

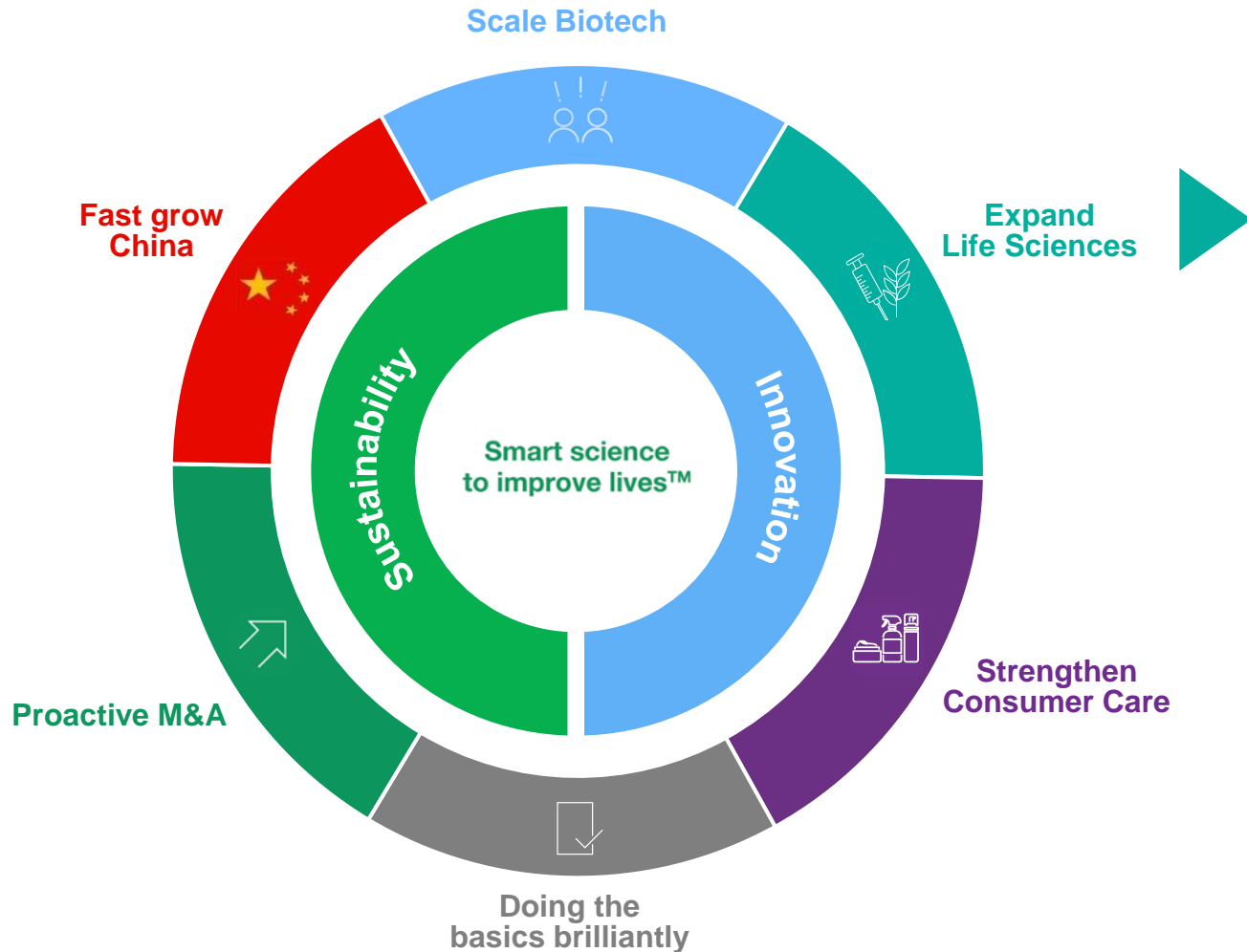
# Health Care seminar

7 October 2022

# Welcome and meet the team

Steve Foots, Chief Executive Officer

# Our strategic priorities



## Health Care

### Take advantage of the biologics revolution via:

- Investment in novel fast growing therapeutics solutions
- Development of leading strategic platforms
- Winning with innovation

## Crop

### Providing sustainable solutions to farmers via:

- Transition to a sustainable portfolio
- Investment in carbon reduction
- Development of delivery systems for novel biopesticides

# Croda portfolio of growth businesses

## Life Sciences



Health Care



Crop Protection



Seed Enhancement

Crop Care

## Consumer Care



Beauty Actives



Beauty Care



Fragrances and Flavours



Home Care

All businesses: minimum of 1.5x GDP growth, >20% ROS, >2x ROIC

Supported by:  
Industrial Specialties

# Objectives and agenda for today

## Objectives

- Meet the team
- Introduce Croda Health Care strategy
- Explore each growth platform
- Introduce innovation pipeline

## Agenda

- Strategic focus
- Growth platforms
- Strategic execution
- Q&A

# Meet the team

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## Executive Committee



**Steve Foots**  
Chief Executive Officer



**Jez Maiden**  
Group Finance Director



**Daniele Piergentili**  
President, Life Sciences

## Life Sciences leadership team



**Freek Snieders**  
Senior Vice President,  
Croda Health Care



**Laura Reilly**  
VP Marketing  
Life Sciences



**Ritesh Tanna**  
Finance Director  
Life Sciences

## Health Care leaders



**James Lawrence**  
Global Business Director  
Protein and Small  
Molecule Delivery



**Peter Tygesen**  
Managing Director  
Adjuvant Systems



**Dr Steve Burgess**  
Managing Director  
Nucleic Acid Delivery

# Health Care – strategic focus

**Daniele Piergentili**, President Life Sciences

**Freek Snieders**, Senior Vice President Health Care

# Where we have come from

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# Evolution of a world class partner for drug delivery – aligned with market need

pre 2000

**Consumer Health**  
Market leader in  
topical and oral care



2000+

Promotion of  
standard excipients



2010+

**Patient health #1**  
Development of  
speciality excipients



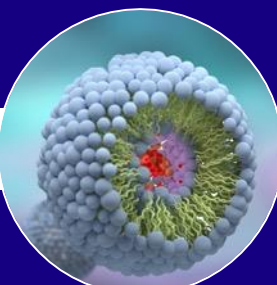
2018

**Patient health #2**  
Vaccine adjuvants  
acquisition



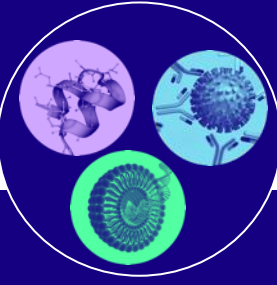
2020

**Patient health #3**  
Lipids acquisition,  
complementary  
adjuvants



2022

**New strategic focus**



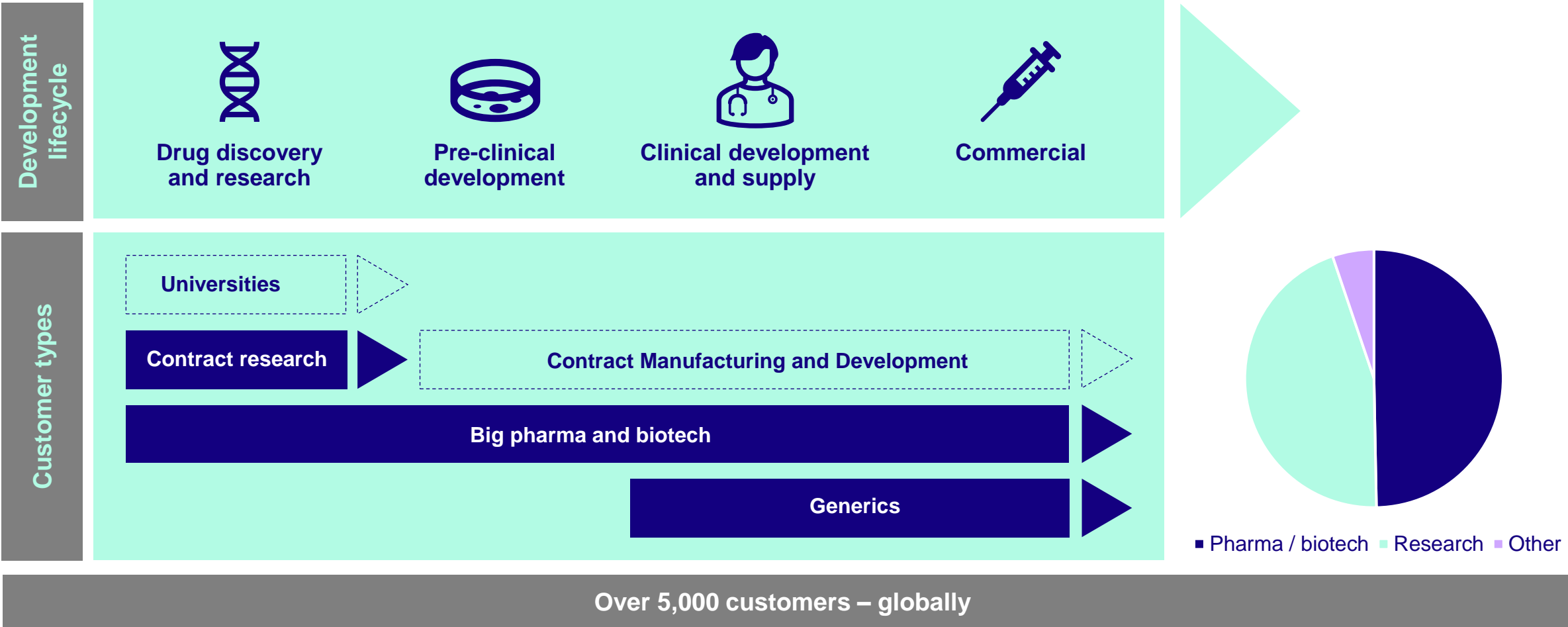
Standard  
excipients

Speciality  
excipients

Vaccine  
adjuvants

Lipid  
technologies

# Delivering across development lifecycle & customers



Pie chart shows breakdown of total customers 2021; other customers include contract manufacturers and generics

# Where we are now

---

# What we said in 2019 – delivering our promises

|  |                                     |
|--|-------------------------------------|
| Accelerate speciality excipient growth | 20% CAGR speciality excipient sales |
| Leverage selling network               | Doubled vaccine adjuvant sales      |
| Target adjacencies                     | Acquired Avanti Polar Lipids        |
| Biologics presence                     | Key role in Pfizer Covid-19 vaccine |
| Deliver high growth rates              | Successful, profitable growth       |

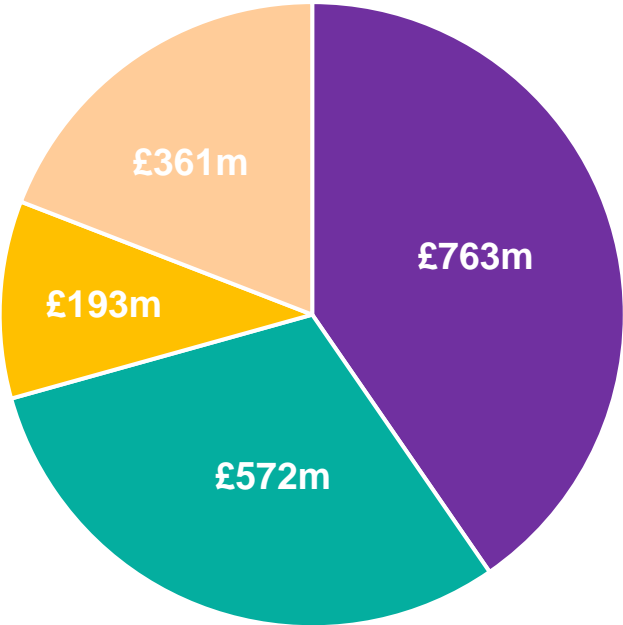
Reported sales growth 2019-21

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# Croda Health Care in context

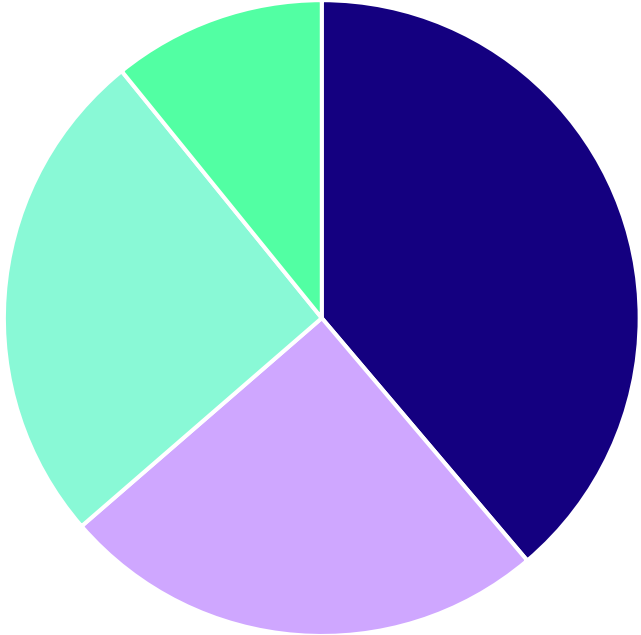
Croda sales 2021



■ Consumer Care ■ Life Sciences ■ Industrial Specialties ■ Divested

**£1,890m**

Life Sciences sales 2021



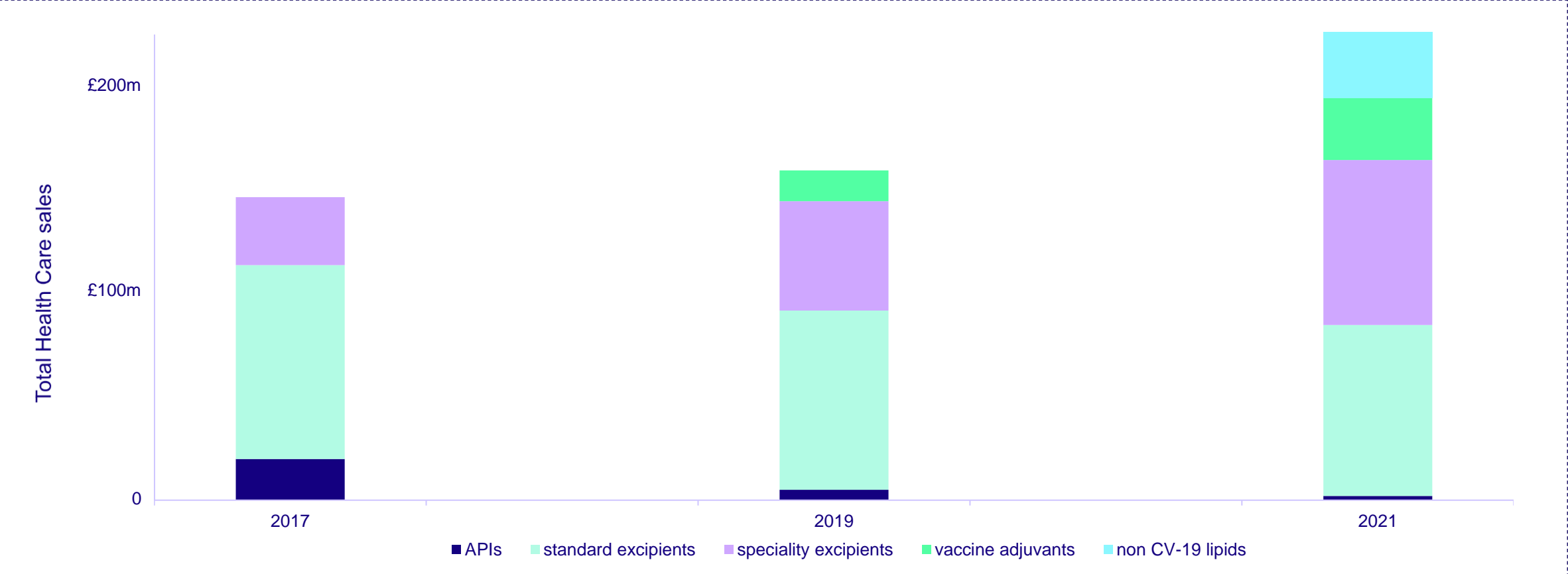
■ Health Care ■ CV-19 lipids ■ Crop Protection ■ Seed Enhancement

**£572m**

Croda sales 2021 shows estimated analysis of PTIC sector had divestment occurred at start of 2021

# Health Care 2017-21

– increased sales; improved mix



Reported sales growth 2017-21 excluding COVID-19 lipid system sales

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# Health Care 2017-21 – global footprint in drug delivery



# Health Care 2017-21

## – acquired adjacent technologies



### Vaccine adjuvants (2018)

- Leading independent producer
- Expansion in existing vaccines
- Novel vaccine development



### Lipid systems (2020)

- R&D leader
- Emerging delivery technology
- Potential for significant growth

### Benefits to Croda

- Expanded patient health platforms
- Bring deep pharma knowledge
- Expanded GMP manufacturing

### Benefits to acquisition

- Leverage global network
- Innovation collaboration
- Access investment for faster growth

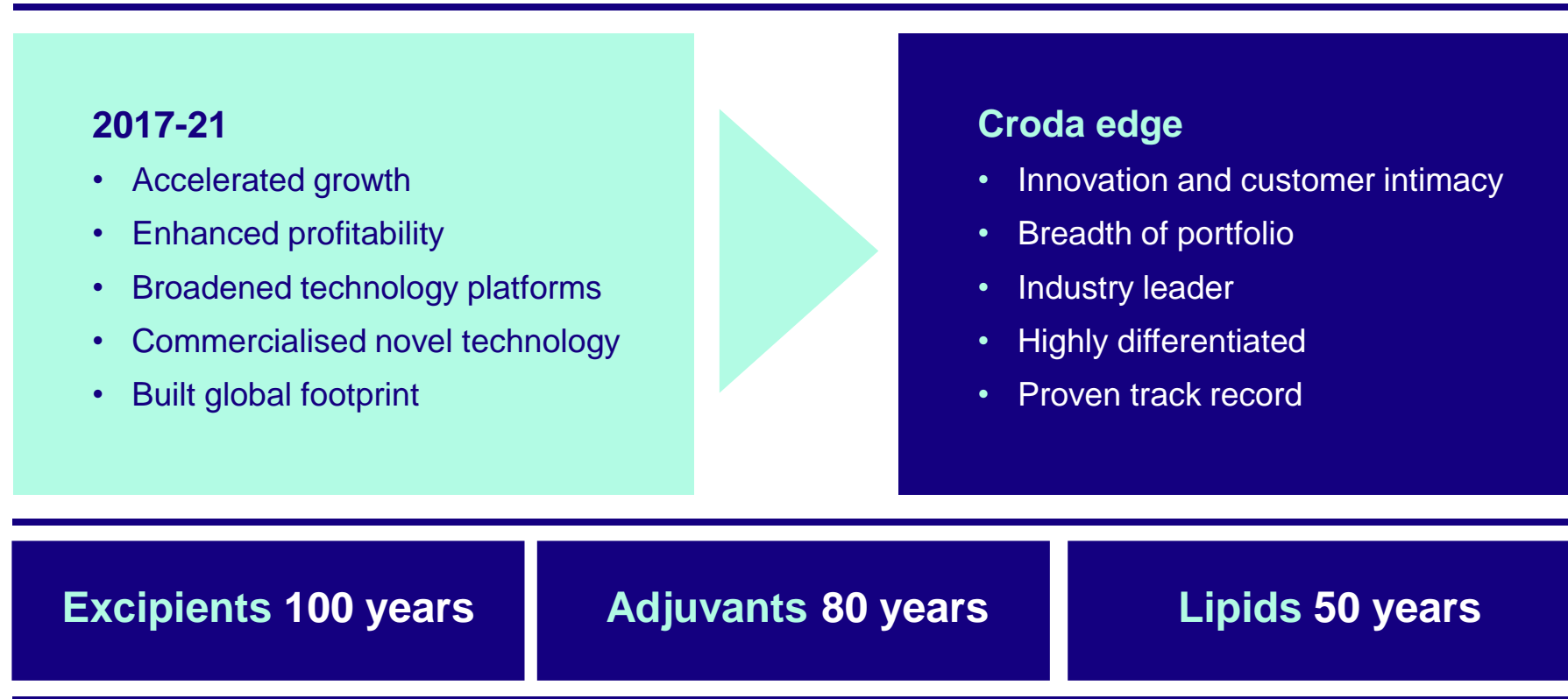
GMP is the highest quality and regulatory standard for pharmaceutical production

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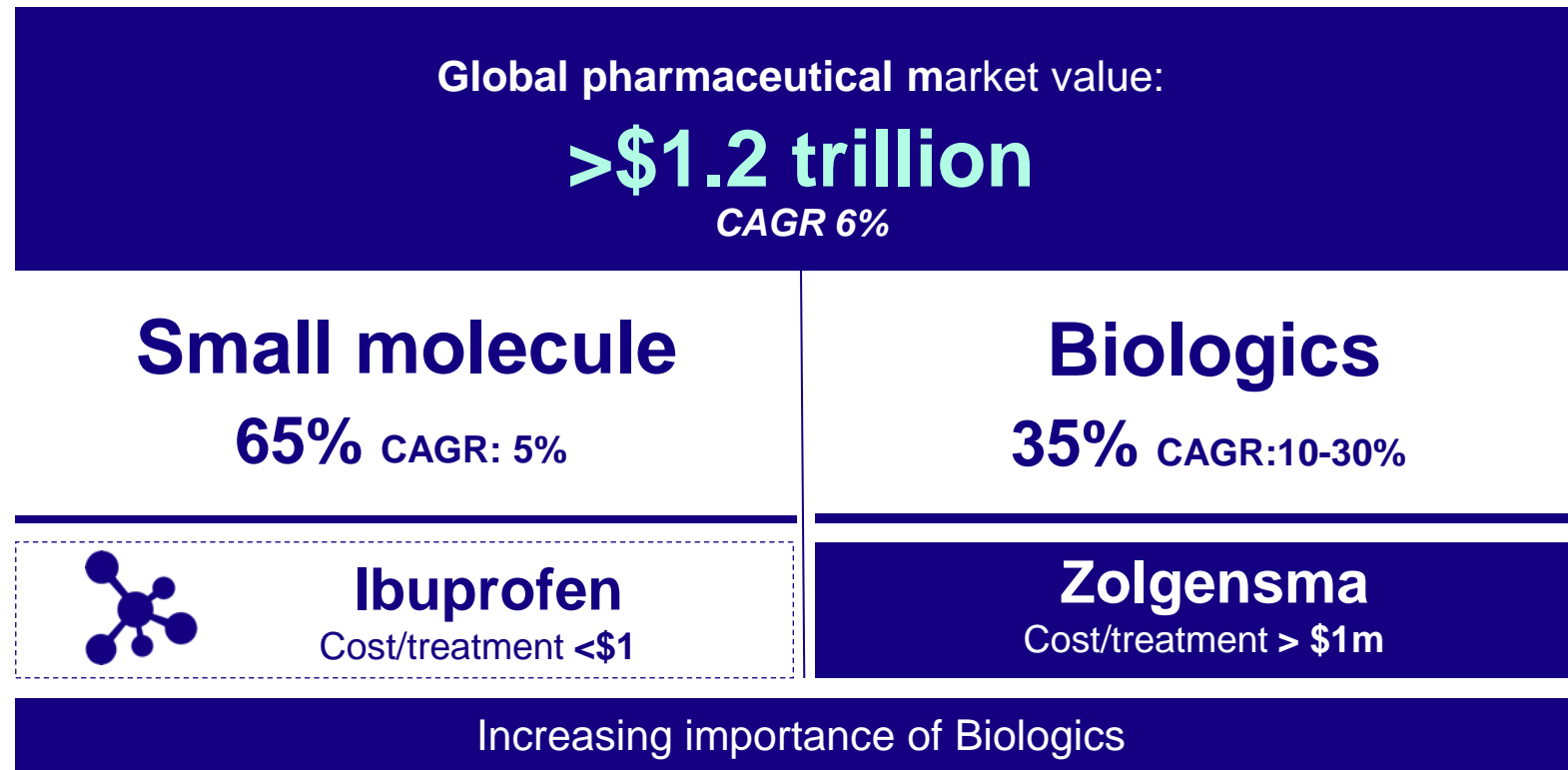


# Positioning Croda for future growth



# Market trends driving growth

# Biologics – higher growth and value opportunity



Market value: Statista, 2021. CAGR 2022-27

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# The biologics revolution



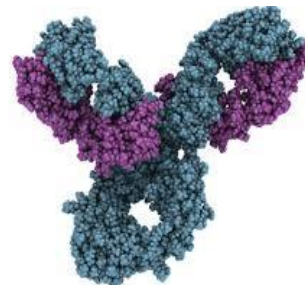
## 1st generation

**Small molecules:**

Eg Ibuprofen

<\$1/ treatment

1 indication



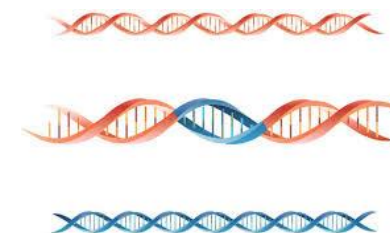
## 2nd generation

**Proteins (mAbs):**

Eg Keytruda

>\$1,000 / treatment

>40 indications



## 3rd generation

**Nucleic Acids:**

Eg Zolgensma

>\$500,000 / treatment

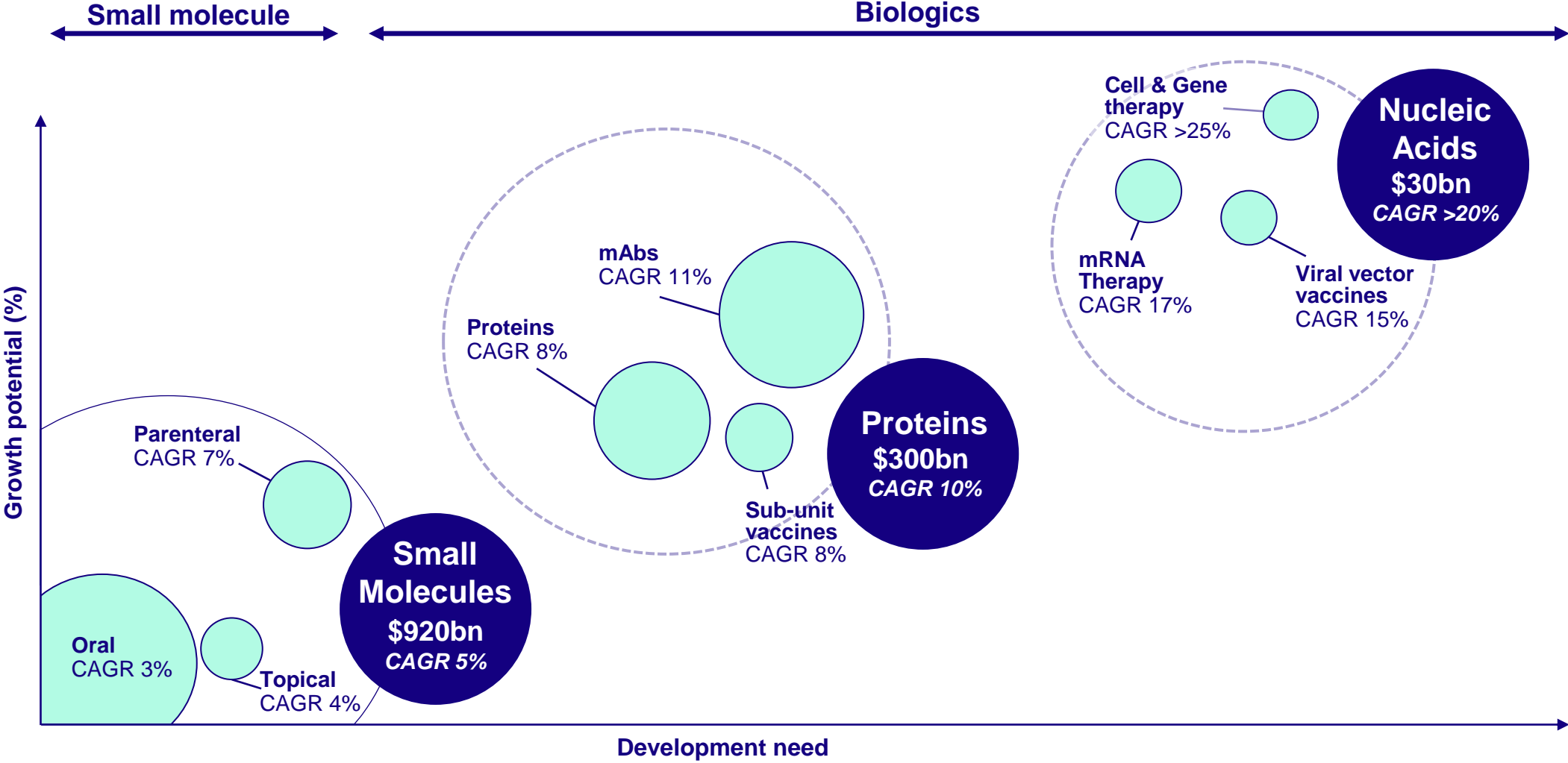
.....infinite possibilities

Higher specificity of the treatment / lower toxicity / more personalised

Increasing value of active ingredient

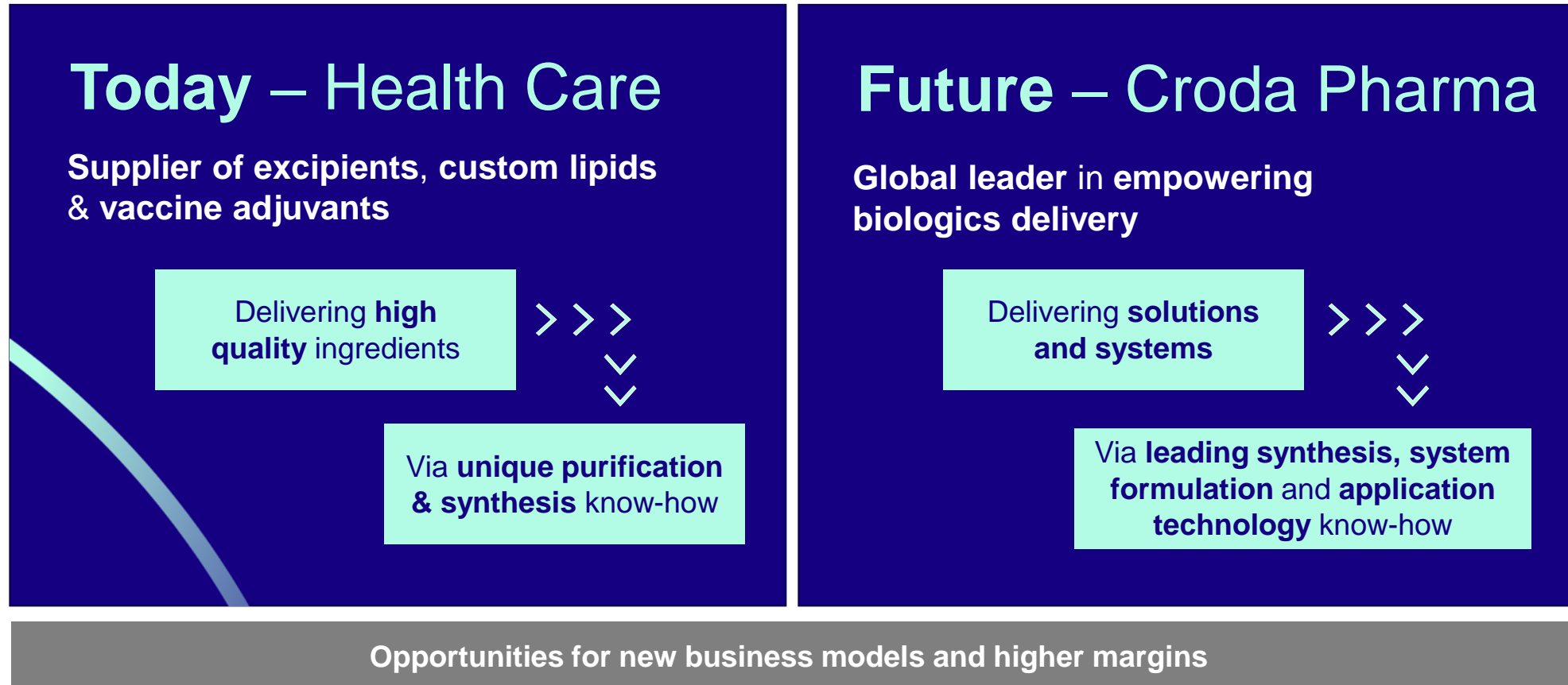
Increasing complexity of delivery

# A developing market with growing needs



Bubble size is the size of the market today. Date ranges for CAGR %s vary and cover the period to 2026 to 2030. Exclude COVID-19 vaccines

# Croda Pharma – our vision





# Our strategic focus

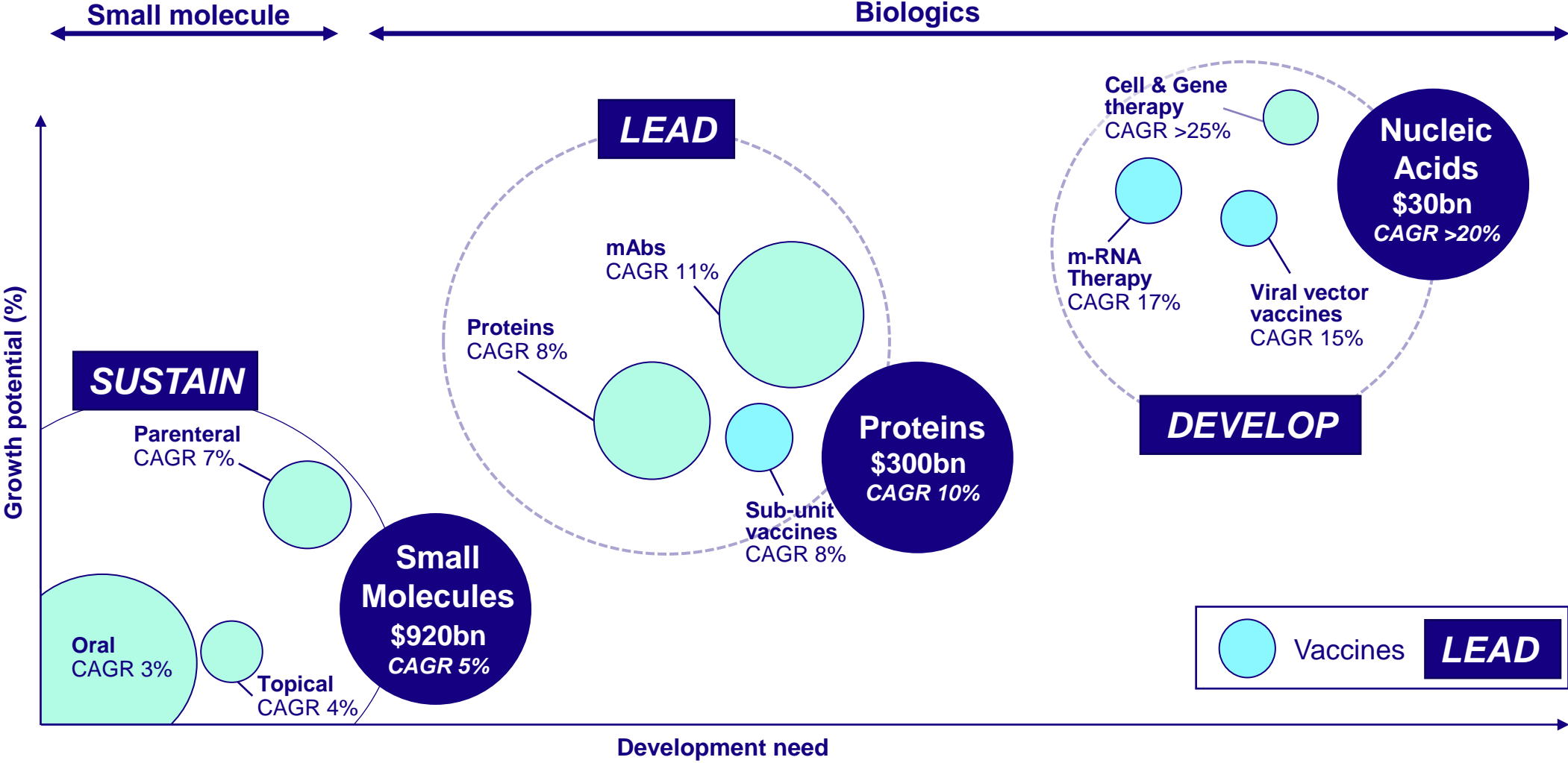
The image features a dark blue background with several concentric circles of varying shades of blue and green. The circles are centered and overlap, creating a sense of depth and movement. The text 'Croda Pharma' is prominently displayed in the center, overlaid on the circles.

**Croda Pharma**

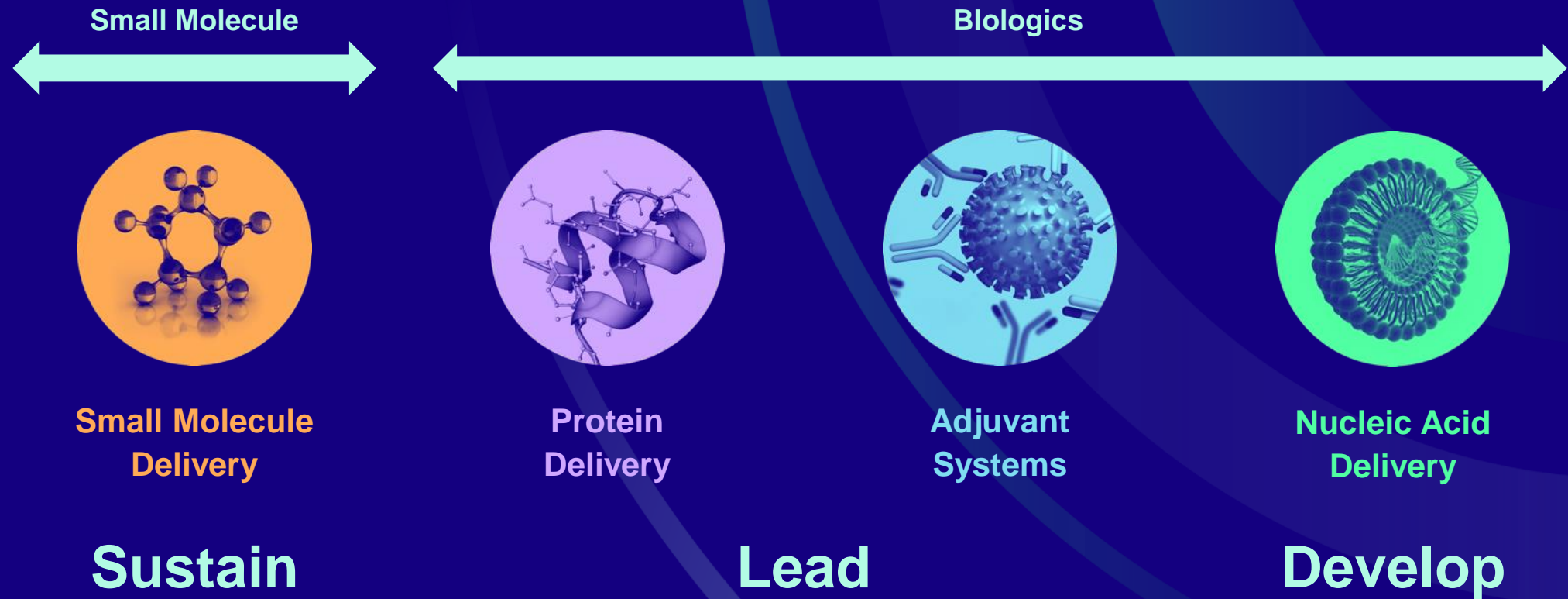


# Empowering biologics delivery

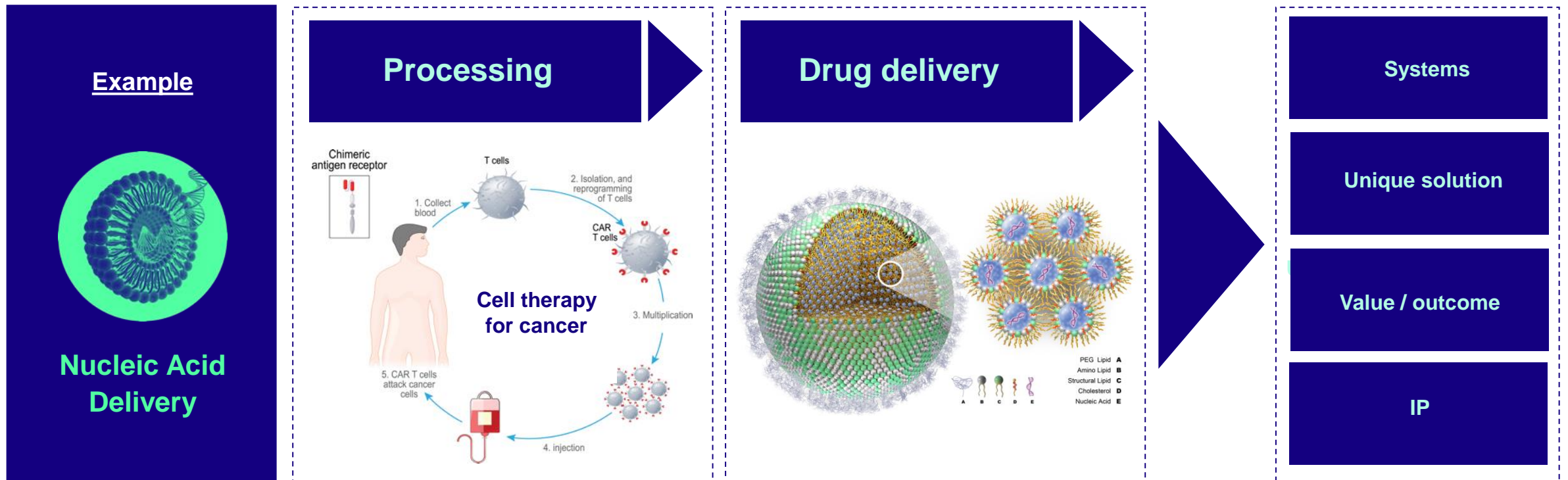
# A developing market with growing needs



# Strategic focus – Croda Pharma platforms



# Strategic Platforms – delivering increased value



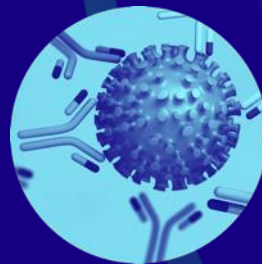
Complex biologic manufacture and delivery = increased value and opportunity

# Strategic focus – lead and develop growth platforms



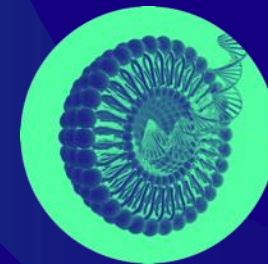
## Protein Delivery

The leading portfolio of speciality excipients providing optimal systems for protein / mAbs stabilisation and delivery as well as solutions to improve bioprocessing yields



## Adjuvant Systems

The world-leading vaccine adjuvants systems portfolio to enable all pharma companies to boost their therapeutic vaccines



## Nucleic Acid Delivery

Innovative high purity lipid & polymer-based systems for bioprocessing and delivery of next generation nucleic acid therapeutics

# Part 2: Teach-in – growth platforms

**Objective** – for each platform understand:

- Market definition
- Evolution of Croda's position
- Market scale
- Why Croda will win
- Growth opportunities
- Investment

# Growth platform – Protein and Small Molecule Delivery

James Lawrence – Global Business Director

# What is protein delivery?



## Protein Delivery

- Protein active ingredients are manufactured by biological means, via cells, bacteria or yeast. They are large, sensitive molecules
- Protein-based medicines are typically injected into the body, protecting their complex structure from being broken down by digestion if taken orally
- A Monoclonal Antibody (mAb) is a type of protein which binds specifically to certain cells to stimulate the patient's immune system to attack those cells

**Proteins are sensitive, presenting challenges through their storage, manufacturing and administration  
Excipients form key components of delivery systems for protein processing and drug delivery**



# Heritage – capturing increasing value

Moving from consumer health to pharmaceuticals

Consumer health

Standard excipients

Speciality excipients

Delivery systems

Addressing more complex drug delivery challenges

Small molecule

Large molecule



Tablet



Topical cream



Liquid capsule



Injectable  
(small molecule)



Injectable  
(protein biologic)



Injectable  
(mAb biologic)



Vaccine

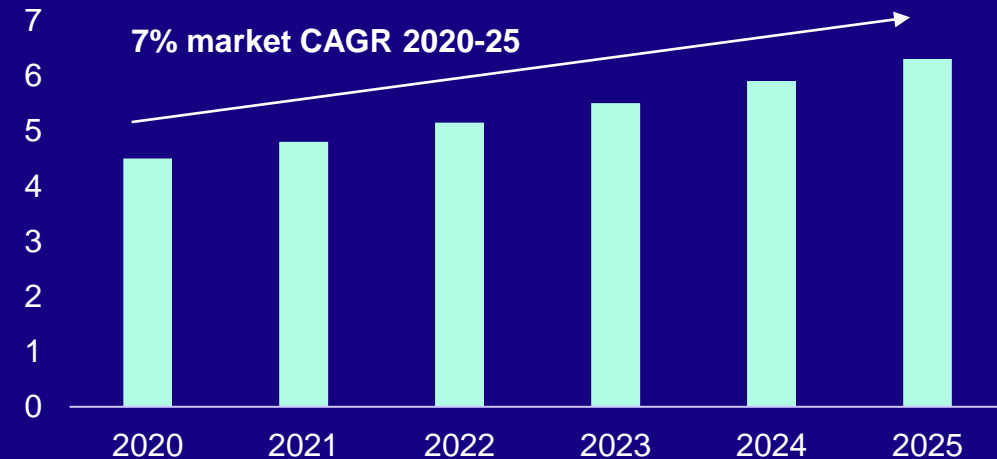
# Excipient market

– Croda targeting high growth and higher value niches

- Excipient market estimated to be worth 1-2% of overall drug market
- Excipients for small molecule APIs continue to grow mid-single digit %
- Excipients for large molecule APIs growing more quickly
- Croda focuses on high growth and high value niches
- Parenteral formulations require the highest level of purity and performance

Parenteral means administered by some route other than through the gastrointestinal tract, typically injection.

## Excipient market (\$bn)

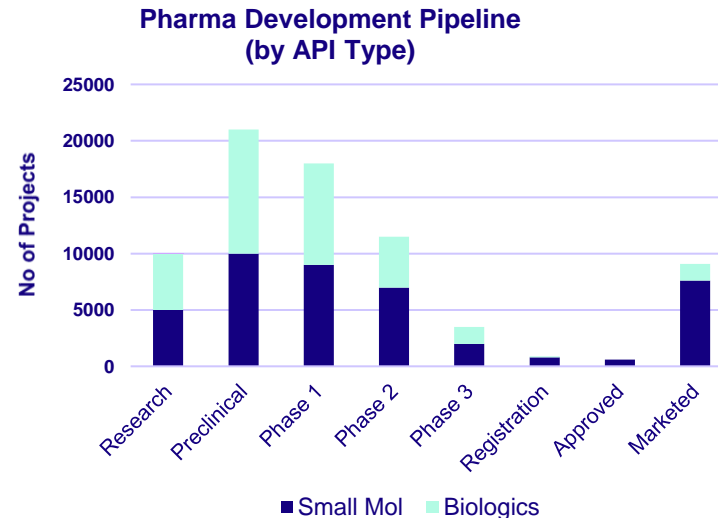


SOURCE:  
Kline 2021

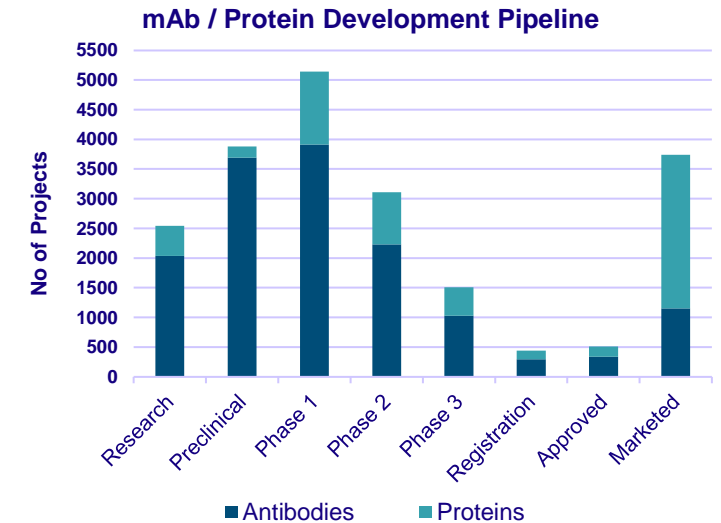
# Protein market – biologics offer highest growth

- Proteins / mAbs market value \$300bn today; 10% CAGR
- Biologics share continues to increase
- Sensitive biologic APIs can usually only be administered by injection and require high purity, high performance excipients
- 60% of total drug product pipeline is for injectable delivery

Increasing % of APIs are biologics



Increasing % of biologics are mAbs



Market value: Kline 2021. Development Pipeline data based on total number of projects: Pharmacricle.

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# Why Croda will win

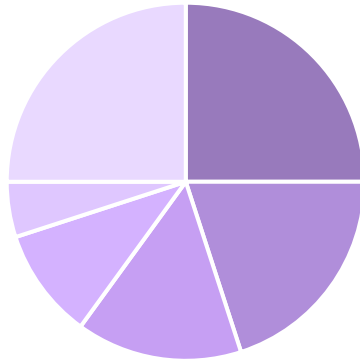
## – improving the performance of drug products

### Croda focuses on value not volume

Sales of parenteral excipients

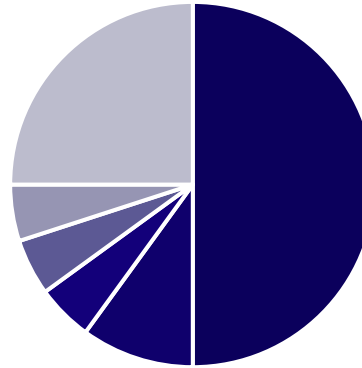
#### Value

- Croda
- Roquette
- Pfanstiehl
- BASF
- NOF
- Other



#### Volume

- Roquette
- Tereos
- Merck
- Universal
- Cargill
- Other



No competitor has comparable portfolio of high purity excipients

### Differentiated positioning

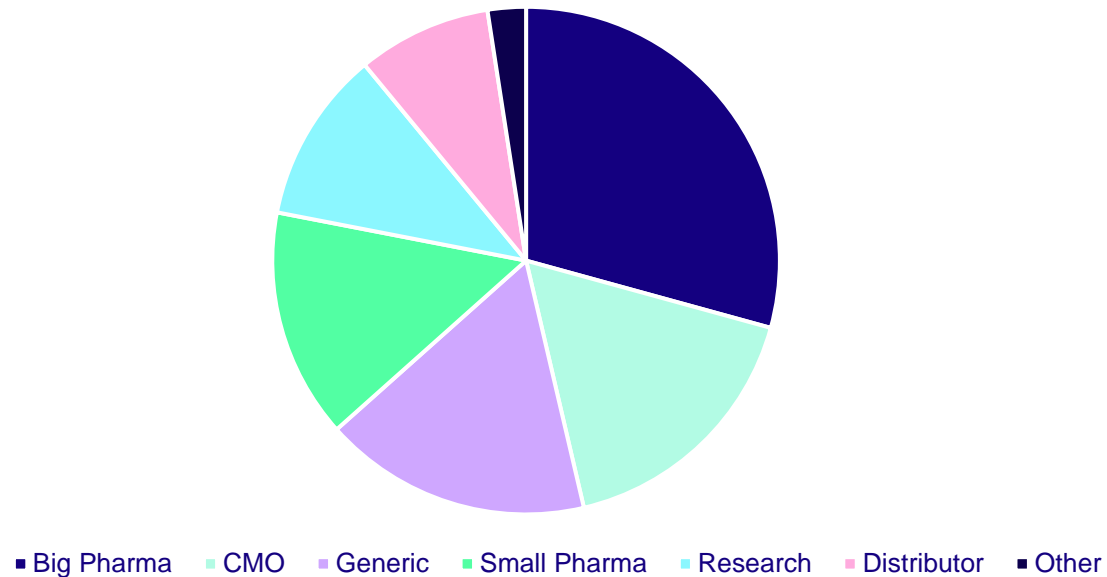
- Highest purity
- Batch-to-batch consistency
- Customer proximity
- Broadest range of speciality excipients

Sales of parenteral excipients by supplier 2020, Kline 2021

# Innovation

– supporting customers from big pharma to start-ups

Current breakdown by customer type



Pie chart shows breakdown of total customers 2021

- >1,400 direct customers supplied globally
- Supply all of top 20 big pharma companies
- Balanced portfolio of customers
- Partnering with academic researchers
  - 24 live Open Innovation projects

# Innovation – growth projects across many applications



mAbs to treat cancer

Speciality excipients for cancer applications



mAb treatment to preserve sight

Speciality excipients to combat macular degeneration



Oral insulin delivery system

Speciality excipient with superior solubility

- Alternative to injection
- Prevents breakdown in gut; promotes absorption
- Phase 3 US clinical trial



# Innovation

## – developing delivery and bioprocessing solutions

Over 2,000 customer projects for formulation delivery solutions

### Protein / mAb delivery

- Croda formulation ingredients enable delivery
- Transitioning from ingredient supplier to solutions provider

#### Case study – global biopharma company

- Experiencing quality issues with injectable mAb formulation
- Variability within the approved specification was identified as cause
- Croda developed unique specification - predictable supply and quality
- Issue resolved – customer buying for global use

### Bioprocessing aids

- Croda building range of process aids / reagents for use in bioprocessing
- Addressing the challenges faced by the market today

#### Case study – new product

- Croda has developed high performance process aid – unique product
- Will deliver guaranteed performance with higher yield

Purity and batch-to-batch consistency remain the key quality attributes

# Investing in growth



## 1. Innovation

- Expansion of R&D capabilities from Europe/US to new markets in Asia e.g. India
- Drug formulation team
  - Demonstrating impact / providing solutions
- Biotech processing team
  - High purity process aids and reagents for biopharma process



## 2. Knowledge

- Increase in Protein Delivery teams in target markets
- Technical expertise and business development specialists
- Building global network to empower biologics delivery



## 3. Capacity

- Additional capacity in US, Europe and Asia
- Building portfolio of purification technologies



# Building a valuable innovation pipeline

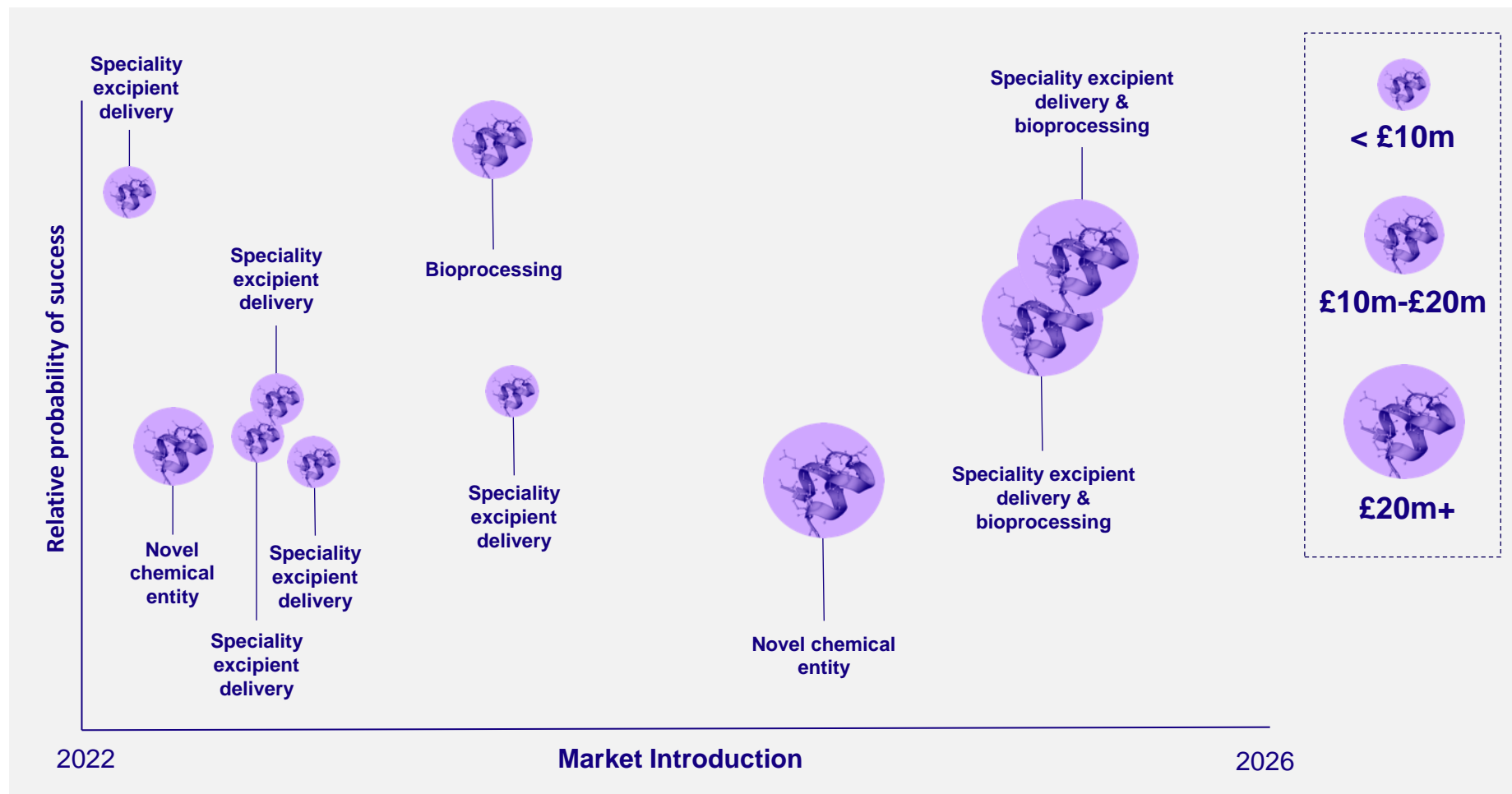


Chart shows expected peak annual sales value of new products. X axis is anticipated launch date. Y axis is relative probability of success influenced by technical, regulatory and commercial factors

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# Key takeaways

## **Market-leading position**

- 20 year track record in excipient systems for the pharma industry
- Recent 10-30% annual growth in speciality excipients – meeting needs for growing biologics drug delivery market

## **Significant growth opportunity**

- Protein/mAb market worth \$300bn and growing 10% per annum
- Increasing complexity and value add from speciality excipient development

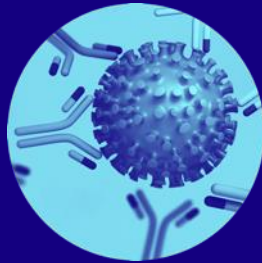
## **Exciting future growth**

- 2022-25: 10%+ annual growth expected from existing customer pipeline, leveraging Croda's recent capacity expansion
- 2026-30: significant innovation pipeline in protein delivery and bioprocessing

# Growth platform – Adjuvant Systems

Peter Tygesen, Managing Director, Adjuvant Systems

# What is an adjuvant system?

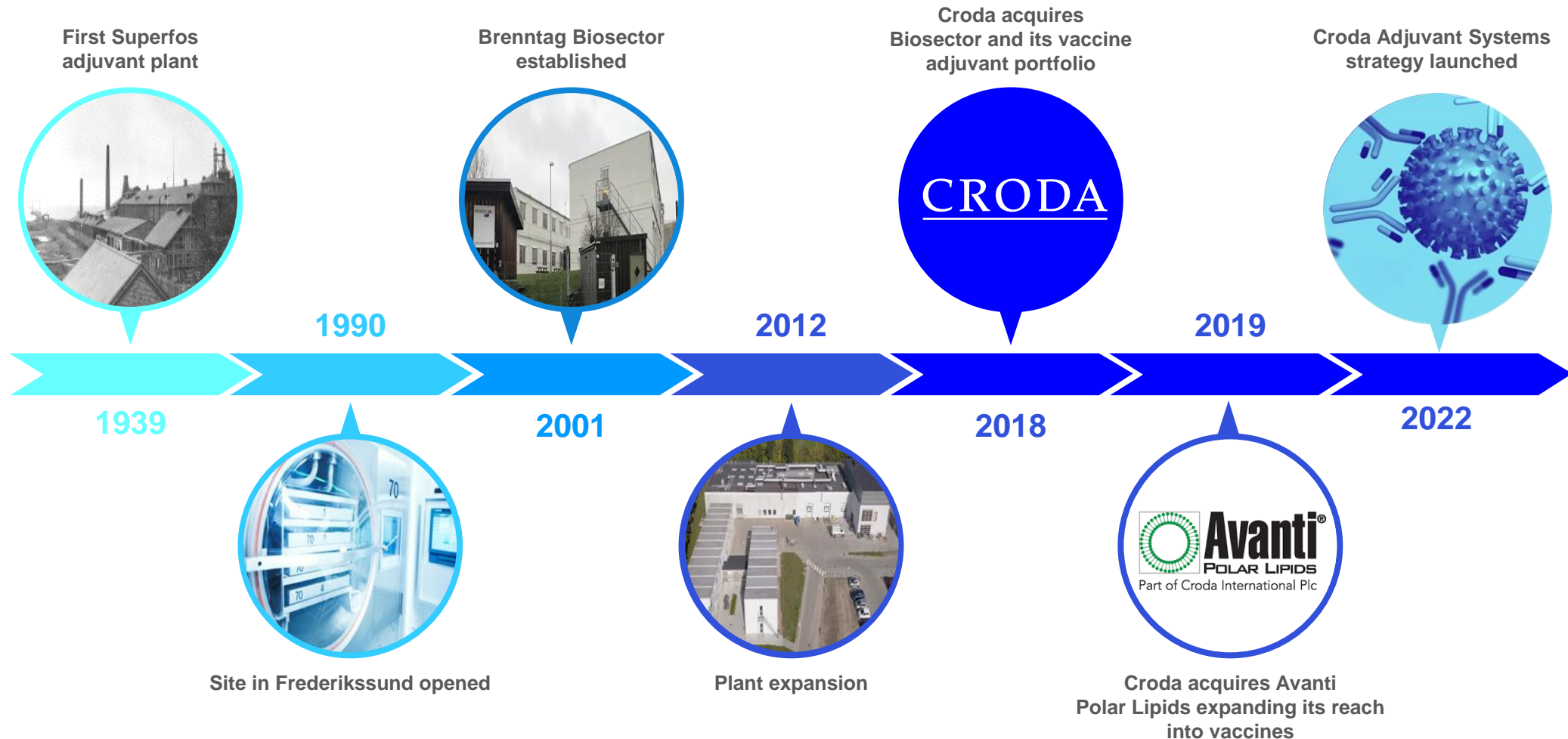


## Adjuvant Systems

- Vaccine adjuvants are drug delivery systems administered together with an antigen to boost the desired immune response
- Adjuvant systems comprise multiple active components and aid design of vaccines against difficult pathogens
- Therapeutic vaccines help the body fight an already-contracted disease
- Prophylactic vaccines prevent disease

**Vaccine adjuvant systems enable efficacious vaccine development in novel areas  
Considerable emerging demand for new tailored solutions**

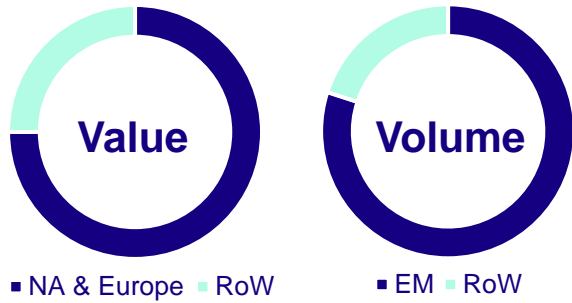
# Heritage – capturing increasing value



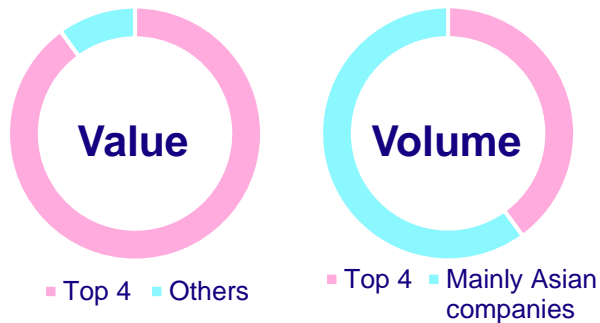
# Prophylactic vaccine market – WHO driving growth

## Vaccine market today

### Global sales by region

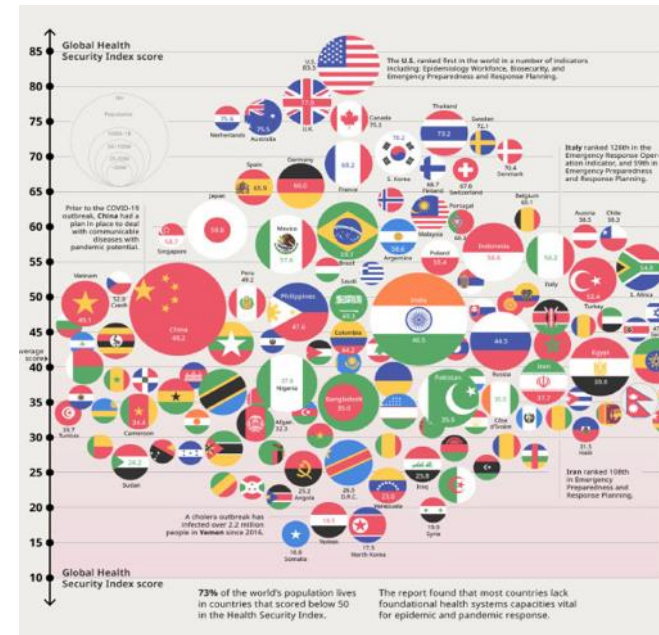
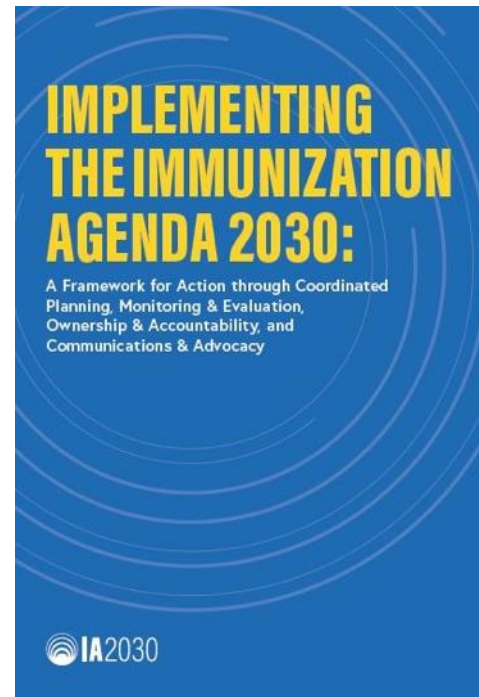


### Global sales by manufacturer



## Growth drivers

WHO Immunisation Agenda 2030 |  
Government pandemic preparedness programmes



## CRODA

### Purpose:

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### Ambition:

Contribute to >10 clinical development programmes in clinical phase 3 by 2024

### Status 2022:

Contributing to 15 projects in different clinical phases

Source: marketsandmarkets.com. NA is North America, EM is Emerging Market, RoW is rest of the world. Top 4 vaccine companies are GSK, Pfizer, Sanofi, and Merck

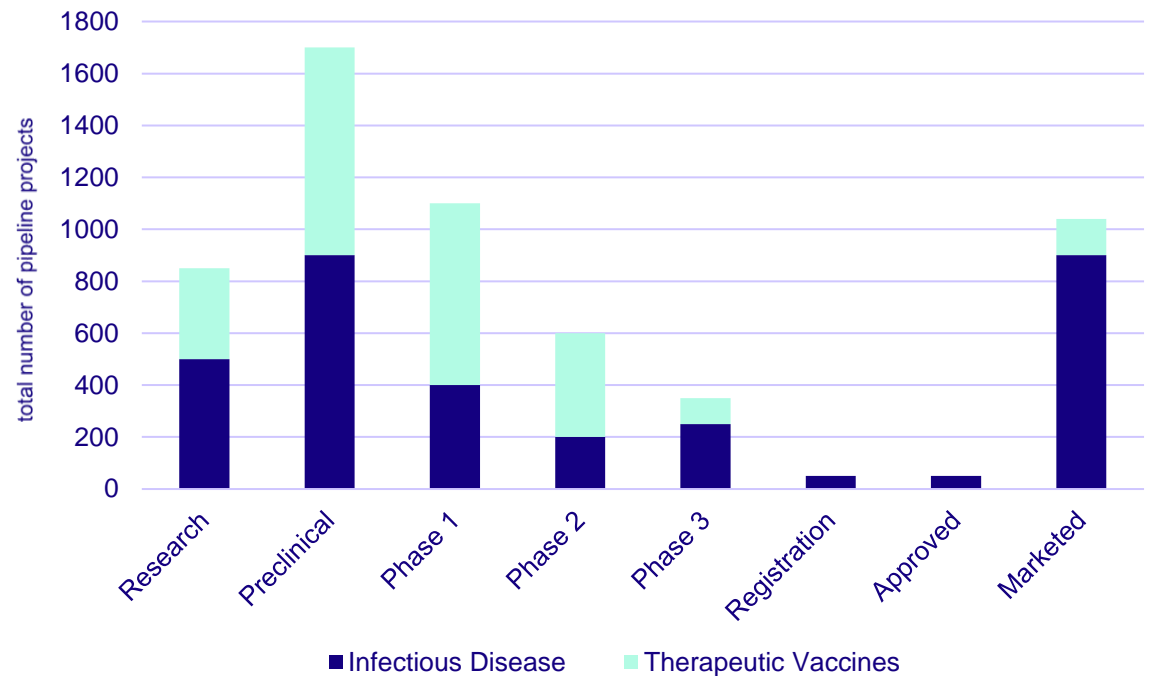
# Therapeutic vaccine market

## – new vaccines accelerating growth

### Growth drivers – therapeutic vaccines

- Expansion of vaccinology in new therapeutic areas
- For example:
  - Oncology
  - Neurology
- Typically higher value
- Creating large unmet need for new adjuvant systems

### Vaccine Development Pipelines



# Vaccine adjuvant market

– growth driven by adjuvant systems

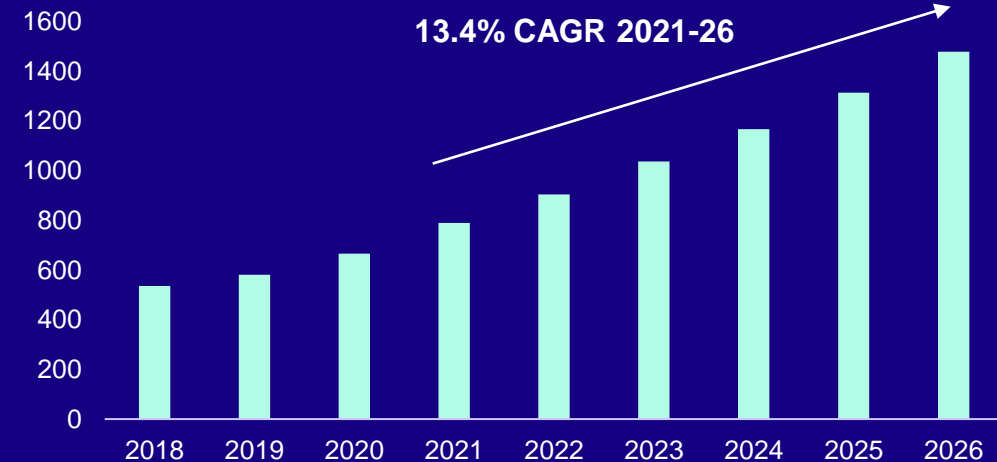
## Heritage business

- Aluminium adjuvants
- Still regarded as the "gold standard"
- Applicable in ~30% of marketed vaccines in infectious diseases

## Vaccine adjuvant systems

- Single component adjuvants
  - Lipids, saponins etc
- Multi component systems for desired immune response

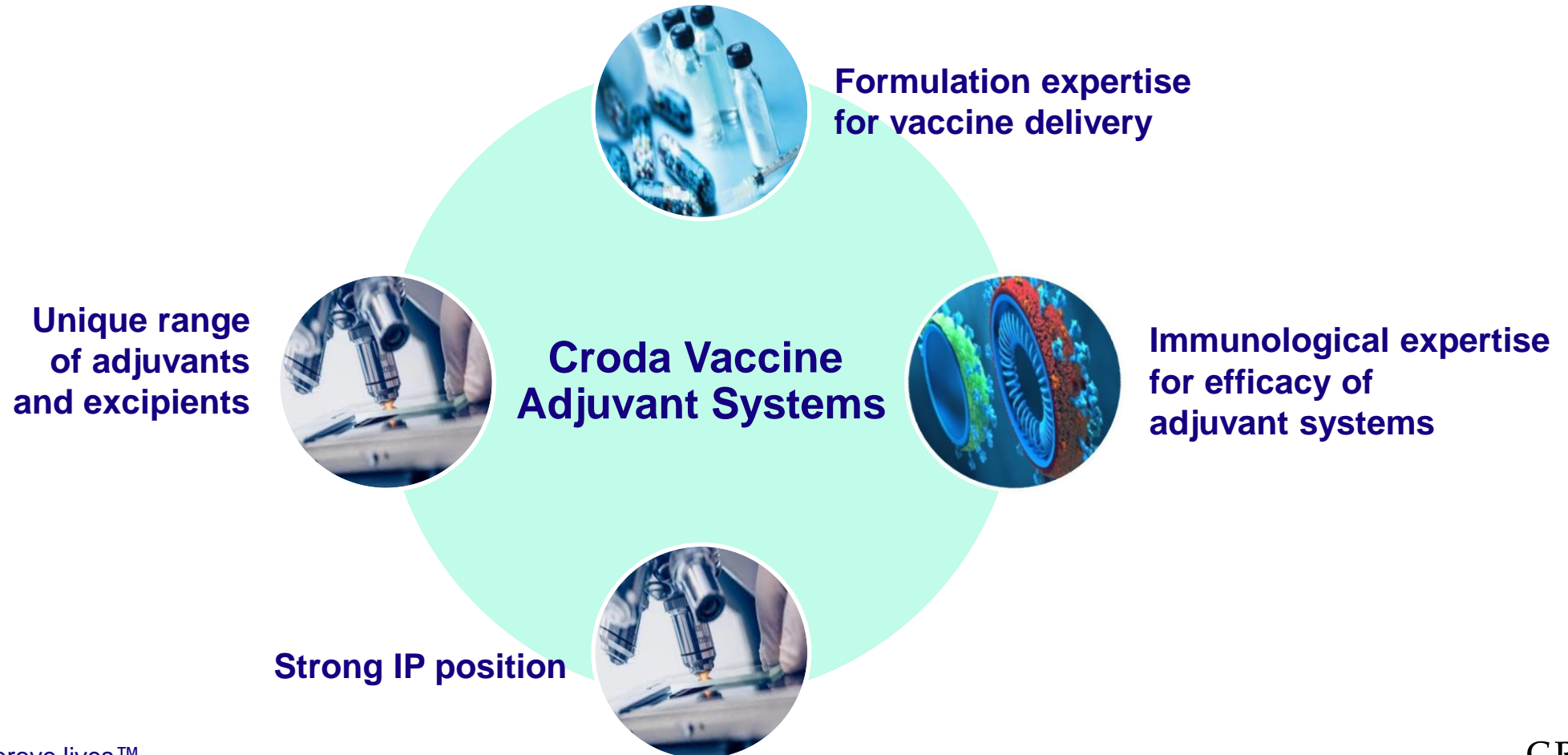
## Vaccine adjuvant market (\$USm)





# Why Croda will win

– uniquely diverse portfolio and expertise

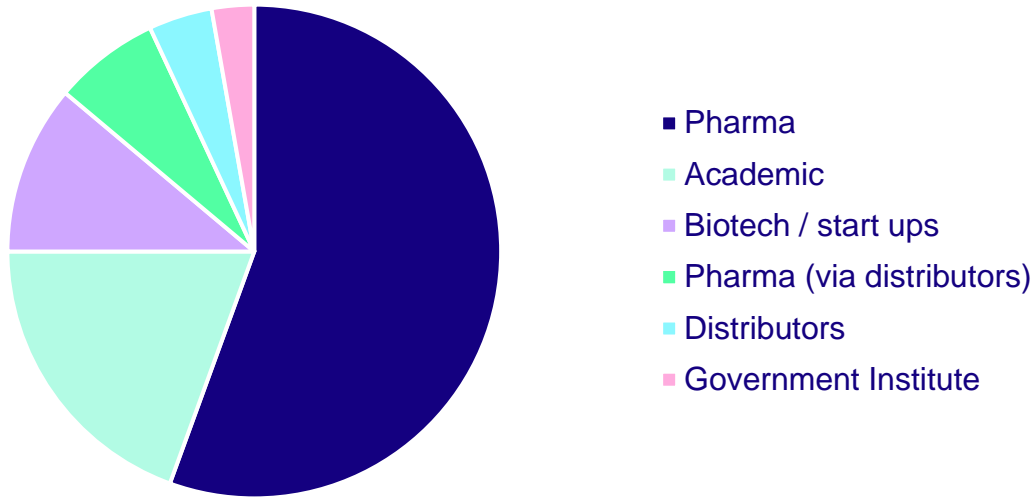


# Innovation – partnering with customers in R&D

## Customer R&D challenges

- Complex pathogens = “moving targets” for vaccines
- New administration routes for patient convenience
- New therapeutics

## Current breakdown by customer type



Pie chart shows breakdown of total customers in 2021  
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## Key partners

- Pharma companies (including all top 4)
- Academic research, Government institutes
- Biotech and start ups

**>200** samples for discovery, preclinical and clinical development to

**>60** different R&D groups

YTD 2022

## Example Partners



### Pharma

Croda is supplying Janssen with the adjuvant for the HIV-1 vaccine currently in clinical phase 3



### Biotech

Croda is working with Evaxion Biotech on their proprietary pipeline in immunotherapy in cancer and infectious disease

# Innovation

– growth projects in new therapeutic areas



Heritage business



Adjuvant systems



New administrative routes

>100 commercial customers

~100 preclinical and clinical projects

>10 projects

## Typical vaccines:

- HPV, hepatitis B, Conjugate Pneumococcal
- Aluminium adjuvants in 30% of all marketed human vaccines



## Project examples:

- Herpes Zooster, Cancer, Alzheimer, RSV, Malaria

Therapeutic vaccine projects  
+75% in current portfolio



## Example: patch formulation

- Non-invasive formulation technologies and innovative vaccines platforms



Verndari



# Investing in growth



## 1. Innovation

- Internal R&D and licensing for new adjuvants and systems
- New R&D centre of excellence – combining formulation and immunology know-how
- Establishing partnerships in academia, start ups and biotech



## 2. Knowledge

- Adding key resources to R&D, manufacturing and supply chain
- Growing sales and marketing to support ambitious strategy



## 3. Capacity

- Denmark – mineral and saponin-based adjuvants and systems
- Avanti – lipid-based adjuvants and systems
- New US multi-platform scale-up site

# Building a valuable innovation pipeline

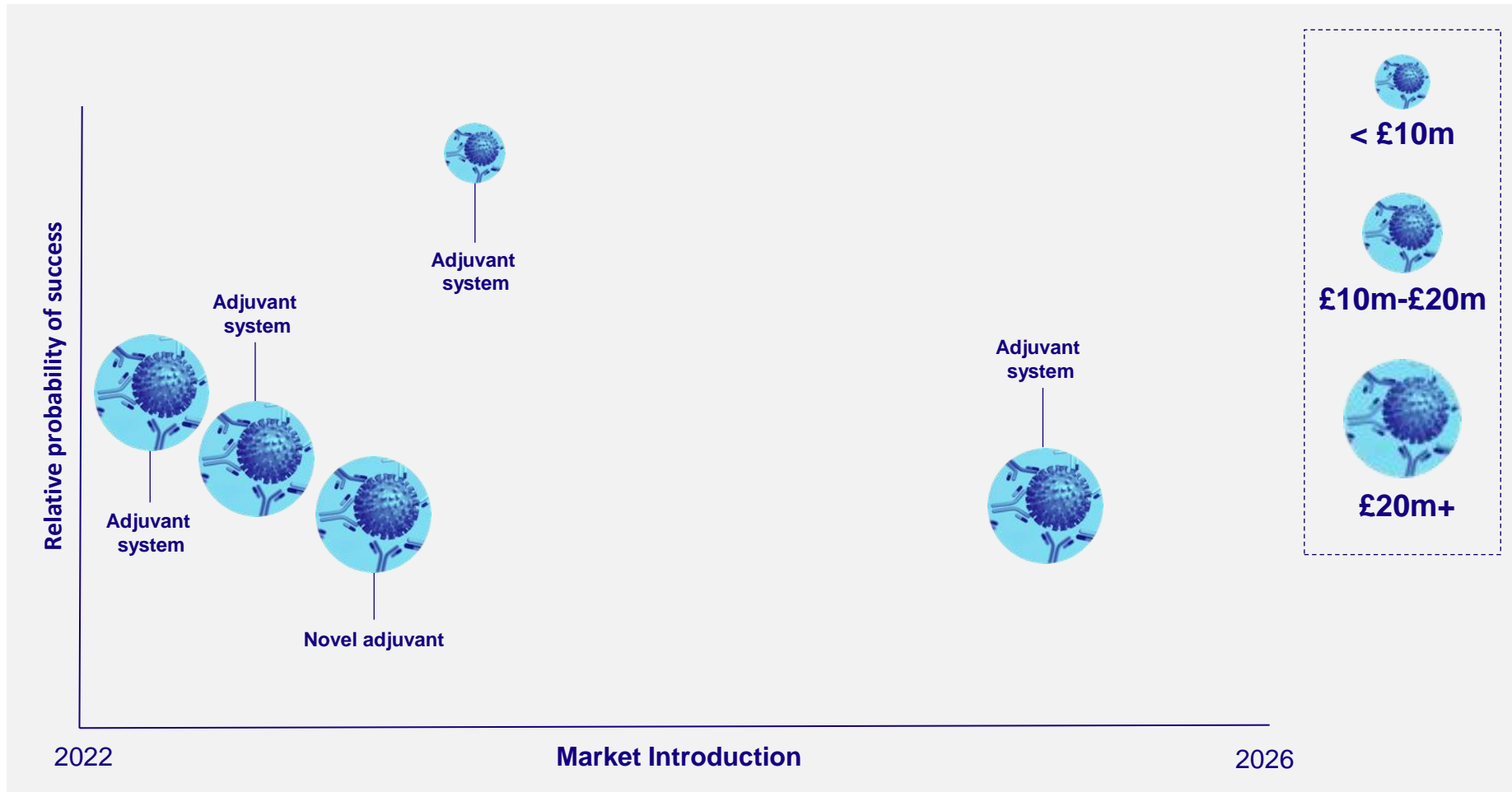


Chart shows expected peak annual sales value of new products. X axis is anticipated launch date. Y axis is relative probability of success influenced by technical, regulatory and commercial factors  
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# Key takeaways

## Market-leading position

- Best invested third party adjuvant supplier
- Unique pipeline of adjuvants AND building blocks for innovative adjuvant systems to support new vaccine development

## Significant growth opportunity

- WHO programme driving growth in heritage vaccines
- Rapid development of new vaccine applications, particularly therapeutics

## Exciting future growth

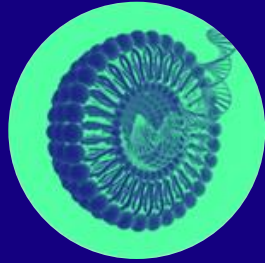
- 2022-25: driven by existing customer pipeline and expansion of constrained capacity
- 2025-30: building innovation pipeline in adjuvant systems

# Growth platform – Nucleic Acid Delivery

**Dr. Stephen W. Burgess**

Managing Director, Nucleic Acid Delivery

# What are nucleic acids?



## Nucleic Acid Delivery

- Present in all cells and essential for all forms of life
- Two major forms:
  - Deoxyribonucleic acid (DNA)**
  - Ribonucleic acid (RNA)**
- Primary role is to store and process genetic information
- Introduction of nucleic acids into cells counteracts defective genes in inherited and acquired disorders

**Nucleic acid therapeutics require sophisticated delivery technologies to overcome inherent challenges  
Lipid Nanoparticles (LNP) are preferred delivery systems for nucleic acids, comprising multiple components**



# Heritage – building relationships for success

Avanti founded to supply research market



1985

Exosurf receives market approval



1990-2017

Avanti initiates work with Acuitas



2020

Croda acquires Avanti expanding reach into nucleic acid delivery



1967



Good Manufacturing Practice initiated

1990



Clinical support of gene therapy trials

2017



BioNTech and Pfizer engage Avanti to supply lipids for development of COVID-19 vaccine

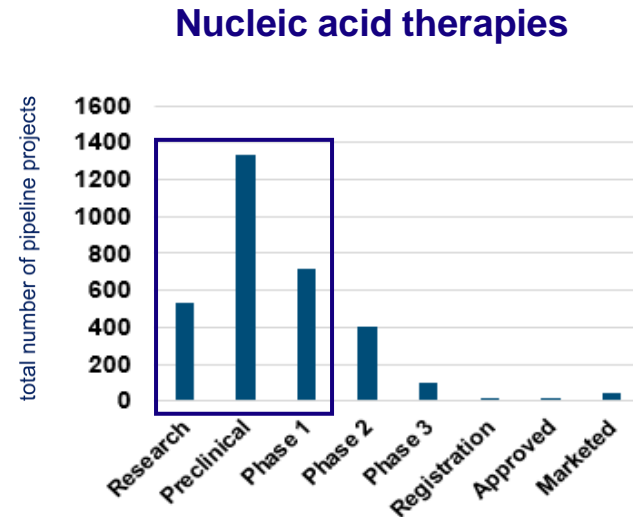
2020

GMP is the highest quality and regulatory standard for pharmaceutical production  
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# Market – rapidly expanding nucleic acid therapy development pipeline

## Rapidly expanding pipeline

- 2,500 projects – increasing rapidly
- Mostly early phases of development – beginning to commercialise over next 5-7 years



## Growth of nucleic acid therapies >20% CAGR

|                       |      |
|-----------------------|------|
| Viral vector          | 15%  |
| mRNA                  | 17%  |
| Cell and gene therapy | >25% |

Source: Pharmacircle based on total number of pipeline projects

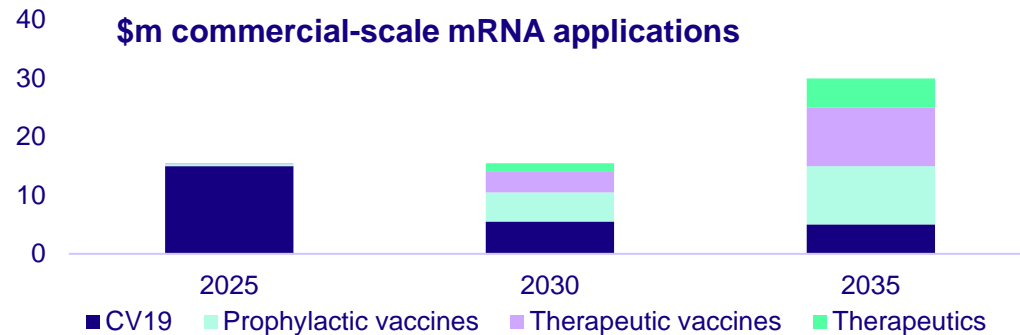
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# Market – targeting high-growth technologies

## Nucleic acid delivery >20% CAGR

### Market segment: mRNA



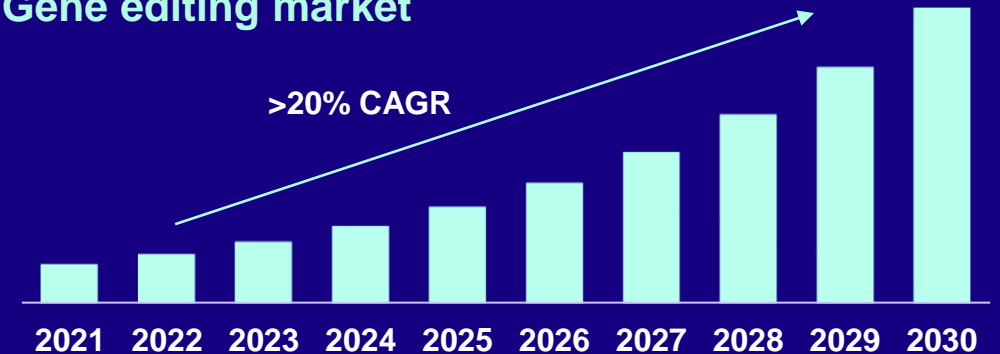
- Non-CV mRNA vaccines / therapeutics market: \$25bn by 2035
- Of which, lipid component niche: \$1.5bn

Nature Journal: "Evaluation of the market for mRNA", 4 October 2021

### Market segment: gene editing

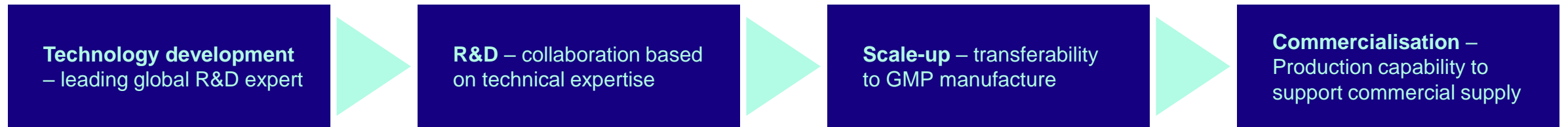
- Gene editing market: >\$5bn in 2021
- CAGR >20%; \$36bn by 2030
- Of which, lipid component niche: a further \$1.5bn

### Gene editing market



Genome Editing Market, Global Outlook and Forecast 2022-2030, Allied Market Research, August 2022

# Why Croda will win – unique position from discovery to commercial supply



Strengthening customer relationship

## Competitors

- One primary competitor supplying core lipid products for legacy liposomal drugs
- Three primary competitors supplying nucleic acid delivery space
- No competitor with comparable diverse portfolio of lipid products or pipeline projects

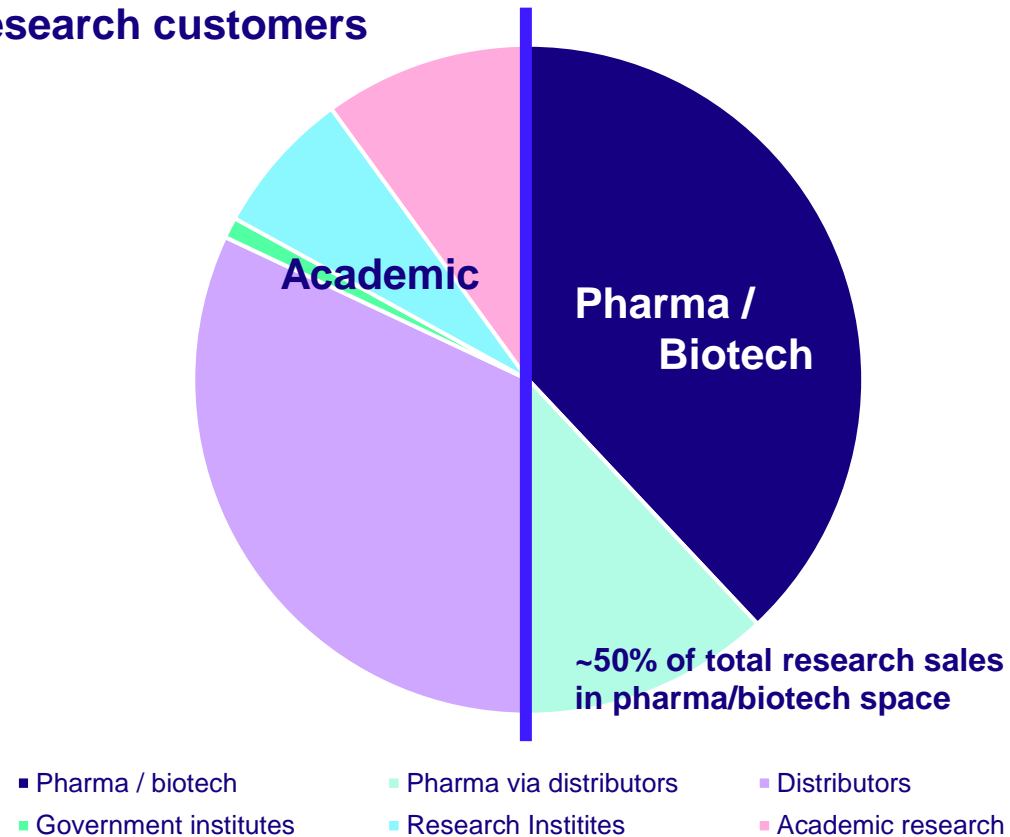
## Differentiated positioning

- Strong brand loyalty through Avanti R&D business and expert technical collaborations
- Unique formulation expertise in lipid-based delivery
- Unique portfolio of lipids to develop next-generation materials for nucleic acid delivery
- Ability to support discovery through commercial launch and beyond

# Innovation

## – partner in pharma research

### Current research customers



Pie chart shows breakdown of total customers 2021

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### Key Partners

#### Research and clinical development



Avanti is a preferred manufacturer for Acuitas Therapeutics and their licensing partners to support clinical development.

#### Customer collaborations



In addition to being a key supplier, Avanti/Croda is actively collaborating with BioNTech on advanced materials to improve vaccine delivery and tolerability.

# Innovation – growth projects at forefront of nucleic acid revolution



**Prophylactic vaccines**

76 projects



**Therapeutic vaccines**

32 projects



**Therapeutics**

72 projects



**Gene editing**

100-1,000x more lipid required

← Croda contributing to >50% of these projects →

## Example: influenza

- 8 clinical trials; 1 in Phase 3
- Flu / RSV / CV19 combinations
- ~1.5bn influenza vaccines pa

**sanofi**



## Example: cancer immunotherapy

- 17 clinical trials; 5 in Phase 2
- mRNA for patient-specific cancers
- Targeting breast, melanoma, prostate, ovarian cancer

**BIONTECH**



## Example: protein replacement

- 2 clinical trials; Phase 2
- Targeting cardiac disease and cystic fibrosis
- Programmes in pre-clinical studies for hemophilia A/B and multiple metabolic diseases

**AstraZeneca**  **sanofi**

## Example: Genetic heart disease

- Affecting 31m worldwide
- Single course turns off specific problematic genes
- Combats arterial plaque forming
- World's first gene editing patient dosed in 2022



Nature Journal: "Evaluation of the market for mRNA", 4 October 2021 which analysed 180 pipeline projects from 31 companies.

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# Investing in growth



- Future extensions to pipeline from Avanti R&D and licensing
- New products to improve lipid nanoparticle delivery systems
- New transfection agents for cell & gene therapy

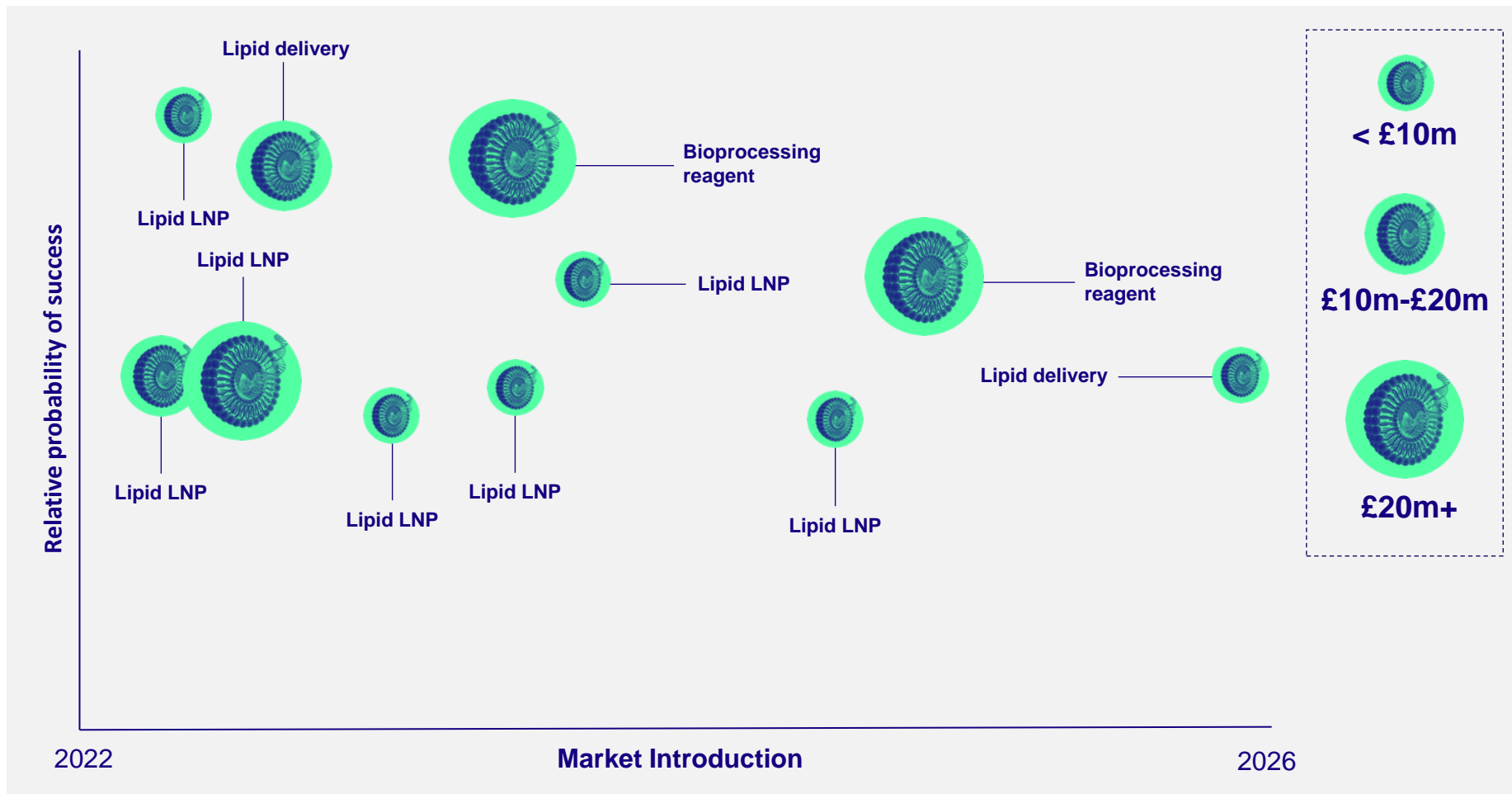


- R&D to support customers with application data
- Sales and marketing to support ambitious strategy



- R&D capability, Avanti, US
- Further capacity at UK site, supported by UKG co-investment
- Establish new multiproduct scale up at new US site, supported by USG co-investment

# Building a valuable innovation pipeline



Weighted value by  
2030: ~ £150m

Chart shows expected peak annual sales value of new products. X axis is anticipated launch date. Y axis is relative probability of success influenced by technical, regulatory and commercial factors  
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# Key takeaways

## Market-leading position

- Avanti established as global leader in lipid delivery – first to commercialise Covid lipids
- Strong R&D presence in pharma gives access to drug / vaccine discovery and clinical development

## Significant growth opportunity

- Covid-19 confirmed therapeutic application of nucleic acid – thousands of opportunities in clinical development
- mRNA vaccines will greatly improve existing treatments, with gene editing being the next revolution in medicine


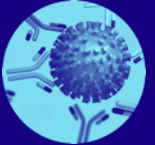
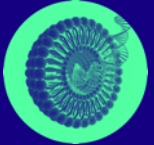
## Exciting future growth

- 2022-25: lipid demand stabilizing, customer project portfolio broadening, new capacity for future expansion
- 2026-30: commercialisation of clinical pipeline in lipid systems

# Empowering biologics delivery – strategy execution

Daniele Piergentili, President Life Sciences

# Empowering biologics delivery

|                    |   |   |  |
|--------------------|---|---|--|
| Growth platform    |  <b>Protein Delivery</b> |  <b>Adjuvant Systems</b> |  <b>Nucleic Acid Delivery</b>   |
| Croda UVP          | Leading partner for <b>high purity</b> excipients and bioprocessing aids                                  | <b>Broadest portfolio of vaccine adjuvants and systems</b>  | <b>Unique portfolio of lipids, polymers and functional ingredients</b> to create unique solutions and systems  |
| Market Opportunity | <b>&gt;10% market CAGR with limited competition</b> driven by therapeutic mAbs blockbusters               | <b>&gt;13% market CAGR with very limited competition</b> serving the therapeutic vaccines market            | <b>&gt;20% market CAGR fueled by the genome revolution</b> – nucleic acid therapeutics should represent <b>&gt;30% of pipelines in the next 10 years</b> |
|                    | <b>Lead</b>   | <b>Lead</b>   | <b>Develop</b>   |

UVP is unique value proposition

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# Strategy execution

A new strategy and brand

## Croda Pharma

Empowering biologics delivery



Small  
Molecule  
Delivery



Protein  
Delivery



Nucleic  
Acid  
Delivery



Adjuvant  
Systems

A clear execution plan



Innovation



Knowledge

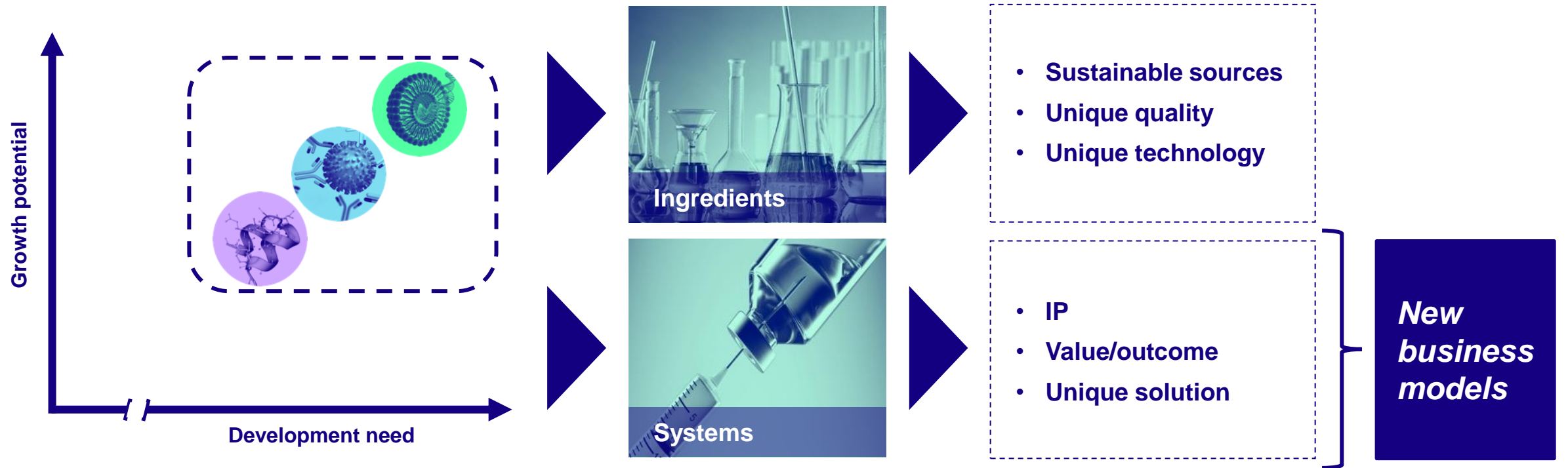


Capacity



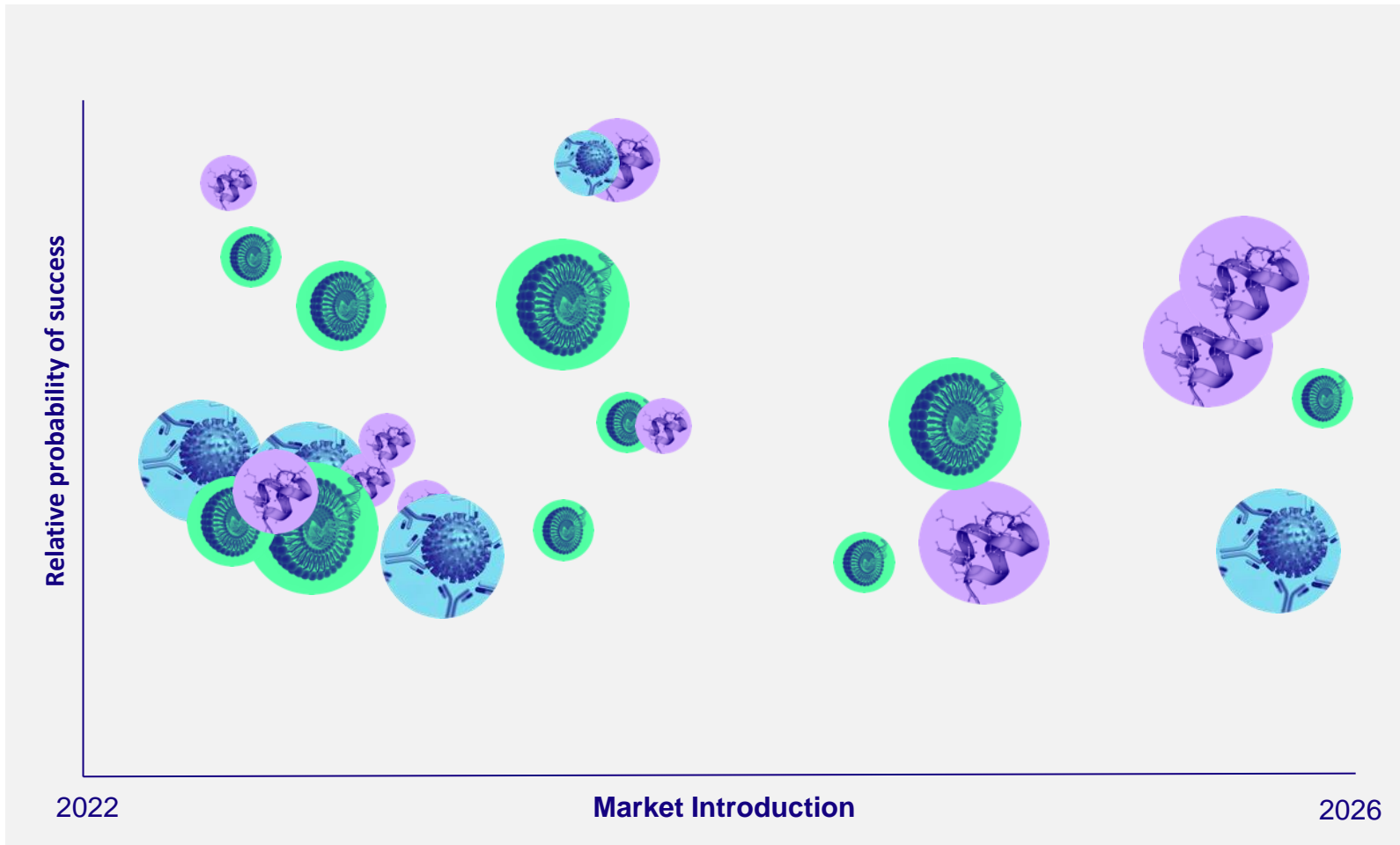
M&A and licensing

# Innovation – Smart science to improve lives™



Opportunities for new business models and margin expansion

# Innovation – exciting pipeline across all platforms



**£380m weighted value by 2030**

- Balanced across platforms
- Balanced in project type
- Balanced in project size
- Risk adjusted for regulatory, technical, and market introduction

Chart shows expected peak annual sales value of new products. X axis is anticipated launch date. Y axis is relative probability of success influenced by technical, regulatory and commercial factors

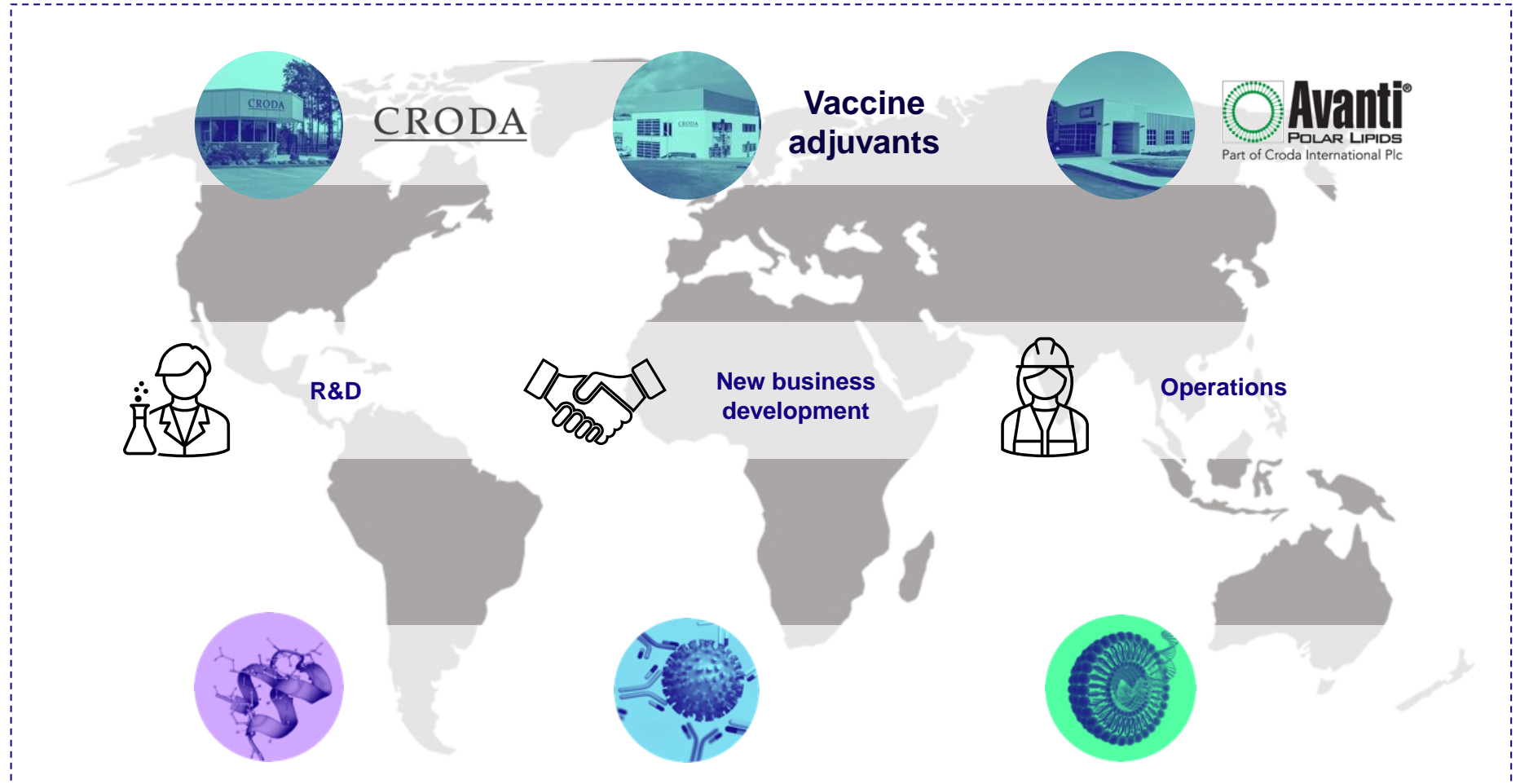
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# Knowledge – building on strong global foundations

Leveraging combined knowledge, enriching innovation

Expanding our teams, digitalising our approach

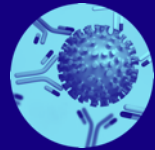
Establishing market-facing, technology-led teams to drive ambition



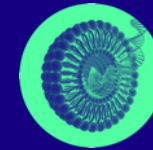
# Capacity – capex with government co-investment



## Protein Delivery



## Adjuvant Systems



## Nucleic Acid Delivery

### Capex 2020-21



Doubled US capacity



50% more capacity in Japan



Doubled capacity in Denmark



Doubled capacity at Avanti, USA

Established UK scale-up site

### Capex 2022-24



R&D / projects expansion  
£40m

New US multi-product scale-up site  
£45m  
+ £50m US Government co-investment

UK capacity expansion  
£25m  
+ £15m UK Government co-investment



# M&A and licensing – clear framework

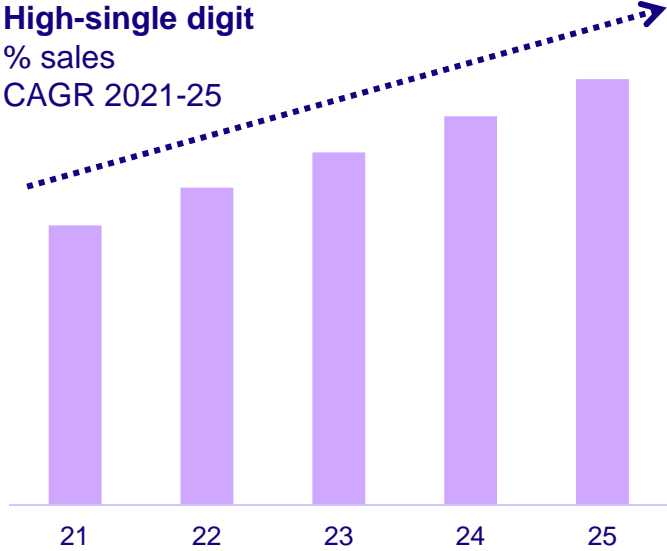


# Sustainable value creation

# 2021-25 – continued customer driven growth

## Proteins / small molecules

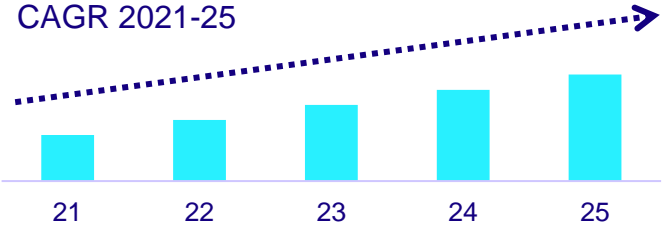
High-single digit  
% sales  
CAGR 2021-25



Faster growth for biologic APIs

## Adjuvant systems

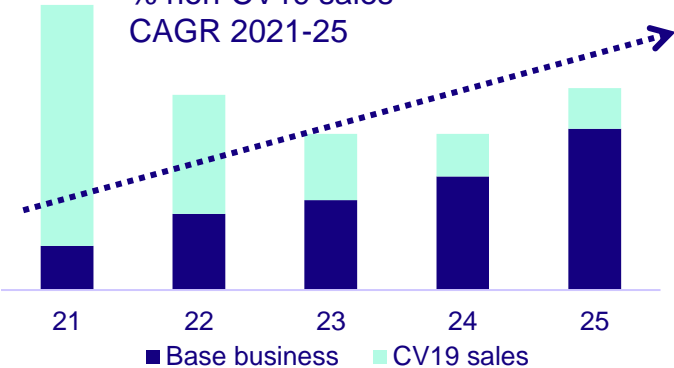
Double digit  
% sales  
CAGR 2021-25



Accelerating growth through new systems

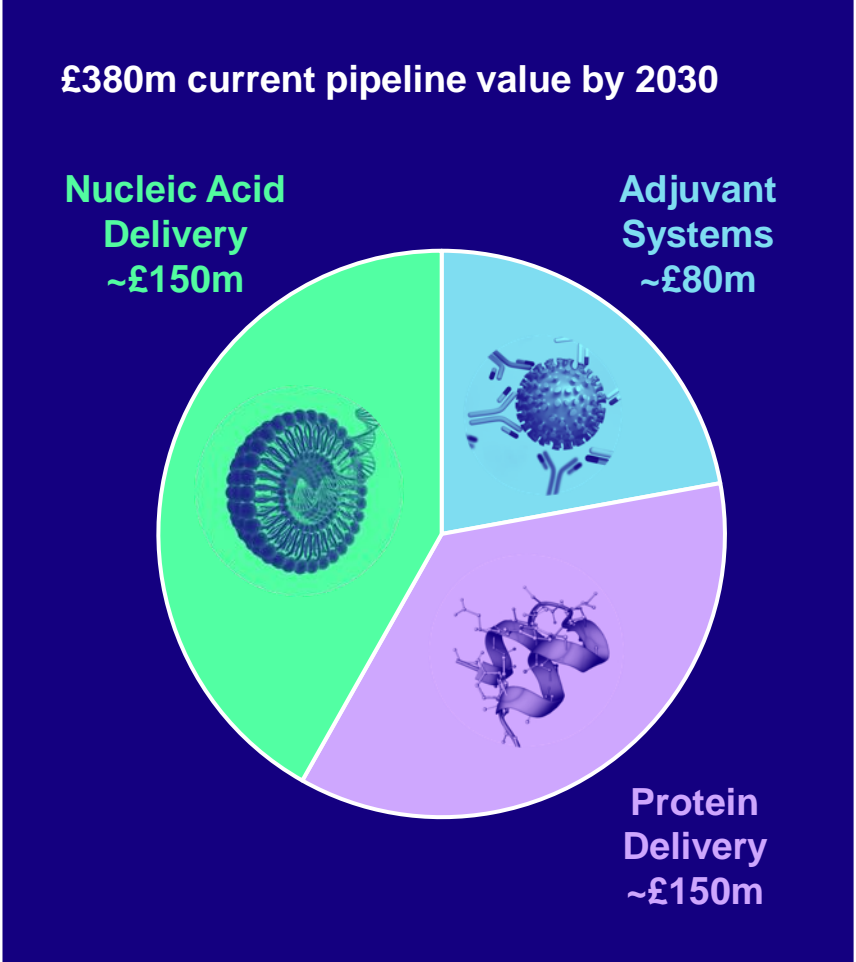
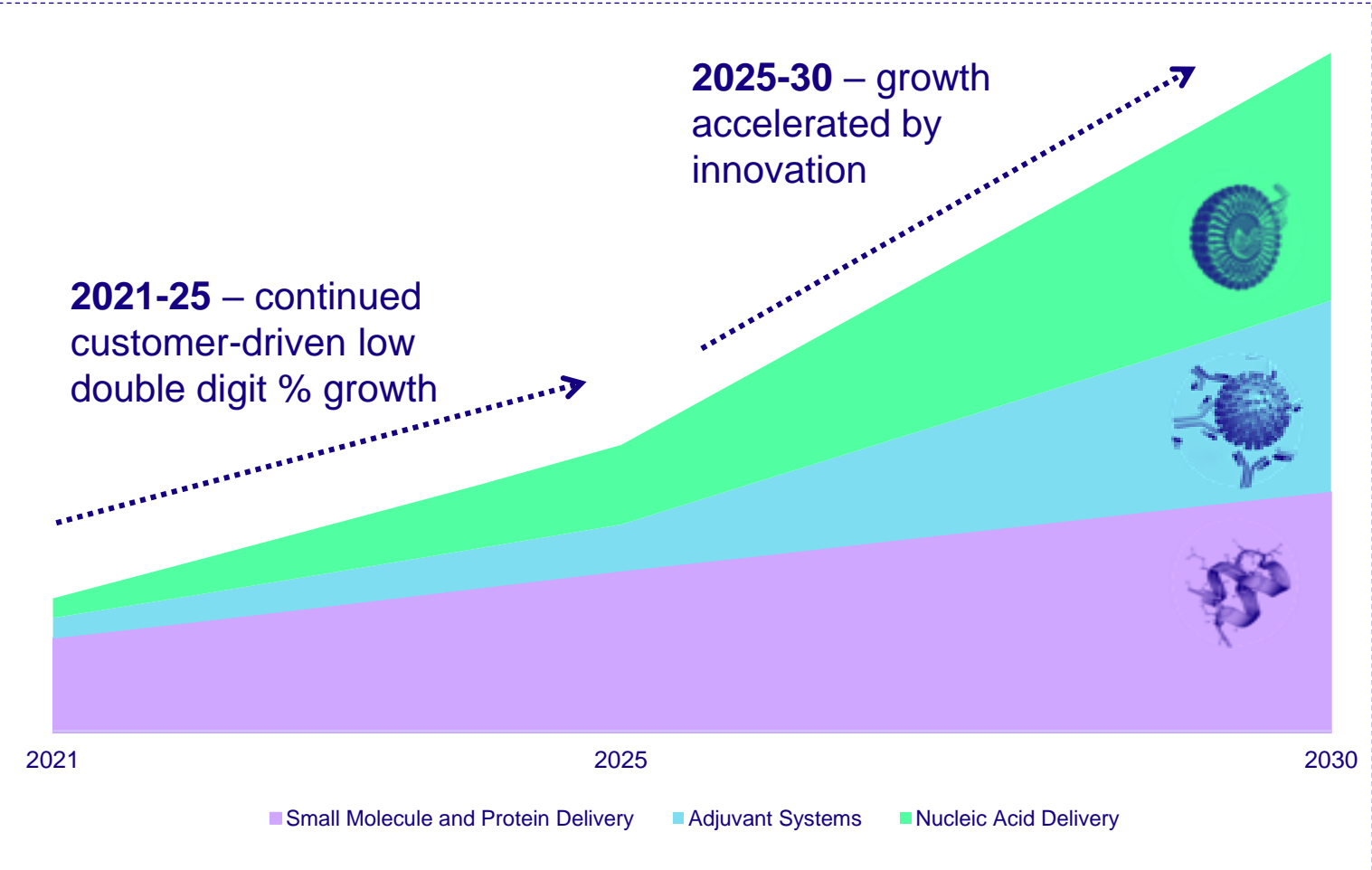
## Nucleic acids

Double digit  
% non-CV19 sales  
CAGR 2021-25



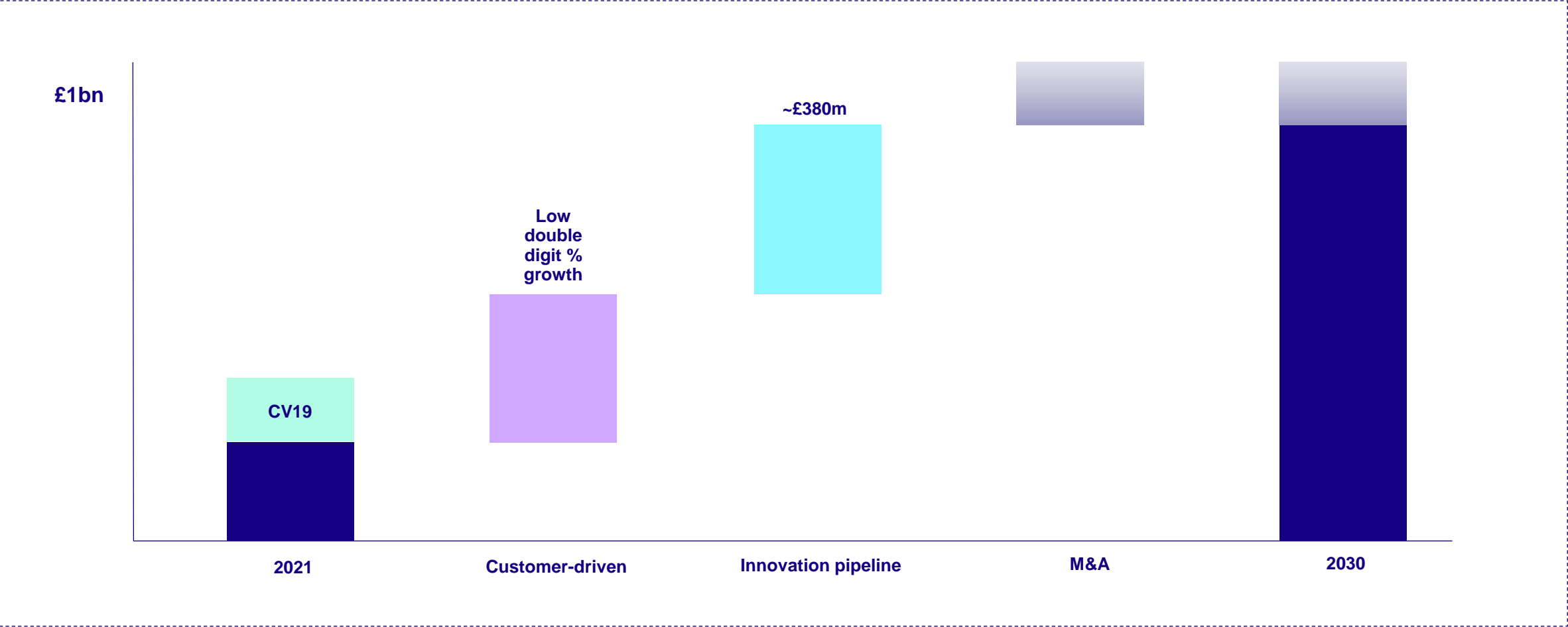
Rapidly developing portfolio

# 2025+ – sales growth accelerated by innovation



Future growth rates are management forecasts, excluding Nucleic Acid COVID-19 sales. Innovation pipeline value is weighted based on technical, market and regulatory factors.

# 2030 ambition – £1bn pharma opportunity



# Key takeaways

## **Strong Delivery**


- Built a leading portfolio of speciality excipients
- 'Buy and build' expansion strategy working well

## **Significant growth opportunity**

- Biologics revolution provides a unique market opportunity
- 'Empowering Biologics Delivery' strategy
- Based on three growth platforms with a clear execution plan

## **Exciting future growth**

- 2022-25: low double digit % customer-driven growth pipeline
- 2026-30: exciting innovation pipeline to accelerate opportunities



# Q&A

Croda Pharma

[investor.relations@croda.com](mailto:investor.relations@croda.com)



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