



Croda's Technology Investment Group

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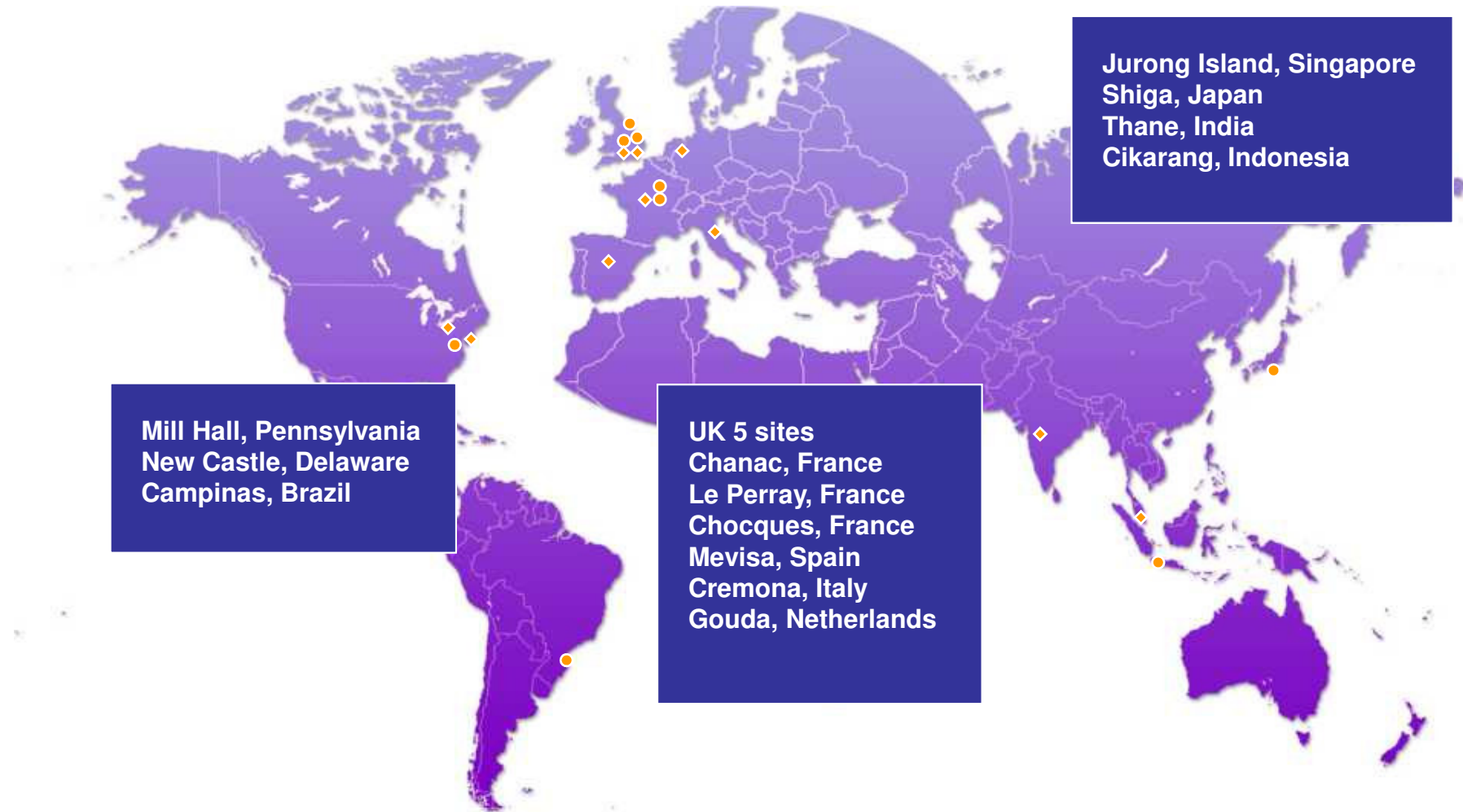
The Science of Innovation

Croda at a Glance

- A leading producer of speciality ingredients for high growth markets
- Majority of feedstocks are naturally derived (69%)
- Sell effects and not chemicals
- Driven by innovation and exploitation of technology

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Croda's Manufacturing Sites

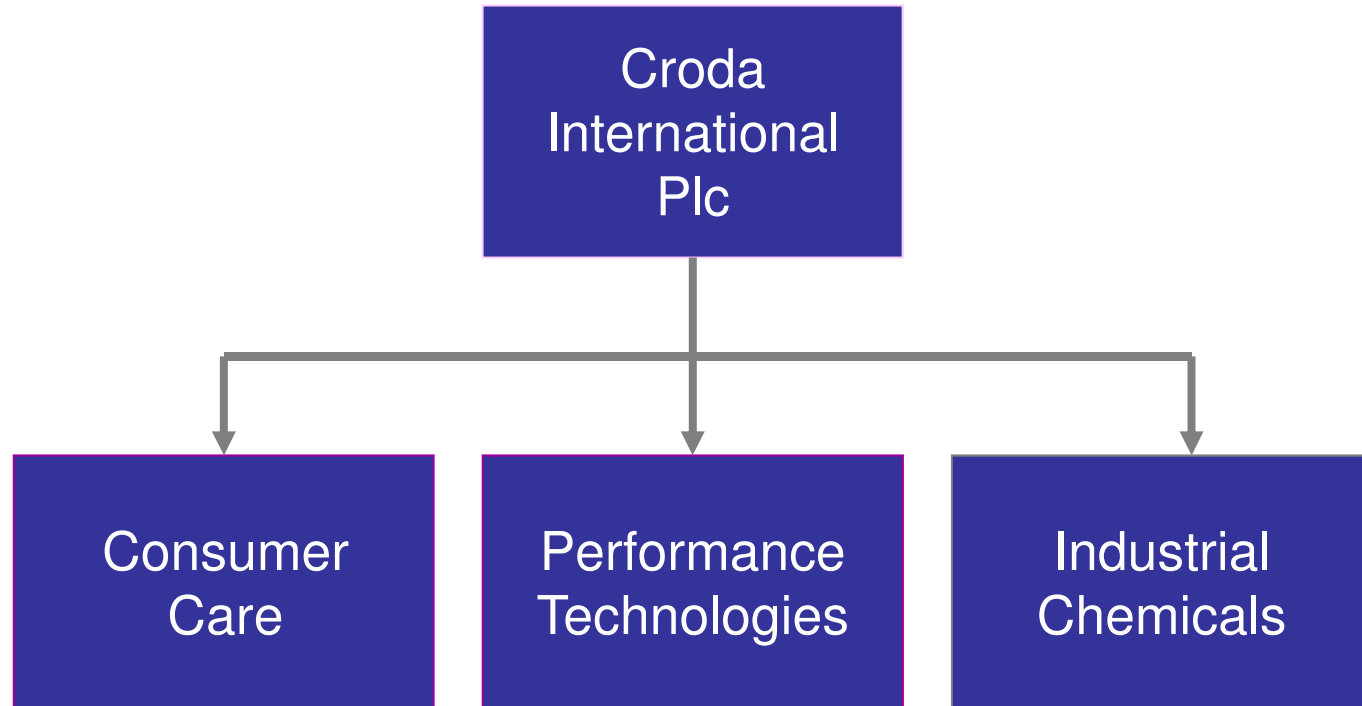




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Three divisions, different markets,
one unified focus...



... to grow through constant innovation

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Innovation - Croda Definition

“Any aspect of the operation of the business that differentiates Croda from the competition and by doing so creates value”



Differentiation



Added value

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Role

Corporate development function

Challenge

Find opportunities and innovation

Delivery

Differentiated technologies, products or effects

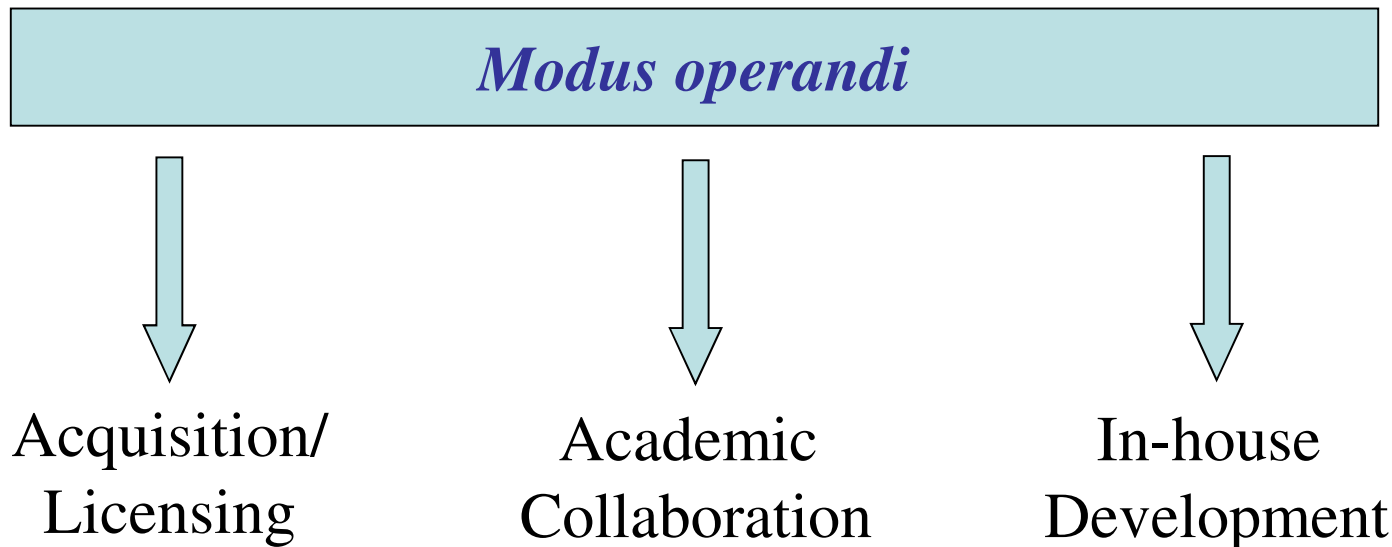
Acceleration of market led innovation is at the heart of our future growth story

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Modus operandi

- Nominally there are three routes to obtaining an identified technology





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Our goal is to acquire technology that:

Is, or has potential to be, class leading

Meets valuable unmet customer needs

Has robust IP

Can be commercialized globally through the Croda network

Acquisition criteria

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TIG - Success to Date

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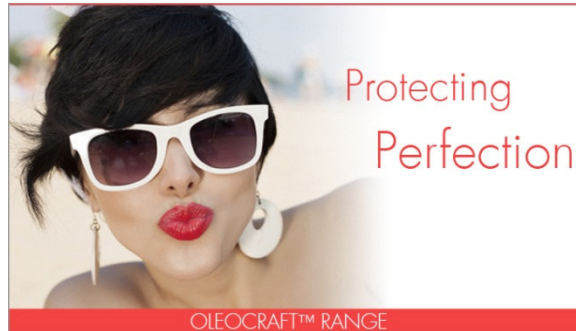


Liquiwax™ Range
by Croda

Polymeric Emollients



Plant Stem Cell Technology



Protecting
Perfection

OLEOCRAFT™ RANGE

Oil Gelling Polymers



Novel Fatty Acids and Amides



FlowSolve™

Asphaltene Dispersants

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External Collaborations

- Technology solutions to business needs do not always exist, so it cannot be acquired
- Collaboration with world leading academics can lead to technology solutions
- Relationships exist with top ranked universities in UK, Holland and France
- Croda is beginning to develop relationships in Canada and the USA

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- Challenged with identifying and addressing technology needs of business in medium to long term
- Target organizations or technology which provide are differentiated relevant to the market needs of each of the market sectors

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Focus on new technologies into 'existing' markets

Consumer Care

- Personal Care
- Health Care
- Crop Care

Performance

Technologies

- Home Care
- Lubricants
- Geo Tech
- Coatings & Polymers
- Polymer Additives

Industrial Chemicals

- Process Additives

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What are the key drivers in our core markets?

- Performance
- “Green”
 - Natural
 - Renewable
 - Sustainability
 - Low environmental impact
 - Biodegradable

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Sustainability

- Sustainability - “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” Brundtland Report - Our Common Future
- To quote Steve Foots - Croda Chief Executive: *“We feel that through our emphasis on emerging markets and technologies, we are making our own small contribution, going beyond ‘not compromising’ and actually ‘enhancing’ the capabilities of future generations.”* Croda Sustainability Report 2011

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Sustainability Drivers

- Customers - corporate sustainability targets.
 - Commitments:
 - Use of renewable energy - move to complete dependence.
 - Reduction of waste - targets to have zero waste.
 - Reducing product carbon footprint impact - become carbon neutral.
 - Greater use of renewable, recyclable and sustainable feedstocks.
 - Minimizing environmental impact - targets to have no negative impact.
- Consumers - changing behaviour to sustainable values
- Markets - demanding sustainable ingredients
- Croda - continuously updating our Corporate Social Responsibility targets

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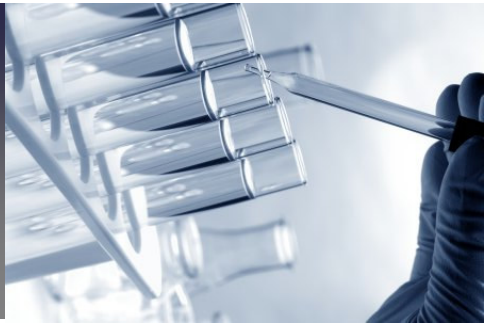
Sustainable Innovation

- Innovative environmentally friendly solutions
- Safer/milder ingredients
- Developing products that allow people to maximize performance and value whilst
 - Reducing energy use
 - Minimizing environmental impact
 - Improving efficiency

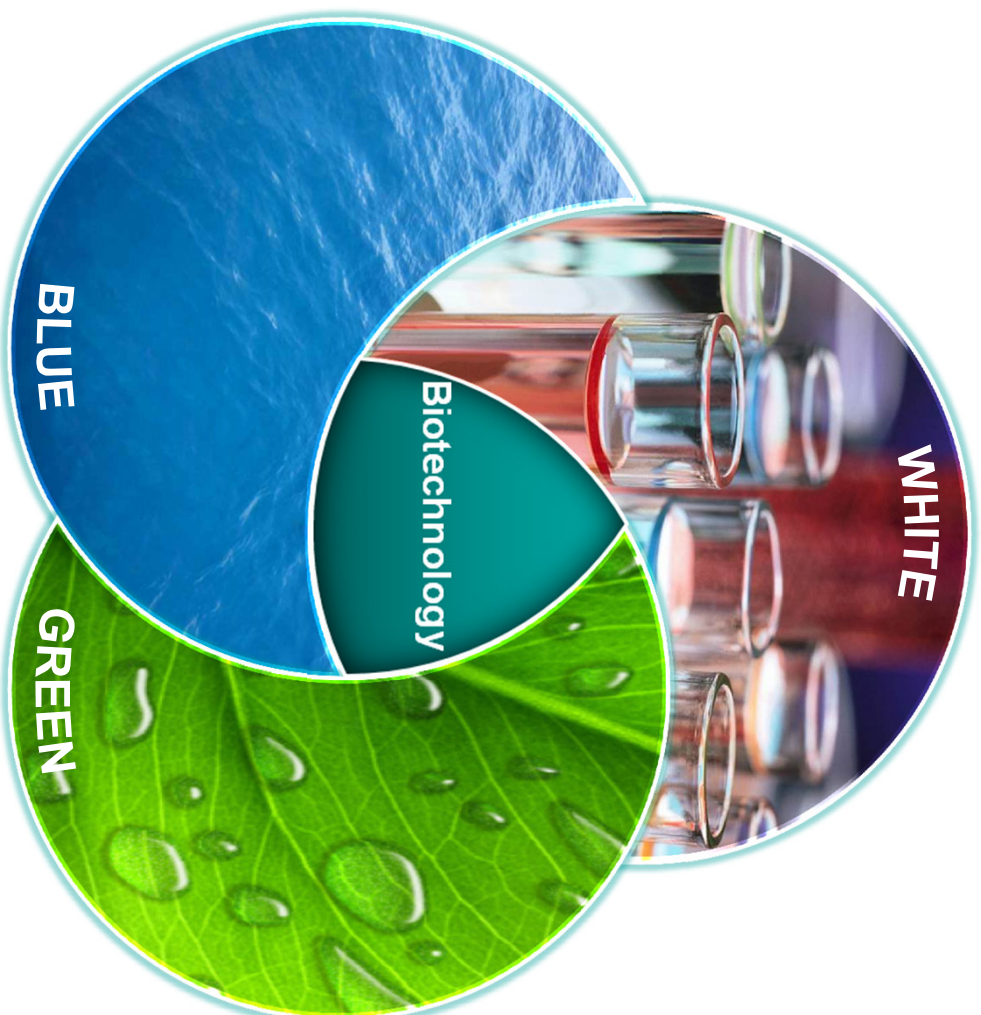
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Sustainable Innovation



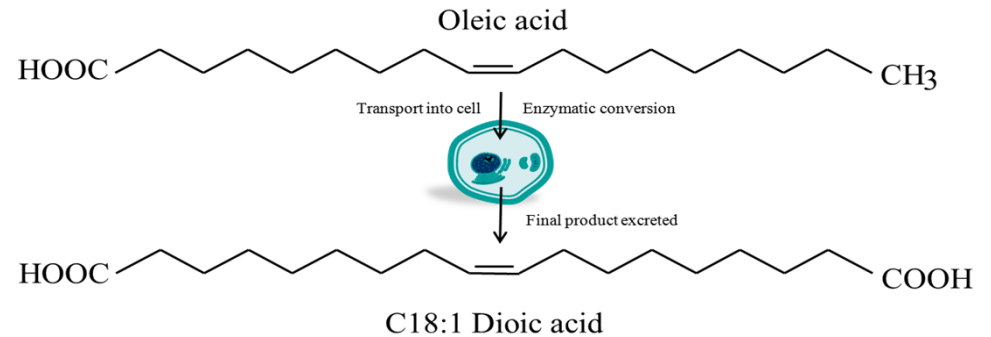
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Biotech Activities

White biotechnology

- Cosmetic skin active ingredients
- Bio-surfactants
- Bio-esters



Blue biotechnology

- Cosmetic skin active ingredient
- Marine Biotech Collaborations

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Nautilus Collaboration



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Biotech Activities

Green biotechnology

- Plant cell culture technology



Sustainable development

- No over exploitation of land
- No widespread use of solvents
- No biosphere destruction
- Reduction in water usage



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Biotechnology Summary

- Croda strongly believes biotechnology is a significant disruptive technology offering step-change opportunities in our core markets
- Technology is aligned with drivers in our markets and is a logical place for Croda to be
- Investment in fermentation plant and acquisition of IRB
- Investment in global collaborations and partnerships in white, green and blue biotechnology
- New Biotechnology inspired launches planned for the future
- Strong internal know-how continuing to develop

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Collaborations and Acquisitions

- Commitment to invest in external bio-research through collaboration
 - Companies with differentiated expertise in biotechnology
 - Universities
 - Customers
- Commitment to access new biotechnologies through acquisition
 - Acquisition of technology
 - Acquisition of bio-businesses

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Thank you!

Questions?

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