Croda International Plc
Investor Seminar
Life Sciences
Welcome and Introduction
Steve Foots, CEO
Cautionary statement and definitions

Cautionary statement

This review is intended to focus on matters which are relevant to the interests of shareholders in the Company. The purpose of the review is to assist shareholders in assessing the strategies adopted and performance delivered by the Company and the potential for those strategies to succeed. It should not be relied upon by any other party or for any other purpose. Forward looking statements are made in good faith, based on a number of assumptions concerning future events and information available to the Directors at the time of their approval of this report. These forward looking statements should be treated with caution due to the inherent uncertainties underlying such forward looking information. The user of this review should not rely unduly on these forward looking statements, which are not a guarantee of performance and which are subject to a number of uncertainties and other facts, many of which are outside the Company's control and could cause actual events to differ materially from those in these statements. No guarantee can be given of future results, levels of activity, performance or achievements.

Adjusted results

Unless otherwise stated, all performance data refers to adjusted results. These are stated before exceptional items (including discontinued business costs), acquisition costs and amortisation of intangible assets arising on acquisition, and tax thereon. The Board believes that the adjusted presentation (and the columnar format adopted for the Group income statement) assists shareholders by providing a meaningful basis upon which to analyse underlying business performance and make year-on-year comparisons. The same measures are used by management for planning, budgeting and reporting purposes and for the internal assessment of operating performance across the Group. The adjusted presentation is adopted on a consistent basis for each half year and full year results.

Constant currency results

All data is at reported currency rates unless otherwise stated. Reported currency results reflect current year performance translated at reported rates (actual average exchange rates). Constant currency results reflect current year performance for existing business translated at the prior year’s average exchange rates and include the impact of acquisitions. For constant currency profit, translation is performed using the entity reporting currency. For constant currency sales, local currency sales are translated into the most relevant functional currency of the destination country of sale (for example, sales in Latin America are primarily made in US dollars, which is therefore used as the functional currency). Sales in functional currency are then translated into Sterling using the prior year’s average rates for the corresponding period. Constant currency results are reconciled to reported results in the Finance Review.

Non-statutory terms are defined in the ‘Alternative Performance Measures’ section of the Finance Review in the Half Year Results Statement.

The Core Business comprises Personal Care, Life Sciences and Performance Technologies.
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>10.30</td>
<td>Delivering our strategy</td>
<td>Steve Foote</td>
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<tr>
<td>10.40</td>
<td>Introduction to Life Sciences</td>
<td>Dr Nick Challoner</td>
</tr>
<tr>
<td>11.00</td>
<td>Opportunities in Crop Care</td>
<td>Dr Dave Cherry</td>
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<td>11.20</td>
<td>Break</td>
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<td>11.30</td>
<td>Opportunities in Health Care</td>
<td>Freek Snieders</td>
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<td>12.15</td>
<td>Q&amp;A</td>
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<td>12.45</td>
<td>Wrap Up</td>
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<td>13.00</td>
<td>Lunch</td>
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Meet the team

Board and Executive

Steve Foots
Group Chief Executive

Jez Maiden
Group Finance Director

Prof Keith Layden
Non-Executive Director

Dr Nick Challoner
President,
Life Sciences

Senior Management

Freek Snieders
Managing Director,
Health Care

Dr Dave Cherry
Managing Director,
Crop Protection

Dr Alun Barnes
Vice President R&T,
Life Sciences

Laura Reilly
Marketing Director,
Life Sciences

Ritesh Tanna
Group Financial
Controller

Nick Commandeur
Corporate Development
Director

Smart Science to Improve Lives™
Croda at a glance

**Highlights**

- £1.39 bn sales
- 4,580 employees
- 72 operations in 38 countries
- 28.2% of sales in new and protected (NPP) products
- 28 years of consecutive dividend increases

**Highlights**

**Three strong legs**

- Personal Care: 36%
- Life Sciences: 38%
- Performance Technologies: 26%

**Balanced sector footprint**

**Integrated sustainability and business strategy**

*Our purpose*

Smart Science to Improve Lives™

- Sustainable model
- New market development
- Faster growth
- Winning with our customers

2018 Data
Our strategic priorities

Smart Science to Improve Lives™

Our purpose

Our mega trends

Beauty and ageing
Health and well-being
Feeding world population
Sustainability

Our strategy

Personal Care
Strengthen to grow

Life Sciences
Expand to grow

Performance Technologies
Refine to grow

Our enablers

Become employer of choice
Build strong digital competence
Deliver world class customer experience
More responsive operations
Increased dynamic innovation
Croda International Plc
Investor Seminar
Life Sciences

Introduction to Life Sciences
Dr Nick Challoner, President Life Sciences
The evolution of Life Sciences

Life Sciences

Health Care

Standard Excipients

Nutritional Lipids

Crop Care

Crop Protection

2014
The evolution of Life Sciences

At the smart end of the market, delivering niche applications to our diverse customer base

Life Sciences

Health Care
- Vaccine Adjuvants
- Speciality Excipients
- Drug Delivery

Crop Care
- Seed Enhancement
- Crop Protection
- Plant Biostimulants
Strong track record of results delivery

Revenue £m

- 2014: 12% CAGR
- 2018: 350

Operating profit £m

- 2014: 10% CAGR
- 2018: 120

Return on sales %

- 2013: 35%
- 2014: 30%
- 2015: 25%
- 2016: 20%
- 2017: 15%
- 2018: 20%
- H1 2019: 12%

Plant Impact Acquisition
Incotec Acquisition
BioSector Acquisition
Building on the success of Personal Care

Life Sciences Ambition

- As Profitable as Personal Care
- Become Largest Sector in Croda

<table>
<thead>
<tr>
<th>Personal Care</th>
<th>Life Sciences</th>
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<tbody>
<tr>
<td>Innovation</td>
<td>High</td>
</tr>
<tr>
<td>Customer intimacy</td>
<td>High</td>
</tr>
<tr>
<td>Growth rates</td>
<td>Medium</td>
</tr>
<tr>
<td>Barriers to entry</td>
<td>Medium</td>
</tr>
<tr>
<td>SDG alignment*</td>
<td>Medium</td>
</tr>
<tr>
<td>Market fragmentation</td>
<td>High</td>
</tr>
</tbody>
</table>

Strong IP and technology-rich portfolio and pipeline well positioned for Growth

* United Nations Sustainable Development Goals
Growing with diverse customer base

Crop Care

Top 10 = 75% of revenue*

Health Care

Top 10 = 25% of revenue*

100s of customers

1000s of customers

* Revenue of top 10 customers in 2018
Increasing global footprint

- Life Sciences manufacturing sites
- Sales office
- Life Sciences R&T Innovation Centre

2014
Increasing global footprint

- Innovation Centre, Denmark, Health Care
- Innovation Centre, China, Crop Care
- Innovation Centre, Japan, Health Care
- Local Manufacture, Brazil, Crop Care

Life Sciences manufacturing sites
Sales office
Life Sciences R&T Innovation Centre

Doubled number of innovation centres
+40% Sales team
40% Employees in emerging markets

2019
Increasing global footprint

### Crop
- PaddyRise™ - stronger, more resilient plants
- 25% increase in yield from fixed land area
- Improved income from less land

### Health
- Doubled capacity for speciality excipients
- Increased manufacturing footprint in Japan, US and UK
- New R&T facilities Brazil and Denmark
Innovation is delivering returns

**Accelerating Innovation**

- >30% Average sales of NPP in last 2 years
- 10x R&D ROI for every £1 invested in R&D
- 1600 New customers in last 2 years

**Increasing IP**

- 35 Number of new patents granted in last 2 years - fastest growing of all sectors
- 71 Open Innovation projects in last 2 years
- £210m Invested in last 5 years in technology-led acquisitions

2018 Data
Innovation is keeping us a step ahead

Accelerating number of Technology Investments (TI)

Growing sales from new technologies

Increasing number of Open Innovation (OI) partners

Significant innovation pipeline

2014 2018

£398m
8
39

30% 2018 sales

2014 2018

4 completed
0
4

+54%

8
>4X
39

Smart Science to Improve Lives™
Customer intimacy

- Academies, masterclasses, virtual events
- 2500+ attendees across 20 countries in last 3 years
- “Go to” company “Formulator’s friend”
Targeted M&A

Target screening, selection and prioritisation achieved against 22 criteria

- Matches identified business need
- Is innovative, disruptive, IP-rich
- Offers significant growth potential in one or more Croda markets
- Can be commercialised globally through the Croda network

Acquisition criteria
Targeted M&A

- **Incotec**, 2015
  - Seed Enhancement

- **Novel Technologies**, 2016-18
  - Drug Delivery

- **Plant Impact**, 2018
  - Plant Biostimulants

- **Biosector**, 2018
  - Vaccine Adjuvants

**Investing in niche adjacencies to improve lives**

- Profit doubled in 3 years
- Acquired advanced research pipeline
- Technology adjacency ready for commercialisation
- Commercialised technology adjacency with strong potential

Smart Science to Improve Lives™
## Life Sciences takeaways

### Successful delivery
- Increased niche market positions
- Stronger IP & technology portfolio

### Driving strong returns
- Revenue and profit CAGR >10%
- High margin > 30%
- Superior return on capital

### Exciting future
- Strongly aligned to mega trends
- Organic and inorganic growth opportunities

### Delivering strategy
- Increasing global footprint
- Accelerating innovation & NPP
- Greater customer intimacy
Croda International Plc
Opportunities in Crop Care

Dr Dave Cherry,
Managing Director
Crop Protection
What drives Crop Care?

- Expanding population
- Changing environment
- Demand for transparency and trust
- Digitalisation and interconnectedness
Exciting niche markets

Crop Protection market
$58bn (CAGR 4%)

Adjuvants and Additives
$3bn (CAGR 5%)

Seed market
$60bn (CAGR 8%)

Seed Treatment
$5bn (CAGR 10%)

Croda Crop Care Sales by Region 2018

- 39% Europe
- 32% North America
- 16% LatAm
- 13% Asia

Strong consistent performance across regions and key customers
Accelerated growth in LatAm and Asia

Source: Mordor Intelligence, 2018
CAGR: 2018-2024
The evolution of Croda Crop Care

Agrochemicals

Targeted, sustainable solutions

Leader in formulation, delivery and seed technology

Sustainable solutions aligned with UN SDGs

Cross-fertilisation enhances innovation pipeline
## Delivering success in Crop Care

<table>
<thead>
<tr>
<th>Collaboration</th>
<th>Innovation</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic partnerships at multinationals</td>
<td>Strong pipeline plus open innovation</td>
<td>Showcasing expertise at customer events</td>
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</table>

<table>
<thead>
<tr>
<th>Diversification</th>
<th>Responsibility</th>
<th>Expansion</th>
</tr>
</thead>
<tbody>
<tr>
<td>New customers, markets, applications</td>
<td>Sustainable solutions at our core</td>
<td>Strong organic growth supplemented by M&amp;A</td>
</tr>
</tbody>
</table>
Customer collaboration in Crop Care

Market Growth CAGR 4%

Access to education and expertise

Croda Growth CAGR 7%

Increased strategic engagement

Suppliers Award 2018

Increased customer intimacy

Innovation Award 2019

Broader access to contacts

KEY ACCOUNT SUCCESS

Collaborative engagement on technical projects

Early access to new technologies
Platforms for growth

**Crop Protection**
- Industry leading adjuvant supplier, innovation aligned with key customer base

**Seed Enhancement**
- Innovative technologies to improve the quality and performance of seeds and maximise yields

**Plant Biostimulants**
- Creating a new category; investing for the future to sustainably improve crop yield and quality
Targeted, sustainable solutions
Crop Protection

Hydravance™
Soil adjuvant

Atplus DRT™
Drift reduction technology

Water management in soil

Precision agriculture

Improving performance of agrochemical active ingredients with specialised additives
Targeted, sustainable solutions
Seed Enhancement

Enhancing seeds to reach their maximum potential

Upgrading X-ray technology

Maximising the value of seeds

Primed

Primed

Faster, more uniform germination

Smart Science to Improve Lives™
Targeted, sustainable solutions
Plant Biostimulants

Stimulating natural plant responses, helping plants direct their resources to improving crop quality and creating yield.

Without CaT™

Without Alethea™

With Alethea™

Improving calcium mobility

Mitigating impact of environmental stress

CaT™

Alethea™
Crop Care takeaways

**Value generation**
- High growth within exciting niche markets
- Proven capability and potential
- Strong margin generation

**Stronger together**
- Broadening our platforms and market relevance
- Greater insights and expertise
- Smarter innovation

**Customer collaboration**
- Enhanced strategic relationships
- New customers and applications

**Sustainable future**
- Responding positively to the challenges of a changing world
- Targeted, sustainable solutions
Croda International Plc
Investor Seminar
Life Sciences

Break
Croda International Plc
Opportunities in Health Care

Freek Snieders, Managing Director Health Care
What drives Health Care?

Growing and ageing population

Growth in biotech providing significant formulation challenges

Concern around drug safety and integrity

Development of drugs and vaccines for rare diseases
Exciting niche markets

Global Pharma Market
$1.204tn (CAGR 4-6%)

Croda’s Vaccine Adjuvant niche
$0.5bn

Croda’s Speciality Excipient niche
$2bn

Global Excipient Market
$6.9bn (CAGR 4-5%)
The evolution of Croda Health Care

Consumer Health

Patient Health

Strategic move towards Patient Health

Brand protection at the core of our offering

Customers seek high quality, low risk delivery systems

Smart Science to Improve Lives™
Platforms for growth

Speciality Excipients
- Excipient niche highly valued by customers
- Continued innovation with unique solutions and purification technologies
- Substantial regulatory know-how and influence

Vaccine Adjuvants
- Established adjuvant portfolio and expertise
- Industry-leading site quality credentials
- Strong pipeline of next generation vaccine adjuvants

Drug Delivery
- Technology investments for the future
- Targeted and controlled drug delivery
- Accessing new business models
What are Excipients?

Excipients are the inactive part of a drug formulation that enable the Active Pharmaceutical Ingredient (API) to be delivered effectively to the patient.

Delivering the API

- Optimised format
- Right dosage
- Right time

Smart Science to Improve Lives™
What are Excipients?

Excipients play differing roles across differing applications
Opportunity for increased value capture in challenging formulations

Tablet
- Drugs comprise:
  - API 1%
  - Excipients 99%

Topical cream
- Drugs comprise:
  - API 1%
  - Excipients 25%
  - Water 74%

Liquid capsule
- Drugs comprise:
  - API 8%
  - Excipients 92%

Injectable
- Drugs comprise:
  - API 2%
  - Excipients 98%

Injectable (biologic)
- Drugs comprise:
  - API 10%
  - Excipients 4%
  - Water 86%
Croda protects pharmaceutical brands

Customers require independent accreditations and a global, consistent ability to supply

Customers seek high quality, low risk delivery systems

Excipient selection restricted to regional pharmacopoeia

Opportunity to build on performance and functionality of “standard” grades

Preference for tried and tested excipients

Innovation “in the safe space”

Customers derisking supply chain

Seeking credible suppliers with quality focus
Why compromise on delivery?

Pharma focus on API
Discovery is complex, costly, high risk

Pharma focus on delivery
Formulating for success with Speciality Excipients

PhRMA (Pharmaceutical Research and Manufacturers of America)

Smart Science to Improve Lives™
# Increasing challenges of Biotech

## Top Selling Drugs

<table>
<thead>
<tr>
<th>Position</th>
<th>2003</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lipitor</td>
<td>Humira</td>
</tr>
<tr>
<td>2</td>
<td>Zocor</td>
<td>Revlimid</td>
</tr>
<tr>
<td>3</td>
<td>Norvasc</td>
<td>Odpivo</td>
</tr>
<tr>
<td>4</td>
<td>Zyprexa</td>
<td>Enbrel</td>
</tr>
<tr>
<td>5</td>
<td>Prevacid</td>
<td>Eylea</td>
</tr>
<tr>
<td>6</td>
<td>EpoGen</td>
<td>Herceptin</td>
</tr>
<tr>
<td>7</td>
<td>Plavix</td>
<td>Keytruda</td>
</tr>
<tr>
<td>8</td>
<td>Advair</td>
<td>Avastin</td>
</tr>
<tr>
<td>9</td>
<td>Nexium</td>
<td>Rituxan</td>
</tr>
<tr>
<td>10</td>
<td>Zoloft</td>
<td>Remicade</td>
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</table>

### Key Points
- **9 out of 10 top selling drugs are biologics**
- **All top 10 biologics are injectables**
- **60%+ of pipeline is for injectable delivery**
- **Formulation challenges unmet by standard excipients**

*Biologics delivered in Injectable Formulation*

Pharmacircle, 2018
Croda’s excipient offering

**Standard Excipients**
Routine applications

**Speciality Excipients**
Sensitive, challenging applications

Speciality Excipients for superior performance
Speciality Excipients

- Enhanced drug stability
- Boosting shelf life
- Improving product safety
- Reducing patient irritation
- Superior performance
- Improving active efficacy

Impurities extracted from a standard grade

Soybean Oil

Before

After

Smart Science to Improve Lives™
Speciality Excipients
Oncology drug performance

In standard excipient products, multiple API degradation products develop

Speciality excipients offer more predictable, consistent drug performance
Speciality Excipients
Outperforming the excipient market

Success replicated across regions and customers

Double digit growth across Speciality Excipients

Standard Excipients growth aligned with market

![Graph showing revenue growth for Standard and Speciality Excipients compared to market growth.

- Standard Excipients: Growth aligned with market.
- Speciality Excipients: Double digit growth across regions and customers.

Legend:
- Green line: Market Growth
- Purple line: Croda Standard Excipients
- Teal line: Croda Speciality Excipients

Year: 2015 to 2018

Revenue (% Indexed to 2015)
Speciality Excipients
Investing in range and technologies

2019
30
Speciality Excipients

2025
100
Speciality Excipients

Doubled capacity across 3 regions
Speciality Excipients
Growing with diverse customer base

Top 10 Customer Revenue, 2018

Health Care
Top 10
25%

1000s of Customers

Target customer groups

Multinationals
Medical device
Contract research
Contract development
Biotech
Generics
Speciality Excipients
Investing in quality and reach

1st Excipient supplier to achieve EXCiPACT

Significant new opportunities in emerging markets

Ability to manufacture to pharma API standards

Industry-leading vaccine adjuvant site

Health Care manufacturing sites
Sales office
Health Care R&T Innovation Centre
What is a vaccine adjuvant?

A vaccine is a biological preparation that improves immunity to a particular disease.

An adjuvant is a key component of a vaccine. It boosts the body’s immune response to a vaccine.
Vaccine Adjuvants
Acquiring in adjacent technologies

**Biosector**
€72m Acquisition

**Acquisition Rationale**
- Attractive industry leader in Speciality Excipient niche
- Strengthening existing customer relationships
- Utilising Croda network to broaden reach
Vaccine Adjuvants
Disease prevention

Enhancing the immune response of a vaccine to boost performance

Gold standard products and facility

Novel, natural saponin pipeline

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“Easy” vaccines have already been developed

Partnering to target new diseases

Vaccine Adjuvants
Combating challenging diseases

- Malaria
- Tuberculosis
- HIV
- Shingles
- Staphylococcus aureus
- Respiratory syncytial virus
- Influenza

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Adjacent Technologies

Drug delivery

- Technology investments for the future
- Targeted and controlled drug delivery
- Accessing new business models

Smart partnering
- SiSaf
- ProSilic drug delivery technology

Disruptive technologies
- Enza
- Novel products with broad applicability
Our speciality journey

Consumer Health → Patient Healthcare

- 55% Standard Excipients
- 45% Speciality Excipients
- Upgrading to Speciality Excipients and technologies

2018 → 2025
Our speciality journey
Health Care increasing value

Health Care Continuum

- Consumer Health
- Standard Excipients
- Speciality Excipients
- Vaccine Adjuvants
- Drug Delivery

Added value
Health Care takeaways

Established leading position in Excipients

Reputation for quality & service – barriers to entry

Transitioning towards high growth Speciality Excipients

Exciting opportunities in emerging markets

Strong innovation pipeline & new excipient technologies

Targeting adjacent technologies e.g. vaccines.

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Life Sciences

Q&A