



Investor Supplemental FY24-Q1

September 6, 2023

Disclaimer

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements contained in this press release other than statements of historical facts, including our market leadership position, anticipated benefits from our partnerships and investments, financial outlook, our expectations relating to our new consumption-pricing model and the impact to our results of operations, our expectation to be operating profitably on a non-GAAP basis by the end of fiscal 2025, the expected benefits of our offerings, our business strategies, plans, and objectives for future operations, are forward-looking statements. The words “anticipate,” “believe,” “continue,” “estimate,” “expect,” “intend,” “may,” “will” and similar expressions are intended to identify forward-looking statements. We have based these forward-looking statements largely on our current expectations and projections about future events and trends that we believe may affect our financial condition, results of operations, business strategy, short-term and long-term business operations and objectives, and financial needs. These forward-looking statements are subject to a number of risks and uncertainties, including difficulties in evaluating our prospects and future results of operations given our limited operating history, our dependence on a limited number of existing customers that account for a substantial portion of our revenue, our ability to attract new customers and retain existing customers, market awareness and acceptance of enterprise AI solutions in general and our products in particular, and our history of operating losses. Some of these risks are described in greater detail in our filings with the Securities and Exchange Commission, including our Annual Report on Form 10-K for the fiscal year ended April 30, 2023, and other filings and reports we make with the Securities and Exchange Commission from time to time, including our Quarterly Report on Form 10-Q that will be filed for the fiscal quarter ended July 31, 2023, although new and unanticipated risks may arise. The future events and trends discussed in this press release may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance, achievements, or events and circumstances reflected in the forward-looking statements will occur. Except to the extent required by law, we do not undertake to update any of these forward-looking statements after the date of this press release to conform these statements to actual results or revised expectations.

This presentation also contains estimates and other statistical data made by independent parties and by us relating to market size and growth and other data about our industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. Neither we nor any other person makes any representation as to the accuracy or completeness of such data or undertakes any obligation to update such data after the date of this presentation. In addition, projections, assumptions, and estimates of our future performance and the future performance of the markets in which we operate are necessarily subject to a high degree of uncertainty and risk.

In addition to the financials presented in accordance with U.S. generally accepted accounting principles (“GAAP”), this presentation includes non-GAAP financial information. We believe that non-GAAP financial information, when taken collectively with financial information presented in accordance with GAAP, may be helpful to investors because it provides consistency and comparability with past financial performance. There are a number of limitations related to the use of non-GAAP financial metrics versus their nearest GAAP equivalents. For example, other companies may calculate non-GAAP metrics differently or may use other metrics to evaluate their performance, all of which could reduce the usefulness of our non-GAAP financial metrics as tools for comparison. We urge you to review the non-GAAP financial information with the financial information presented in accordance with GAAP, and not to rely on any single financial measure to evaluate our business.

 **C3.ai This is Enterprise AI.**

Letter from our Chief Executive Officer

The Evolution of C3 AI

Dear C3 AI Shareholder,

Like many of the world's leading technology companies, C3 AI has changed and expanded its branding and product portfolios to achieve market leadership.

When we founded C3 AI, we believed the market for elastic cloud computing, IoT, big data, and predictive analytics software was destined to be large. That proved true.

However, in 2009 the market was nascent, and the specific applications and markets were unknown.

In 2008, the global public cloud market was less than \$20 billion; in 2023 it is expected to approach \$500 billion.¹ In 2008, there were less than 1 billion IoT devices worldwide²; in 2023, that number is expected to exceed 55 billion³. In 2008, the AI software market – as we think about it today – did not exist. This year it is expected to exceed \$450 billion⁴. And now with Generative AI, this market alone may reach \$1.3 trillion by 2032⁵. We believe that by any standards that constitutes explosive growth.

When we consider mega-market developments like the internet, the smartphone, and AI, it is impossible to anticipate a priori exactly how these markets will develop. With the advent of the Mosaic internet browser in 1993, who could have anticipated Amazon and Google? With the founding of Apple Computer Company in 1976, who could have anticipated the iPhone? The Apple Store? Apple TV? iTunes? These mega-markets develop in unanticipated ways.

We believe that Enterprise AI is a mega-market event. As this market has developed, C3 AI has continually expanded its market offerings and continually expanded its market position to address the ever-expanding opportunity.

C3: 2009 – 2012

We founded C3 in January of 2009 and developed some of the core components of what is now the C3 AI Platform within the first year. You may recall there was much discussion and interest in the 2008-2011 timeframe about clean tech, energy management, LEED certification, cap and trade vs carbon offsets, etc., and as a result we decided to focus our first use case on energy management. That proved to be a good decision.

In 2010, we released our first product, C3 Energy Management.

In 2010 – 2012, we closed several large agreements with a large global industrial company, one of the world's largest chemical companies, two large utilities, and one of the world's largest high-tech companies.

C3 Energy: 2013 – 2015

¹ <https://www.forrester.com/report/the-public-cloud-market-outlook-2022-to-2026/RES178311>

² <https://www.statista.com/statistics/764026/number-of-iot-devices-in-use-worldwide/>

³ <https://www.idc.com/getdoc.jsp?containerId=US49631322>

⁴ <https://www.idc.com/getdoc.jsp?containerId=US49571222>

⁵ <https://www.bloomberg.com/company/press/generative-ai-to-become-a-1-3-trillion-market-by-2032-research-finds/>

In 2012, C3 engaged McKinsey & Co. to conduct a study and make recommendations for maximizing growth including optimal company positioning and an associated pricing and product strategy. In the 2000-2020 timeframe, utility companies globally were in the process of spending \$2 trillion to upgrade their grid infrastructures with IoT devices, enabling the advent of the smart grid. Utilities were early adopters of IoT.

The McKinsey analysis recommended that there was a significant opportunity for C3 to expand its business by applying its energy management and energy efficiency solutions to utilities at grid scale, in addition to selling to enterprises.

Adopting the McKinsey recommendations, C3 expanded its market position, rebranded as C3 Energy, and in addition to its prior solutions, C3 Energy offered a family of predictive analytics solutions – then reliant on emerging AI techniques including machine learning, supervised learning, and unsupervised learning – to address the utility value chain of power generation, transmission, distribution, and consumption to optimize the operation of large and complex power grid infrastructures. The C3 Energy utility software products expanded to include C3 AMI Operations, C3 Revenue Protection, C3 Predictive Analytics, C3 Revenue Production, and C3 Reliability.

Many customers also licensed our core C3 Platform that they used to develop their own predictive analytics application and/or to develop derivative works of the C3 Energy applications.

It was during this period that the company formed its data science division to develop and apply AI techniques to our applications including machine learning, predictive analytics, supervised learning, and unsupervised learning capabilities.

The company began to offer its products to the oil and gas industry including its AI Predictive Maintenance application for oil pumps, offshore oil rigs, LNG production facilities, etc. The company continued to offer its products for energy management and energy efficiency to utilities based upon per customer pricing and to enterprises based upon expected value pricing.

This expansion into energy markets proved successful as C3 AI booked approximately \$83 million in contracts and recognized \$63.9 million in revenue during this period.

C3 IoT: 2016 – 2018

By 2016 we were seeing significant expansion in the cloud computing market and the proliferation of IoT sensors was expanding dramatically across many industries. We were increasingly approached by manufacturing companies, financial service companies, oil and gas companies, and the U.S. Department of Defense to deploy the same types of AI applications that we had successfully deployed in other enterprises including AI predictive maintenance, AI fraud detection, AI Inventory Optimization, and C3 Energy Management.

At that time, the common expression for these types of applications was “IoT”, and we appropriately rebranded the company as C3 IoT to communicate to the market that we were again expanding our market offerings from primarily one vertical market (energy) to a broadening range of markets.

In response to this increased demand, the company tailored its core applications to meet the needs of those industries. As such, in addition to the C3 Platform, we offered market-specific versions of our AI predictive maintenance, inventory optimization, energy management applications, etc., for each of the utility, oil and gas, defense, and financial services industries.

This market and product line expansion again proved successful as the company booked \$203 million in contracts and recognized \$120.4 million in revenue from 2016-2018.

C3 AI: 2019 – Present

As the market for cloud computing, big data, IoT, and predictive analytics continued to expand, the market perception of IoT – as expressed in the literature, technical conferences, the academy, and in customer expectations – changed. While IoT had previously been considered at the confluence of the sensor devices and the AI applications, it was clear that IoT was becoming a concept increasingly centered on devices – the IoT sensors themselves --with the AI applications considered a separate category. As this developed, the C3 IoT brand became confusing to the market, as many customers had the preconception that the company was primarily in the business of manufacturing IoT sensor and devices.

To eliminate this market confusion, we rebranded the company C3 AI, clearly communicating that we were in the computer software business.

In addition to the products and services that the company offered since its inception, C3 AI again expanded its product offerings to include to date over 40 AI production applications for the utility, oil & gas, financial services, manufacturing, health, communications industries, and U.S. defense and intelligence sectors. Across industries, we introduced a number of AI application products that serve all vertical markets including Ex Machina, to address the needs of the growing citizen data science market, C3 AI CRM, C3 AI Data Vision, and C3 AI ESG.

Again, this market expansion proved successful, enabling C3 AI to book over \$1.2 billion in additional contracts and recognize \$951.1 million in revenue from 2019-2023.

2023: Generative AI Changes Everything

Subsequent to the general introduction of ChatGPT and Generative AI in November of 2022, the market interest in applying AI to business processes appears to be expanding exponentially. We do not believe that it is an overstatement to say that there is no CEO, no senior business manager, no institutional investor, and no government or military leader who has not given thought to AI today – this very day – to take advantage of AI to improve business results.

The market has very much come our way. As the market interest in AI accelerates, we believe C3 AI is extraordinarily well positioned offering the C3 AI Platform that allows customers in all industries to realize their enterprise AI visions -- in addition to over 40 turn-key production AI applications that customers can install today to address predictive maintenance, supply chain optimization, fraud detection, demand chain optimization, contested logistics, production optimization, AI CRM, AI ESG, and enterprise search – plus industry-specific versions of these solutions that meet the needs of defense, intelligence, manufacturing, financial services, pharmaceuticals, oil and gas, utilities, chemicals, agribusiness, lumber and paper products, and others.

There is exactly one company that offers an AI Platform and over 40 turnkey AI enterprise industry-specific applications in 2023, and that company is C3 AI.

Generative AI explodes the market opportunity. We believe the possibilities are almost endless and the power of LLMs will increase dramatically as the industry spends billions of dollars per year advancing GPT technology.

There is no organization that is not wrestling with how to take advantage of AI. The killer application is to use Generative AI to transform the human computer interaction models of enterprise applications. With Generative AI, the complex mishmash of tabs, drop-downs, and arcane commands is replaced by a simple search bar. Ask a question...get the answer.

We believe the most common Generative AI use case will be enterprise search -- instead of attempting to wrestle answers from scores of enterprise applications like ERP, CRM, HR, manufacturing automation, customer service, supply chain -- LLMs (actually small language models) applied to the enterprise will allow a single search bar to access all enterprise applications and immediately return the appropriate answer. A truly unified enterprise search model.

But enterprises are finding that there are a number of disqualifying attributes of the LLM solutions currently being proposed by hyperscalers, consultants, and others: 1) LLM answers are frequently random; 2) LLM answers are not traceable to ground truth; 3) LLM-caused data exfiltration exposes serious data security risks; 4) Enterprise data access controls go unenforced; 5) LLM hallucination makes it impossible to tell when an answer is fact or fiction; and 6) LLM-specific solutions prevent enterprises from taking advantage of the rapid innovation in LLM development.

C3 Generative AI is designed to address the disqualifying hobgoblins of other LLM solutions offering: 1) deterministic answers; 2) answers that can be traceable to ground truth; 3) significantly reduced risk of LLM-caused data exfiltration; 4) enterprise data access controls that can be fully enforced; 5) significantly reduced risk of hallucination; 6) C3 Generative AI is LLM-agnostic – allowing enterprises to take advantage of the rapidly evolving developments in improved LLM solutions as they become available.

We introduced C3 Generative AI in January 2023 and it appears that the addressable market for Generative AI is larger than the sum of the global AI market that we addressed at the end of 2022.

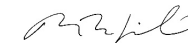
It is difficult to overestimate the reception that we are receiving to our Generative AI solution. The market interest levels are intense, the sales cycles are short, the benefits are immediate, and the expansion opportunities within the enterprise are vast.

C3 AI was well ahead of its time in predicting the scale of the opportunity in enterprise AI applications. We began when the market was nascent, and as the market has developed and expanded, we have expanded our branding and our market offerings to meet market expectations.

While we believed that this market would be quite large, no one could have anticipated the size and growth rate of the AI market that we now address.

C3 AI has spent the past 14 years preparing for this opportunity. The technology foundation is tried, tested, and proven. A strong portfolio of applications is in place. We have a pricing and distribution model that meets the needs of the market. We have a quality brand and a long list of satisfied customers. We are armed with a battalion of talented, professional employees deployed worldwide. Our partner ecosystem with Google, AWS, Azure, Booz Allen, Baker Hughes and others is well developed and expanding. The company is well capitalized with a seasoned leadership team.

The future looks bright.



Thomas M. Siebel
Chairman and CEO

FY24-Q1 Highlights

Number of
Agreements

32

Operating Cash
Flow

\$3.9M

Revenue Growth¹

11%

cRPO²

\$171M

Cash Balance

\$810M

(1) FY24-Q1 QTD vs FY23-Q1 QTD

(2) Current RPO (cRPO) refers to the revenue expected to be recognized from remaining performance obligations over the next 12 months

(3) Percentages are rounded for presentation purposes

FY24-Q1 C3 AI Partner Model Success

- Closed 32 agreements during Q1 FY24, of which 20 were with partners
- Qualified opportunity pipeline with partners has increased by over 100% in the past year
- Our qualified pipeline with cloud partners grew by 61% from Q4 FY23 to Q1 FY24
- Booz Allen partnership resulted in 10 closed agreements during Q1 FY24 in the Federal Defense market

Google Cloud

aws

Microsoft

Baker Hughes

accenture

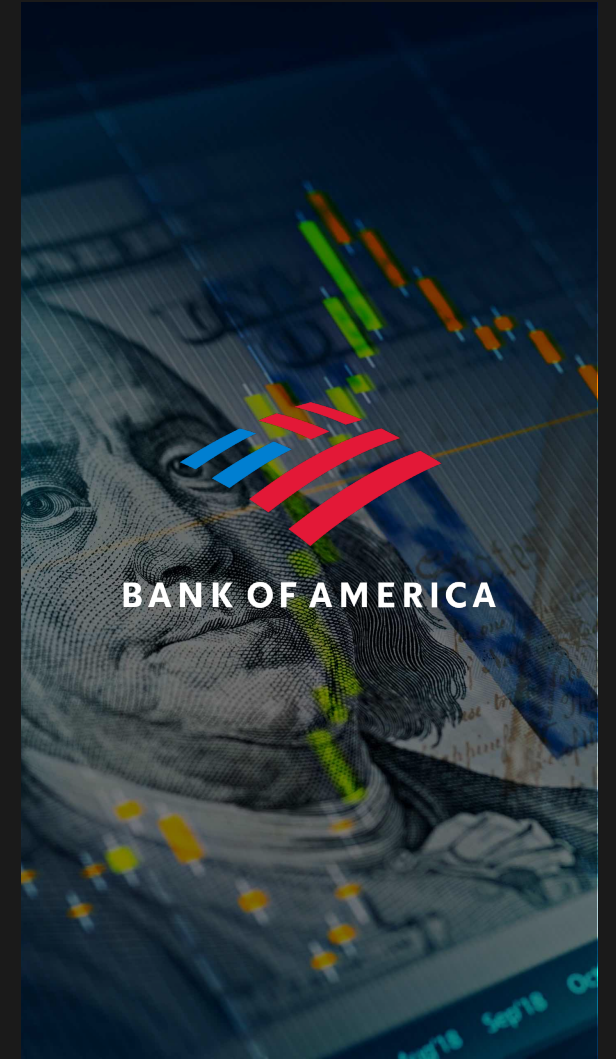
Peraton

Raytheon Technologies

Booz | Allen | Hamilton

C3 AI Customer Success

C3 AI Customer Success



C3 AI Customer Success



The DoD uses the C3 AI Platform and C3 AI Applications across many Services, Components, and Combatant Commands to realize a significant improvement in Readiness and Decision Advantage.

Beginning in 2017, in collaboration with the Defense Innovation Unit (DIU), C3 AI began work for the US Air Force to improve and accelerate predictive maintenance for the E-3 Sentry (AWACS)

The DIU and the USAF Rapid Sustainment Office (RSO) selected C3 AI for an additional Readiness project to apply similar predictive maintenance approaches to the B-1B strategic bomber.

This configuration of C3 AI Readiness for the US Air Force has scaled to over 16 Air Force platforms.

The net effect: up to a 25% increase in overall aircraft full-mission-capability and economic value on the order of \$3 billion.

C3 AI Customer Success



C3 AI applications are deployed across the entire Shell asset base.

Shell's predictive maintenance program monitors almost 20,000 pieces of equipment and over two billion rows of data a day. C3 AI identifies failure in advance, helping to protect workers, keep equipment running, and generating enormous economic benefit.

Recently, Shell and C3 AI:

- expanded AI-based estimation techniques in subsurface reservoir management
- deployed an oil condition monitoring application for Shell's customers to reduce unplanned downtime of heavy-duty assets
- expanded the feature set of the C3 AI ESG solution.

C3 AI Customer Success



We continue to expand our partnership with Koch Industries, particularly at Georgia-Pacific and Flint Hills Resources. We generate almost 4 million monthly predictions across 300-plus assets using our reliability and supply chain applications.

Koch initiated two generative AI pilots to help process data, documents, and files. Georgia-Pacific is improving efficiency in triaging and resolving equipment issues, while Flint Hill Resources is increasing efficiency and information access in commodity trading.

Koch also kicked off a Koch corporate wide finance application benefiting all Koch businesses.

C3 AI Customer Success



The C3 AI applications deployed at Bank of America deliver customer insights, optimize business workflows, and provide recommendations to its Liquidity Product Specialists and Treasury Sales Officers.

These applications are all expected to generate significant annual benefits, especially in a higher-interest rate environment, where balance retention, and efficiency of sales and operations are important drivers of profitability and expense reduction.

Every day, over 500 liquidity and sales users log in to use the C3 AI applications.

In the past three months, Bank of America has:

- applied AI-based techniques to assess client responsiveness and sensitivity in a fluctuating interest-rate environment;
- explored opportunities to apply generative AI to improve efficiency of sales and operations.

C3 Generative AI

C3 Generative AI

C3 Generative AI is a unified knowledge source that enables enterprise users to rapidly locate, retrieve, and act on enterprise data and insights through an intuitive search and chat interface.

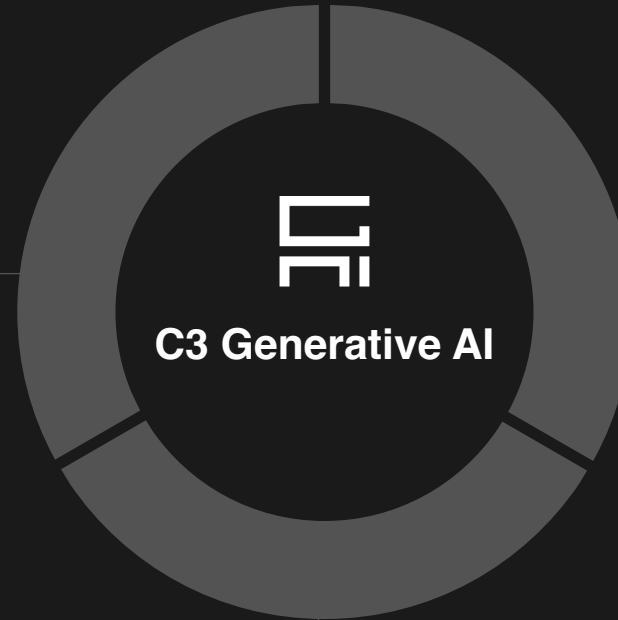


- ✓ Deterministic Responses
- ✓ Traceable to Ground Truth
- ✓ Enterprise Access Controls
- ✓ No LLM-Caused Data Leakage
- ✓ Minimizes the Risk of Hallucinations
- ✓ LLM Agnostic

Apply C3 Generative AI for Industries, Business Processes, and Enterprise Systems

C3 Generative AI for Industries

- C3 Generative AI for Aerospace
- C3 Generative AI for Defense
- C3 Generative AI for Financial Services
- C3 Generative AI for Healthcare
- C3 Generative AI for Intelligence
- C3 Generative AI for Manufacturing
- C3 Generative AI for Oil and Gas
- C3 Generative AI for Telecommunications
- C3 Generative AI for Utilities



C3 Generative AI for Business Processes

- C3 Generative AI for Customer Service
- C3 Generative AI for Energy Management
- C3 Generative AI for ESG
- C3 Generative AI for Finance
- C3 Generative AI for Human Resources
- C3 Generative AI for Process Optimization
- C3 Generative AI for Reliability
- C3 Generative AI for Sales
- C3 Generative AI for Supply Chain

C3 Generative AI for Enterprise Systems

- | | |
|---|---------------------------------|
| C3 Generative AI for Databricks | C3 Generative AI for Salesforce |
| C3 Generative AI for Microsoft Dynamics 365 | C3 Generative AI for SAP |
| C3 Generative AI for Oracle ERP | C3 Generative AI for ServiceNow |
| C3 Generative AI for Oracle NetSuite | C3 Generative AI for Snowflake |
| C3 Generative AI for Palantir | C3 Generative AI for Workday |

Guidance

	FY24-Q2	FY24
Total Revenue	\$72.0 – \$76.5 million	\$295.0 – \$320.0 million
YoY Growth %	15% – 23%	11% – 20%
Non-GAAP Loss from Operations	(\$27.0) – (\$40.0) million	(\$70.0) – (\$100.0) million

Our guidance includes GAAP and non-GAAP financial measures. A reconciliation of non-GAAP guidance measures to corresponding GAAP measures is not available on a forward-looking basis without unreasonable effort due to the uncertainty regarding, and the potential variability of, expenses that may be incurred in the future. Stock-based compensation expense-related charges, including employer payroll tax-related items on employee stock transactions, are impacted by the timing of employee stock transactions, the future fair market value of our common stock, and our future hiring and retention needs, all of which are difficult to predict and subject to constant change. We have provided a reconciliation of GAAP to non-GAAP financial measures in the financial statement tables for our historical non-GAAP results included in this presentation. Our fiscal year ends April 30, and numbers are rounded for presentation purposes.

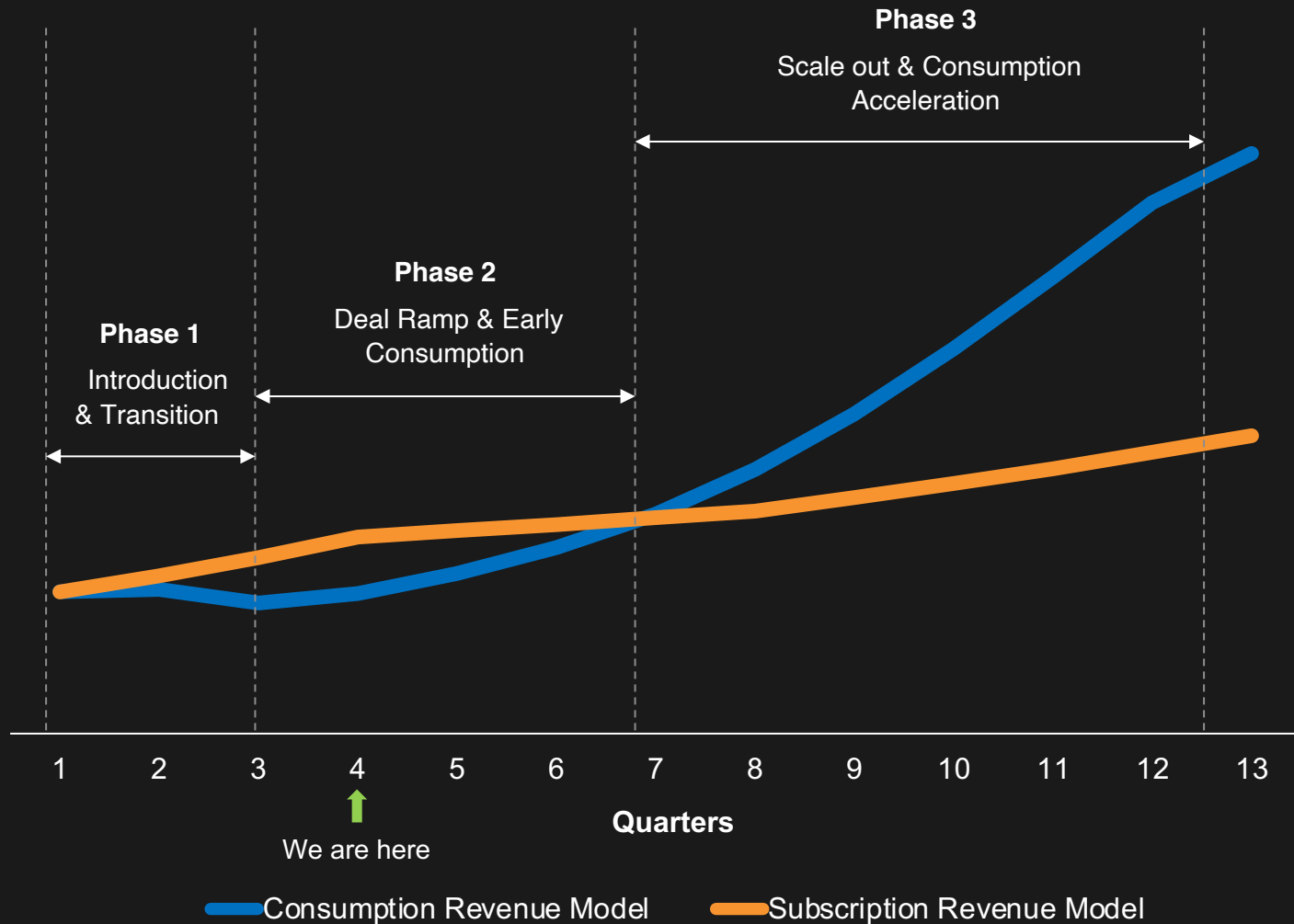
Finance Update

FY24-Q1 Summary Financial Results

	FY24-Q1
Revenue	\$72.4 million
Subscription Revenue	\$61.4 million
Non-GAAP Gross Profit	\$49.6 million
Remaining Performance Obligations (“RPO”)	\$334.6 million
Non-GAAP Gross Margin	69%
Current RPO	\$170.6 million
Non-GAAP net loss per share	\$(0.09)
Free Cash Flow	\$(8.9) million
Free Cash Flow adjusted for new C3 AI HQ	\$1.4 million

Note: Non-GAAP Gross Profit, Non-GAAP Gross Margin, Non-GAAP net loss per share, Free cash flow and Free cash flow adjusted for new C3 AI HQ are non-GAAP financial measures. Refer to the Appendix for a reconciliation of this non-GAAP financial measure to the most directly comparable GAAP measure. Numbers and percentages are rounded for presentation purposes.

Consumption Based Revenue Transition



Phase 1 – Introduction & Transition

- First pilots started along with trials
- Pilots have a lower TCV and higher initial investment costs
- Revenue growth flattens and gross margin compresses

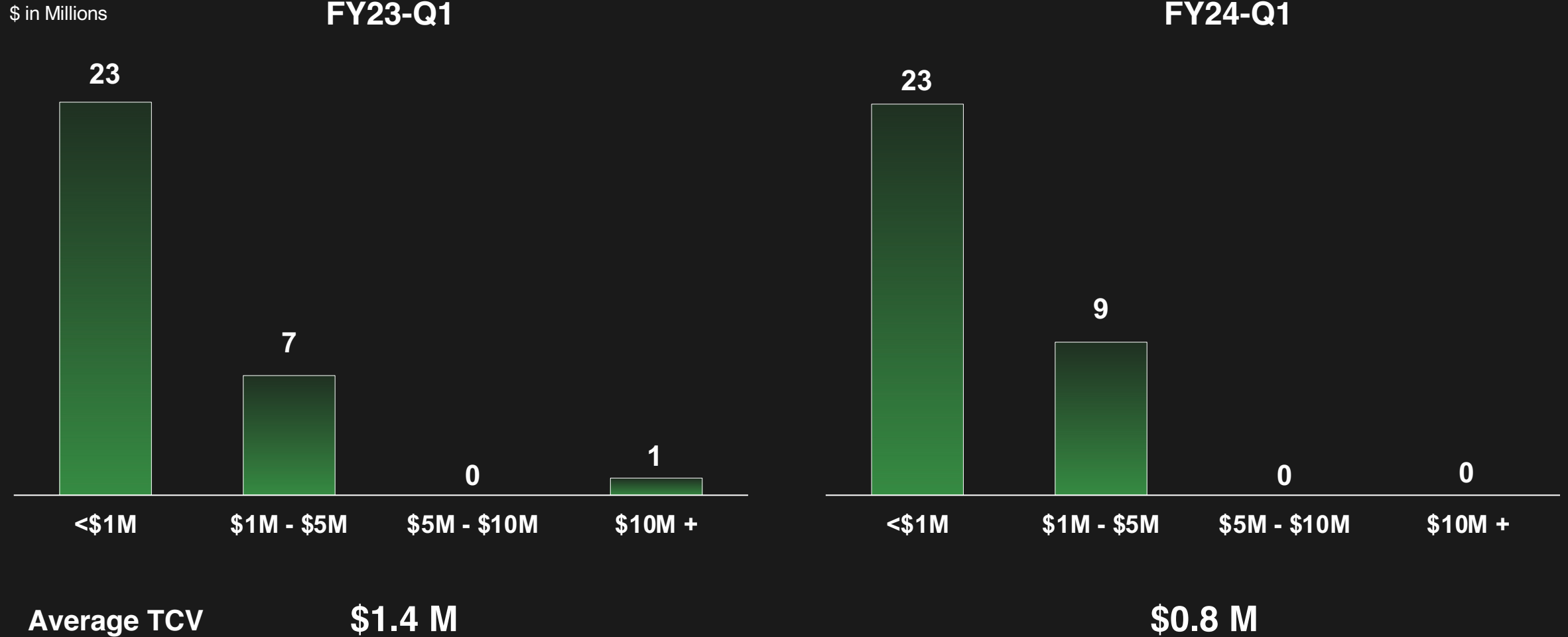
Phase 2 – Deal Ramp & Early Consumption

- Increased number of pilots and more customers convert to consumption
- Revenue decline bottoms
- Total revenue growth and gross margin improve

Phase 3 – Scale out & Consumption Acceleration

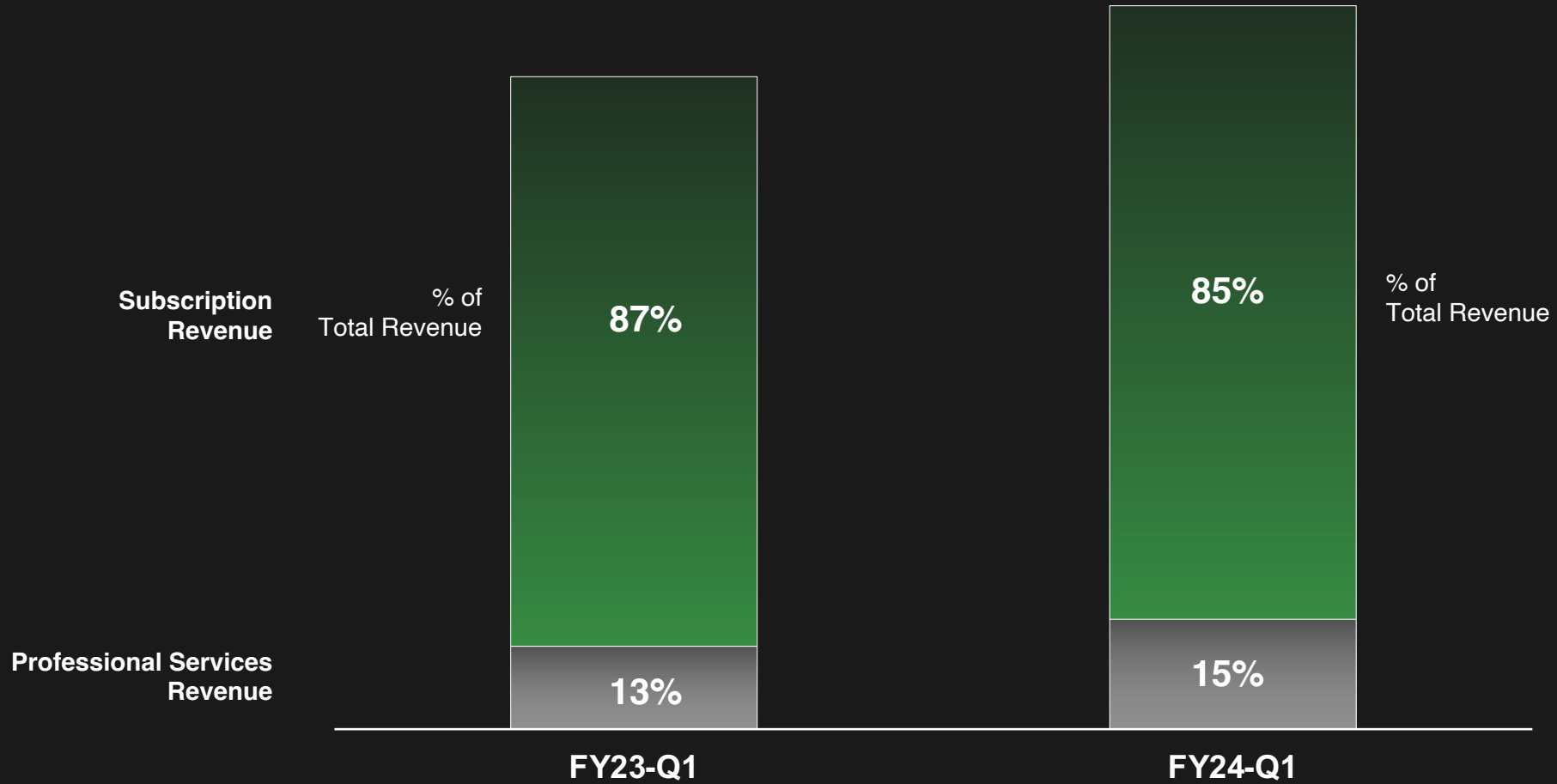
- Larger number of customers have converted to consumption
- Revenue growth accelerates and gross margin trends toward pre-transition level (high 70s)

Deal Bands



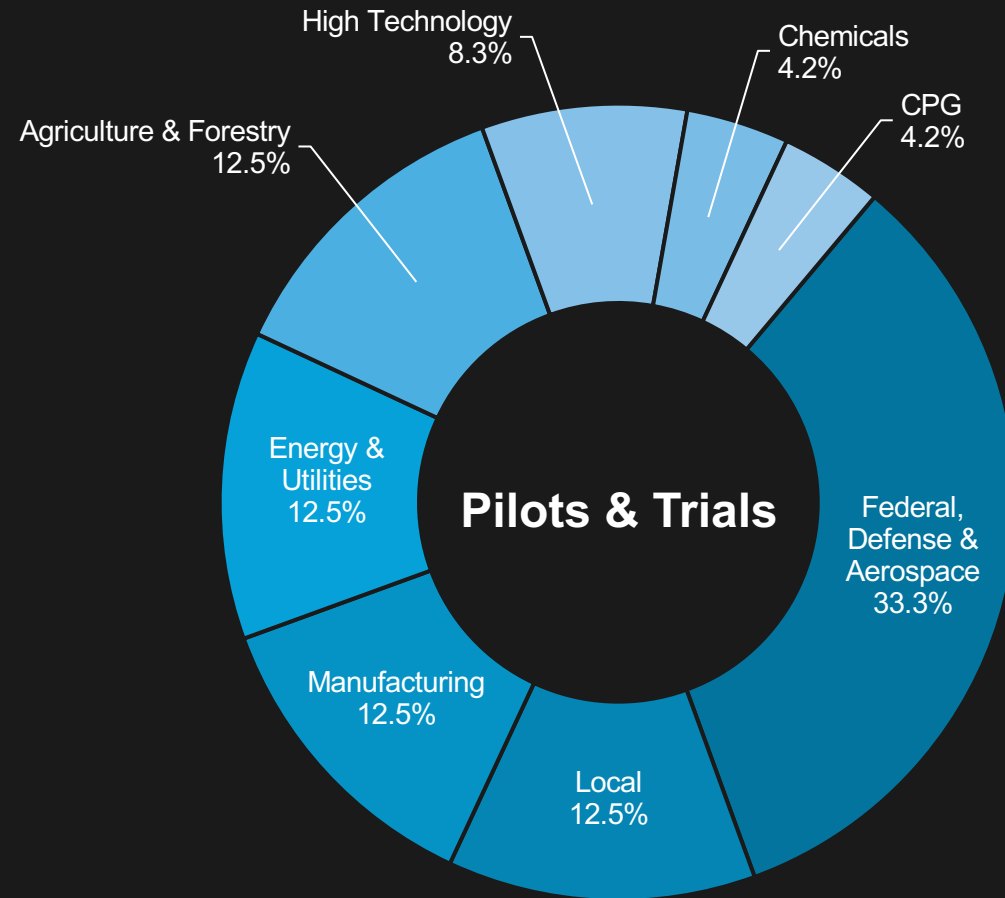
Note: Fiscal year ends April 30. Numbers are rounded for presentation purposes.

Total Revenue Mix



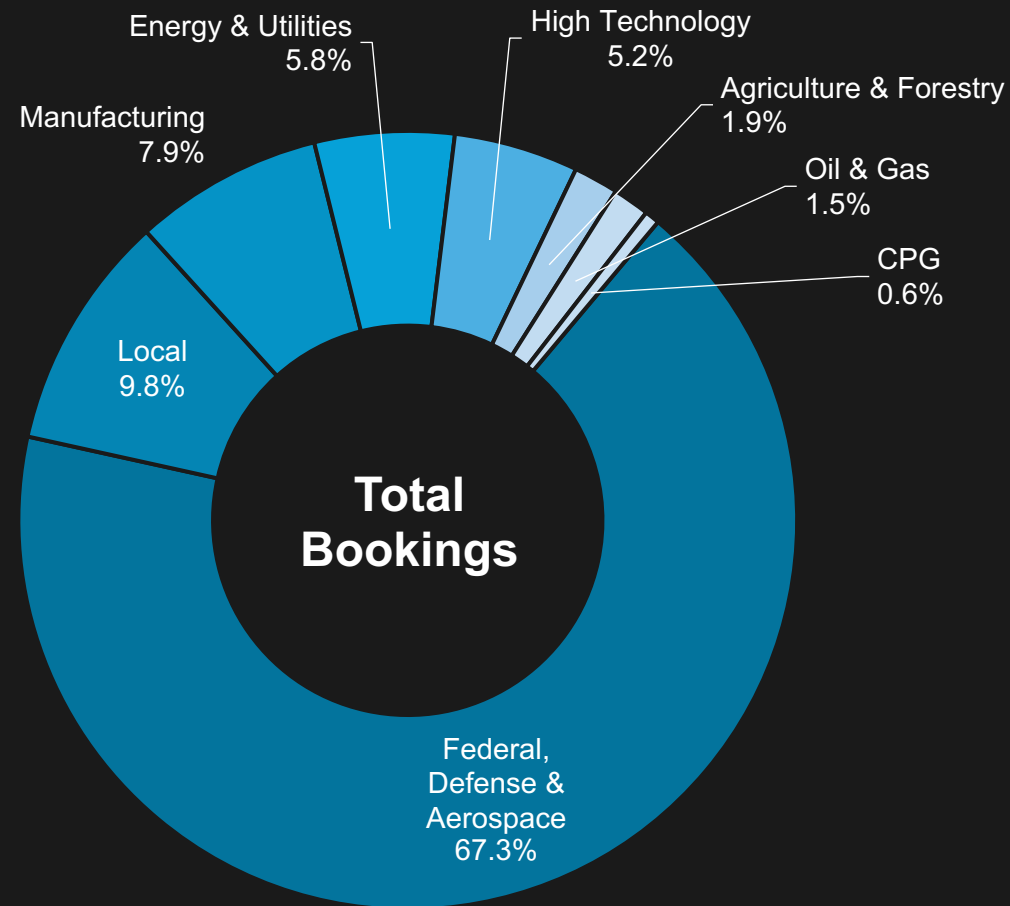
Note: Numbers and percentages are rounded for presentation purposes.

Pilots & Trials Diversity by Industry FY24-Q1



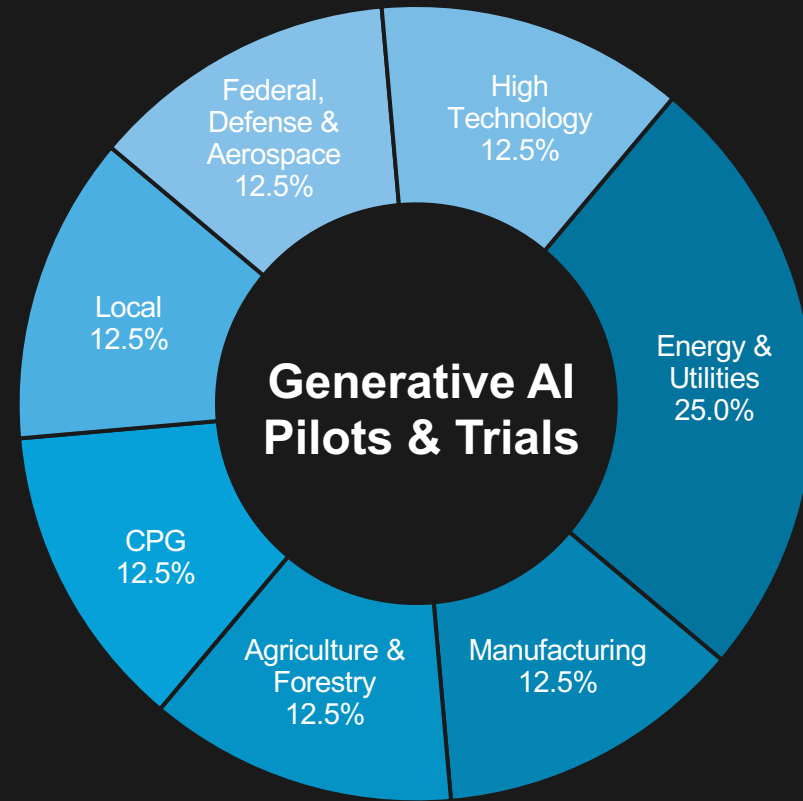
Note: Fiscal year ends April 30. Percentages are rounded for presentation purposes. % calculation is based on deal count

Diversity by Industry FY24-Q1



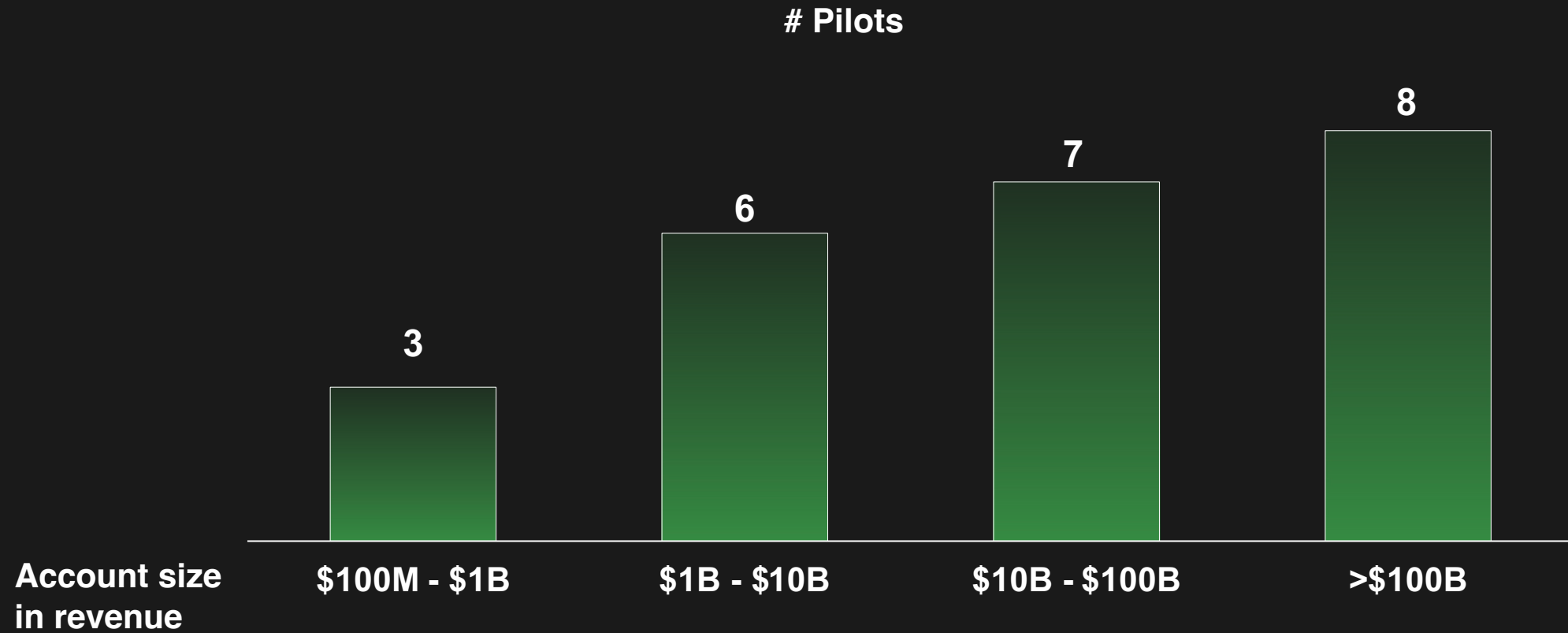
Note: Fiscal year ends April 30. Percentages are rounded for presentation purposes. % calculation is based on dollar amount

Generative AI Pilots & Trials Diversity by Industry FY24-Q1



Note: Fiscal year ends April 30. Percentages are rounded for presentation purposes. % calculation is based on deal count

Pilot Account Profile



C3 AI Investment Thesis



Huge Addressable Market of \$791.5 Billion by 2026¹



First-mover Advantage



Patented Enterprise AI Application Platform



Substantial Market Partner Ecosystem



Recognized AI Market Leadership



Proven Track Record of Success



Veteran Disciplined Management Team



High-Performance Corporate Culture



Excellence in Execution

¹ Source: IDC Worldwide Artificial Intelligence Software Forecast, 2022

 **C3.ai This is Enterprise AI.**

Appendix

Income Statement

	Three Months Ended							
	October 31, 2021	January 31, 2022	April 30, 2022	July 31, 2022	October 31, 2022	January 31, 2023	April 30, 2023	July 31, 2023
Revenue								
Subscription	\$ 47,408	\$ 57,084	\$ 56,302	\$ 57,026	\$ 59,508	\$ 57,043	\$ 56,866	\$ 61,352
Professional services	10,855	12,689	16,015	8,282	2,900	9,626	15,544	11,010
Total Revenue	58,263	69,773	72,317	65,308	62,408	66,669	72,410	72,362
Cost of revenue								
Subscription ⁽¹⁾⁽²⁾	11,392	12,275	12,958	14,092	19,165	21,294	23,872	30,434
Professional services ⁽¹⁾⁽²⁾	4,579	5,079	4,405	4,314	1,587	977	1,036	1,379
Total cost of revenue	15,971	17,354	17,363	18,406	20,752	22,271	24,908	31,813
Gross profit	42,292	52,419	54,954	46,902	41,656	44,398	47,502	40,549
Operating expenses								
Sales and marketing ⁽¹⁾⁽²⁾	46,166	43,146	47,450	42,987	44,936	43,497	51,701	43,885
Research and development ⁽¹⁾⁽²⁾	36,523	40,931	46,378	55,877	50,051	55,051	49,681	50,868
General and administrative ⁽¹⁾⁽²⁾	15,279	15,748	17,649	21,247	18,635	17,888	19,400	19,889
Total operating expenses	97,968	99,825	111,477	120,111	113,622	116,436	120,782	114,642
Loss from operations	(55,676)	(47,406)	(56,523)	(73,209)	(71,966)	(72,038)	(73,280)	(74,093)
Interest income	322	410	750	2,538	4,224	6,987	8,230	10,122
Other (expense) income, net	(1,372)	7,742	(2,452)	(1,021)	(945)	2,032	284	(239)
Net income (loss) before provision for income taxes	(56,726)	(39,254)	(58,225)	(71,692)	(68,687)	(63,019)	(64,766)	(64,210)
Provision for income taxes	13	193	195	179	163	143	190	148
Net income (loss)	\$ (56,739)	\$ (39,447)	\$ (58,420)	\$ (71,871)	\$ (68,850)	\$ (63,162)	\$ (64,956)	\$ (64,358)

(1) Includes stock-based compensation expense as follows:

	Three months ended							
	October 31, 2021	January 31, 2022	April 30, 2022	July 31, 2022	October 31, 2022	January 31, 2023	April 30, 2023	July 31, 2023
Cost of subscription	\$ 2,364	\$ 2,639	\$ 2,814	\$ 4,272	\$ 5,486	\$ 5,996	\$ 5,663	\$ 8,056
Cost of professional services	685	704	719	1,071	479	361	309	460
Sales and marketing	13,555	8,850	11,804	16,779	19,080	18,316	17,214	16,779
Research and development	10,256	12,846	13,340	25,217	23,905	23,646	17,449	17,033
General and administrative	5,680	6,322	6,951	9,291	7,063	7,512	7,433	8,552
Total stock-based compensation expense	\$ 32,540	\$ 31,361	\$ 35,628	\$ 56,630	\$ 56,013	\$ 55,831	\$ 48,068	\$ 50,880

(2) Includes employer payroll tax expense related to stock-based compensation as follows:

	Three months ended							
	October 31, 2021	January 31, 2022	April 30, 2022	July 31, 2022	October 31, 2022	January 31, 2023	April 30, 2023	July 31, 2023
Cost of subscription	\$ —	\$ 7	\$ 35	\$ 286	\$ 170	\$ 190	\$ 357	\$ 509
Cost of professional services	—	1	6	100	16	11	20	32
Sales and marketing	215	202	42	530	356	277	604	1,005
Research and development	217	38	72	943	386	618	576	817
General and administrative	151	108	23	183	63	79	112	137
Total employer payroll tax expense	\$ 583	\$ 356	\$ 178	\$ 2042	\$ 991	\$ 1175	\$ 1669	\$ 2500

GAAP to Non-GAAP Reconciliations

	Three Months Ended								
	July 31, 2021	October 31, 2021	January 31, 2022	April 30, 2022	July 31, 2022	October 31, 2022	January 31, 2023	April 30, 2023	July 31, 2023
Subscription revenue	\$ 46,122	\$ 47,408	\$ 57,084	\$ 56,302	\$ 57,026	\$ 59,508	\$ 57,043	\$ 56,866	\$ 61,352
Professional services revenue	6,284	10,855	12,689	16,015	8,282	2,900	9,626	15,544	11,010
Total Revenue	52,406	58,263	69,773	72,317	65,308	62,408	66,669	72,410	72,362
GAAP cost of subscription revenue	9,213	11,392	12,275	12,958	14,092	19,165	21,294	23,872	30,434
Stock-based compensation	821	2,364	2,639	2,814	4,272	5,486	5,996	5,663	8,056
Employer payroll tax expense related to employee stock-based compensation	—	—	7	35	286	170	190	357	509
Non-GAAP cost of subscription revenue	8,392	9,028	9,629	10,109	9,534	13,509	15,108	17,852	21,869
GAAP cost of professional services revenue	3,812	4,579	5,079	4,405	4,314	1,587	977	1,036	1,379
Stock-based compensation	602	685	704	719	1,071	479	361	309	460
Employer payroll tax expense related to employee stock-based compensation	65	—	1	6	100	16	11	20	32
Non-GAAP cost of professional services revenue	3,145	3,894	4,374	3,680	3,143	1,092	605	707	887
GAAP sales and marketing expense	36,822	46,166	43,146	47,450	42,987	44,936	43,497	51,701	43,885
Stock-based compensation	6,135	13,555	8,850	11,804	16,779	19,080	18,316	17,214	16,779
Employer payroll tax expense related to employee stock-based compensation	301	215	202	42	530	356	277	604	1,005
Non-GAAP sales and marketing expense	30,386	32,396	34,094	35,604	25,678	25,500	24,904	33,883	26,101
GAAP research and development expense	26,712	36,523	40,931	46,378	55,877	50,051	55,051	49,681	50,868
Stock-based compensation	2,758	10,256	12,846	13,340	25,217	23,905	23,646	17,449	17,033
Employer payroll tax expense related to employee stock-based compensation	182	217	38	72	943	386	618	576	817
Non-GAAP research and development expense	23,772	26,050	28,047	32,966	29,717	25,760	30,787	31,656	33,018
GAAP general and administrative expense	12,364	15,279	15,748	17,649	21,247	18,635	17,888	19,400	19,889
Stock-based compensation	3,596	5,680	6,322	6,951	9,291	7,063	7,512	7,433	8,552
Employer payroll tax expense related to employee stock-based compensation	307	151	108	23	183	63	79	112	137
Non-GAAP general and administrative expense	8,461	9,448	9,318	10,675	11,773	11,509	10,297	11,855	11,200
Gross profit on a GAAP basis	\$ 39,381	\$ 42,292	\$ 52,419	\$ 54,954	\$ 46,902	\$ 41,656	\$ 44,398	\$ 47,502	\$ 40,549
Stock-based compensation	1,423	3,049	3,343	3,533	5,343	5,965	6,357	5,972	8,516
Employer payroll tax expense related to employee stock-based compensation	65	—	8	41	386	186	201	377	541
Gross profit on a non-GAAP basis	40,869	45,341	55,770	58,528	52,631	47,807	50,956	53,851	49,606
Gross margin on a GAAP basis	75 %	73 %	75 %	76 %	72 %	67 %	67 %	66 %	56 %
Gross margin on a non-GAAP basis	78 %	78 %	80 %	81 %	81 %	77 %	76 %	74 %	69 %
Loss from operations on a GAAP basis	(36,517)	(55,676)	(47,406)	(56,523)	(73,209)	(71,966)	(72,038)	(73,280)	(74,093)
Stock-based compensation expense	13,912	32,540	31,361	35,628	56,630	56,013	55,831	48,068	50,880
Employer payroll tax expense related to employee stock-based compensation	855	583	356	178	2,042	991	1,175	1,669	2,500
Loss from operations on a non-GAAP basis	\$ (21,750)	\$ (22,553)	\$ (15,689)	\$ (20,717)	\$ (14,537)	\$ (14,962)	\$ (15,032)	\$ (23,543)	\$ (20,713)
Operating margin on a GAAP basis	-70 %	-96 %	-68 %	-78 %	-112 %	-115 %	-108 %	-101 %	-102 %
Operating margin on a non-GAAP basis	-42 %	-39 %	-22 %	-29 %	-22 %	-24 %	-23 %	-33 %	-29 %
RPO	\$ 290,613	\$ 465,526	\$ 469,276	\$ 477,421	\$ 458,209	\$ 417,320	\$ 403,159	\$ 381,437	\$ 334,560
Cancelable amount of contract value	66,638	63,766	67,454	39,396	38,626	36,229	33,171	40,247	46,400
Non-GAAP RPO	\$ 357,251	\$ 529,292	\$ 536,730	\$ 516,817	\$ 496,835	\$ 453,549	\$ 436,330	\$ 421,684	\$ 380,960

