

Global Premier CRDMO: Enabling Global Partners and Delivering Sustainable High Growth

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Fengxian Shanghai*



WuXi Biologics
Global Solution Provider

Stock Code: 2269.HK

Forward-Looking Statements

This presentation may contain certain “forward-looking statements” which are not historical facts, but instead are predictions about future events based on our beliefs as well as assumptions made by and information currently available to our management. Although we believe that our predictions are reasonable, future events are inherently uncertain and our forward-looking statements may turn out to be incorrect. Our forward-looking statements are subject to risks relating to, among other things, the ability of our service offerings to compete effectively, our ability to meet timelines for the expansion of our service offerings, and our ability to protect our clients’ intellectual property. Our forward-looking statements in this presentation speak only as of the date on which they are made, and we assume no obligation to update any forward-looking statements except as required by applicable law or listing rules. Accordingly, you are strongly cautioned that reliance on any forward-looking statements involves known and unknown risks and uncertainties. All forward-looking statements contained herein are qualified by reference to the cautionary statements set forth in this section.

Use of Adjusted Financial Measures (Non-IFRS Measures)

We have provided adjusted net profit, adjusted net profit margin, adjusted EBITDA, adjusted EBITDA margin and adjusted diluted earnings per share for the corresponding periods, which excludes the share-based compensation expenses, listing expenses and foreign exchange gains or losses, and are not required by, or presented in accordance with, IFRS. We believe that the adjusted financial measures used in this presentation are useful for understanding and assessing underlying business performance and operating trends, and we believe that management and investors may benefit from referring to these adjusted financial measures in assessing our financial performance by eliminating the impact of certain unusual and non-recurring items that we do not consider indicative of the performance of our business. However, the presentation of these non-IFRS financial measures is not intended to be considered in isolation or as a substitute for the financial information prepared and presented in accordance with IFRS. You should not view adjusted results on a stand-alone basis or as a substitute for results under IFRS, or as being comparable to results reported or forecasted by other companies.

01

Success of Follow the Molecule Strategy

04

Company Update

02

Transferring the secret of success to Ireland

05

Summary

03

Disposables as powerful as stainless technologies

Success of Follow the Molecule Strategy

01

Pompe Disease Overview

Pompe disease is a rare genetic disorder that causes progressive weakness to the heart and skeletal muscles.



Two types which are Late-onset Pompe disease (LOPD) and Infantile-onset Pompe disease (IOPD)

5,000 – 10,000 patients globally.

Caused by mutations in a gene that makes an enzyme called acid alpha-glucosidase (GAA)

Respiratory failure and heart failure are two of the most lethal manifestations of diseases.

Enzyme replacement therapy can treat Pompe disease.

Currently Nexviazyme from Sanofi are used on market, cost \$760k/year.

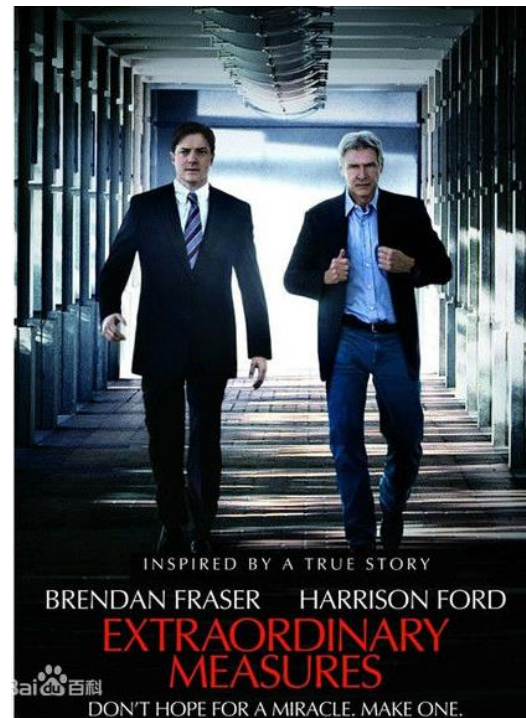
If newborn babies diagnosis as Pompe disease, they usually do not live to 1-2 years old.

How Drug Discovery Became a Personal Journey (1998-2010)?

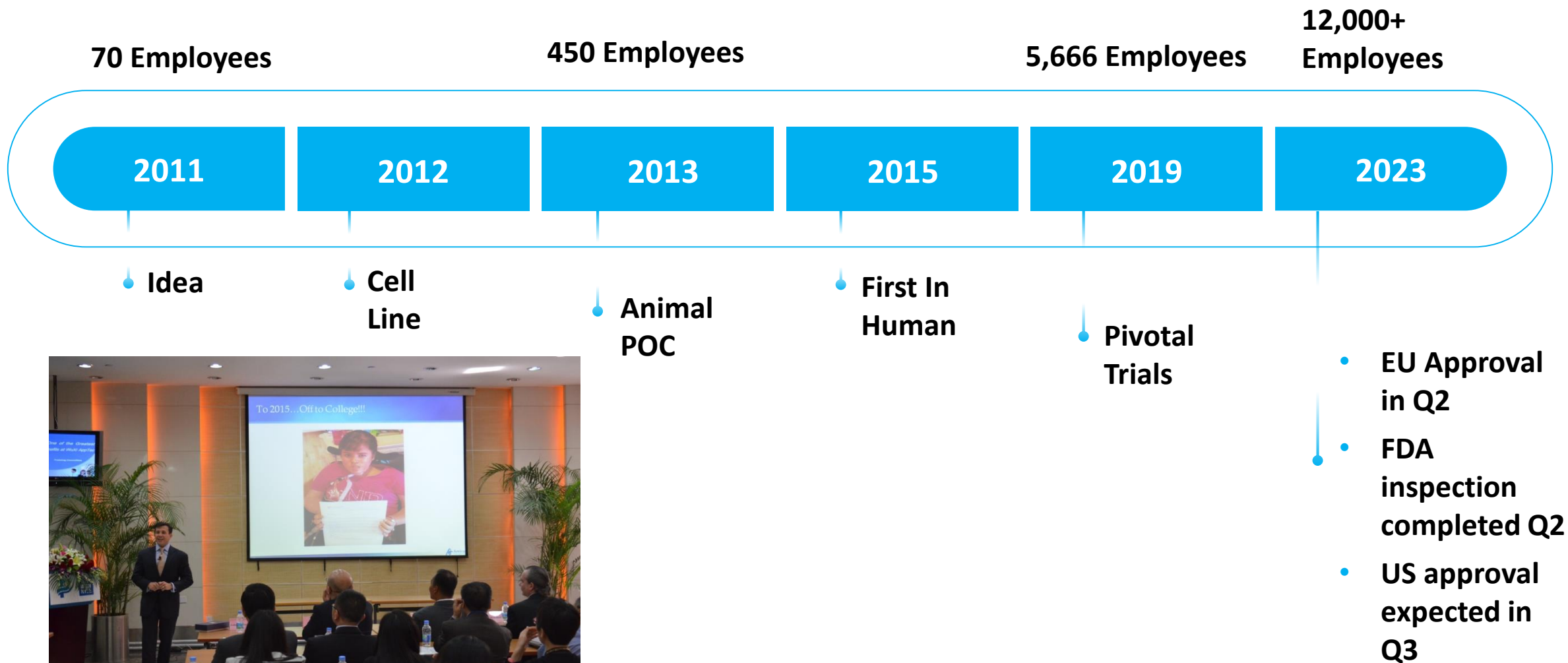
John Crowley
Executive Chairman of
Amicus



The Story was taken into the movie “Extraordinary Measures” in 2010



Sequel of “Extraordinary Measures” (2011-2023): Finding a Next-generation Biologics – More Precise and Potent



AT-GAA: Global Regulatory Status

Anticipate regulatory approvals and launch into the three largest Pompe markets in Q3 2023



- Pombiliti™ (cipaglucosidase alfa) received a positive CHMP opinion in December 2022
- Miglustat CHMP opinion is expected in Q2 2023



- Pre-approval manufacturing inspection schedule for Q2
- Approval expected in Q3



- U.K. MAA submitted via recognition procedure based on CHMP opinion



Global Dual Sourcing Strategy to Enable the Client



**Every batch can provide a full year supply for
approx. 1% of global population!**

D to M Conversion 100% Since 2018:

80% programs 100% sourced from WuXi, remaining 20% ~90% sourced

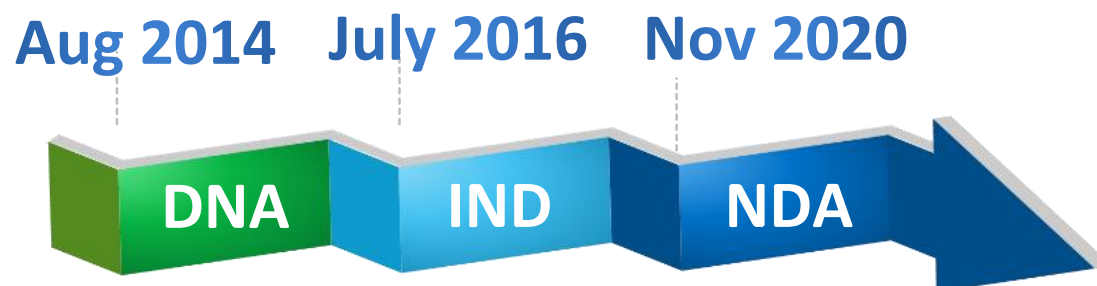
Concentrated Fed-batch process; China NDA approval as breakthrough in Aug 2021



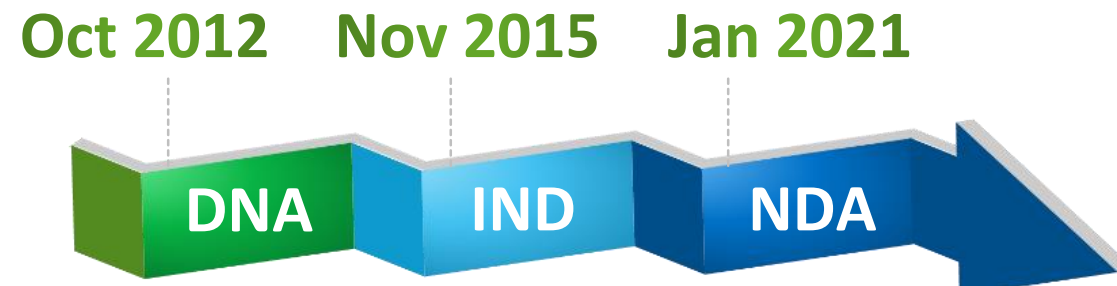
Approved in US & EU; Continuously reporting positive data in new indication



China NDA approval in Dec 2021 & oversea BLA submission in Dec 2022

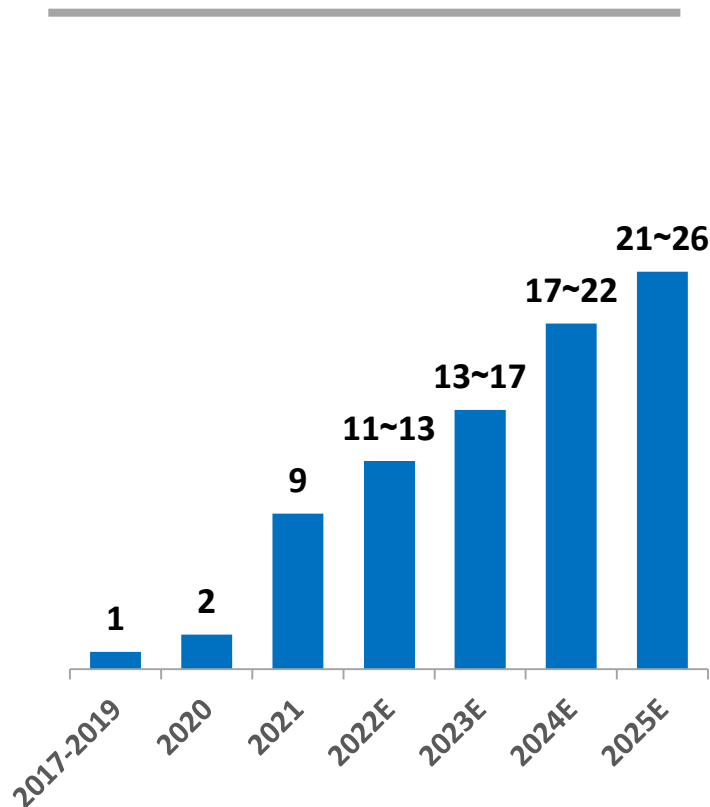


Challenging perfusion cell culture process; MAA approval in Mar 2023

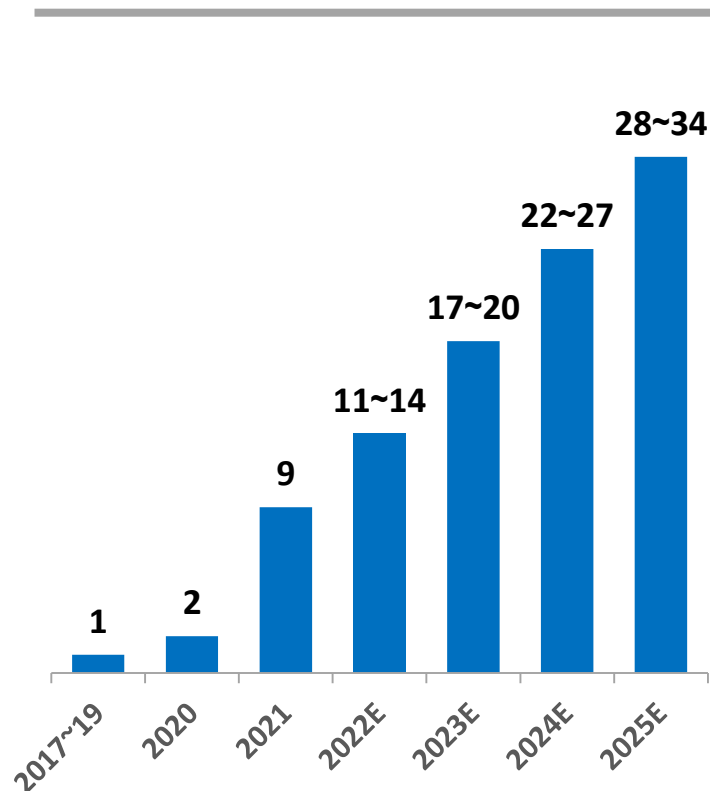


Commercial Manufacturing will Drive Strong Growth from 2021 and Beyond

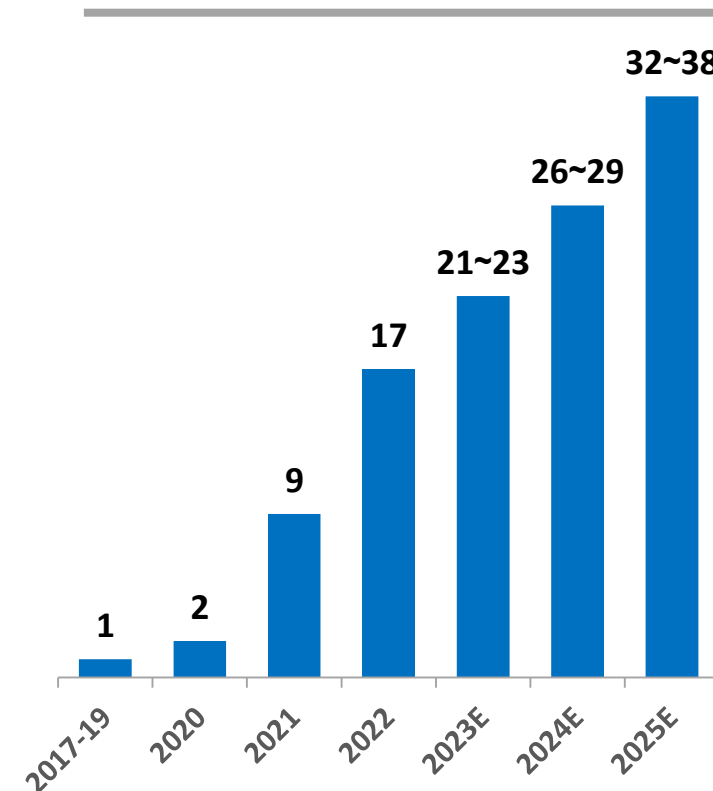
2020 CMO Prediction



1H2022 CMO Prediction



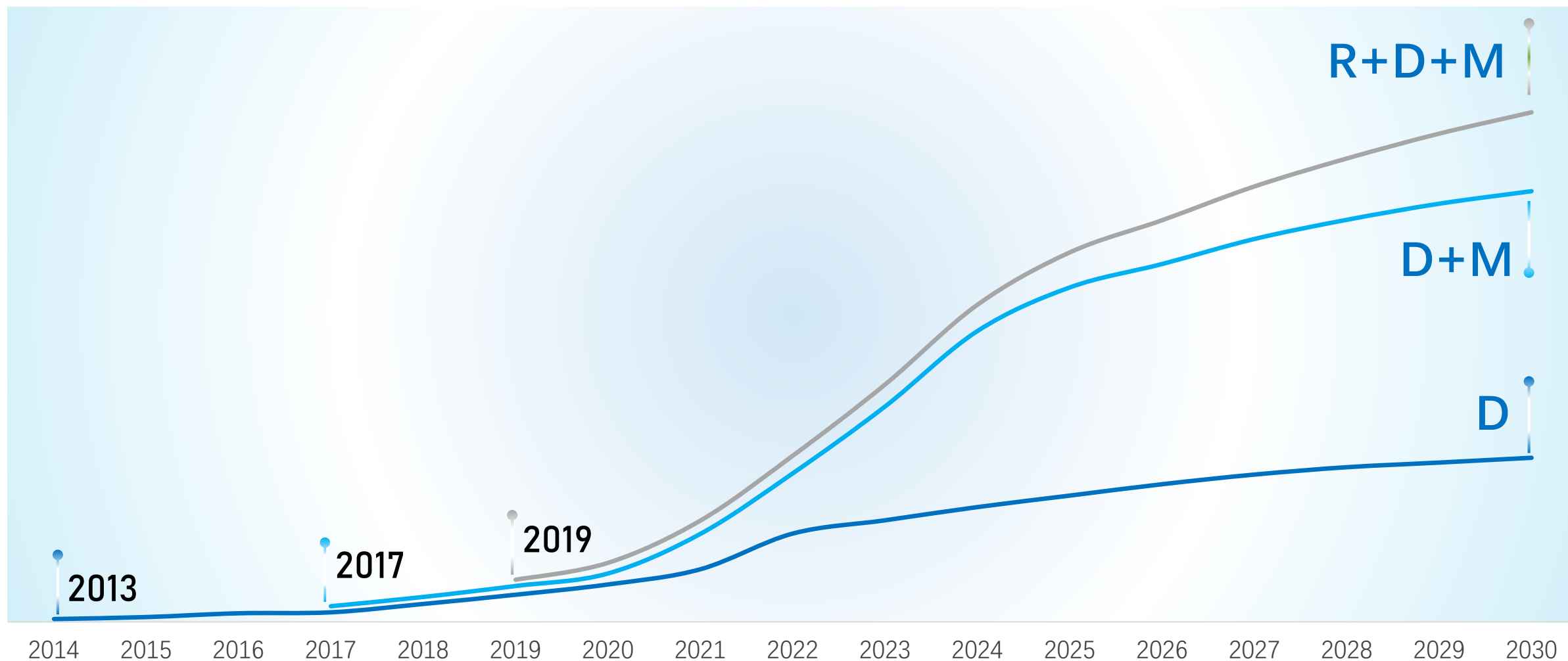
2023 CMO Prediction



- CMO projects are expected to increase by implementing “Follow & Win the Molecule” strategies
- “Win-the-molecule” enables WuXi Bio to secure more potential CMO projects

CRDMO: Three Growth Curves Drive Sustainable Long-term Growth

Three Long-Term Growth Curves



Transferring the Success to Ireland

02

Project Execution: Fastest Project Built to GMP in Ireland Despite COVID



- 65.5 Acre greenfield site
- Construction started in early 2019 and completed 26 months later
- 467,520sq.ft. of floor space across 18 distinct areas/buildings, 313,058sq.ft. GEP, 154,150sq.ft. GMP
- 500,000 tons of earth moved, 6,000 tons of structural steel, 39 miles of underground dry services, 6.2 million work hours, 1,400 average personnel on site
- Commissioning, Qualification and Validation (CQV) accounted for 70,000 files, 120,000 records and 9,500 material certs across over 140 equipment vendors and 4 mechanical contractors

Project Successes

- Over the course of the project nearly 75 archaeologists were empowered to dig and preserve the historical artifacts spread across the construction site
- Project was completed with a remarkable safety record of a 0.35 recordable injury rate with the final 13 months of construction (3 million work hours) completed without a single recordable event
- Sustainability efforts include; heat recovery system, low emissivity glazing, PV solar, EV charging, 'wilding' of green spaces



2cm

19E0060_689_1-20



5cm

19E0060_24_1










5cm

ISPE Facility of the Year for 2023

- ISPE's (**International Society for Professional Engineers**) Facility of the Year Awards is an annual program that recognizes state-of-the-art projects unitizing new technologies to improve the quality of products, to reduce the cost of producing high-quality medicines, and demonstrate advances in project delivery
- Winners in the category of Operations exemplify the application of novel tools and approaches to delivering projects



Ireland will Deliver High Revenue & Profitability

Signed Commercial Contracts		MFG	Scale (FB)	Est. Batches/Yr.
	Pharma A	Perfusion	1K	30+
	Pharma B	Fed Batch	12K	10+
	Pharma C	Fed Batch	16K	6+
	Pharma D	Fed Batch	8K	20+
	Pharma E	Fed Batch	12K	15+
	Pharma F	Fed Batch	12K	13+
	Pharma G	Fed Batch	12K	20+



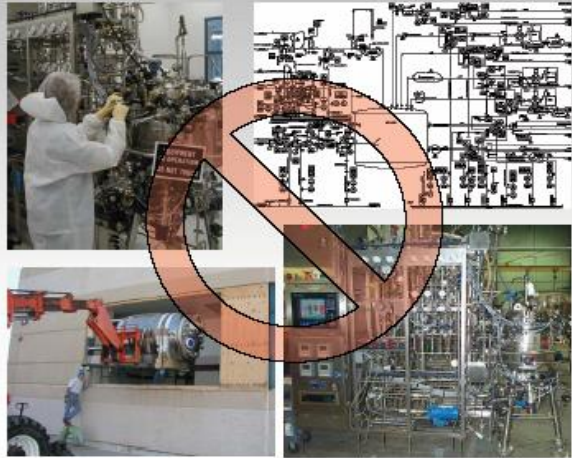
*Significant commercial manufacturing from 2024 onwards, almost fully booked in 2025
30% projects transferred from China as global dual sourcing ie follow the molecule
70% win the molecule for all potential blockbuster biologics*

**Disposables achieved
multiple ton scale with
similar COGS**

03

TECHNOLOGY: Disposable Manufacturing Technology Proven Effective in Commercial Manufacturing

Conventional Bioreactors



Single-Use Bioreactors

- ☑ No cleaning and sterilization
- ☑ Simple design & operation
- ☑ Saves time and resources
- ☑ Minimal utilities
- ☑ Less maintenance and repair
- ☑ Simple qualification & validation
- ☑ Low contamination risk
- ☑ Less capital investment

VS

HyClone Single-Use Bioreactor (SUB)

Permanent
Support Vessel
(50 and 250L)



Single-Use
Bioreactor BPC

HyClone

- Global leader and pioneer in using disposable manufacturing technology
- 4,000kg+ neutralizing mAbs delivered 12,000/16000L scale
- COGS reduced to <US\$80/g at 12,000L scale, comparable COGS with similar stainless steel
- 1,500+ batches manufactured at ~98% success rate
- Less CAPEX, faster in building facilities (one year) and comparable COGS resulting in higher ROI (MFG1 10-year ROI 51% realized, MFG2 35%, MFG3 50% expected)

Disposable Bioreactors CAN Deliver Lower COGS than Stainless Steel

Scale of Disposable Bioreactors	Scale of Stainless Steel Bioreactors	Cost Difference	Manufacturing Experience at WuXi Biologics
2,000L	12,000L	Disposable ~30% more expensive	MFG1 500+ batches
6 x 2,000L	12,000L	Disposable ~10% cheaper	MFG2 50+ batches
3 x 4,000L	12,000L	Disposable ~10% cheaper	MFG5 20+ batches
6 x 4,000L	12,000L	Disposable ~20% cheaper	MFG9
6 x 4,000L	25,000L	Disposable ~10% cheaper	MFG9
2,000L Wuxi UP™	2,000L	Disposable ~30% cheaper	MFG1/MFG2 50+ batches
2,000L WuXiUP™	12,000L	Disposable ~10% cheaper	MFG1/MFG2 50+ batches

- Through scale-out (multiple-pack of disposable bioreactors) and WuXiUP™, disposable bioreactors can achieve **similar or lower** COGS as any stainless steel bioreactors
- Supported with **100+** batches of data across **10+** projects at WuXi Biologics

Disruptive Single-Use Technology Pioneered by WuXi Bio

~44% Market Share in New Capacity, 65-70% in R&D

The Advantages of Single-Use Bioreactor



Less water resource consumed



No detergent, more environmental- friendly

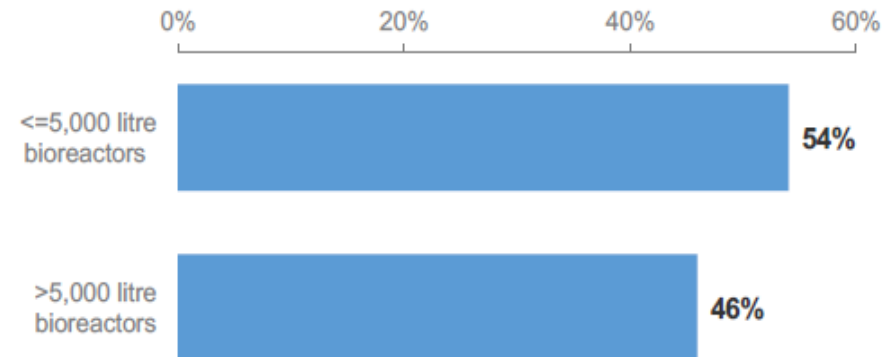


Save projects switching time, more flexible, less CAPEX intensive

Single-Use Bioreactor Capacity Expansion and its Penetration Rate



Biotech Companies Use more Single-Use Bioreactors for Capacity Expansion



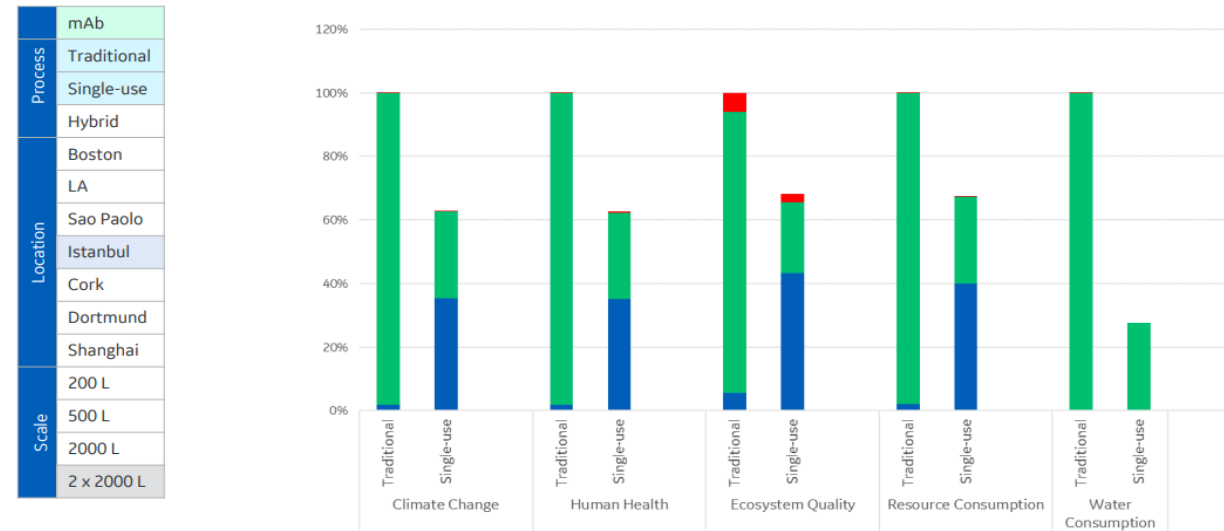
The Application Rate of Single-Use Bioreactors in R&D and CMO Stage



Embracing ESG-friendly Disposable Technology to Protect Environment

- Launched one of the world's largest cGMP biologics manufacturing facilities using disposable bioreactors in Wuxi
- Significantly reduced the impact on environment
 - 70% water saving
 - 33% energy saving
 - 0 waste water generation
- Other advantages include:
 - Accelerate the R&D process
 - Improve product quality
 - Enhance production efficiency

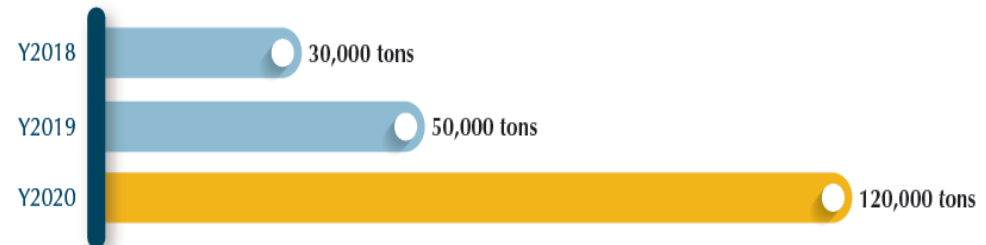
Impact comparison for traditional and single-use process technologies



Single-Use Technology and Sustainability | 2017 BPSA International Single-Use Summit | 13 July 2017

20

Annual water savings due to the adoption of SUT (estimated value)



Business Update

04

Arcus Biosciences Expands Strategic Relationship with WuXi Biologics to Develop a Best-in-Class anti-CD39 Antibody for the Treatment of Cancer

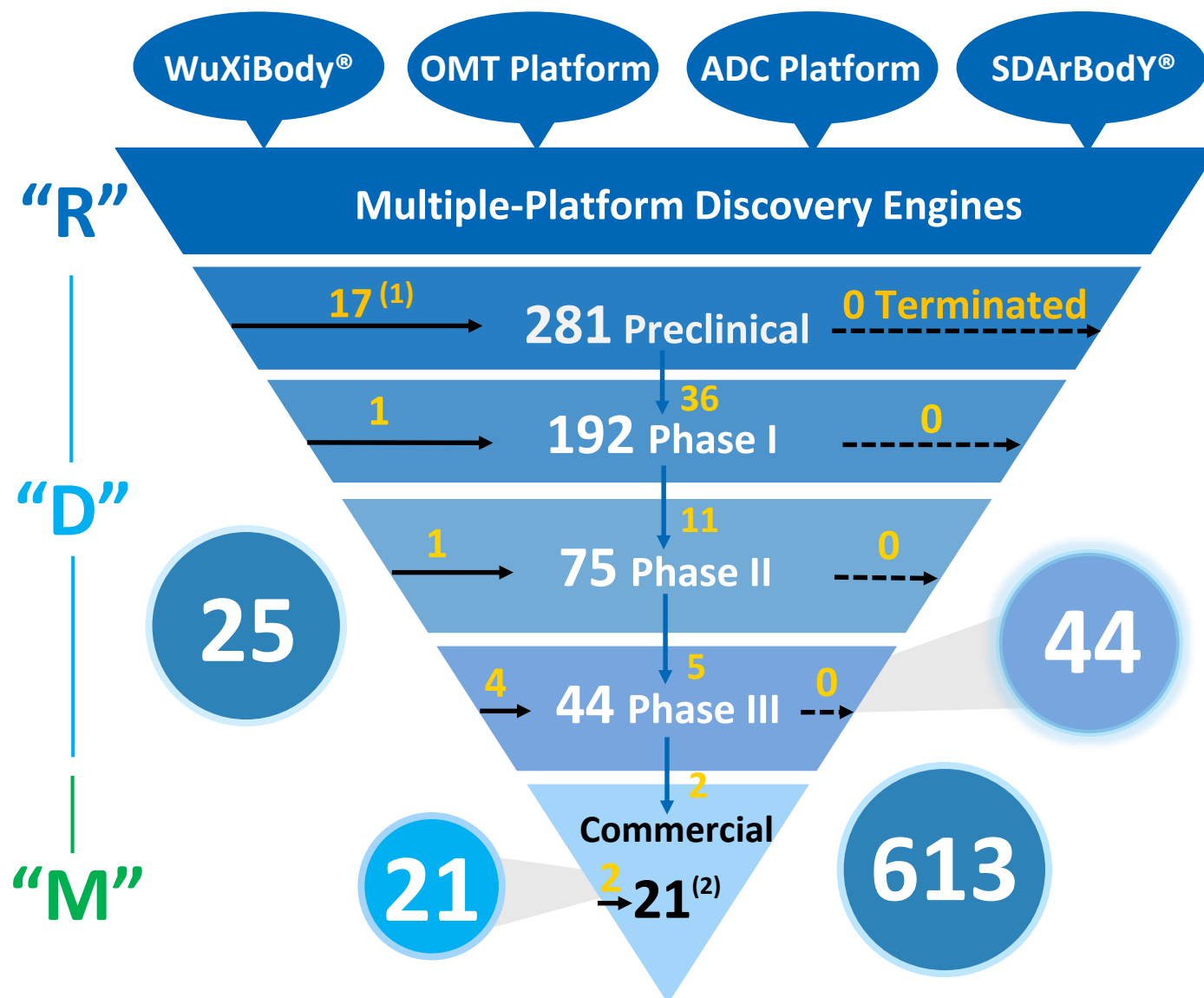
- The parties will discover anti-CD39 antibodies using WuXi Bio's proprietary technology.
- This CD39 collaboration represents the fourth antibody development program on which the two companies have joined forces.
- Arcus was granted exclusive worldwide rights to anti-CD39 antibodies discovered under the collaboration and will be responsible for all further development and commercialization activities of such anti-CD39 antibodies.

WuXi Biologics and GSK Enter into License Agreement on Multiple Novel Bi- & Multi-specific T Cell Engagers

- WuXi Biologics will provide an exclusive license to GSK for 1 preclinical bispecific T cell engaging (TCE) antibody and 3 additional bi-/multi-specific TCE antibodies developed using WuXi Biologics' proprietary technology platforms
- WuXi Biologics will receive an upfront payment of US\$40 million, up to ~US\$1.4 billion at key milestones and tiered royalties on net sales

Soft Growth in Pre-clinical balanced with Strong Growth in Phase III & CMO Drive 2X industry growth

- Biotech funding slowdown especially in China resulted in softer growth in pre-clinical stage. Only observed 6Q into the cycle still highlighted our leadership position.
- Anticipate similar market share as the acceptance rate for WuXi is similar. Sales cycle extension is the reason for the lower No. of projects
- Q4 2022 drive to sign record numbers of projects also pulled up H1 2023 demands
- **“Win-the-Molecule”** strategy continued to excel: **8** external projects transferred into the pipeline as of May 31, 2023, including **4** phase III projects and **2** CMO for blockbuster products
- **21** CMO projects: superb growth

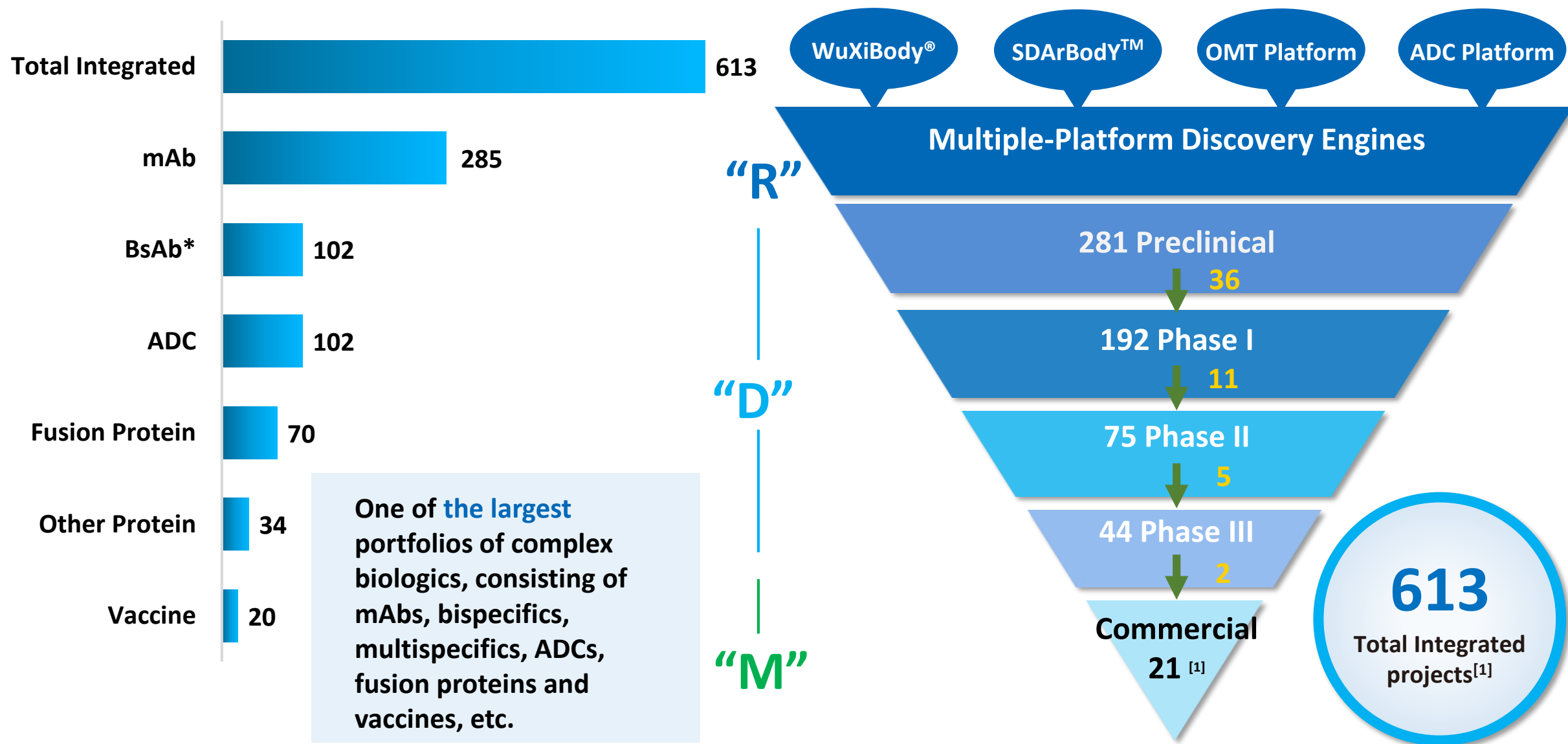


Notes:

1. As of May 31, 2023

2. The commercial manufacturing projects refer to the projects approved by regulatory authorities and signed CMO contracts with the Group

Rich Pipeline across All Biologics Modalities: ADC and BsAb



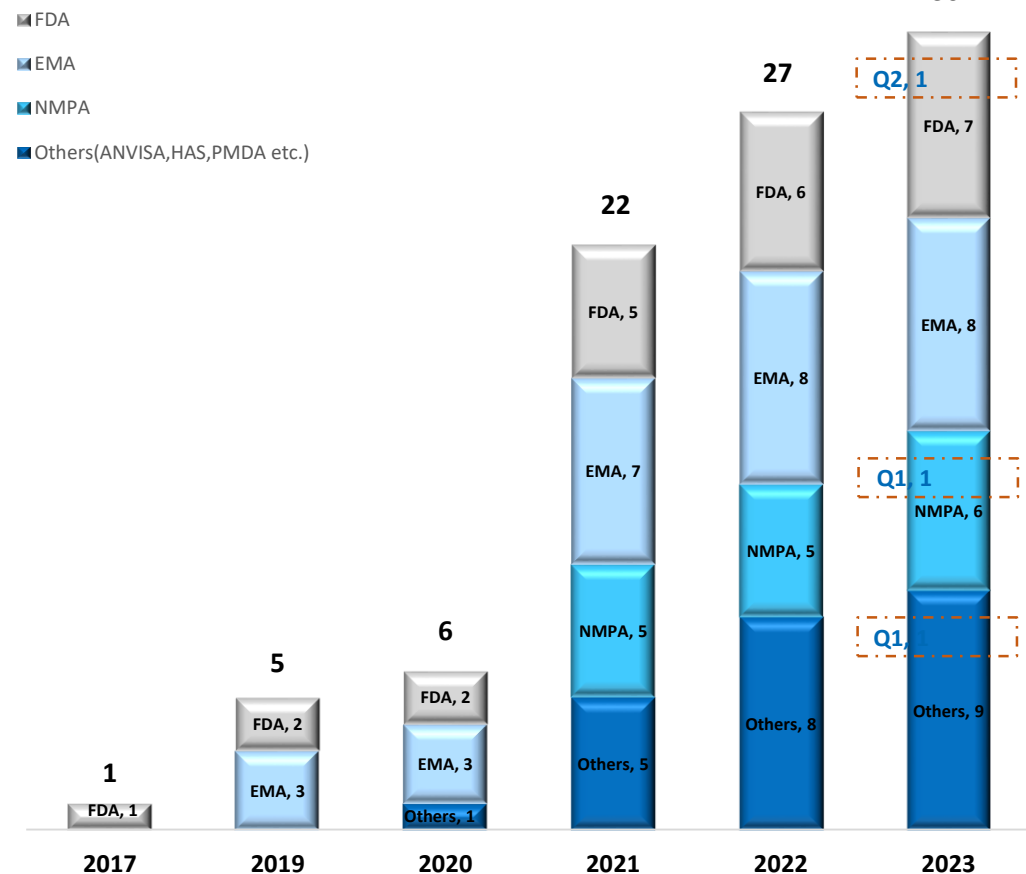
Notes:

* Bispecific Antibody (BsAb) Included both WuXiBody® projects and non-WuXiBody® projects

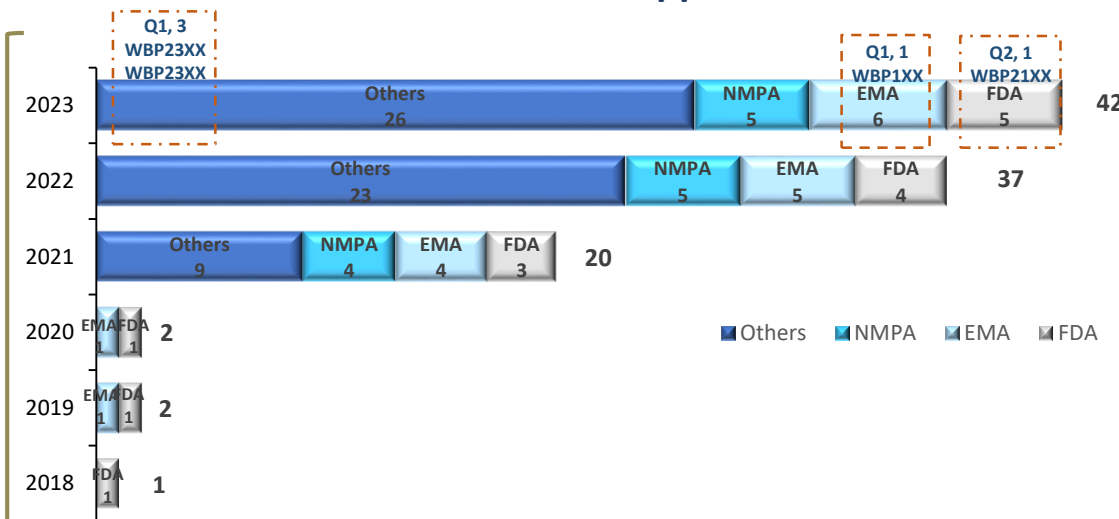
[1] As of May 31, 2023. [2] The commercial manufacturing projects refer to the projects approved by regulatory authorities and signed CMO contracts with the Group

QUALITY: Global Regulatory Inspections

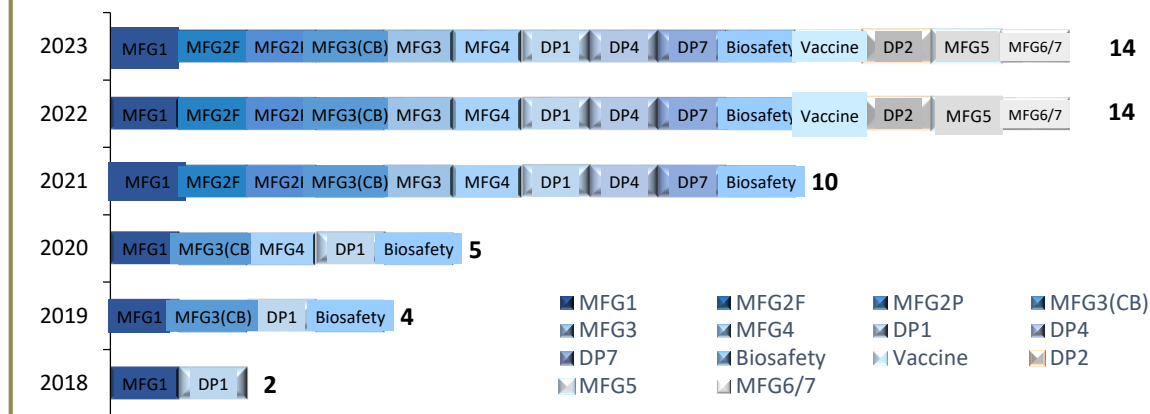
Number of Regulatory Inspections: 30



Number of License Approvals: 42



Number of Certified Facilities: 14



1. 53% of employee are women; 47% of managerial positions and 30% of executive management are female
2. 100% renewable energy combined with disposable manufacturing technologies make Irish manufacturing site “greenest” biologics manufacturing globally
3. Committed to Science Based Targets Initiative (SBTi)
4. 21% YoY reduction in GHG emissions intensity (Scope 1/2)



WBS: Continuous Improvement

CEO Kaizen

70million

Cost saving on materials for clinical drug substance manufacturing

15million

AS/QC cost saving on testing reagents and consumables

4batches

MFG5 capacity increase by buffer preparation method improvement

30%

XDP1 capacity increase by reducing change over time

70%

QC CoA approval lead time reduction to speed up product release and improve customer satisfaction

Inventory control strategy optimization to significantly reduce Inventory and material impairment

Risk-based material management process optimization to enable more flexibility and agility in material selection and reduce material cost

Target to improve 300 bps GPM in 2023

Summary

05

Evolution of Biologics Service Companies: WuXi Biologics Leading the Industry as CRDMO

CMO: Contract Manufacturing 1990s – 2000s

- **Business rationale:** mostly 2nd supplier for large pharmas to ensure robust supply chain
- **Core expertise:** large-scale manufacturing

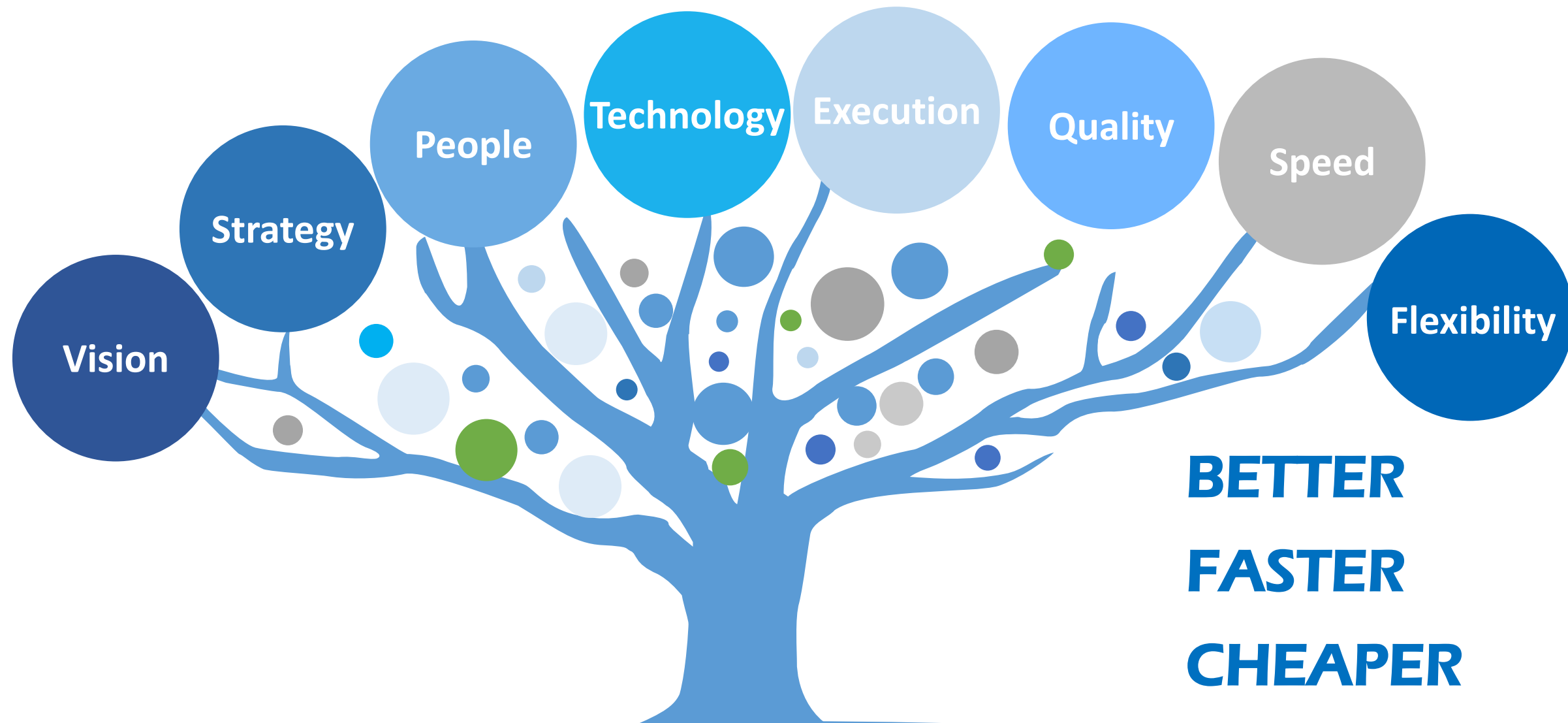
CDMO: Contract Development and Manufacturing 2000s – 2015s

- **Business Rationale:** small and medium-sized biotechs need end-to-end one-stop shop services and often require external technology for new modalities: ADCs or bispecifics
- **Core expertise:** development technology and large-scale manufacturing

CRDMO: Contract Research Development and Manufacturing 2015s - present

- **Business Rationale:** innovation driven by small and medium-sized companies requires end-to-end services from ideas to commercial manufacturing
- **Core expertise:** discovery/development platforms and manufacturing
- **Newest trend of service companies:** sticky business model which engages with partners 5-10 years earlier than traditional CMOs

Eight Keys for Future Success: Sustainable High Growth



Global Premier CRDMO

Enable Global Partners and Deliver Sustainable High Growth Despite Recent Challenges

- 1 2X industry growth achievable due to success of both Follow and Win the Molecule strategies. 1H witnessed slower growth of follow the molecule, however win the molecule for phase III and blockbuster commercial drugs accelerated
- 2 Ireland site almost fully booked for 2025 demonstrated great success of strategy and execution: 30% projects transferred from China as global dual sourcing ie follow the molecule and 70% win the molecule for all blockbuster biologics
- 3 Disposable manufacturing proven to deliver multi-ton of mAbs at similar COGS as stainless steel. Flexibility of Disposable technologies: from 100Kg to 10+ tons
- 4 Digitalization have been effectively used in discovery, development and manufacturing for 3+ years. Digital empowered WuXi Biologics will continue to enable faster, better and cheaper services for biologics discovery, development and manufacturing
- 5 Due to high base in 1H 2022 and shutdown for maintenance after three years of bullet train speed, 1H 2023 will see slower revenue growth. Despite all challenges, maintain the full year guidance

WuXi Bio Vision

“Every drug can be made and every disease can be treated” by building an open-access platform with the most comprehensive capabilities and technologies in the global biologics industry

