



# iINVESTORDAY

 SOPHiA GENETICS™

#SOPHiINVESTORDAY



# Welcome

1:30pm – 2:40pm		<b>Welcome</b> Jennifer Pottage, Head of Investor Relations
		<b>Opening remarks</b> Troy Cox, Chairman of the Board
		<b>Building a data-driven world</b> Dr. Jurgi Camblong, Chief Executive Officer
		<b>Growing the SOPHiA network</b> Ken Freedman, Chief Revenue Officer
		<b>Capitalizing on our expanding biopharma opportunity</b> Peter Casasanto, Chief BioPharma Officer
2:40pm – 2:55pm	—	<b>15-Minute Break</b>
2:55pm – 4:30pm		<b>The importance of global collective intelligence</b> Dr. Philippe Menu, Chief Medical Officer
		<b>Building the platform of the future</b> Abhi Verma, Chief Technology Officer & Dr. Zhenyu Xu, Chief Scientific Officer
		<b>Delivering value creation via sustainable growth</b> Ross Muken, Chief Financial Officer
		<b>Executive Q&amp;A</b>
4:30pm – 5:30pm	—	<b>Reception</b>

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This presentation contains statements that constitute forward-looking statements. All statements other than statements of historical facts contained in this presentation, including statements regarding our future results of operations and financial position, business strategy, products and technology, partnerships and collaborations, including our ability to enter into definitive agreements for any partnerships and collaborations for which we have memorandums of understanding (“MOUs”), as well as plans and objectives of management for future operations, are forward-looking statements. Forward-looking statements are based on our management’s beliefs and assumptions and on information currently available to our management. Such statements are subject to risks and uncertainties, and actual results may differ materially from those expressed or implied in the forward-looking statements due to various factors, including those described in our filings with the U.S. Securities and Exchange Commission. No assurance can be given that such future results will be achieved. Such forward-looking statements contained in this document speak only as of the date of this presentation. We expressly disclaim any obligation or undertaking to update these forward-looking statements contained in this presentation to reflect any change in our expectations or any change in events, conditions, or circumstances on which such statements are based, unless required to do so by applicable law. No representations or warranties (expressed or implied) are made about the accuracy of any such forward-looking statements.

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# Opening remarks

**Troy Cox**

Chairman of the Board



# A perspective shaped

from 30+ years in the industry



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1990-2001



SANOFI

Sr. Vice President  
2001-2006



Inspired by patients.  
Driven by science.

President  
2006-2010

Genentech

A Member of the Roche Group

Sr. Vice President  
2010-2017



FOUNDATION  
MEDICINE

Chief Executive Officer  
2017-2019




Chairman of the Board  
2019+



Nasdaq Welcomes  
SOPHIA GENETICS, Inc.  
SOPH Nasdaq Listed

 SOPHIA  
GENETICS

 Nasdaq





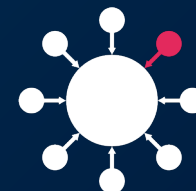
## Things you will hear frequently today



**Better informed  
decisions**



**Global network  
connectivity**



**Decentralized  
platform**



**Uniquely qualified  
as an enabler**

# VIDEO



# Building a data-driven world

**Dr. Jurgi Camblong**

Chief Executive Officer & co-founder







# Meet **SOPHiA GENETICS™**

We are a category defining  
software company on a mission to  
**Democratize Data-Driven Medicine**



**2011**  
Year Founded

**IPO**  
July 23, 2021

**500**  
SOPHiANS

**750+**  
Connected Healthcare Institutions

**~70**  
Countries

**1M+**  
Genomic Profiles Analyzed



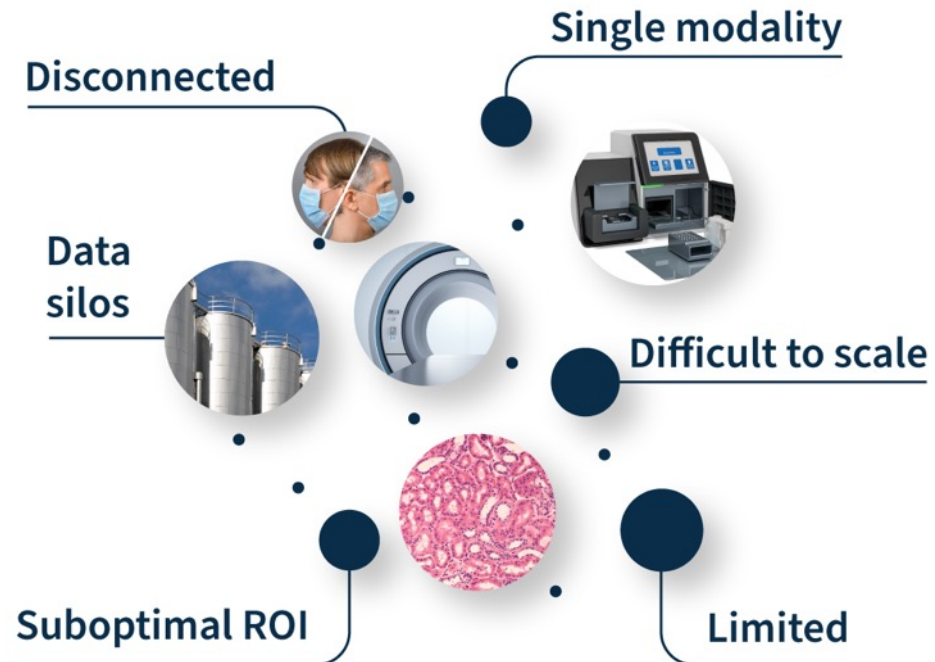
# Precision medicine opportunities

Building the future with machine learning and knowledge sharing

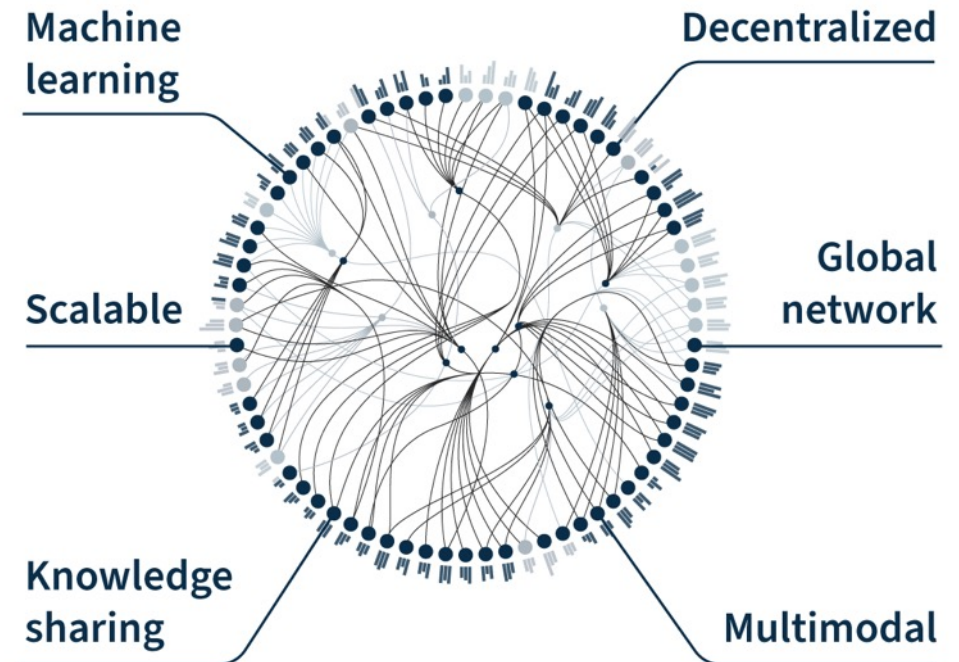


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## Past



## Beyond



## 2011

### Next Generation Sequencing (NGS)



**Revolutionary DNA-sequencing technology,**  
but creates large, complex, and noisy datasets for analysis



## SOPHiA GENETICS™

Raw sequencing data



Analysis reporting

# SOPHiA DDM Platform

our cloud-native software leverages the power of data analytics and predictive AI to transform the practice of healthcare

GENERATION #1

- Oncology
- Rare and Inherited Diseases





 We are a first mover with critical mass



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**750+** connected  
healthcare  
institutions<sup>1</sup>

NORAM  
~110

EMEA  
~490

APAC  
~80

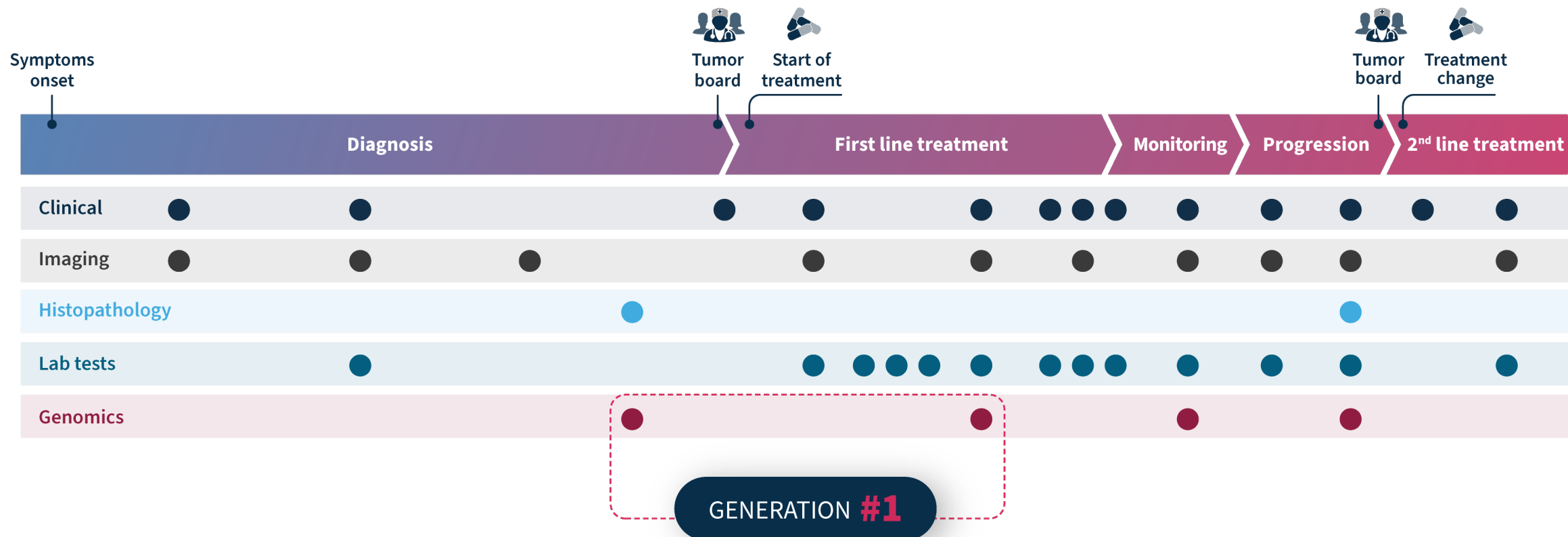
LATAM  
~70

<sup>1</sup> Represents active customers who have generated revenue through DDM platform usage or Alamut licenses

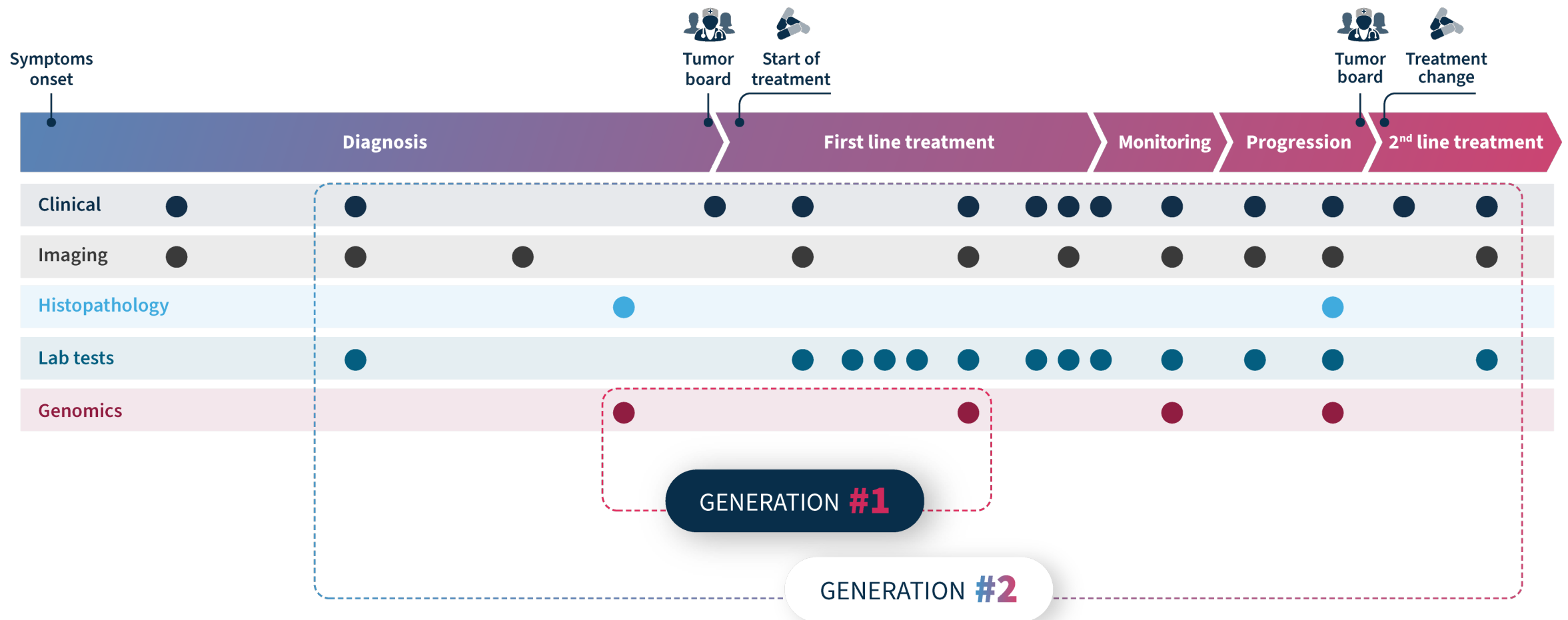
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# Patient journey of the future



# Patient journey of the future



### GENERATION #2



Data  
Visualization

Cohorting

Prediction

# Predictive models will support data-driven medicine vs. hypothesis-driven medicine



## DEEP-LUNG-IV

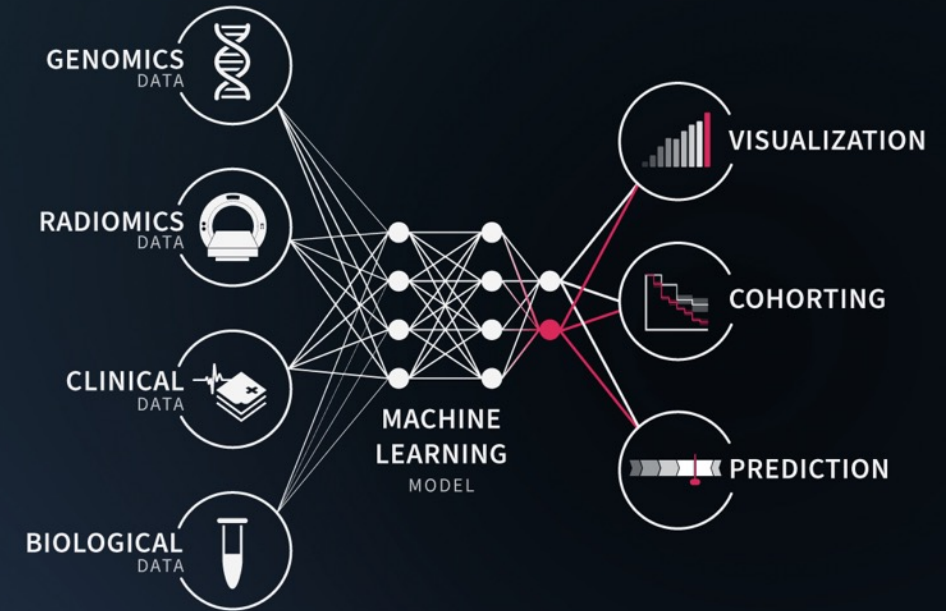
To date

~80% predictive value

23 participating sites

7 countries

~900 patients



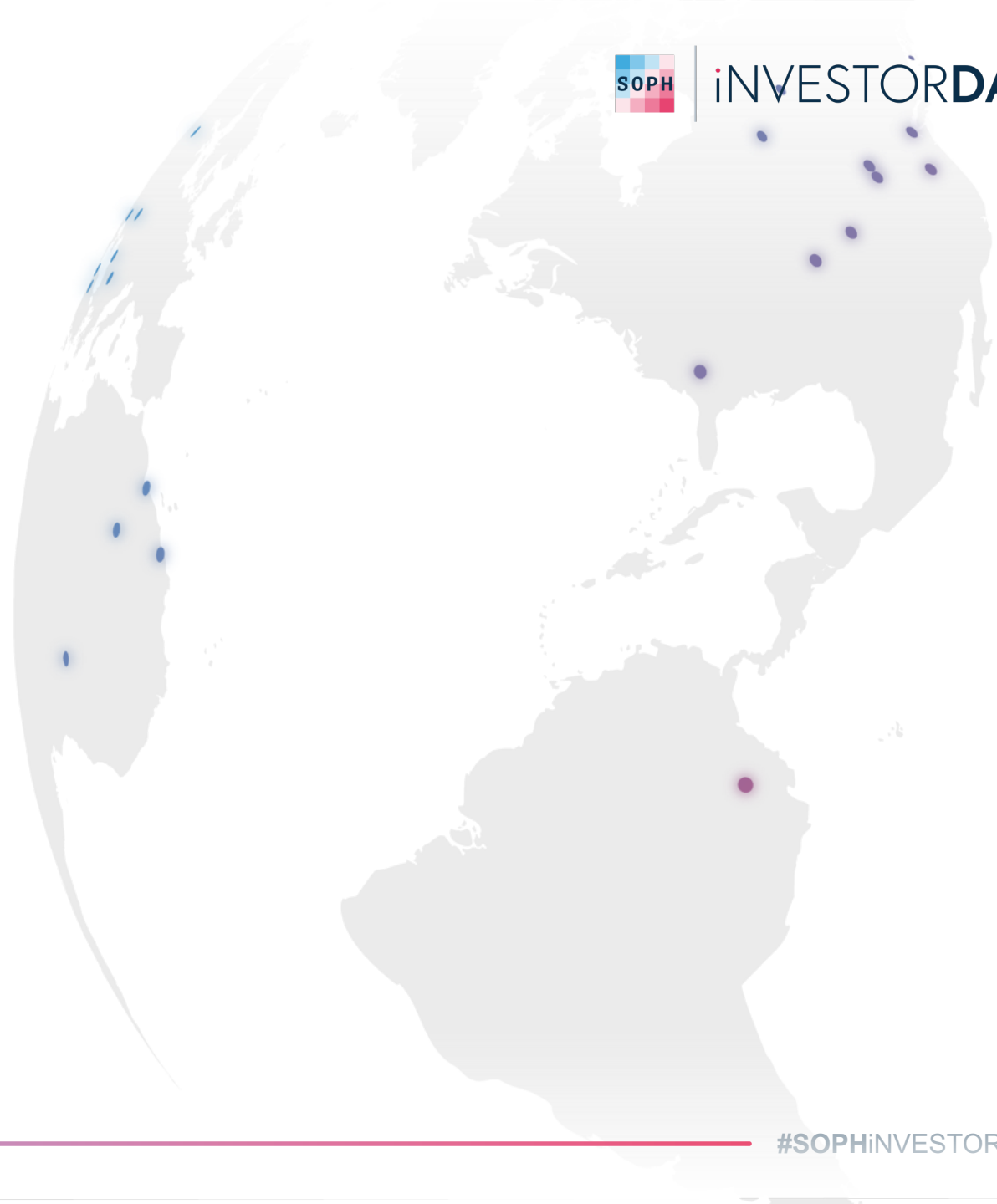


# From 23 sites Today

for Lung cancer



GENERATION #2







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**750+ sites**

for Lung cancer

**Expanding**

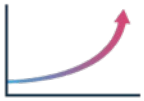


GENERATION **#2**

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# Beyond lung



**Sites**



**Lung cancer**



**Breast cancer**



**Brain cancer**

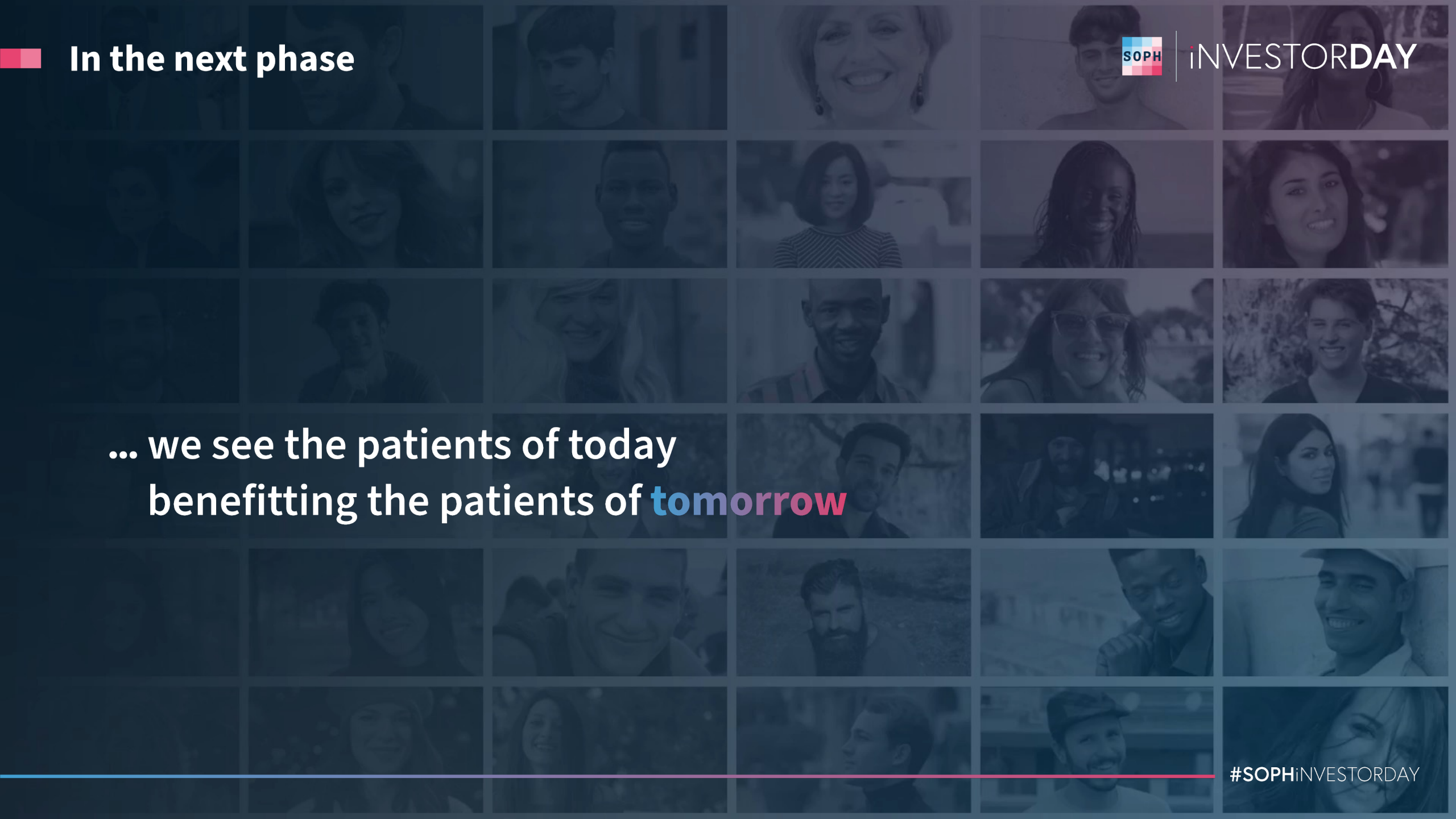



**Kidney cancer**



**Colorectal cancer**

GENERATION **#2**



 In the next phase

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... we see the patients of today  
benefitting the patients of tomorrow

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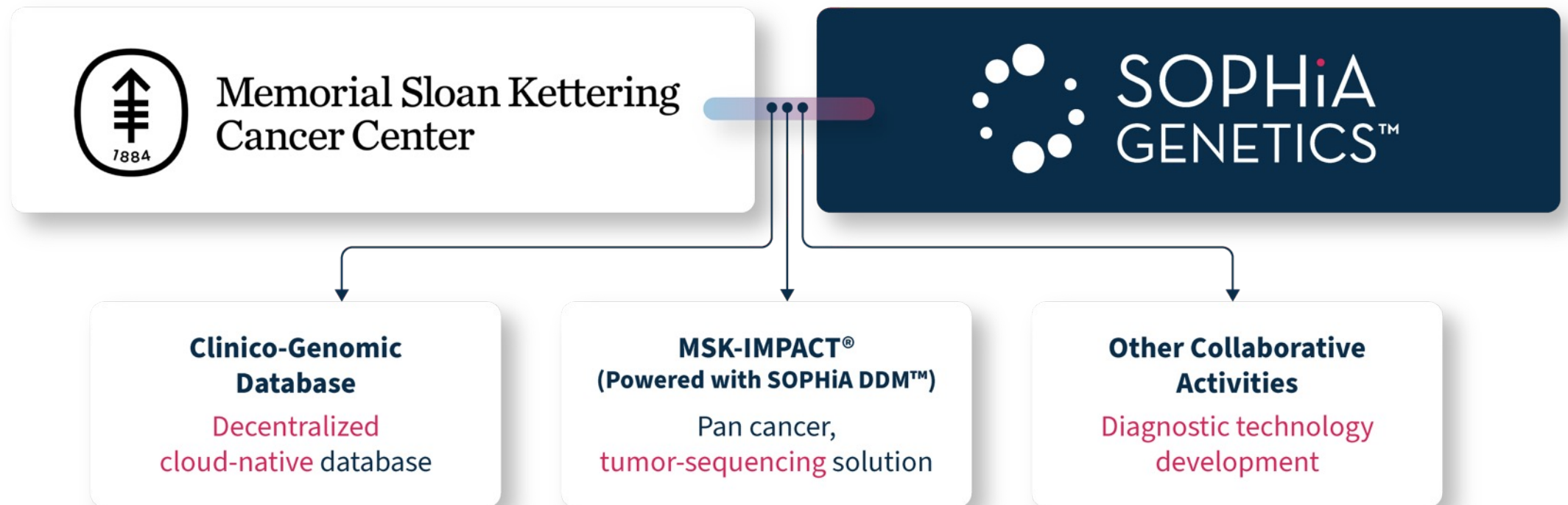
## Extensive partner ecosystem

joining forces to shape healthcare's data-driven future



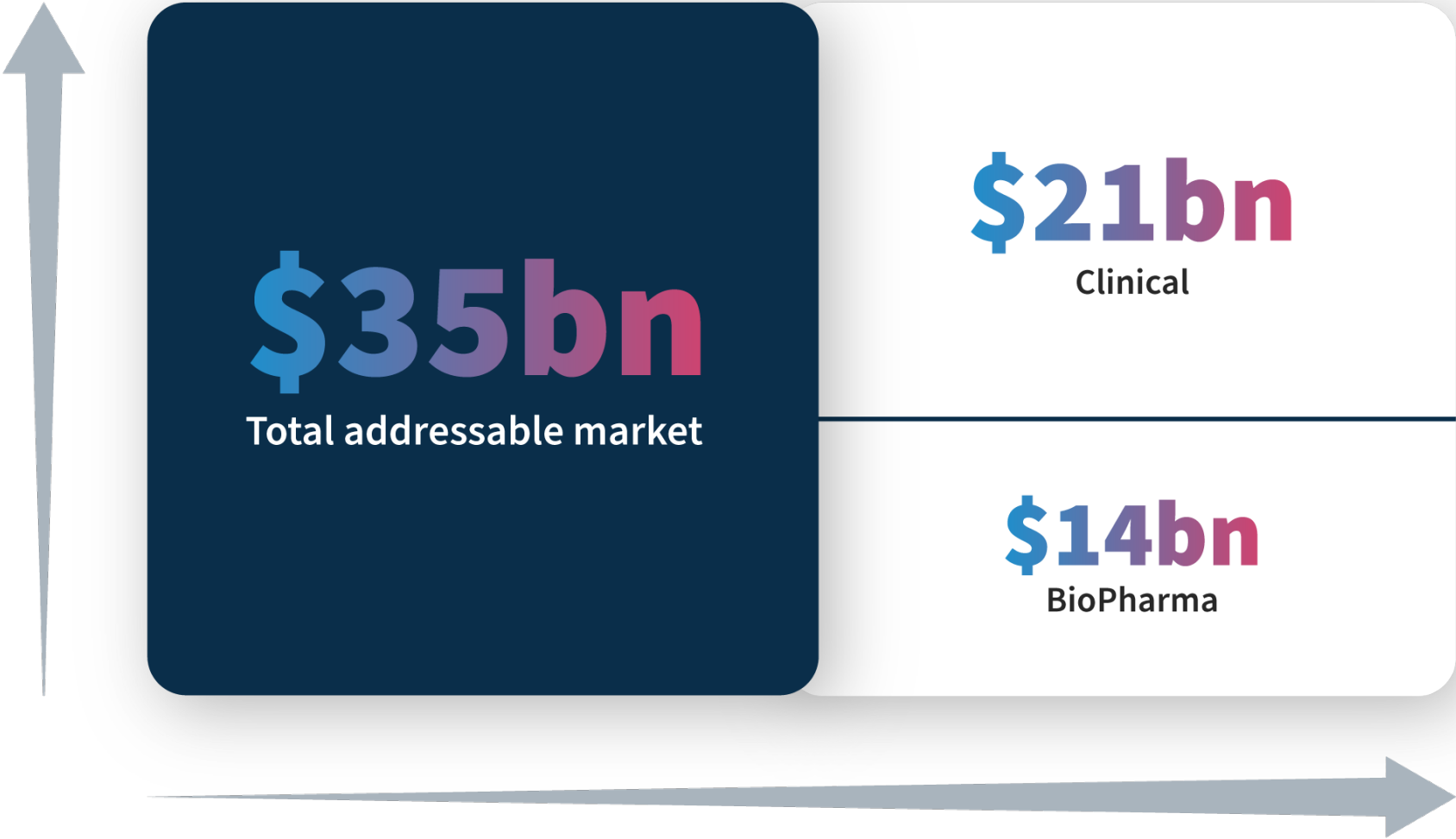
# Raising the bar for collective intelligence

A unified vision to create a new gold standard for cancer care





# Massive market opportunity with room to grow

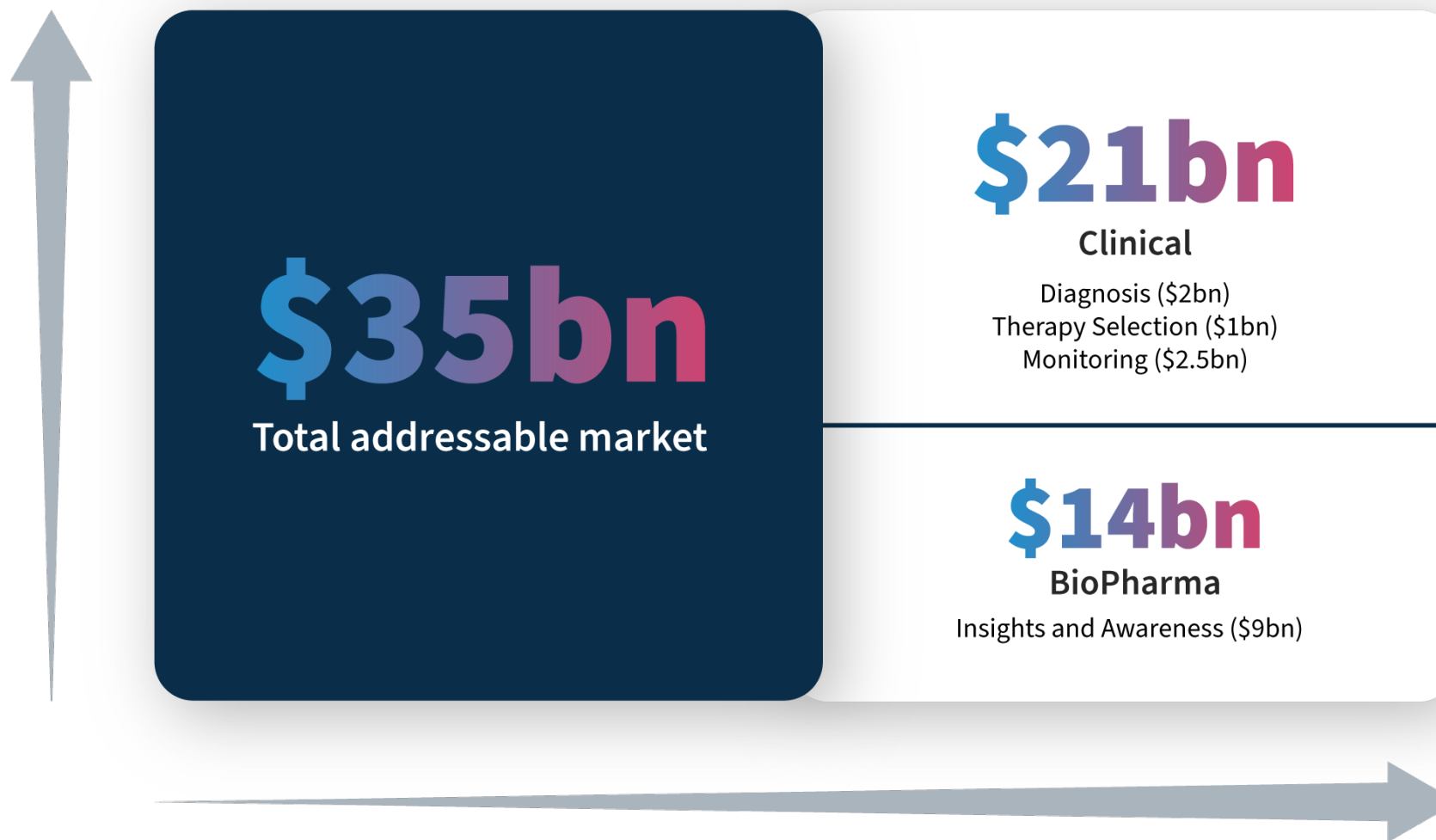


Note: This slide presents our estimated addressable market for 2021. These estimates are primarily based on epidemiological data, including incidence and prevalence estimates of addressable populations for each application, as well as a range of price assumptions for our products taking into account differences in panel sizes.

# Massive market opportunity with room to grow



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Note: This slide presents our estimated addressable market for 2021. These estimates are primarily based on epidemiological data, including incidence and prevalence estimates of addressable populations for each application, as well as a range of price assumptions for our products taking into account differences in panel sizes.



# A biopharma partnership united in purpose



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Optimize, validate, and deploy ecDNA algorithms across technologies to improve patient selection and access



Cloud-native software company  
developing and deploying innovative  
solutions through SOPHiA DDM™



**BOUNDLESS** BIO™

Next generation precision  
oncology company advancing the  
first ecDNA-directed therapies  
(ecDTx) for patients with oncogene  
amplified cancers

# All SOPHiANS are KEY for our success

our people and teams are agile, collaborative, and mission-driven



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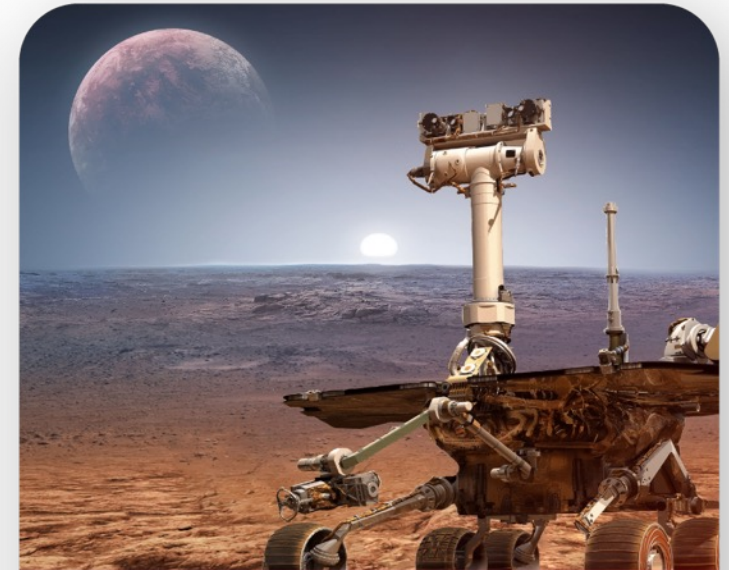
## Fearlessly Adventurous

There isn't a peak we are not prepared to climb together to achieve our mission



## Resilient and Nimble

We don't back down



## Relentlessly Curious

We answer questions that have never been asked, let alone answered



Today, we will answer **THREE** important questions



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**1 | How we sell**

**2 | How we innovate**

**3 | How we grow sustainably**





# Growing the SOPHiA network

**Ken Freedman**

Chief Revenue Officer



**Ken Freedman**

Chief Revenue Officer

⋮ SOPHiA DDM™

Data in, answers out



# Uniquely positioned to deliver customer value



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Deliver top  
**analytical performance**



Expedite  
**turnaround time**



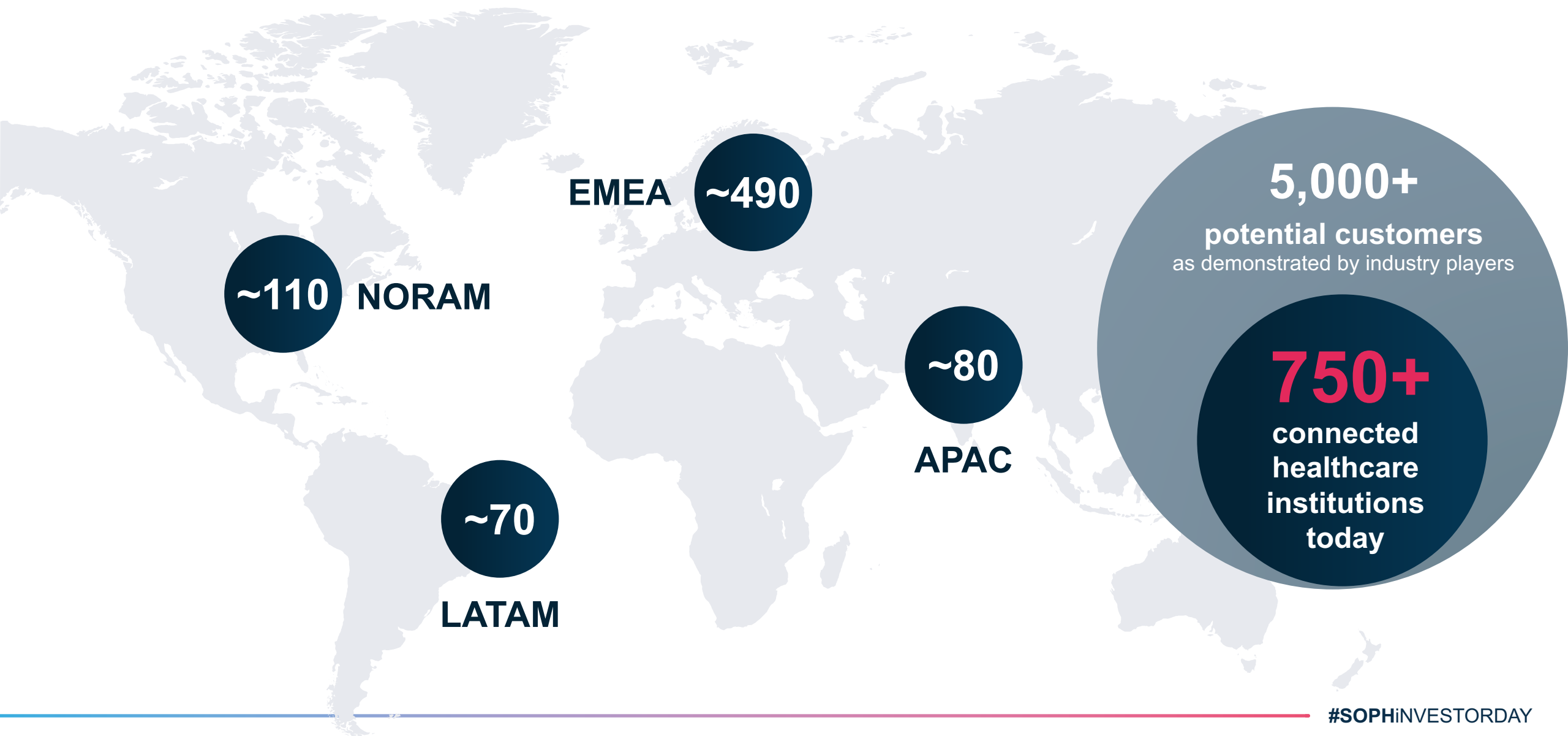
Accelerate **adoption** of  
precision applications



Control **costs**



# Expansive global footprint



# Wide range of SOPHiA DDM applications



HRD	RNA Solutions	Solid Tumors	BRCA	Whole Exome Sequencing
HRS	Somatic Oncology	Comprehensive Genomic Profiling	Hereditary Cancer	Clinical Exome Sequencing
Trusight Oncology 500	Liquid Biopsy	Onco-Hematology	Inherited & Rare Diseases	Cardiology
Myeloid	Lymphoma	Neurology	Metabolism	and more...

Exciting opportunity exists to further expand within our existing customer portfolio



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750+ connected healthcare institutions

50%

of customers currently use  
**one** SOPHiA DDM  
application

37%

use **two to three**  
applications

13%

use **four or more**  
applications



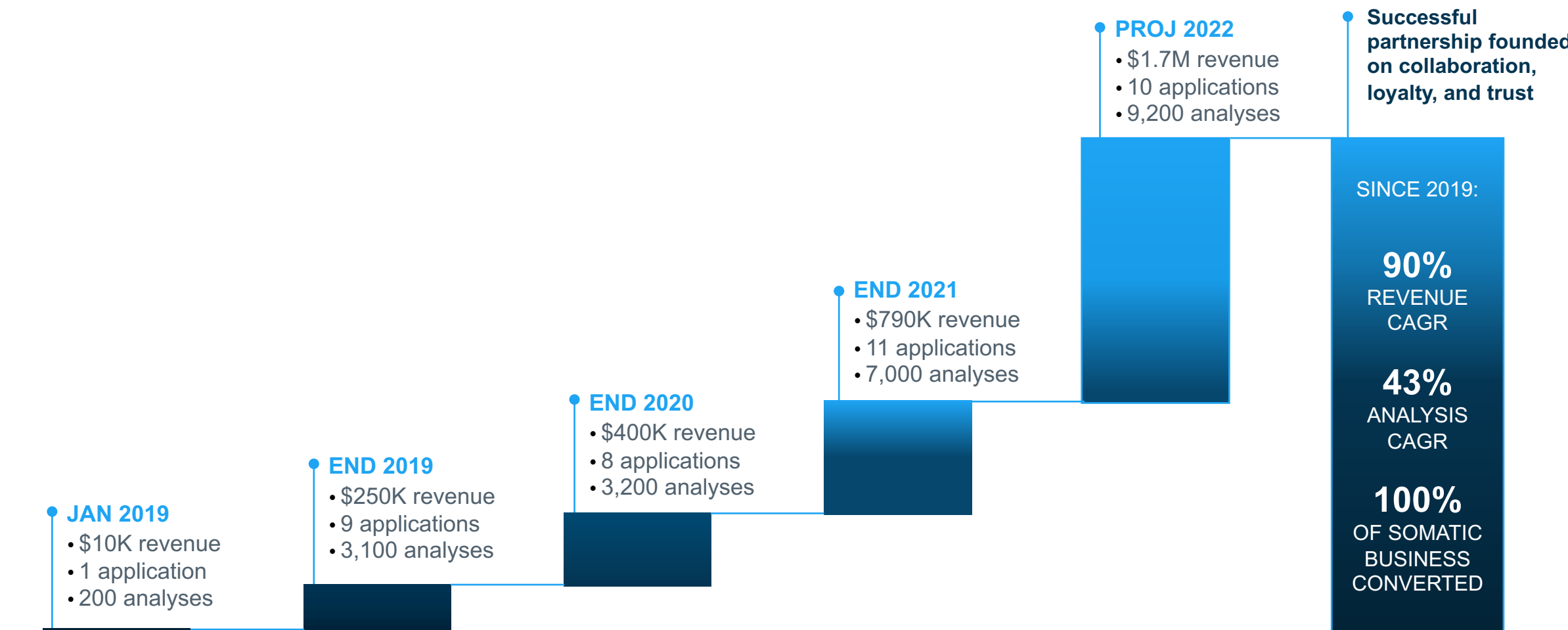
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# A look into a customer's expansion journey



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Applying our customer success methodology with a large central lab <sup>(1)</sup>



FN 1: Approximate values

This is an example of one customer journey and may not be indicative of all customer expansion journeys.

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**~100**

**Commercial  
team**

**20**

**customer success  
executives**

**Expand strategy**

- White space
- Retention
- Customer satisfaction

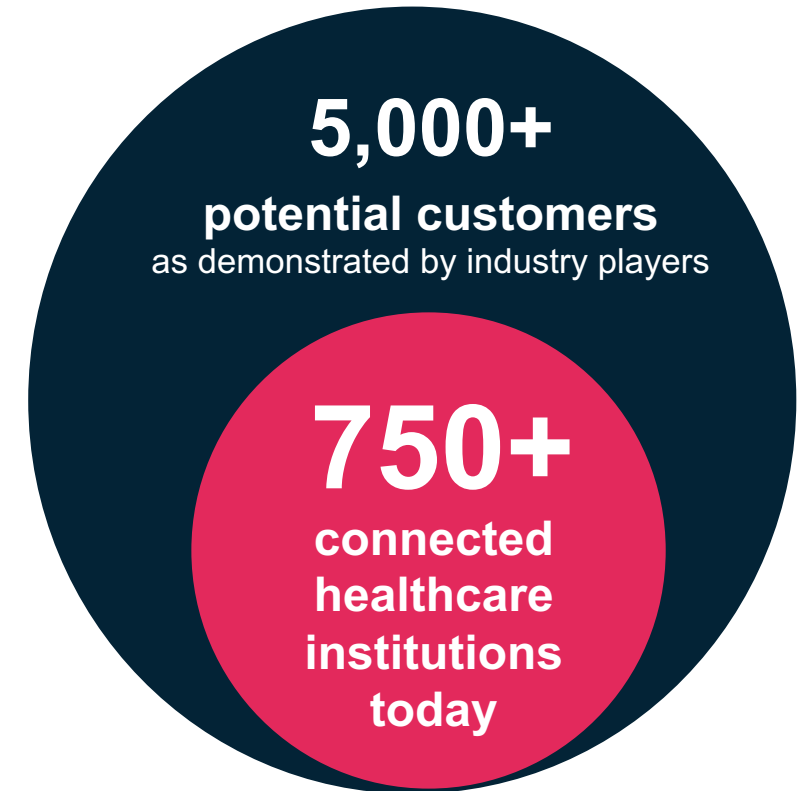


## Opportunity to land new customers



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While we have landed **750+ customers**...





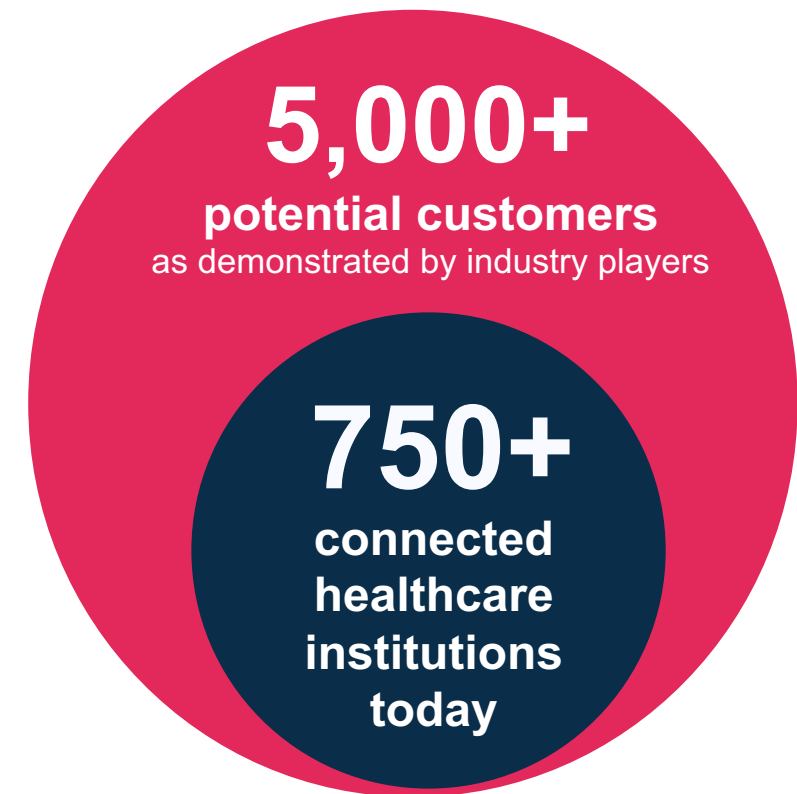
## Opportunity to land new customers



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While we have landed **750+ customers**...

We have a massive opportunity  
to grow our reach



**~100**

**Commercial  
team**

**20**

**Global sales  
executives**

## Land strategy

- Targeting 5,000+ potential customers
- Customers include hospitals, research institutions, and central labs
- Focused on US, UK, Germany, Asia

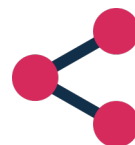
## How we sell



**Direct**



**Distributors**



**Partners**





**66%**

of hits during an MLB  
season are singles

**12%**

of hits are homeruns

We are laser-focused on optimizing the  
KPIs throughout the journey

## Awareness

### KPIs:

- # opportunities created

## Sales Process

### KPIs:

- time in funnel
- close rate

## Implementation

### KPIs:

- time to revenue

## Loyalty

### KPIs:

- net promoter score
- customer health score

# VIDEO



## Key takeaways



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1

**Large and  
growing market**

2

**Proven land and  
expand strategy**

3

**Global team and  
structure in place**





# Capitalizing on our expanding biopharma opportunity

**Peter Casasanto**

Chief BioPharma Officer



**Peter Casasanto**

Chief BioPharma Officer

**BioPharma can leverage the  
power of data and analytics  
to more effectively deliver  
targeted therapies to the market**

# BioPharma is a well-established global industry

But not without its challenges



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**10+ years**

Average length  
from IND to  
approval

**~80%**

Clinical trials fail to  
meet enrollment  
timelines

**~10%**

Drugs make it from  
PI to approval

**~\$2B**

Average cost  
of drug  
development



# These challenges require more than just data...



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Our value proposition to BioPharma is driven by SOPHIA GENETICS' core competencies

Clinical

Platform

BioPharma

Global clinical network

Real-time computing

Multimodal data



Improved **decision making**

Enhanced **comparative analysis**

Advanced **patient finding**

**Decentralized Scalable**

## 3 pillars for growth: the three d's



### Data

Providing insights from multimodal datasets across decentralized network



### Development

Leveraging AI and ML for the development of new solutions & predictive analytics



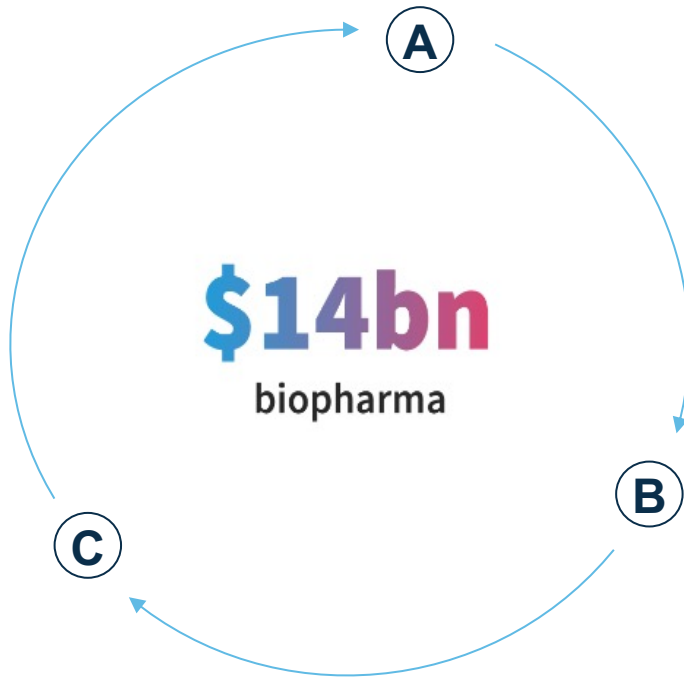
### Deployment

Deploying proprietary and commercial solutions

# Our ability to deliver innovative biopharma solutions

A catalyst for SOPHiA GENETICS' growth strategy...

## Total addressable market in 2021



## Catalysts for growth

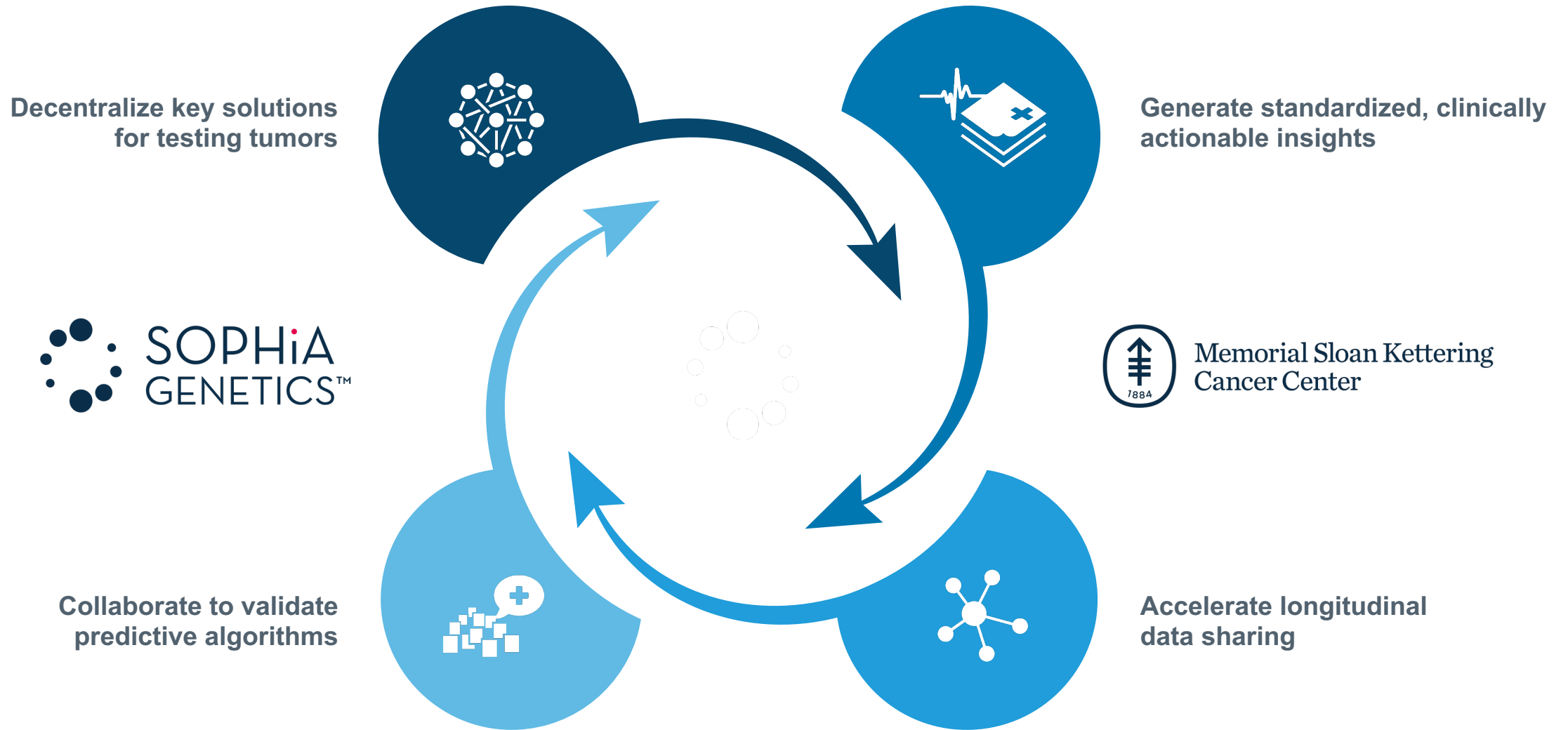


# Data:

Putting our shared vision into practice



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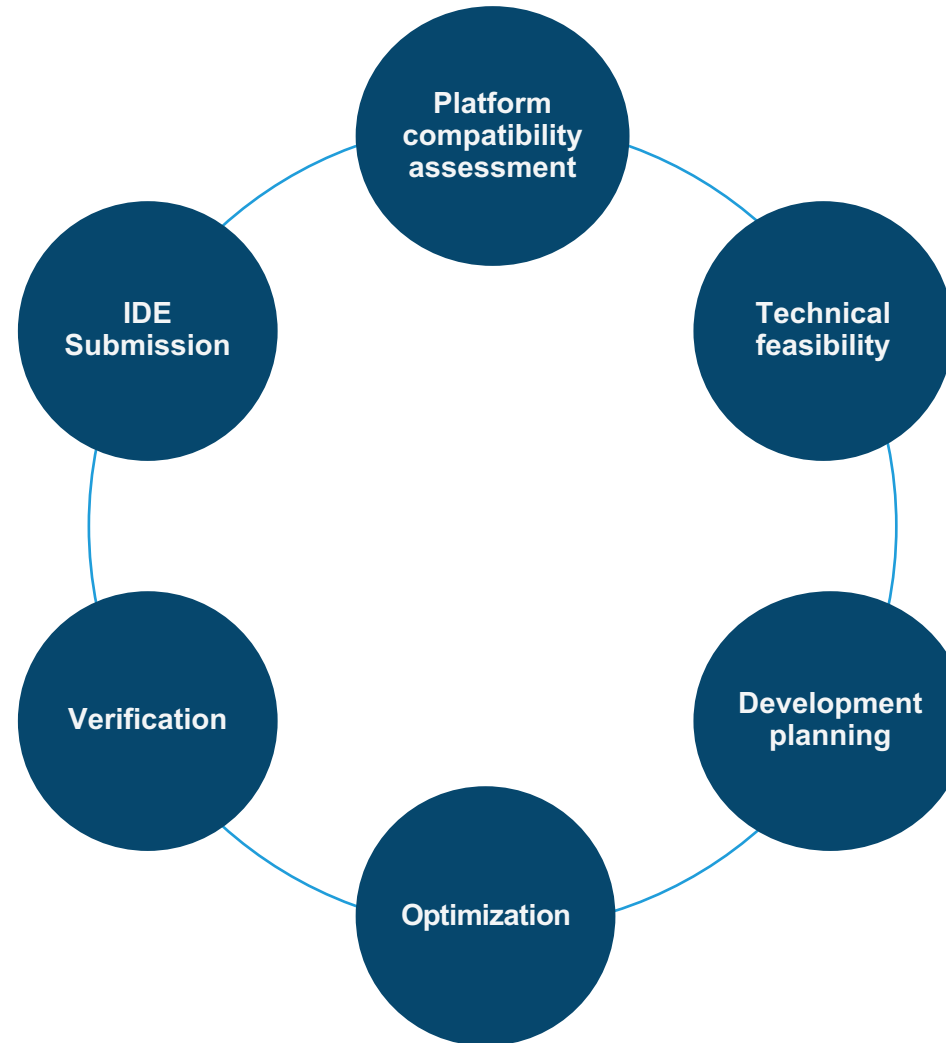


# Development:

A partnership powered by our decentralized platform



- **Oncogene amplifications** frequently occur on ecDNA
- Boundless Bio has built an **ecDNA detection algorithm** to identify patients with ecDNA driven cancers
- Partnering with SOPHiA to validate ecDNA detection algorithm for the **first clinical study of ecDTx**



- **Decentralized, technology agnostic platform** enables the **end-to-end development** of new solutions
- **Application of gene signature across** assays to identify patients
- Unlocks a **broad spectrum** of SOPHiA GENETICS Biopharma capabilities

## Deployment:

Expanding access to HRD testing globally

10+

Countries

30+

Institutions



Offering laboratories **innovative solutions to enable locally-delivered HRD testing**



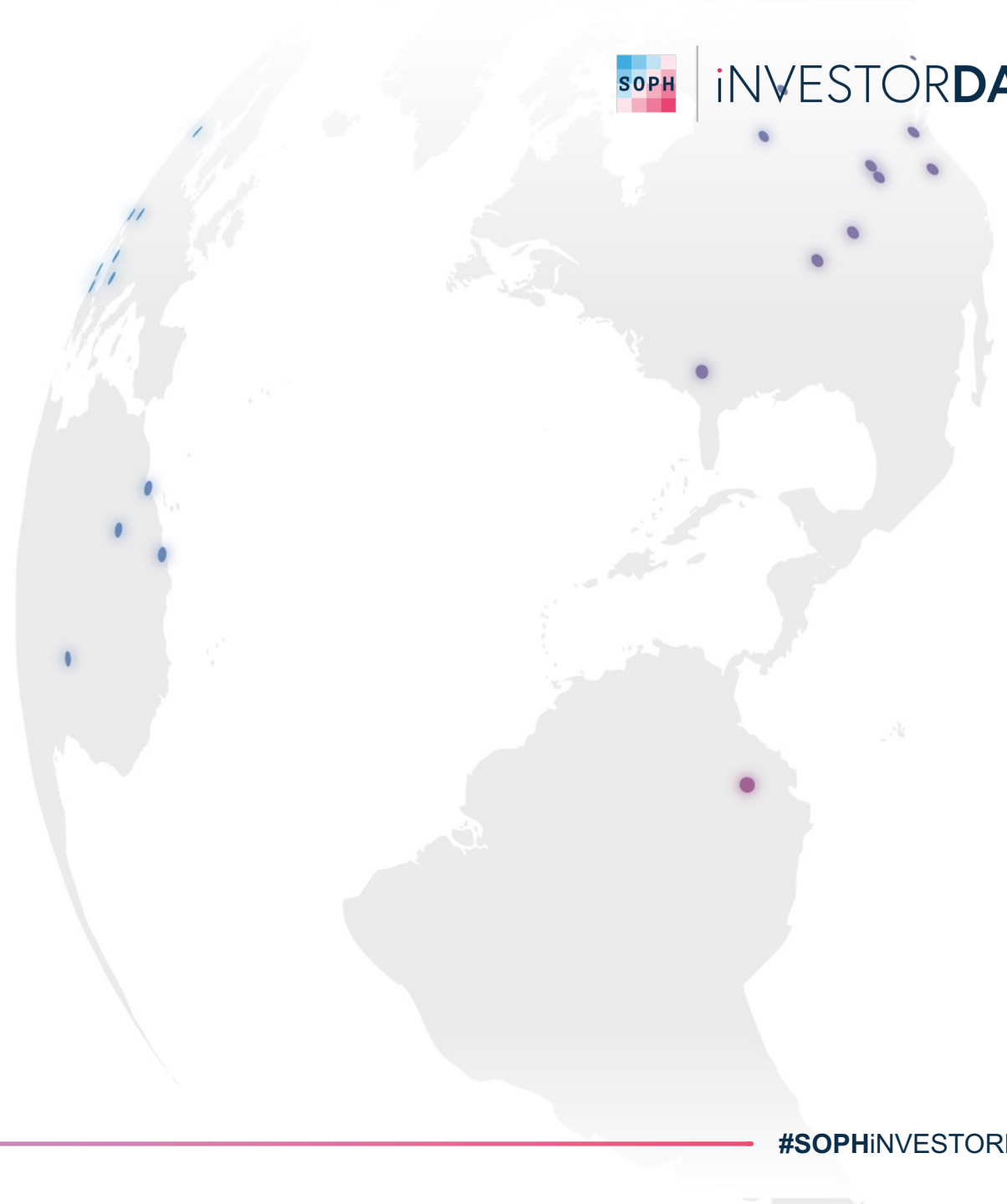
Empowering lab customers to **increase range of options for HRD detection**



Providing labs with **full control of data to save time and cost**



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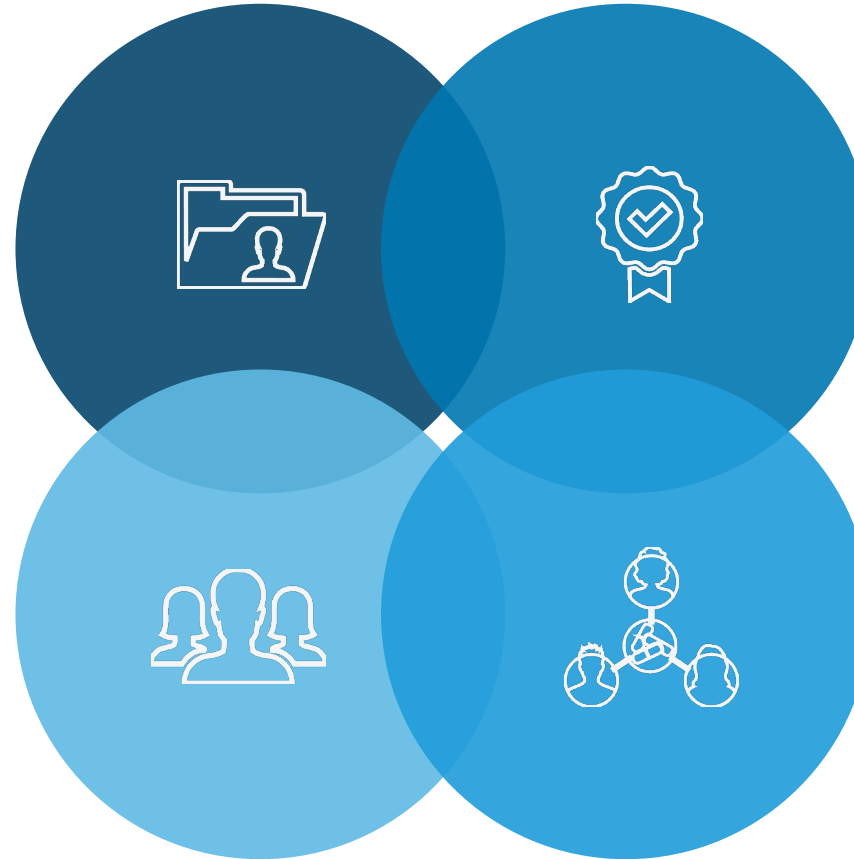
# Tearing down data silos to become a full-scale partner

Building an invaluable multimodal data set for better patient care



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Improve multimodal data sets to support **trial design and asset management**



Support translational and clinical trials **for patient selection & stratification**

Expand the **diversity and depth** of clinico-genomic data cohorts

Accelerate collective intelligence **through contributions of retro and prospective data**

## Traction best evidenced by customer testimonials...



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“ We see you as a data player...  
**You are on our data strategy roadmap**

*Head of BD Precision Medicine  
Top 20 pharma*

“ **Your global footprint, universal approach and ability to deliver data** through your tech platform is unique

*Immuno-Oncology Lead  
Top 20 pharma*

“ We also learn from your approach, **which we find as the only true holistic view**

*SVP of Translational Medicine  
Top 10 biotech*

“ When we hear that major institutions are willing to partner, **this is a sign that your approach is solid**

*Immuno-Oncology Biomarker Lead  
Top 20 pharma*

“ I continue to hear about you guys, **your data and the platform**

*Head of Diagnostics  
Top 10 biotech*



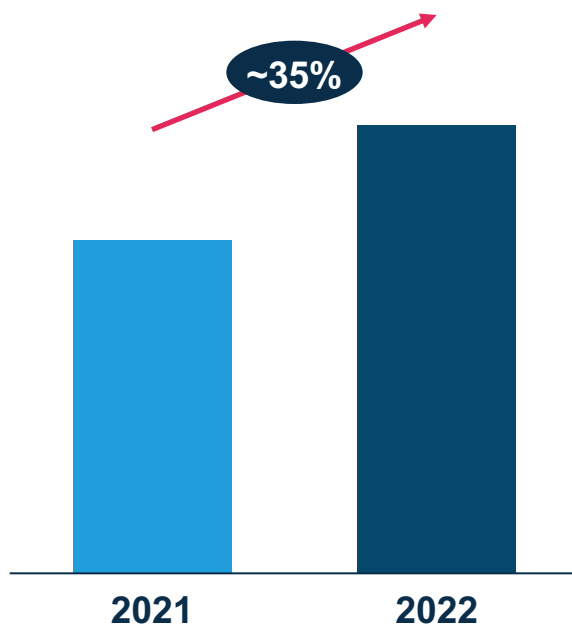


... and we are seeking to maximize the traction



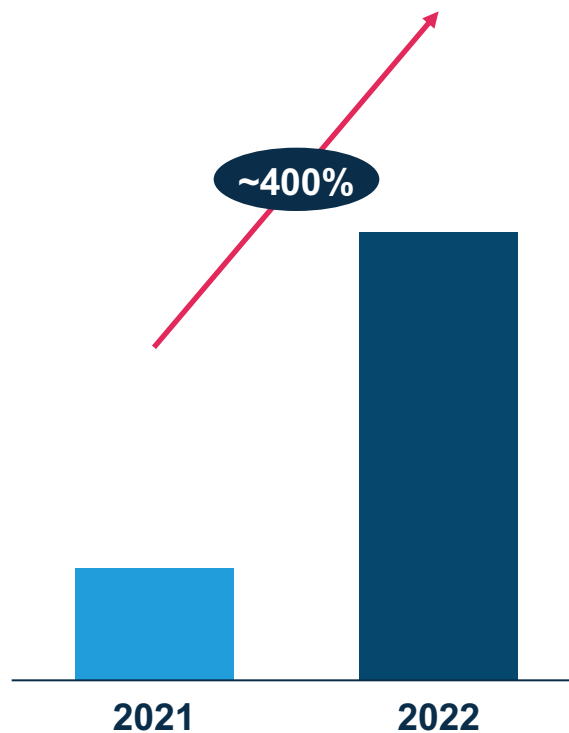
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### 1 Number of pipeline opportunities



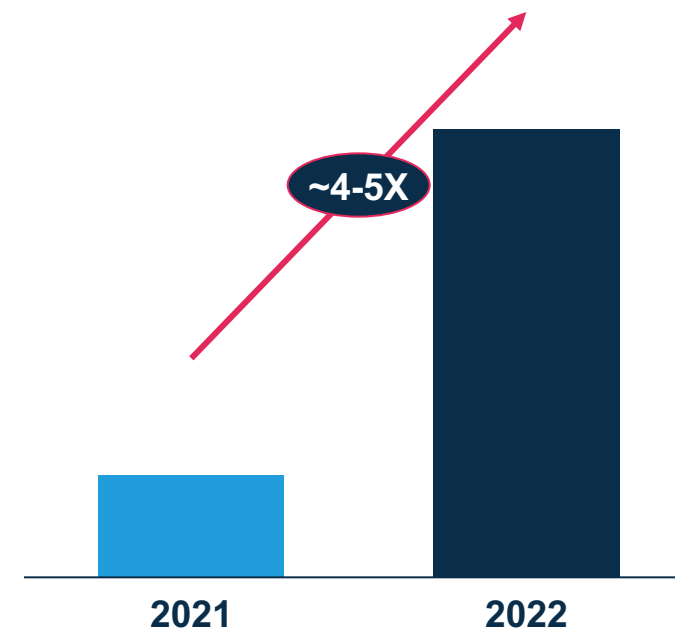
Driven by multimodal deals and better targeting

### 2 Customer meetings



Higher demand across Data, Development and Deployment

### 3 Bookings projections



Improved hit rate and larger deal sizes



 This is just the tip of the iceberg



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**Product market fit**

**Identify and nurture**



## Key takeaways



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1

**Informed strategy  
and targeting**

2

**Collaboration  
across 3 d's**

3

**Positioned to be  
the multimodal partner  
of the future**



# 15-minute Break



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 SOPHiA GENETICS™

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# The importance of a global collective intelligence

**Dr. Philippe Menu**

Chief Medical Officer



McKinsey  
& Company

**Dr. Philippe Menu**

Chief Medical Officer

# Oncology has evolved from an organ-level view to a focus on molecular alterations, fueled by genomics



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20 years ago

Lung cancer  
as an **organ**  
**disease**



Today

Dozens of lung  
cancer **subtypes**  
based on genomic  
signatures

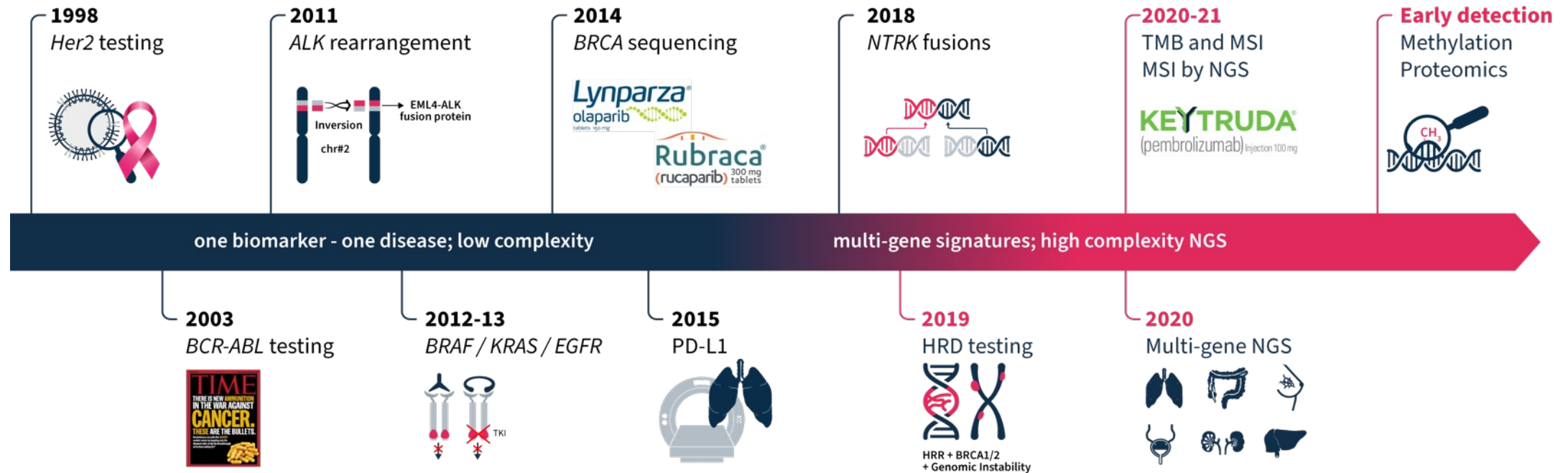


# Data-driven medicine is ushering a new era for cancer care



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Fueled by increasingly targeted therapies, technology and advanced analytics

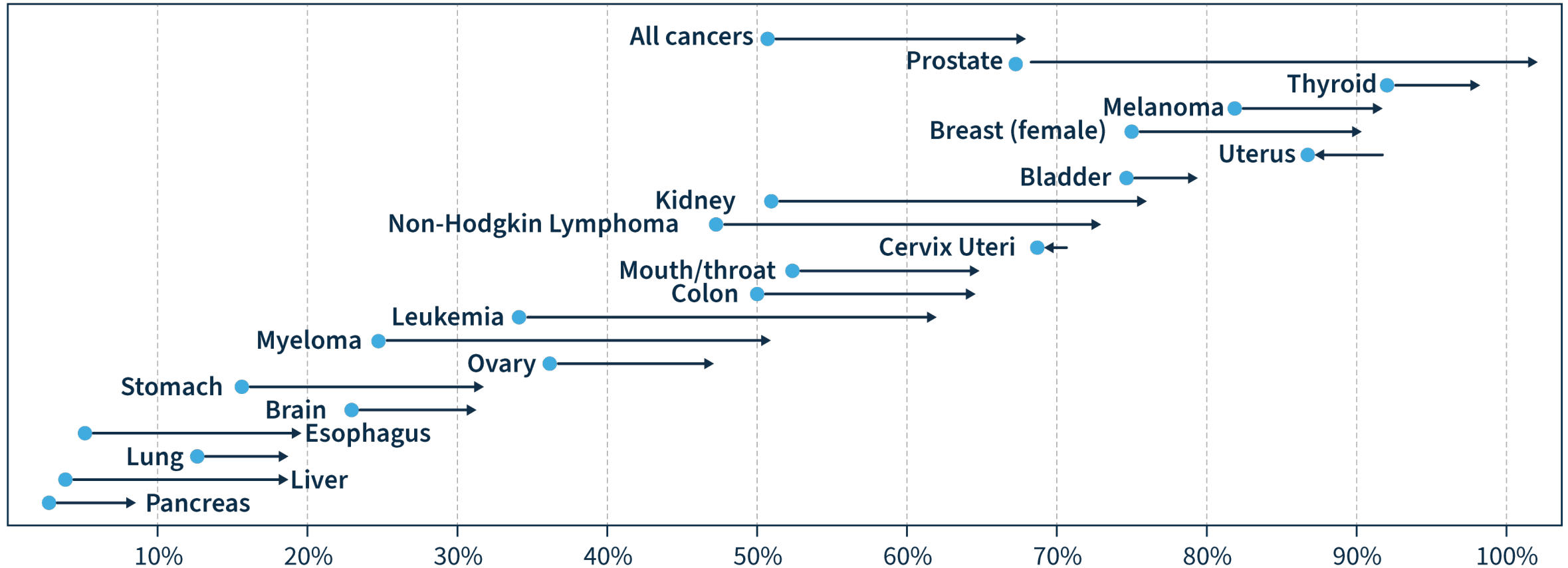


# Cancer outcomes have been slowly improving over the past 50 years, yet high unmet medical need remains



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Average five-year survival rates from common cancer types in the United States, shown as the rate over the period 1970-1977 and over the period 2007-2013. This five-year interval indicates the percentage of people who live longer than five years following diagnosis.



Based on data by Journal of the National Cancer Institute; Surveillance, Epidemiology and End Results Program. Data visualization available at [OurWorldinData.org](https://ourworldindata.org)

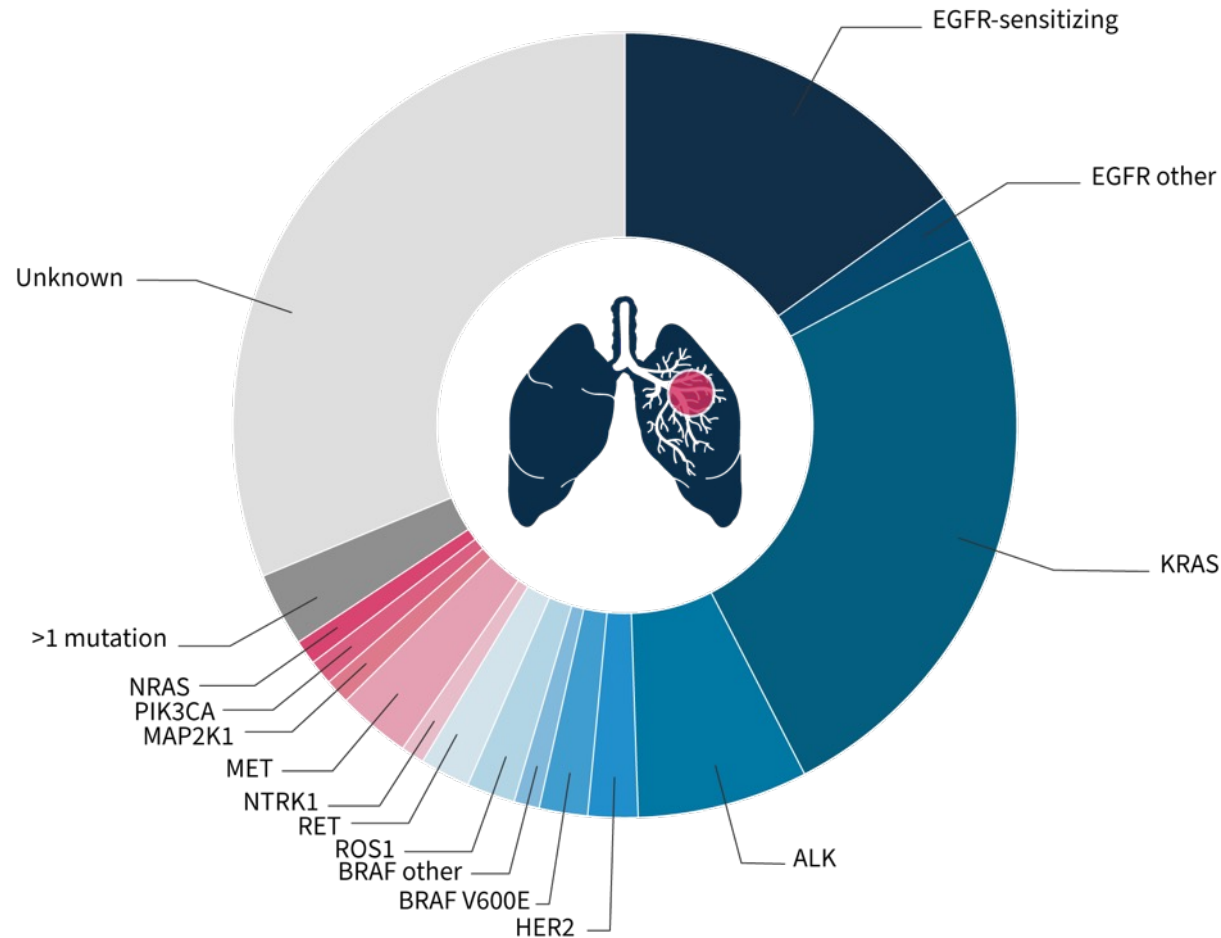


# Today's reality: every cancer is different...

Example: metastatic lung cancer is increasingly a collection of rare diseases



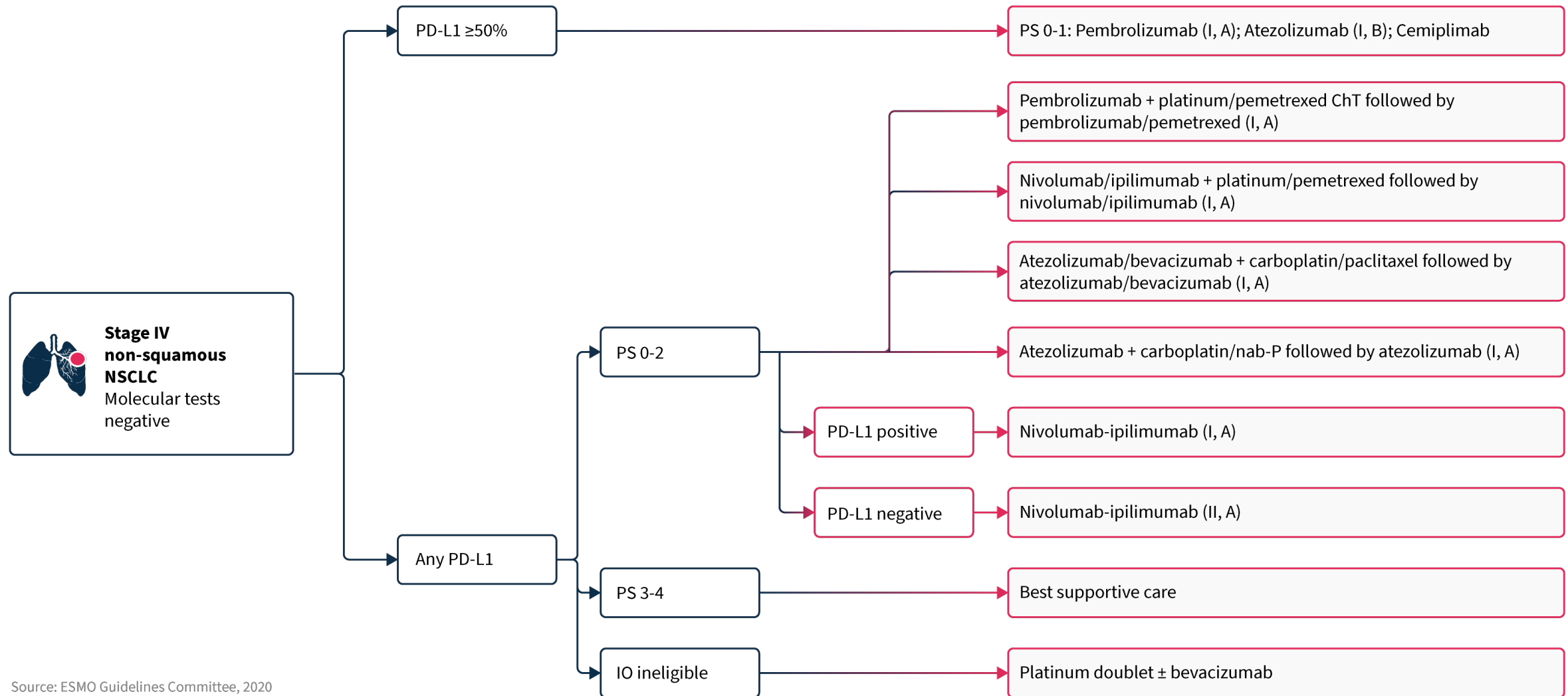
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- Specific variants (e.g., KRAS G12C)
- Co-mutations
- Tumor mutational fingerprint evolving over time

# ... and oncologists face complex therapeutic decisions

Current standard of care for non-oncogene addicted stage IV non-squamous NSCLC

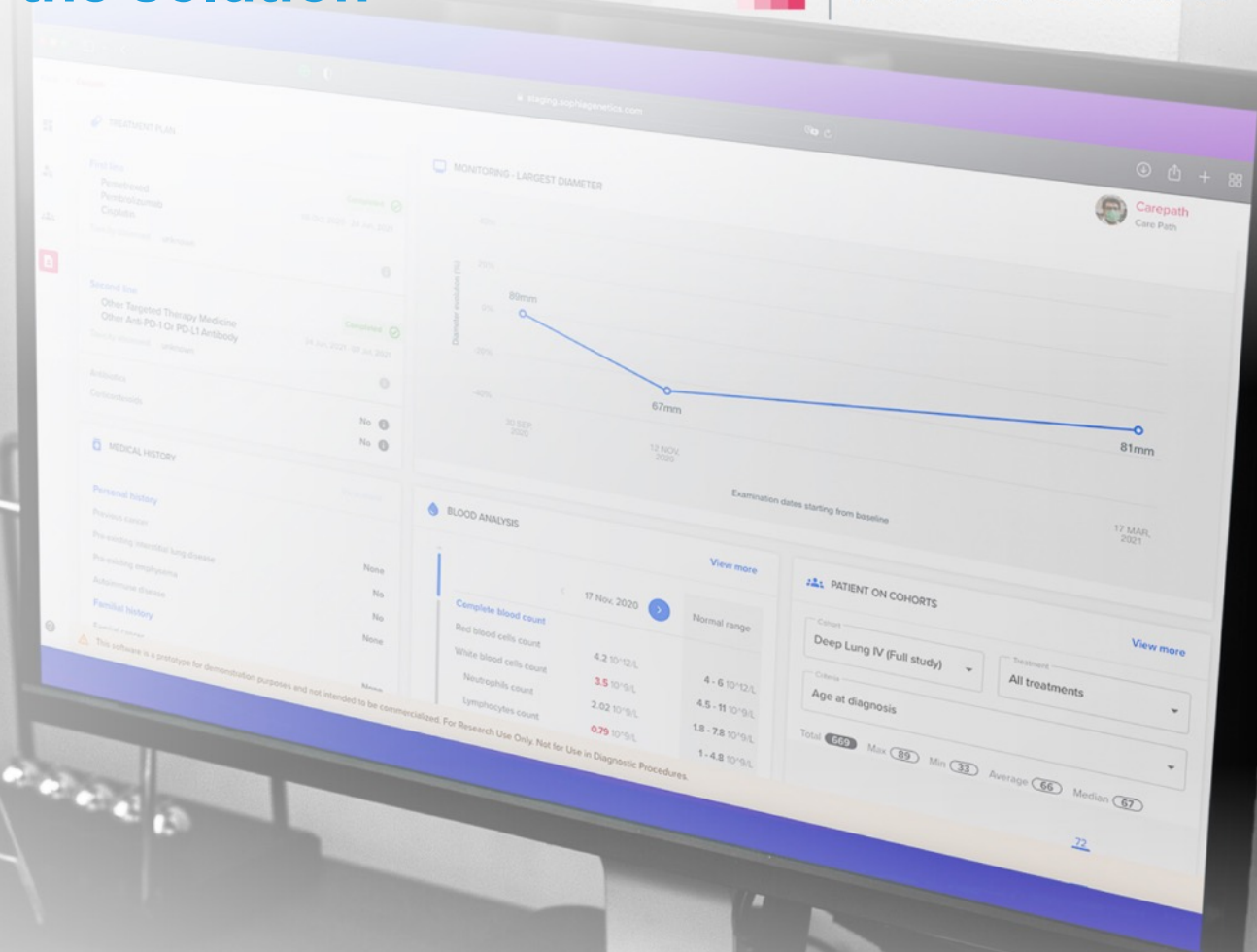


Source: ESMO Guidelines Committee, 2020

# Our SOPHiA DDM platform is part of the solution

## GENERATION #2

- High **accuracy** in picking the signal from the noise
- **Multimodal** and **longitudinal** real-world data
- Global **collective intelligence**

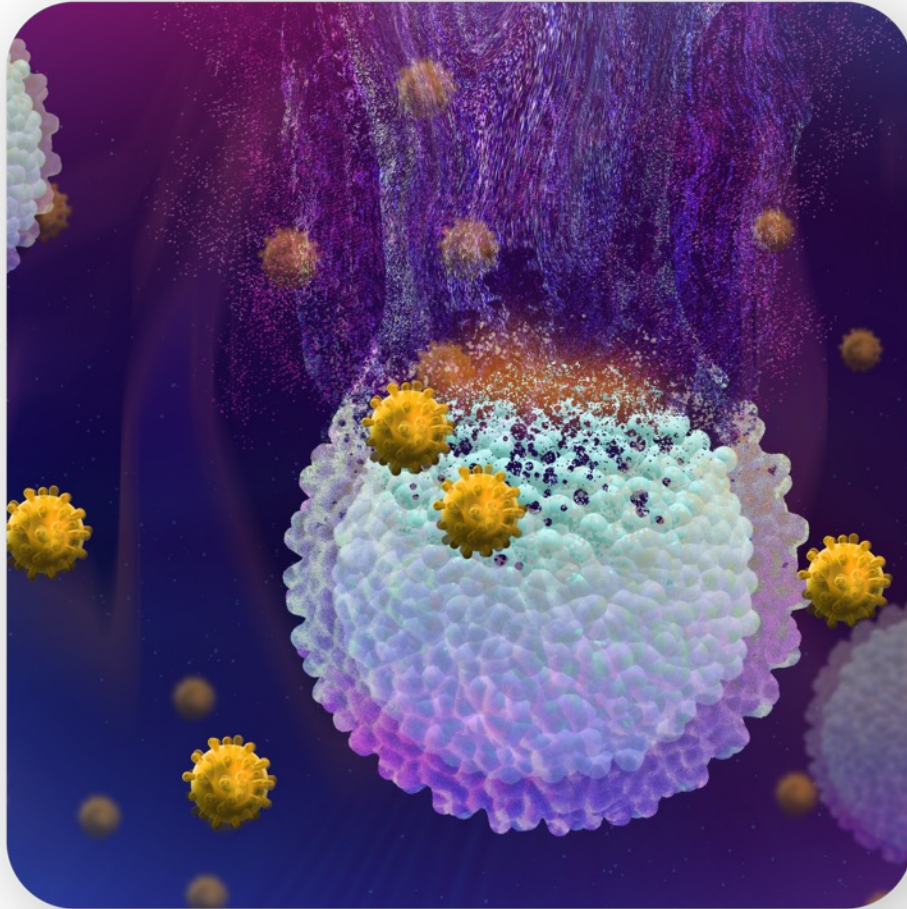


# Unlocking the power of multimodal digital health data sets

Predicting response to immunotherapy in first-line metastatic non-small cell lung cancer



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**Immunotherapy** offering  
**potential for cures**  
in metastatic lung cancer

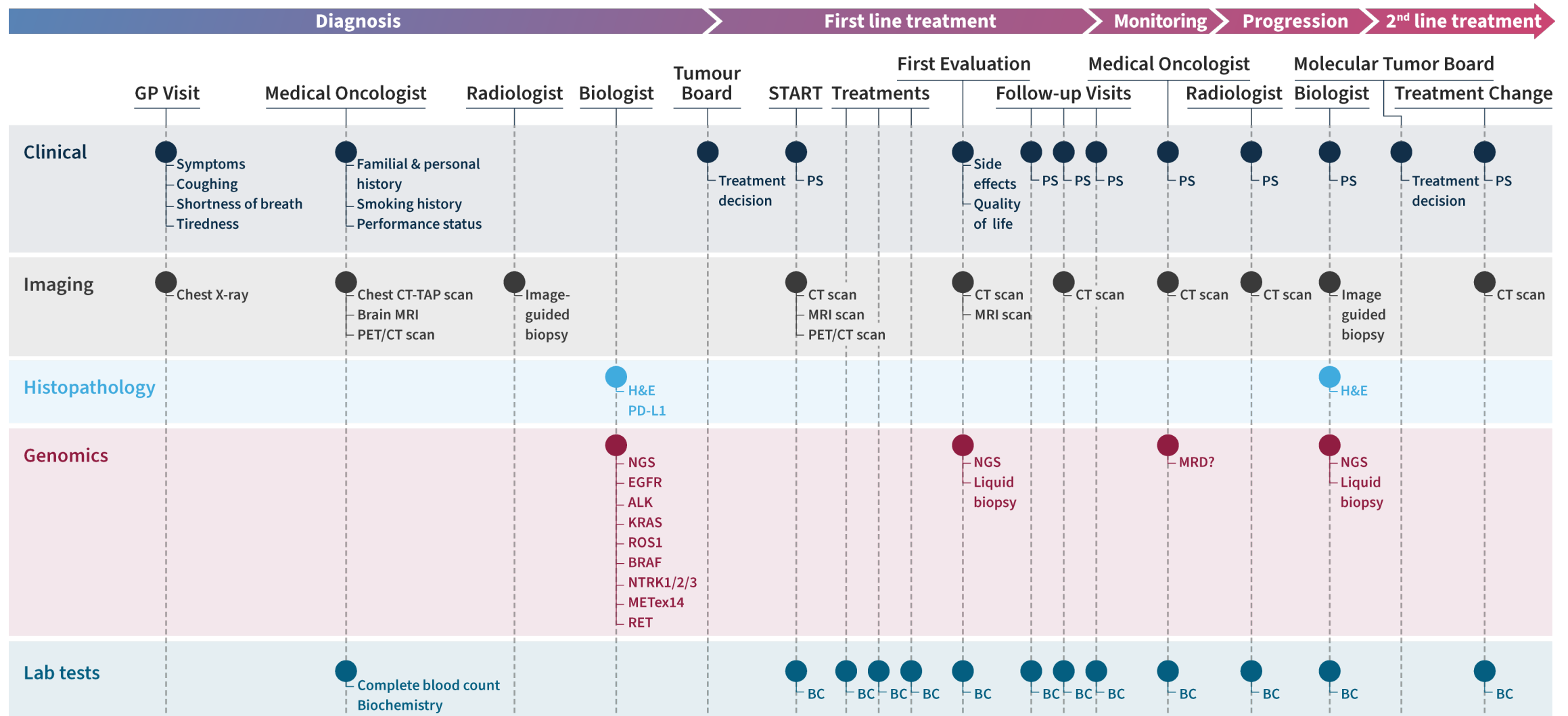


- Majority of non-responders
- Side effects
- Financial toxicity
- Suboptimal biomarkers



- Need for individual-level predictions for patient outcomes
- Multimodality offers a stronger window into biology and disease

# The data we need to enable individualized medicine is everywhere – lung cancer example



BC, blood count; H&E, hematoxylin and eosin; MRD, minimal residual disease; PS, performance status.



# Multimodal approaches have the potential to transform medicine – lung cancer example

## SOPHiA DEEP-LUNG-IV

- **Objective:**  
Predict response to immunotherapy  
leveraging machine learning predictive  
models based on multimodal data
- **Enrolling target:**  
4,000 patients
- **Design:**  
Multicentric, international  
(~30 sites, ~10 countries), observational

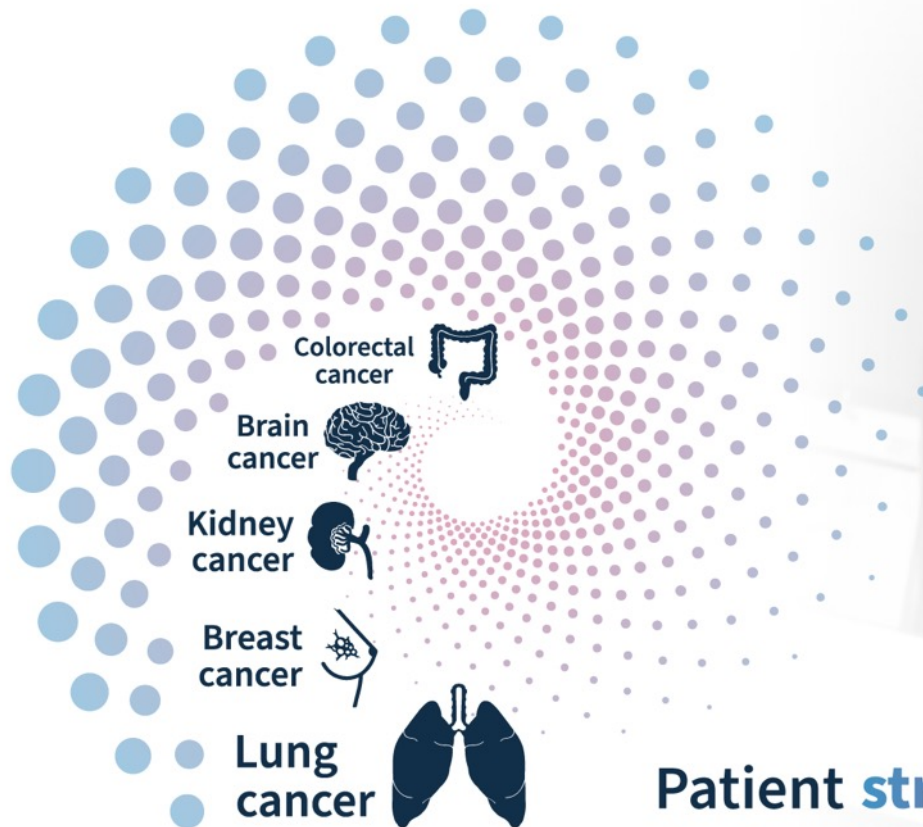
## Multimodal data collection timepoint overview (indicative)

		Baseline	1 <sup>st</sup> evaluation	Progression
Imaging	CT scan	●	●	●
	PET scan, MRI	●	●	●
	Imaging report	●	●	●
Genomics	NGS	●		
Histopathology	PD-L1 immunohistochemistry	●		
	Histopathology	●		
Lab tests (Blood analysis)	Hematology, biochemistry	●	●	●
Clinical data	Demographics, medical history	●		
	Treatment history		Treatment, adverse events, clinical outcomes	

Time →



# A portfolio of multimodal applications will fuel the SOPHiA CarePath module of our platform



Patient **stratification** and **predictive models** to fuel new applications into SOPHiA CarePath module of the platform



# SOPHiA CarePath enables multimodal longitudinal analysis of health data



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## Data Visualization



Longitudinal view across the care journey and across data modalities

## Cohorting



Placing the patient in the context of other similar patients across the network

## Prediction



Predictive analytics modules at an individual level

# SOPHiA CarePath enables multimodal longitudinal analysis of health data



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## Data Visualization



Longitudinal view across the care journey and across data modalities

## Cohorting



Placing the patient in the context of other similar patients across the network

## Prediction



Predictive analytics modules at an individual level





## Key takeaways



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1

**Vision of individualized  
data-driven medicine**

2

**Breaking data silos across  
instruments and institutions**

3

**Building a global multimodal  
collective intelligence**



# Building the platform of the future

**Abhi Verma**

Chief Technology Officer

**Dr. Zhenyu Xu**

Chief Scientific Officer



**Abhi Verma**

Chief Technology Officer



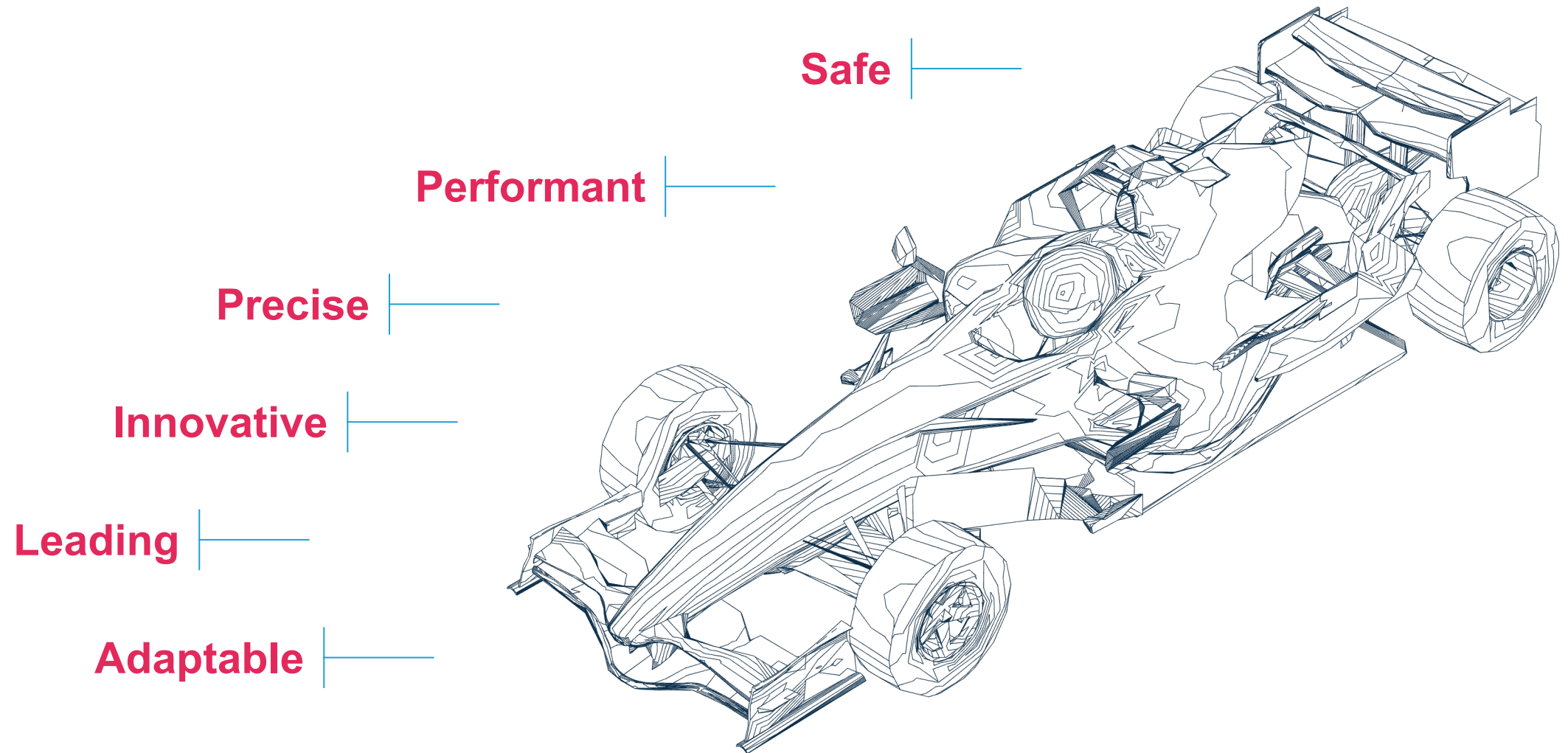
**Dr. Zhenyu Xu**

Chief Scientific Officer

**Our technology platform is the frame...**  
**powered by our data science engine**



**iINVESTORDAY**



# The building blocks integrate to make a state-of-the-art platform

 **kubernetes**

 PostgreSQL

 **DELTA LAKE**

 **kafka**

 GraphQL

 **Azure**

 **databricks**

 TensorFlow

 **Keras**

**UNETR**



# SOPHiA DDM™

**Modular Architecture**

**Real-World, Real-Time  
Insights**

**Knowledge Network**

**Scalable &  
Extensible**

**Cloud Based**

**Semantic  
Technologies**

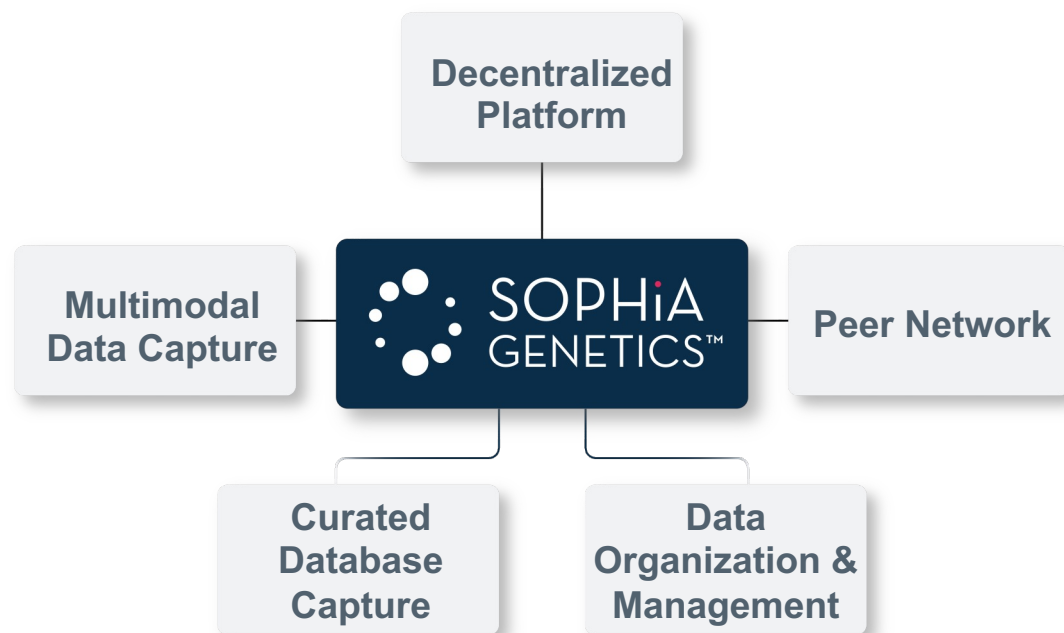
**Federated  
Data Querying**

**CE-IVD,  
GDPR, HIPAA  
compliant**

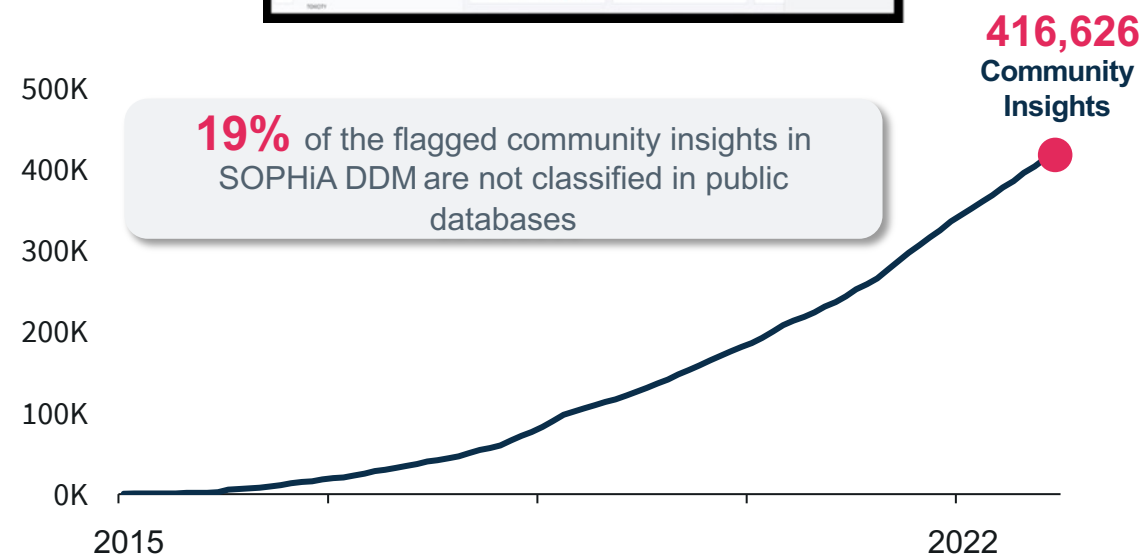
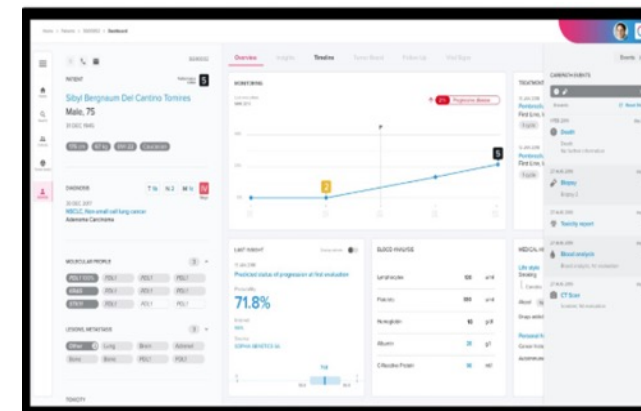
**Embedded Data  
Protection**

# The SOPHiA DDM platform breaks data silos and creates networks

Breaking data silos enables...



Multimodal insights & a collective intelligence



19% of the flagged community insights in SOPHiA DDM are not classified in public databases



# We develop and operate with rapid innovation and continuous improvement



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To address the needs and requirements of a constantly evolving market and regulatory environment

Continuous  
Customer  
Feedback Loop

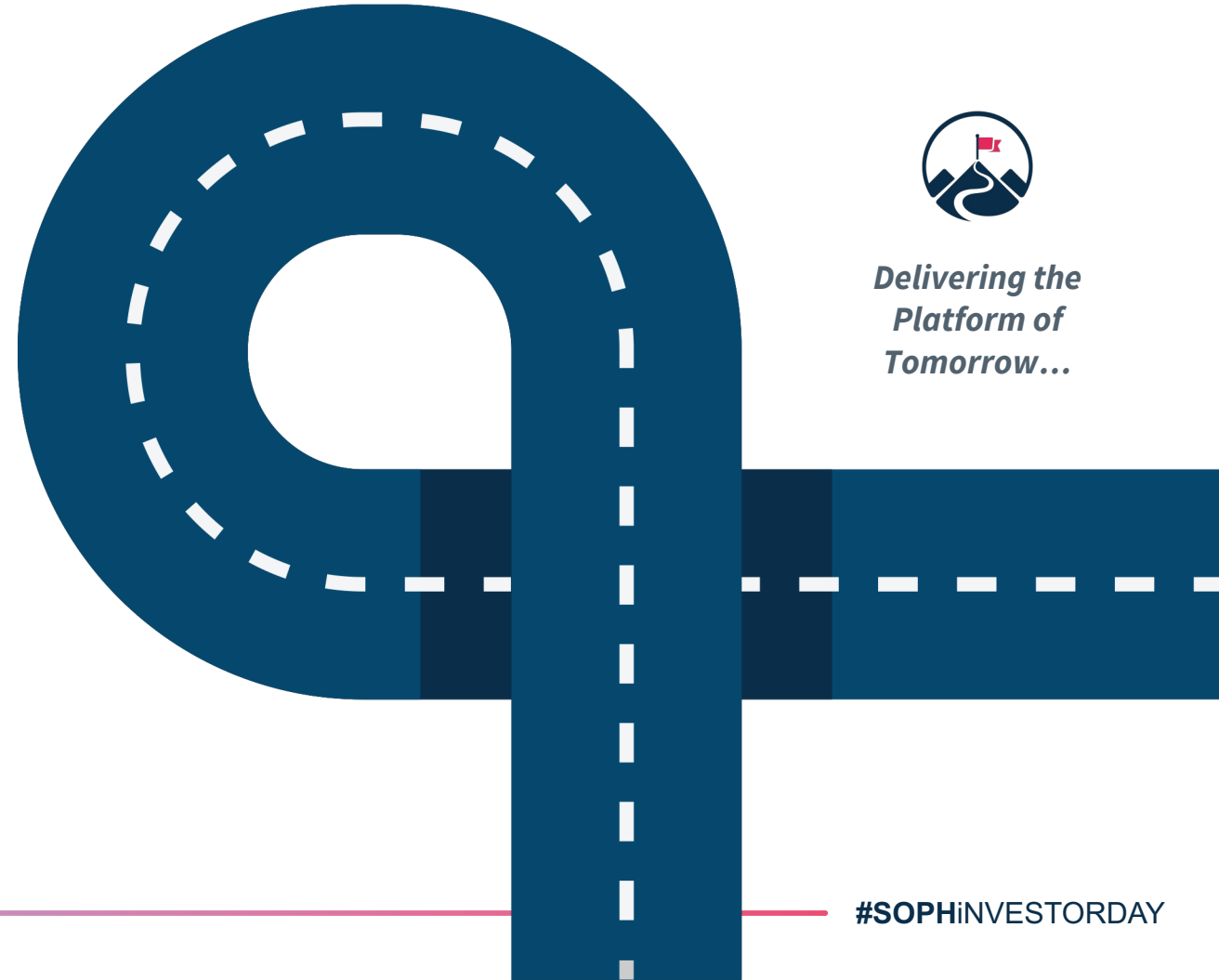
Enhanced Features &  
Analytical  
Functionalities

Minimum Viable  
Product

Highly  
Automated

2 Week  
Release Cycles

Leading DevOps  
Practices



*Delivering the  
Platform of  
Tomorrow...*

#SOPHiINVESTORDAY

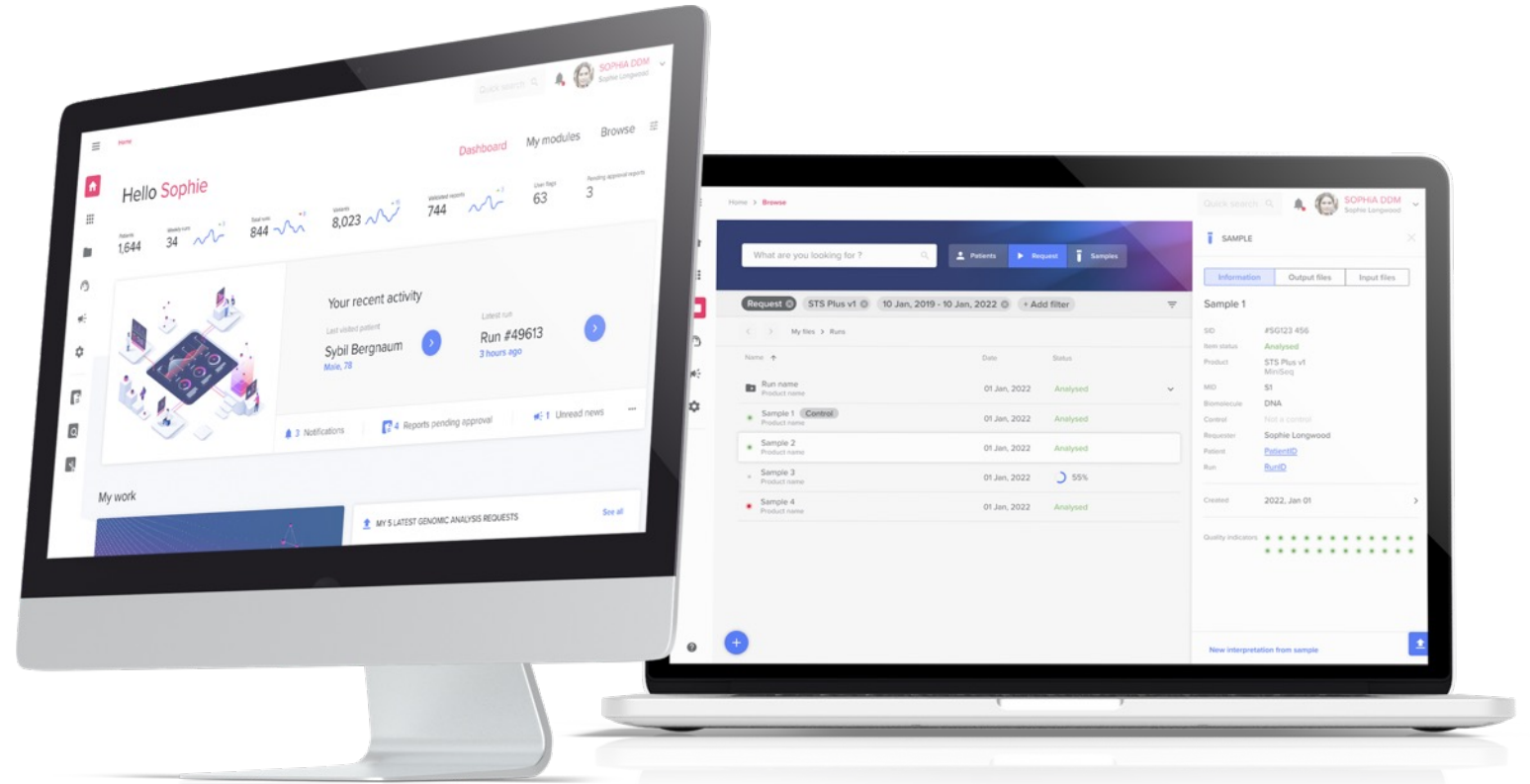
# Customer centric approach remains the heart of our platform

## Easy to Deploy

- Click-and-go installation
- Seamless integration across customer IT environments
- Integrated with customer systems and workflows

## Easy to Use

- Intuitive user interface
- Independent of instruments and chemistries
- Rapid, high quality targeted insights via customized reports

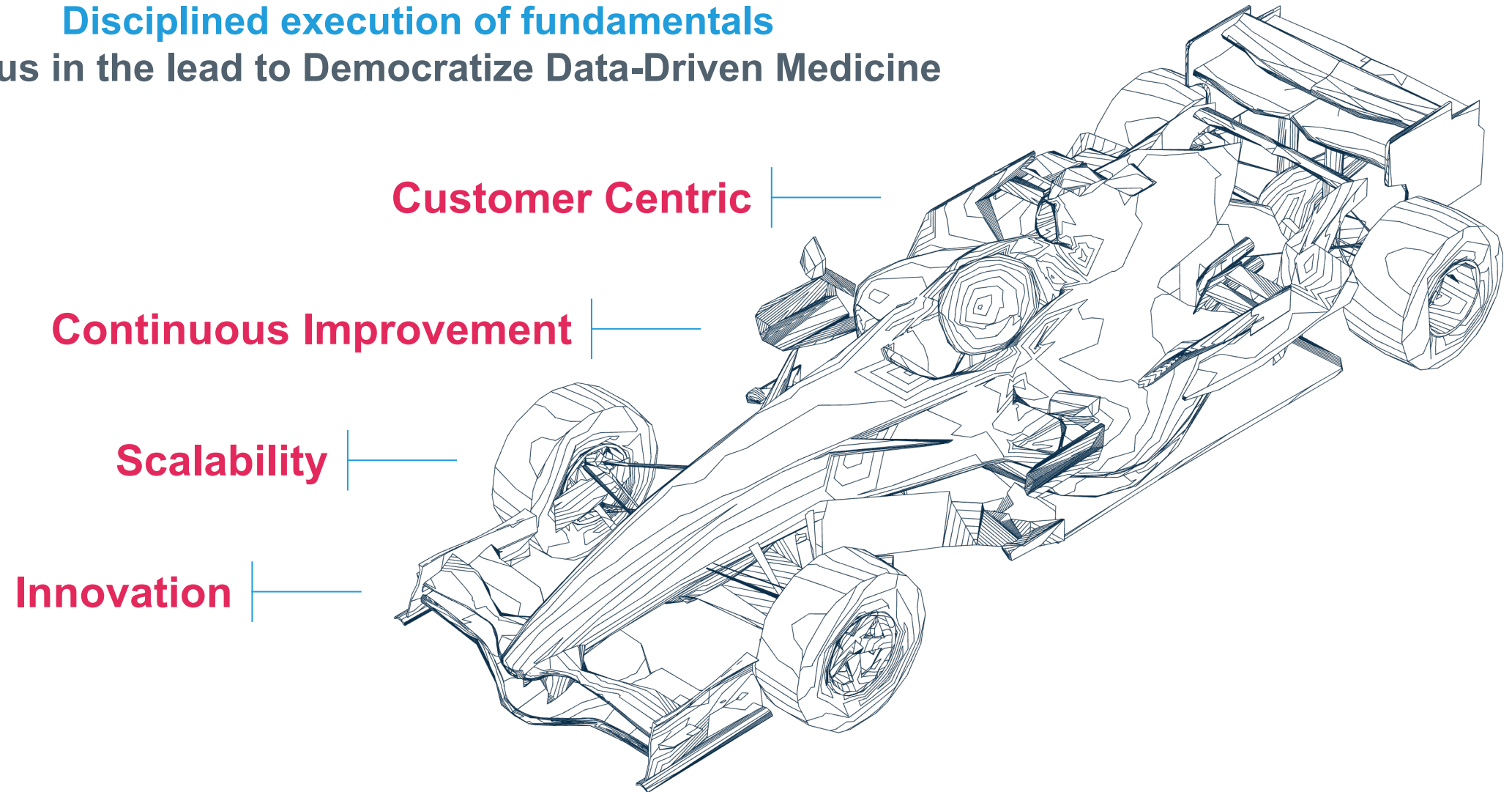


**We are in pole position**



**iINVESTORDAY**

**Disciplined execution of fundamentals**  
keep us in the lead to Democratize Data-Driven Medicine



Science

## Gene Loops Enhance Transcriptional Directionality

SUE MEI TAN-WONG, JUDITH B. ZAUGG, JURGI CAMBLONG, ZHENYU XU, DAVID W. ZHANG, HANNAH E. MISCHO, ASEEM Z. ANSARI, NICHOLAS M. LUSCOMBE,

LARS M. STEINMETZ, AND NICK J. PROUDFOOT [fewer](#) [Authors Info & Affiliations](#)

molecular  
systems  
biology

## Antisense expression increases gene expression variability and locus interdependency

Zhenyu Xu, Wu Wei, Julien Gagneur, Sandra Clauder-Münster, Milosz Smolik, Wolfgang Huber, Lars M Steinmetz

nature

## Bidirectional promoters generate pervasive transcription in yeast

Zhenyu Xu, Wu Wei, Julien Gagneur, Fabiana Perocchi, Sandra Clauder-Münster, Jurgi Camblong, Elisa Guffanti, Françoise Stutz, Wolfgang Huber & Lars M. Steinmetz

## Widespread bidirectional promoters are the major source of cryptic transcripts in yeast

Helen Neil, Christophe Malabat, Yves d'Aubenton-Carafa, Zhenyu Xu, Lars M. Steinmetz & Alain Jacquier

Cell

## Set3 HDAC Mediates Effects of Overlapping Noncoding Transcription on Gene Induction Kinetics

TaeSoo Kim<sup>1</sup>, Zhenyu Xu<sup>2</sup>, Sandra Clauder-Münster<sup>2</sup>, Lars M. Steinmetz<sup>2</sup>, Stephen Buratowski<sup>1,2,3,4</sup>

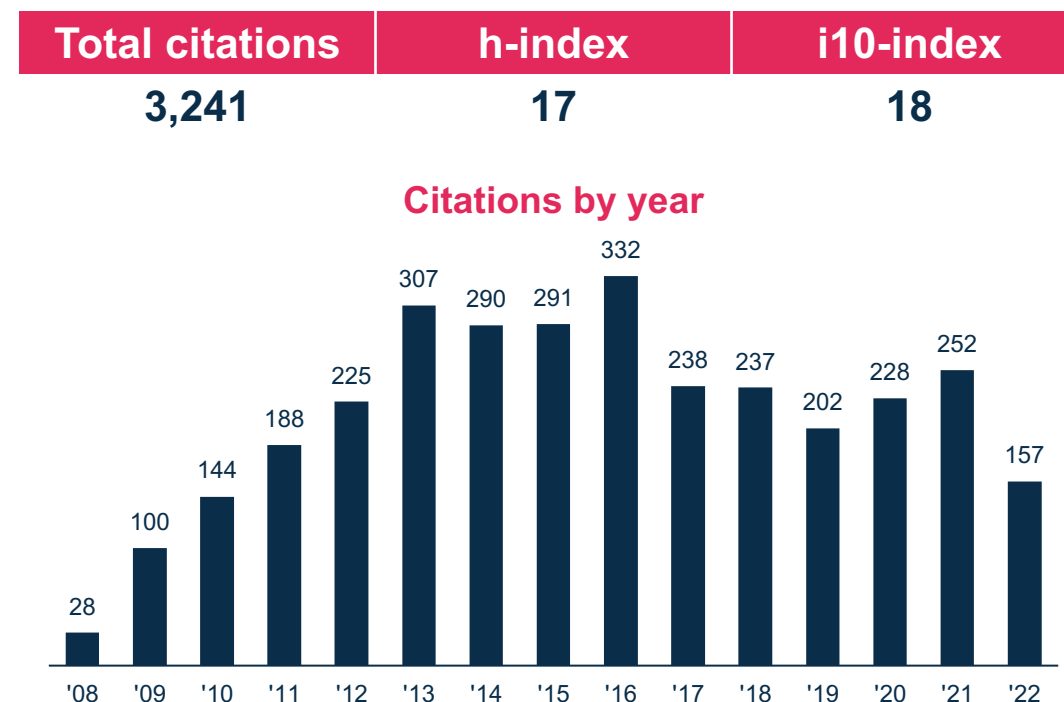
Molecular Cell

## Extensive Degradation of RNA Precursors by the Exosome in Wild-Type Cells

Rajani Karthi Gudipati<sup>1,2</sup>, Zhenyu Xu<sup>2</sup>, Alice Lebraton<sup>1,2,3,4</sup>, Bertrand Séraphin<sup>1</sup>, Lars M. Steinmetz<sup>2</sup>, Alain Jacquier<sup>1,2</sup>, Domenico Libri<sup>1,2,3,4</sup>

## Control of Cdc28 CDK1 by a Stress-Induced lncRNA

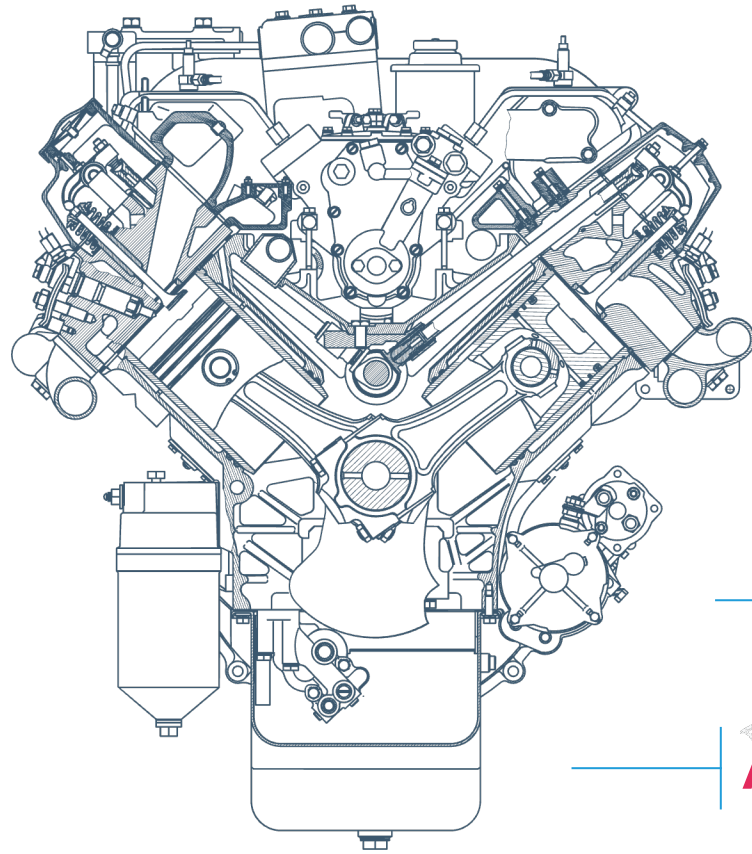
Mariona Nadal-Ribelles<sup>1,2</sup>, Carme Solé<sup>1,2</sup>, Zhenyu Xu<sup>2</sup>, Lars M. Steinmetz<sup>2</sup>, Eulàlia de Nadal<sup>1,2,3,4</sup>, Francesc Posas<sup>1,2,3,4</sup>



# Creating the data science engine of the future



iINVESTORDAY



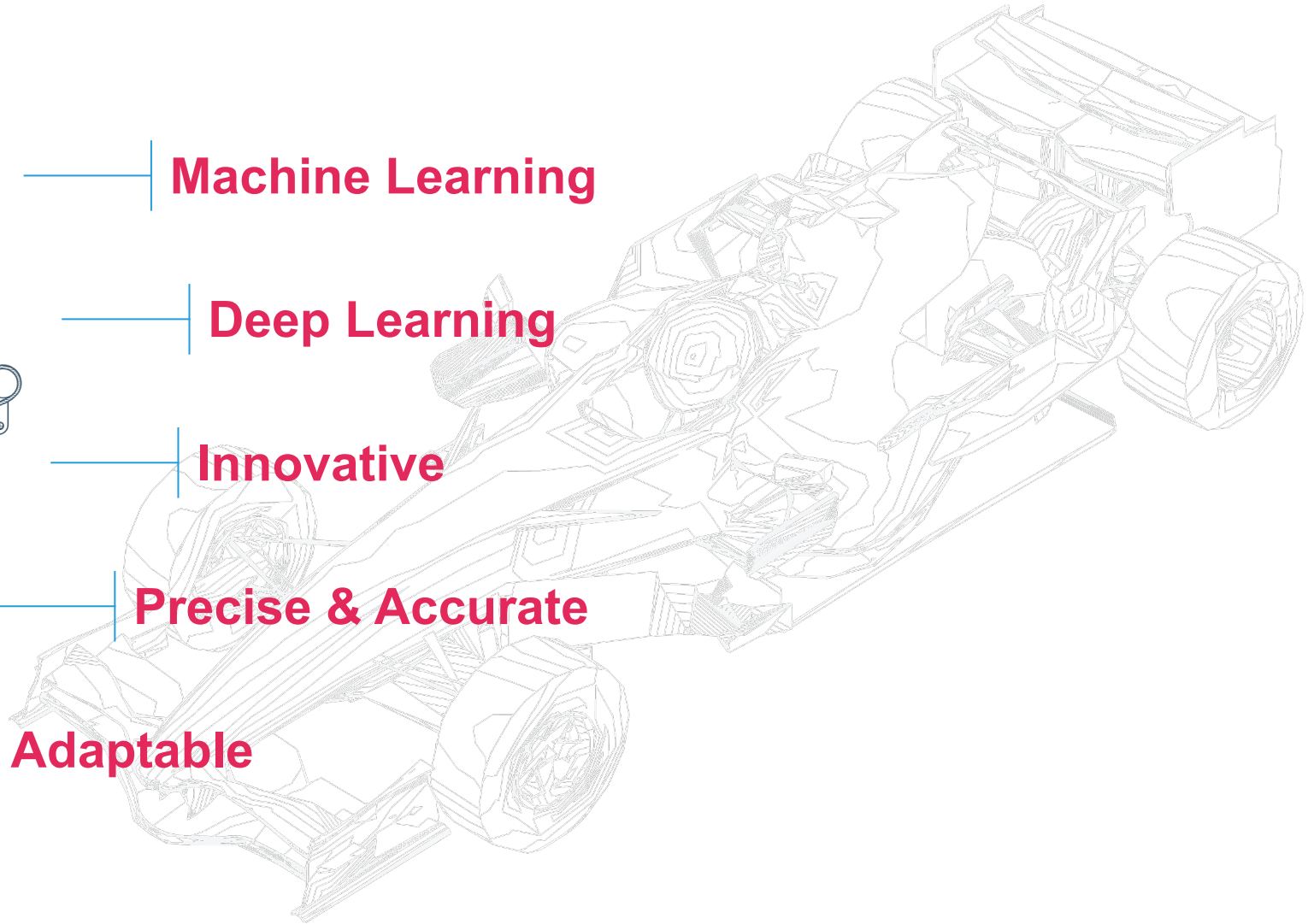
Machine Learning

Deep Learning

Innovative

Precise & Accurate

Adaptable





# Our engine has been field tested

Across hundreds of peer-reviewed applications in multiple fields

~400

As of September 2022



genomics

radiomics

multimodal

133

2021

91

2020

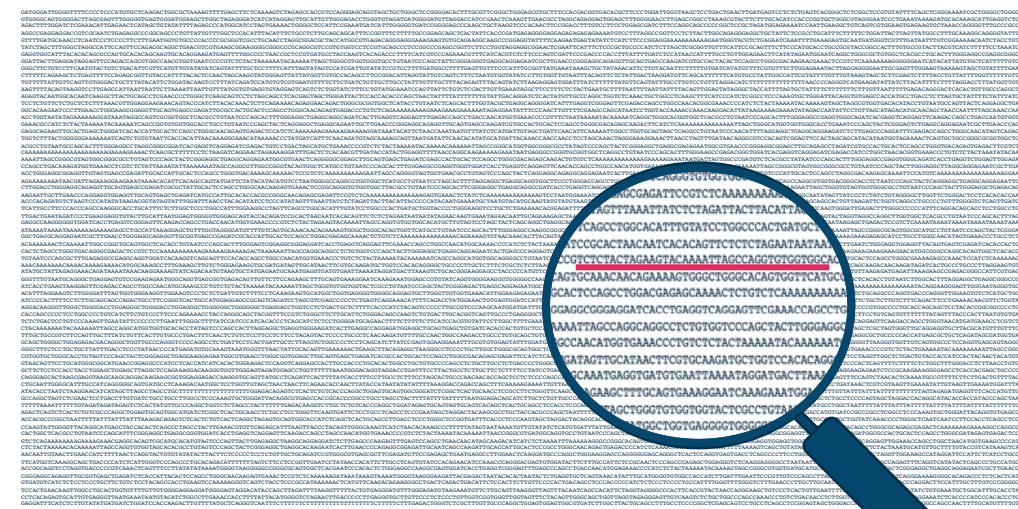
61

2019

28

2018

Many internal and external factors can trigger genetic change eventually leading to cancer



# Challenges in mutation identification

Combination of technical factors are the major sources of assay discordance



Labs



Sample Type



Chemistry



Sequencers



Evaluating the analytical validity of circulating tumor DNA sequencing assays for precision oncology

**JCO<sup>®</sup> Precision Oncology**  
An American Society of Clinical Oncology Journal  
Orthogonal Comparison of Four Plasma NGS Tests With Tumor Suggests Technical Factors are a Major Source of Assay Discordance



[Daniel Stetson](#), MS<sup>1</sup>; [Ambar Ahmed](#), MS<sup>1</sup>; [Xing Xu](#), PhD<sup>2</sup>; [Barrett R.B. Nuttall](#), MS<sup>1</sup>; [Tristan J. Lubinski](#), PhD<sup>1</sup>; [Justin H. Johnson](#)<sup>1</sup>; ...




Comparison of 2 Commercially Available Next-Generation Sequencing Platforms in Oncology

Nicole M. Kuderer, MD<sup>1,2</sup>; Kimberly A. Burton, PhD<sup>1,2</sup>; Sibel Blau, MD<sup>2,3</sup>; et al

[➤ Author Affiliations](#) | [Article Information](#)

JAMA Oncol. 2017;3(7):996-998. doi:10.1001/jamaoncol.2016.4983

False-negative errors in next-generation sequencing contribute substantially to inconsistency of mutation databases

Young-Ho Kim, Yura Song, Jong-Kwang Kim, Tae-Min Kim, Hye Won Sim, Hyung-Lae Kim, Hyonchol Jang, Young-Woo Kim, Kyeong-Man Hong 

Published: September 12, 2019 • <https://doi.org/10.1371/journal.pone.0222535>

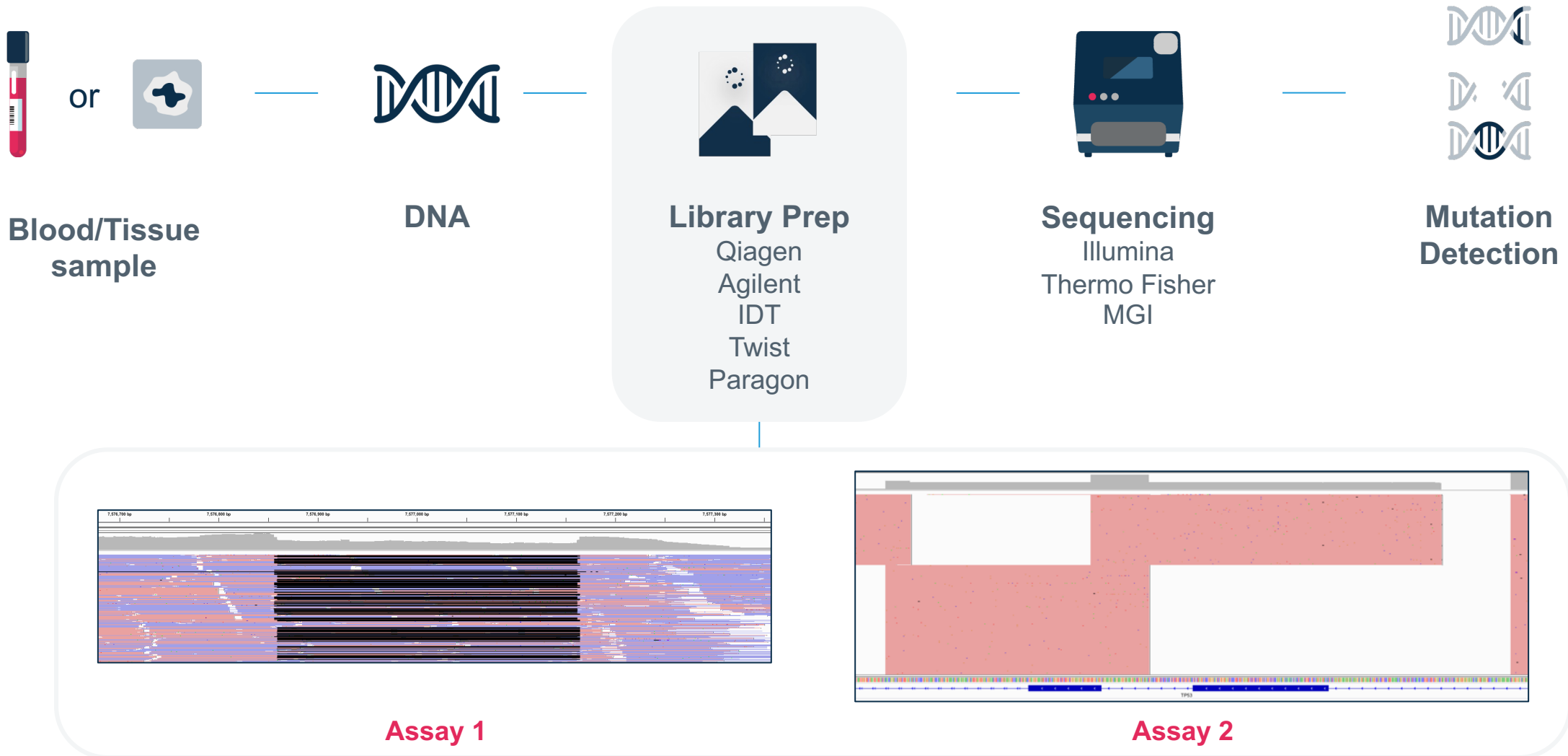
“Missed mutations (false negatives) were more common than erroneous candidates (false positives)...indicating that the reliable sampling of rare ctDNA fragments is the key challenge for ctDNA assays”

# Challenges in mutation identification

Diversity of library prep is needed to address different applications but causes workflow challenges

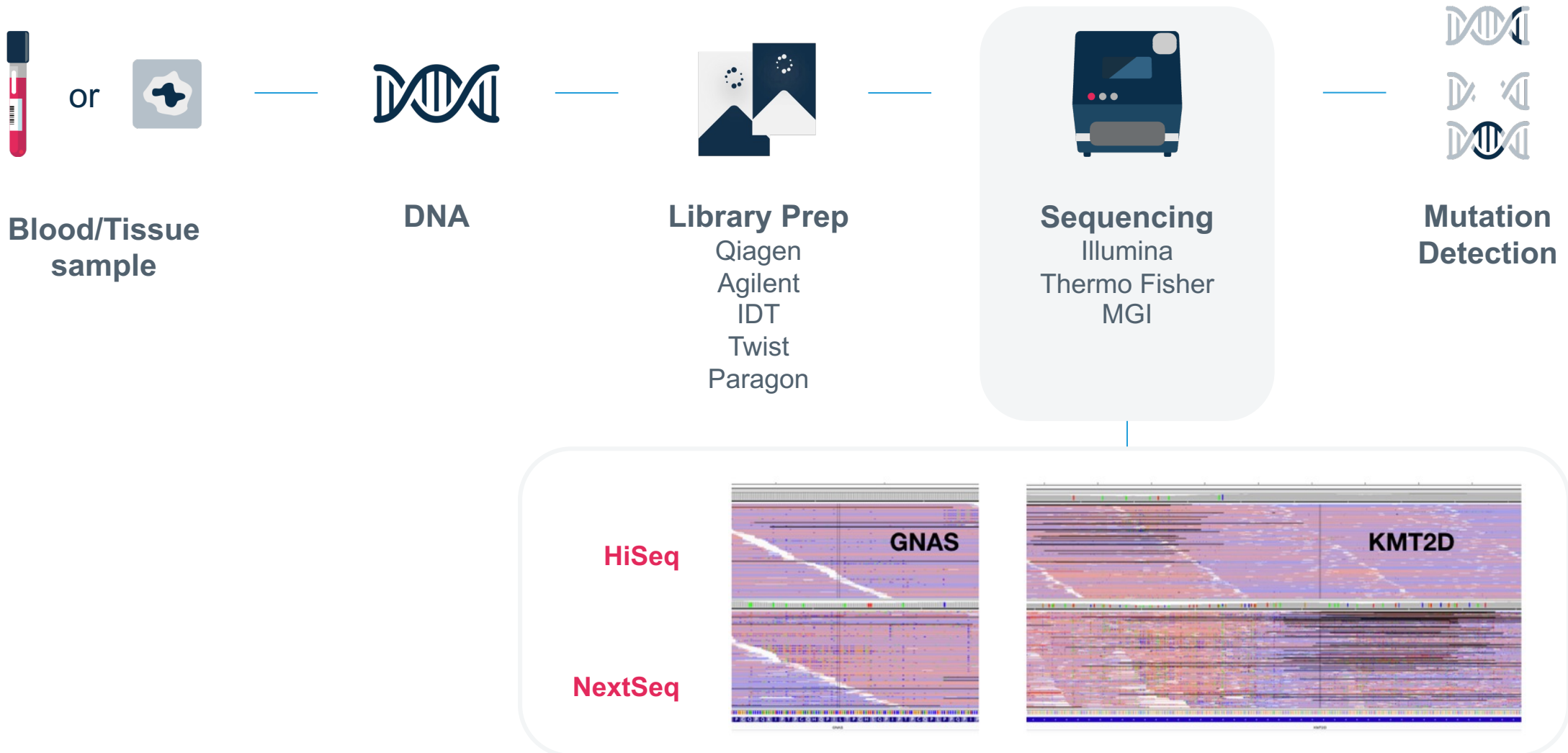


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# Challenges in mutation identification

Different sequencers also generate variations in results

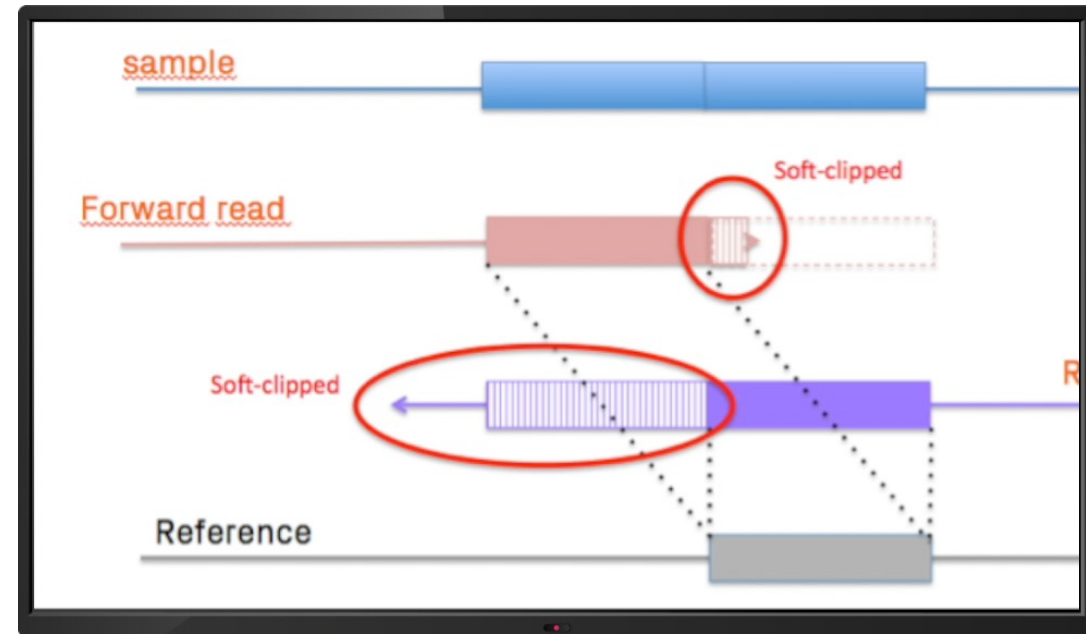




# Solving the complexity of heterogenous workflows

There is a need for a platform that can harmonize the heterogeneity of workflows

Relevant gene change      Relevant gene change  
Relevant gene change      In/origin/gene change  
Relevant gene change      Relevant gene changes  
Relevant gene change      Relevant gene change  
Relevant gene change      Relevant gene change  
Relevant gene change      Relevant gene change



Deep Learning

Lab Components,  
e.g. Polymerase

Enrichment  
Methods

Targeted  
Genes / Regions

Sequencing  
Technologies

# SOPHiA DDM – Our Versatile Platform

Our innovative technologies help enable such harmonization



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	Library Prep	Disease Area	Sequencer	Application
Lab 1	Qiagen Agilent	Germline / Hereditary Cancer Germline / Rare Disease	Illumina	BRCA1 c.874del SLC2A c.696_697insAT
Lab 2	Thermo Fisher	Somatic / Solid Tumor	Thermo Fisher	EGFR+
Lab 3	IDT Illumina Invitae	Germline / Hereditary Cancer Somatic / Myeloid Disease Somatic / Fusion	Illumina	Boland Inversion FLT3 ITD ALK+
Lab 4	Paragon	Germline / Hereditary Cancer	MGI	BRCA1 exon 1-2 dup m.16189T>C
Lab 5		Germline / Rare Disease		No NGS Capacity

## SOPHiA GENETICS™



**Accurate SNP and INDEL Detection**  
Secondary Analysis

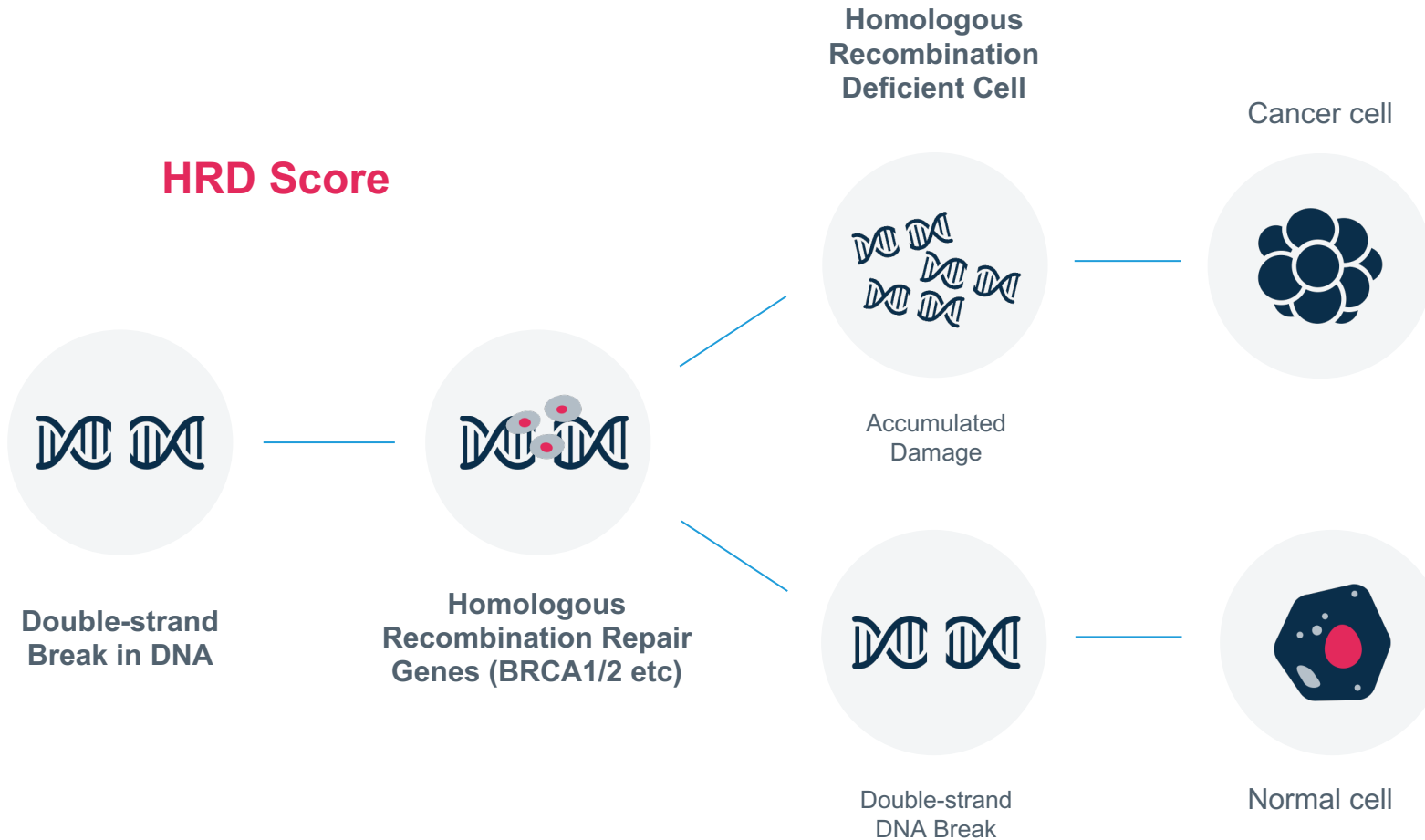


**Superior CNV Resolution**  
Secondary Analysis

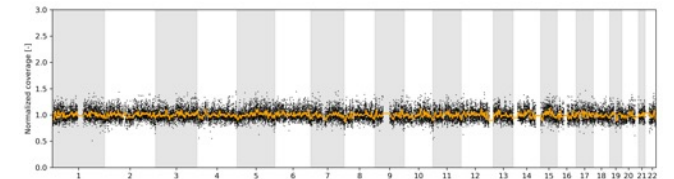
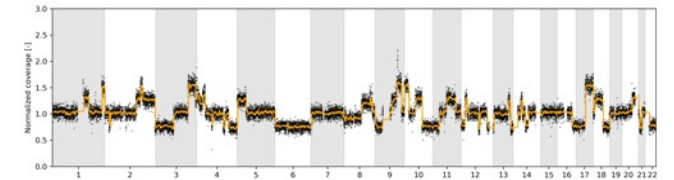


**Advanced Variant Annotation**  
Tertiary Analysis

# Leveraging our platform to inform PARP1 inhibition

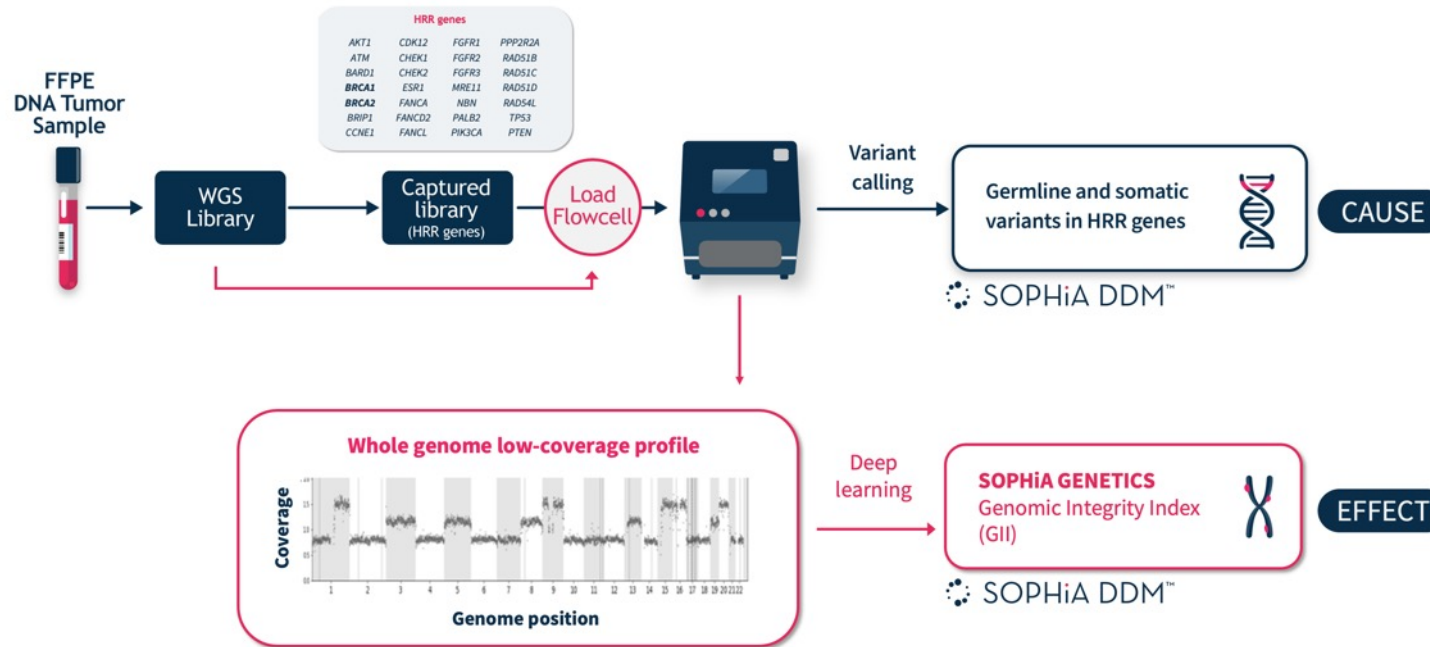


**HRD+ and eligible for PARP inhibitor treatment**

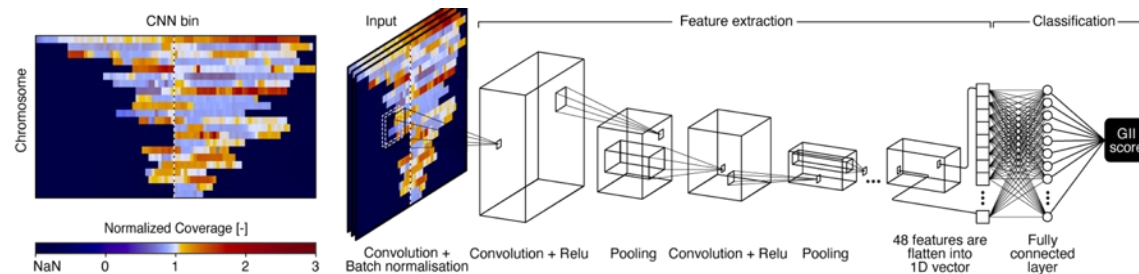


# SOPHiA DDM Dx HRD Solution

Creating a harmonized, highly accurate and precise technology



**~1 year to  
develop and deploy**



**Excellent  
concordance with  
reference method**

**Consistency across  
genomic workflows**

**Consistency  
across  
laboratories**

**Excellent concordance with  
reference method in a decentralized way**

Performance metric	Value (95% CI interval)
Overall percent agreement (OPA)	<b>93.7%</b> (91.0%, 95.6%)
Negative percent agreement (NPA)	<b>96.4%</b> (93.1%, 98.2%)
Positive percent agreement (PPA)	<b>90.8%</b> (86.2%, 94.0%)
Overall rejection rate	<b>4.9%</b>
Relative rejection rate	<b>1.9%</b>
<b>Equal performance to a centralized method</b>	



# SOPHiA DDM Dx HRD Solution

Creating a harmonized, highly accurate and precise technology

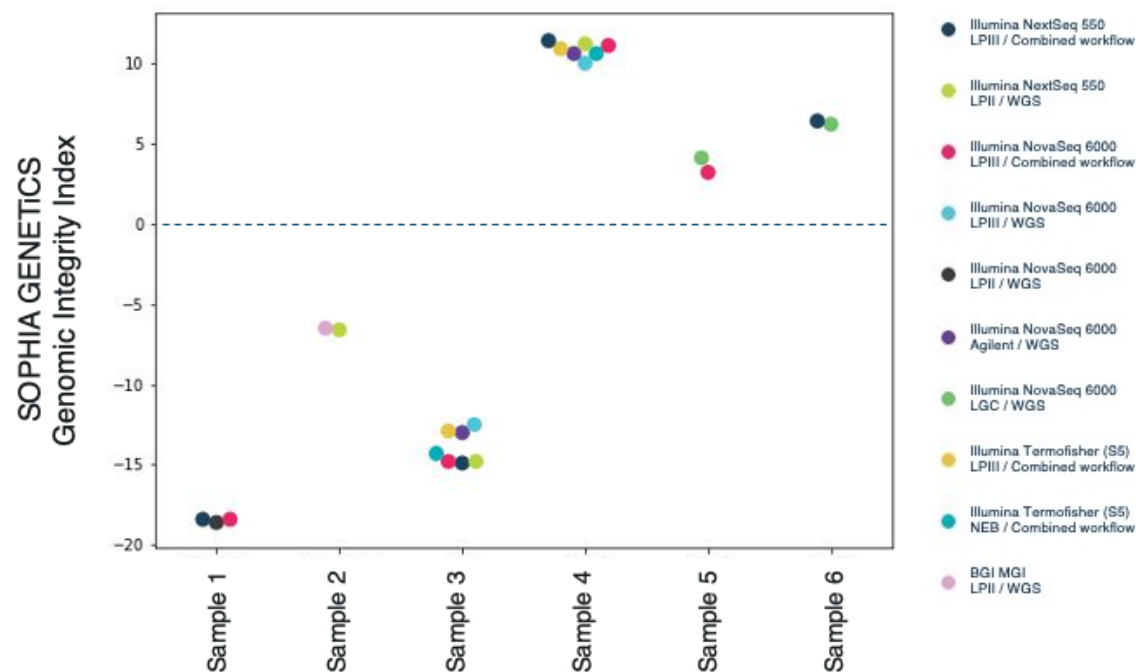
Excellent  
concordance with  
reference method

Consistency across  
genomic workflows

Consistency  
across  
laboratories



## Consistency across different genomic workflows



# SOPHiA DDM Dx HRD Solution

Creating a harmonized, highly accurate and precise technology

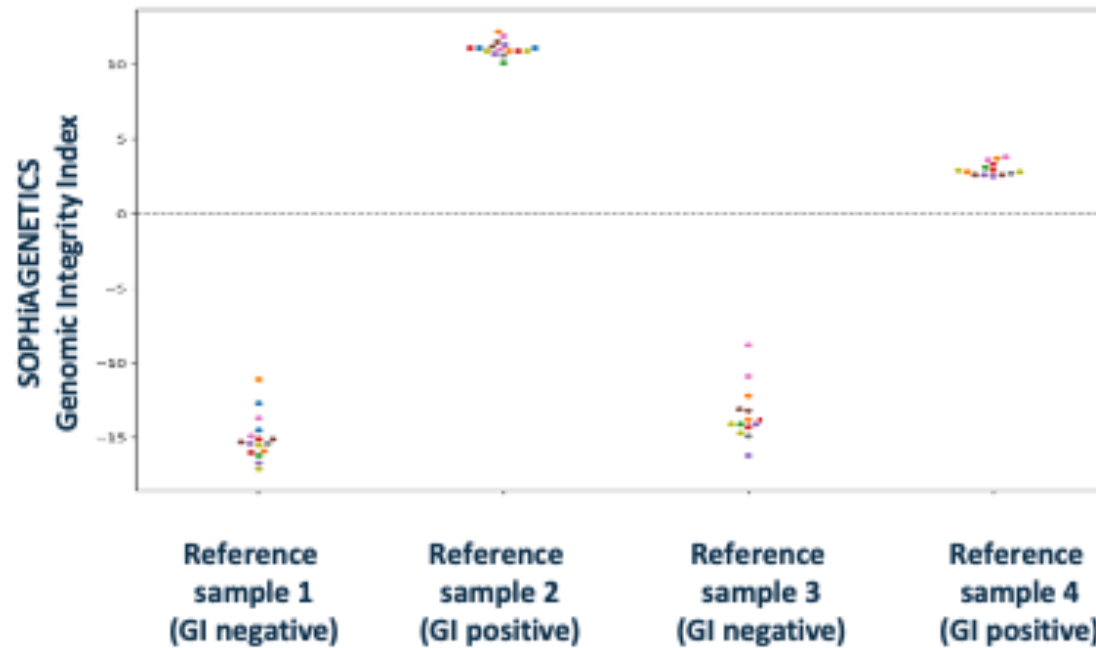
Excellent  
concordance with  
reference method

Consistency across  
genomic workflows

Consistency  
across  
laboratories



Consistency across 9  
different laboratories



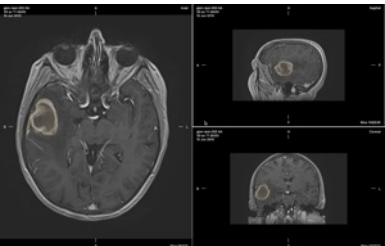
# Applying our technologies and expertise to other data modalities

Leveraging our deep genomics expertise to **harmonize radiomics**

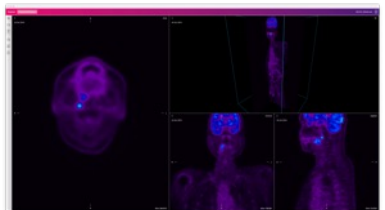
## 3D tumor segmentation



CT – Lung Cancer

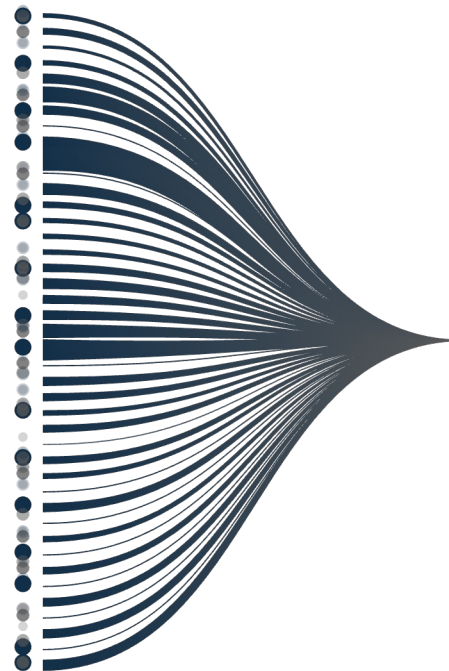


MRI – Brain Cancer

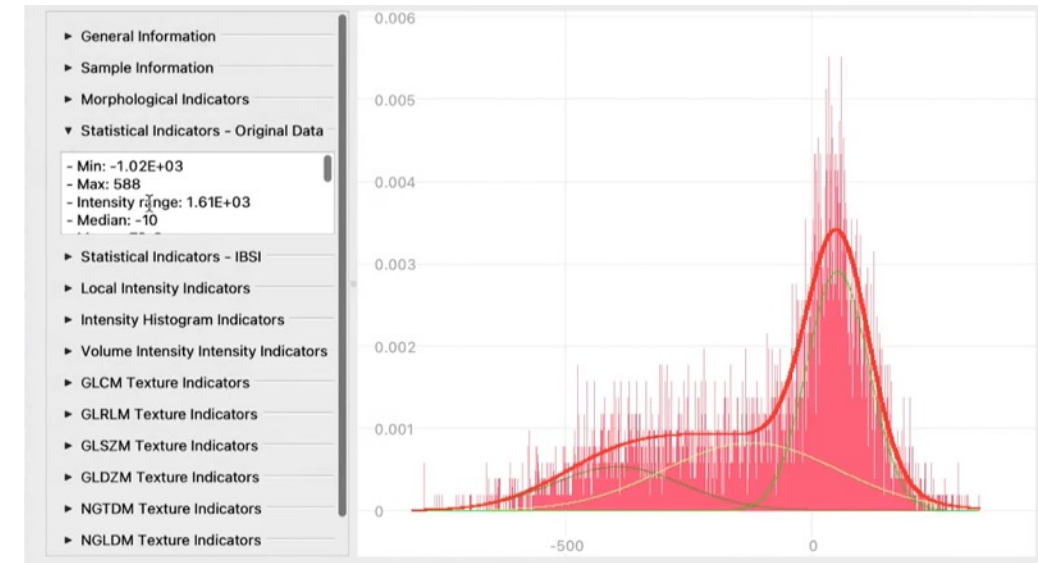


PET – Head and Neck Cancer

## Data standardization and pre-processing

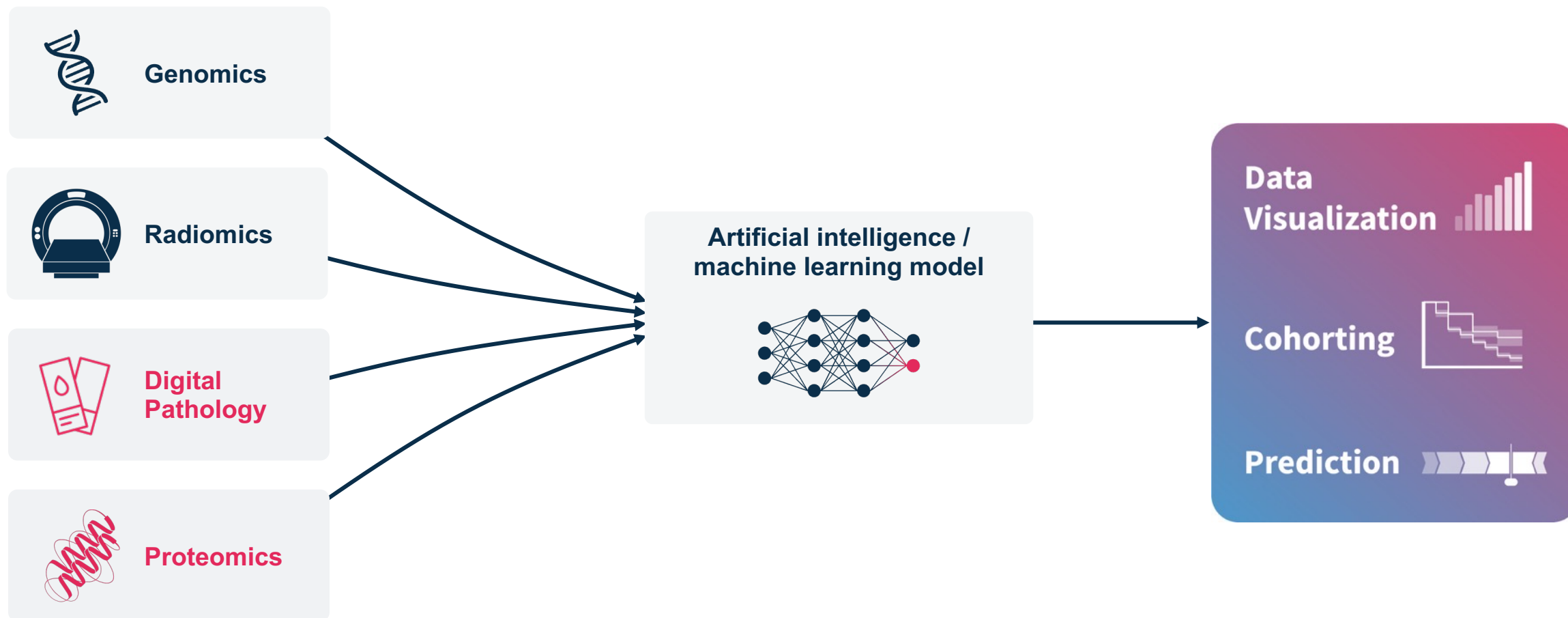


## Radiomics features extraction (200+)



# Unlocking the potential of multimodal health data

Expanding our reach to other modalities will help **further amplify our platform's capabilities**





# Key takeaways

We are the platform of the future



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1

Unmatched platform  
fundamentals

2

Unique algorithmic capabilities

3

Potential to evolve & expand





# Delivering value creation via sustainable growth

**Ross Muken**

Chief Financial Officer



EVERCORE

 Click  
Therapeutics

BANK OF AMERICA 

Deutsche Bank 

**Ross Muken**

Chief Financial Officer

# SOPHiA's platform strategy is resonating with customers



iINVESTORDAY

**750+**

Total customers <sup>(1)(2)</sup>

**380+**

Recurring platform customers <sup>(1)(3)</sup>

**5,000+**

Users across network <sup>(4)</sup>

**~260,000**

Genomic profiles analyzed over last 12 months <sup>(1)</sup>

**\$47.0 – \$49.5M**

2022 revenue guidance <sup>(5)</sup>

**30% – 35%**

'21 - '22 constant currency core revenue growth <sup>(5)</sup>

**64% | 66%**

1H 2022 IFRS gross margin | adjusted gross margin <sup>(1)(6)</sup>

**\$215M+**

Cash, cash equivalents, & term deposits <sup>(1)</sup>

#SOPHiINVESTORDAY

**FN 1:** Represents statistic as of 06/30/2022. **FN 2:** Please refer to appendix for customer disclosure. **FN 3:** Please refer to appendix for recurring platform customer disclosure. **FN 4:** Represents statistic for DDM & Alamut users as of 06/30/2022. **FN 5:** Represents financial outlook as of 06/30/2022. This presentation does not represent an update or affirmation of previously disclosed guidance. **FN 6:** Please refer to appendix for IFRS to adjusted gross margin reconciliation.

# SOPHiA's platform strategy is resonating with customers



iINVESTORDAY

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#SOPHiINVESTORDAY

**FN 1:** Represents statistic as of 06/30/2022. **FN 2:** Please refer to appendix for customer disclosure. **FN 3:** Please refer to appendix for recurring platform customer disclosure. **FN 4:** Represents statistic for DDM & Alamut users as of 06/30/2022. **FN 5:** Represents financial outlook as of 06/30/2022. This presentation does not represent an update or affirmation of previously disclosed guidance. **FN 6:** Please refer to appendix for IFRS to adjusted gross margin reconciliation.

# Our key software KPIs remain exceptional



30+

## New Logos

1H 2022 New recurring platform customers

- Evidence of success in the **land** portion of our growth strategy
- **Strong new customer growth** – Showcases our ability to **continue penetrating** our large addressable market



\$91K+

## ARPU

Average revenue per platform customer <sup>(1)</sup>

- Evidence of success in the **expand** portion of our growth strategy
- **Consistent** growth historically – Mix of same-store analysis / patient **volume growth** and **menu expansion**



120%+

## NDR

Net dollar retention <sup>(2)</sup>

- Evidence of success in the **expand** portion of our growth strategy
- **Top tier performance** – Proxy for **organic** customer growth less **churn** (supports high revenue **visibility**)



3.1x

## LTV / CAC

Lifetime value / customer acquisition cost <sup>(3)</sup>

- Evidence of success in the **efficiency** of our commercial efforts and ability to create **value via Land and Expand**
- **Strong** performance – Demonstrates ability to **cost effectively acquire** new logos, grow and retain them



\$85M+

## RPO

Remaining performance obligation <sup>(4)</sup>

- Evidence of **visibility** and **predictability** into future revenue performance (backlog coverage)
- Superior visibility – Majority of forward revenue derived from **existing consumption** + upcoming expansion / implementations



## 1. Fueling our growth engine

### New product launches

- CarePath
- HRD

### Tier-1 partnerships

- Memorial Sloan Kettering
- Launch of GE Healthcare

### BioPharma traction

- Boundless Bio
- AstraZeneca

### Geographic penetration

- Significant new wins in APAC & LATAM
- Continued central lab momentum in US

### Enhancing customer journey

- Repositioning sales force
- Enhanced focus on upselling / cross selling

## 2. Driving sustainability

### Enhancing FTE productivity

- Consistent focus on process improvement
- Proper utilization of automation / systems
- Key KPI: Revenue per FTE

### Gross margin efficiencies

- Cloud compute / storage optimization effort
- Leverage existing customer service organization
- Key KPI: Gross margin

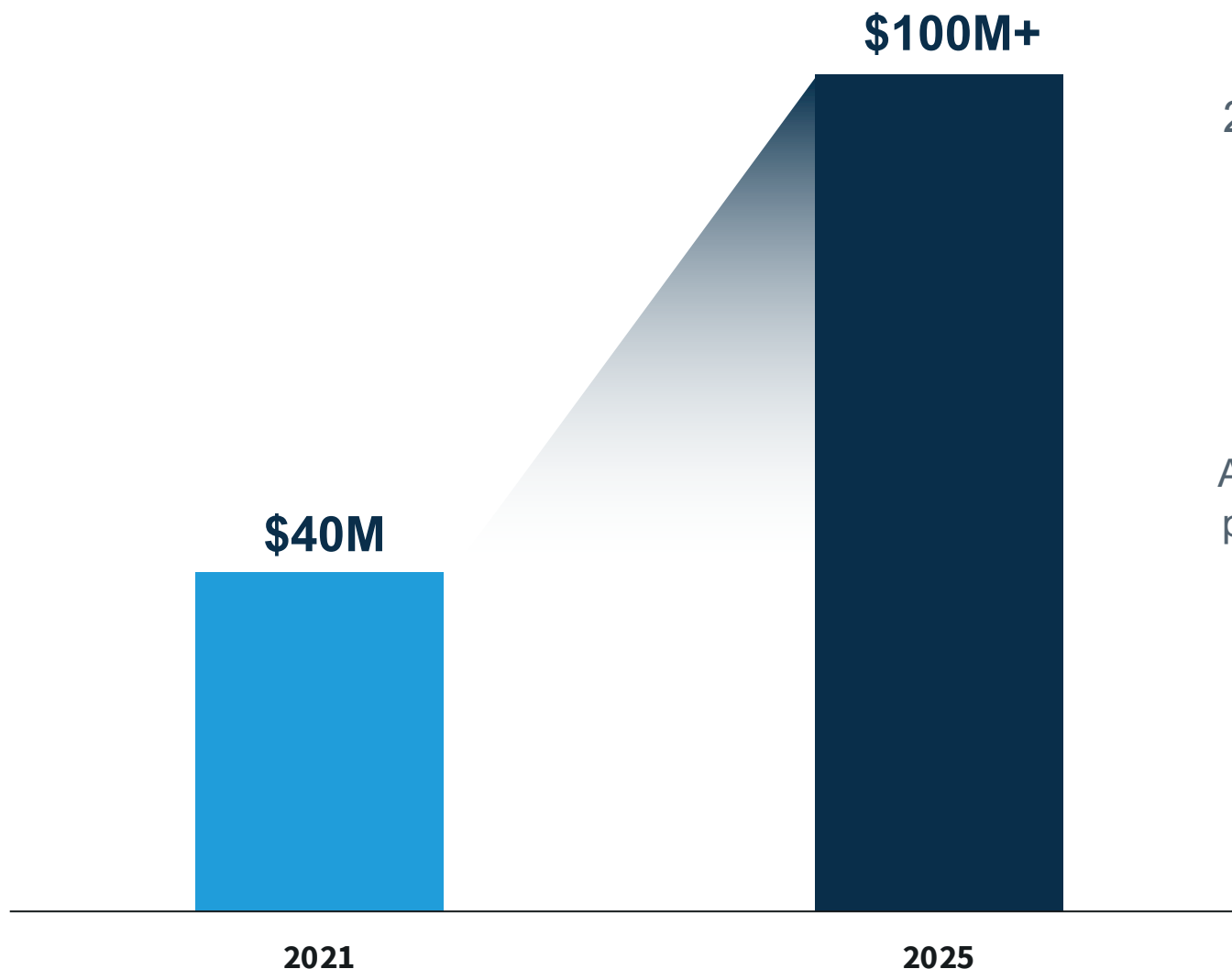
### Optimizing R&D and commercial investments

- NORAM / Pharma salesforce now complete
- Product roadmap narrowed to high impact launches
- Key KPI: OpEx growth vs. revenue

### OpEx efficiencies

- Public company cost normalization
- Leverage quality and regulatory investments
- Key KPI: Fixed cost leverage (operating loss)

# The path to \$100M+ in revenue by 2025



**30% - 35%**

2021 – 2025 constant currency growth p.a.

**~500K**

Annual genomic  
profile analyses

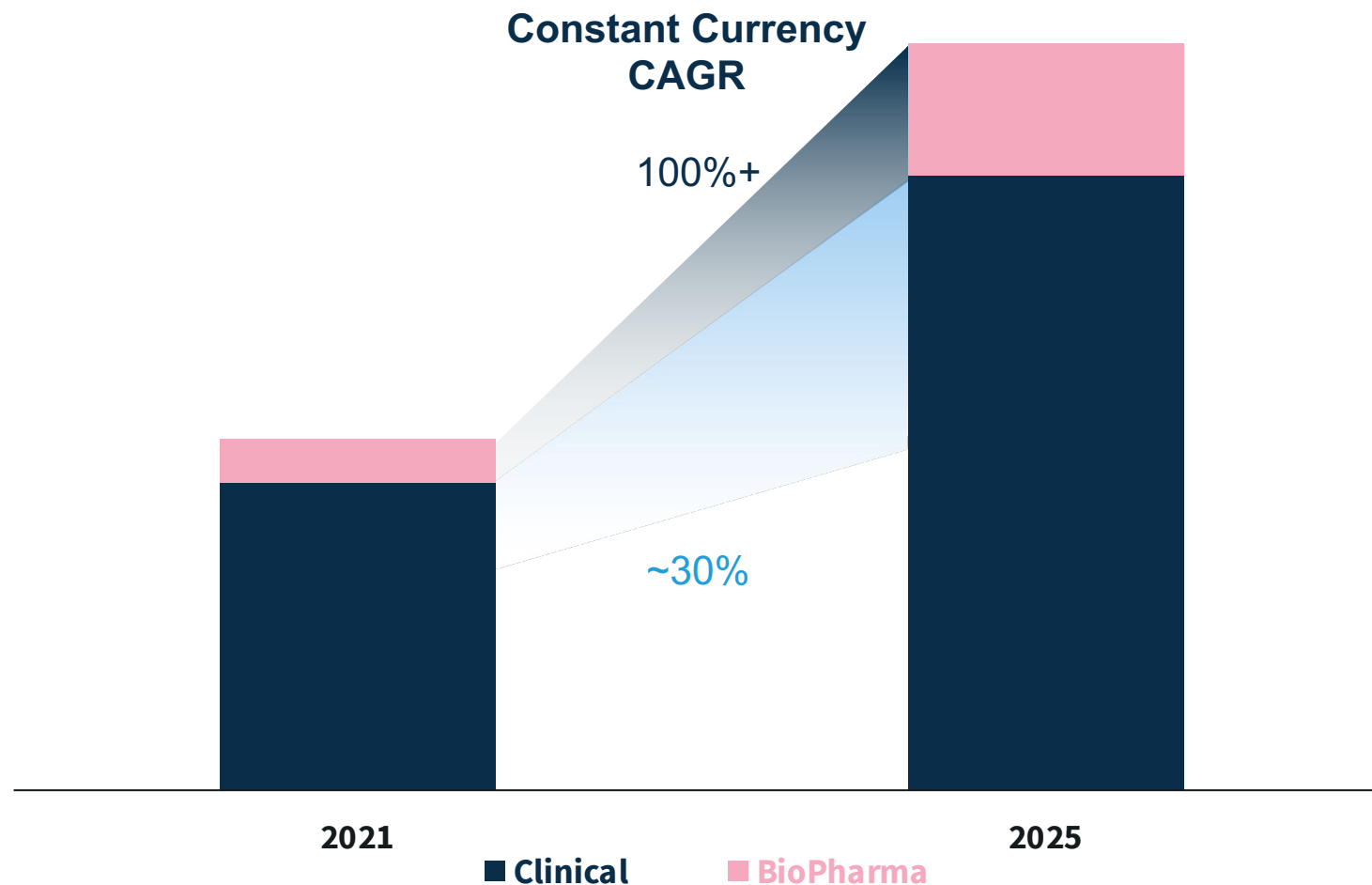
**CarePath / MSK**

BioPharma acceleration

**U.S. Central Labs / HRD / MSK**

Clinical strength

# Flywheel effect to boost biopharma contribution



**10% - 20%**  
of revenue base

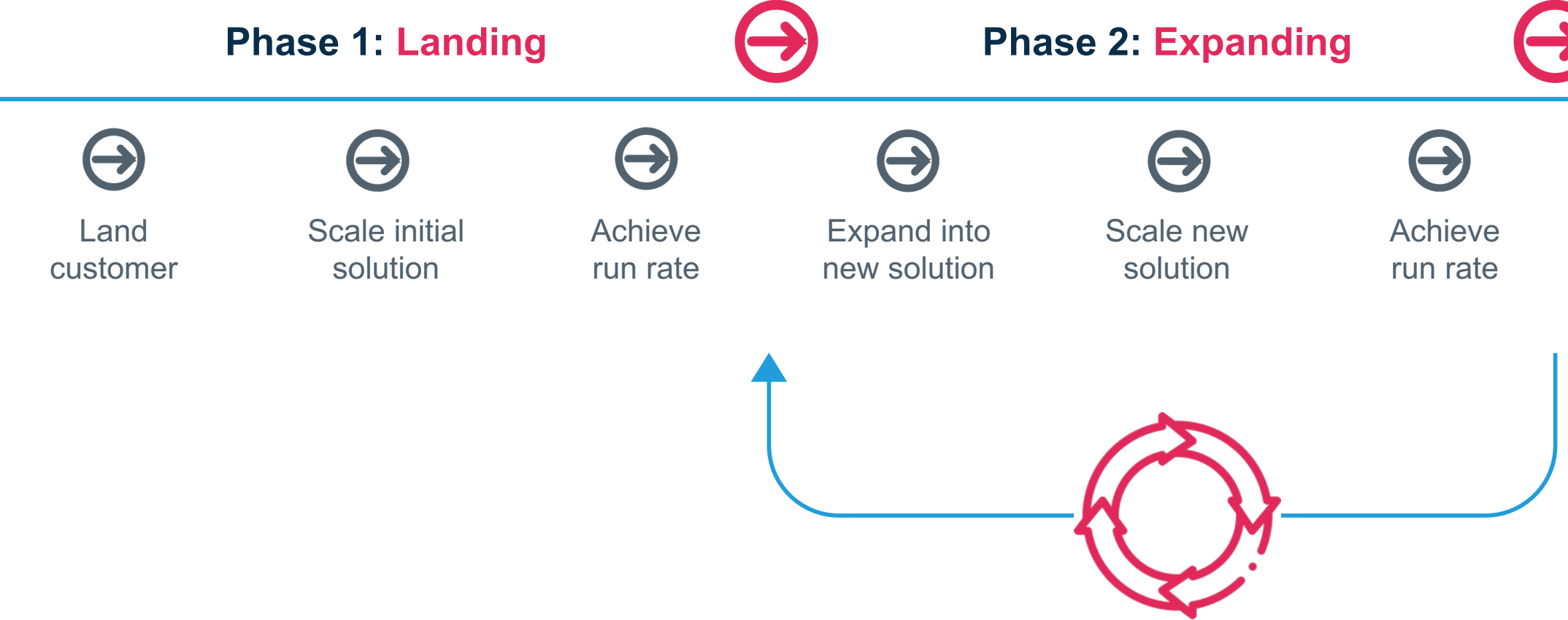
**80% - 90%**  
of revenue base



# Land and expand fuels efficient value creation



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**Virtuous flywheel**

Consistently expanding value contributed by customer

# Customer consumption momentum builds over time

Our largest customers will continue to get even bigger

Evolution of Top 20 Largest Customers Average Revenue

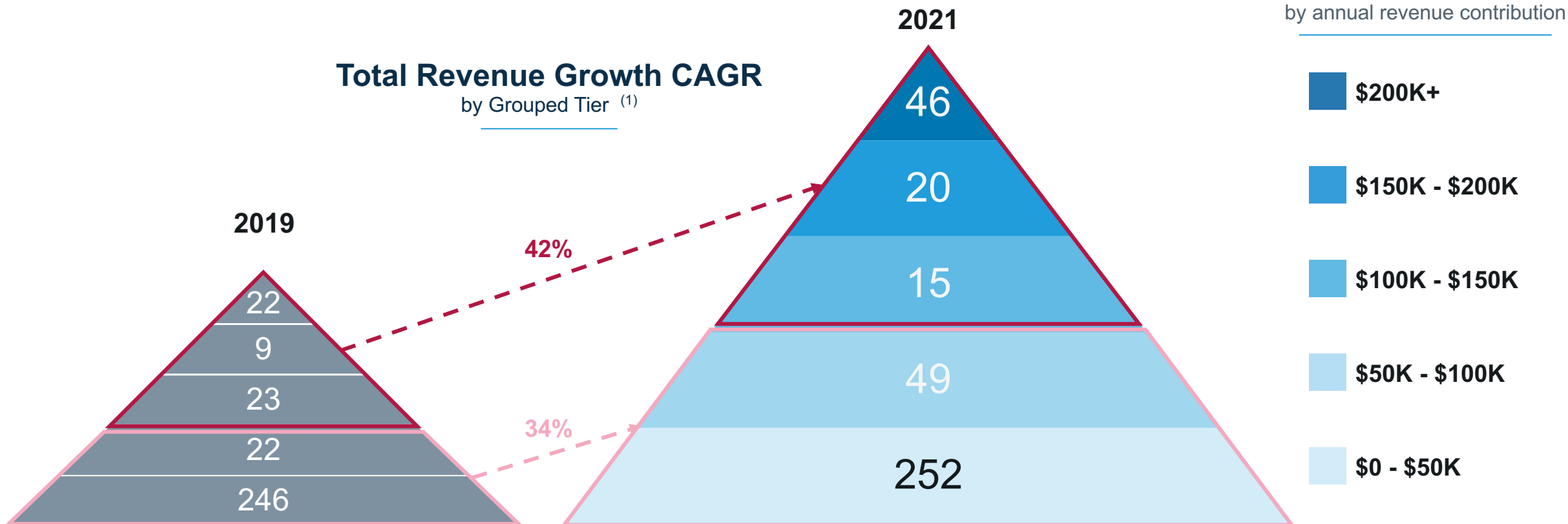
2019  
~\$385K



2021  
\$675K+

## Total Revenue Growth CAGR

by Grouped Tier <sup>(1)</sup>



Note: Based on recurring platform customers. FN 1: Represents CAGR of total tier revenue of customers with \$100K+ in revenue and CAGR of total tier revenue of customers with \$0 - \$100K in revenue.

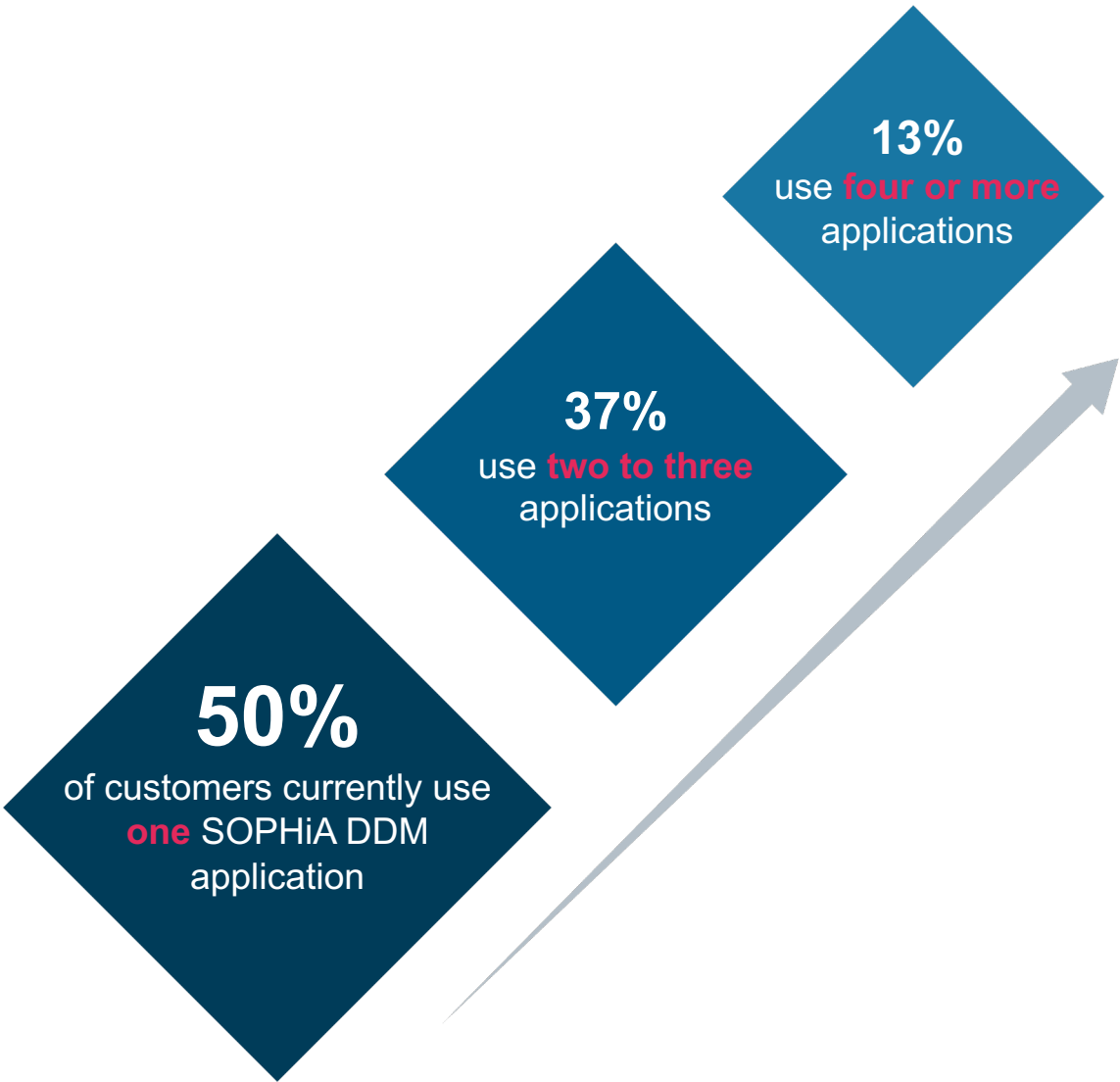




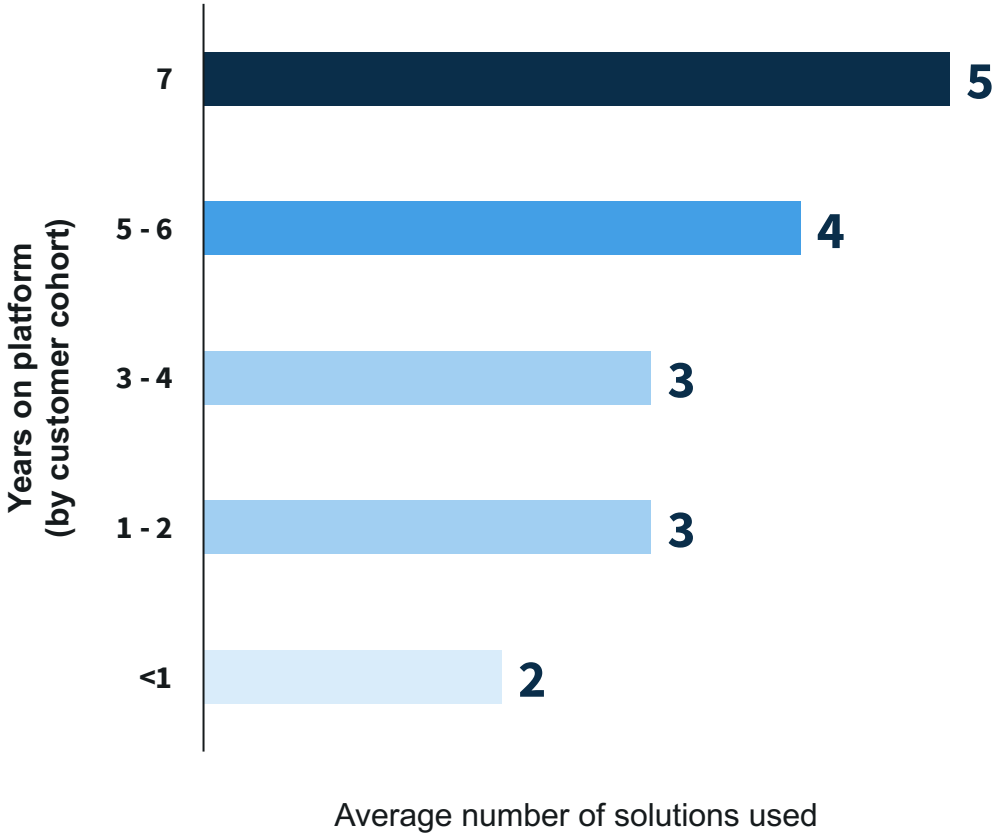
# Sizable opportunity to cross/upsell our broad application set



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Recurring platform customers consistently add solutions as they spend more time on the platform

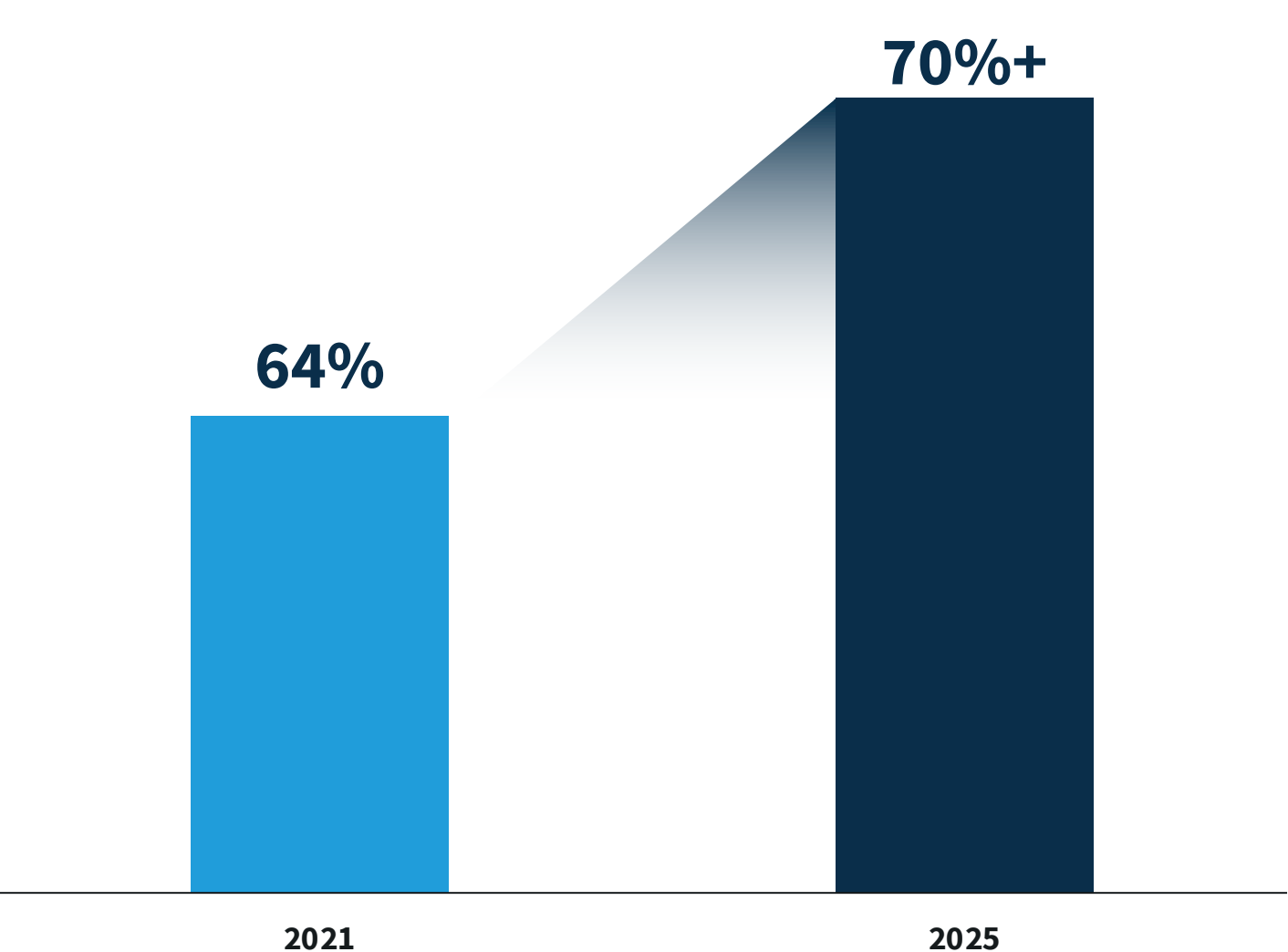




# GM expansion through efficiency and economies of scale



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500bps+

Adj. gross margin improvement

Economies of scale

Labor efficiency

Cloud cost leverage

**Note:** Please refer to appendix for IFRS to adjusted gross margin reconciliation.

# Operating leverage across the cost continuum



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FY2022 adj.  
operating expenses

Go-forward trend

Wages &  
benefits

- Limited headcount growth expected as future revenue can be supported by existing human capital base

Adj.  
Fixed Costs

- Public company-related fees not expected to grow substantively
- Fixed asset growth and facility expansion to be modest

Adj.  
Variable Costs

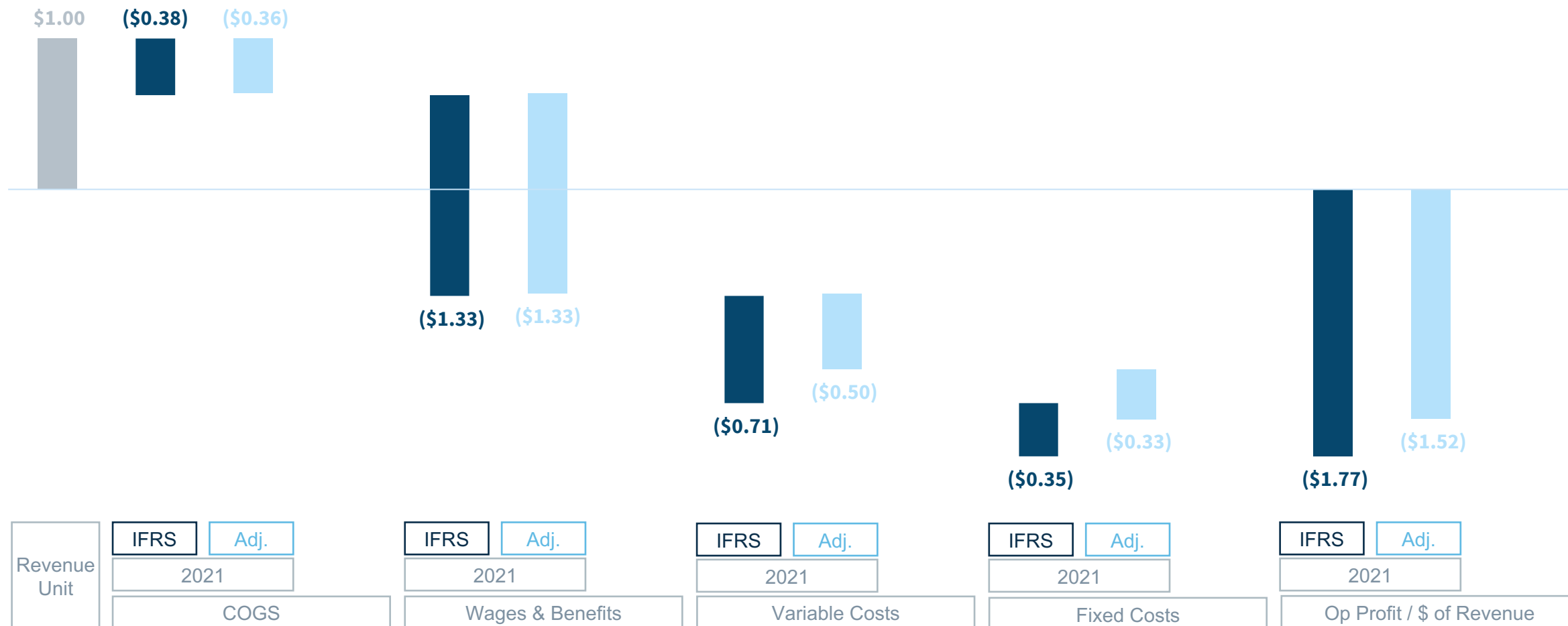
- Discretionary compensation growing with revenue, albeit more slowly
- Cost savings initiatives will help improve leverage, as non-headcount related expenses are not expected to scale proportionately with revenue

## Incremental margin

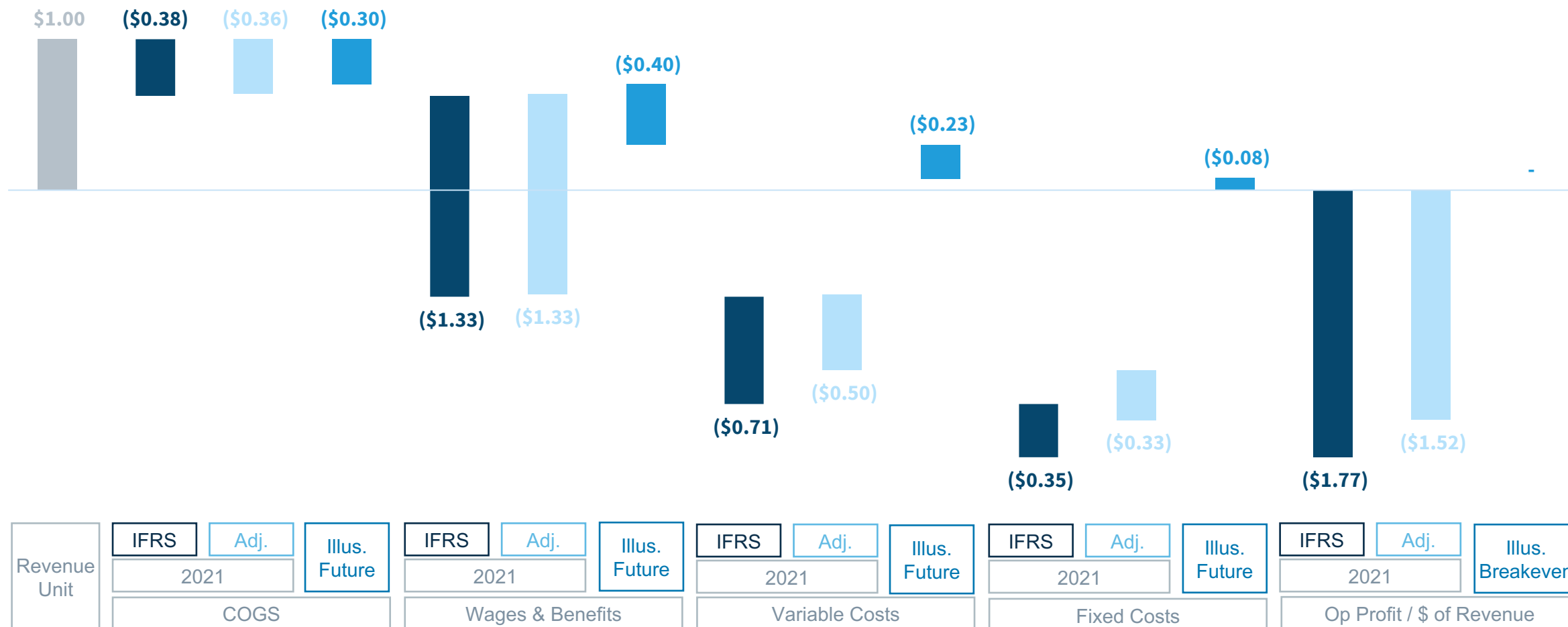
> 55%

Strong OM leverage due to efficient growth

# Positioning us on a path to breakeven

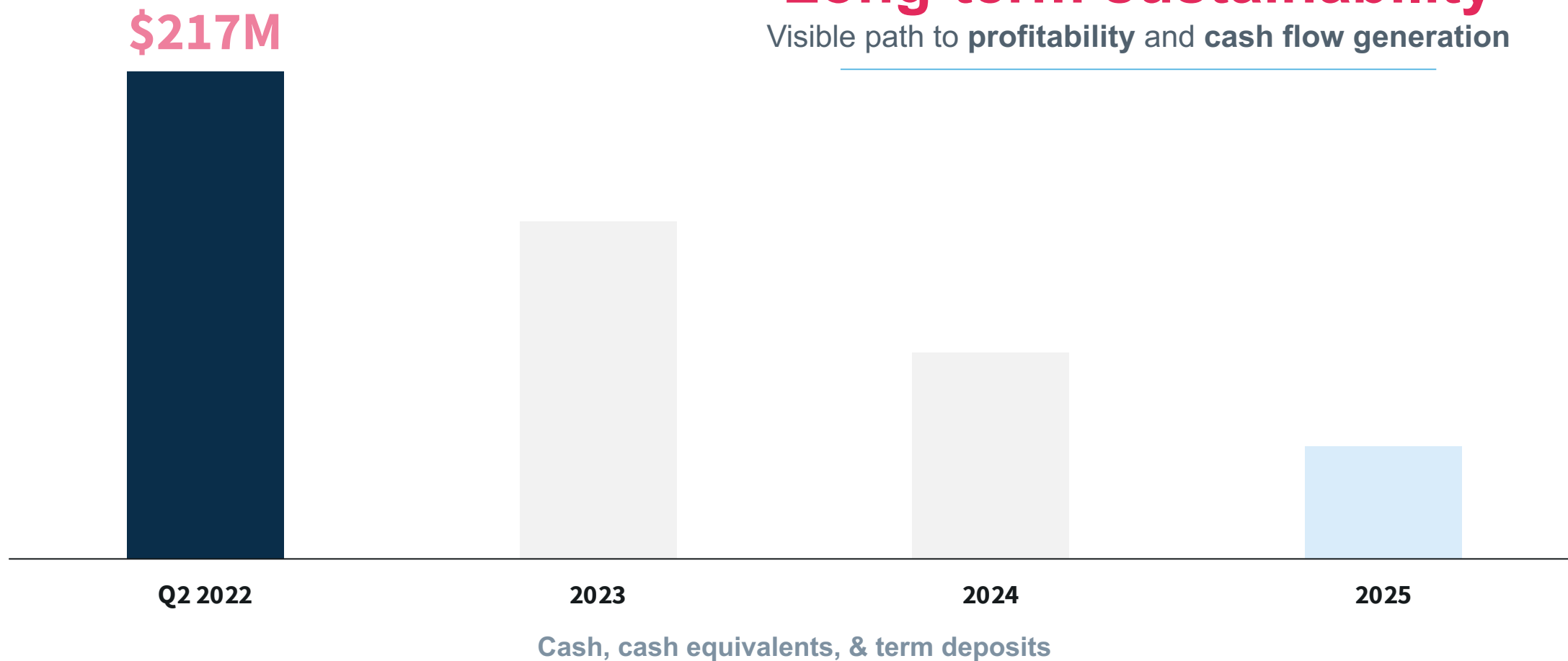


# Positioning us on a path to breakeven



## Long-term sustainability

Visible path to **profitability** and **cash flow generation**





# Though we have been successful... this is only the beginning



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Transformative product launches



Enhanced customer journey



BioPharma traction



Leading partnerships



Gross margin improvements



Sustained operating leverage



Optimized product and  
commercial investments



Ample cash runway and path  
to profitability



Today, we answered **THREE** important questions



iINVESTORDAY

- 1 | How we sell
- 2 | How we innovate
- 3 | How we grow sustainably

A person stands on a snowy mountain peak, looking out over a vast landscape of clouds. In the sky, a grid of glowing white dots is visible, suggesting a data visualization or a network. The sun is setting behind the clouds, creating a warm, orange glow.

# Democratizing Data-Driven Medicine **T** **GETHER**

# Q&A

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**Customer Disclosure:** Represents active customers who have generated revenue through DDM platform usage or Alamut licenses in the trailing 12-month period as of June 30, 2022.

**Recurring Platform Customer Disclosure:** Defined as the number of customers who accessed our platform through the dry lab access and bundled access models and generated revenue during the specified time period, which, in this case, is the twelve months ended June 30, 2022.

**ARPU Disclosure:** We calculate a rolling 12-month average revenue per platform customer based on the total revenue generated by our customers divided by the total number of customers. Average revenue per platform customer is a function of analysis volume, product pricing, access model used, and customer size mix.

**NDR Disclosure:** To calculate net dollar retention, we first specify a measurement period consisting of the trailing two-year period from our fiscal period end. Next, we define a measurement cohort consisting of platform customers who use our dry lab access and bundle access models from whom we have generated revenues during the first month of the measurement period, which we believe is generally representative of our overall dry lab access and bundle access customer base. We then calculate our net dollar retention as the ratio between the U.S. dollar amount of revenue generated from this cohort in the second year of the measurement period and the U.S. dollar amount of revenue generated in the first year. Any customer in the cohort that did not use our platform in the second year is included in the calculation as having contributed zero revenue in the second year.

**LTV / CAC Disclosure:** We calculate LTV for the stated time period by dividing the average revenue per customer by the revenue churn rate, which we define as the annualized revenues we estimate to have lost from customers who have not generated revenue over the past 12 months in that period based on their average quarterly revenue contributions from point of onboarding as a percentage of total recurring platform revenue and multiplying by average gross margin for dry lab and bundle access customers. We calculate CAC for the stated time period based on sales and marketing expenses divided by the number of new customers that we acquired who have generated revenue over the period.

**RPO Disclosure:** Remaining performance obligation ("RPO") as of a determination date is defined as the approximate revenue expected by SOPHiA GENETICS SA ("the Company") for the three-year period beginning after such determination date based on its existing contracts. The Company classifies its contracts with customers into four types: hard commitment, public tenders, soft commitment, no commitment. Hard contracts contain legally enforceable minimum order amounts. Public tenders are contracts with public institutions pursuant to a request for proposal process that specify expected minimum order amounts. Soft commitment contracts contain expected order amounts that are not legally enforceable but contain certain incentives for the customer to achieve such order amounts. No commitment contracts have expected order amounts that are not legally enforceable and do not contain any incentives for the customer to achieve such order amounts. In calculating RPO, the Company assumes that it will (i) collect on all revenues associated with the minimum order amounts in hard commitment contracts and public tenders entered into prior to January 1, 2022, (ii) collect on a percentage of revenues associated with the expected order amounts in soft commitment contracts entered into prior to January 1, 2022, with such percentage being equal to the percentage of revenues associated with expected order amounts in soft commitment contracts that the Company collected over the three most recently completed fiscal years prior to the determination date, (iii) collect on a percentage of revenues associated with the expected order amounts in no commitment contracts entered into prior to January 1, 2022, with such percentage being equal to the percentage of revenues associated with expected order amounts in no commitment contracts that the Company collected over the three most recently completed fiscal years prior to the determination date, and (iv) collect on all revenues associated with contracts entered into on or after January 1, 2022, which assumption the Company believes is supported by a review process implemented for such contracts which aims to ensure that the expected order amounts in such contracts reflect the amounts that the customer will actually order. The expected revenues are converted to United States Dollar ("USD") using the foreign exchange rates prevailing on the determination date. RPO is a calculation of future revenues associated with the Company's existing contracts and is calculated using various assumptions that may be incorrect. The Company's actual revenues from such contracts to be lower than the RPO amount. You are cautioned not to unduly rely on RPO as a measure of future financial performance.



# Reconciliation of IFRS to adjusted gross profit and gross profit margin for 1H 2022



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Amounts in USD thousands  
(unaudited)

Six months ended June 30, 2022	
<b>Revenue</b>	<b>\$22,528</b>
Cost of revenue	(8,197)
<b>Gross profit</b>	<b>\$14,331</b>
Amortization of capitalized research and development expenses <sup>(1)</sup>	451
<b>Adjusted gross profit</b>	<b>\$14,782</b>
<b>Gross profit margin</b>	<b>64%</b>
Amortization of capitalized research and development expenses <sup>(1)</sup>	2%
<b>Adjusted gross profit margin</b>	<b>66%</b>

**FN 1:** Amortization of capitalized research and development expenses consists of software development costs amortized using the straight-line method over an estimated life of five years. These expenses do not have a cash impact but remain a recurring expense generated over the course of our research and development initiatives.

# Reconciliation of IFRS to adjusted operating profit for FY 2021

Amounts in USD thousands (unaudited)	IFRS Financials	Amortization of Capitalized R&D Expenses <sup>(1)</sup>	Damaged Inventory Write-off <sup>(2)</sup>	Amortization of Intangible Assets <sup>(3)</sup>	Share-Based Compensation Expense <sup>(4)</sup>	Non-Cash Pension Expense <sup>(5)</sup>	Non-Recurring IPO-related Expenses <sup>(6)</sup>	Adjusted Financials
<b>Revenue</b>	<b>\$40,450</b>							<b>\$40,450</b>
Cost of Revenue	(15,229)	483	88					(14,658)
<b>Gross Profit</b>	<b>\$25,221</b>	<b>\$483</b>	<b>\$88</b>					<b>\$25,792</b>
Wages & Benefits	(53,739)							(53,739)
Variable Expenses	(28,759)				8,514			(20,245)
Fixed Expenses	(14,212)			609		(73)	323	(13,353)
<b>Total Operating Expenses</b>	<b>(96,710)</b>	<b>-</b>	<b>-</b>	<b>609</b>	<b>8,514</b>	<b>(73)</b>	<b>323</b>	<b>(87,337)</b>
<b>Operating Loss</b>	<b>(\$71,489)</b>	<b>\$483</b>	<b>\$88</b>	<b>\$609</b>	<b>\$8,514</b>	<b>(\$73)</b>	<b>\$323</b>	<b>(\$61,545)</b>
	<b>IFRS Financials</b>	<b>% of Revenue</b>	<b>Adjusted Financials</b>	<b>% of Revenue</b>				
<b>Revenue</b>	<b>\$40,450</b>		<b>\$40,450</b>					
Cost of Revenue	(15,229)	(38%)	(14,658)	(36%)				
<b>Gross Profit</b>	<b>\$25,221</b>	<b>62%</b>	<b>\$25,792</b>	<b>64%</b>				
Wages & Benefits	(53,739)	(133%)	(53,739)	(133%)				
Variable Expenses	(28,759)	(71%)	(20,245)	(50%)				
Fixed Expenses	(14,212)	(35%)	(13,353)	(33%)				
<b>Total Operating Expenses</b>	<b>(96,710)</b>	<b>(239%)</b>	<b>(87,337)</b>	<b>(216%)</b>				
<b>Operating Loss</b>	<b>(\$71,489)</b>	<b>(177%)</b>	<b>(\$61,545)</b>	<b>(152%)</b>				

## Notes to the reconciliation of IFRS to adjusted financial measures tables

- (1) Amortization of capitalized research and development expenses consists of software development costs amortized using the straight-line method over an estimated life of five years. These expenses do not have a cash impact but remain a recurring expense generated over the course of our research and development initiatives.
- (2) Damaged inventory write-off consists of expenses associated with the write-off of inventory that were damaged as a result of a refrigeration equipment malfunction. These expenses are not expected to be a recurring event in our business, but we expect such expenses could still be incurred from time to time.
- (3) Amortization of intangible assets consists of costs related to intangible assets amortized over the course of their useful lives. These expenses do not have a cash impact, but we could continue to generate such expenses through future capital investments.
- (4) Share-based compensation expense represents the cost of equity awards issued to our directors, officers, and employees. The fair value of awards is computed at the time the award is granted and is recognized over the vesting period of the award by a charge to the income statement and a corresponding increase in other reserves within equity. These expenses do not have a cash impact but remain a recurring expense for our business and represent an important part of our overall compensation strategy.
- (5) Non-cash pension expense consists of the amount recognized in excess of actual contributions made to our defined pension plans to match actuarial expenses calculated for IFRS purposes. The difference represents a non-cash expense but remain a recurring expense for our business as we continue to make contributions to our plans for the foreseeable future.
- (6) Non-recurring IPO-related expenses represent expenses incurred for our initial public offering that were not capitalized and are not expected to be recurring during the ordinary course of our business.