

#### **Cautionary Notes**

Forward Looking Statements: Certain statements in this presentation may be considered forward-looking statements, including statements with respect to the Company's outlook and expectations, including expectations for the planned development and release of the Company's anticipated Ankaa-3 84-qubit single chip quantum processors, anticipated 9-qubit chip at 99.4% median 2-gubit gate fidelity, scaling to four 9-gubit chips for a 36-gubit multi-chip system with an anticipated 99.5% 2-gubit gate fidelity, and anticipated 108-gubit and 336-gubit next generation multi-chip machines and the timing thereof, including these systems' potential performance; the Company's ability to achieve 99% and greater fidelity on 84-gubit systems and other future systems; expectations relating to the Company's potential path to achieve nQA, revenue growth from achieving nQA and expectations that quantum computers have the potential to provide significant performance and price advantage over classical computation for select applications; expectations relating to the Company's commercialization and sales of QPUs, including Novera QPUs, and expectations of making similar additional sales of QPUs in the future; expectations relating to the Company's technology roadmap, the timing thereof and its ability to unlock quantum advantage and drive value creation and ability to apply to potentially commercially valuable problems; expectations and benefits with respect to the potential, opportunities, applications and impacts of quantum computing; expectations with respect to the Company's partnerships, including with NQCC; expectations with respect to leveraging fourth generation circuit architecture and introducing higher connectivity and tunable coupling, designed to ultimately deliver fidelities exceeding 99%; the capabilities of the Company's fab-1 facility, including its ability to accelerate research and development and innovation cycles, mitigate supply chain risk, provide efficiencies, generate intellectual property, and provide competitive advantage; expectations with respect to the Company's goal of delivering performance at scale with the mission of being the industry standard and the ability of its strategic investments in quantum hardware, software, and partnerships to enable progress toward quantum advantage; expectations with respect to building the world's most powerful computers to help solve humanity's most important and pressing problems; expectations with respect to quantum markets and opportunities; expectations with respect to the competitive landscape and barriers to entry; statements with respect to the potential of quantum computing to transform many different industries for the better; expectations with respect to the Company's strategy to reach quantum advantage and become the industry's standard; expectations with respect to the anticipated stages of quantum technology maturation, including anticipated inflection points; expectations with respect to quantum computing industry trends and standards; the Company's ability to be at the forefront of superconducting computing and expectations with respect to the Company's belief the superconducting is the leading quantum computing modality and the Company's technology is superior; the Company's ability to build the world's most powerful computers; expectations regarding the potential power of quantum computers; expectations with respect to the Company's supply chain; expectations relating to growth of the business, including with respect to future potential activities and expansion of QCaaS and growing revenue through high value partnerships; expectations relating to the Company's ability to achieve 100+q at 99%+ fidelity and demonstrate nQA in 2-3 years and QA in 4-5 years; expectations with respect to demonstrating reference applications, error mitigation, error correction, advantage-capable subroutines, and quantum advantage subroutines, including the timing thereof; and statements with respect to the Company's potential to deliver anticipated high-margin, recurring revenue growth and operating profit and be well-positioned to capture a significant share of the quantum computing opportunities. Forward-looking statements generally relate to future events and can be identified by terminology such as "pro forma," "may," "should," "could," "might," "plan," "possible," "project," "strive," "budget," "target," "forecast," "expect," "intend," "will," "estimate," "believe," "predict," "potential," "pursue," "aim," "goal," "mission," "outlook," "anticipate" or "continue." or the negatives of these terms or variations of them or similar terminology.



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Such forward-looking statements are subject to risks, uncertainties, and other factors which could cause actual results to differ materially from those expressed or implied by such forward-looking statements. These forward-looking statements are based upon estimates and assumptions that, while considered reasonable by the Company and its management, are inherently uncertain. Factors that may cause actual results to differ materially from current expectations include, but are not limited to: the Company's ability to achieve milestones, technological advancements, including with respect to its technology roadmap, help unlock quantum computing, and develop practical applications; the ability of the Company to complete ongoing negotiations with government contractors successfully and in a timely manner; the potential of quantum computing; the ability of the Company to obtain government contracts and the availability of government funding; the ability of the Company to expand its OCaaS business; the success of the Company's partnerships and collaborations; the Company's ability to accelerate its development of multiple generations of quantum processors; the outcome of any legal proceedings that may be instituted against the Company or others; the ability to meet stock exchange listing standards; the ability to recognize the anticipated benefits of the business combination, which may be affected by, among other things, competition, the ability of the Company to grow and manage growth profitably, maintain relationships with customers and suppliers and attract and retain management and key employees; costs related to operating as a public company; changes in applicable laws or regulations; the possibility that the Company may be adversely affected by other economic, business, or competitive factors; the Company's estimates of expenses and profitability; the evolution of the markets in which the Company competes; the ability of the Company to execute on its technology roadmap; the ability of the Company to implement its strategic initiatives, expansion plans and continue to innovate its existing services; the impact of the COVID-19 pandemic on the Company's business; the expected use of proceeds from the Company's past and future financings or other capital; the sufficiency of the Company's cash resources; unfavorable conditions in the Company's industry, the global economy or global supply chain, including financial and credit market fluctuations and uncertainty, rising inflation and interest rates, increased costs, international trade relations, political turmoil, natural catastrophes, warfare (such as the ongoing military conflict between Russia and Ukraine and related sanctions against Russia), and terrorist attacks; and other risks and uncertainties set forth in the section entitled "Risk Factors" and "Cautionary Note Regarding Forward-Looking Statements" in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2023, the Company's Form 10-Q for the three months ended September 30, 2024 and future filings with the SEC. These filings identify and address other important risks and uncertainties that could cause actual events and results to differ materially from those contained in the forward-looking statements. Forward-looking statements speak only as of the date they are made. Readers are cautioned not to put undue reliance on forward-looking statements, and the Company assumes no obligation and does not intend to update or revise these forward-looking statements other than as required by applicable law. The Company does not give any assurance that it will achieve its expectations.

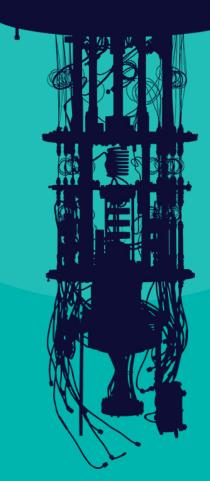
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## Rigetti's Mission:

Build the world's most powerful computers to help solve humanity's most important and pressing problems



## Rigetti's Strategy:

To be at the forefront of Superconducting Quantum Computing



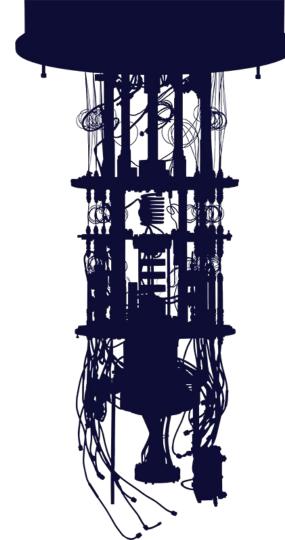


### **Table of Contents**

1.	EXECUTIVE SUMMARY	7
2.	MARKET OPPORTUNITY	17
3.	PRODUCTS AND TECHNOLOGY	21
4.	CUSTOMERS AND GO-TO-MARKET	31
5.	GROWTH STRATEGY	35

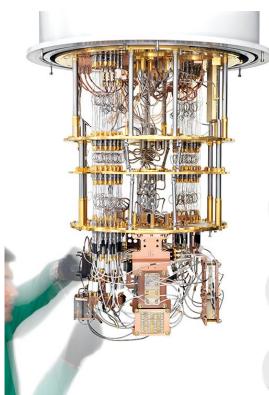








### A Global Leader in Quantum Computing





- \$7.6B quantum computing market opportunity across multiple applications and use cases by 2027<sup>1</sup>
- Robust IP portfolio with 227 issued and pending patents across quantum engineering, fabrication, and algorithms
- Gaining commercial traction with multiple, first-ever on-prem QPU sales and 20+ multi-year partnerships across government, academia and private industry
- Exceptional, visionary management team with ~100 years of combined expertise



### **Leading Industry Position 10+ Years in the Making**

Center in

Berkeley, CA

first full-stack.

company

universal pure-play

quantum computing

Rigetti at a Glance

2013

**Founded** 

16

Deployed quantum systems to-date

**70K** 

Combined sq. ft. of facilities

140

*Employees* 

49 **PhDs** 

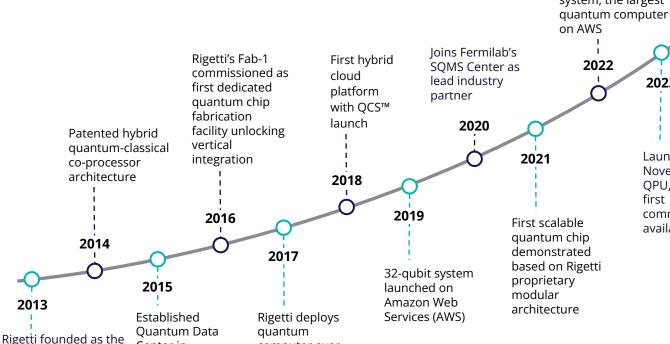
95% - 99+%

2-Qubit gate fidelity ramp 2022-2025E

16 - 336

Qubit count ramp 2018 - 2025E

We believe Rigetti's early bets have led to its position as an industry leader 227 issued and pending patents (102 issued, 125 pending)



computer over

the cloud

90 at 99.4% median 20 gate fidelity, and chiplet path demonstrated Aspen™-M 80-qubit 2024 system, the largest UK's NOCC opens, 2023 including 24Q Ankaaclass system Launches the Novera™ QPU, Rigetti's first commercially available QPU

Commercial

availability of



### **Classical Computers are Plateauing**

#### Moore's Law Has Slowed





Costs have ballooned tremendously to reach 3nm process nodes



Companies face decisions between cost and speed and are slowing rollout of new generations



Increased reliance on specialized chip technology (GPU, FPGA, etc.) rather than further miniaturization

### Diminishing Returns for Parallelization





Marginal benefits from parallel computing decrease as processors are added



Increase in processors leads to substantial increase in resource consumption



Numerous problems are not parallelizable

### **Energy Requirements Can't Keep Up**





Classical supercomputers need significant megawatts of electricity to operate

1:1

Power increases at a 1:1 relationship with the number of transistors added

#### Critical Problems Are Out of Reach





Optimization, data analysis and simulation involve huge degrees of complexity with many interacting variables



Molecular simulation of a system of 50 particles is described by 10<sup>15</sup> coefficients, requiring multiple petabytes of classical memory



Factoring Large Numbers would take million of years on a classical computer

Today's Computing Solutions Are Reaching Their Limits, Paving the Way for a Disruptive Technological Advance



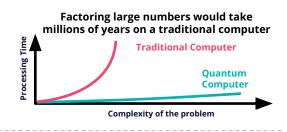
### We Believe Quantum Computing is the Answer





#### **ORDERS OF MAGNITUDE FASTER**

Compute time could be reduced from decades to seconds



### **%**

#### **EASILY REPRESENTS COMPLEX DATA**

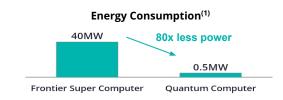
Enhanced data representations will need fewer physical resources

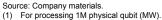




#### **GROUND-BREAKING POWER EFFICIENCY**

Significantly less power consumption

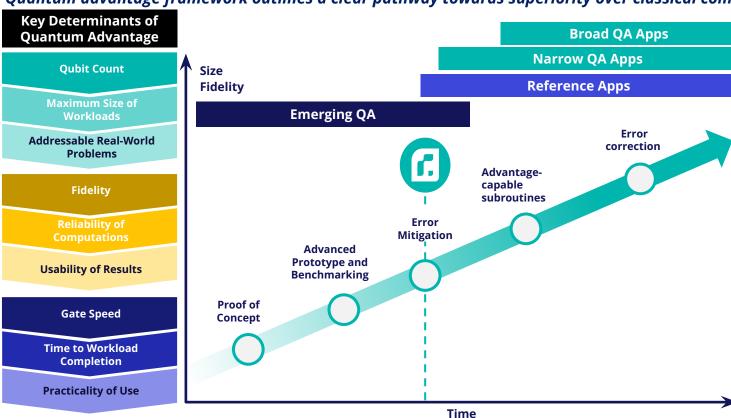






### Rigetti Positioned to Deliver Quantum Advantage

Quantum advantage framework outlines a clear pathway towards superiority over classical computers



#### Advantage-Capable Subroutine:

Non-simulatable quantum subroutines that can be applied to valuable problems. These subroutines are required for nQA and bOA

#### Narrow QA (nQA):

Solve a practical, operationally relevant problem better, faster, or cheaper than current classical solution

#### **Broad QA (bQA):**

Solve a practical problem that is provably classically hard, ensuring the quantum application solution will last



### We Believe Superconducting is the Leading Modality

#### **Quantum Computing Modalities**

Figures of Merit	Superconducting Rigetti, IBM, Google, Amazon, Fujitsu, IQM, Govt. of China	Trapped lons IonQ, Quantinuum, Oxford Ionics	Neutral Atoms QuEra, Atom Computing	Photonics PsiQuantum, Xanadu, Govt. of China	
Qubit Count	100+ Multi-die	25+	25+	<10	
Fidelity <sup>(1)</sup>	99% - 99.5%	99.5%+	99.5%+	99%+	
Gate Speed	50-100 ns	300-500 us	300-500 us		



#### Highly developed modality.

Superconducting quantum computing chips leverage mainstream semiconductor fabrication techniques such as optical lithography, sputter deposition, and plasma etching.

#### **Necessity for captive foundry.**

Synchronized design  $\rightarrow$  fabrication  $\rightarrow$  test flywheel is critical to enable performance improvement necessitating either a captive fab or a close foundry relationship.



# We Believe We Have Superior Technology and Manufacturing Capabilities

Key Qua	ntum Computing Technology Value Chain	Rigetti Differentiation
Chip Design & Fabrication	<ul> <li>Creation of the architecture and layout of quantum circuits</li> <li>Precise manufacturing and production to maintain qubit functionality and performance</li> </ul>	Best-in-Class Design & Fabrication     World's first dedicated quantum integrated circuit foundry     Delivering high performance quantum circuit wafer and diesland qubit count scaling technology
Quantum Processors	<ul> <li>Superconducting quantum processors are the heart of the system providing high performing qubits</li> <li>Between 300 and 3,000 qubits at 99.5+% is our target for nQA.</li> </ul>	<ul> <li>Highly Competitive Performance</li> <li>Expecting to reach 99+% 2-qubit fidelites in 2024 at 84Q;</li> <li>9Q at 99.9% 1Q fidelity and 99.4% median 2Q fidelity</li> <li>Plans to go from 36Q → 100+Q → 300+Q→1,000+ qubits</li> <li>80 ns gate speed</li> <li>40 us T1 coherence time</li> </ul>
Interconnect	<ul> <li>1st quantum multi chip interconnection</li> <li>High-density flexible circuits, replacing traditional coaxial cable: higher signal density, low loss, and low thermal heat load</li> </ul>	<ul> <li>Only Multi-Chip in the Industry</li> <li>Demonstrated 2 x 40Q and 2x9Q without performance deterioration</li> <li>Can confidently tile to achieve 1000+Q</li> </ul>
Control System	<ul> <li>Hardware required to generate microwave signal to perform quantum operations</li> <li>Integration with classical compute and HPC</li> </ul>	Industry Leading Control Systems  • High performance - HPC ready  • Very high price-performance \$10K/qubit vs. \$35K/qubit
Software & Quantum Cloud Services	<ul> <li>Required operating system and tools for hybrid computation</li> <li>Open source interfaces, libraries and compilers</li> <li>High performance software providing cloud-delivered hybrid compute capabilities</li> </ul>	<ul> <li>Comprehensive Quantum OS and Cloud Platform</li> <li>Integrated for highest performance on Rigetti hardware</li> <li>Supports industry standard quantum development, on prem deployments and environments and the public clouds</li> </ul>

# Rigetti Superconducting Technology is Trusted by World-leading Organizations and Governments





**National Labs & Centers** 







**MOODY'S** 

- Quantum hardware provider of choice by the UK's National Quantum
   Computing Centre, Air Force Research Lab, and Fermilab's SQMS Center
- Collaborating with HSBC, Standard Chartered Bank, ADIA Lab, and Moody's Analytics to develop practical quantum computing uses cases for finance

#### **Research Centers**



PA

#### **Hyperscalers**



computers capable of solving complex optimization problems

Pursuing foundational research funded by DARPA to develop benchmarks

for quantum computing performance and to develop quantum

- QPUs from Rigetti data centers integrated into public cloud providers like
   AWS, Microsoft Azure, and service providers like Strangeworks and Qbraid
- Rigetti's QCS<sup>®</sup> Direct cloud service used by DOE, DOD, and enterprise customers like Fermilab, ADIA Lab, USRA, and NASA.











#### **Exceptional, Visionary Management Team and Board of Directors**

#### **Management Team**



Dr. Subodh Kulkarni President and CFO **Prior Experience:** (X) keytronic CYBER OPTICS



**Jeffrey Bertelsen** CFO Prior Experience: CYBER OPTICS KPMG



**David Rivas** CTO Prior Experience: Sun NOKIA



**Rick Danis** General Counsel Prior Experience: KYMETA Demand Media



**Iackie Kaweck** SVP, Human Resources **Prior Experience:** VIVIDSEATS. Leapfrog ?

#### **Board of Directors**



Thomas J. lannotti Chairman of the Board APPLIED MATERIALS



**Cathy McCarthy** Director



Michael Clifton Director



Dr. Subodh Kulkarni Director













Alissa M. Fitzgerald Dr. Ray O. Johnson Director

Bessemer Venture Partners



H. Gail Sandford Director



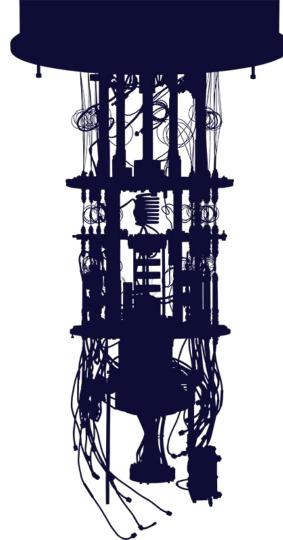
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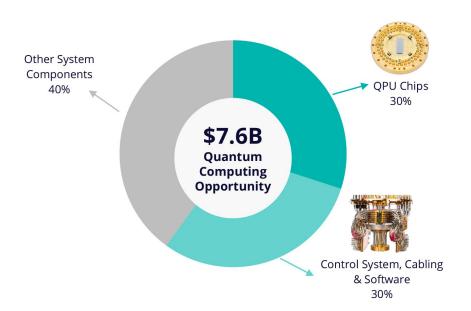






### A Large Opportunity With Unprecedented Possibilities

**Quantum Compute Unleashing Full Potential**(1)



**Global Government Funding Over the Next Decade** 



\$42B<sup>(2)</sup>

Total worldwide government investment in quantum computing announced to-date



<sup>(1)</sup> IDC Worldwide Quantum Computing Forecast, 2023–2027: Surfing the Next Wave of Quantum Innovation, company estimates.

<sup>(2)</sup> McKinsey, Quantum Technology Monitor, April 2024.

### **Today's Quantum Computing Landscape**

Governments are treating quantum computing as critical for national interests

\$42B total government investment announced in 2024 — 26% increase from 2023<sup>1</sup>

#### **Examples of government funded quantum computing programs**

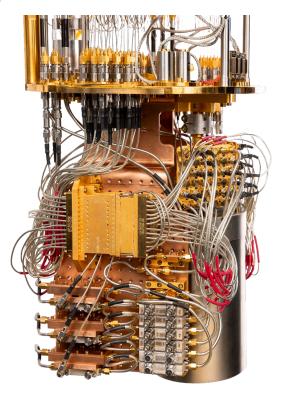
**US:** National Quantum Initiative Act (\$968M requested budget in FY 2024)

**UK:** National Quantum Technologies Programme (£2.5B over 10 years)

**India:** National Quantum Mission (\$740M USD over 8 years)

**European Union:** Quantum Technologies Flagship (€1B over 10 years)

Such programs foster innovation, collaboration with academia & industry, and workforce development

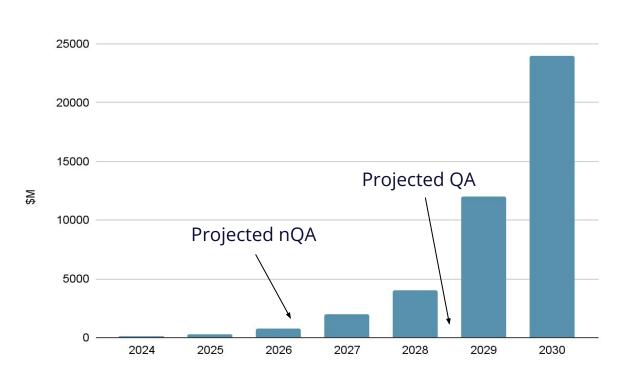




### **Superconducting Quantum Computing Growth**

On premises systems for national quantum computing centers and national labs driving current growth

Growth is expected to accelerate as we get closer to quantum advantage



**IDC projects \$7.6B** for the global quantum computing market in 2027. Estimate 30% available for superconducting QPU/QCS (We exclude the China market)

**2024-2025** business will be mostly on-premises hardware purchases from National Quantum Computing Centers and National Labs (e.g. Chicago's Bloch Technology Center, UK NQCC, Oak Ridge National Labs)

**2026** these national investments will continue to drive as commercial customers in Financial, Pharmaceutical, Aerospace, Defense, and other vertical markets to begin producing investment in Quantum Computing

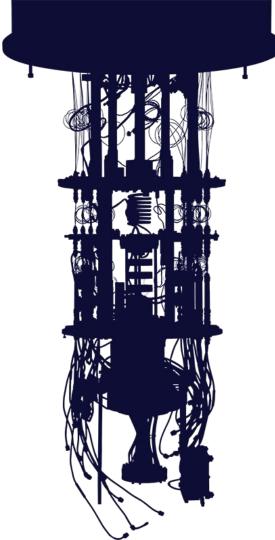
**2027-2028** growth driven as broader adoption of quantum computing continues

**2028** and Beyond Growth Driven by quantum advantage

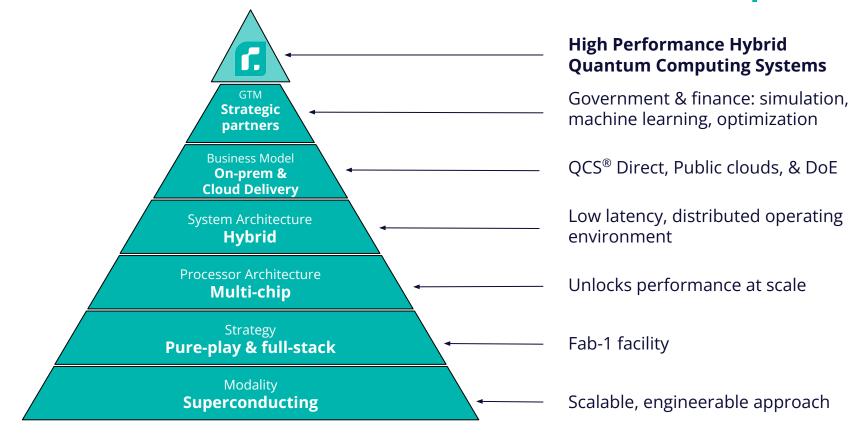








### Our Mission: Build the World's Most Powerful Computers





### **Rigetti Solution Overview**

Chips manufacturing with the ability to design high-quality quantum-coherent superconducting microwave devices

Design linear and nonlinear chip components in Fab-1 quantum integrated circuit foundry

Design and

Software Tools

Fast gate times, low-latency conditional logic and fast program execution times processors

Scalable quantum processors with on-chip design features that allow plurality of qubits

rigetti

Control Systems

Control qubits in a reliable and programmable way

Integrated high-density flexible circuits to enhance scale and protect qubits from noise

Suite of open-source tools for writing, simulating and running quantum programs

**QCS Platform** 

QPU

Quantum System Technologies

Source: Company's website.

Quantum Cloud Services platform (QCS®), which has evolved to support ultra-low latency connectivity between a customer's high-performance classical hardware and Rigetti OPUs



# Rigetti's Fab-1: Industry's First Dedicated and Integrated Quantum Foundry

Accelerates R&D, Drives Innovation, and Provides Competitive Advantage



Addresses Supply Chain Risk

Helps mitigate unfavorable macro- economic conditions.



Accelerates Innovation Cycles

Rapid design, build, test flywheel driving rapid innovation & technology advantages at scale



#### **Capital Efficiency**

Enables scaling large systems to achieve Advantage and beyond



#### IP Generation

42 patents issued and pending (20 issued, 22 pending) covering processor chip design, fabrication and assembly, including multi-chip processors





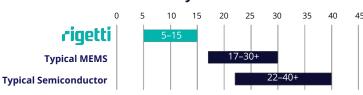


Asset for R&D Partnerships

Fab-1 facilitates external partnership with our Foundry services business.
We also believe Fab-1 is an asset to US quantum leadership as a of unique US-based quantum first foundry.

Fab-1 serves as a barrier to entry, putting Rigetti in an enviable position on the experience and capability curve.





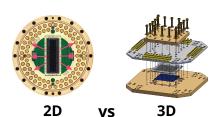
Processing Lead Time (weeks)

(1) Cycle time chart based on internal estimates of development cycle time for chip design and manufacture.



# Proprietary Scaling Technology Unlocked by 6+ Years of Fab-Driven Innovation

# Vertical Signaling



Signals routed

vertically

3D signal delivery enables high density, modular processor I/O and removes the need to redesign each new generation to accommodate signal line routing

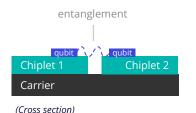
## Quantum Chiplet Technology



Modular assembly onto a carrier device enables:

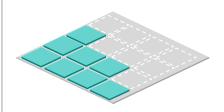
- High fabrication yield, improved processor performance
- Potential for heterogeneous integration (specialized chips for processing, memory and networking)

# Inter-Module Connectivity



Low-latency connections provide high fidelity quantum entanglement between modules

#### Rigetti's Scalable Architecture



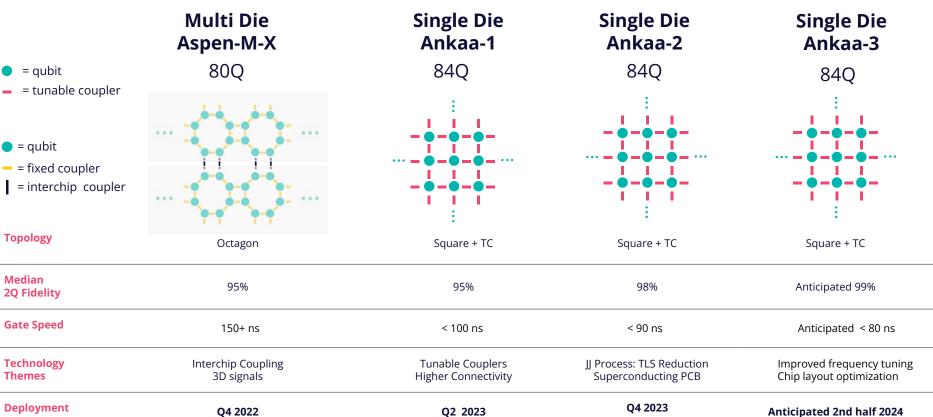
Large-scale processors built from identical tiles provide a directly scalable architecture



Signals routed

laterally

### **Ankaa™ Architecture for Performance & Scaling**





#### **Modular System Architecture Foundation of 2025 Roadmap**

#### 2025 System Milestone Roadmap

Qubit count	36	108
Anticipated 2Q Gate Fidelity	99.5%	99.5%
Scaling	4 x 9Q	
Deployment	Anticipated Q2 2025	Anticipated Q4 2025

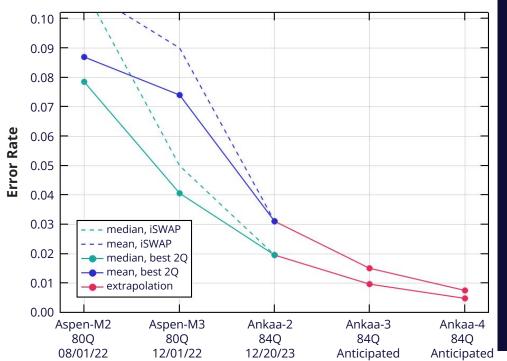
"We believe the anticipated 4-chip 36-qubit system will be the most ambitious multi-chip QPU architecture in the market, and a significant milestone for the company and the quantum computing industry."

- Dr. Subodh Kulkarni Rigetti CEO



### Foundation For Larger, Higher Performing QPUs





Transitioning from the Aspen to Ankaa architecture enabled us to **reduce error rates by 2.5X** — for the first time a deployed Rigetti
QPU achieved a 98% 2-qubit gate fidelity.

The Ankaa architecture will be the **foundation of our 336+ qubit systems**. Underpinned by
the critical technology that has proven to
demonstrate increasingly higher fidelities:

- Inter-module chip coupling
- Tunable couplers
- Square lattice
- Rapid iterations with Fab-1

Rigetti QPU deployment date and qubit count



### **Enabling On-Premises Quantum Computing**



**Superior Performance**High-fidelity two-qubit operations

Control Over Tech Stack
Deeper access to the tech stack

Flexible Configuration
Easily rewired and customized

24/7 System Access

No schedule snafus or resource-sharing

**Future-Proof** 

Continuous upgrade and improvement of hardware as technology evolves

# Across Broad Downstream Applications



Government Programs



Quantum Research Labs



Quantum R&D Solutions



Quantum Professional Consulting



### The QCS® Stack





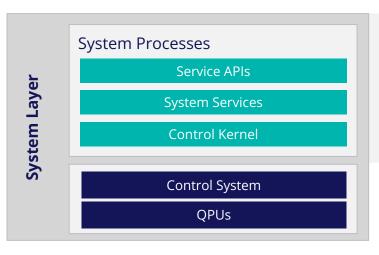


#### Tools to support high performance QPU integration and application development



#### **Developer Tools**

- Integrated Developer Environment (IDE)
- Quantum Software Libraries
- Client Software Development Kit (SDKs)
- Compiler
- Simulators
- Command Line Interface



#### User & Systems Management

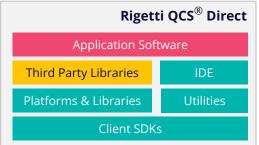
Quantum System Management

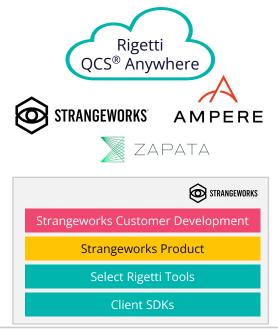
- QPU Systems Dashboard
- Reservations
- Billing & Reporting
- User Account Management
- Translation
- Admissions
- Program/Circuit Scheduling

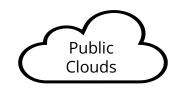


### QCS® One Stack for All Our Customers & Partners









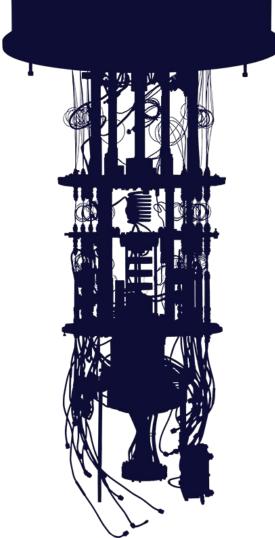




Service APIs
System Services
Control Kernel







#### **Partnerships Help Accelerate Our Path**

**Applications** 















Access & **Production** 



DARPA





astex pharmaceuticals



**Quantum Cloud** Services (QCS<sup>™</sup>)





Quantum **Processing Units** 











**Chip Fabrication** (Fab-1)











### **Delivering On-Premises Quantum Computing to the UK**



The NQCC has been formally opened by the Science Minister, Lord Vallance

We are delighted to announce that the NQCC's facility was inaugurated this morning by the Science Minister, joined by representatives from leading quantum companies, academia, the National Quantum Technologies Programme (NqTP), and government, including officials from the Office for Quantum. Many of the NQCC's key partners and collaborations was in attendance.



National Quantum
Computing Centre
Oct 25 - 1 min read time

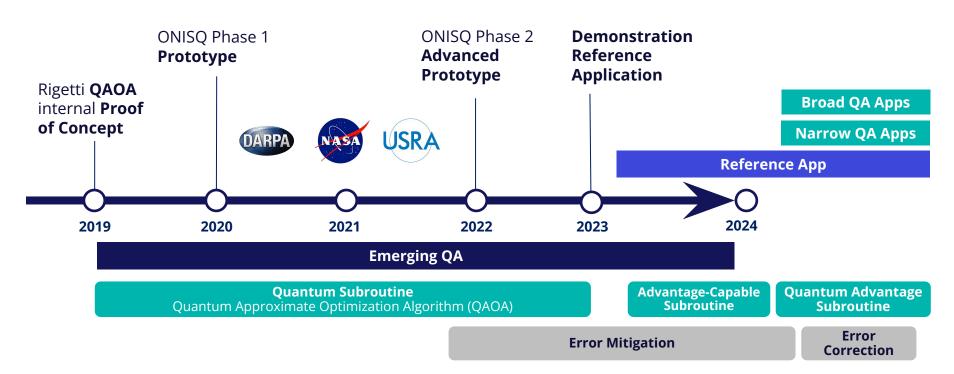
- → Fully operational **24-qubit quantum computing system**included in the recently opened
  National Quantum Computing
  Centre (NQCC) in the UK
- → The system will feature the hallmarks of Rigetti's 84-qubit Ankaa-2 system
- → Will be deployed with Rigetti's software development tools
- System will be made available to NQCC researchers for testing, benchmarking, and application development





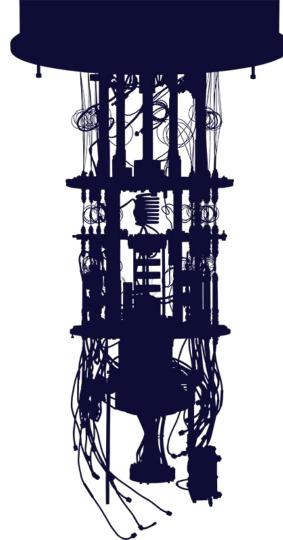
### **Case Study - DARPA Program Optimization**

Optimization with Noisy Intermediate Scale Quantum devices (ONISQ)











### Path to Leadership

On-premises system through early nQA to cloud services deployments with hyperscalers

- Government sponsored deployments driving technology development to nQA
- Application development partners focused on clear nQA wins to first applications
- Integration with HPC on first integrations into supercomputing
- Continue our lead with integration with hyperscalers evolving into QCaaS as the dominant mode of deployment

