



S I N G U L A R G E N O M I C S

Company Presentation

February 2024

FORWARD-LOOKING STATEMENTS

Certain statements contained in this press release, other than historical information, constitute forward-looking statements within the meaning of the federal securities laws. Forward-looking statements include, but are not limited to, statements regarding: (i) our timeline and planned development of the G4X and other future products; (ii) expected features, capabilities and specifications of the G4X and other future products; (iii) our ability to successfully manufacture, commercialize and support the G4, G4X and our flow cell kits in accordance with our timelines, objectives and specifications; (iv) future addressable markets for our products; and (v) quotes of management. Any such forward-looking statements are based on our management's current expectations and are subject to risks and uncertainties that could cause our actual future results to differ materially from our management's current expectations or those implied by our forward-looking statements. These risks and uncertainties include, but are not limited to, the following: (i) we are currently developing the G4X Spatial Sequencer and may not be successful in completing its development on our projected timeline, with the features and capabilities we expect, or at the cost we anticipate; (ii) we have very little history manufacturing and commercializing our products or technology; (iii) the life sciences technology market is highly competitive, and if we fail to compete effectively, our business and operating results will suffer; (iv) if we are sued for infringing, misappropriating or otherwise violating intellectual property rights of third parties, such litigation could be costly and time consuming and could prevent or delay us from developing or commercializing our products; (v) if our products fail to achieve early customer and scientific acceptance, we may not be able to achieve broader market acceptance for our products, and our revenues and prospects may be harmed; (vi) we expect to be highly dependent upon revenue generated from the sale of the G4 and future products, and any delay or failure by us to successfully manufacture and commercialize the G4 and future products could have a substantial adverse effect on our business and results of operations; and (vii) recent macroeconomic challenges such as inflation and rising interest rates may materially and adversely impact our business, operations, product manufacturing and commercialization objectives. These and other risk factors that may affect our future results of operations are identified and described in more detail in our most recent filings on Forms 10-K and 10-Q and in other filings that we make with the SEC from time to time, including our Quarterly Report on Form 10-Q for the period ended September 30, 2023, filed with the SEC on November 14, 2023. Accordingly, you should not rely on forward-looking statements as predictions of future events or our future performance. Except as required by law, we undertake no obligation to update publicly or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.

This presentation also contains estimates and other statistical data made by independent parties and by us relating to market size, 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.

The performance information in this presentation and the associated discussion regarding our G4 and G4X instrument and consumable kits are reported at target specifications, and the performance of third-party instruments are reported based on specifications publicly available on such third party's website.

This presentation contains references to our trade names, trademarks and service marks and to those belonging to third parties. We do not intend our use or display of a third party's trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, such third party.

PRESENTATION CONTENTS

- ① Introduction** | Company overview, products, markets
- ② G4 Platform | Product overview, on-market feedback
- ③ G4X Platform | Product overview, specifications and differentiators
- ④ Business Execution | Operations, commercial and development

COMPANY OVERVIEW



SINGULAR
GENOMICS

~260

Employees

250+

Issued and pending
patents

\$450M

Dollars raised

\$191M

Cash as of
9.30.23

OMIC

NASDAQ Ticker



SINGULAR
GENOMICS

THE NEXT ERA OF MOLECULAR ANALYSIS

On-Market

G4

Fast, Flexible and Scalable
Next Generation Sequencing



Early Access 2024

G4X

High-throughput *In Situ*
Spatial Sequencing



Future Development *

PX

High-throughput Plate-based
Single Cell Profiling



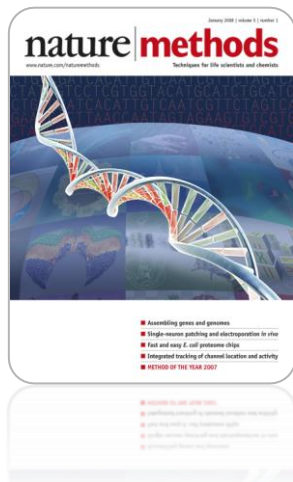
ADDRESSABLE MARKETS

NGS, SINGLE CELL AND SPATIAL

Next Generation Sequencing

\$7B  **\$20B**

2023 2030




Market Growth Drivers

Large fast-growing markets

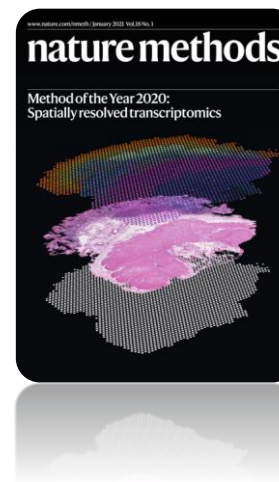
Clinical applications and reimbursement

Oncology & immunology applications

Single Cell and Spatial

\$2B+  **\$11B**

2023 2030



Market Growth Drivers

Next frontier of biological research

Scale and cost

Discovery to translational

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G4: BENCHTOP PERFORMANCE REDEFINED

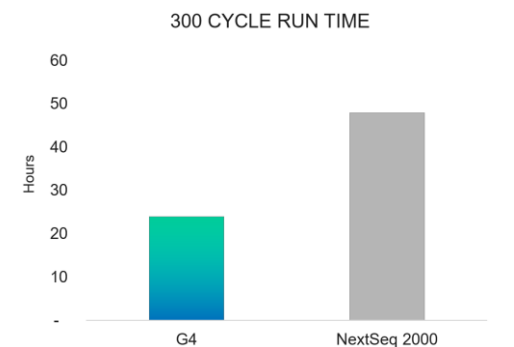
KEY ATTRIBUTES TO ADDRESS NGS MARKET



Quality: $\geq 99.9\%$, or Q30, for $\geq 85\%$ of base reads

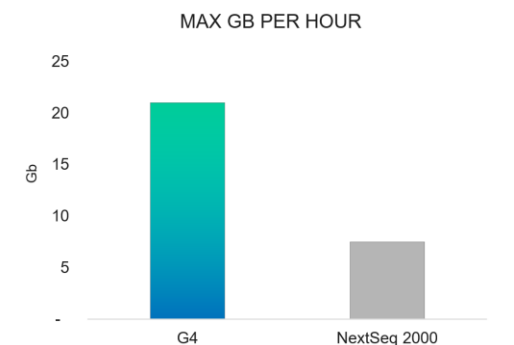
Speed

8–24 hours
Industry leading run times



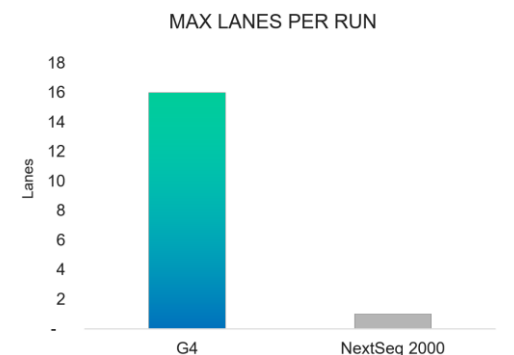
Power

Up to 480 Gb output
Unmatched data produced per day



Flexibility

1–4 flow cells, 16 lanes
Unparalleled operational efficiency



G4 SEQUENCING REAGENTS

DOWN TO \$600 PER FLOW CELL, \$150 PER LANE



Flow Cell Configuration	Reagent Configuration ¹	Reads / Flow Cell ²	Reads / Run ²	Quality ³
F2	100–300 cycles	200M	800M	>85% Bases ≥ Q30
F3	50–300 cycles	400M	1,600M	
F4 ⁴	TBD	Up to 800M	Up to 3,200M	
Max Read	Single Cell & Spatial FFPE	800M	3,200M	

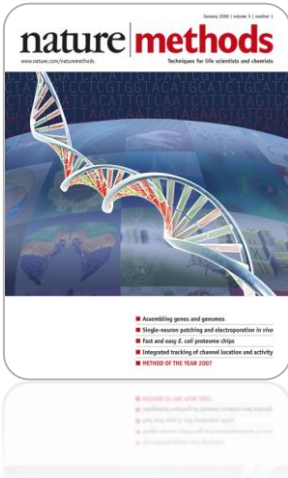
¹ Reagents include 50 additional cycles above what is represented to account for adapters and indices.
² Paired reads passing filter for F2 and F3 are dependent on application and read length.
³ Performance metrics may be impacted by application, sample quality, library preparation, loading concentration and other sequencing considerations. Metrics as generated on reference bacterial and human genomes.
⁴ F4 kits specifications are projected. Product currently in development.

ADDRESSING THE NGS OPPORTUNITY

G4 VALUE DRIVERS

Next Generation Sequencing

\$7B  **\$20B**
2023 2030



Market Growth Drivers

Large fast-growing markets

Clinical applications and reimbursement

Oncology & immunology applications

Addressing the Market Growth

G4 Sequencer

- ✓ Flexibility, power, speed
- ✓ Application-based solutions
- ✓ Decentralized clinical fit



G4 ADDRESSES MAJORITY OF THE MARKET PUBLICATIONS ACROSS APPLICATIONS



Lane Independence

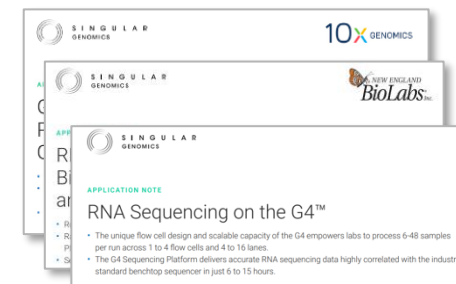
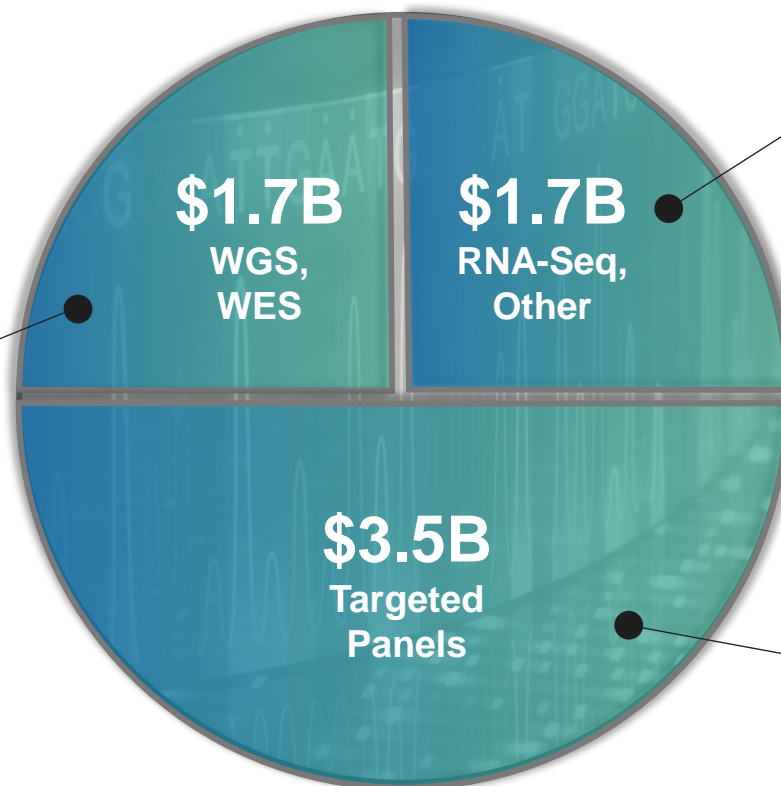
16 individual lanes

Speed

Quick turnaround times

Accuracy

Industry gold standard

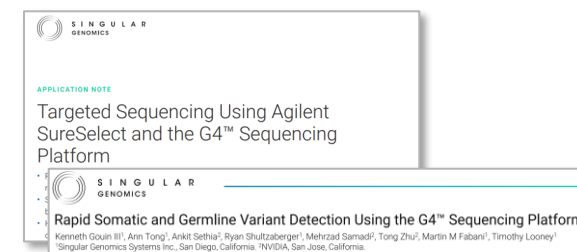


Flexibility

Optimize run sizes

Max Read Kits

Single cell and spatial solutions



Flexibility

Optimize run sizes

Lane Independence

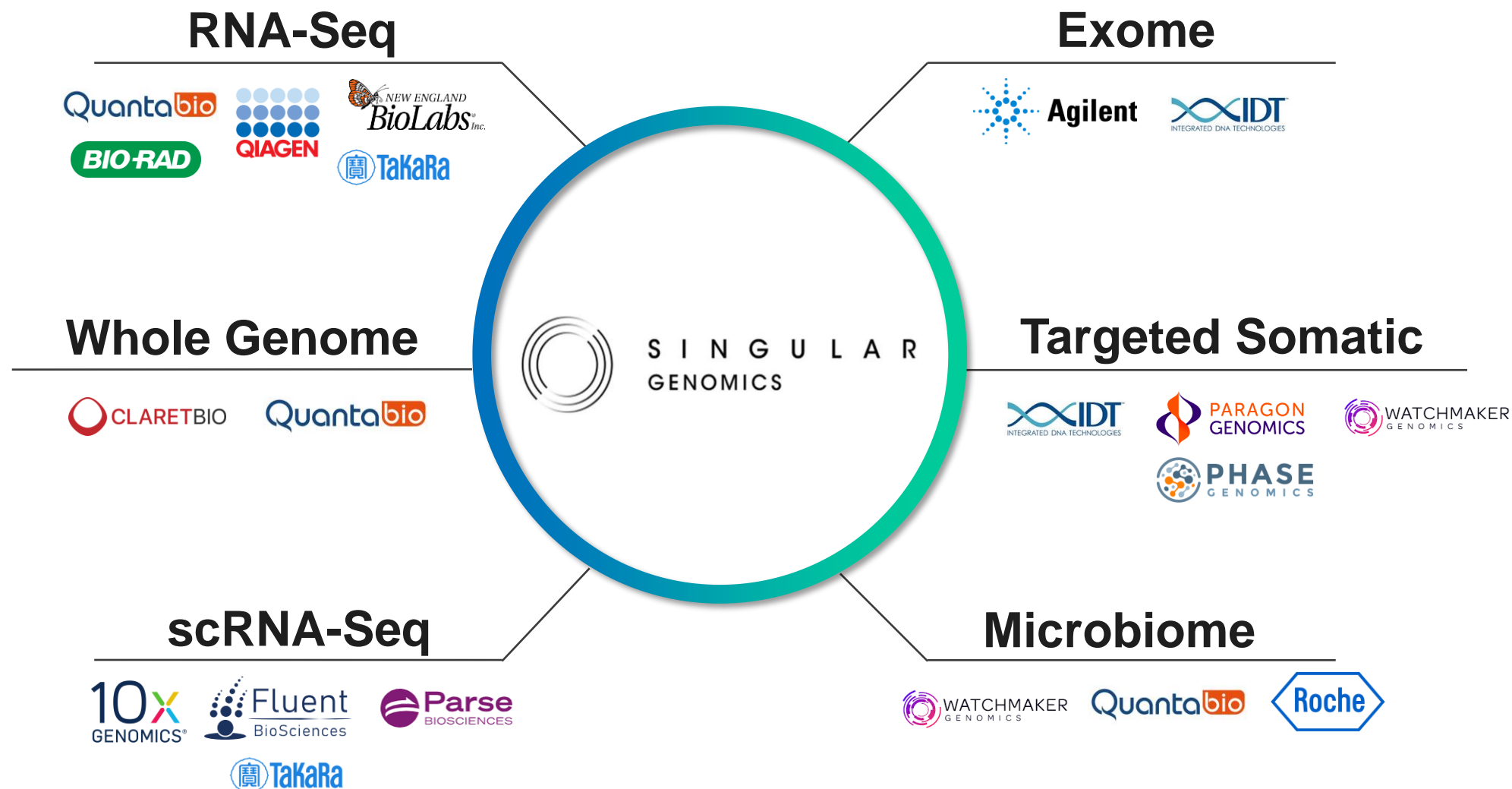
16 individual lanes

Cost

Low cost per Gb or M reads

LEADING LIBRARY PREP COMPATIBILITY

VALIDATED PROTOCOLS FOR EASE OF ADOPTION



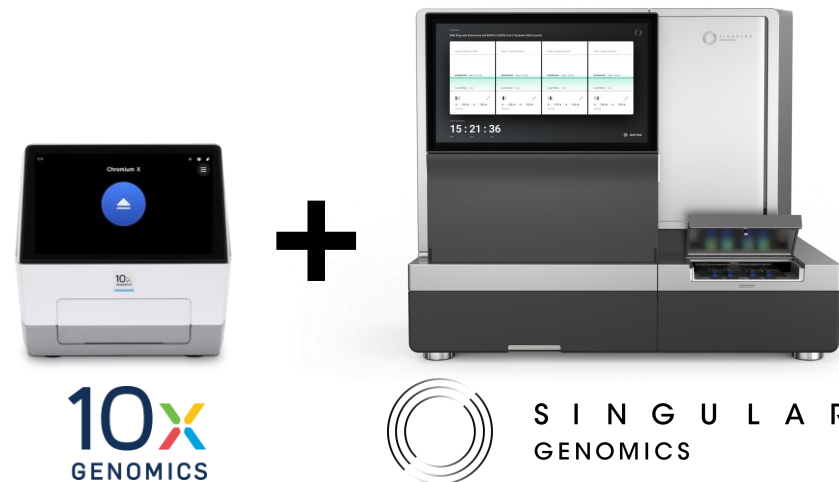


Scalable, Consistent Economics

Maximizing throughput and decreasing cost for single cell sequencing
Savings up to \$600 per sample, or over \$6,000 per run

Optimized Workflow

Unmatched 3.2 billion read capability on a benchtop system
Seamlessly matches existing Chromium kits



G4 ON-MARKET OVERVIEW

GROWING AND DIVERSE INSTALLED BASE

Portfolio

24

G4 Shipments (as of 12/31/23)



~\$4M

Revenue Recognized



25

Library Prep & Analysis Partners



3

Consumables Formats (F2, F3, Max Read)



Customers

Example Customers:



HARVARD
UNIVERSITY



BROAD
INSTITUTE



The
UNIVERSITY
of VERMONT

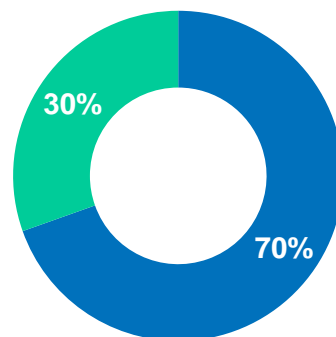


THE UNIVERSITY OF
NEW MEXICO



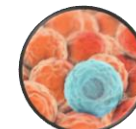
MEDICAL
COLLEGE
OF WISCONSIN

Customer Segmentation:

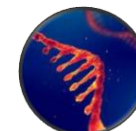


■ Academic ■ Commercial Clinical

Applications



Single Cell



RNA-Seq



Targeted Panels



Exome



Whole Genome

G4 ON-MARKET FEEDBACK

CUSTOMER QUOTES



HARVARD
UNIVERSITY

"The flexibility and speed of the G4 has enabled our Spatial Technologies Unit to use a single instrument for new single cell and spatial transcriptomic assay pilots as well as production, decrease turnaround times, and meet demanding deadlines for our clients."



BROAD
INSTITUTE

*"The instrument was purchased to replace old equipment, augment our sequencing capacity, and **lower our sequencing cost while addressing new needs** from our users... Its 4 flow cells and 16-lane design gave us the ability to streamline our single cell sequencing operation. The four-color chemistry **allows us to successfully and consistently sequence extremely difficult libraries that were a challenge for a very long time while generating superb reproducible data...**"*



*"We have been very excited by the enthusiasm of the researchers we support for the G4 with **many labs already submitting projects** to be run on the sequencer. These include samples for RNA-Seq (both standard and high-throughput), CUT&RUN, as well as custom protocols where the laboratories are preparing their own libraries."*



G4 FOCUS AREAS FOR 2024

- 1 Installed Base**
Increased placements, happy customers
- 2 Increased Pull-through**
Drive revenue with higher instrument utilization
- 3 New Kits, System Enhancements**
More throughput, improved customer experience
- 4 Clinical Readiness**
Increased robustness, state-of-the-art processes



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SPATIAL MARKET TODAY

“Spatialomics technologies should see significant growth ahead...”

- **COWEN**

“Spatial biology enables access to data and context that traditional methods do not provide.”

- **Canaccord Genuity**

“Spatial biology provides a new dimension of biological insight to tissue analysis which can be leveraged to develop better therapeutics and diagnostics.”

- **DeciBio**

Spatial Market:

- \$2B+ current, \$11B in 2030 (23% CAGR)
-

Applications:

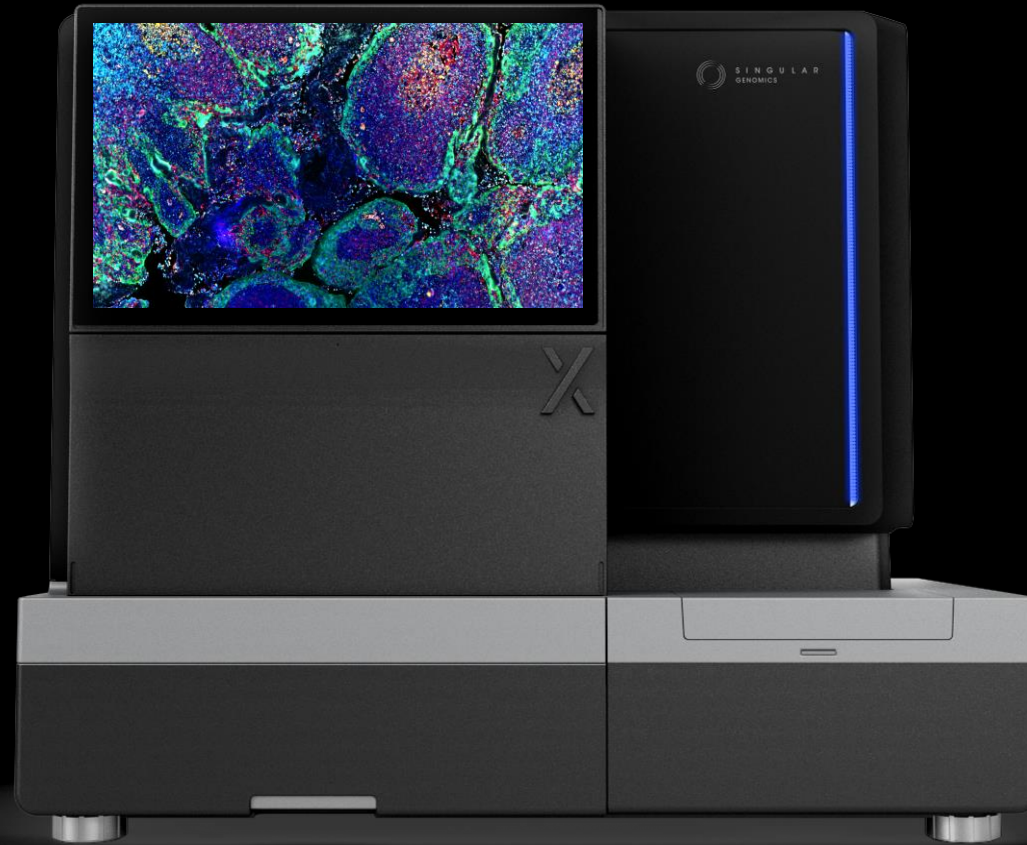
- Immunology and oncology research
 - Cell and gene therapies
 - Drug discovery + development
-

Current Limitations:

- Throughput, cost, speed, multiple data types

INTRODUCING G4X

HIGH-THROUGHPUT SPATIAL SEQUENCING

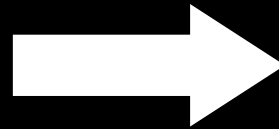


G4X LEVERAGES CORE G4 TECHNOLOGY AND PLATFORM

CURRENT G4 PLATFORM WILL BE UPGRADEABLE TO G4X

G4

**Fast, flexible and scalable
next generation sequencing**



- ✓ Same platform
- ✓ High-speed imaging
- ✓ Fast chemistry
- ✓ Software upgrade

G4X

**Spatial sequencing at
high throughput**



What is spatial sequencing?

Sequencing inside cells, in tissue

Three *in situ* readout modalities: direct sequencing of RNA (Direct-Seq™), transcripts, proteins

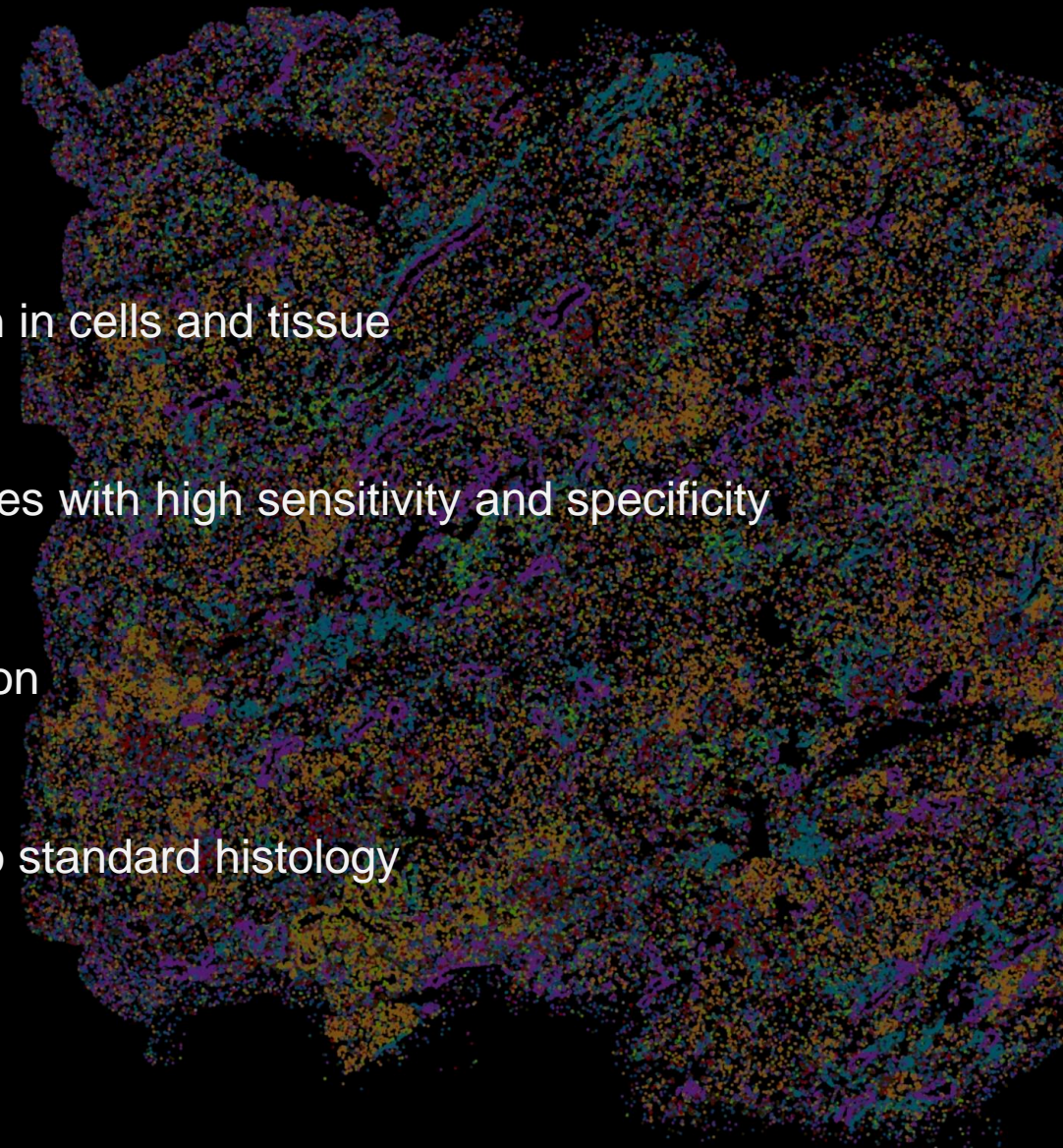
What is high throughput?

~10X more imaging space per run, ~20X more samples per week

Orders of magnitude more samples per run

STACKABLE LAYERS OF DATA

Simultaneous multiomic readout,
from a single FFPE section...



Direct-Seq

Sequencing RNA at subcellular resolution

Features:

- Sequencing of 1–100 bases of RNA *in situ*
- Detects broad class of mutations like SNVs, indels and fusions
- Rapid sequencing with 4-color SBS chemistry

Applications:

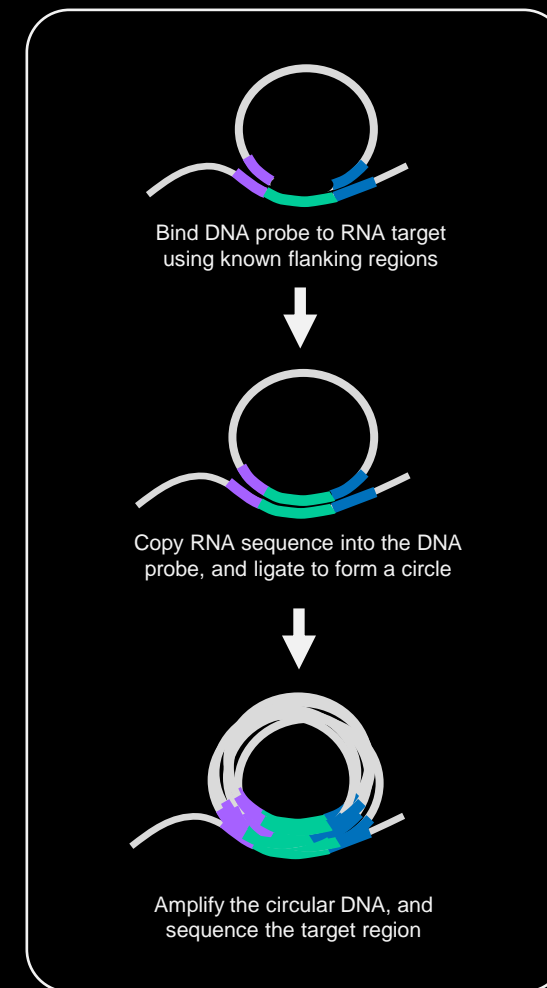
- B- and T-cell, sequencing of variable regions
- Cancer hotspot mutation analysis
- Gene editing

Direct-Seq

Transcriptomics

Proteomics

Fluorescent H&E



Transcriptomics

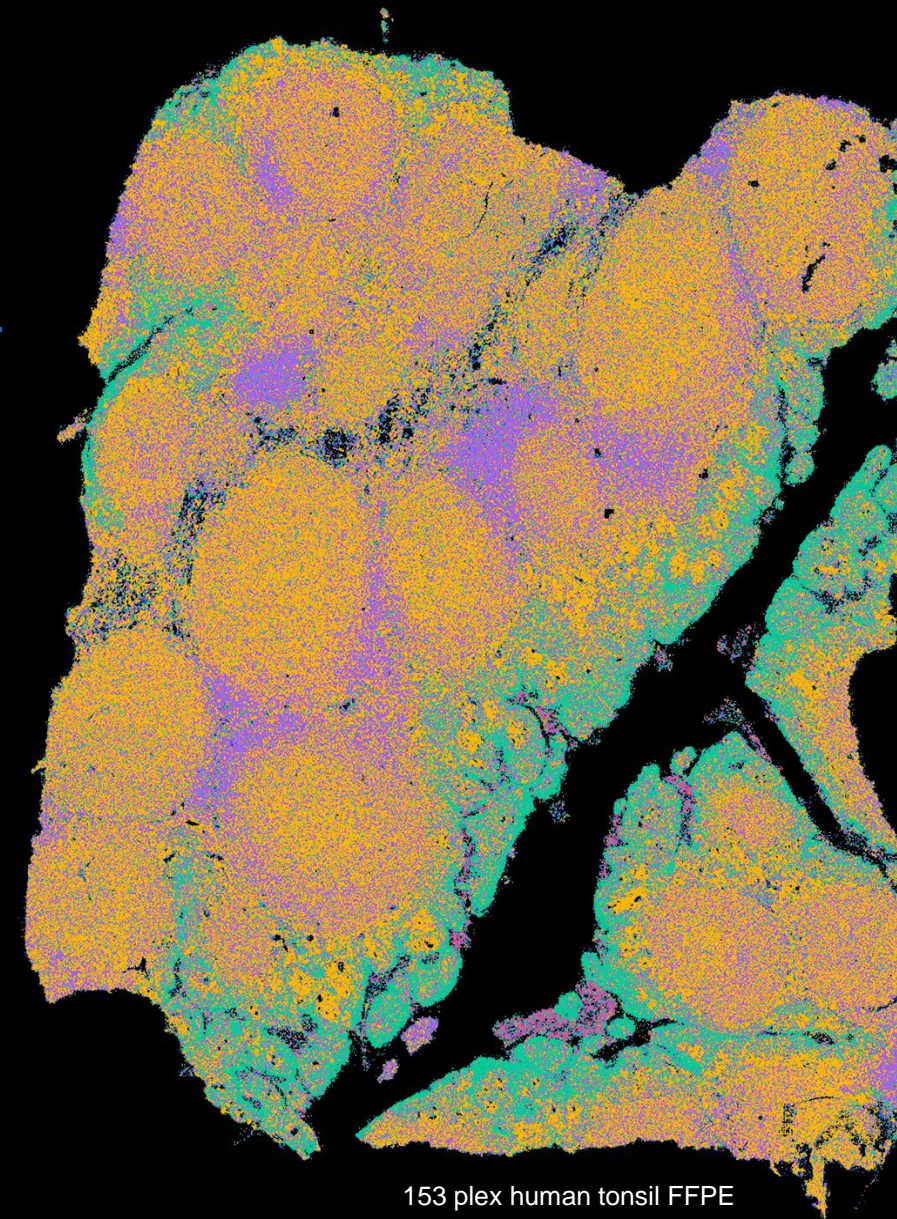
Barcode-free profiling of hundreds of genes

Features:

- Small probe binding regions for degraded FFPE material
- Sub-micron level resolution for single-cell analysis
- On-board protocols to minimize optical crowding
- Nuclear and membrane-based cell segmentation

Applications:

- Immuno-oncology
- Cell mapping and differentiation
- Drug discovery



153 plex human tonsil FFPE

UNPACKING SPATIAL SEQUENCING

Proteomics

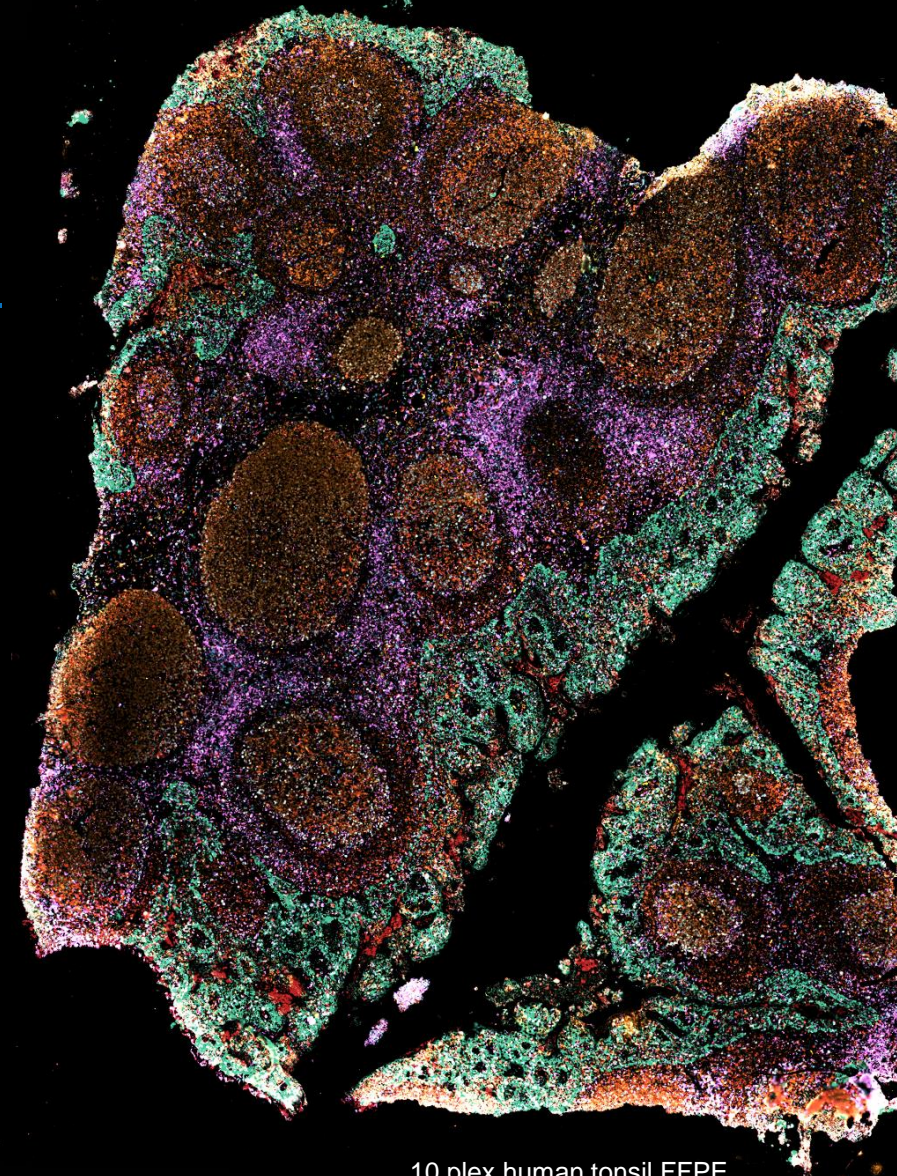
Image dozens of proteins at high resolution

Features:

- DNA-Oligo conjugated antibodies are amplified and detected
- High sensitivity and wide dynamic range
- Accurate cell boundary labeling enables cell segmentation

Applications:

- Immuno-oncology
- Drug and biomarker discovery



10 plex human tonsil FFPE

UNPACKING SPATIAL SEQUENCING

Fluorescent H&E

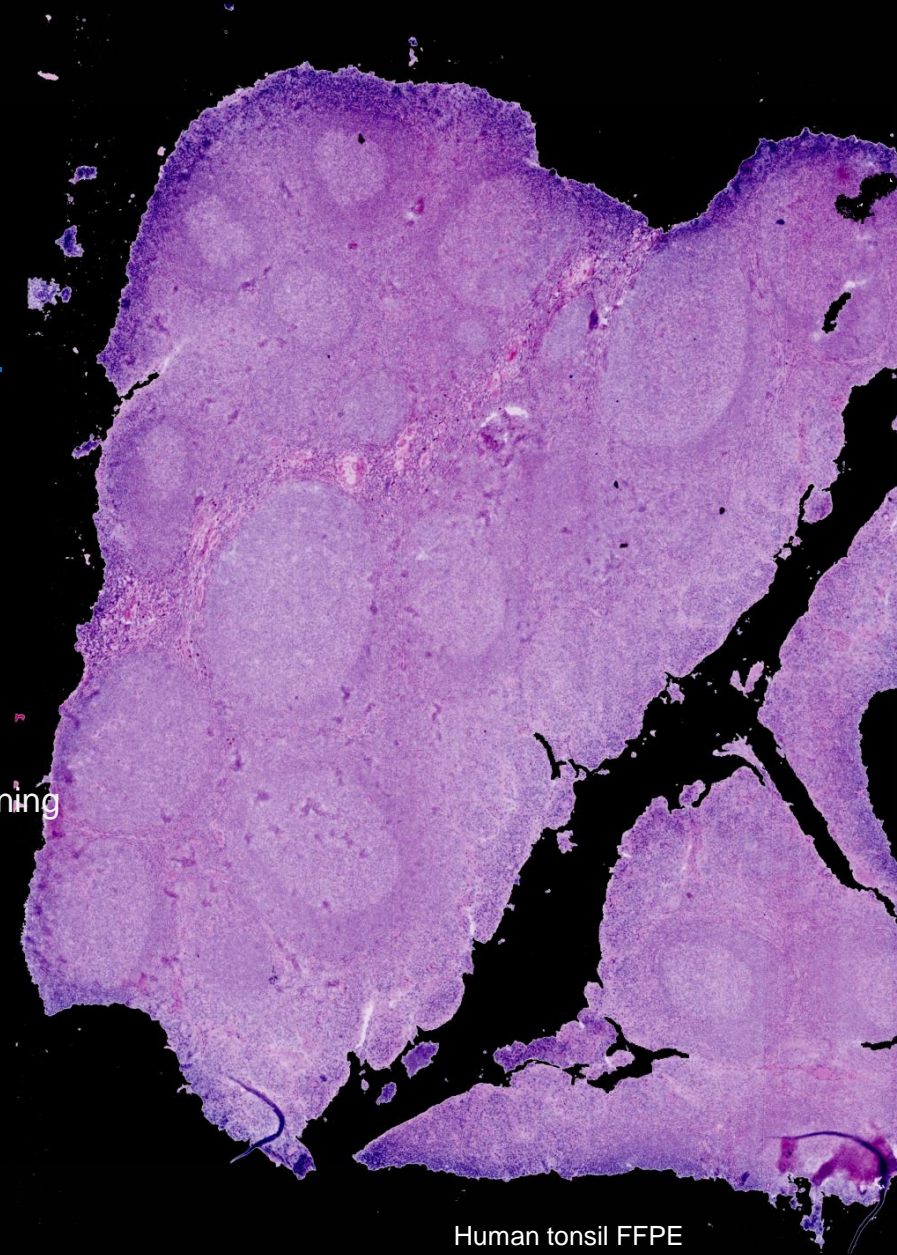
Visualize tissue morphology

Features:

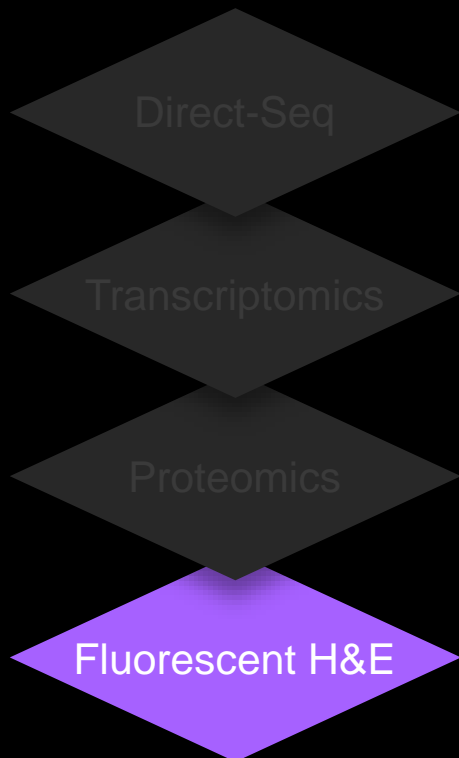
- On-instrument fluorescent imaging
- Automates traditionally manual steps

Applications:

- Identify tissue morphology
- Connect into standard histopathology data streams for AI training



Human tonsil FFPE



G4X WILL DRIVE HIGHER THROUGHPUT

Leading *In Situ*
Platforms

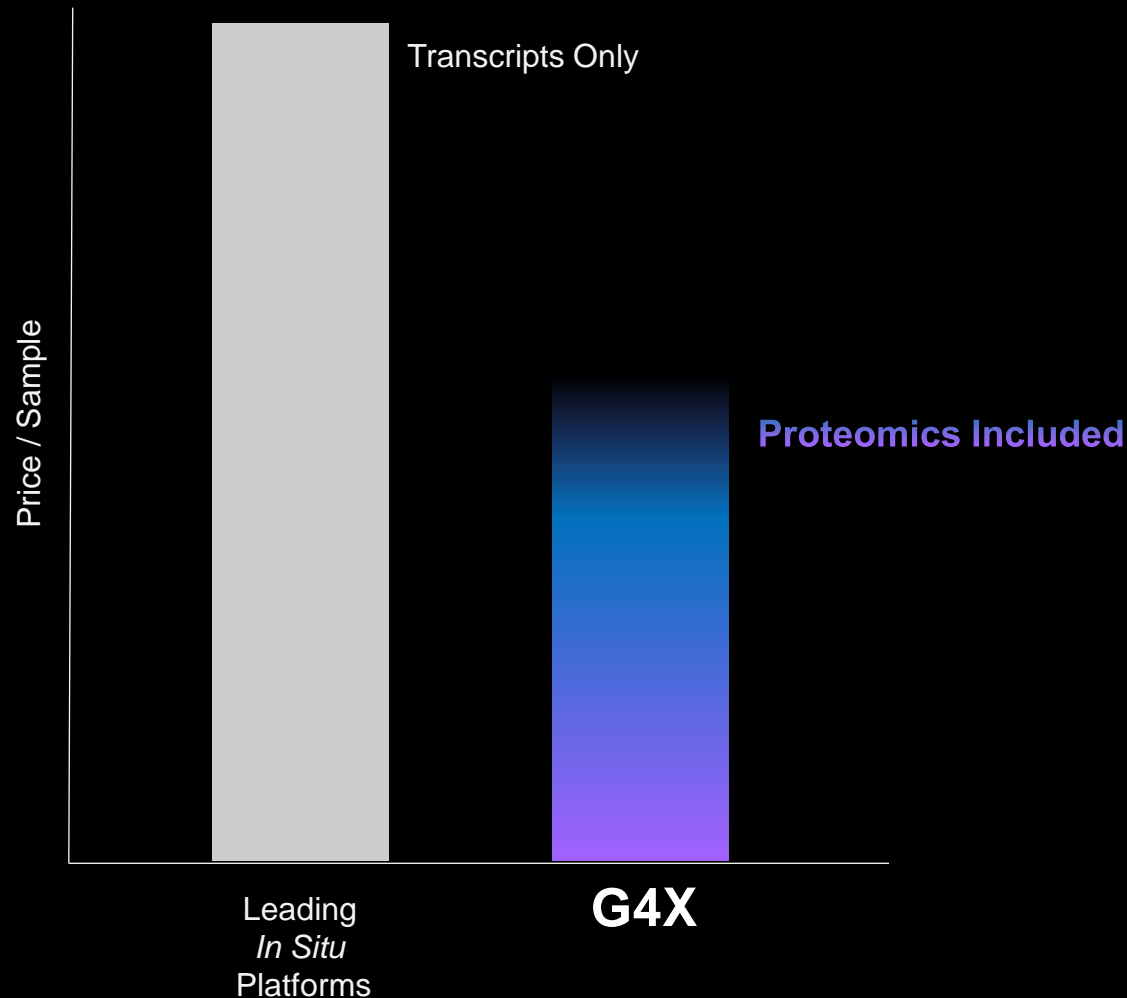


10x the samples per run
40 cm² imaging area

20x the samples per week
Single-day run time

HIGHER THROUGHPUT DRIVES COSTS DOWN

PLATFORM ALSO INCLUDES ADDITIONAL FEATURES



More G4X features...

- Upgradeable from G4
- Streamlined pre-sequencing workflow
- Flexible imaging area and run sizes
- Off-the-shelf and custom panels
- Onboard storage, standard file outputs
- First class customer & technical support

TWO TECHNOLOGIES, ONE SINGULAR PLATFORM

Next-Gen Sequencing

Flexible

4 flow cells, 16 lanes

Fast

Daily sequencing

Powerful

480 Gb & 1.6B reads / day

Spatial Sequencing

Multi-modal

RNA, Protein, H&E

Fast

Single-day run time

High-throughput

20x more samples / week



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BUSINESS EXECUTION

Commercial

Increasing revenue & awareness

Customer Focus

Best-in-class service and support

Operations

In-house manufacturing

Innovation

250+ issued and pending patents
Multi-disciplinary in-house teams



COMMERCIAL EXCELLENCE

Brand Awareness & Growth

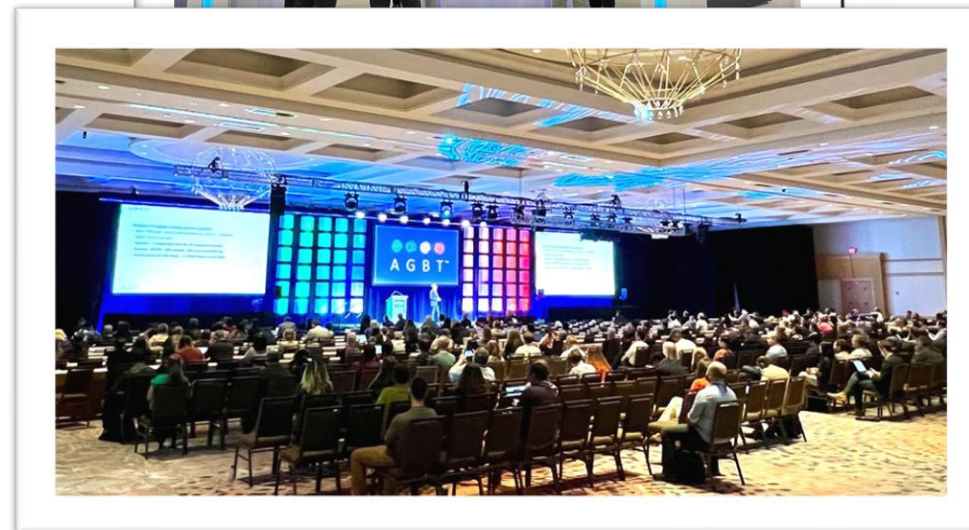
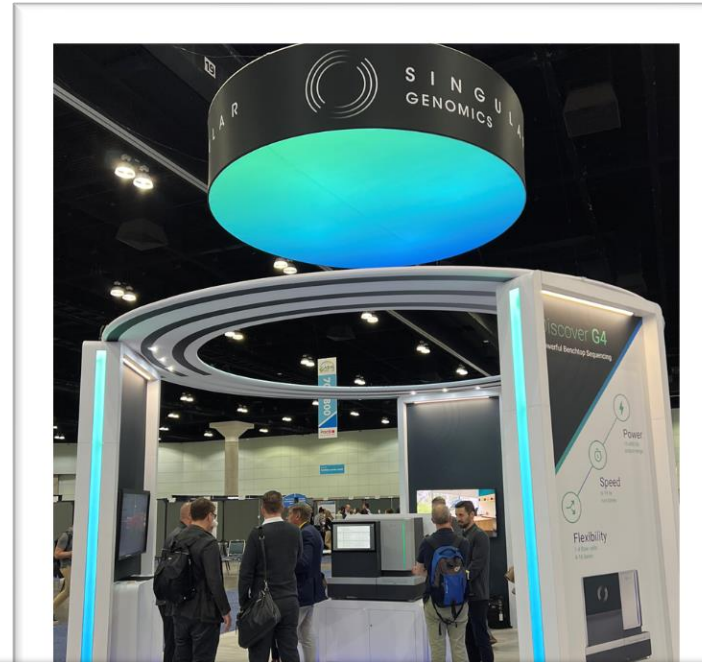
Strong tradeshow & customer engagements

Value Proposition Resonating

Growing marketing & sales funnels

International Expansion

Increasing presence in Europe and ROW



CUSTOMER FOCUS

Training

Comprehensive, personalized



Expanding Support Teams

Local representation for rapid response time



Resources

Protocols and user guides, interactive guides, knowledgebase, library preparation



OPERATIONS EXECUTION



Supply Chain

Focus on scalability

Scaling & Capacity

Dedicated manufacturing facility

Capacity to support multi-year growth

Quality

Commitment to continuous improvement

ISO 13485 preparation

GROWING INNOVATION PIPELINE

G4 Platform



 *On Market*

G4X Platform



 *Early Access 2024*

Kits & Content



- ☐ Higher density flow cells
- ☐ Increased accuracy
- ☐ New software features
- ☐ Spatial applications and kits

 *Continued Development*

2024 COMPANY OBJECTIVES



*Accelerating Genomics for the
Advancement of Science and
Medicine*

- ① **Commercial Growth** | Instrument and consumables shipments
- ② **Customer Service** | Offer best-in-class support of our customers
- ③ **Operational Excellence** | Scale with quality
- ④ **Continued Innovation** | New kits and G4X product launch

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S I N G U L A R
G E N O M I C S



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