) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology, and as confirmed by CW-2, the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making it more expensive and less reliable.

322. Therefore, Arqit had not achieved full commercialization in September 2021.

2. December 16, 2021 Investor Conference Call

323. Also on December 16, 2021, at approximately 10:30 a.m. Eastern Time, while the U.S. market for Arqit Quantum securities was open, Arqit Quantum held an investor conference call to discuss its fiscal year 2021 financial results. A transcript of the conference call was prepared by Bloomberg. A copy of the slide presentation used during the conference call was also attached to the December 16, 2021 Form 6-K, which was signed by Defendant Williams. Defendants Williams and Pointon participated in the conference call for Arqit Quantum.

324. On that conference call, Defendant Williams falsely claimed Arqit's platform was "scalable" with purportedly "low operating cost" stating in relevant part:

> ***{FS54}*** ***This platform is therefore infinitely scalable, has a very low operating cost and enables us to take this business to hyperscale.*** Any connected device is a potential customer for Arqit, however in Phase 1, we've been focusing on selling private instance to customers, mainly in the defense market place. Also on selling the software, ***{FS55}*** ***which is working in its preliminary method*** to telecom, financial services, and IoT or automation customers. We've already signed contracts across all of those target markets and made a number of press releases on

> these subjects. We're now very focused on monetizing those early contracts that we've signed by delivering the software to those customers to trigger billing in the current six month period.[141]

325. Also during that conference call, Defendant Pointon stated that {FS56} "***Arqit commenced full commercialization of its QuantumCloud product in September [2021], shortly before the close of our 2021 fiscal year end***."[142]

326. FS54-56 were untrue statements of material fact and omitted to state material facts necessary to make the statements not misleading because, at the time they were made and throughout the Class Period, QuantumCloud was not "infinitely scalable," did not have "low operating cost," was not working in its preliminary method, and could not take Arqit to hyperscale. Rather, QuantumCloud was an early-stage prototype unable to encrypt anything in practical use, no commercial customer was using Arqit's software with live data, Arqit's system could not meaningfully use common internet protocols, the success of Arqit's system required widespread adoption of new communications protocols, and Arqit's satellite-based solution for QuantumCloud was in fact prohibitively expensive and might only work 50% of the time, as evidenced by the following:

a) According to the April 2022 *WSJ* Article, the *WSJ* interviewed several former employees and reviewed internal Arqit documents which revealed that, at the time of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data, and the success of Arqit's system required widespread adoption of new communications

[141] 12/16/2021 Tr. at 3.

[142] 12/16/2021 Tr. at 4.

protocols and standards before QuantumCloud could be functional and thus QuantumCloud was not universally applicable to every edge device and cloud machine in the world;

b) As reported by the April 2022 *WSJ* Article, British cyber security officials questioned the viability of Arqit's encryption technology in a meeting with Arqit in the summer of 2020;

c) Arqit's Chief Revenue Officer resigned in April 2021 over concerns about the lack of maturity of Arqit's encryption technology and related revenue forecasts;

d) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use;

e) According to CW-3, who was later corroborated by additional members of the global cybersecurity community who published a scientific article alongside CW-3, a review of Arqit's ARQ19 patent for satellite-based quantum key distribution revealed that Arqit's proposed satellite protocol was not truly quantum safe; and

f) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology, and as confirmed by CW-2, the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making it more expensive and less reliable.

3. December 2021 20-F

327. On December 16, 2021, at approximately 8:30 a.m., the Company filed its annual report pursuant to Section 13 or 15(D) of the Exchange Act on Form 20-F with the SEC (the

"December 2021 20-F").[143] The December 2021 20-F reported Arqit's operational and financial results for the fiscal year ended September 30, 2021. The December 2021 20-F was signed by Defendant Williams. Moreover, the December 2021 20-F was accompanied by four certifications pursuant to the Sarbanes-Oxley Act of 2002, one each signed by both Defendant Williams and Defendant Pointon pursuant to both Sections 302 and 906 of the Act, respectively. In the Section 302 certifications, Williams and Pointon certified that the 20-F "does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading…"

328. In the December 2021 20-F, the Section 10(b) Defendants repeated many of the materially false and misleading statements made in the Offering Materials. As alleged below, these statements were materially false and misleading when made. Further, the "as of" date of the December 2021 20-F was September 30, 2021, the end of Arqit's 2021 fiscal year, and only 23 days after Arqit securities were listed on the NASDAQ. There is a strong inference that the true state of affairs as it existed on September 7, 2021 (and as described by the *WSJ* Article), also existed 23 days later on September 30, 2021.

329. In the December 2021 20-F, the Section 10(b) Defendants repeatedly stated that Arqit had "pioneered unique quantum encryption technology" or created "groundbreaking" protocol that had "universal application" and would protect any networked devices from a cyber attack from a quantum computer, stating, in relevant part:

> Arqit is a cybersecurity company ***{FS57}*** ***that has pioneered a unique quantum encryption technology which makes the communications links of any networked***

[143] Available at www.sec.gov/ix?doc=/Archives/edgar/data/1859690/000110465921150276/arqq-20210930x20f.htm.

device secure against current and future forms of cyber attack — even an attack from a quantum computer.[144]

***

Arqit is a cybersecurity company ***{FS58}*** ***that has pioneered a unique quantum encryption technology which makes the communications links of any networked device secure against current and future forms of cyber attack — even an attack from a quantum computer***…. ***{FS59}*** ***The software has universal application to every edge device and cloud machine in the world.*** ***{FS60}*** ***Arqit has not only invented a ground-breaking new quantum protocol, but it has also found a way to translate the benefits of quantum security to end point devices.***[145]

***

{FS61} ***Arqit's platform creates symmetric encryption keys, which is a cyber-encryption technology that is secure against all forms of attack including by quantum computers.***[146]

***

As a result [of QuantumCloud], ***{FS62}*** ***Arqit can store and transact data securely in the cloud and to include any form of end point device within this security boundary.***[147]

***

{FS63} Arqit has ***invented a unique quantum encryption technology which makes the communications links of any networked device secure against current and future forms of cyber attack — even an attack from a quantum computer***.[148]

***

{FS64} ***QuantumCloud™ provides some very significant advantages to such organizations, even though its root source of entropy is not as fully quantum safe as satellite delivery will be. As a result, Arqit believes a very significant early source of revenue will be simply upgrading existing symmetric key systems to***

[144] December 2021 20-F at 28.

[145] December 2021 20-F at 39.

[146] December 2021 20-F at 33.

[147] December 2021 20-F at 32.

[148] December 2021 20-F at 41.

> ***Metro QuantumCloud™ which can be done remotely at low frictional and financial cost.***[149]
>
> ***
>
> Arqit plans to launch its first two quantum satellites by 2023, ***{FS65}*** ***which will lead to a significant increase in the level of security offered by its end to end system and improve the attractiveness of its products to potential customers***. In July 2021, Arqit launched an interim version of QuantumCloud™ in which the source of root keys will be simulated until the satellites launch and supplied by a terrestrial quantum random number generator. Although this is a significant improvement over existing technology, it is not as secure as the quantum satellite version of QuantumCloud™ will be.[150]

330. FS57-65 were untrue statements of material fact and omitted to state material facts necessary to make those statements not misleading because, *inter alia*, at the time they were made, Arqit's QuantumCloud product could not encrypt data in a quantum-safe manner, did not have universal application to every edge device and cloud machine in the world, and would not provide an early source of revenue, as evidenced by:

a) According to the April 2022 *WSJ* Article, the *WSJ* interviewed several former employees and reviewed internal Arqit documents which revealed that, at the time of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data, and the success of Arqit's system required widespread adoption of new communications protocols and standards before QuantumCloud could be functional and thus QuantumCloud was not universally applicable to every edge device and cloud machine in the world;

[149] December 2021 20-F at 32.

[150] December 2021 20-F at 41.

b) As reported by the April 2022 *WSJ* Article, British cyber security officials questioned the viability of Arqit's encryption technology in a meeting with Arqit in the summer of 2020;

c) Arqit's Chief Revenue Officer resigned in April 2021 over concerns about the lack of maturity of Arqit's encryption technology and related revenue forecasts;

d) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use;

e) According to CW-3, who was later corroborated by additional members of the global cybersecurity community who published a scientific article alongside CW-3, a review of Arqit's ARQ19 patent for satellite-based quantum key distribution revealed that Arqit's proposed satellite protocol was not truly quantum safe; and

f) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology, and as confirmed by CW-2, the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making it more expensive and less reliable.

331. Throughout the December 2021 20-F, the Section 10(b) Defendants also repeatedly stated that Arqit's platform, which included software and delivery of random numbers by satellite, could create symmetric encryption keys "in infinite volumes at minimal cost," "at scale," and at "low cost,"

{FS66} Arqit's product, called QuantumCloud™, ***creates unbreakable software encryption keys that are low cost and easy to use with no new hardware required.***[151]

***

{FS67} Arqit's product, called QuantumCloud™, ***creates unbreakable software encryption keys that are low cost and easy to use.***[152]

***

{FS68} ***The importance of Arqit's platform lies in its ability to "distribute" symmetric keys securely at scale by creating them at end points***. Although symmetric encryption keys are secure, to date there has been no secure way to create and distribute symmetric keys electronically. ***{FS69}*** ***Arqit's groundbreaking technology has solved these known issues. Its innovations create symmetric encryption keys at end points when they are needed, at scale, securely, at any kind of end point device and in groups of any size. With Arqit's technology, symmetric encryption keys are never "delivered", they are created at endpoints, and so they cannot be intercepted. This is a completely new way to create and distribute unbreakable symmetric keys that represents a groundbreaking, novel technology. The keys are created with what is known as a "mixed trust model" which means that no third party computer ever has the key, or sufficient information to recreate or guess the key. The key is never transmitted in creation across any network. It is therefore not possible for any third party to know or guess the key during creation.***[153]

***

Easily Scalable. Arqit's software, fulfilled from the cloud, ***{FS70}*** ***automatically creates keys in infinite volumes at minimal cost, resulting in low capital expenditure once deployed***. From an operating cost perspective, there is no human analysis or information processing required by Arqit's product, so personnel costs are limited to maintaining core infrastructure, marketing and customer support. ***{FS71}*** ***These factors make Arqit's products easily scalable for both Arqit and its customers***.[154]

***

{FS72} ***Arqit's pioneering technology provides a simple, cost-effective and secure way to create and distribute symmetric keys electronically that can be applied***

[151] December 2021 20-F at 28, 39.

[152] December 2021 20-F at 41.

[153] December 2021 20-F at 33.

[154] December 2021 20-F at 33.

universally across geographies, industries and devices, making it well placed to take advantage of this significant upcoming market opportunity.[155]

***

{FS73} The service is sold and fulfilled on a self-service basis in the cloud ***making it an easily scalable business model***.[156]

***

{FS74} Arqit plans to launch its first two quantum satellites by 2023, ***which will lead to a significant increase in the level of security offered by its end to end system and improve the attractiveness of its products to potential customers***.[157]

***

{FS75} ***QuantumCloud™ provides some very significant advantages to such organizations, even though its root source of entropy is not as fully quantum safe as satellite delivery will be. As a result, Arqit believes a very significant early source of revenue will be simply upgrading existing symmetric key systems to MetroQuantumCloud™ which can be done remotely at low frictional and financial cost.***[158]

***

Arqit's ARQ19 protocol is a fundamental cryptographical discovery, and ***{FS76}*** ***its DSCC invention allows quantum cryptography to be commercialized for the mass market.***[159]

332. FS66-76 were untrue statements of material fact and failed to disclose material information necessary to make those statements not misleading because at the time they were made and throughout the Class Period, Arqit's QuantumCloud product as designed with satellites was not easily scalable, and could not create keys "in infinite volumes at minimal cost" or at "low

[155] December 2021 20-F at 29.

[156] December 2021 20-F at 28, 39.

[157] December 2021 20-F at 41.

[158] December 2021 20-F at 32.

[159] December 2021 20-F at 31.

cost," and therefore could not take advantage of upcoming market opportunity or be commercialized for the mass market, as evidenced by:

a) According to the April 2022 *WSJ* Article, the WSJ interviewed several former employees and reviewed internal Arqit documents, which revealed that, at the time of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data, and the success of Arqit's system required widespread adoption of new communications protocols and standards before QuantumCloud could be functional and thus QuantumCloud was not universally applicable to every edge device and cloud machine in the world;

b) As reported by the April 2022 *WSJ* Article, British cyber security officials questioned the viability of Arqit's encryption technology in a meeting with Arqit in the summer of 2020;

c) Arqit's Chief Revenue Officer resigned in April 2021 over concerns about the lack of maturity of Arqit's encryption technology and related revenue forecasts;

d) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use;

e) According to CW-3, who was later corroborated by additional members of the global cybersecurity community who published a scientific article alongside CW-3, a review of Arqit's ARQ19 patent for satellite-based quantum key distribution revealed that Arqit's proposed satellite protocol was not truly quantum safe; and

f) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology, and as confirmed by CW-2, the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making it more expensive and less reliable.

333. Further, the December 2021 20-F falsely claimed Arqit had solved "all" the ongoing problem of safely distributing the encryption key by using quantum satellite technology, which included the issues identified by Arqit of geographic limitations of line of sight for simultaneous transmission and the risk of interception or hacking in the intervening time between transmissions, and that the addition of satellite transmission would increase customer security (not to mention the cost of satellite transmission):

> Arqit's solution combines world-leading innovation in two areas: a new form of quantum satellite and a software agent that can be downloaded onto any device. ***{FS77}*** **Arqit's *quantum satellite technology solves all previously known problems of quantum key distribution*** and puts identical copies of quantum safe keys into each data center in a network.[160]
>
> ***
>
> Prior to launch of its satellites, Arqit's quantum encryption platform, QuantumCloud™, will use machines in data centers to generate a terrestrial simulation of the quantum satellite technology. ***{FS78}*** By 2023, it plans to launch its first two quantum satellites, ***which will generate a significant increase in the level of security offered by the end-to-end system.***[161]
>
> ***
>
> Prior to Arqit's planned satellite launches in 2023, the source of root keys used in data centers will occur through terrestrial transmission which is secure but not quantum safe. ***{FS79}*** By 2023, Arqit intends to upgrade its transmission to

[160] December 2021 20-F at 28, 39.

[161] December 2021 20-F at 28, 39.

satellite, ***which will provide provable security in the delivery of key data into the data centers as a result of its ARQ19 algorithm. The end point keys are then created in a manner that means that no third party can ever know them and they are computationally secure even against a quantum attack***."[162]

334. FS69 (alleged above in paragraph 331) and FS77-79 were untrue statements of material fact and omitted to state material facts because at the time they were made and throughout the Class Period, QuantumCloud had not solved all issues with distributing encryption keys using satellites, and its satellites would not generate a significant increase in the level of security of QuantumCloud or even provable security, as evidenced by:

a) According to the April 2022 *WSJ* Article, the *WSJ* interviewed several former employees and reviewed internal Arqit documents which revealed that, at the time of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data, and the success of Arqit's system required widespread adoption of new communications protocols and standards before QuantumCloud could be functional and thus QuantumCloud was not universally applicable to every edge device and cloud machine in the world;

b) As reported by the April 2022 *WSJ* Article, British cyber security officials questioned the viability of Arqit's encryption technology in a meeting with Arqit in the summer of 2020;

c) Arqit's Chief Revenue Officer resigned in April 2021 over concerns about the lack of maturity of Arqit's encryption technology and related revenue forecasts;

[162] December 2021 20-F at 30.

d) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use;

e) According to CW-3, who was later corroborated by additional members of the global cybersecurity community who published a scientific article alongside CW-3, a review of Arqit's ARQ19 patent for satellite-based quantum key distribution revealed that Arqit's proposed satellite protocol was not truly quantum safe; and

f) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology, and as confirmed by CW-2, the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making it more expensive and less reliable.

335. In addition to the claims discussed *supra*, the December 2021 20-F claimed to warn investors of various risk factors, yet the Section 10(b) Defendants' supposed risk disclosures were also false or misleading because either the Section 10(b) Defendants had no reasonable basis to support their purported beliefs or the Section 10(b) Defendants failed to inform investors that those risks had already materialized. One such disclosure warned investors that the Company ***{FS80}*** "***may not be able to convert its customer orders in backlog or pipeline into revenue***":

> As of September 30, 2021, Arqit's backlog estimates consisted of approximately ***$130 million in customer contracts, and Arqit had an estimated $1.1 billion in pipeline***, consisting of customer contracts in various stages of negotiation and initial revenue indications from potential customers that have not been contractually committed. ***There is no assurance that its backlog will materialize***

in actual revenues, or that Arqit will be able to convert its pipeline into executed contracts that will generate revenues.[163]

336. FS80 was materially false and misleading because, at the time it was made, the risk that Arqit would not be able to convert customer orders in backlog into revenue had already materialized, as evidenced by:

a) According to the April 2022 *WSJ* Article, the *WSJ* interviewed several former employees and reviewed internal Arqit documents which revealed that, at the time of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data, and the success of Arqit's system required widespread adoption of new communications protocols and standards before QuantumCloud could be functional and thus QuantumCloud was not universally applicable to every edge device and cloud machine in the world;

b) As reported by the April 2022 *WSJ* Article, British cyber security officials questioned the viability of Arqit's encryption technology in a meeting with Arqit in the summer of 2020;

c) Arqit's Chief Revenue Officer resigned in April 2021 over concerns about the lack of maturity of Arqit's encryption technology and related revenue forecasts;

d) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use;

[163] December 2021 20-F at 12.

e) According to CW-3, who was later corroborated by additional members of the global cybersecurity community who published a scientific article alongside CW-3, a review of Arqit's ARQ19 patent for satellite-based quantum key distribution revealed that Arqit's proposed satellite protocol was not truly quantum safe; and

f) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology, and as confirmed by CW-2, the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making it more expensive and less reliable.

337. Thus, Arqit would not be able to convert its purported contracts into revenue based on its current technology as represented.

338. Arqit's December 2021 20-F also falsely claimed in a risk factor that the satellite would be more attractive to, and increase customers because it was more secure than Arqit's current technology:

> Arqit intends to launch its first satellite in 2023. Prior to launching its satellites, Arqit's quantum encryption platform, QuantumCloud™, will use machines to generate a terrestrial simulation of the quantum satellite technology. ***{FS81}*** ***There are some differences in the level of security provided by QuantumCloud™ when using the terrestrial simulation compared to delivery by satellite, and Arqit therefore expects that the satellites it is building will generate an improvement in the attractiveness of its products to customers.***[164]

339. FS81 was materially false and misleading because, at the time it was made, Defendants Arqit, Pointon, and Williams knew that Arqit's satellites would not generate an improvement in the attractiveness of Arqit's products to customers due to the prohibitive cost and

[164] December 2021 20-F at 12.

low reliability of transmitting data by satellite, not to mention that Arqit's software was only an early stage prototype, as evidenced by:

a) According to the April 2022 *WSJ* Article, the *WSJ* interviewed several former employees and reviewed internal Arqit documents which revealed that, at the time of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data, and the success of Arqit's system required widespread adoption of new communications protocols and standards before QuantumCloud could be functional and thus QuantumCloud was not universally applicable to every edge device and cloud machine in the world;

b) As reported by the April 2022 *WSJ* Article, British cyber security officials questioned the viability of Arqit's encryption technology in a meeting with Arqit in the summer of 2020;

c) Arqit's Chief Revenue Officer resigned in April 2021 over concerns about the lack of maturity of Arqit's encryption technology and related revenue forecasts;

d) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use;

e) According to CW-3, who was later corroborated by additional members of the global cybersecurity community who published a scientific article alongside CW-3, a review of Arqit's ARQ19 patent for satellite-based quantum key distribution revealed that Arqit's proposed satellite protocol was not truly quantum safe; and

f) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology, and as confirmed by CW-2, the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making it more expensive and less reliable.

340. The December 2021 20-F also purported to warn its investors of potential issues with inoperability with customer computer systems:

> ***{FS82} If Arqit's network and products do not interoperate with its customers' internal networks and infrastructure or with third-party products, websites, or services, its network may become less competitive and its results of operations may be harmed.***
>
> Arqit's network and products must interoperate with its customers' existing internal networks and infrastructure. These complex internal systems are developed, delivered, and maintained by the customer and a myriad of vendors and service providers. As a result, the components of its customers' infrastructure have different specifications, rapidly evolve, utilize multiple protocol standards, include multiple versions and generations of products, and may be highly customized. Arqit must be able to interoperate and provide products to customers with highly complex and customized internal networks, which requires careful planning and execution between its customers, its customer support teams and, in some cases, its channel partners.[165]

341. FS82 was materially false and misleading because it did not disclose the then-existing facts that demonstrated the risk had already materialized, specifically that Arqit's software was only an early stage prototype that could not encrypt anything in practical use, the software could not operate using common internet protocols, Arqit's software would require the widespread adoption of new communications protocols to be effective and operational, as evidenced by:

[165] December 2021 20-F at 22.

a) According to the April 2022 *WSJ* Article, the *WSJ* interviewed several former employees and reviewed internal Arqit documents which revealed that, at the time of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data, and the success of Arqit's system required widespread adoption of new communications protocols and standards before QuantumCloud could be functional and thus QuantumCloud was not universally applicable to every edge device and cloud machine in the world;

b) As reported by the April 2022 *WSJ* Article, British cyber security officials questioned the viability of Arqit's encryption technology in a meeting with Arqit in the summer of 2020;

c) Arqit's Chief Revenue Officer resigned in April 2021 over concerns about the lack of maturity of Arqit's encryption technology and related revenue forecasts;

d) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use;

e) According to CW-3, who was later corroborated by additional members of the global cybersecurity community who published a scientific article alongside CW-3, a review of Arqit's ARQ19 patent for satellite-based quantum key distribution revealed that Arqit's proposed satellite protocol was not truly quantum safe; and

f) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the

QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology, and as confirmed by CW-2, the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making it more expensive and less reliable.

342. Thus, the Section 10(b) Individual Defendants failed to disclose that the risk of QuantumCloud not being interoperable with third party products and services had already materialized.

D. Following the *WSJ* Article, Defendants Continued to Make Materially False and Misleading Statements in the Second Quarter of 2022

343. On May 12, 2022, at approximately 11:00 a.m. Eastern Time, while the U.S. market for Arqit Quantum securities was open, Arqit Quantum held an investor conference call to discuss its financial results for the first half of fiscal 2022. A transcript of the conference call was prepared by Bloomberg. A copy of the slide presentation used during the conference call was also attached to the May 12, 2022 Form 6-K, which was signed by Defendant Williams. Defendants Williams and Pointon participated in the conference call for Arqit Quantum.

344. On the conference call, Defendant Williams stated "Thus Arqit's technology represents a reimagining and greatly more usable version of an existing standard, which means that customers ***{FS83}*** ***do not need a costly replacement cycle to use QuantumCloud as our products already fit into many existing standards and protocols***."[166]

345. FS83 was materially false and misleading because it failed to disclose that the use of Arqit's planned satellite technology would generate a significant increase in cost for the QuantumCloud platform. As confirmed by CW-2, a single use of the Arqit satellite system would

[166] 5/12/2022 Tr. at 2.

likely cost "tens of thousands of dollars" in perfect atmospheric conditions and, given that atmospheric conditions would likely not be perfect all the time, would actually cost more and be successful only about 50% of the time due to atmospheric conditions.

E. The Section 10(b) Defendants Acted with Scienter

346. As alleged herein, the Section 10(b) Defendants acted with scienter in that they knew or recklessly disregarded that the public documents and statements issued and disseminated to the public in the name of the Company, or in their own name, during the Class Period were materially false or misleading when made. The Section 10(b) Defendants, by virtue of their receipt of information reflecting the true facts regarding Arqit and its QuantumCloud product, and their control over, receipt, and modification of Arqit's materially misleading statements, were active and culpable participants in the fraudulent scheme alleged herein.

1. The Section 10(b) Defendants Received and Ignored Warnings from the U.K. Government, Industry Experts and Arqit's Own Employees that That Arqit's Satellite Technology Was Not Viable

347. As discussed above, in Summer 2020, the NCSC—a top-level agency of the U.K. Government with expertise in cybersecurity—informed Arqit that its proposed satellite-based encryption technology did not appear viable, in a high-level evaluation they privately shared with Arqit.

348. The NCSC's concerns, according to the *WSJ* Article, related to "the viability of Arqit's proposed approach to encryption technology." As Arqit described in the Offering Materials, it approach to encryption involved the use of satellites to transmit random numbers to end users for key creation. The *WSJ* Article notes that Defendant Williams was well aware of the NCSC's 2020 unfavorable evaluation of Arqit's technology, because "people who worked for Arqit at the time" recalled that Williams was "apoplectic" in his response, which included calling NCSC director Ian Levy a "f— Jewish c—."

349. The NCSC warnings came to Williams the same summer in which CW-2 informed other Arqit employees at a July 2020 offsite meeting that the satellite technology was extremely expensive and likely cost prohibitive. CW-2 further stated at the offsite meeting that, even under the best atmospheric conditions, Arqit's proposed satellite technology for QuantumCloud could only be expected to work properly 50% of the time due to atmospheric conditions. CW-2 raised the cost concerns about Arqit's satellite program to Arqit CIO Barry Childe, who met regularly with Defendant Williams both with and without CW-2 present. Shortly after CW-2 raised these concerns, CW-2 learned that Williams was unhappy with the witness, and the CW-2 was noticeably sidelined from working on major projects until the end of the witness' contract—which was not renewed.

350. After CW-2's contract was not renewed in November 2020, however, it is evident that Arqit management did not soon forget the points the witness had raised about the prohibitively high cost of Arqit's satellite program.

351. As alleged herein, there is a strong inference that the Section 10(b) Defendants were informed well before the Offering, both by external individuals and employees, that Arqit's satellite technology for quantum key distribution was not viable.

352. These warnings from the highest levels of the British government and from Arqit's own employees put the Section 10(b) Defendants on notice that Arqit's technology was nothing more than a mere prototype that needed significant work before it would be viable and usable by customers and that the satellite component was likely not viable and cost-prohibitive. Thus, contrary to the Section 10(b) Defendants' public statements that the technology was "live" and purportedly generating revenue, was low cost and easy to scale, and that the satellites would add security to a quantum safe level and thereby improve the attractiveness of Arqit's product to

customers, the product was actually a prototype, no customers were using live data, and the satellite service would be too expensive for common use at scale.

2. The August 25, 2021 Letter to CW-3 Rejecting CW-3's Presentation on Arqit's Technology Proves the Section 10(b) Defendants Were Aware, or Recklessly Disregarded, That Arqit's Technology Was Not Viable.

353. On August 25, 2021, immediately after the QCrypt Conference at which CW-3 presented, the Dentons law firm, on behalf of Arqit, sent CW-3 a letter claiming CW-3's observations were incorrect and represented a misunderstanding of Arqit's technology. The letter also stated that CW-3's statements were "likely to cause serious harm to our client's reputation, not least because it suggests that Arqit has been misleading about its technology." Thus, to silence CW-3 in the August 25, 2021 letter, right before the Merger would close and Arqit would begin public listing on the NASDAQ, the Section 10(b) Defendants also threatened to sue CW-3 for defamation.

354. There is a strong inference that the Section 10(b) Defendants learned of CW-3's presentation, because the letter to CW-3 was sent within a day of the witness' presentation at the Conference, at a time Arqit only had around 67 full-time employees. The Section 10(b) Defendants' letter to CW-3 acknowledging CW-3's presentation and trying to silence CW-3 shows the Section 10(b) Defendants were clearly aware of CW-3's presentation and criticisms and, thus, of Arqit's technology shortcomings and deficiencies and that the satellite component was not a secure or viable way to safely distribute symmetric encryption keys. There is a strong inference that no such letter would be sent without knowledge and approval by the most senior officers of Arqit – Williams and Pointon.

355. CW-3's scientific claim—that Arqit's patented satellite protocol was not secure—was later affirmed when CW-3 published the findings in a peer-reviewed scientific journal along

with a cohort of international academic and researcher co-authors who vetted the claim. Though CW-3 and the remaining authors of the scientific article contacted Arqit for comment before publication in 2022, Arqit at that time remained silent and did not participate in the peer review of the article. That Arqit silenced CW-3 mere days before the Offering for pointing out a fatal flaw in Arqit's satellite technology patent, and then did not respond when CW-3 bolstered the claim through co-authorship and scientific peer review, strengthens the inference that the Section 10(b) Defendants knew Arqit's technology was not viable at the time of the Offering and throughout the Class Period.

3. Defendant Williams Was Aware that the Satellite Component of Arqit's Technology Was Not Technologically or Financially Viable Through Attendance at Company Meetings

356. Defendant Williams was aware that Arqit's satellite component of its QuantumCloud technology was not viable through his attendance at Company meetings.

357. CW-2 raised a discussion at a July 2020 offsite meeting that Childe and Defendant Williams also attended. In a group meeting session that Childe joined, CW-2 discussed that the satellite technology was cost prohibitive and that in realistic atmospheric conditions, the system might only work 50% of the time, which would make the cost of a single key even more expensive.

358. There is a strong inference that Williams and the other Section 10(b) Defendants were informed of this information, because CW-2 was told not to return to the offsite meeting, shortly after the meeting CW-2 was told CW-2's services were no longer necessary, and there was a change in attitude towards CW-2 after CW-2 spoke at this meeting.

359. Thus, the Section 10(b) Defendants were aware the satellite technology was not commercially or technologically viable.

4. That Arqit Has Not Engaged in Peer Review or Shared its Supposed Technologies with the Company's Cryptographer Demonstrates Defendants Were Aware of, or Recklessly Disregarded, that Arqit's Technology Did Not Work

360. Prior to and following the Offering, including throughout the Class Period, the Section 10(b) Defendants actively concealed Arqit's QuantumCloud encryption technology from industry and scientific peers, prospective customers including key government agencies whose signoff was critical to Arqit's business model, and even from Arqit employees, all of which collectively supports an inference that the Section 10(b) Defendants knew Arqit's QuantumCloud product did not work and/or was not commercially-viable.

361. The Section 10(b) Defendants made it abundantly clear in their public statements during the Class Period that Arqit sought to make the U.S. government one of its customers, calling Arqit's lack of participation in U.S. government cybersecurity initiatives into question:

a) in discussing Arqit's "[t]otal [a]dressable [m]arket," Arqit described "[n]ew opportunities for growth … expected in government [and] defense:"[167]

b) Arqit identified that selling QuantumCloud for the "[n]ational [d]efense" of the "U.S. and the North Atlantic Treaty Organization ("NATO") allies" was part of Arqit's "Go-to-Market Strategy;"[168]

c) on June 11, 2021, Arqit announced the formation of an international consortium "to provide its quantum encryption technology to government customers," explicitly including the "USA;"[169] and

[167] Registration Statement at 147.

[168] Registration Statement at 152.

[169] Registration Statement at 154–45.

d) U.S. military veterans Lt. General VeraLinn Jamieson and General Stephen Wilson served on the boards of directors of Arqit Limited or subsidiaries prior to the Merger and now serve on Arqit Quantum's board.[170]

362. Despite Arqit's clear interest in doing business with the U.S. government, Arqit did not submit the software component of its QuantumCloud encryption technology for consideration by NIST, which strongly indicates that the Section 10(b) Defendants knew Arqit's technology either did not work or was otherwise not commercially viable.

363. NIST's Post-Quantum Cryptography Standardization Process is a U.S. federal government initiative intended to solicit, evaluate, and standardize one or more quantum-resistant public-key cryptographic algorithms. The software component of Arqit's QuantumCloud product purports to contain a quantum-resistant public-key cryptographic algorithm of exactly the kind that NIST's initiative is intended to evaluate. NIST's current initiative follows work NIST completed in the 1990s and early 2000s, which led the U.S. government to adopt is current encryption standards; therefore, NIST's signoff on technology is critical to the U.S. government's adoption of that technology.

364. Both CW-1 and CW-2, who are not located in the U.S., confirmed that as members of the cybersecurity industry they were very aware of NIST's Post-Quantum initiative because it is a world-leading initiative to find new encryption technologies to standardize.

365. NIST's Post-Quantum initiative, which has spanned 2017 to present, has included four rounds of proposals in which global academics, researchers, and companies have submitted dozens of encryption technologies for review and evaluation by NIST and "comments from the

[170] Registration Statement at 159–60.

public as part of [NIST's] evaluation process"—*i.e.,* peer review from the cybersecurity industry.[171] Three of those rounds had submission dates prior to the Offering.

366. Given Arqit has never submitted its QuantumCloud technology to the NIST initiative, QuantumCloud is not being considered as a new encryption standard for U.S. government use, which significantly limits Arqit's ability to do business with the U.S. government.

367. In commenting on the importance of NIST in evaluating new encryption technologies, CW-1 confirmed "it is the ultimate org. in terms of standards… the best in the world, that's where you go," which begs the question of why Arqit did not do so. Moreover, Arqit's own SEC filings confirm that the Company values NIST and the NSA as important and influential in the global cybersecurity industry. For example, Arqit's Offering Materials explicitly note that NIST "leads efforts on mitigation of the quantum threat to cyber security" and cites NIST multiple times thereafter in justifying the "[m]arket [o]pportunity" for Arqit's QuantumCloud product.[172] Arqit also noted in its 2022 20-F that "in May 2022, the U.S. National Security Agency stated that symmetric encryption keys," like those used in Arqit's QuantumCloud, "are recommend [*sic*] for use by federal agencies which wish to become quantum safe."

368. Accordingly, the Section 10(b) Defendants were very aware that NIST, as well as the NSA, are influential to the U.S. government's adoption of new encryption technologies. There is a strong inference that the fact that Arqit never submitted QuantumCloud to the NIST initiative implies that Arqit did not want QuantumCloud evaluated by NIST or reviewed by the global

[171] U.S. Department of Commerce, National Institute of Standards and Technology, *Post-Quantum Cryptography Call for Proposals*, csrc.nist.gov/Projects/post-quantum-cryptography/post-quantum-cryptography-standardization/Call-for-Proposals (last accessed Aug. 15, 2023).

[172] Registration Statement at 146–47.

cybersecurity community because QuantumCloud is not a finished, secure product that is commercially viable.

369. CW-2 also stated that during CW-2's tenure, Arqit did not appear to engage in any peer review of the QuantumCloud Software. As CW-2 explained, if Arqit had submitted QuantumCloud to the NIST initiative, it would have been apparent through the public comment process that the QuantumCloud code was taken from BIKE, which had already been submitted to NIST multiple times. That Arqit never submitted QuantumCloud to the NIST initiative for evaluation supports an inference that Arqit did not want to expose its code as being stolen, and therefore that QuantumCloud was not commercially viable.

370. CW-3 corroborated that Arqit never published QuantumCloud encryption technology for peer review, which CW-3 found was suspicious from an industry perspective.

371. That Arqit did not publish its patents for QuantumCloud or ARQ19 in scientific journals for peer review by the global cybersecurity community further indicates that Arqit management knew QuantumCloud and satellite implementation thereof were not commercially viable. At best, Arqit forfeited numerous opportunities to have its technologies vetted and proven as secure by the global cybersecurity community, which would have been advantageous to Arqit; at worst, Arqit management eschewed peer review because they knew the process would expose flaws and a lack of commercial viability for the Company's products.

5. Defendants' Retraction of its Supposed Independent Security Proof Supports a Strong Inference of Scienter

372. The circumstances regarding Arqit's only purported "peer review" strongly indicate that Arqit was hiding a QuantumCloud product that was not commercially viable from investors.

373. On May 11, 2022, Arqit announced via press release that it had obtained the Surrey Report, an "independent assurance report undertaken by University of Surrey" on the technology protocols used by Arqit to purportedly use QuantumCloud encryption technology on terrestrial networks. Arqit claimed that the Surrey Report confirmed the "security proof" of using QuantumCloud over fiber internet networks as an alternative to satellite, a claim Arqit would later point to as justification for abandoning plans to develop satellites for QuantumCloud. Prior to Arqit's announcement of the Surrey Report, Arqit had always told investors that using satellites for quantum encryption for QuantumCloud was the Company's long-term goal, because "terrestrial transmission … is secure but not quantum safe."[173]

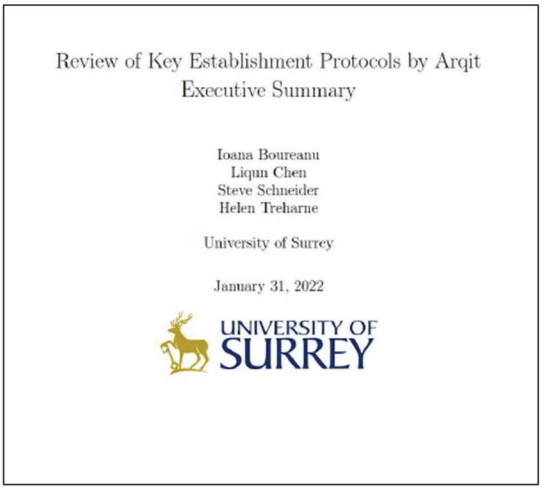
374. The Surrey Report, Arqit claimed, provided the opposite: that terrestrial transmission for QuantumCloud was just as quantum safe as using Arqit's satellites. Arqit later claimed that the Surrey Report became pivotal to the Company's decision to abandon use of satellites in lieu of terrestrial fiber networks, explaining in its December 14, 2022 Form 20-F filing that Arqit had "deployed … a terrestrial method" of QuantumCloud and announcing that, "[a]s a result" of the Surrey Report, "although previously Arqit intended to distribute replicated entropy to data centers via Arqit developed satellites, it will now distribute replicated entropy securely through its terrestrial classical means."

375. Despite the alleged "security proof" the Surrey Report provided, which enabled Arqit to make a massive shift in its go-to-market strategy and thereby abandon plans to launch satellites, Arqit has never released the full Surrey Report publicly. The May 11, 2022 press release instructs investors to visit the Resources page on Arqit's website "[t]o see the conclusions and access" a summary of the report, but Arqit's website indicates that Arqit has since removed the

[173] Registration Statement at 148.

summary of the Surrey Report from the Resources page. That Arqit has removed from its website the summary of the Surrey Report, the supposed "security proof" that justified the Company's shift from needing satellites for quantum safe encryption to merely using terrestrial methods, strongly indicates that the Surrey Report was not the "security proof" Arqit claimed it to be. In other words, that Arqit has seemingly retracted the Surrey Report indicates that it could not hide that Arqit's satellite-based QuantumCloud product for quantum safe communications, as pitched to investors in the Offering, was not commercially viable.

376. Moreover, that Arqit has never publicly released the full Surrey Report, but rather only a one-page summary prepared by consultants, further indicates that Arqit knew its satellite-based encryption solution was never commercially viable, and that the Company struggled to justify its shift away from the satellites it once claimed at the time of the Offering were necessary to provide quantum safe communications. The May 11, 2022 press release led investors to a one-page summary document titled "Independent Assurance Review on Arqit's Technology." The short document included multiple images showing the covers of two reports, revealing that the Surrey Report had in fact been completed on January 31, 2022—months before its existence was disclosed publicly—but that Arqit had enlisted a consulting firm, PA Consulting, to then supposedly "build[] upon [the] technical review by University of Surrey." The one-page document concluded that "Arqit customers may access the PA Consulting report," but did not indicate where, if anywhere, the full Surrey Report was published. Thus, investors and the global cybersecurity community could not vet Arqit's claims nor conduct any form of peer review, and instead were restricted to just a one-page summary as the purported proof that Arqit's QuantumCloud technology was secure.

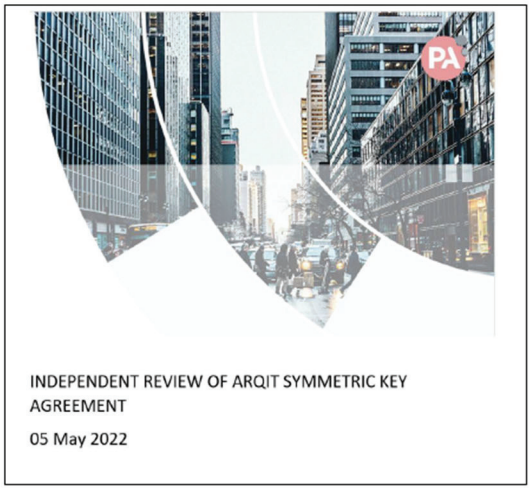

Review of Key Establishment Protocols by Arqit
Executive Summary

Ioana Boureanu
Liqun Chen
Steve Schneider
Helen Treharne

University of Surrey

January 31, 2022

UNIVERSITY OF SURREY


INDEPENDENT REVIEW OF ARQIT SYMMETRIC KEY AGREEMENT

05 May 2022

377. That Arqit justified its major shift in abandoning satellites with the Surrey Report, and did not in fact release that full Report to the public including investors but rather publicly released only a one-page, second level report made by paid consultants claiming to summarize the Report, collectively supports a strong inference that the Surrey Report was not the "security proof" Defendants claimed it to be that justified Arqit's abandonment of satellites and that therefore, Defendants knew that Arqit's QuantumCloud product with its intended use with satellites was not quantum safe.

6. The Suspicious Timing and Context of Arqit's Former Chief Revenue Officer's Sudden Departure Supports Scienter

378. As discussed above, in April 2021, right before the Offering, Arqit's Chief Revenue Officer resigned over concerns that Defendant Williams was giving unrealistic revenue projections to potential investors.

379. Arqit's Offering Materials included forecasts of projected growth of five times in Fiscal 2022 and three times in Fiscal 2023. Yet, the Section 10(b) Defendants knew their product was only a prototype, was not being used with live data, and their highly touted satellite program would be too expensive for common use or to allow Arqit to scale. Yet, according to CW-1 and several former employees interviewed by the Wall Street Journal, Arqit had few or no

revenue-generating customers as of the Merger and Arqit's listing on the NASDAQ, or a year after the Merger.

380. According to CW-1, Arqit's technology was merely a prototype, was not functional and kept breaking down. As CW-1 elaborated, the QuantumCloud software "would crash often or return errors" and therefore, the product was not ready to be used by large commercial enterprises, governments or militaries.

381. The suspicious timing of the Chief Revenue Officer's resignation and admitted reason for leaving Arqit— the Section 10(b) Defendants were lying to potential investors about Arqit's revenue prospects and technology—supports a strong inference of scienter.

7. The Allegations Concern the Core Business Operations of Arqit Quantum

382. Arqit Quantum's QuantumCloud and the satellite aspect thereof were essential to Arqit Quantum's success. QuantumCloud constituted the core business operation of Arqit Quantum, whose sole business was the development the encryption processes to make communications quantum safe. Indeed, Arqit admitted in a December 14, 2022 press release that QuantumCloud was "its core … offering…"[174] In addition, as a start-up company, recruiting customers and signing contracts with confirmed revenue was essential to the Company's survival. Accordingly, it is appropriate to presume that the Section 10(b) Defendants were apprised of, had access to, or had actual knowledge of all material information related to Arqit Quantum during the Class Period, including the material information that was improperly withheld and/or misrepresented to investors.

[174] Arqit Quantum Inc., Arqit announces Technology Update, ir.arqit.uk/news-events/press-releases/detail/51/arqit-announces-technology-update (Dec. 13, 2022 at 8:01 a.m. ET).

383. Further, by virtue of their receipt of information reflecting the true facts regarding Arqit Quantum's operations and its marketplace, as well as their control over and/or receipt of the Company's materially misleading misstatements and/or their associations with the Company that made them privy to confidential proprietary information concerning Arqit Quantum, the Section 10(b) Defendants were active and culpable participants in the fraudulent scheme alleged herein. The Section 10(b) Defendants knew of and/or recklessly disregarded the falsity and misleading nature of the information, which they caused to be disseminated to the investing public. The fraud as described herein could not have been perpetrated without the knowledge and/or recklessness and complicity of personnel at the highest level of the Company, including the Section 10(b) Defendants.

8. The Allegations Show Arqit Acted With Corporate Scienter

384. The allegations above also establish a strong inference that Arqit Quantum acted with corporate scienter throughout the Class Period, as its officers, management, and agents, including, but not limited to, the Section 10(b) Individual Defendants and Childe, had actual knowledge of the misrepresentations and omissions of material facts set forth herein (for which they had a duty to disclose), or acted with reckless disregard for the truth because they failed to ascertain and to disclose such facts, even though such facts were available to them.

385. The scienter of the Section 10(b) Individual Defendants and other employees and agents of the Company is similarly imputed to Arqit Quantum under *respondeat superior* and agency principles.

386. Corporate scienter is supported by the fact that Arqit was a small company, consisting of just 67 employees at the time of the July 29, 2021 Registration Statement, wherein the Section 10(b) Individual Defendants were directly involved in developing and marketing Arqit's purported groundbreaking encryption technology. In fact, Defendant Williams touted in

the August 18, 2021 presentation given for Public Investor and Analyst Day that, up until the Offering, only Williams and one other salesperson were responsible for selling Arqit's encryption technology to potential customers.

387. The Section 10(b) Individual Defendants were also aware that their statements concerning Arqit's satellite technology were untrue because the satellite component was, in their words, the most important component for delivering symmetric encryption keys safely, as well as from concerns raised by NCSC in the summer of 2020 and by CW-3 in August 2021 about Arqit's satellite technology.

388. Moreover, the Section 10(b) Individual Defendants were made aware that their revenue forecasts were overstated and unachievable because Arqit's encryption technology was merely a prototype not ready for commercial sale and the satellite component was not viable technologically or financially from, *inter alia*: (i) attendance at offsite meetings; (ii) warnings from CW-2 and CW-3 expressing that the technology was not viable; and (iii) that the Chief Revenue Officer resigned immediately before the Offering, raising concerns that Arqit was overstating its technology capabilities and corresponding revenue growth and customer pipeline.

389. Given the details of the representations the Section 10(b) Individual Defendants made throughout the Class Period claiming the technology was "live" and ready for commercial distribution, touting Arqit's revenue forecasts and growth and representing the satellite technology "solves all previously known problems with quantum key distribution," each of the Section 10(b) Individual Defendants either knew, or recklessly disregarded that, contrary to their public statements, Arqit Quantum's technology was merely a prototype with significant errors, not ready for commercial use, and therefore claimed revenue growth was not achievable.

390. In either event, the Section 10(b) Individual Defendants were at least reckless with respect to the truth, and their scienter is imputable to the Company.

391. The scienter of Arqit and its management is also evidenced by the knowledge and actions of Childe, Arqit's Chief Information Officer. As Chief Information Officer and thereby the top-ranking executive for technology at Arqit, Childe was either intimately involved with the technological development of Arqit's products—CW-1 and CW-2 confirmed as much for QuantumCloud, the satellites for QuantumCloud, and blockchain-based implementations of the product—or else recklessly disregarded the development thereof. Not only did CW-2 and CW-1 confirm that Childe met regularly with Defendant Williams, but Childe is also listed on Arqit's website as a co-founder of the Company and on Arqit's ARQ19 patent filing as an inventor, both alongside Williams. Thus, Childe was closely involved with Defendant Williams on many matters crucial to the Company, including development of the flagship QuantumCloud product and accompanying satellites.

392. CW-2 for instance pointed out to Childe as early as summer of 2020 that Arqit's satellite technology was not commercially viable due to cost, a topic which Childe undoubtedly brought to Williams because Arqit later abandoned satellite technology, citing cost as the primary reason. Thus, Childe was personally involved in the QuantumCloud product and accompanying satellite development from before the Offering through at least Spring of 2023, and his knowledge was almost assuredly shared with fellow Arqit executives such as Williams and Pointon.

9. Defendants Were Motivated to Make Materially False Statements in Order to Be First To Market with a Quantum-Safe Technology

393. The Section 10(b) Defendants were motivated to make false statements in the Offering Materials and throughout the Class Period to inflate the price of Arqit's stock because

there is significant opportunity in the cybersecurity market to develop a truly quantum-safe encryption technology.

394. According to current reports cited in Arqit's Offering Materials, the global market for hardware-based encryption products was estimated to be $293.8 billion and is expected to grow to $1.46 trillion by 2032.[175] Likewise, the global market for software-based encryption products was estimated at $10.9 billion in 2021 and is expected to more than double to $22.1 billion by 2023.[176] Arqit stated in the Offering Materials that "the global addressable market for information security services will be $197.9 billion by the end of 2024."[177]

395. Arqit made bold, broad claims as to the market opportunity for its QuantumCloud product, which is supposedly safe against attacks from quantum computers. Arqit for example has broadly claimed in describing its "Total Addressable Market" that, once quantum computers become more accessible for malicious individuals, "consumers, businesses and governments across *all* geographies and industrie*s* will likely need to replace the existing cyber encryption technology used in *almost all* electronic interfaces."[178] Arqit has indiscriminately claimed that its QuantumCloud product "has *universal* application to *every* edge device," such as "mobile phones, cars or Internet of Things sensors," which demonstrates Arqit management believes—or would like prospective customers to believe—that QuantumCloud can be used to secure most any kind

[175] GlobeNewswire, *Global Hardware Encryption Market Size To Surpass USD 1463.72 Billion By 2032 | CAGR 17.42%*, www.globenewswire.com/news-release/2023/05/16/2669727/0/en/Global-Hardware-Encryption-Market-Size-To-Surpass-USD-1463-72-Billion-By-2032-CAGR-17-42.html (May 16, 2023).

[176] GlobeNewswire, *Global Encryption Software Market (2021 to 2026) – Increased Adoption of Encryption Software Across Verticals Presents Opportunities*, www.globenewswire.com/en/news-release/2022/04/22/2427179/28124/en/Global-Encryption-Software-Market-2021-to-2026-Increased-Adoption-of-Encryption-Software-Across-Verticals-Presents-Opportunities.html (Apr. 22, 2022).

[177] Registration Statement 76.

[178] Registration Statement at 147 (emphasis added).

of commonplace computer.[179] Accordingly, Arqit has nearly wholesale claimed computers as its market opportunity, thus providing significant room for motive to defraud investors.

396. Thus, because there is currently no quantum-safe solution, there is a massive untapped market for the firm who can be the first to develop quantum-resistant encryption technology. Arqit wanted to be that company.

F. Loss Causation and Economic Loss

397. As detailed herein, during the Class Period, the Exchange Act Defendants made materially false and misleading statements that artificially inflated the price of Arqit Quantum ordinary shares and warrants in the Offering and throughout the Class Period.

398. When the truth about the Exchange Act Defendants' prior misrepresentations was disclosed and became apparent to the market, the prices of Arqit Quantum's ordinary shares and warrants declined significantly as the prior, artificial inflation came out of the prices of the securities.

399. By not publicly disclosing the adverse facts detailed herein, the Exchange Act Defendants presented a misleading picture of Arqit Quantum's business, prospects, and operations. The Exchange Act Defendants' false and misleading statements caused Arqit Quantum ordinary shares and Arqit Quantum warrants to trade at artificially inflated levels throughout the Class Period.

400. On April 18, 2022, the *WSJ* issued a scathing article revealing, among other things, that Arqit Quantum's flagship QuantumCloud product at the time of the Offering was nothing more than an "early-stage prototype unable to encrypt anything in practical use," and that

[179] Registration Statement at 146, 153 (emphasis added).

implementation of QuantumCloud would require "broad adoption of new protocols and standards for telecommunications, cloud computing and internet services" that were not widely supported.

401. Upon the news, Arqit Quantum's ordinary shares declined from $15.06 per share on April 14, 2022 to $12.49 per share on April 18, 2022, a decline of $2.57 per share, or *17%*, on unusually heavy trading volume. Likewise, Arqit Quantum's warrants declined from $3.85 per warrant on April 14, 2022 to $2.4021 per warrant on April 18, 2022, a decline of $1.4479 per warrant, or *nearly 38%*.

402. Market participants reacted negatively to the *WSJ* Article. Financial research firm InvestorPlace wrote in an April 19, 2022 article on *Business Insider* that "Arqit Quantum … stock is slipping on Tuesday after former employees made allegations about the company's capabilities." Likewise, Capacity, a British news outlet focused on the telecommunications carrier industry, described in an April 21, 2022 piece that "media criticisms … have seen [Arqit Quantum's] share price drop 30% in five days and 43% in a month," noting "[t]he latest fall … follows an article in the Wall Street Journal."

403. Thus, as demonstrated above, the market understood the *WSJ* Article to be correcting the Exchange Act Defendants' prior Class Period misstatements that misrepresented, *inter alia*, (a) QuantumCloud was "live" and currently being used by customers with live data, (b) QuantumCloud solved "all known" problems with QKD, (c) QuantumCloud was "unique technology," (d) QuantumCloud had "universal application" and made "the communications links of any networked device secure against current and future forms of cyber attack-even from a quantum computer," and (e) Arqit's projected revenues and that $130 million in "revenues will definitely be delivered."

404. Then, on December 14, 2022, at approximately 6:07 a.m. Eastern Time, before the U.S. market for Arqit Quantum securities opened at 9:30 a.m. Eastern Time, Arqit Quantum filed its 2022 20-F. That morning at approximately 8:01 a.m. Eastern Time, Arqit Quantum also issued a press release entitled "Arqit announces Technology Update," in which the Company "announce[d] a *significant* change in its technology strategy…" (emphasis added). In these statements, Arqit Quantum disclosed, *inter alia*, that:

a) the Company was eliminating its quantum satellite technology due to high costs;

b) Arqit was thus, changing its go-to-market strategy from what the Exchange Act Defendants previously disclosed in the Offering Materials that was dependent on the use of satellite technology, stating that Arqit Quantum's new strategy was "to eliminate quantum satellites and the associated ground infrastructure from its core QuantumCloud™ product offering" because "the satellites that are required for the quantum satellite protocol are expensive to launch and maintain" [180] and that "Arqit has therefore concluded that it no longer needs to incorporate satellites … into its core QuantumCloud™ technology offering in order to deliver a quantum safe product;"[181] and

c) the SEC was investigating the Merger between Arqit Quantum and Centricus, stating that "Arqit [Quantum] is … cooperating with an SEC investigation relating to the business combination between Arqit and Centricus Acquisition Corp.,

[180] 2022 20-F at 37, 22.

[181] Arqit Quantum Inc., *Arqit announces Technology Update*, ir.arqit.uk/news-events/press-releases/detail/51/arqit-announces-technology-update (Dec. 13, 2022 at 8:01 a.m. ET).

including by voluntarily producing documents. The SEC has informed Arqit that this is a fact-finding inquiry."[182]

405. In the December 14, 2022 press release, Arqit explained that the shift away from satellites was a "significant change in its technology strategy," and the Company pointed to the Surrey Report's supposed independent review and security validation as reasons for the strategy shift.

406. Following the filing and press release on December 14, 2022, at approximately 11:00 a.m., Arqit Quantum held a conference call during market trading hours to discuss its financial results for the 2022 fiscal year. A transcript of the conference call was prepared by Bloomberg. Defendants Williams and Pointon participated in the conference call for Arqit Quantum.

407. On the conference call, Defendant Williams addressed Arqit's decision to abandon its satellite technology:

> In addition to the acceleration of our go-to-market strategy, innovation in our technology is resulting in changes to the financial profile of the company. We announced today under a separate press release that, as a result of additional innovation, Arqit [Quantum] no longer requires satellite delivery of replicated randomness to datacenters as part of the symmetric key agreement process at endpoints. Arqit [Quantum] sometime ago developed a terrestrial method of delivering this replicated randomness to datacenters. The security of encryption keys created on the endpoint using our lightweight software agent is as strong with the terrestrial method as with the satellite method. The security proof work that we published earlier in the year satisfied us of this. Therefore, we concluded that we do not require satellites and associated ground systems in the background of our technology stack.[183]

408. On this news, Arqit Quantum's ordinary shares declined from $6.25 per share on December 13, 2022 to $5.15 per share on December 14, 2022, a decline of $1.10 per share, or

[182] 2022 20-F at 55.

[183] 12/14/2022 Tr. at ___.

nearly 18%. Similarly, Arqit Quantum's warrants fell from $1.20 per warrant to $0.782 per warrant over the same period, representing a drop of $0.418 per warrant, or *almost 35%*.

409. Industry media in the space was quick to point out that Arqit Quantum's divestiture from once-hailed satellite technology was a substantial shift for the Company. *Spacewatch.Global* reported on December 15, 2022 that "Arqit Quantum[] has announced a *significant change in its technology strategy*…."[184] Several outlets pointed out that Arqit Quantum's pivot away from satellite technology strategy affected the Company's contracts and revenue for fiscal year 2022. *SpaceNews* noted that "[t]he company's [European Space Agency] contract was recently reclassified as other income in Arqit [Quantum]'s accounts, instead of revenue, partly because the company does not consider this work to be its primary output" anymore.[185] Similarly, *Satellite Today* reported that the announcement came at a time Arqit "had a number of deals in the space industry…"[186]

410. Financial news outlet *Seeking Alpha* likewise explained that Arqit Quantum's abandonment of satellite technology had hurt Arqit Quantum's ability to secure key customer contracts premised on said technology, writing that "Arqit [Quantum]… shares plunge[d] 14.7% as the Co. had anticipated booking several governmental contracts in FY 2022 which slipped into the current fiscal year," and that "[t]he Co[mpany] prioritized a *significant* portion of its finite resources to capture this go-to-market strategy in FY 2022…"[187]

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[184] SpaceWatch.Global, Arqit cancels quantum satellite project (Dec. 15, 2022), spacewatch.global/2022/12/arqit-cancels-quantum-satellite-project/ (emphasis added).

[185] Jason Rainbow, *Arqit drops plan to operate quantum encryption satellites,* SpaceNews (Dec. 15, 2022), spacenews.com/arqit-drops-plan-to-operate-quantum-encryption-satellites/

[186] Rachel Jewett, *Arqit Quantum Ditches Plan for Quantum Satellites*, Satellite Today (Dec. 14, 2022), www.satellitetoday.com/business/2022/12/14/arqit-quantum-ditches-plan-for-quantum-satellites/

[187] Pranav Ghumatkar, *Arqit Quantum plummets 15% post FY 2022* results, Seeking Alpha (Dec. 14, 2022), seekingalpha.com/news/3917067-arqit-quantum-plummets-15-post-fy-2022-results (emphasis

411. Financial analysts who covered Arqit Quantum securities likewise understood Arqit Quantum's statements to be revealing a significant pivot away from the satellite technology Arqit Quantum had once hailed to investors, which weighed on the stock. Analysts from H.C. Wainwright reduced its target price for Arqit Quantum ordinary shares down from $16.00 per share down to $14.00 per share, writing in a December 22, 2022 report that "the company announced that advancements in technology have *eliminated the need for satellite distribution*" and that "we understand *some investors may view 2H22 results as disappointing*…"

412. In Deutsche Bank's January 17, 2023 analyst report—the firm's first report since Arqit's December 2022 announcements—Deutsche lowered its price target for Arqit Quantum's ordinary shares in *half* from $7.00 per share down to $3.50 per share. "Incorporating FY22 results and management commentary," Deutsche Bank analysts cited concerns that Arqit Quantum was "a very early-stage business that has yet to prove the efficacy and commercial viability of its solution as well as its ability to scale efficiently."

413. Other financial media highlighted the SEC investigation as a factor in the decline of Arqit Quantum's securities, with financial outlet *The Motley Fool* reporting on December 14, 2022 that "[t]he next-generation computing specialist's share price tumbled by almost 18% on Wednesday, *no thanks to the disclosure of a regulatory investigation* and an annual earnings report that was not warmly welcomed by investors."[188]

414. On December 14, 2022, the *WSJ* also reported in an article titled "U.K. Quantum Cybersecurity Firm Discloses SEC Investigation Over Merger" that:

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added).

[188] Eric Volkman, *Why Arqit Quantum Stock Dived by Nearly 18% Today*, The Motley Fool (Dec. 14, 2022), www.fool.com/investing/2022/12/14/why-arqit-quantum-stock-dived-by-nearly-18-today/ (emphasis added).

> The disclosure Wednesday came as part of a filing on Arqit's annual results through Sept. 30, in which it said it had lower revenue than projected at the time of the SPAC merger. Shares in the company fell more than 17% in Wednesday's trading.
>
> ***
>
> The company reported less revenue and higher expenses than forecasts it gave investors before its public listing through a SPAC merger in 2021.
>
> It reported $7.2 million in revenue in the fiscal year ending in September—which doesn't include the European Space Agency funding—up from nearly zero in the 12 months through September 2021. Its 2021 forecasts, which were for calendar years rather than fiscal years, called for $32 million in revenue in 2022 and $14 million in 2021.
>
> Arqit also disclosed multiple "material weaknesses" in internal controls and said its auditor had raised "critical audit matters" to management, one of which related to revenue recognition around the European Space Agency contract.
>
> ***
>
> The company initially stated that it would launch satellites into space as part of its plan to secure communications systems. In its regulatory filing on Wednesday, Arqit said it no longer needed to launch a satellite-based component of its proposed encryption due to "innovation in our technology," adding that it would attempt to sell a satellite currently under construction.
>
> The U.S. government has invested heavily in post-quantum algorithms that can be adapted by existing networked systems rather than pursuing more speculative technologies like satellites to secure digital communication systems, such as those that Arqit and others are proposing. In September, the U.S. National Security Agency announced that it would implement new quantum-proof algorithms on all national-security systems by 2035. The Biden White House has also instructed federal agencies to develop starting next year strategies to address post-quantum cryptography threats. [189]

415. Thus, as demonstrated above, the market understood the Exchange Act Defendants' December 14, 2022 disclosures about its satellite technology and go-to-market strategy to be correcting their prior Class Period misstatements that misrepresented, *inter alia*: (a)

[189] Elliot Brown, *U.K. Quantum Cybersecurity Firm Discloses SEC Investigation Over Merger, WSJ (*Dec. 14, 2022), available at www.wsj.com/articles/u-k-quantum-cybersecurity-firm-discloses-sec-investigation-over-merger-11671054986.

QuantumCloud solved "all known" problems with QKD, (b) QuantumCloud as designed with satellites was low cost and easily scalable, and (c) QuantumCloud satellites would increase attractiveness to customers and increases in security.

416. Further, as demonstrated above, the market understood the Exchange Act Defendants December 14, 2022 disclosure about the SEC investigation to be a further disclosure correcting their prior Class Period misstatements that misrepresented, *inter alia*: (a) QuantumCloud was "live" and currently being used by customers with live data, (b) QuantumCloud solved "all known" problems with QKD, (c) QuantumCloud was "unique technology," (d) QuantumCloud had "universal application" and made "the communications links of any networked device secure against current and future forms of cyber attack-even from a quantum computer," and (e) Arqit's projected revenues and that $130 million in "revenues will definitely be delivered."

417. By not disclosing the adverse facts detailed herein, the Exchange Act Defendants presented a misleading picture of Arqit Quantum's business, risks, and current and future financial prospects. When the truth about the Company was revealed to the market, the prices of Arqit Quantum securities fell significantly, with Arqit Quantum ordinary shares dropping to $12.49 on April 18, 2022, then to $5.15 per share on December 14, 2022, removing the inflation from the Exchange Act Defendants' misrepresentations and causing economic loss to investors who had purchased Arqit Quantum ordinary shares during the Class Period. Similarly, Arqit Quantum warrants dropped to $2.4021 per warrant on April 18, 2022, and to $0.782 on December 14, 2022.

418. The decline in the prices of Arqit Quantum ordinary shares and warrants after the corrective disclosures came to light was a direct result of the nature and extent of the Exchange Act Defendants' misrepresentations being revealed to investors and the market. The timing and

magnitude of the price declines in Arqit Quantum securities negates any inference that the losses suffered by Plaintiffs and the other members of the Exchange Act Classes were caused by changed market conditions, macroeconomic or industry factors, or Company-specific facts unrelated to the Exchange Act Defendants' material misrepresentations.

419. The economic loss, i.e., damages, suffered by Plaintiffs and the other members of the Exchange Act Classes was a direct result of the Exchange Act Defendants' false statements that artificially inflated the price of Arqit Quantum securities and the subsequent significant declines in the value of Arqit Quantum securities when the Exchange Act Defendants' prior misrepresentations were disclosed. During the Class Period, as detailed herein, the Exchange Act Defendants made materially false and misleading statements that artificially inflated the prices of Arqit Quantum ordinary shares and warrants by failing to disclose and misrepresenting the adverse facts detailed herein. When the Exchange Act Defendants' prior misrepresentations and fraudulent conduct were disclosed and became apparent to the market, the prices of Arqit Quantum securities declined significantly as the prior artificial inflation came out of the stock's price.

G. Applicability of the Presumption of Reliance (Fraud-on-the-Market Doctrine)

420. The market for Arqit Quantum securities was open, well-developed, and efficient at all relevant times.

421. As a result of the materially false and/or misleading statements and/or failures to disclose particularized in this Complaint, Arqit Quantum securities traded at artificially inflated and/or maintained prices during the Class Period. Plaintiffs and other members of the Section 10(b) Class purchased the Company's securities relying upon the integrity of the market price of Arqit Quantum securities and market information relating to Arqit Quantum and have been damaged thereby.

422. At all times relevant, the market for Arqit Quantum securities was an efficient market for the following reasons, among others:

a) Arqit Quantum securities were listed and actively traded on the NASDAQ, a highly efficient and automated market;

b) Arqit Quantum filed periodic public reports with the SEC and/or the NASDAQ;

c) Arqit Quantum regularly communicated with public investors via established market communication mechanisms, including through regular dissemination of press releases on major newswire services, holding investor conference calls, and through other wide-ranging public disclosures, such as communications with the financial press and other similar reporting services; and/or

d) Arqit Quantum was followed by securities analysts employed by brokerage firms, including Equity Development Limited, H.C. Wainwright, Northland Capital Markets, Deutsche Bank, and Cenkos, who wrote reports about the Company. Each of these reports was publicly available and entered the public marketplace.

423. As a result of the foregoing, the market for Arqit Quantum securities promptly digested current information regarding Arqit Quantum from all publicly available sources and reflected such information in the prices of the securities. Under these circumstances, all purchasers of Arqit Quantum securities during the Class Period suffered similar injury through their purchase of Arqit Quantum securities at artificially inflated and/or maintained prices, and a presumption of reliance applies.

424. Therefore, Plaintiffs and the Section 10(b) Class are entitled to a presumption of reliance pursuant to *Basic Inc. v. Levinson*, 485 U.S. 224 (1988).

425. A Section 10(b) Class-wide presumption of reliance is also appropriate in this action under the Supreme Court's holding in *Affiliated Ute Citizens of Utah v. United States*, 406 U.S. 128 (1972), because the Exchange Act Classes' claims are, in large part, grounded in the Section 10(b) Defendants' omissions of material facts necessary to make the statements made by the Section 10(b) Defendants not misleading.

426. Because this action involves the Section 10(b) Defendants' failure to disclose material adverse information regarding the Company's business, operations, and prospects - information that the Section 10(b) Defendants were obligated to disclose during the Class Period but did not - positive proof of reliance is not a prerequisite to recovery. All that is necessary is that the facts withheld be material in the sense that a reasonable investor might have considered them important in the making of investment decisions. Given the importance of the Class Period material misstatements and omissions set forth above, that requirement is satisfied here.

X. CLAIMS FOR RELIEF UNDER SECTION 10(b) AND 20(a) OF THE EXCHANGE ACT AND SEC RULE 10b-5

COUNT IV
For Violations of Section 10(b) of the Exchange Act and SEC Rule 10b-5
(On Behalf of the Section 10(b) Class Against All Section 10(b) Defendants)

427. Plaintiff repeats and realleges each and every allegation contained in paragraphs 1 through 426 above as if fully set forth herein.

428. This Count is asserted on behalf of Plaintiffs and the Section 10(b) Class against all Section 10(b) Defendants pursuant to Section 10(b) of the Exchange Act, 15 U.S.C. §78j(b), and Rule 10b-5 promulgated thereunder by the SEC, 17 C.F.R. C 240.10b-5.

429. Section 10(b) of the Exchange Act provides that:

> It shall be unlawful for any person, directly or indirectly, by the use of any means or instrumentality of interstate commerce or of the mails, or of any facility of any national securities exchange… To use or employ, in connection with the purchase or sale of any security registered on a national securities exchange or any security

> not so registered, or any securities-based swap agreement any manipulative or deceptive device or contrivance in contravention of such rules and regulations as the Commission may prescribe as necessary or appropriate in the public interest or for the protection of investors.

430. Rule 10b-5 provides that:

> It shall be unlawful for any person, directly or indirectly, by the use of any means or instrumentality of interstate commerce, or of the mails or of any facility of any national securities exchange,
>
> > (a) To employ any device, scheme, or artifice to defraud,
> >
> > (b) To make any untrue statement of a material fact or to omit to state a material fact necessary in order to make the statements made, in the light of the circumstances under which they were made, not misleading, or
> >
> > (c) To engage in any act, practice, or course of business which operates or would operate as a fraud or deceit upon any person,
>
> in connection with the purchase or sale of any security.

431. Throughout the Class Period, the Section 10(b) Defendants, individually and in concert, directly or indirectly disseminated or approved the false statements specified above, which they knew or deliberately disregarded were misleading in that they contained misrepresentations and failed to disclose material facts necessary to make the statements made, in light of the circumstances under which they were made, not misleading.

432. During the Class Period, the Section 10(b) Defendants carried out a plan, scheme, and course of conduct that was intended to and, throughout the Class Period, did: (i) deceive the investing public, including Plaintiffs and other Section 10(b) Class members, as alleged herein; (ii) artificially inflate and maintain the market price of Arqit Quantum's securities; and (iii) cause Plaintiffs and other members of the Section 10(b) Class, in ignorance of the falsity of the Section 10(b) Defendants' statements, to purchase or otherwise acquire Arqit Quantum's securities at artificially inflated prices. In furtherance of this unlawful scheme, plan, and course of conduct, the Section 10(b) Defendants took the actions set forth herein.

433. The Section 10(b) Individual Defendants (a) Directly participated in the management of Arqit Quantum; (b) were directly involved in the day-to-day operations of Arqit Quantum at the highest levels; (c) were privy to confidential proprietary information concerning Arqit Quantum and its business and operations; (d) were directly or indirectly involved in the oversight or implementation of Arqit Quantum's internal controls; and/or (e) were directly or indirectly involved in drafting, producing, reviewing and/or disseminating the untrue statements of a material fact or statements that omitted to state a material fact required to be stated or necessary to make the statements made not misleading; were aware of or recklessly disregarded the fact that the false and misleading statements were being issued concerning Arqit; and/or approved or ratified these statements in violation of the federal securities laws.

434. The Section 10(b) Individual Defendants, who are the senior officers and/or directors of the Company, had actual knowledge of the material omissions and/or the falsity of the material statements set forth above, and intended to deceive Plaintiffs and the other members of the Section 10(b) Class, or, in the alternative, acted with reckless disregard for the truth when they failed to ascertain and disclose the true facts in the statements made by them or other Arqit Quantum personnel to members of the investing public, including Plaintiffs and the Section 10(b) Class.

435. As set forth in Section IX.E, *supra*, the Section 10(b) Defendants acted with scienter in that they knew that the public documents and statements issued or disseminated in the name of Arqit Quantum were materially false or misleading; knew that such statements or documents would be issued or disseminated to the investing public; and knowingly and substantially participated, or acquiesced in the issuance or dissemination of such statements or documents as primary violations of the securities laws. These defendants by virtue of their receipt

of information reflecting the true facts of Arqit Quantum, their control over, and/or receipt and/or modification of Arqit Quantum's allegedly materially misleading statements, and/or their associations with the Company which made them privy to confidential proprietary information concerning Arqit Quantum, participated in the fraudulent scheme alleged herein.

436. As a result of the wrongful conduct alleged herein, Plaintiffs and other members of the Section 10(b) Class have suffered damages in an amount to be established at trial.

437. By reason of the foregoing, the Section 10(b) Defendants are liable to the Plaintiffs and the other members of the Section 10(b) Class for substantial damages which they have suffered in connection with their respective purchases or acquisitions of Arqit Quantum securities during the Class Period.

COUNT V
For Violations of Section 20(a) of the Exchange Act
(On Behalf of the Section 10(b) Class Against the Section 10(b) Individual Defendants)

438. Plaintiff repeats and realleges each and every allegation contained in paragraphs 1 through 437 above as if fully set forth herein.

439. This Count is asserted on behalf of Plaintiffs and the Section 10(b) Class against the Section 10(b) Individual Defendants pursuant to Section 20(a) of the Exchange Act, 15 U.S.C. §78t(a).

440. Section 20(a) of the Exchange Act provides that:

> Every person who, directly or indirectly, controls any person liable under any provision of this chapter or of any rule or regulation thereunder shall also be liable jointly and severally with and to the same extent as such controlled person to any person to whom such controlled person is liable (including to the Commission in any action brought under paragraph (1) or (3) of section 78u(d) of this title), unless the controlling person acted in good faith and did not directly or indirectly induce the act or acts constituting the violation or cause of action.

441. As alleged above, the Exchange Act Individual Defendants violated Section 10(b) of the Exchange Act and/or SEC Rule 10b-5 promulgated thereunder.

442. During the Class Period, the Section 10(b) Individual Defendants were privy to non-public information concerning the Company and its business and operations via access to internal corporate documents, conversations and connections with other corporate officers and employees, attendance at management and Board of Directors meetings and committees thereof and via reports and other information provided to them in connection therewith. Because of their possession of such information, the Section 10(b) Individual Defendants knew or recklessly disregarded the fact that adverse facts specified herein had not been disclosed to, and were being concealed from, the investing public. Plaintiffs and other members of the Section 10(b) Class had no access to such information, which was, and remains, solely under the control of the Section 10(b) Defendants.

443. The Section 10(b) Individual Defendants were involved in drafting, producing, reviewing and/or disseminating the materially false and misleading statements complained of herein. The Section 10(b) Individual Defendants were aware (or recklessly disregarded) that materially false and misleading statements were being issued by the Company and nevertheless approved, ratified and/or failed to correct those statements, in violation of federal securities laws. Throughout the Class Period, the Section 10(b) Individual Defendants were able to, and did, control the contents of the Company's SEC filings, reports, press releases, and other public statements. The Section 10(b) Individual Defendants were provided with copies of, reviewed and approved, and/or signed such filings, reports, releases and other statements prior to or shortly after their issuance and had the ability or opportunity to prevent their issuance or to cause them to be corrected.

444. The Section 10(b) Individual Defendants also were able to, and did, directly or indirectly, control the conduct of Arqit Quantum's business, the information contained in its filings

with the SEC, and its public statements. Moreover, the Section 10(b) Individual Defendants made or directed the making of affirmative statements to securities analysts and the investing public at large, and participated in meetings and discussions concerning such statements. Because of their positions and access to material non-public information available to them but not the public, the Section 10(b) Individual Defendants knew that the adverse facts specified herein had not been disclosed to and were being concealed from the public and that the positive representations that were being made were false and misleading. As a result, the Section 10(b) Individual Defendants are responsible for the accuracy of Arqit Quantum's corporate statements detailed herein and are therefore responsible and liable for the misrepresentations contained herein.

445. The Section 10(b) Individual Defendants acted as controlling persons of Arqit Quantum within the meaning of Section 20(a) of the Exchange Act. By reason of their positions with the Company, the Section 10(b) Individual Defendants had the power and authority to cause Arqit Quantum to engage in the wrongful conduct complained of herein. The Section 10(b) Individual Defendants controlled Arqit Quantum and all of its employees.

446. As alleged above, Arqit Quantum is a primary violator of Section 10(b) of the Exchange Act and SEC Rule 10b-5. By reason of their conduct, the Section 10(b) Individual Defendants are liable pursuant to Section 20(a) of the Exchange Act.

447. As a direct and proximate result of the wrongful conduct of Arqit Quantum and the Section 10(b) Individual Defendants, Plaintiffs and members of the Section 10(b) Class suffered damages in connection with their respective purchases and acquisitions of the Company's securities during the Class Period.

XI. ADDITIONAL ALLEGATIONS PERTAINING TO PLAINTIFFS' CLAIMS UNDER SECTION 14(a) OF THE EXCHANGE ACT

A. Materially False and Misleading Statements in the Proxy Statement and Documents Incorporated Therein by Reference

448. On July 30, 2021, Arqit Quantum issued the Proxy Statement as indicated above in paragraph 180, that contained untrue statements of material fact or omitted material facts. The Proxy Statement formed part of the Registration Statement, which was signed by Defendants Williams, Jamieson, and Wilson.

449. Defendants Williams, Jamieson, and Wilson are liable under Section 14(a) of the Exchange Act for the materially false and misleading statements in the Proxy Statement as they signed the Registration Statement, and the Proxy Statement was incorporated in the Registration Statement, and therefore made the statements in the Proxy Statement.

450. Defendant Pointon is liable under Section 14(a) of the Exchange Act for the statements in the Proxy Statement because, as the CFO of Arqit, he had authority over statements being made in the Proxy Statement.

451. Arqit Quantum is also liable under Section 14(a) the Exchange Act for the statements in the Proxy Statement as a maker of the statements in the Proxy Statement.

452. To avoid duplication, Plaintiffs incorporate FS1-29 in the Offering Materials, which are the same documents as the Proxy Statement, and the reasons that these statements were untrue statements of material fact or omitted to state material facts alleged in Section VI.A, *supra*.

453. On August 2, 3, 9, 11, 18, and 19, 2021, 2021, Defendant Williams, Ritchie, and Arqit Quantum/Centricus issued the Other Proxy Solicitations, which contained untrue statements of material fact or omitted material facts, and which were intended to influence Centricus securities holders' vote in connection with the Merger.

454. To avoid duplication, Plaintiffs incorporate FS30-46 in the Other Prospectuses, which are the same documents as the Other Proxy Solicitations, and the allegations of the reasons that these statements were untrue statements of material fact or omitted to state material facts alleged in alleged in Section VI.B, *supra*.

455. In addition, in the Proxy Statement, Centricus gave reasons as to why Centricus stockholders should vote to approve the Merger:

> Symmetric Keys are Secure. ***{FS84}*** ***Arqit's platform creates symmetric encryption keys, which is a cyber-encryption technology that is secure against all forms of attack including by quantum computers***. A symmetric encryption key, once created, is computationally secure. This means that it is regarded as impossible, even for a quantum computer, to guess a symmetric encryption key in less than millions of years. Arqit's technology is built around this secure encryption tool.
>
> Groundbreaking and Proprietary Distribution Technology. The importance of Arqit's platform lies in its ***{FS85}*** ***ability to "distribute" symmetric keys securely at scale by creating them at end points***. Although symmetric encryption keys are secure, to date there has been no secure way to create and distribute symmetric keys electronically. ***{FS86}*** ***Arqit's groundbreaking technology has solved these known issues. Its innovations create symmetric encryption keys at end points when they are needed, at scale, securely, at any kind of end point device and in groups of any size.***
>
> Easily Scalable. ***{FS87}*** ***Arqit's software, fulfilled from the cloud, automatically creates keys in infinite volumes at minimal cost, resulting in low capital expenditure once deployed.*** From an operating cost perspective, there is no human analysis or information processing required by Arqit's product, so personnel costs are limited to maintaining core infrastructure, marketing and customer support. ***{FS88}*** ***These factors make Arqit's products easily scalable for both Arqit and its customers***.[190]

456. As FS84-88 are attributed to Centricus, they were made by the Defendants associated with Centricus – Lefebvre and Ritchie. Defendants Lefebvre and Ritchie are therefore liable under Section 14(a) of the Exchange Act for FS84-88 because, as the CEO and Chairman of Centricus, they had authority over FS84-88 made in the Proxy Statement.

[190] Registration Statement at 27, 106.

457. FS84-88 were materially false and misleading for the same reasons discussed above. At the time of the Merger and Arqit's listing on the NASDAQ, Arqit's software could not create a delivery encryption keys. Because of these technical issues, Arqit had not solved all known issues with symmetric key distribution. Further, the NCSC had unfavorably evaluated Arqit's software product. In addition, Arqit's product did not create infinite keys at minimal cost and was not easily scalable, as confirmed by:

a) According to the April 2022 *WSJ* Article, the *WSJ* interviewed several former employees and reviewed internal Arqit documents which revealed that, at the time of the Offering on September 7, 2021, QuantumCloud was only an early-stage prototype unable to encrypt anything in practical use and thus QuantumCloud did not provide quantum safe security, no commercial customer was using Arqit's software with live data, and the success of Arqit's system required widespread adoption of new communications protocols and standards before QuantumCloud could be functional and thus QuantumCloud was not universally applicable to every edge device and cloud machine in the world;

b) As reported by the April 2022 *WSJ* Article, British cyber security officials questioned the viability of Arqit's encryption technology in a meeting with Arqit in the summer of 2020;

c) Arqit's Chief Revenue Officer resigned in April 2021 over concerns about the lack of maturity of Arqit's encryption technology and related revenue forecasts;

d) CW-1 corroborated the April 2022 *WSJ* Article, reporting that in 2022 and 2023—well after the Offering—the QuantumCloud software remained a prototype that was not ready for commercial use;

e) According to CW-3, who was later corroborated by additional members of the global cybersecurity community who published a scientific article alongside CW-3, a review of Arqit's ARQ19 patent for satellite-based quantum key distribution revealed that Arqit's proposed satellite protocol was not truly quantum safe; and

f) As revealed by Arqit on December 14, 2022, and corroborated by CW-2, the Company's satellite-based technology for quantum key distribution for the QuantumCloud product was prohibitively expensive to implement for all but niche use cases, thus forcing Arqit to abandon the technology, and as confirmed by CW-2, the satellite transmission of an encryption key might only be successful 50% of the time due to atmospheric conditions, making it more expensive and less reliable.

B. Causation

458. Immediately prior to the Merger, Centricus units were converted to their underlying securities – one Class A ordinary share of Centricus and one-fourth of one Centricus warrant.

459. Every public unitholder and shareholder of the Centricus SPAC was negatively impacted by the Proxy Statement in the following three ways:

460. Redemption: Public shareholders were provided the right to redeem their shares for approximately $10.00 per share (or unit, as the units would be converted), respectively, if they preferred to receive their money back rather than obtain Arqit Quantum shares and warrants in the Merger. Holders of the outstanding Centricus public warrants did not have redemption rights with respect to such Centricus warrants in connection with the Merger.

461. Merger Vote: whether or not they redeemed shares, the Proxy Statement called for Centricus public shareholders and/or securities holders to vote to approve or reject the Merger between Centricus and Arqit Quantum.

462. Replacement Share Issuance: Centricus securities holders who did not redeem their Centricus shares converted their Class A ordinary shares on a one-for one basis, into a share of Arqit Quantum common stock and Centricus warrants on a one-for-one basis into one Arqit Quantum warrants.

463. As a result of the false and misleading statements made in the Proxy Statement, the Section 14(a) Class members were harmed.

464. To avoid unnecessary duplication, Plaintiffs incorporate herein, the loss causation allegations from Section IX.F, *supra*.

XII. CLAIMS FOR RELIEF UNDER SECTION 14(a) AND 20(a) OF THE EXCHANGE ACT AND SEC RULE 14d-5

COUNT VI
For Violations of Section 14(a) of the Exchange Act and SEC Rule 14a-9
(On Behalf of the Section 14(a) Class Against All Section 14(a) Defendants)

465. Plaintiff repeats and realleges each and every allegation contained in paragraphs 1 through 259 and 448 through 464 and Section IX.F above as if fully set forth herein.

466. This Count is asserted on behalf of Plaintiffs and the Section 14(a) Class against all the Section 14(a) Defendants pursuant to Section 14(a) of the Exchange Act, 15 U.S.C. §78n(a), and Rule 14a-9, 17 C.F.R. §240.14a-9, promulgated by the SEC pursuant to Section 14(a).

467. This Count expressly excludes and disclaims any allegation that could be construed as alleging fraud. For purposes of asserting this Count, Plaintiffs do not allege that the Section 14(a) Defendants acted with scienter or fraudulent intent, which are not elements of a Section 14(a) claim.

468. Section 14(a) of the Exchange Act, provides that:

> [it] shall be unlawful for any person by use of the mails or by any means of instrumentality of interstate commerce or of any facility of a national securities exchange or otherwise, in contravention of such rules and regulations as the Commission may prescribe as necessary or appropriate in the public interest or for

> the protection of investors, to solicit or to permit the use of his name to solicit any proxy or consent or authorization in respect of any security (other than an exempted security) registered pursuant to Section 12 of this title [15 U.S.C. §78(1)].

469. Rule 14a-9 provides that:

> No solicitation subject to this regulation shall be made by means of any proxy statement, form of proxy, notice of meeting or other communication, written or oral, containing any statement which, at the time and in the light of the circumstances under which it is made, is false or misleading with respect to any material fact, or which omits to state any material fact necessary in order to make the statements therein not false or misleading or necessary to correct any statement in any earlier communication with respect to the solicitation of a proxy for the same meeting or subject matter which has become false or misleading.

470. The Section 14(a) Defendants solicited approval for the Merger from Plaintiffs and other members of the proposed Section 14(a) Class by means of the Proxy Statement and the Other Proxy Solicitations.

471. The Section 14(a) Defendants prepared and disseminated the false and misleading Proxy Statement and Other Proxy Solicitations specified above, which failed to disclose material facts necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading in violation of Section 14(a) of the Exchange Act and Rule 14a-9 promulgated thereunder.

472. By virtue of their positions within Centricus and Arqit Quantum and their due diligence regarding the Merger, the Section 14(a) Defendants were aware of this information and of their duty to disclose this information in the Proxy Statement and Other Proxy Solicitations. The Proxy Statement and Other Proxy Solicitations were prepared, reviewed, and/or disseminated by the Section 14(a) Defendants named herein. The Proxy Statement and Other Proxy Solicitations misrepresented and/or omitted material facts, as detailed above. The Section 14(a) Defendants were at least negligent in filing the Proxy Statement and making the Other Proxy Solicitations with these materially false and misleading statements.

473. As stated herein, the Proxy Statement and Other Proxy Solicitations contained untrue statements of material fact and omitted to state material facts necessary to make the statements made not misleading in violation of Section 14(a) of the Exchange Act and SEC Rule 14a-9 promulgated thereunder. The Proxy Statement and Other Proxy Solicitations were essential links in the consummation of the Merger. The Section 14(a) Defendants also failed to correct the Proxy Statement and Other Proxy Solicitations prior to the Merger, and the failure to update and correct false statements is also a violation of Section 14(a) of the Exchange Act and SEC Rule 14a-9 promulgated thereunder.

474. As a direct result of the Section 14(a) Defendants' negligent preparation, review and dissemination of the false and/or misleading Proxy Statement and Other Proxy Solicitations, Plaintiffs and the Section 14(a) Class were precluded from exercising their right to seek redemption of their Centricus shares prior to the Merger on a fully-informed basis and were damaged by the decline in value of Arqit securities when the truth was revealed. The false and misleading Proxy Statement and Other Proxy Solicitations used to obtain shareholder approval of the Merger deprived Plaintiffs and the Section 14(a) Class of their right to a fully-educated shareholder vote in connection therewith and the full and fair value for their Centricus shares. At all times relevant to the dissemination of the materially false and/or misleading Proxy Statement and Other Proxy Solicitations, the Section 14(a) Defendants were aware of and/or had access to the true facts concerning the true value of Arqit Quantum, which was far below the operational assets that Centricus shareholders and/or securities holders received.

475. The omissions and false and misleading statements in the Proxy Statement and Other Proxy Solicitations were material in that a reasonable stockholder and/or security holder would have considered them important in deciding how to vote on the Merger. In addition, a

reasonable investor would view a full and accurate disclosure as significantly altering the "total mix" of information made available in the Proxy Statement and Other Proxy Solicitations and in other information reasonably available to stockholders and/or securities holders.

476. None of the materially false and misleading statements contained in the Proxy Statement and Other Proxy Solicitations, or material matters omitted from the Proxy Statement and Other Proxy Solicitations, as described above, were known to the public at the time the vote on the Merger occurred.

477. By reason of the foregoing, the Section 14(a) Defendants have violated Section 14(a) of the Exchange Act and Rule 14a-9(a) promulgated thereunder.

478. As a direct and proximate result of the dissemination of the false and misleading Proxy Statement and Other Proxy Solicitations that the Section 14(a) Defendants used to obtain shareholder approval of and thereby consummate the Merger, Plaintiffs and the Section 14(a) Class have suffered damages and actual economic losses in an amount to be determined at trial.

COUNT VII
For Violations of Section 20(a) of the Exchange Act
(On Behalf of the Section 14(a) Class Against the Section 14(a) Individual Defendants)

479. Plaintiff repeats and realleges each and every allegation contained in paragraphs 1 through 259 and 448 through 478 and Section IX.F above as if fully set forth herein.

480. This Count is asserted on behalf of Plaintiffs and the Section 14(a) Class against the Section 14(a) Individual Defendants pursuant to Section 20(a) of the Exchange Act, 15 U.S.C. §78t(a).

481. Section 20(a) of the Exchange Act provides that:

> Every person who, directly or indirectly, controls any person liable under any provision of this chapter or of any rule or regulation thereunder shall also be liable jointly and severally with and to the same extent as such controlled person to any person to whom such controlled person is liable (including to the Commission in any action brought under paragraph (1) or (3) of section 78u(d) of this title), unless

the controlling person acted in good faith and did not directly or indirectly induce the act or acts constituting the violation or cause of action.

482. As alleged above, the Section 14(a) Individual Defendants violated Section 14(a) of the Exchange Act and/or SEC Rule 14d-9 promulgated thereunder.

483. During the Class Period, the Section 14(a) Individual Defendants were privy to non-public information concerning the Company and its business and operations via access to internal corporate documents, conversations and connections with other corporate officers and employees, attendance at management and Board of Directors meetings and committees thereof and via reports and other information provided to them in connection therewith. Because of their possession of such information, the Section 14(a) Individual Defendants knew or recklessly disregarded the fact that adverse facts specified herein had not been disclosed to, and were being concealed from, the investing public. Plaintiffs and other members of the Section 14(a) Class had no access to such information, which was, and remains, solely under the control of the Section 14(a) Defendants.

484. The Section 14(a) Individual Defendants were involved in drafting, producing, reviewing and/or disseminating the materially false and misleading Proxy Statement and Other Proxy Solicitations complained of herein. The Section 14(a) Individual Defendants were aware (or recklessly disregarded) that materially false and misleading statements were being issued by Arqit Quantum and/or Centricus and nevertheless approved, ratified and/or failed to correct those statements, in violation of federal securities laws. The Section 14(a) Individual Defendants were able to, and did, control the contents of the Proxy Statement and Other Proxy Solicitations. The Section 14(a) Individual Defendants were provided with copies of, reviewed and approved, and/or signed the Proxy Statement, or the Registration Statement of which the Proxy Statement was made

a party of, and the and Other Proxy Solicitations prior to or shortly after their issuance and had the ability or opportunity to prevent their issuance or to cause them to be corrected.

485. The Section 14(a) Individual Defendants also were able to, and did, directly or indirectly, control the conduct of Arqit Quantum's business, the information contained in the Proxy Statement and Other Proxy Solicitations. In addition, Defendants Lefebvre and Ritchie were able to, and did, directly or indirectly, control the conduct of Centricus's business, the information contained in the Proxy Statement and Other Proxy Solicitations. Because of their positions and access to material non-public information available to them but not the public, Section 14(a) Individual Defendants knew that the adverse facts specified herein had not been disclosed to and were being concealed from the public and that the positive representations that were being made were false and misleading. As a result, the Section 14(a) Individual Defendants are responsible for the accuracy of the Proxy Statement and Other Proxy Solicitations and are therefore responsible and liable for the misrepresentations contained therein.

486. The Section 14(a) Individual Defendants acted as controlling persons of Arqit Quantum within the meaning of Section 20(a) of the Exchange Act. By reason of their positions with the Company, the Section 14(a) Individual Defendants had the power and authority to cause Arqit Quantum to engage in the wrongful conduct complained of herein. The Section 14(a) Individual Defendants controlled Arqit Quantum and all of its employees.

487. In addition, Defendants Lefebvre and Ritchie acted as controlling persons of Centricus within the meaning of Section 20(a) of the Exchange Act. By reason of their positions with Centricus, Defendants Lefebvre and Ritchie had the power and authority to cause Centricus to engage in the wrongful conduct complained of herein. Defendants Lefebvre and Ritchie controlled Centricus and all of its employees.

488. As alleged above, Arqit Quantum f/k/a Centricus is a primary violator of Section 14(a) of the Exchange Act and SEC Rule 14d-9. By reason of their conduct, the Section 14(a) Individual Defendants are liable pursuant to Section 20(a) of the Exchange Act.

489. As a direct and proximate result of the wrongful conduct of Arqit Quantum/Centricus and the Section 14(a) Individual Defendants, Plaintiffs and members of the Section 14(a) Class suffered damages in connection with their respective purchases and acquisitions of the Company's securities during the Class Period.

XIII. PRAYER FOR RELIEF (EXCHANGE ACT AND SECURITIES ACT CLAIMS)

WHEREFORE, Lead Plaintiff, on behalf of himself and the Class, prays for relief and judgment, as follows:

490. Declaring this action to be a proper class action under Rule 23, certifying Plaintiffs as a class representative under Rule 23, and designating Lead Counsel as class counsel;

491. Awarding compensatory, rescissory, or statutory damages in favor of Plaintiffs and the other Class members against all Defendants, jointly and severally, for all damages sustained as a result of Defendants' wrongdoing, in an amount to be proven at trial, including interest thereon;

492. Awarding Plaintiffs and the Class reasonable costs and expenses incurred in this action, including counsel fees and expert fees; and

493. Awarding Plaintiff and other members of the Class such other and further relief as the Court may deem just and proper.

XV. JURY TRIAL DEMANDED

Plaintiffs hereby demands a trial by jury.

Dated: September 8, 2023

WOLF POPPER LLP

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