



Writing the Future

AUGUST 2022



Forward-Looking Statements

This presentation contains forward-looking statements. All statements other than statements of historical facts contained herein are forward-looking statements reflecting the current beliefs and expectations of management and include statements regarding, among other things, future financial performance, expectations and objectives of management, market opportunity and growth, anticipated growth of business lines and the timing for such growth, the development and commercialization of Twist Bioscience's data storage business. Such forward-looking statements involve known and unknown risks, uncertainties, and other important factors that may cause Twist Bioscience's actual results, performance, or achievements to be materially different from any future results, performance, or achievements expressed or implied by the forward-looking statements. Such risks and uncertainties include, among others, the risks and uncertainties of the duration, extent and impact of the COVID-19 pandemic, including any reductions in demand for our products (or deferred or canceled orders) globally or in certain regions; the ability to attract new customers and retain and grow sales from existing customers; risks and uncertainties of rapidly changing technologies and extensive competition in synthetic biology could make the products Twist Bioscience is developing obsolete or non-competitive; the retention of employees of acquired companies and the ability of Twist Bioscience to successfully integrate acquired companies and to achieve expected benefits; supply chain and other disruptions caused by the COVID-19 pandemic or otherwise; risks of third party claims alleging infringement of patents and proprietary rights or seeking to invalidate Twist Bioscience's patents or proprietary rights; and the risk that Twist Bioscience's proprietary rights may be insufficient to protect its technologies. For a further description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to Twist Bioscience's business in general, see the risk factors and other risks set forth in Twist Bioscience's Annual Report on Form 10-K filed with the Securities and Exchange Commission (SEC) on November 23, 2021 and subsequent filings with the SEC. In addition, many of the foregoing risks and uncertainties are, and could be, exacerbated by the COVID-19 pandemic and any worsening of global or regional business and economic environment as a result. We cannot at this time predict the extent of the impact of the COVID-19 pandemic and any resulting business or economic impact, but it could have a material adverse effect on our business, financial condition, results of operations and cash flows. Any forward-looking statements contained in this presentation speak only as of the date hereof, and Twist Bioscience specifically disclaims any obligation to update any forward-looking statement, whether as a result of new information, future events or otherwise.

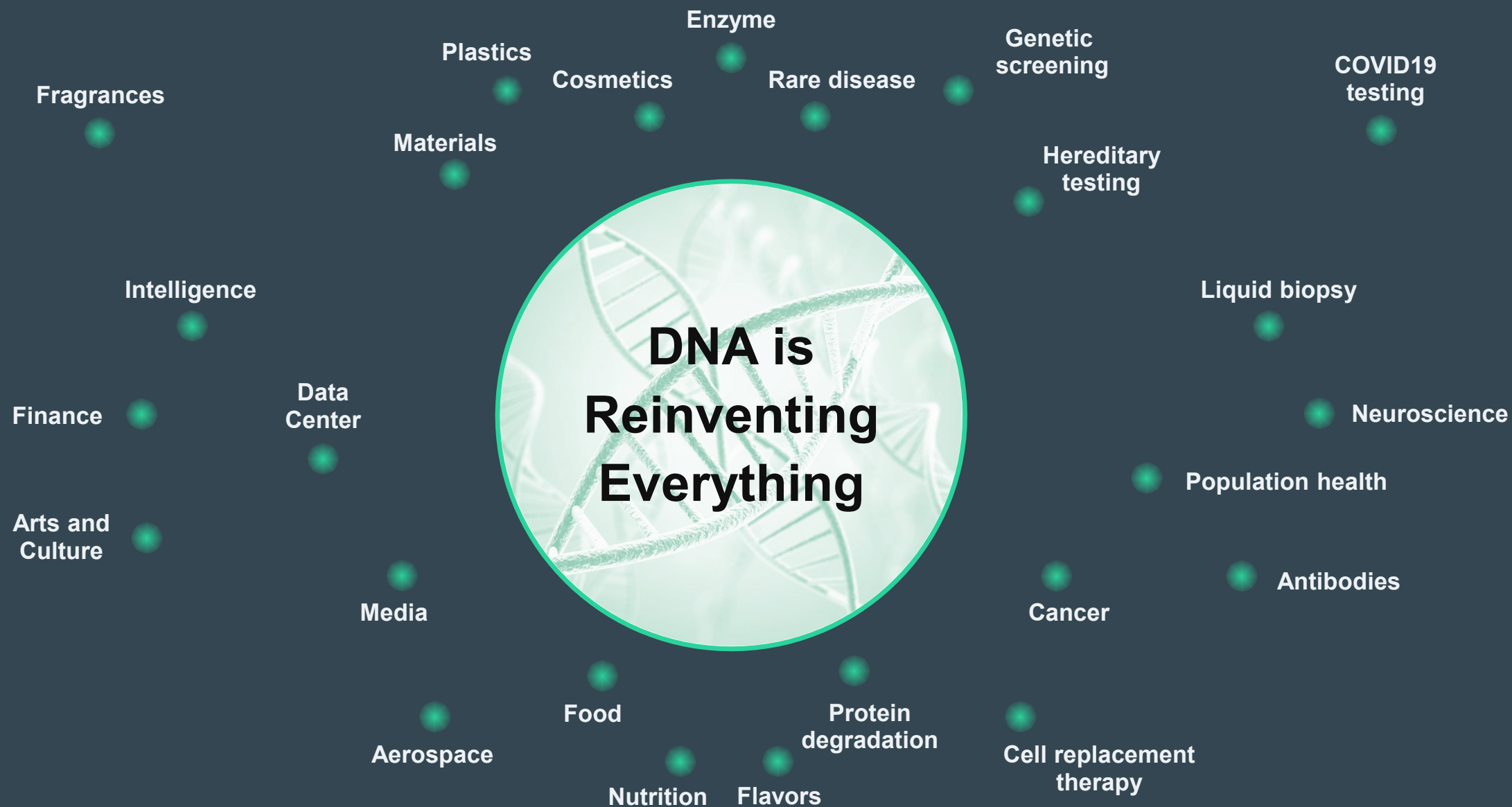


**Writing the Future
one DNA strand at a time**

Our Vision

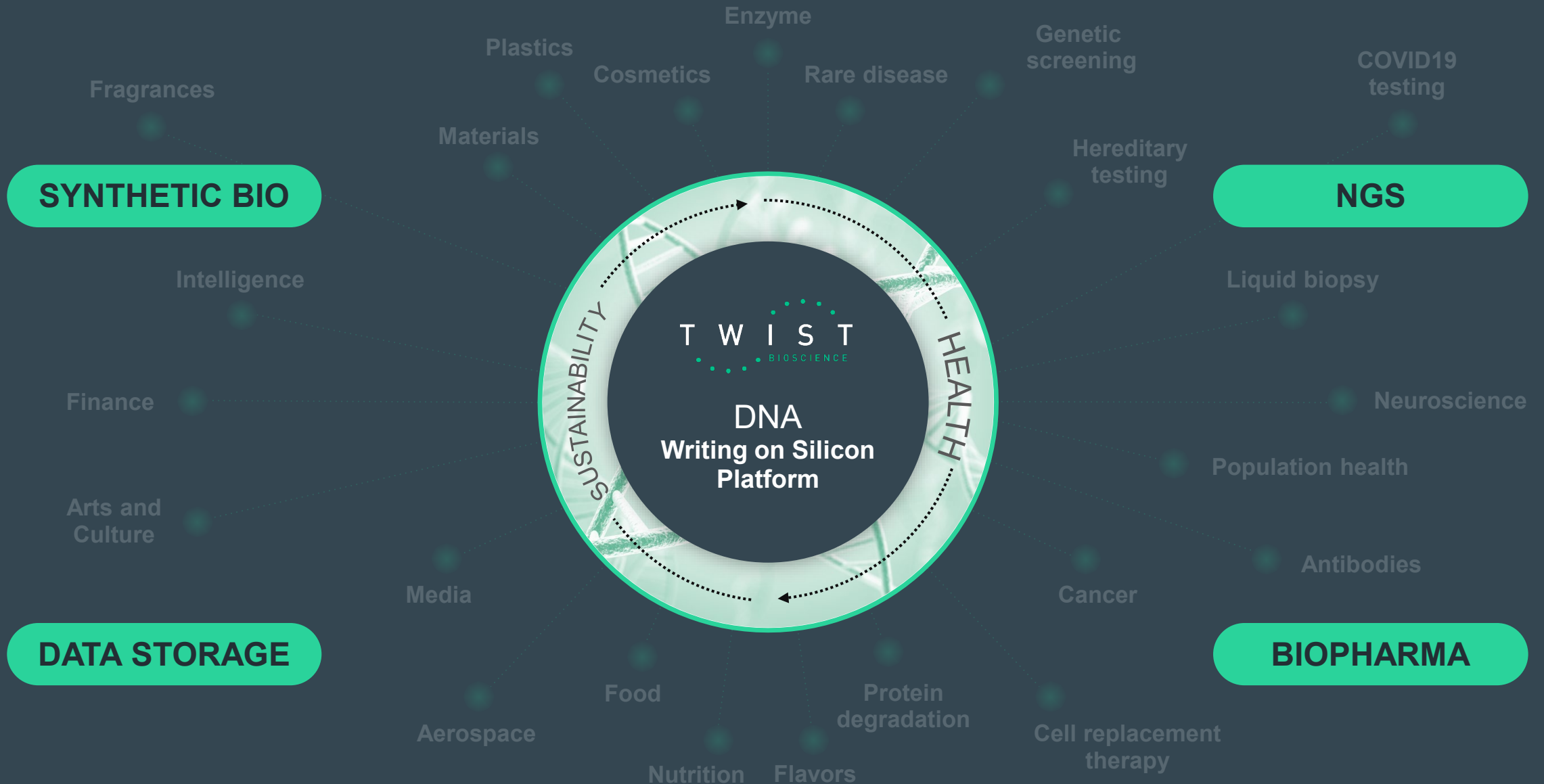
How We Execute

Investing for the Future



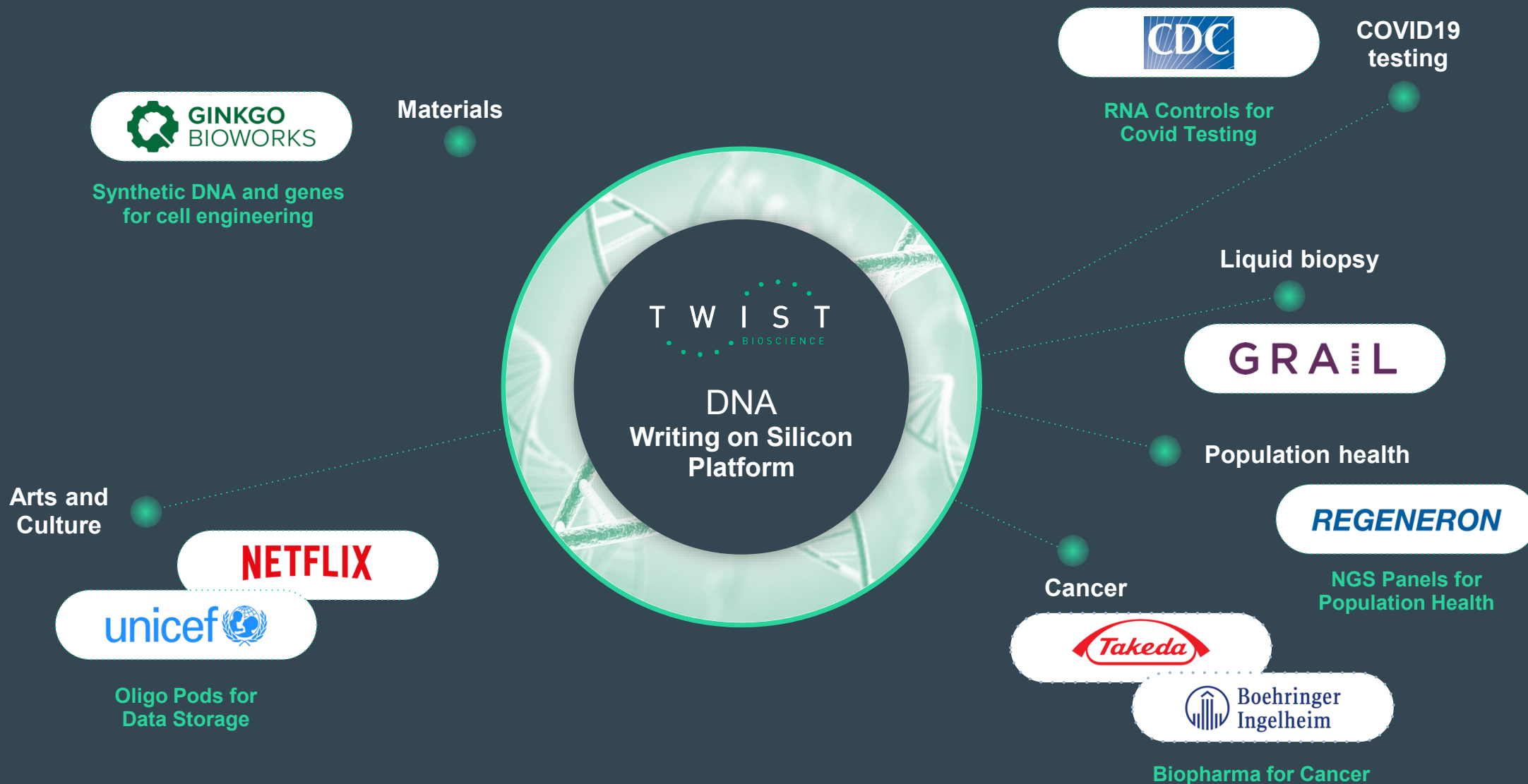


We Are the Infrastructure Powering the Biodiscovery Ecosystem





Empowering Groundbreaking Science

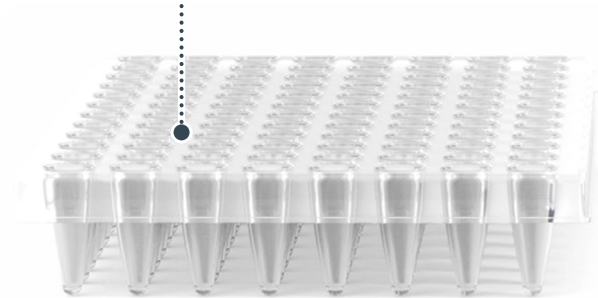




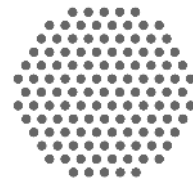
Twist DNA Writing on Silicon Platform

Everyone Else

1 oligo per well



96 Well Plate
makes 1 gene



1M oligos per chip



Twist Silicon Platform
can make 9,600 genes



**State of the
art commercial
infrastructure**

.....

Proprietary software

Robotics

Integrated
ecommerce platform

Manufacturing
execution system

Up to
10,000x
more scale &
throughput



Innovative Leadership

Industrialize synthetic DNA production

Deliver billions of base pairs to date

Reduce **environmental impact** by 99.8%

Implement **biosecurity controls** and privacy

Generate synthetic DNA for **multiple markets**

Apply DNA at scale for **antibody discovery**

Demonstrate **DNA data storage** proof of concept





**We Lead with
Innovation**

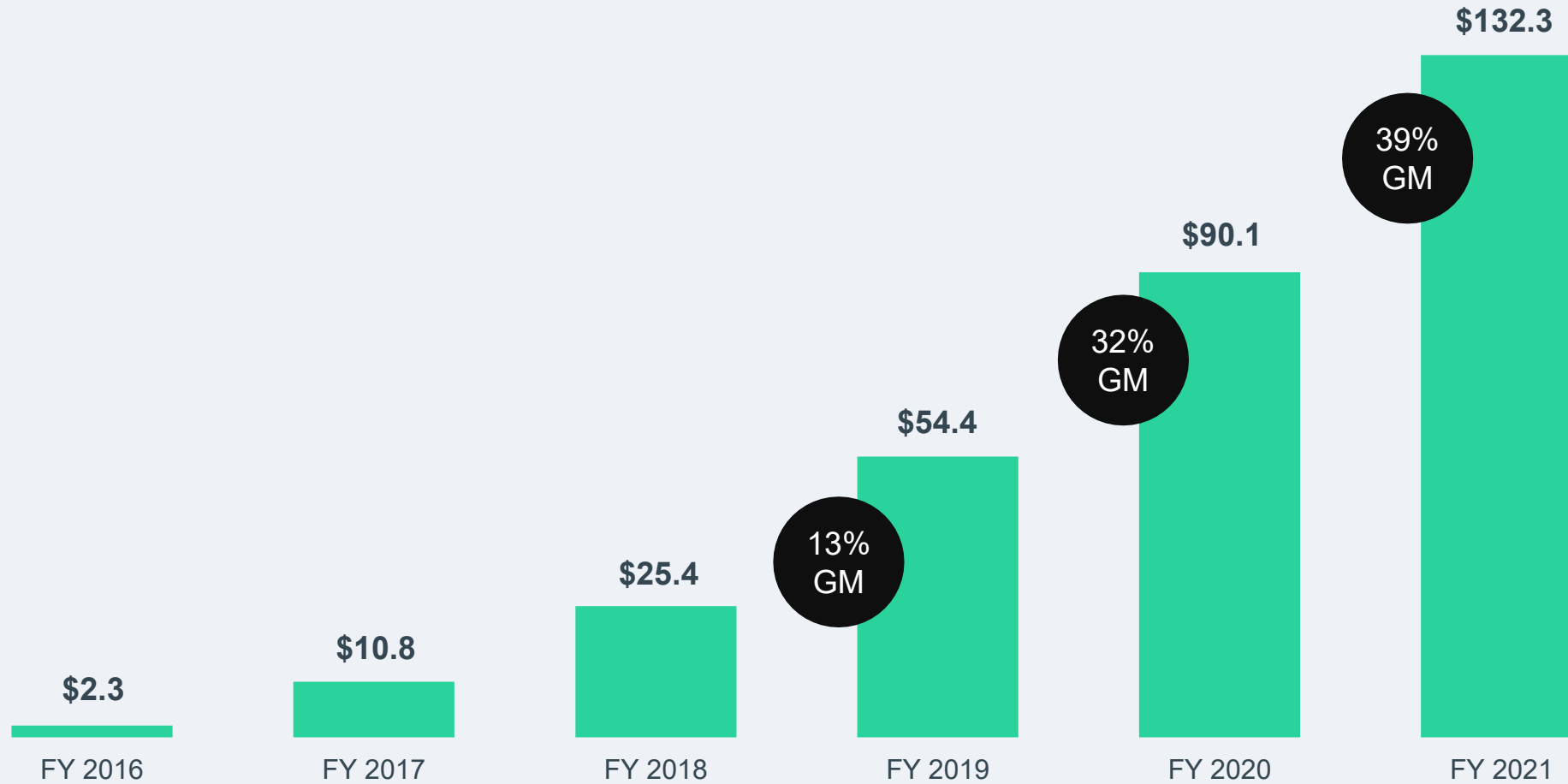
Our Vision

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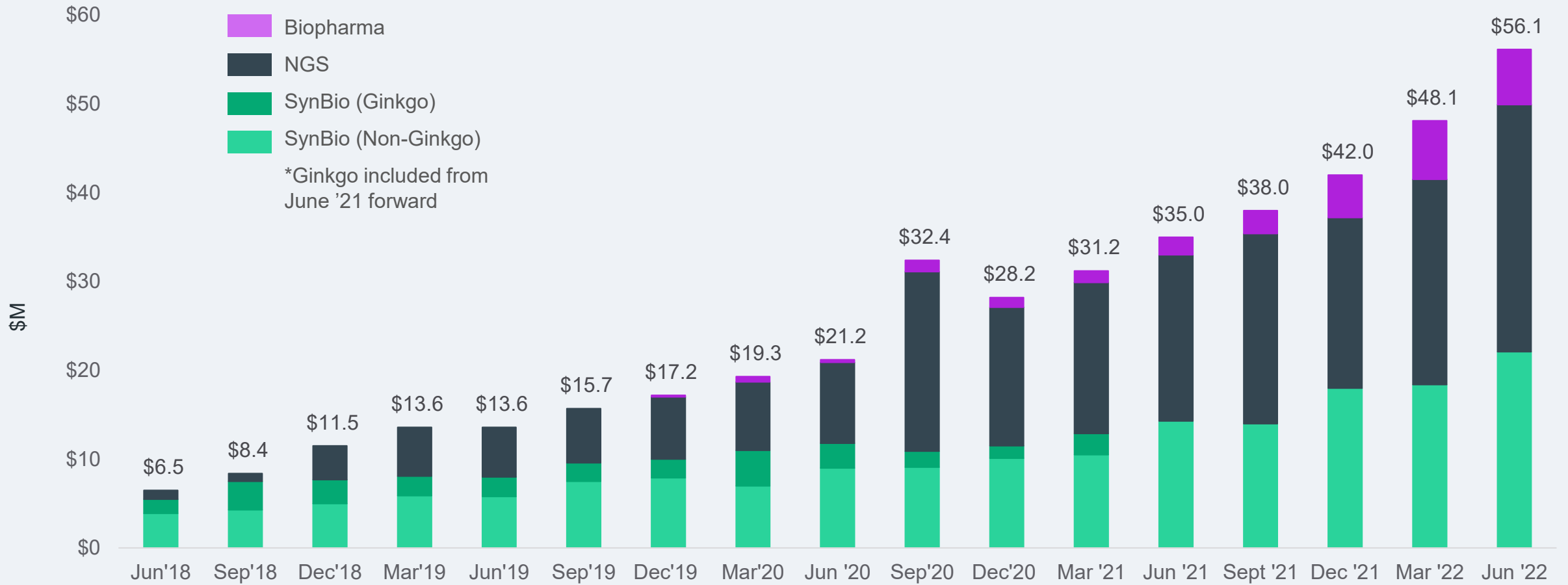


Strong Annual Revenue Growth and Increasing Gross Margin





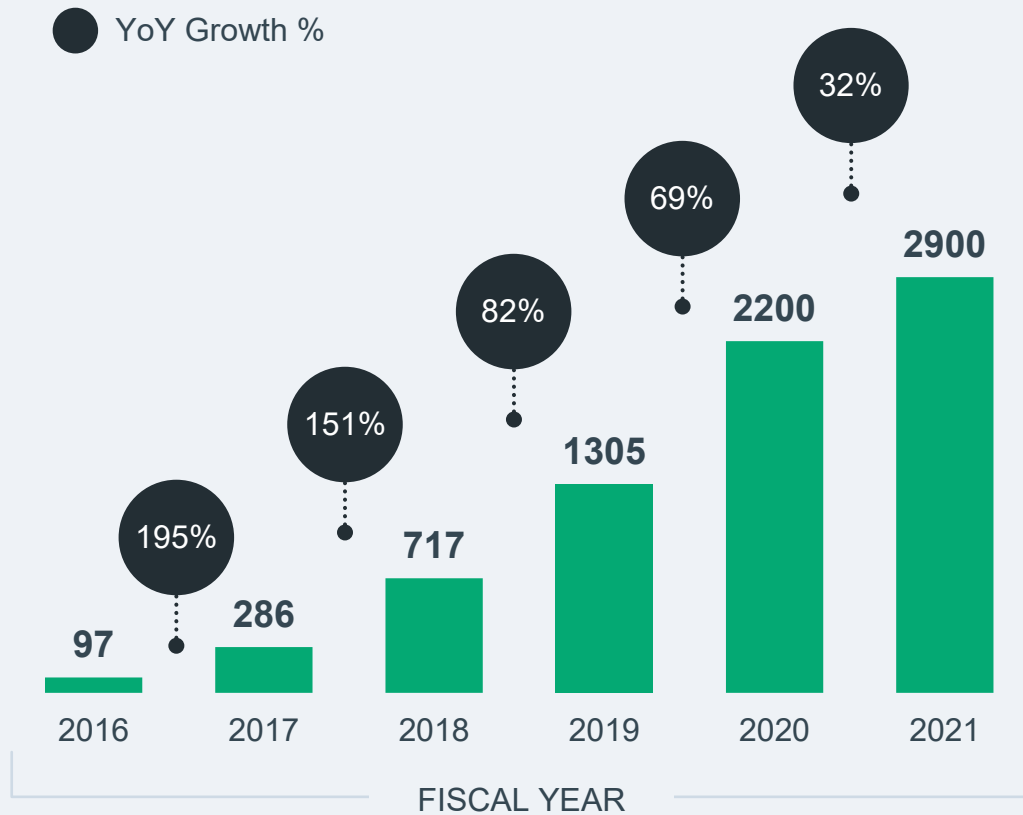
Strong Revenue Growth



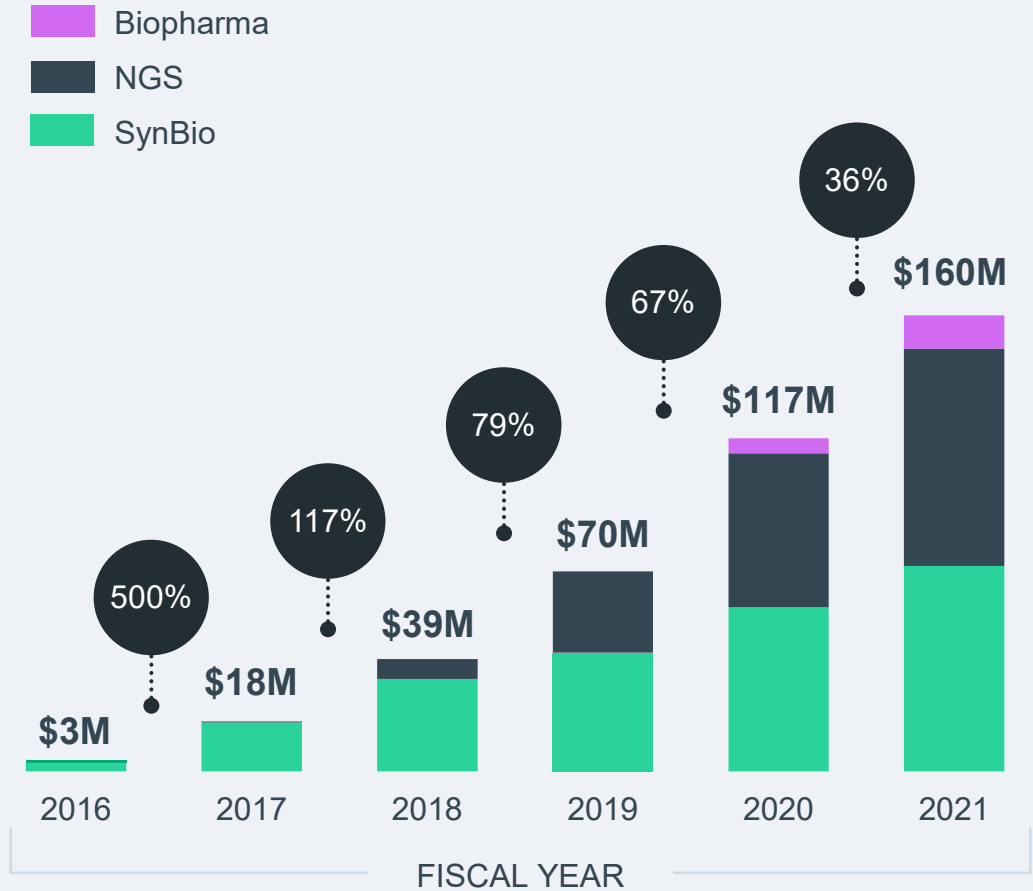


Core Business Growth: SynBio and NGS

Customers



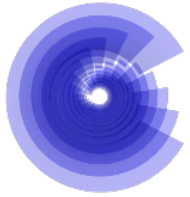
Orders





1. SynBio | Foundational and Differentiated

Twist offers a wide variety of synbio products



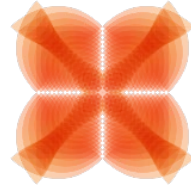
Genes

Clonal
Non-clonal fragments
Clonal-ready gene
fragments



Oligo Pools

sgRNA



Variant Libraries

Site saturation
Combinatorial



Pharma / Biotech Solutions

DNA preps
IgG

99.9%
eCommerce

Why we win

- Cost
- Scale
- Quality
- Customer experience
- Innovative products and solutions



2. NGS | Accelerating Diagnostic Innovation



Human Core Exome



Fixed Panels



Custom Panels



Library Preparation



Reagents and Kits



Synthetic Viral Controls



Targeted Methylation



SARS-CoV-2 NGS Assay

High Value Applications

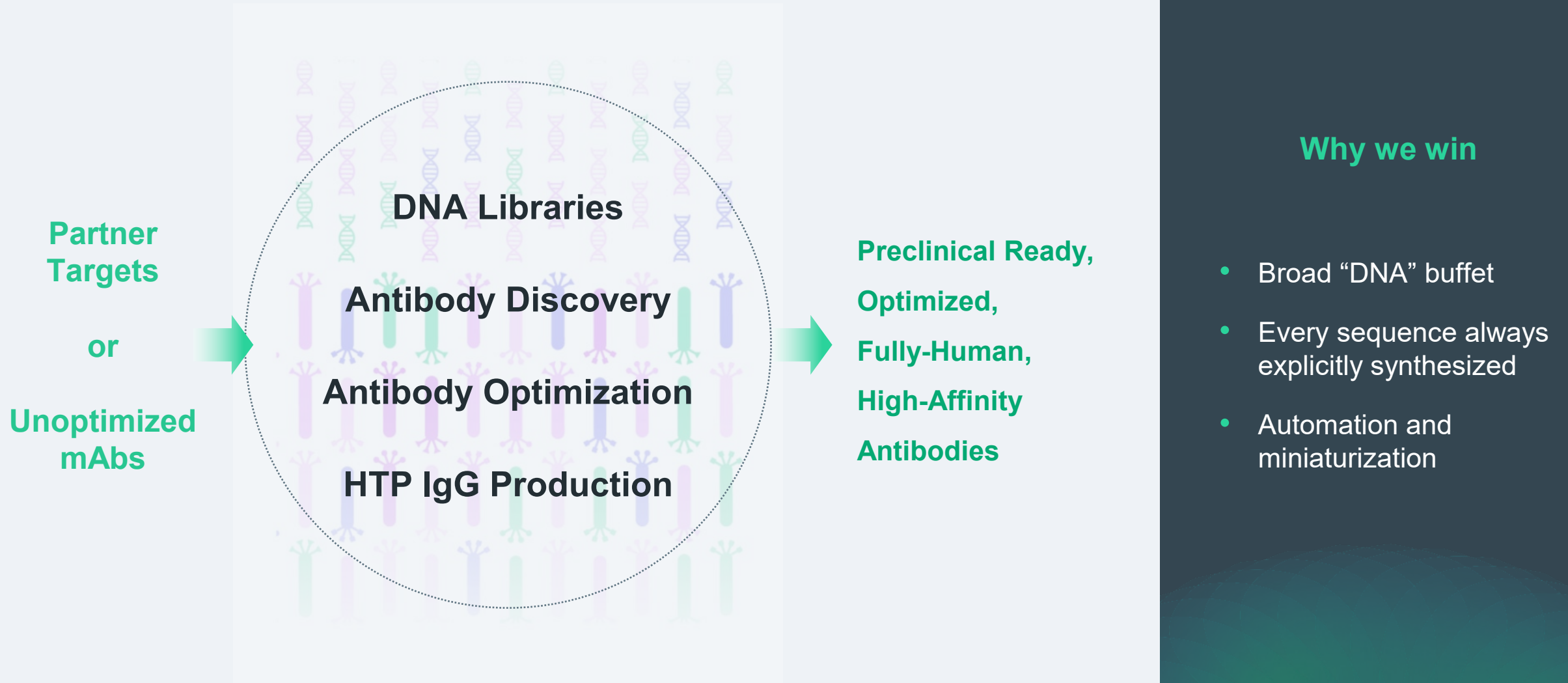
- Liquid biopsy/MRD
- Rare disease
- Oncology
- Population genetics
- Infectious diseases

Why we win

- Quality
- Uniformity
- Lower sequencing cost
- Rapid customization
- Fast throughput



3. Biopharma | Disruptive Discovery Engine





Twist Biopharma Partnerships by the Numbers

Broad

Disease Indications

Cancer, Neurology, Immuno-oncology,
Infectious Disease, Canine / Feline, Other

Varied

Modalities

mAbs, Bispecific Antibodies, VHH, ADC,
Protein Engineering, More

53

Partners

50

Active
Programs

67

Completed
Programs

55

Milestones/
Royalties



Twist Boston



IN VIVO ANTIBODY
DISCOVERY SERVICES

70 active programs as of June 30, 2022

Comprehensive antibody discovery using DiversimAb™
hyperimmune mouse model family

Multiple antibodies in clinic

90+ customers and experienced workforce



Complementing our
synthetic antibody
discovery capabilities



Building a Comprehensive Biopharma Platform

Synthetic DNA Libraries

Naïve, human-repertoire design

Cell-based, Animal-based



Hyper-immune

AI / Deep Learning



deepCDR

SCHRÖDINGER

MOLCORE

somalogic



Better **discovery**

Better **screening**

Better **candidates**



Biopharma | Becoming its Own Growth Platform

Partnering
for milestones and
royalties



Out-licensing
assets



**Internal
development**
and spinouts



2022 is a year
of monetization



Biopharma | Pipeline of Functional Monoclonal Antibodies



ADORA2A	Immuno-oncology
SARS-CoV-2	Infectious Disease
GLP-1R	Obesity and Diabetes
GLP-1R	Hypoglycemia and Rare Disease
CD3	Immuno-oncology
PD-1	Immuno-oncology
TIGIT	Immuno-oncology
CXCR4	Oncology
Undisclosed	Oncology
Undisclosed	Oncology
Undisclosed	Inflammation
Undisclosed	Inflammation
Undisclosed	Inflammation
Undisclosed	Inflammation
Undisclosed	Inflammation

High-value targets in a **broad range of therapeutic areas**

Pre-clinical stage antibodies that bind hard-to-drug targets, like GPCRs

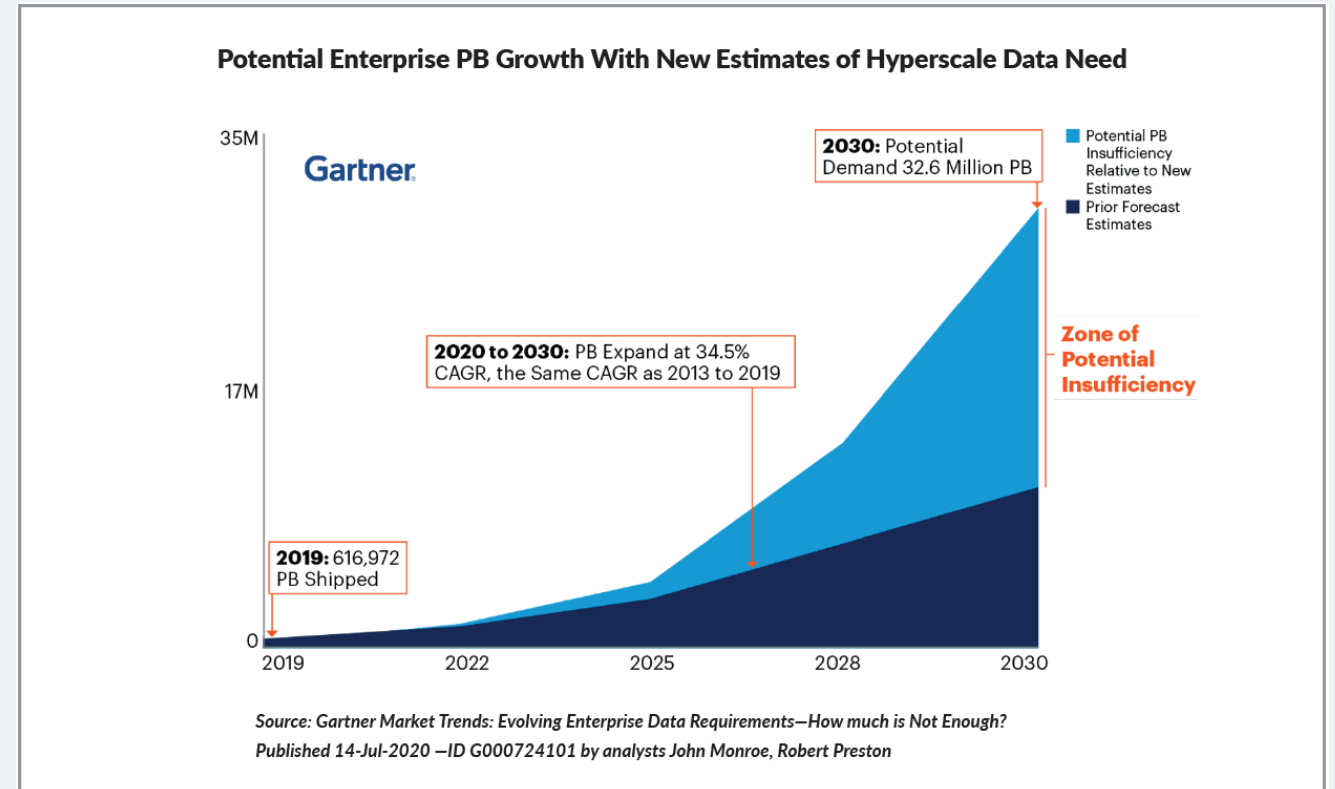
Antibody assets available for **out-licensing, partnering, or spin out**

... Opportunity to advance compounds in many ways



4. DNA Data Storage | The Ultimate Answer for Scaling

- Data creation and storage demand continues to grow exponentially; supply won't keep up with demand
- The industry is seeking to discover new storage technologies enabling >100x storage density capability
- DNA Data Storage is the ultimate answer for scaling to address the growing data storage demand



DNA Data Storage is the ideal candidate technology to enable high-density, cost-effective, sustainable, and energy-efficient long-term data storage solutions



DNA Data Storage | Re-Inventing Archive Storage



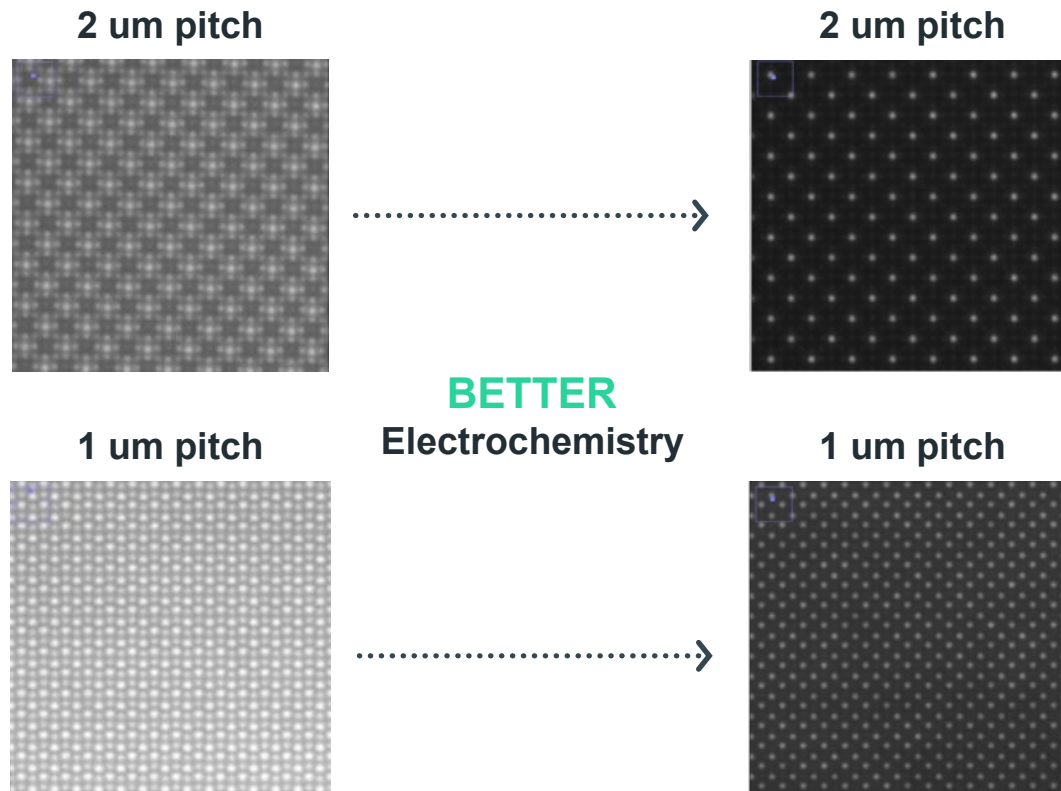
DNA Data Storage is delivering a unique value proposition, initially addressing deep archive to accessible archive use cases to 'Computational Cold Storage'

- **Density** Solutions scaling from Data Lakes to *Data Oceans*
- **Longevity** Enabling *century* and *millennium* scale archive storage
- **Immutability** Stable format – *data is medium* – always able to read DNA
- **Sustainability** Lowest energy storage *carbon footprint* amongst all media
- **Store & Compute** Biotechnology tools enabling computing on 'Cold Storage'



Demonstrated High Density Synthesis Enabling GB-class Storage

Acid Confinement Delivers Robust DNA Synthesis



I A R P A

Georgia Tech **Research Institute**

Optimized geometry of micro wells

Reduced error rate

Increased capacity



**We are
preparing in the next
wave of growth**

Our Vision

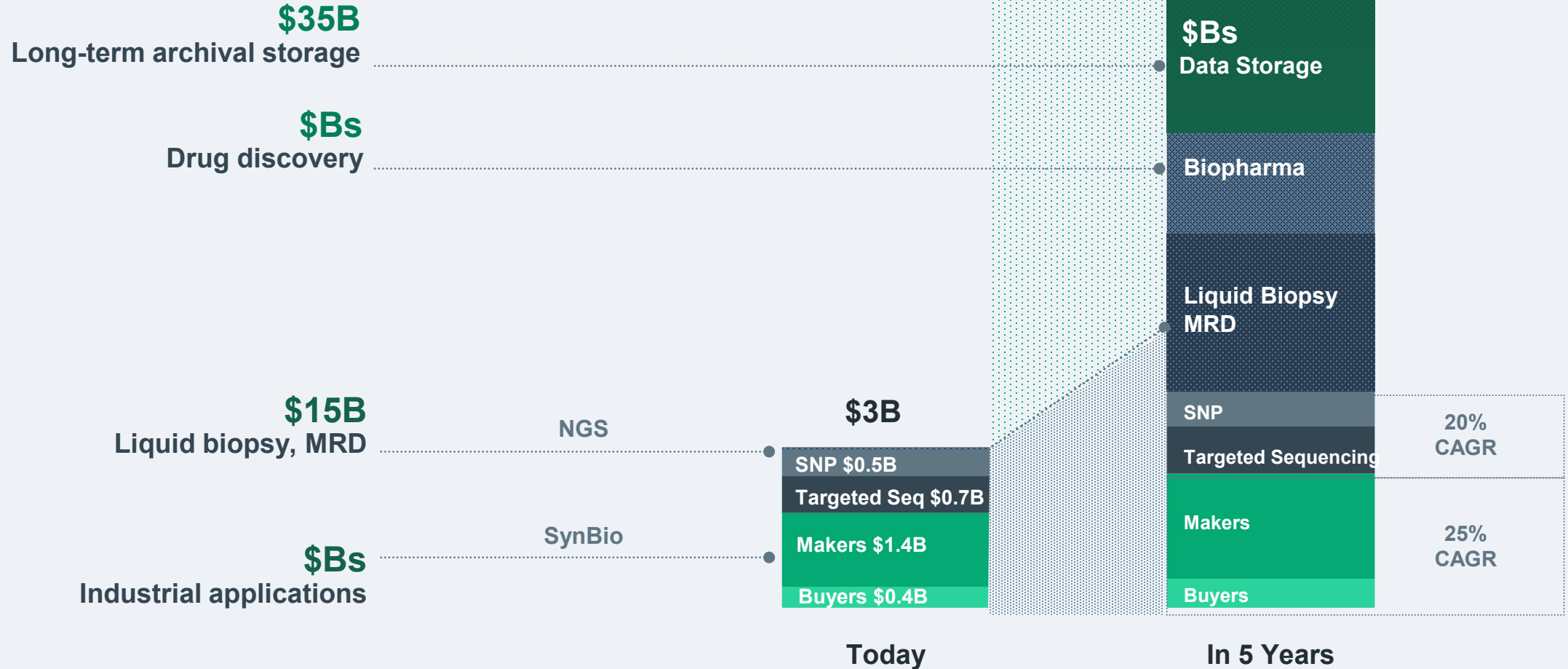
How we Execute

Investing for the Future



Large Growing Market Opportunities

Massive End Markets





Factory of the Future

Next evolution of platform, **launching in 2022**

Expect doubling of **current capacity**

Additional differentiation, including **faster turnaround time for all products**

Opportunity to build **Green Factory of the Future**





SynBio and NGS | What's Next

SynBio

Factory of the Future

IgG proteins

GMP

Fast DNA

RNA

FoF-enabled new
product introduction

NGS

Liquid biopsy

MRD

RNA sequencing workflow

SNP microarray conversion

Alliance content



Bases loaded for future core business growth

Adjusted EBITDA break even at \$300M for core business



Biopharma | What's Next

Abveris integration

More partnerships

More programs

Increasing milestones, royalties

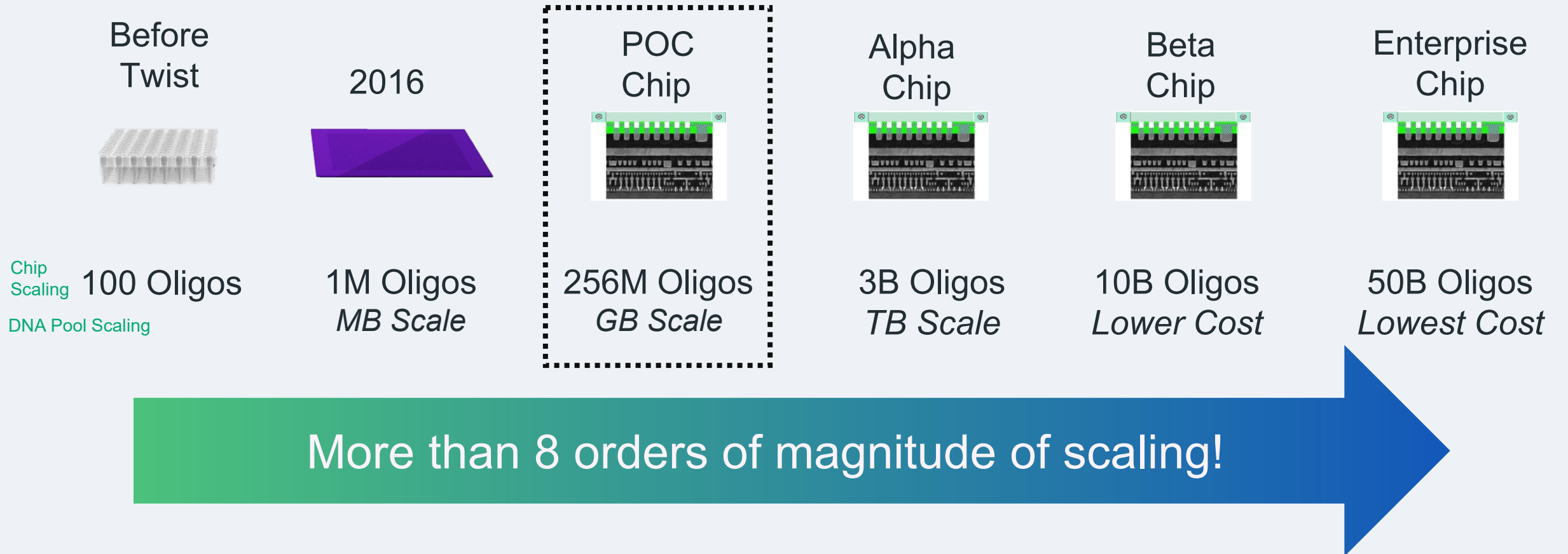
Out-license Twist-discovered antibodies

Internal pipeline advancement





DNA Data Storage - Synthesis Scaling Innovation Roadmap



We're moving from writing DNA at megabyte to *gigabyte* to terabyte level



Innovation Continues: Writing the Future



CHEMICAL

BETTER> < 1 error in
2,000 bp

LONGER> Up to
300 bases

CHEAPER> \$0.03/oligo

GREENER> 99.8% less
reagent waste

VS

Today:

ENZYMATIC

1 error in 400bp or more

< 100 bp

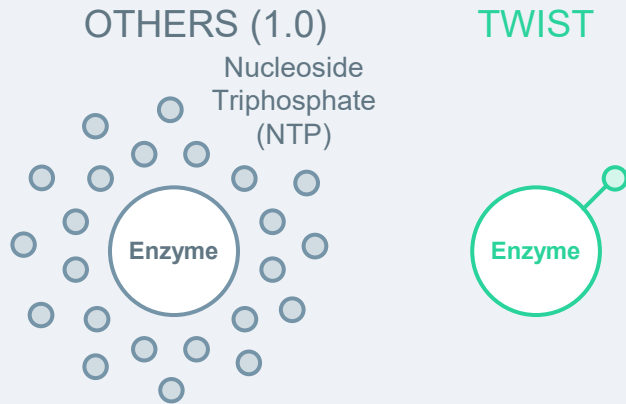
\$50/oligo

Solvent intensive nucleoside
Triphosphate purification



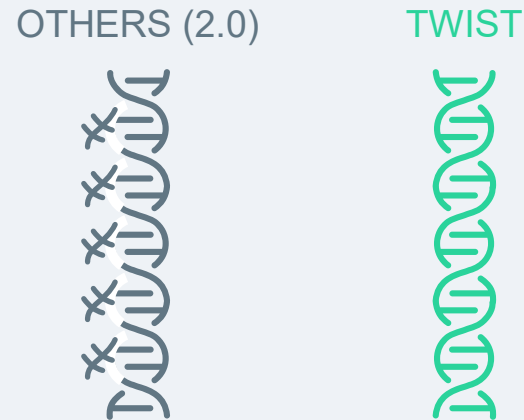
Twist Enzymatic Chemistry 3.0: Superior to Existing Approaches

Low Cost



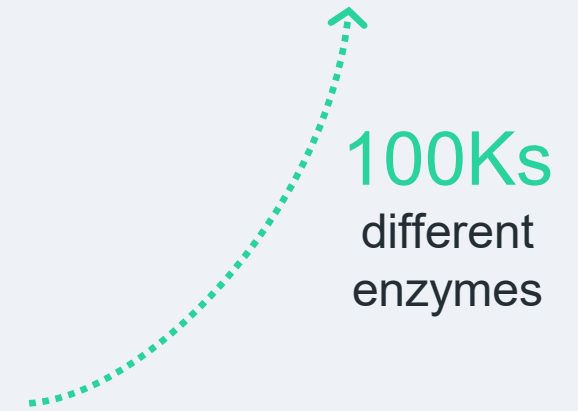
We require significantly less concentration of expensive NTP to synthesize our DNA

Scarless



While other enzyme-NTP linkage techniques leave a scar on the added base, our chemistry leaves our DNA uncompromised

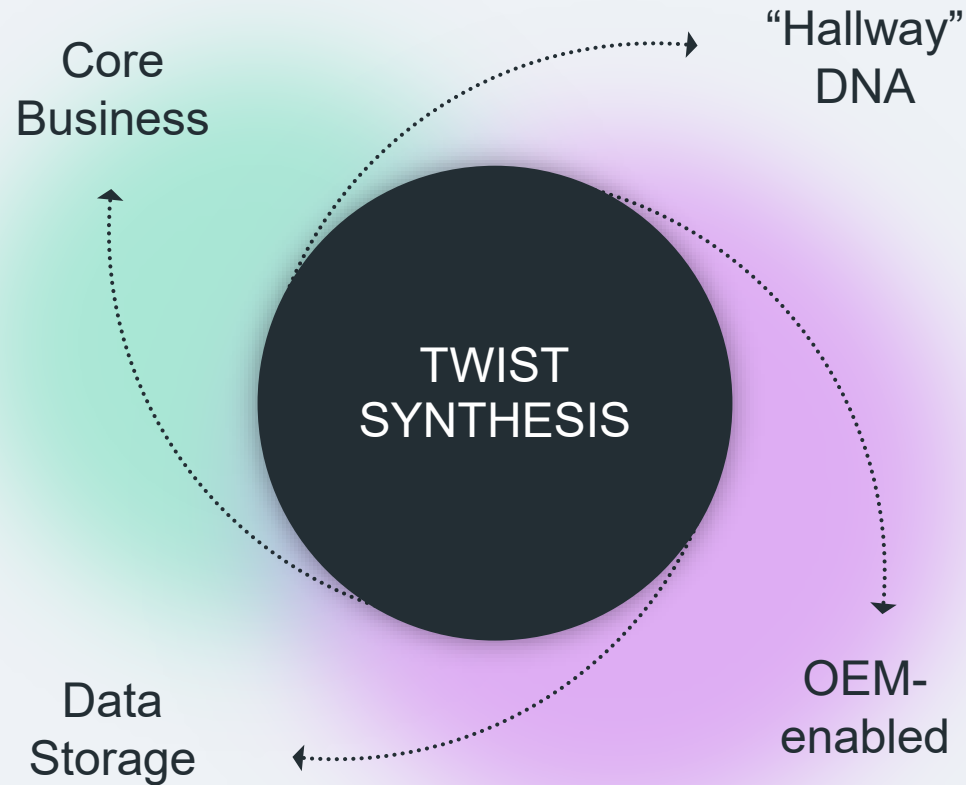
Faster Enzyme Optimization



Our NGS-based enzyme engineering screening platform increases scale and speed to explore the sequence space



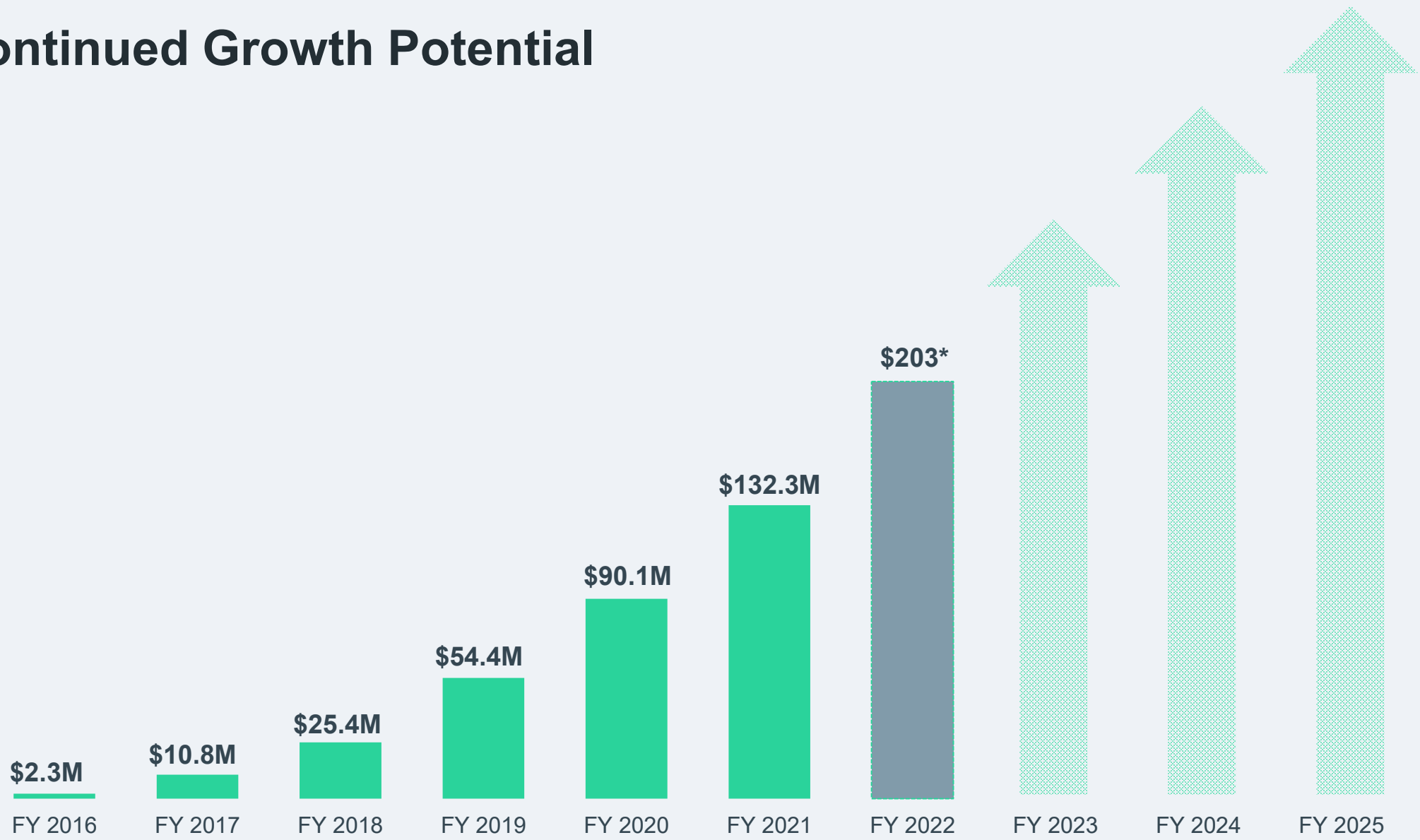
Twist Bioscience Synthesis Creates Growth Optionality



Leading the Industry in all DNA Writing



Continued Growth Potential



*FY 2022 Guidance



Key Takeaways

- Track record of execution delivering revenues growth in multiple markets by leveraging our silicon-based DNA synthesis platform
- Core business has bases loaded for growth
- Factory of the Future enables us to target \$1.4B DNA maker market
- Biopharma growth in 2022 leveraging integration
- Data storage roadmap to commercial offering
- Continued innovation in capital efficient manner – baked into guidance:
 - Enzymatic synthesis that is low cost and scarless

Achieve Adj. EBITDA breakeven at \$300M annual revenue
for the core business (synbio + NGS)



Platform for writing DNA on silicon

Large, growing markets

Differentiated value proposition

Portfolio of high growth businesses

Validated business models

High revenue growth

Track record of execution and innovation



**Now
is the time
for Twist**



Writing the Future

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