GINKGO BIOWORKS

Grow with Ginkgo

2021 Update & Business Review

March 28, 2022



Disclaimer

Forward-Looking Statements

This presentation, the conference call and webcast may contain certain forward-looking statements within the meaning of the federal securities laws, including statements regarding our plans, strategies, current expectations, operations and anticipated results of operations, both business and financial, all of which are subject to known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements, market trends, or industry results to differ materially from those expressed or implied by such forward-looking statements. These forward-looking statements generally are identified by the words "believe," "project," "potential," "expect," "anticipate," "estimate," "intend," "strategy," "future," "opportunity," "plan," "may," "should," "will," "would," "will be," "will continue," "will likely result," and similar expressions. Forward-looking statements are predictions, projections and other statements about future events that are based on current expectations and assumptions and, as a result, are subject to risks and uncertainties. Many factors could cause actual future events to differ materially from the forward-looking statements in this document, including but not limited to: (i) the effect of the business combination between Ginkgo Bioworks Holdings, Inc. ("Ginkgo") and Soaring Eagle Acquisition Corp. ("Soaring Eagle") on Ginkgo's business relationships, performance, and business generally, (ii) risks that the business combination disrupts current plans of Ginkgo and potential difficulties in Ginkgo's employee retention, (iii) the outcome of any legal proceedings that may be instituted against Ginkgo related to its business combination with Soaring Eagle, (iv) volatility in the price of Ginkgo's securities now that it is a public company due to a variety of factors, including changes in the competitive and highly regulated industries in which Ginkgo operates, variations in performance across competitors, changes in laws and regulations affecting Ginkgo's business, changes in the combined capital structure and expectations associated with increases in the number of shares available for sale, (v) the ability to implement business plans, forecasts, and other expectations after the completion of the business combination, and ability to identify and realize additional opportunities, (vi) the risk of downturns in demand for products using synthetic biology, (vii) the unpredictability of the duration of the COVID-19 pandemic and the demand for COVID-19 testing and the commercial viability of our COVID-19 testing business, and (viii) changes to the biosecurity industry, including due to advancements in technology, emerging competition and evolution in industry demands, standards and regulations. The foregoing list of factors is not exhaustive. You should carefully consider the foregoing factors and the other risks and uncertainties described in the "Risk Factors" section of Ginkgo's quarterly report on Form 10-Q filed with the U.S. Securities and Exchange Commission (the "SEC") on November 15, 2021, and other documents filed by Ginkgo from time to time with the SEC. These filings identify and address other important risks and uncertainties that could cause actual events and results to differ materially from those contained in the forward-looking statements. Any forward-looking statement made by us in this presentation, the conference call during which this presentation is reviewed and any discussions that follow speaks only as of the date on which it is made. You are cautioned not to put undue reliance on forward-looking statements, and Ginkgo assumes no obligation and does not intend to update or revise these forward-looking statements, whether as a result of new information, future events, or otherwise. Ginkgo does not give any assurance that it will achieve its expectations.

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Certain of the financial measures included in this presentation, including Adjusted EBITDA, have not been prepared in accordance with generally accepted accounting principles ("GAAP"), and constitute "non-GAAP financial measures" as defined by the SEC. Ginkgo has included these non-GAAP financial measures because it believes they provide an additional tool for investors to use in evaluating Ginkgo's financial performance and prospects. Due to the nature and/or size of the items being excluded, such items do not reflect future gains, losses, expenses or benefits and are not indicative of our future operating performance. These non-GAAP financial measures are supplemental to, should not be considered in isolation from, or as an alternative to, financial measures determined in accordance with GAAP. In addition, these non-GAAP financial measures may differ from non-GAAP financial measures with comparable names used by other companies. See the reconciliation below for additional information regarding certain of the non-GAAP financial measures included in this presentation, including a description of these non-GAAP financial measures and a reconciliation of the historic measures to Ginkgo's most comparable GAAP financial measures.

Agenda

Introduction
Jason Kelly, Co-Founder and CEO

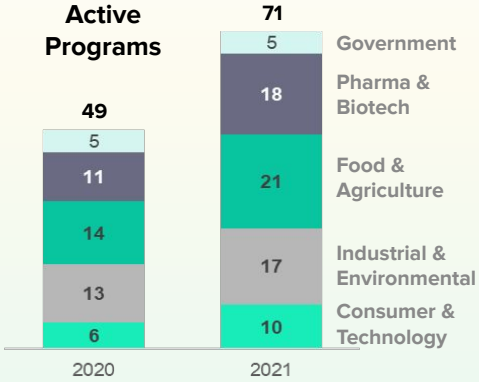
2021 Full Year Financial Update
Mark Dmytruk, CFO

Strategic Positioning
Jason Kelly, Co-Founder and CEO

Q&A Session
Moderated by Anna Marie Wagner, SVP Corporate Development

Capital markets have been tough on growth biotech, but Ginkgo is in a stronger position than at any time in our history

Diversified Business with Demonstrated Technical Success



Multiple Recent Program Successes


Ginkgo has more than doubled the number of products in scale production by our customers so far this year in diverse fields...

Product	Peach	Coconut	[Confidential]	VCE	Myoglobin	CBG	[Confidential]	CBGV
Ginkgo organism?	✓		✓	✓	✓	✓		✓
Ginkgo process?	✓	✓	✓	✓	✓	✓	✓	✓
Approx. Year Started	2014	2016	2016	2020	2018	2018	2020	2018
Year Completed	2019	2019	2018 (mfg began in 2020)	2021	2021	2021	2021	2021
Customer	ROMAINE	ROMAINE	[Confidential]	aldevron		CRONOS GROUP	[Confidential]	CRONOS GROUP
Primary End Market	Consumer	Consumer	Chemicals	Pharma	Food	Consumer	Pharma	Consumer
Organism	Fungal (Species 1)	Fungal (Species 2)	Bacterial (Species 3)	Bacterial (Species 4)	Fungal (Species 5)	Fungal (Species 6)	Bacterial (Species 4)	Fungal (Species 6)
Product Type	Small Molecule	Small Molecule	Small Molecule	Protein	Protein	Small Molecule	Nucleic Acid	Small Molecule
Mfg Scale (L)	Most being produced in tanks at the 25,000 - 50,000L scale; some pharma products produced at lower scale (hundreds to 1,000L)							Pilot Scale
Downstream Economics	Royalty/Toll	Royalty/Toll	Royalty/Toll	Royalty	Equity	Milestone	N/A - Fee for service	Milestone

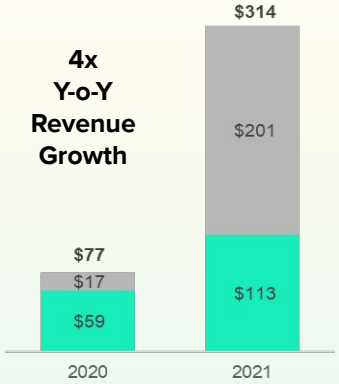
Note: "Ginkgo organism" refers to a strain engineered by Ginkgo, whereas "Ginkgo process" refers to a manufacturing process developed by Ginkgo

Property of Ginkgo Bioworks — 28

Q3 UPDATE & BUSINESS REVIEW

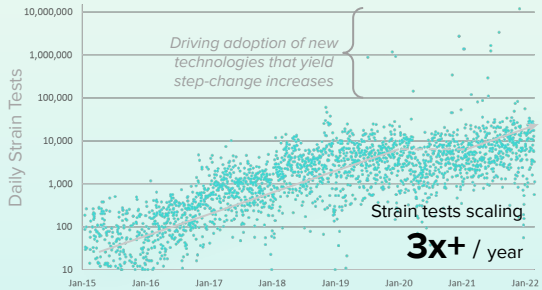
Excerpt from Q3 2021 Earnings Deck

Strong Financial Health

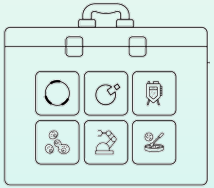


$1.5+ billion in cash yields ample runway

Integrated, Horizontal Platform Technology



Launched first "Cell Development Kits" for protein production

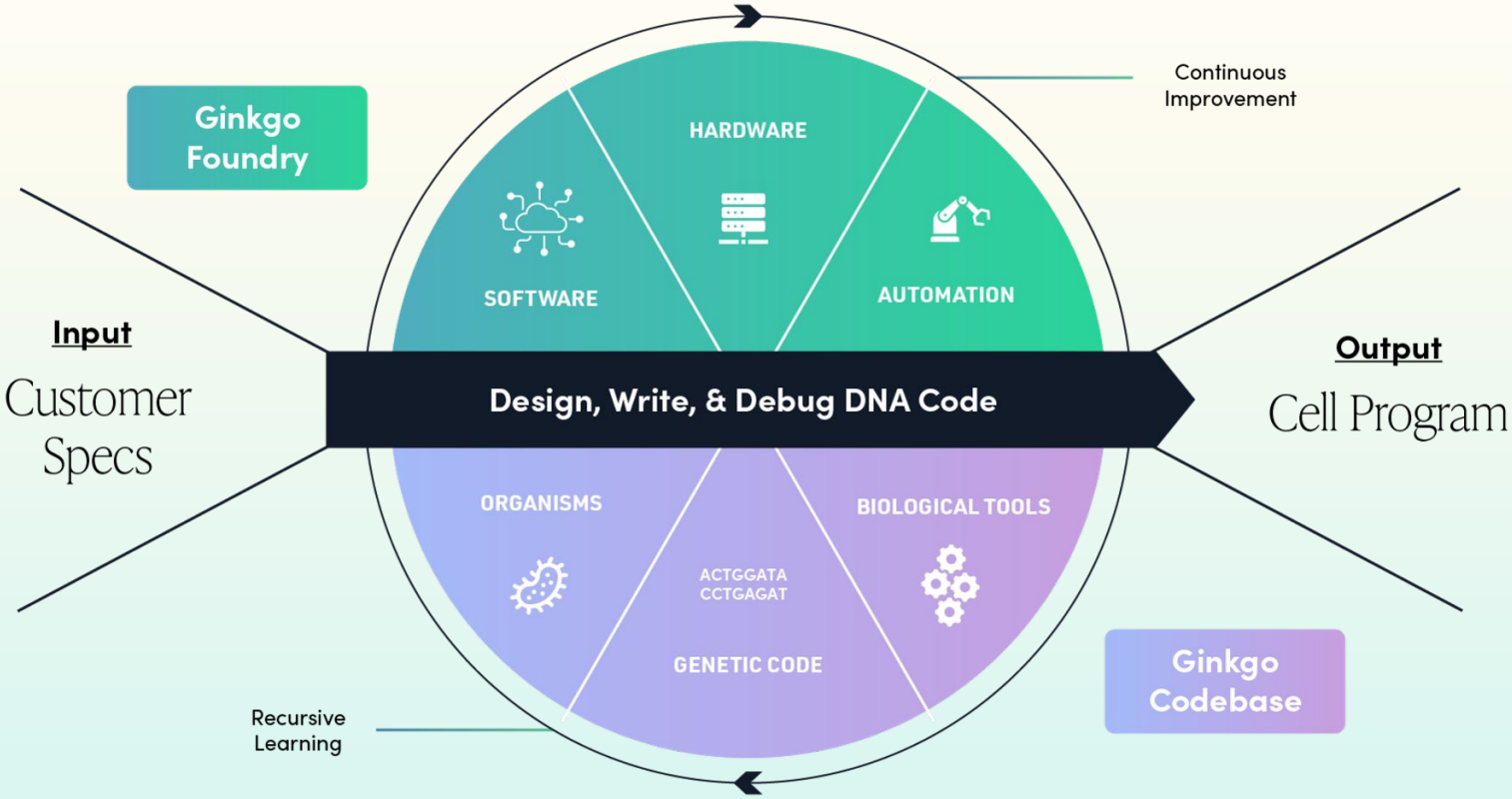


640+ World class team members

4,000+ Organizations served by Concentric, Ginkgo's biosecurity business (as of 3/20/2022)

313,000+ Square feet of lab space

Ginkgo operates as a cell programming platform; scale effects are critical for both profitable economics on programs and for diversification across markets



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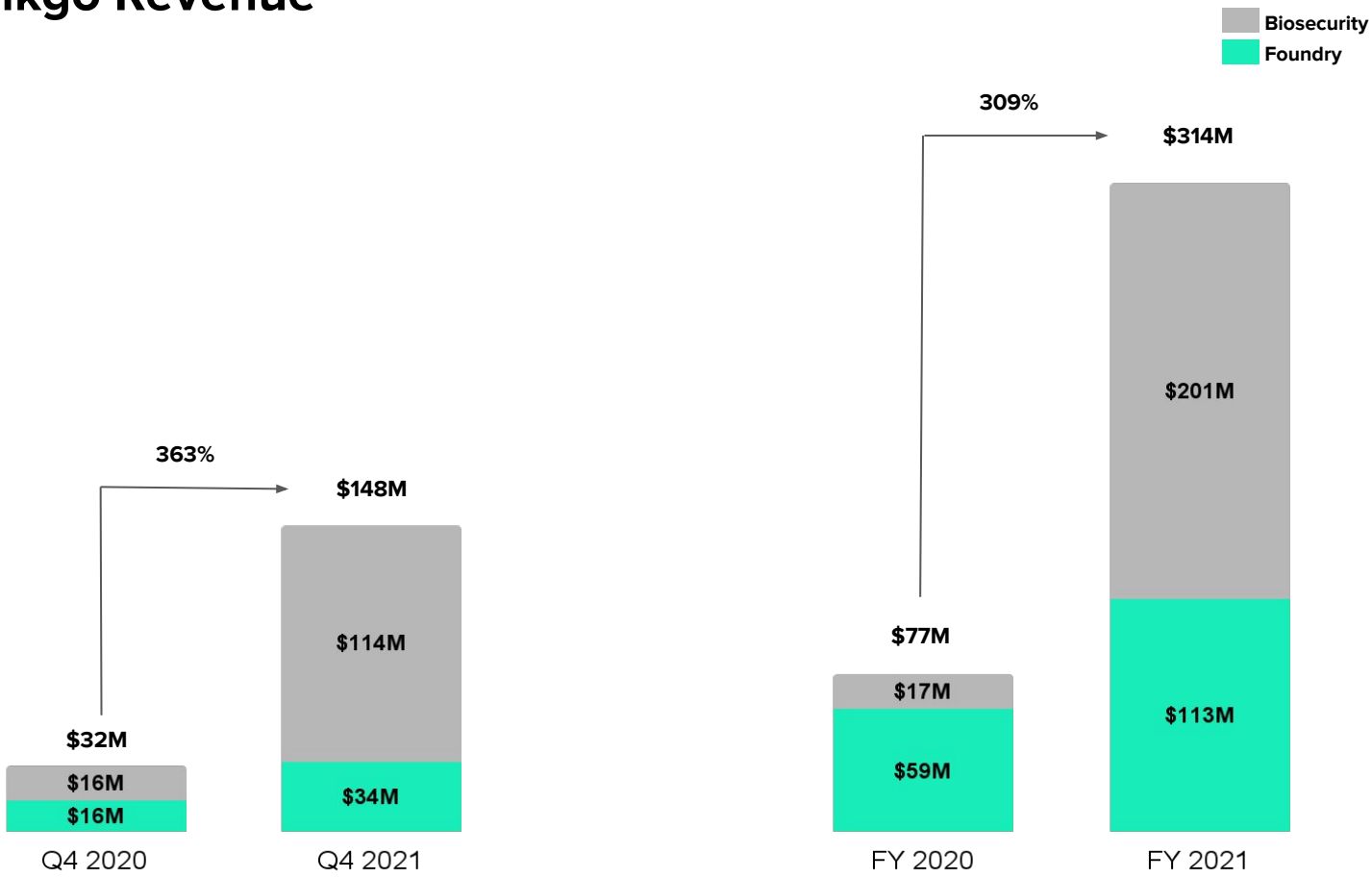
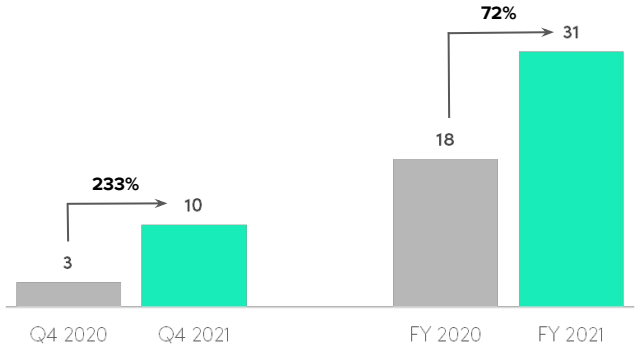
Total Ginkgo Revenue
(Unaudited)

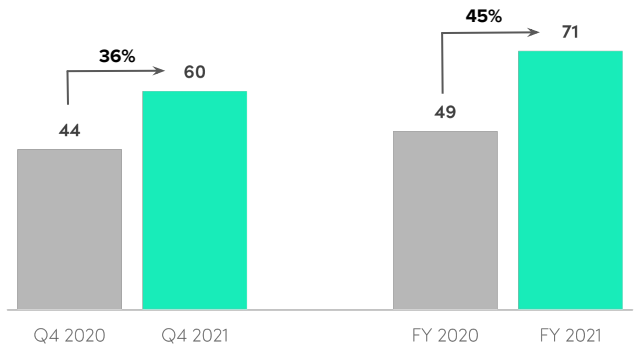


Cell Programming Highlights (Unaudited)

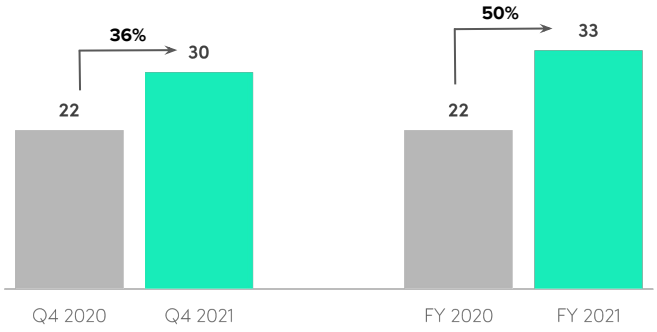
New Programs



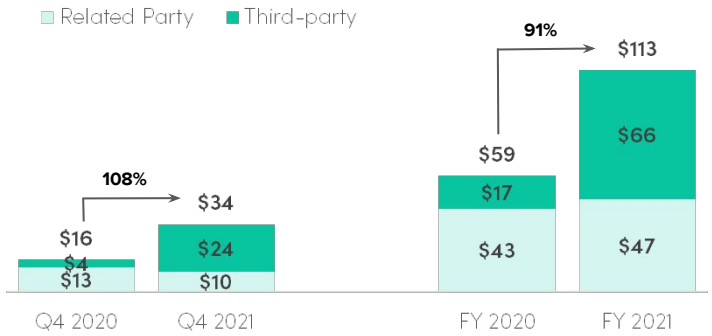
Total Active Programs



Total Active Customers

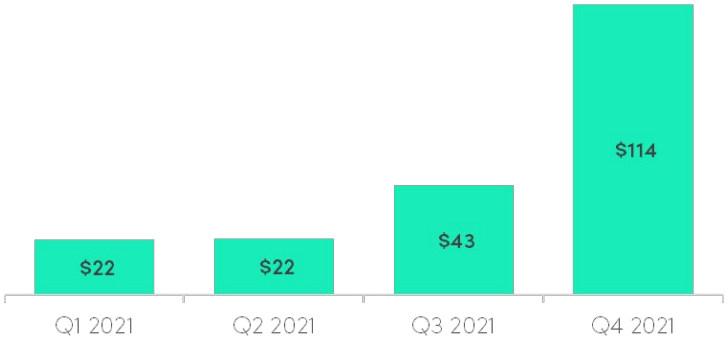


Foundry Revenue ($M)

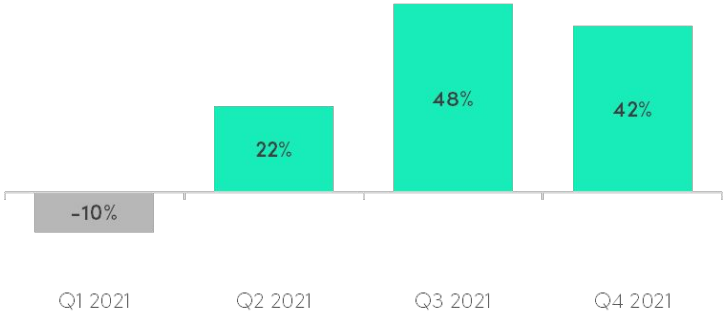


Biosecurity Highlights (Unaudited)

Biosecurity Revenue ($M)

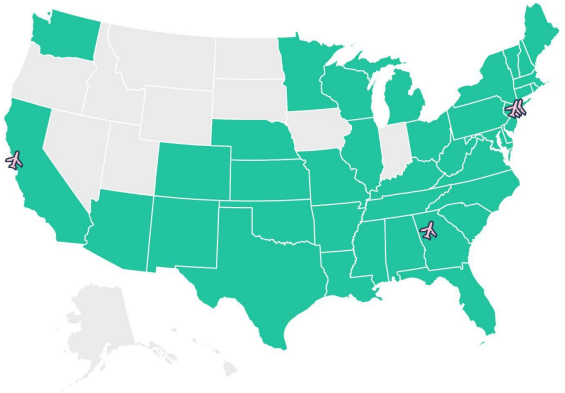


Biosecurity Gross Margin



Concentric's pathogen monitoring network has conducted testing across most of the U.S.(1)

Demonstrated ability to deliver testing in diverse jurisdictions



7,200,000+
Samples to date

4,000+
Organizations supported to date

4
Key US airports

States in which Concentric has delivered testing services

Airport testing locations

(1) Map shading reflects all states in which Concentric has delivered testing since launching in 2020, not all states currently have active testing programs. Breadth is important given diverse set of state operating models.

Data updated 03/27/22

Expanding our reach through partnerships with Eurofins' Clinical Enterprise and acquisition of Project Beacon COVID-19

Air travel SARS-CoV-2 genomic surveillance program in partnership with XpresCheck and CDC yielded first U.S. detections of Omicron sublineages BA.2 and BA.3

2021 Financial Summary (Unaudited)

In millions of USD except new programs and % YoY	Three Months Ended December 31, 2021	2020	% YoY	Year Ended December 31, 2021	2020	% YoY
New programs launched	**10**	**3**	**233%**	**31**	**18**	**72%**
Revenue:						
Foundry	34	16	108%	113	59	91%
Biosecurity	114	16	NM	201	17	NM
Total revenue	**148**	**32**	**363%**	**314**	**77**	**309%**
Biosecurity cost of sales	67	14	381%	130	16	731%
Research and development (excl. SBC)	55	61	(11%)	219	160	37%
General and administrative (excl. SBC)	39	13	205%	106	38	179%
Total operating expenses (excl. SBC)	**160**	**88**	**83%**	**455**	**213**	**113%**
Stock-based compensation [(1)]	1,673	0	NM	1,688	0	NM
Loss from operations	**(1,685)**	**(56)**	**NM**	**(1,828)**	**(137)**	**NM**
Net loss	**(1,605)**	**(46)**	**NM**	**(1,837)**	**(127)**	**NM**
Adjusted EBITDA	**1**	**(51)**	**NM**	**(106)**	**(121)**	**13%**
Capital expenditures	**5**	**19**	**(74%)**	**57**	**58**	**(2%)**

(1) For the year ended December 31, 2021, amount includes $5.0M of employer payroll taxes related to stock-based compensation

2022 Full Year Outlook

In millions of USD except new programs and % YoY	Historical			Outlook
	FY2020	FY2021	(20-21)	FY2022
New Programs	**18**	**31**	**72%**	**60**
GAAP Revenue				
Foundry	$59	$113	91%	$165 - $180
Biosecurity	$17	$201	NM	$160+
Total Revenue	**$77**	**$314**	**309%**	**$325 - $340+**

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We believe...

1

Ouch. And yet... Ginkgo is in a stronger position now than at any time in our past

The market has cooled dramatically for biotech and growth stocks, however Ginkgo has exceeded its targets across almost every dimension.

2

It's hard to achieve scale as a platform cell programming company

If it wasn't hard, there would be a lot more success stories. We may be able to program them, but make no mistake: cells are not computers. Everything we are building, from the technology to the business model, poses obstacles to reaching large scale. But our relative scale and cash balance position us well to achieve success.

3

If it's so hard, why try?

Because we must. The status quo needs to change, and we have the scale and time to try to pull it off. If we do, it will be both valuable and impactful.

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If it's so hard, why try?

The current market environment will provide both challenges and opportunities to Ginkgo and our shareholders



BIOTECH

STAT+

‘Nowhere to hide’: As biotech stocks plummet, an industry is being reshaped by the fallout

By Adam Feuerstein, Damian Garde and Matthew Herper Jan. 28, 2022 Reprints

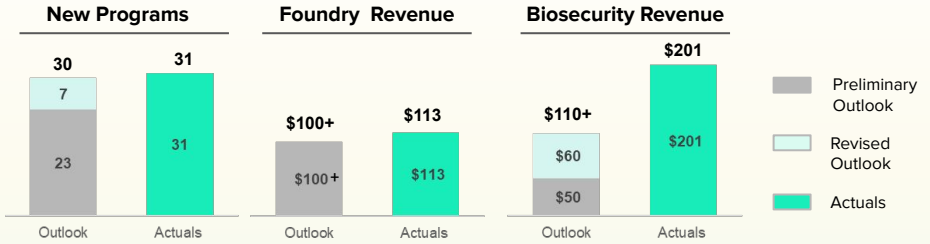
“So, if the company is better positioned today than it was a year ago, why is the stock price so much lower than it was a year ago? As the famed investor Benjamin Graham said, **“In the short term, the stock market is a voting machine; in the long term, it’s a weighing machine.”** *Clearly there was a lot of voting going on in the boom year of ‘99 – and much less weighing.* **We’re a company that wants to be weighed, and over time, we will be – over the long term, all companies are. In the meantime, we have our heads down working to build a heavier and heavier company.”**

Shareholder Letter from Jeff Bezos
2000 Amazon.com Annual Report

Ginkgo is in a stronger position now vs. any time in our history

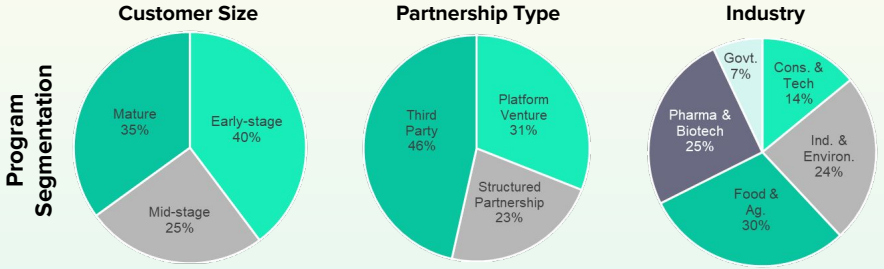
Strong Financial Health

- Strong performance: exceeded all of our public KPIs in 2021
- Long runway: ended the year with over $1.5 billion in cash, providing meaningful multi-year runway as we drive towards profitability



Diversified Customer Base

- Healthy mix of programs across all axes
- Individual end-markets can come in and out of favor (e.g., biofuels); diversification insulates us from these dynamics



New Business Running at Scale in Biosecurity

- Scaled business from $17 million to $201 million of profitable revenue in one year
- Established credibility as a leading provider of K-12 testing and are now working with the public sector to help define what a stable biosecurity infrastructure needs to look like

Strategic Position Strengthened

- Current market environment will benefit well-capitalized industry leaders
- Opportunity to continue long-term scaling plans (while narrow competitors may need to focus on nearer-term opportunities), including platform investments and M&A

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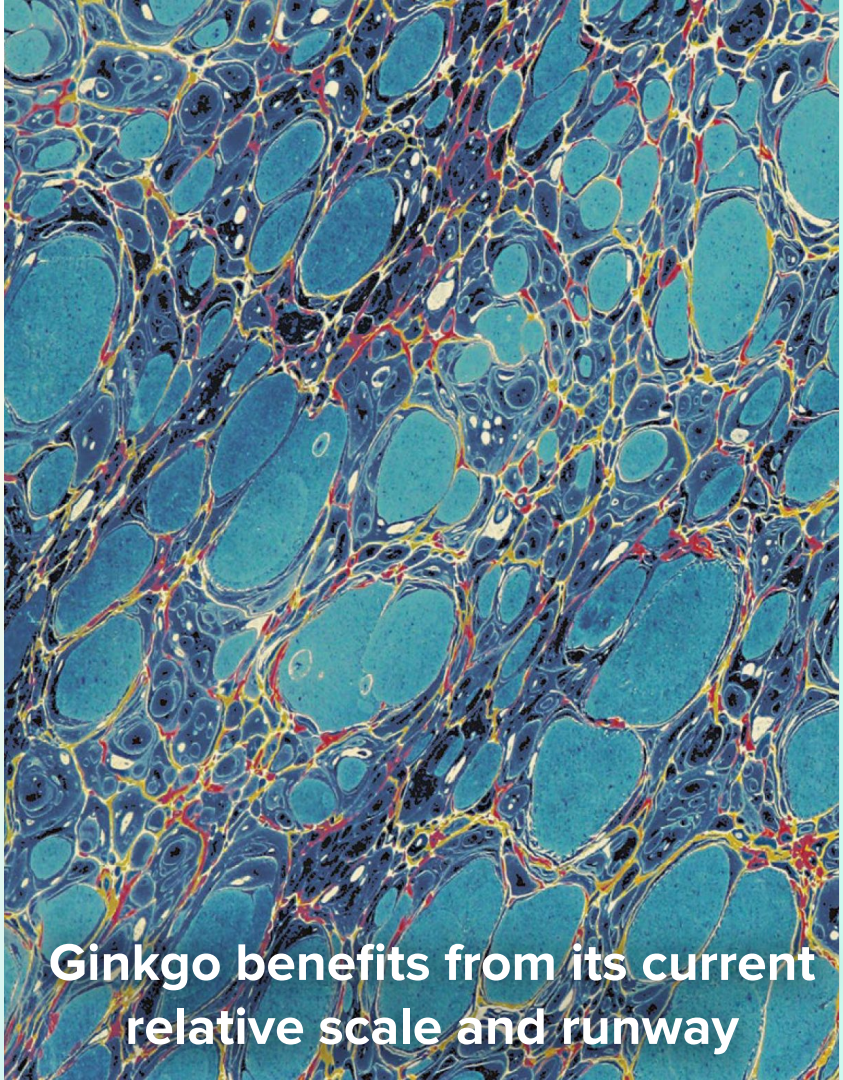
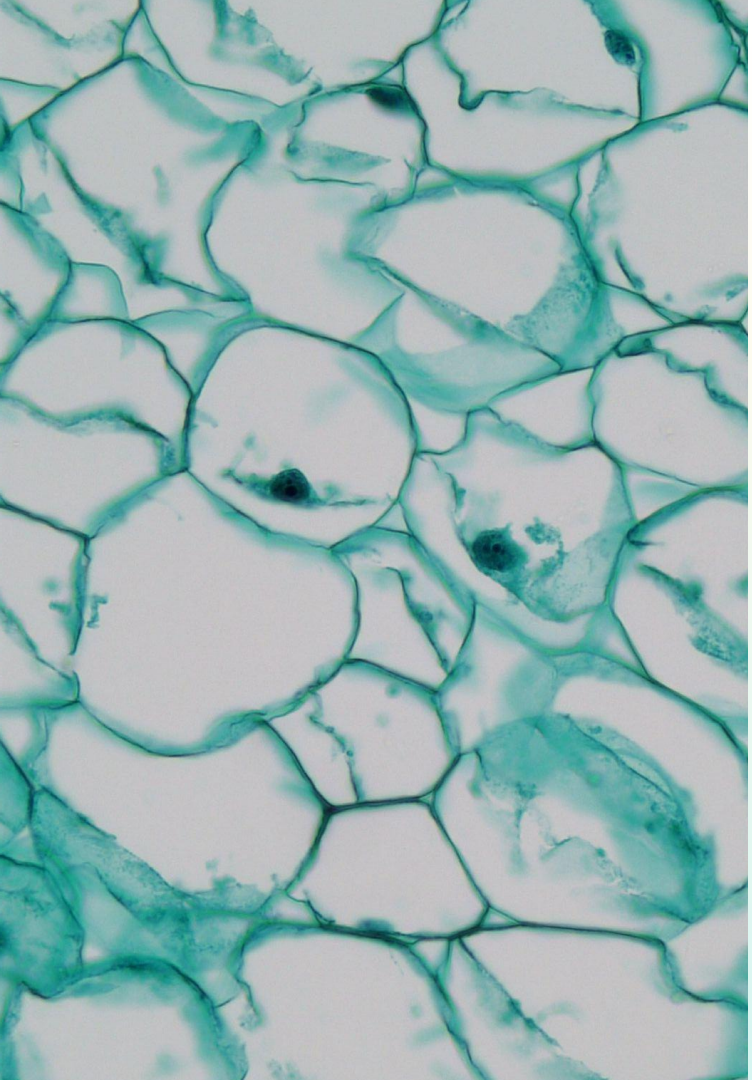
If it's so hard, why try?

Being a sub-scale cell programming platform will be difficult in this new market environment

"Online selling (relative to traditional retailing) is a scale business characterized by high fixed costs and relatively low variable costs. **This makes it difficult to be a medium-sized e-commerce company.** With a long enough financing runway, Pets.com and living.com may have been able to acquire enough customers to achieve the needed scale. **But when the capital markets closed the door on financing Internet companies, these companies simply had no choice but to close their doors.**"

Shareholder Letter from Jeff Bezos
2000 Amazon.com Annual Report





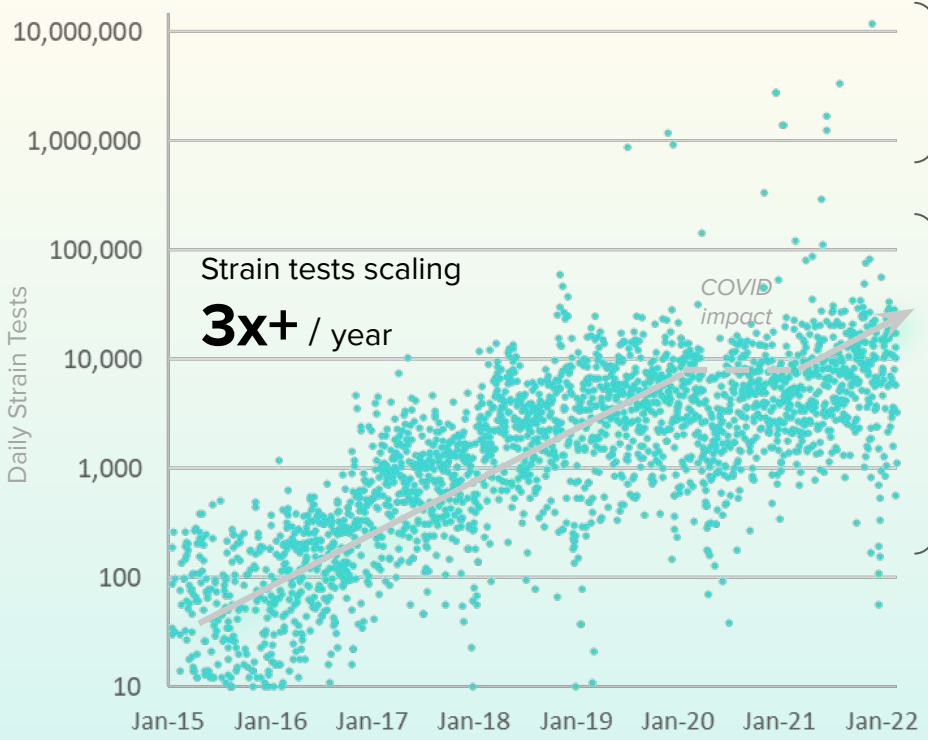
Biology, unlike computers, isn't predictable

"This is a unique moment in our relationship with biology. The COVID-19 pandemic has shown how a tiny bit of RNA code can upend our entire world *and* how mRNA vaccines can give us hope that we can bring the pandemic under control. **It is also a reminder that while biology is *programmable* like a computer, it is not *predictable* like a computer.**"

- Ginkgo Founder's Letter (in S-4 Filing), May 2021

Maintaining exponentially improving technology like Knight's Law is hard, complex work...

Daily Strain Tests: MEASURING THE OUTPUT OF THE PLATFORM



Key Drivers & Challenges

New biological tools: New techniques can create "step change" leaps for certain types of experiments

- Challenge then becomes how to more broadly deploy these techniques
- Not all Foundry technologies scale at the same rate

GenomeWeb

Ginkgo Bioworks to Acquire Swiss Bioengineering Firm FGen

NEW YORK — Ginkgo Bioworks said on Monday that it has signed a definitive agreement to acquire FGen, a Swiss contract research organization...

Automation: Focused on increasing automation across workflows as they mature

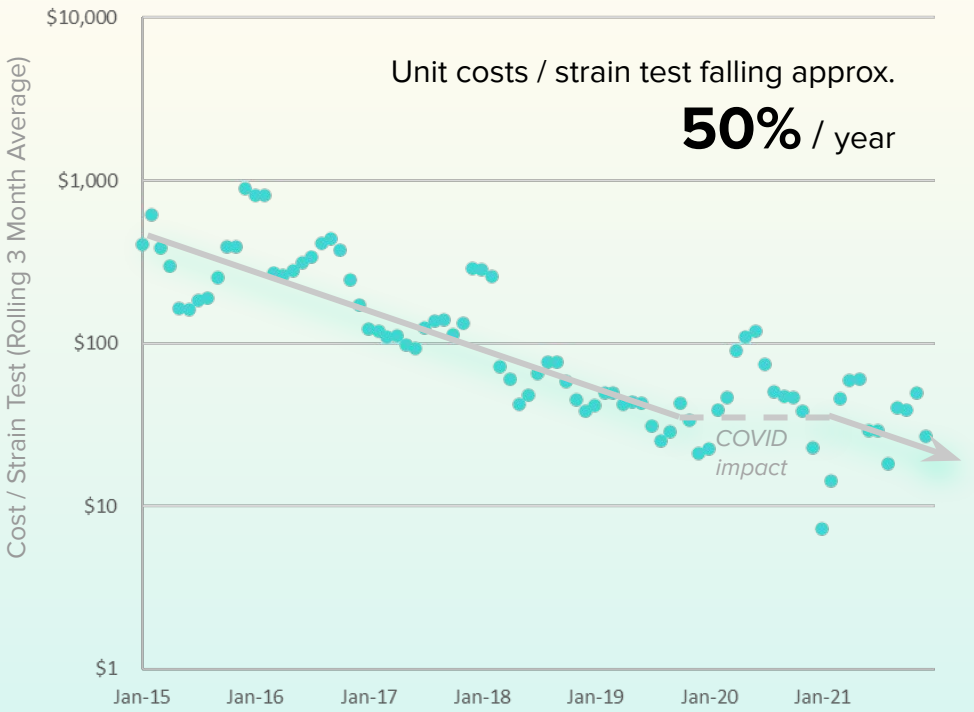
- Difficult to balance scalability and flexibility

Miniaturization: Miniaturization not only drives down reagent usage but these techniques are often higher throughput (e.g. pipette-less liquid handling)

- Requires constant investment in new technologies (exponential scale tends to "break" current supply chains, often quickly - e.g. pipette tips, plates, etc.)

...but still easier than trying to scale the status quo of manual lab work exponentially!

Cost per Strain Tests: MEASURING THE EFFICIENCY OF THE PLATFORM



We believe "by hand" lab techniques get "stuck" and have minimal (if any) improvements over time and with scale

It took us about 8 years from founding to reach cost parity with "by hand" lab work, but now that we have, our cost advantage will become more and more significant

As Knight's Law matures we will need increased industry coordination to maintain exponential improvements over time

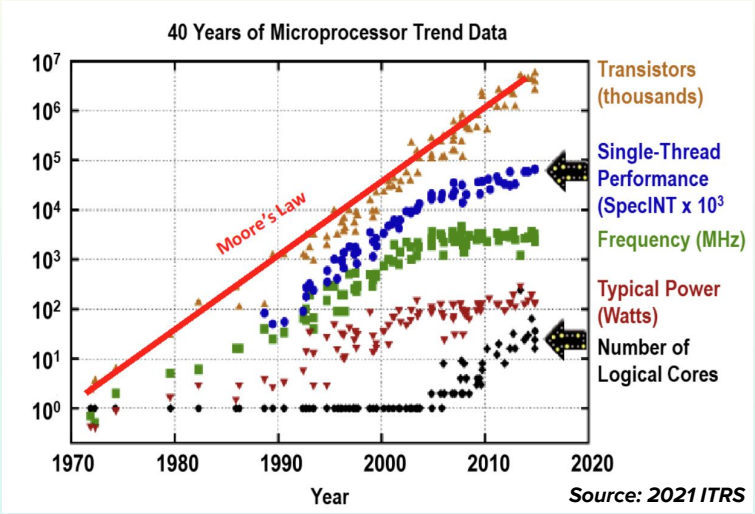
(c) Additional Design Technology Requirements

Year of Production	*2003*	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2012*	*2015*	*2018*	*Driver*
Technology Node		*hp90*			*hp65*						
DRAM ½ Pitch (nm)	*100*	*90*	*80*	*70*	*65*	*57*	*50*	*35*	*25*	*18*	
MPU/ASIC ½ Pitch (nm)	*107*	*90*	*80*	*70*	*65*	*57*	*50*	*35*	*25*	*18*	
MPU Printed Gate Length (nm)	*65*	*53*	*45*	*40*	*35*	*32*	*28*	*20*	*15*	*10*	
MPU Physical Gate Length (nm)	*45*	*37*	*32*	*28*	*25*	*22*	*20*	*14*	*10*	*7*	
SOC new design cycle (months)	12	12	12	12	12	12	11	11	10	9	SOC
SOC logic Mtx per designer-year (10-person team)	1.9	2.5	3.3	4.3	5.4	7.4	10.6	24.6	73.4	113	SOC
SOC dynamic power reduction beyond scaling (X)	0	0.1	0.1	0.2	0.2	0.2	0.2	6	4.7	8.1	SOC
SOC standby power reduction beyond scaling (X)	0.37	1.4	2.4	3.4	5.1	6.4	8.73	18.8	44.4	232	SOC
%Test covered by BIST	20	20	25	30	35	40	45	60	75	90	MPU, SOC

Mtx—Million transistors

Manufacturable solutions exist, and are being optimized
Manufacturable solutions are known
Interim solutions are known
Manufacturable solutions are NOT known

Source: *2003 ITRS*, Tables A, B, and 19, 1, 7, 124.

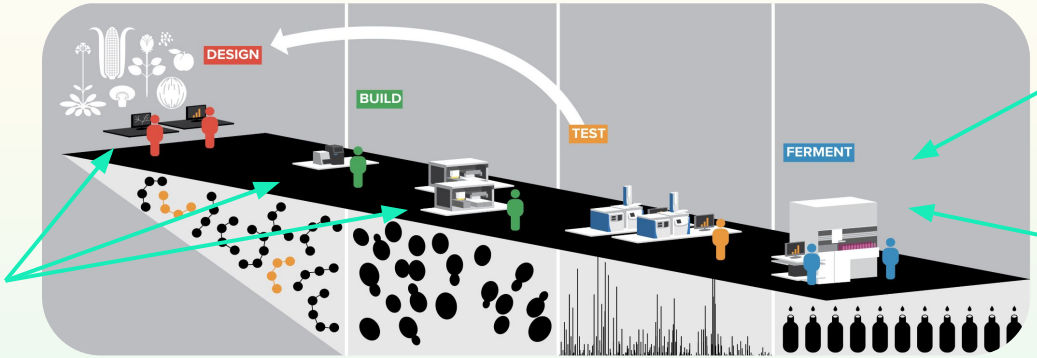


The semiconductor industry required the development of many technologies in parallel to achieve industry scaling goals

We expect biotechnology to have a similar dynamic

If Ginkgo is successful, it will necessitate an increase in scale of key tools and/or adjacent capacity

Reagents / Consumables
(e.g. pipette tips)



Feedstocks
(e.g. sugar or novel feedstocks)

Fermentation Capacity
(e.g. tanks and/or novel methods)

Long R&D cycles will help adjacent sectors meet scaling needs, but we may find we need to help close certain gaps

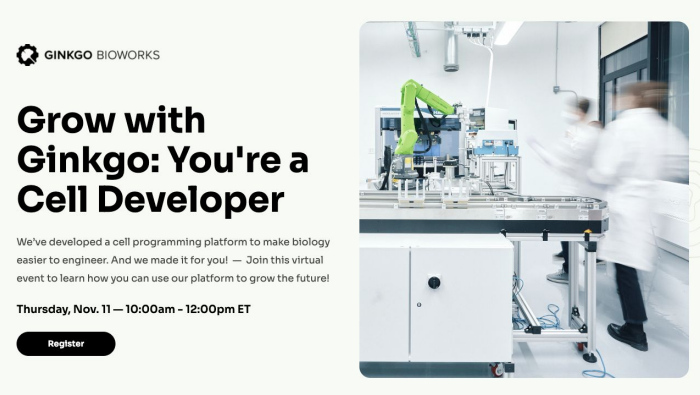
E.g. we're watching the animal-free protein space, which has had significant recent success and is currently facing a gap in pilot scale manufacturing

Exhibit 7 - Taste, Texture, and Price Parity Depends on Improvements in Key Steps in the Value Chain

	Production and sourcing			Processing		
	Source	Growth	Harvest	Extraction	Formulation	Texturizing
Microorganism-based	1 Increase in metabolic efficiency	2 Adoption of low-cost feedstocks	3 Optimization of harvesting and protein extraction processes[1]		4 Reduction in the cost and complexity of additives	—[2]

Source: BCG, "Food for Thought - The Protein Transformation", March 2021

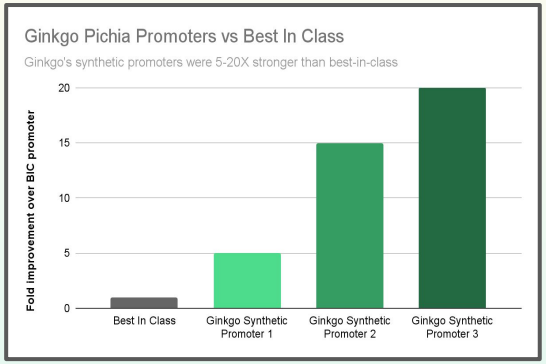
Codebase reuse is better for the whole industry, enabling more product successes and helping spur market growth, but requires changing the status quo IP regime in biotech



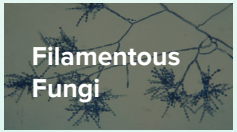
First two CDKs are focused on protein production

We believe they currently represent the state of the art in protein production





CDKs – launched in Q4 – help demonstrate value of IP sharing across the industry, shortening development timelines and increasing probability of success



DUTCH DNA
a heartbeat ahead

Developing additional, diverse CDKs is a top R&D priority

Biotechnology products take significant time to get to market; both scale and diversity are needed to achieve predictable cash flows

Downstream "Present Value" Will Move with Broader Markets

Equity:

- Drop in growth & biotech valuations drives lower marks for existing equity positions
- Effect is felt immediately as equity is a present value measurement (of expected future value)

Cash Milestones & Royalties:

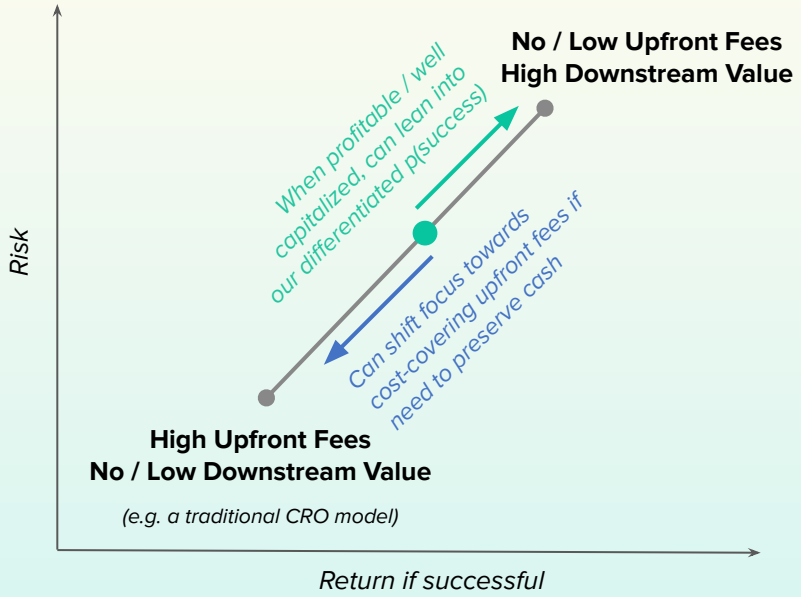
- Milestones and royalties are only paid upon program success / commercialization and are thus delayed
- Higher discount rates similarly drive a lower NPV for these future expected payments

Ended 2021 with **over $1.5 billion in cash**

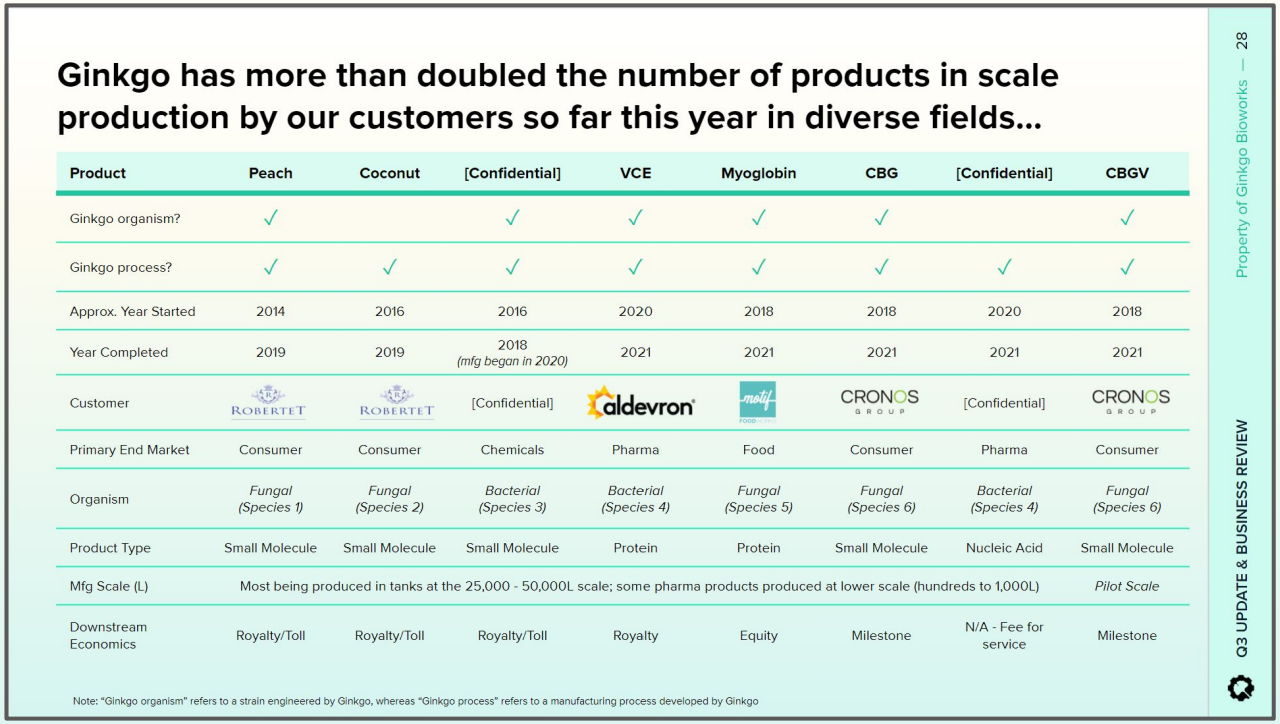
Provides meaningful multi-year runway as we drive towards profitability

Tunable Balance of Risk Sharing

We can adjust the balance between upfront fees and downstream value based on the customer and Ginkgo's position



Platforms are dependent on customers bringing products to market



Ginkgo has more than doubled the number of products in scale production by our customers so far this year in diverse fields...

Product	Peach	Coconut	[Confidential]	VCE	Myoglobin	CBG	[Confidential]	CBGV
Ginkgo organism?	✓		✓	✓	✓	✓		✓
Ginkgo process?	✓	✓	✓	✓	✓	✓	✓	✓
Approx. Year Started	2014	2016	2016	2020	2018	2018	2020	2018
Year Completed	2019	2019	2018 *(mfg began in 2020)*	2021	2021	2021	2021	2021
Customer	ROBERTET	ROBERTET	[Confidential]	aldevron	motif FOOD WORKS	CRONOS GROUP	[Confidential]	CRONOS GROUP
Primary End Market	Consumer	Consumer	Chemicals	Pharma	Food	Consumer	Pharma	Consumer
Organism	*Fungal (Species 1)*	*Fungal (Species 2)*	*Bacterial (Species 3)*	*Bacterial (Species 4)*	*Fungal (Species 5)*	*Fungal (Species 6)*	*Bacterial (Species 4)*	*Fungal (Species 6)*
Product Type	Small Molecule	Small Molecule	Small Molecule	Protein	Protein	Small Molecule	Nucleic Acid	Small Molecule
Mfg Scale (L)	Most being produced in tanks at the 25,000 - 50,000L scale; some pharma products produced at lower scale (hundreds to 1,000L)							*Pilot Scale*
Downstream Economics	Royalty/Toll	Royalty/Toll	Royalty/Toll	Royalty	Equity	Milestone	N/A - Fee for service	Milestone

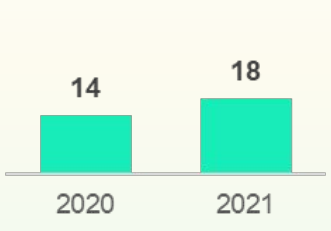
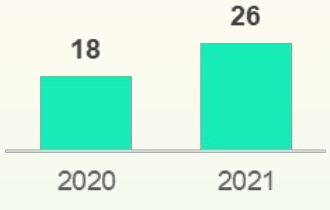
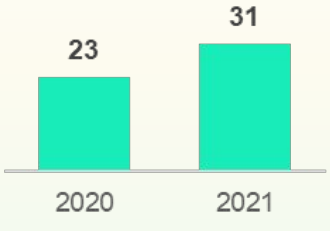
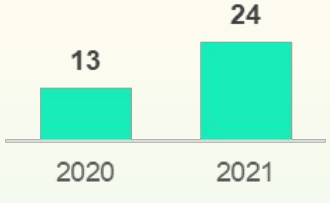
Note: "Ginkgo organism" refers to a strain engineered by Ginkgo, whereas "Ginkgo process" refers to a manufacturing process developed by Ginkgo

Excerpt from Q3 2021 Earnings Call

We must continue to drive a diverse set of programs to completion...

...and then rely on our customers to successfully bring those products to market

Overexposure to a narrow market can mean that if that market stumbles the platform can fail. We plan to remain horizontal.

	Consumer & Technology	Industrials & Environment	Food & Agriculture	Pharma & Biotech
Cumulative Programs				
Archetype	• Wide variation in program types: ○ New product innovation (higher risk / higher value share) and drop-in-replacements (lower risk / lower value share) ○ Commodity segments (lower value share) vs. specialty ingredients (higher value share) • Historically focused on cost and sustainability, increasingly focused on new functionality	• Many projects involve a deeper "discovery" element (higher risk, higher value share) • Moderate time to market, depending on regulatory framework	• Majority of programs are geared towards creating new products and have extensive regulatory requirements / oversight • High risk (i.e. clinical failure) offset by high margins (and higher royalty rates)	
Late-Stage Examples	ROBERTET: Peach and coconut flavors CRONOS GROUP: CBG and CBGV successfully produced	Confidential: Small molecule chemical	motif FOODWORKS: Hemami GRAS Certification JOYN BIO: Early Nitrogen Fixation field trials	aldevron: >10x improvement Confidential: Nucleic acid vaccine (in trials) synlogic: IND-enabling studies

Our biosecurity business will need to evolve as we move from pandemic response to pandemic prevention

The Atlantic

HEALTH

America Is Zooming Through the Pandemic Panic-Neglect Cycle

All epidemics trigger the same Sisyphean cycle of panic and neglect. Even so, that cycle isn't meant to spin *this* quickly.

By Ed Yong

MARCH 17, 2022

Many state contracts expire July 1, 2022. Still to be seen what, if any, long-term measures will be put in place.

We will remain conservative in our biosecurity guidance until it is clear what is being built and how Ginkgo will participate in the new biosecurity ecosystem.

The New York Times

A C.D.C. airport surveillance program found the earliest known U.S. cases of Omicron subvariants.



By Emily Anthes
March 24, 2022

An airport-based coronavirus surveillance program in the United States for travelers arriving from abroad detected the first known U.S. case of the highly contagious Omicron subvariant BA.2 in December, according to a new study.

We believe...

1

Ouch. And yet... Ginkgo is in a stronger position now than at any time in our past

2

It's hard to achieve scale as a platform cell programming company

3

If it's so hard, why try?

Because we must. The status quo needs to change, and we have the scale and time to try to pull it off. If we do, it will be both valuable and impactful.

Breakthrough technology companies often have longer times to profitability. Low interest rate environment has led to a blossoming of these companies in the US over the last 15 years.

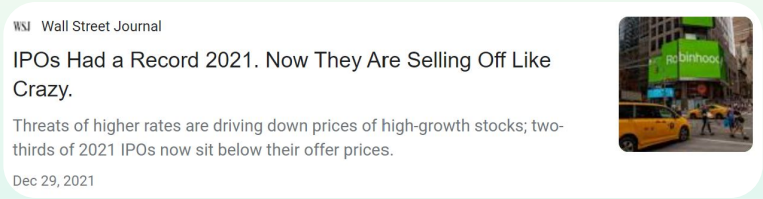
"The list of successful car company startups is short. As of 2016, the number of American car companies that haven't gone bankrupt is a grand total of two: Ford and Tesla. **Starting a car company is idiotic and an electric car company is idiocy squared.**"

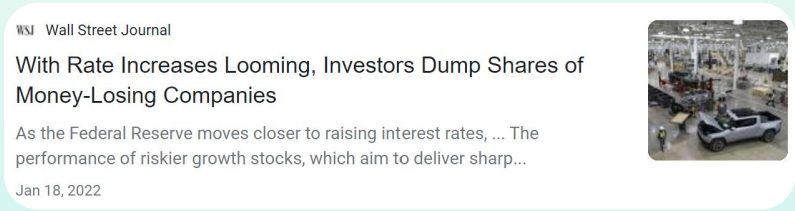
- Elon Musk, Tesla "Master Plan Part Deux", July 2016



Helion secures $2.2B to commercialize fusion energy

Haje Jan Kamps @Haje / 10:01 AM EDT • November 5, 2021





"**Creating a rocket company has to be one of the dumbest and hardest ways to "make money".** If it was about money, I'd just do another Internet company."

- Elon Musk, Twitter, March 2018

It’s easy to underestimate biology’s potential. These are hard problems worth solving.

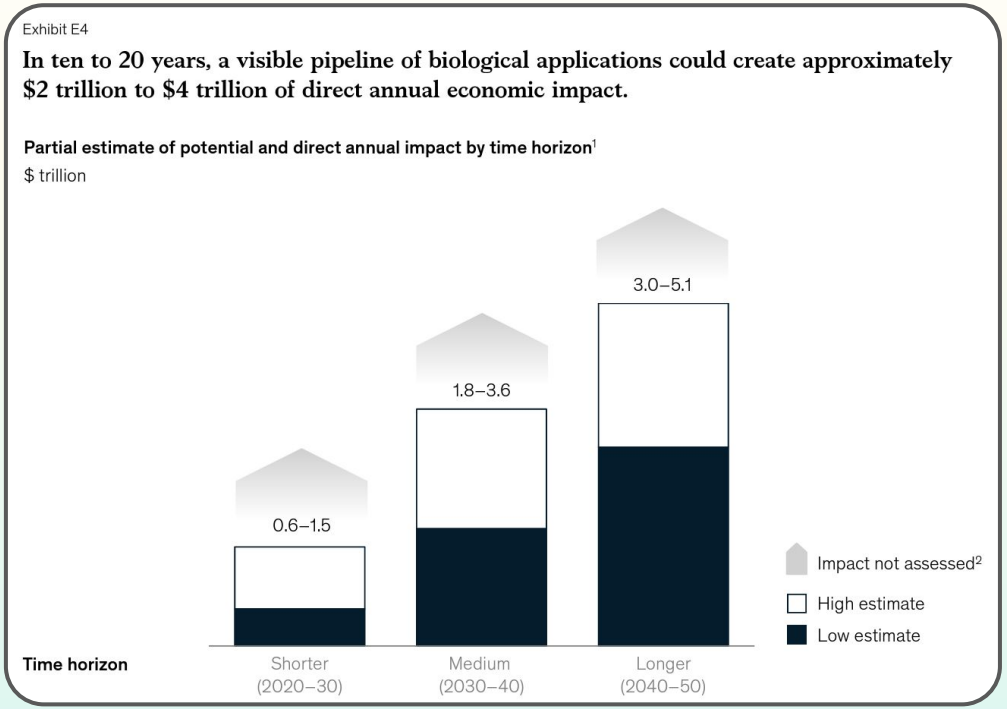
“

60% of the world’s physical inputs could be made using biological means

45% of the world’s disease burden could be addressed

30% of private-sector R&D spent in biology-related industries

”



Read More

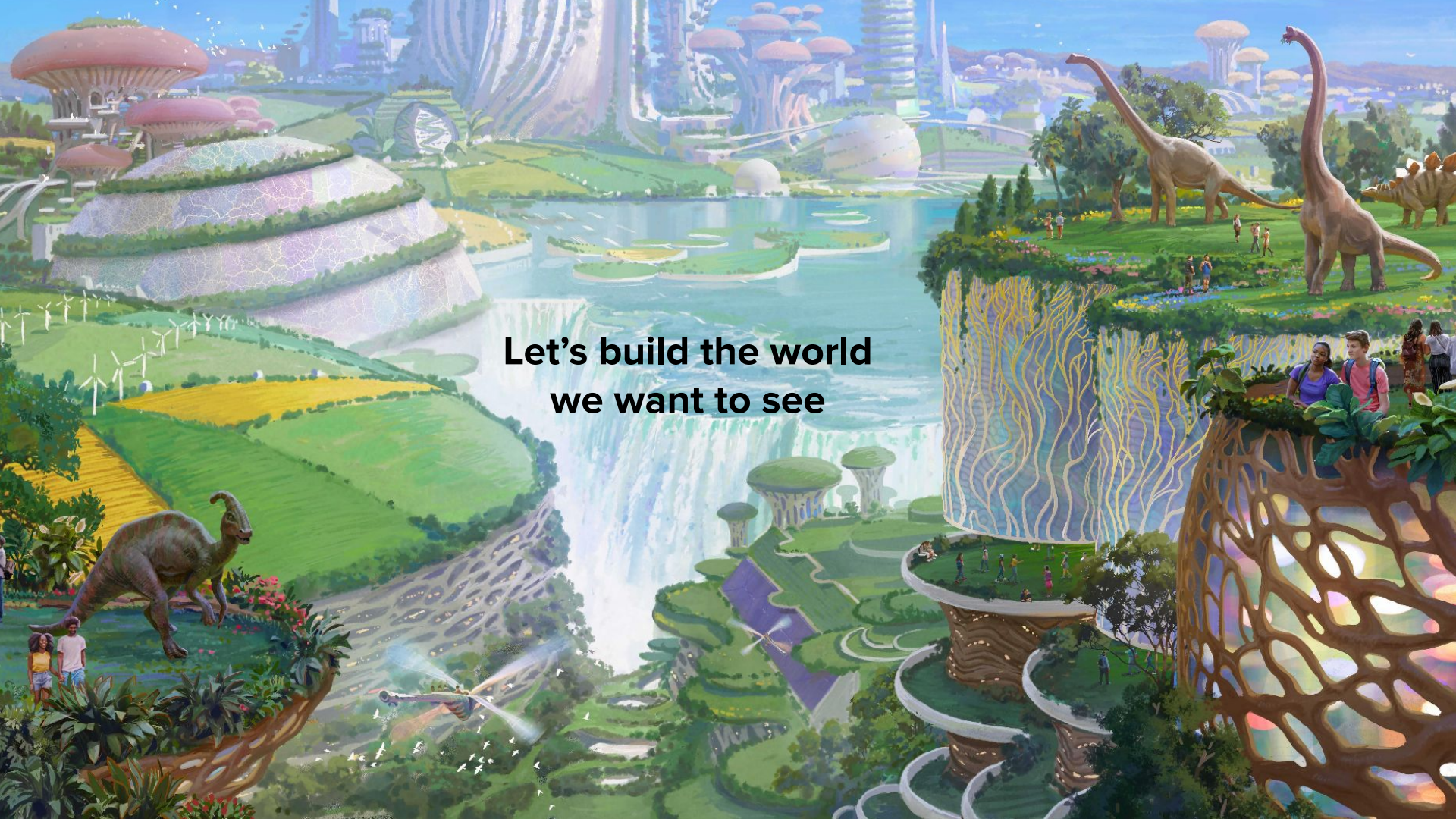
Source: McKinsey Global Institute, The Bio Revolution, May 2021

Several discrete catalysts that could change the game.

- **Strong demand,** across both startups and large enterprise customers, likely to lead to meaningful new partnerships (though timing can be lumpy)
- **Deep M&A pipeline** across both tuck-in technologies and more transformative opportunities
- Demonstrated ability to scale rapidly and pivot as **emerging opportunities** arise, e.g. biosecurity

It’s shaping up to be an exciting 2022!




Let’s build the world
we want to see

Agenda

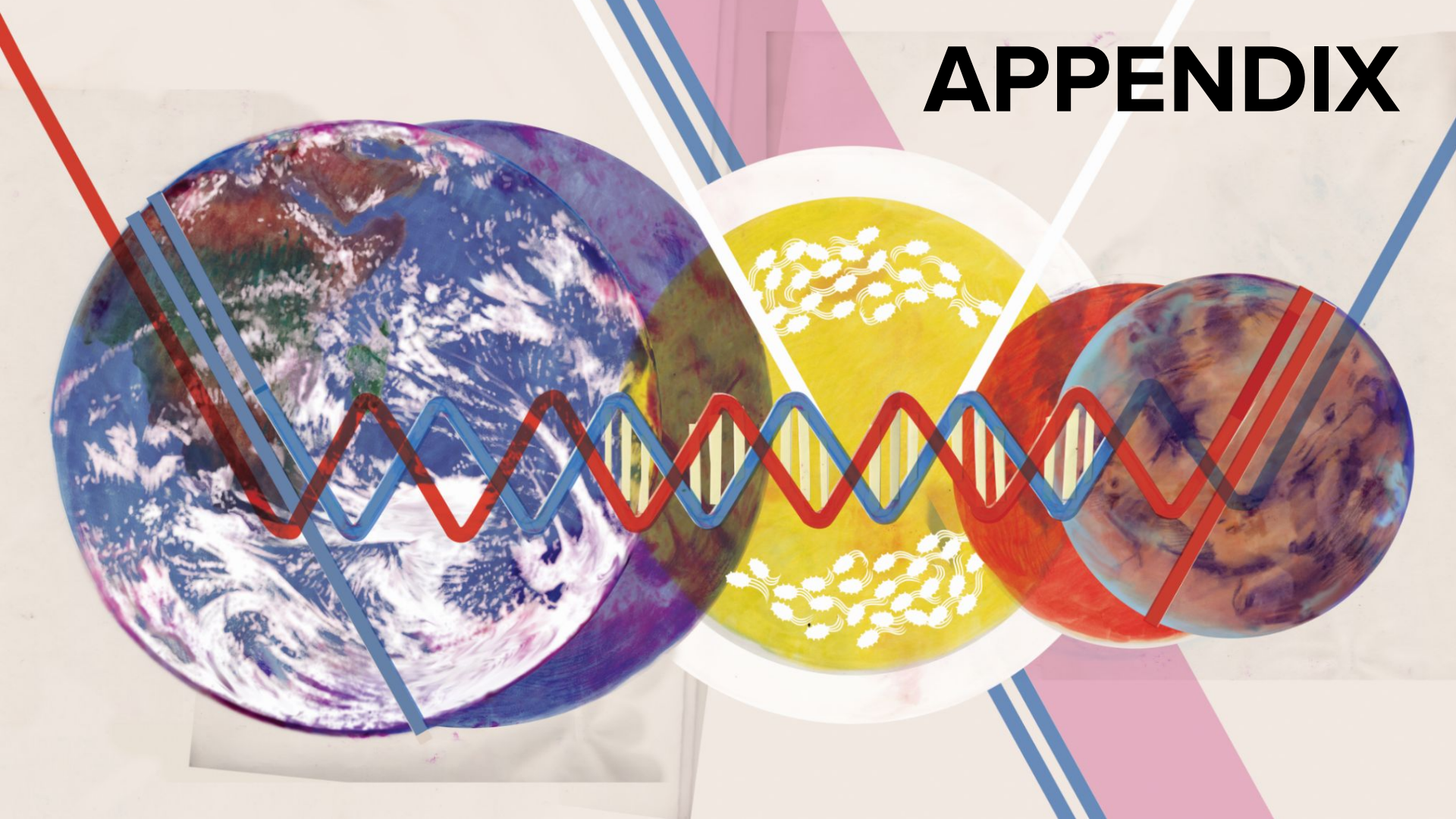
Introduction
Jason Kelly, Co-Founder and CEO

2021 Full Year Financial Update
Mark Dmytruk, CFO

Strategic Positioning
Jason Kelly, Co-Founder and CEO

Q&A Session
Moderated by Anna Marie Wagner, SVP Corporate Development

APPENDIX



Cell Program Counts

	Three Months Ended December 31,		Year Ended December 31,	
	2021	2020	2021	2020
New Programs	10	3	31	18
Current Active Programs	60	44	71	49
Cumulative Programs	105	74	105	74

New Programs: New Programs represent the number of unique programs commenced within the reporting period. As new programs have multi-year durations, we view this metric as an indication of future Foundry revenue growth.

Current Active Programs: Current Active Programs represent the number of unique programs for which we performed R&D services in the reporting period. We view this metric as an indication of current period and future Foundry revenue.

Cumulative Programs: Cumulative Programs represent the cumulative number of unique programs Ginkgo has commenced. We view this metric as an indication of our competitive advantage and as a leading indicator of the mid- to long-term potential economic value derived from downstream value share arrangements. The cumulative number of programs also contributes to Codebase, which accumulates with each additional program we conduct over time and drives better experimental direction and improves the odds of technical success in current and future programs.

Cell Program Counts - Quarterly

	Three Months Ended			
	Mar 31, 2021	**Jun 30, 2021**	**Sep 30, 2021**	**Dec 31, 2021**
New Programs	4	7	10	10
Current Active Programs	44	46	54	60
Cumulative Programs	78	85	95	105

New Programs: New Programs represent the number of unique programs commenced within the reporting period. As new programs have multi-year durations, we view this metric as an indication of future Foundry revenue growth.

Current Active Programs: Current Active Programs represent the number of unique programs for which we performed R&D services in the reporting period. We view this metric as an indication of current period and future Foundry revenue.

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Adjusted EBITDA Reconciliation (Unaudited)

In millions of USD	Three Months Ended December 31,		Year Ended December 31,	
	2021	2020	2021	2020
Net loss attributable to Ginkgo Bioworks Holdings, Inc. stockholders	**$ (1,600.7)**	**$ (46.9)**	**$ (1,830.0)**	**$ (126.6)**
Interest income	(0.5)	(0.1)	(0.8)	(2.6)
Interest expense	0.6	0.6	2.4	2.4
Income tax (benefit) provision	(0.7)	0.0	(1.5)	1.9
Depreciation and amortization	8.0	4.0	29.1	13.9
EBITDA	**$ (1,593.3)**	**$ (42.5)**	**$ (1,800.9)**	**$ (111.1)**
Stock-based compensation [1]	1,672.8	0.1	1,687.6	0.5
Loss on equity method investments [2]	4.1	(1.2)	74.4	0.3
Loss (gain) on investments [3]	14.6	(1.2)	11.5	3.7
Change in fair value of warrant liabilities	(77.1)	0.0	(58.6)	0.0
Gain on settlement of partnership agreement	(22.8)	(0.7)	(23.8)	(8.3)
Other [4]	2.3	(5.3)	3.7	(6.6)
Adjusted EBITDA	**$ 0.6**	**$ (50.8)**	**$ (106.0)**	**$ (121.4)**

(1) For the three months ended and the year ended December 31, 2021, includes $5 0 million in employer payroll taxes related to stock-based compensation

(2) For the three months ended December 31, 2021 and 2020, represents losses on equity method investments under the hypothetical liquidation at book value ("HLBV") method of $4 7 million and $1 8 million, respectively, net of losses attributable to non-controlling interests For the years ended December 31, 2021 and 2020, represents losses on equity method investments under the HLBV method of $77 3 million and $0 4 million, respectively, net of losses attributable to non-controlling interests

(3) Includes loss on the change in fair value of our common stock investments in Synlogic and Cronos and warrants to purchase Synlogic common stock, which are all carried at fair value

(4) For the three months ended and the year ended December 31, 2021, includes mark-to-market adjustments on Access Bio convertible notes and the Glycosyn promissory note For the three months ended and the year ended December 31, 2020, primarily includes milestone payments under our agreement with the National Institutes of Health

Stock-Based Compensation (Unaudited)

In millions of USD	Three Months Ended December 31,			Year Ended December 31,		
	2021	2020	% YoY	2021	2020	% YoY
Total Stock-Based Compensation	**1,672.8**	**0.1**	**NM**	**1,687.6**	**0.5**	**NM**
Amount included in Research and Development expenses:	930.3	0.0	NM	930.4	0.1	NM
Stock-Based Compensation	926.7	0.0	NM	926.7	0.1	NM
Employer Payroll Taxes Related to Stock-Based Compensation	3.6	0.0	NM	3.6	0.0	NM
Amount included in General and Administrative expenses	742.5	0.1	NM	757.2	0.4	NM
Stock-Based Compensation	741.1	0.1	NM	755.8	0.4	NM
Employer Payroll Taxes Related to Stock-Based Compensation	1.4	0.0	NM	1.4	0.0	NM

Modification of Equity Awards in Connection with Business Combination

In the fourth quarter, Ginkgo recognized $1.7 billion of stock-based compensation expense. Prior to becoming a public company in September 2021, Ginkgo granted restricted stock units ("RSUs") with both a service-based vesting condition and a performance-based vesting condition, defined as a change in control or an initial public offering (both as defined in the underlying award agreement). Ginkgo historically did not recognize any stock-based compensation expense associated with these awards due to the performance-based vesting condition.

As previously disclosed, on November 17, 2021 the board of directors modified the vesting terms of RSUs, such that Ginkgo's business combination with Soaring Eagle Acquisition Corp. was deemed to have met the performance condition for vesting. This was accounted for as a modification and resulted in a catch-up adjustment of approximately $1.5 billion of incremental stock-based compensation expense in the fourth quarter of 2021 (calculated based on the number of RSUs impacted, which had been granted since 2015, at the share price of $13.59 on November 17, 2021). Stock-based compensation expense also increased by $173.5 million related to RSU earnout shares ("Earnout RSUs") which were also subject to the same performance condition as the underlying RSUs.

As of December 31, 2021, there was $2.2 billion of unrecognized stock-based compensation expense related to the above catch-up adjustment for those RSUs and Earnout RSUs that had not yet fully met the service-based vesting condition as of December 31, 2021. This amount will be recognized over a weighted-average period of 1.6 years.

Foundry Revenue (Unaudited)

In thousands of USD, except percentages	Three Months Ended December 31,				Year Ended December 31,			
	2021	% of Total	2020	% of Total	2021	% of Total	2020	% of Total
Related Parties	10,415	30%	12,751	78%	47,161	42%	42,535	72%
Third Parties	23,741	70%	3,668	22%	65,828	58%	16,686	28%
Foundry Revenue	**$34,156**	**100%**	**$16,419**	**100%**	**$112,989**	**100%**	**$59,221**	**100%**

Related Parties: Related parties include Platform Ventures (Joyn, Motif, Allonnia and Arcaea) and Structured Partnerships (Genomatica and Synlogic). See notes to our condensed consolidated financial statements for additional information related to transactions with related parties

Third Parties: Includes all other customers

Property of Ginkgo Bioworks — 40

Update on M&A Activity

We expect M&A to be an important strategic lever for Ginkgo, as we can acquire high potential technologies and deploy them at scale. Two deals recently announced:

Project Beacon COVID-19

What: Project Beacon is a Boston-based social benefit organization focused on helping to increase the capacity, availability, accessibility, and affordability of COVID-19 testing.

Why: Ability to bring on an experienced team and deepen relationship with Commonwealth of Massachusetts with minimal financial investment.

When: Announced January 19, 2022

How: Strong, pre-existing relationship with Project Beacon made Concentric the acquirer of choice

fgen

What: FGen is a Swiss company specializing in ultra-high-throughput screening, using nanoliter reactor technology.

Why: Enhances Ginkgo's cell screening and directed evolution capabilities. Technology can be broadly applied across many Ginkgo programs.

When: Announced March 14, 2022

How: Multi-year partnership with FGen built trust and respect between the teams