

GDCh VCW Konferenz
February 28, 2013
**VON MEGATRENDS ZU
INNOVATIVER CHEMIE**

CLARIANT 

Public

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28.02.2013

what is precious to you?

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Facts & Figures Clariant's Businesses



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what is precious to you?

A world leader in specialty chemicals



Clariant focuses on creating value by investing in future profitable and sustainable growth.

KEY FACTS

Sales 2012 (CHF m)

6 038

End 2012

~21 202

employees

(incl. discontinued operations)

EBITDA 2012 (CHF m)
before exceptionals

802

Represented in

76

countries worldwide

More than

100

Group companies
worldwide

7

Business Units

History



- 1886 ● Foundation **Kern & Sandoz** (dyes)
- 1995 ● New operating structure along Pharma, Nutrition, Agribusiness/Chemicals sectors
- 1996 ● Sandoz and Ciba-Geigy form **Novartis**



- 1995 ● **Clariant spin-off and IPO**
- 1997 ● Acquisition of **Hoechst** Specialty Chemicals
- 2000 ● Acquisition of **BTP**
- 2003 ● Divestment of **Cellulose Ethers** and **Electronic Materials**
- 2005 ● Divestment of **Acetyl Building Blocks**
- 2006 ● Acquisition of **CIBA Masterbatches**
- 2006 ● Divestment of **Pharmaceutical Fine Chemicals**
- 2007 ● Divestment of **Custom Manufacturing**
- 2011 ● Acquisition of **Süd-Chemie**

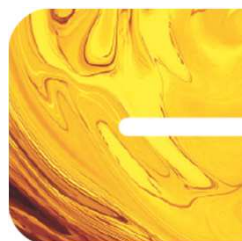
Overview Business Units (continued operations)



ADDITIVES



CATALYSTS



**FUNCTIONAL
MINERALS**



**INDUSTRIAL &
CONSUMER
SPECIALTIES**



MASTERBATCHES



**OIL & MINING
SERVICES**



PIGMENTS

Disclaimer: All facts and figures shown in this presentation refer to the seven core Business Units: Additives, Catalysts, Functional Materials, Industrial & Consumer Specialties, Masterbatches, Oil & Mining Services and Pigments – **reported as continuing operations.**

Not included are the **discontinued operations** :

Textile Chemicals, Paper Specialties and Emulsions (agreement to sell signed in late 2012) as well as Leather Services and Detergents & Intermediates (expected implementation of strategic options by end 2013)

Overview of Clariant's Business Clusters

CARE CHEMICALS



PLASTICS & COATINGS



CATALYSIS & ENERGY



NATURAL RESOURCES



Four strategic pillars define the future path

1

Managing the existing business for profitability

- Focus on opportunities in each Business Unit (products, customers, regions)
- Further differentiation of value propositions

2

R&D and innovation

- Improve innovation success rate by implementing new set-up for R&D, New Business Development and processes
- Group-wide implementation of Innovation Excellence

3

Growth dynamics in emerging markets

- Increasing market share in emerging regions (China, India, Brazil)
- Leverage Asia's fast-growing economies

4

Portfolio management

- Execute strategic options/disposal of five non-core businesses
- Focus on bolt-on acquisitions to support expansion of future portfolio

Clariant Excellence – Four Key Areas



Megatrends – Challenges for a sustainable future

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Megatrends – Challenges for a sustainable future



From unmet needs to market success



“Idea-to-Market”
Process



The Chemical Industry is Solution Provider and Enabler



Innovation@Clariant

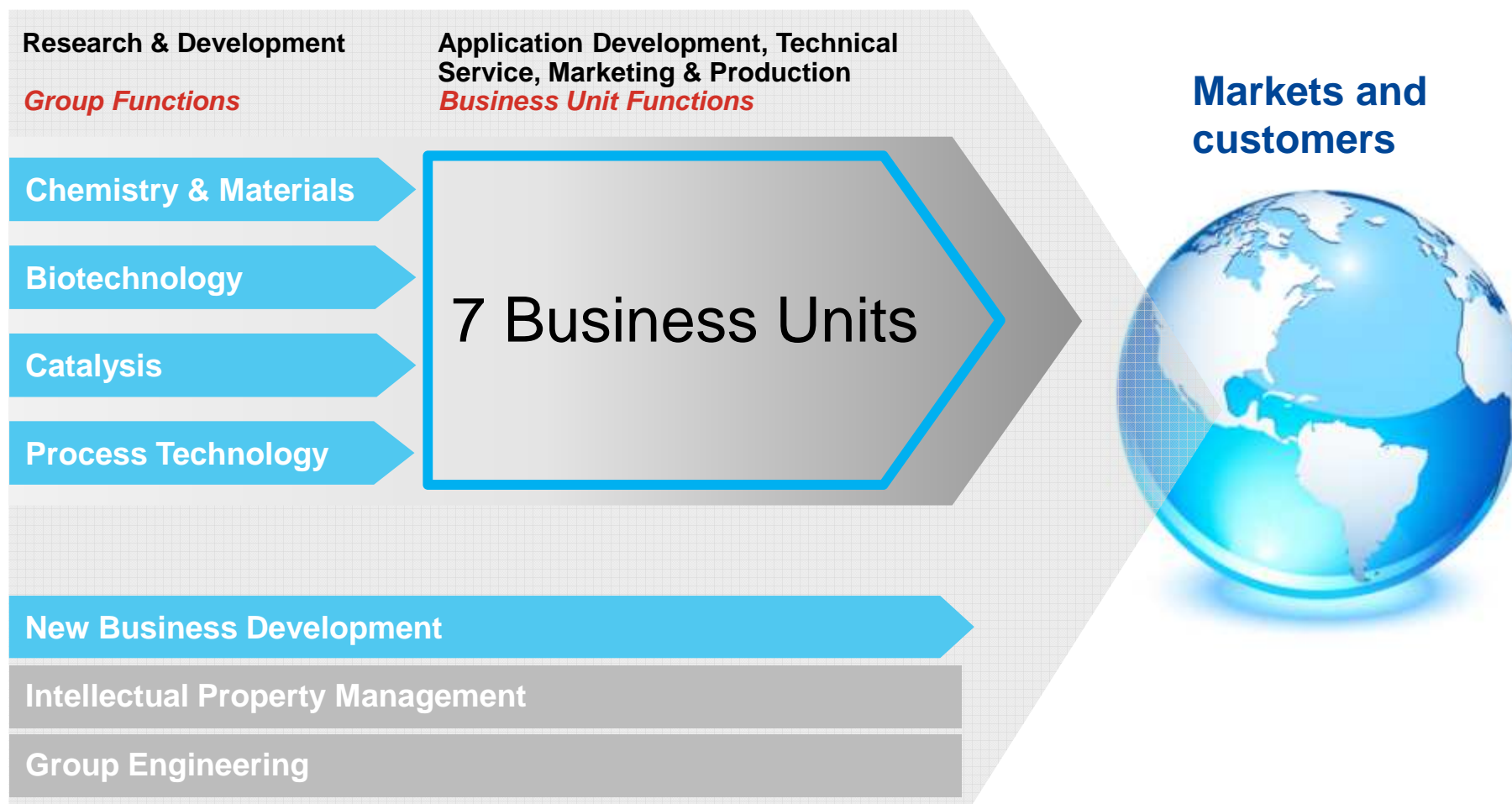


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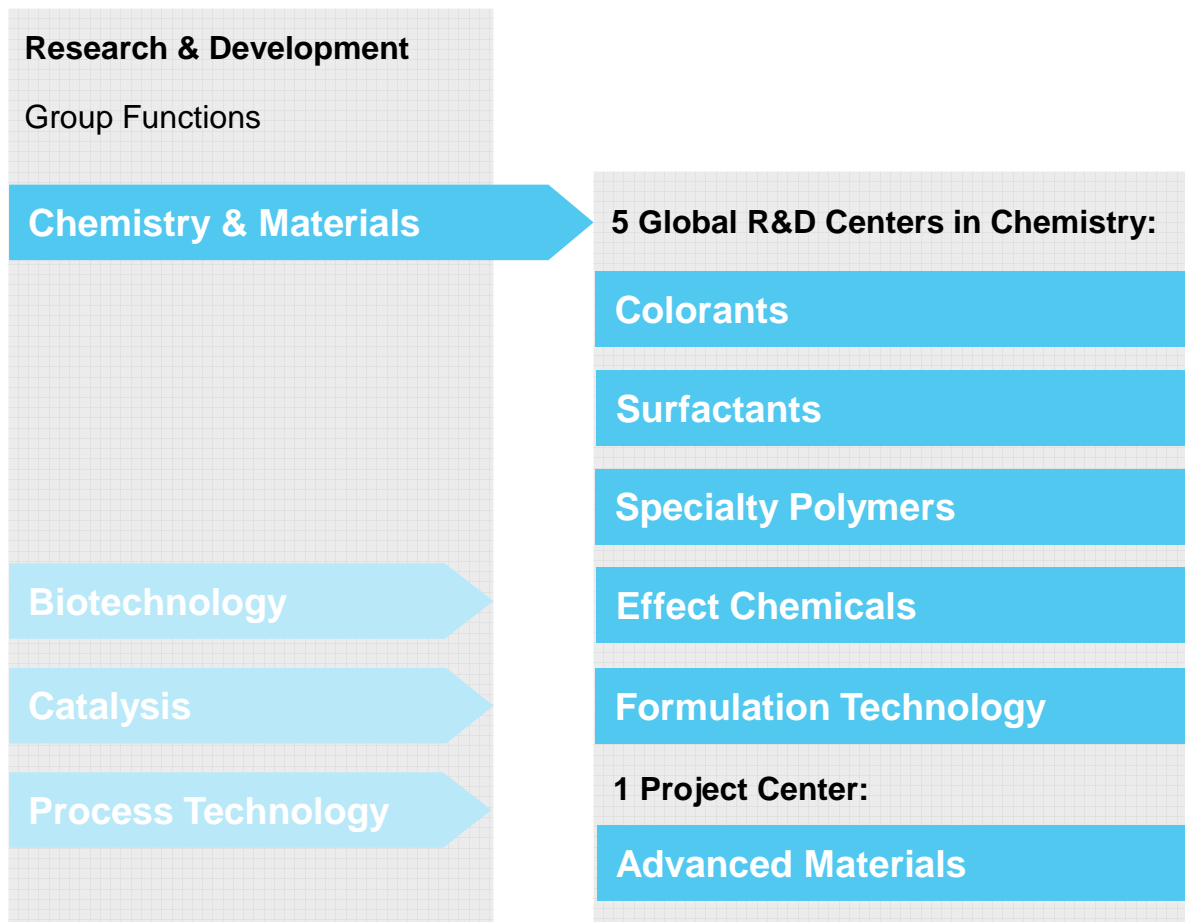
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Clariant Innovation Chain



Clariant Innovation Chain



R&D Center Surfactants

Combining interface phenomena & functionality



Green Chemistry Solutions

- Renewable resources
- Biodegradability & hybrid systems

Cosmetics & Personal Care

- Emulsification, cleansing & conditioning
- Creams, gels & lotions
- Shampoos & conditioners

Industrial & Home Care

- Detergents, rinse aids & softeners

Agriculture

- Adjuvants
- Emulsification
- Dispersion

Metal Working

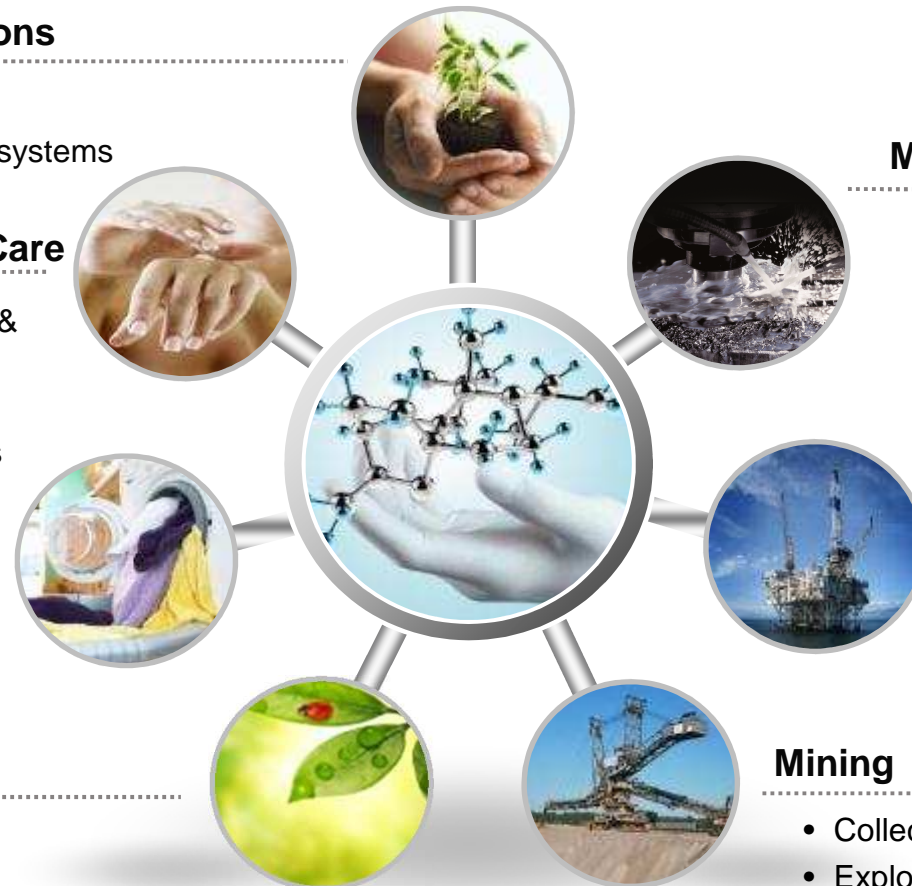
- Emulsification & dispersion
- Corrosion inhibition
- Lubrification

Oil Industry

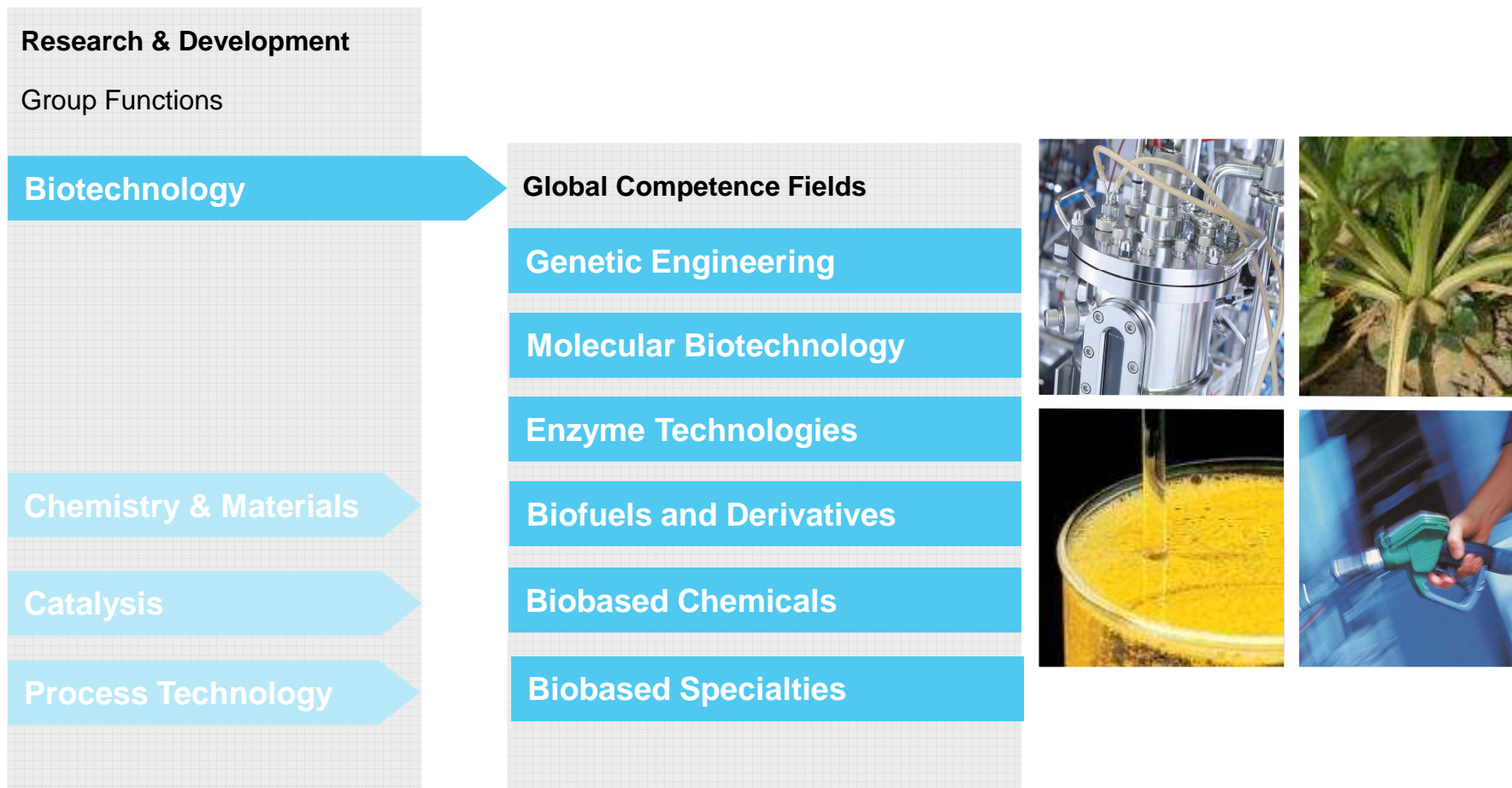
- Demulsifiers & foamers
- Corrosion inhibitors
- Wetting agents

Mining

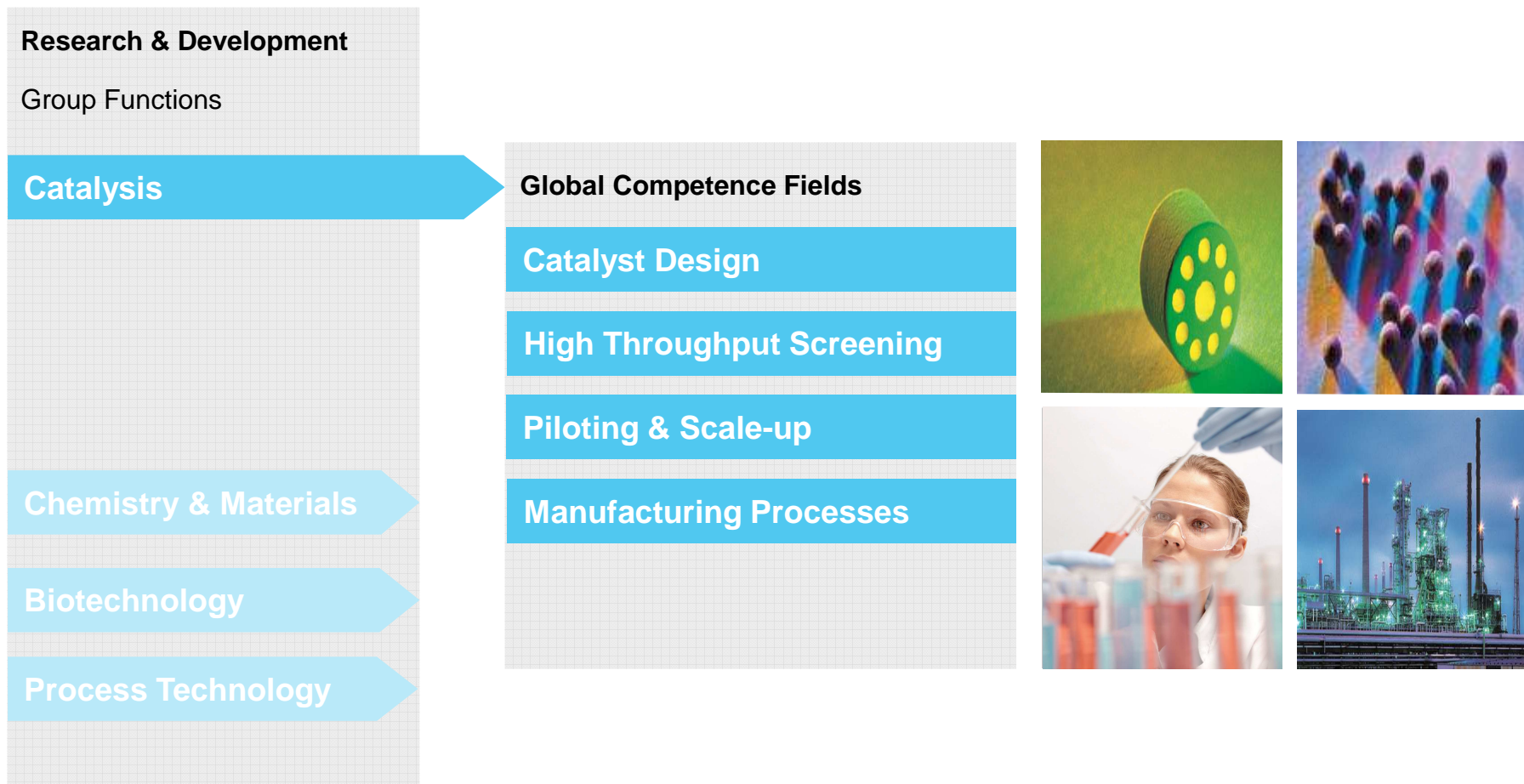
- Collector & flotation agents
- Explosive emulsifiers



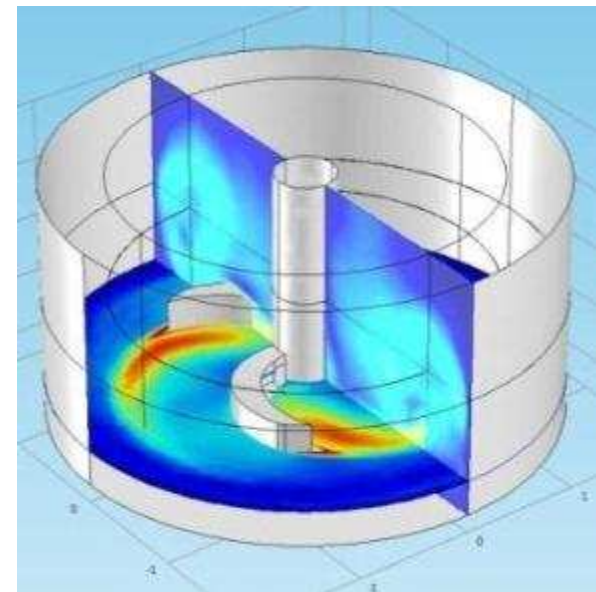
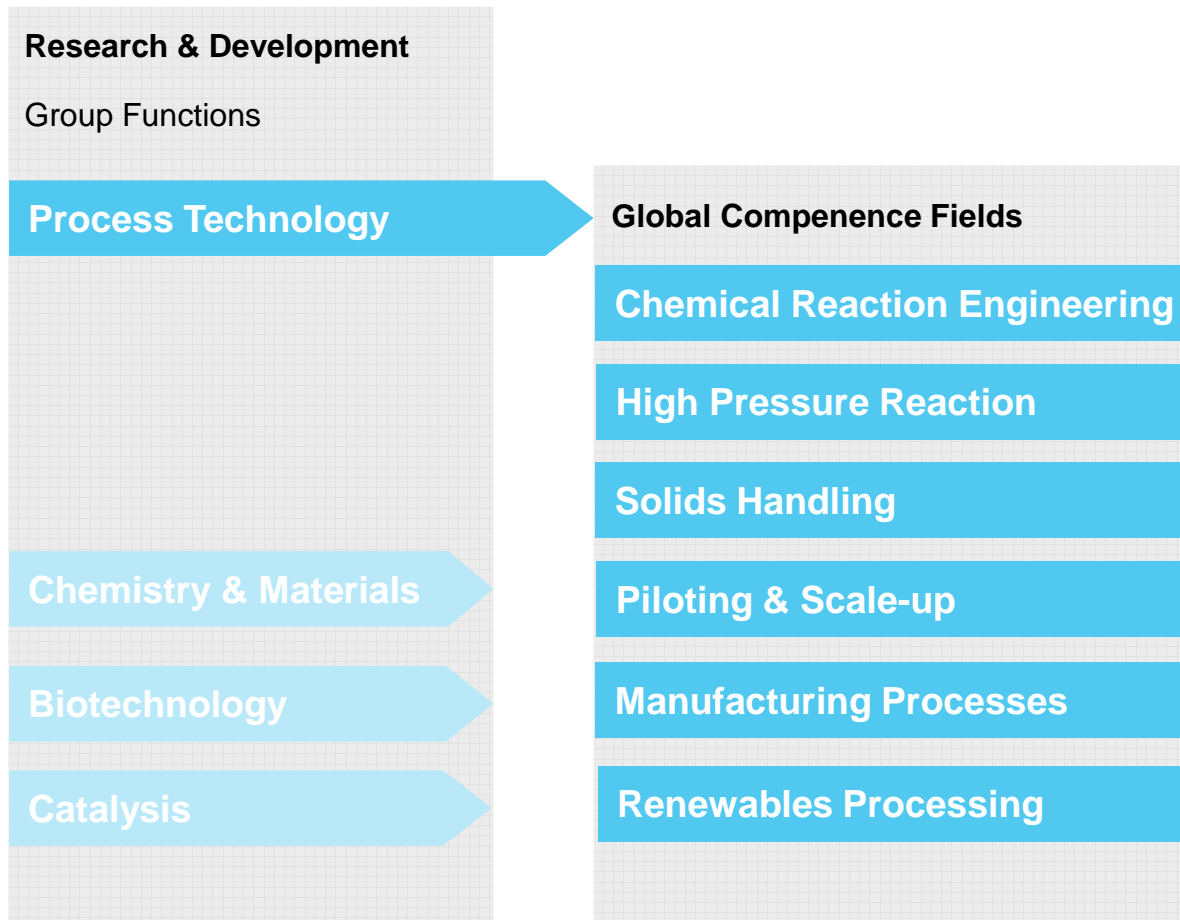
Clariant Innovation Chain



Clariant Innovation Chain



Clariant Innovation Chain



Innovation is the basis for our business success

KEY FACTS

People in R&D
(end of 2012)

1100

over

9500

patents

R&D expenditures
2012 (CHFm)

207

(2.7 % of Group
sales)

more than

140

scientific
collaborations

12

global R&D centers

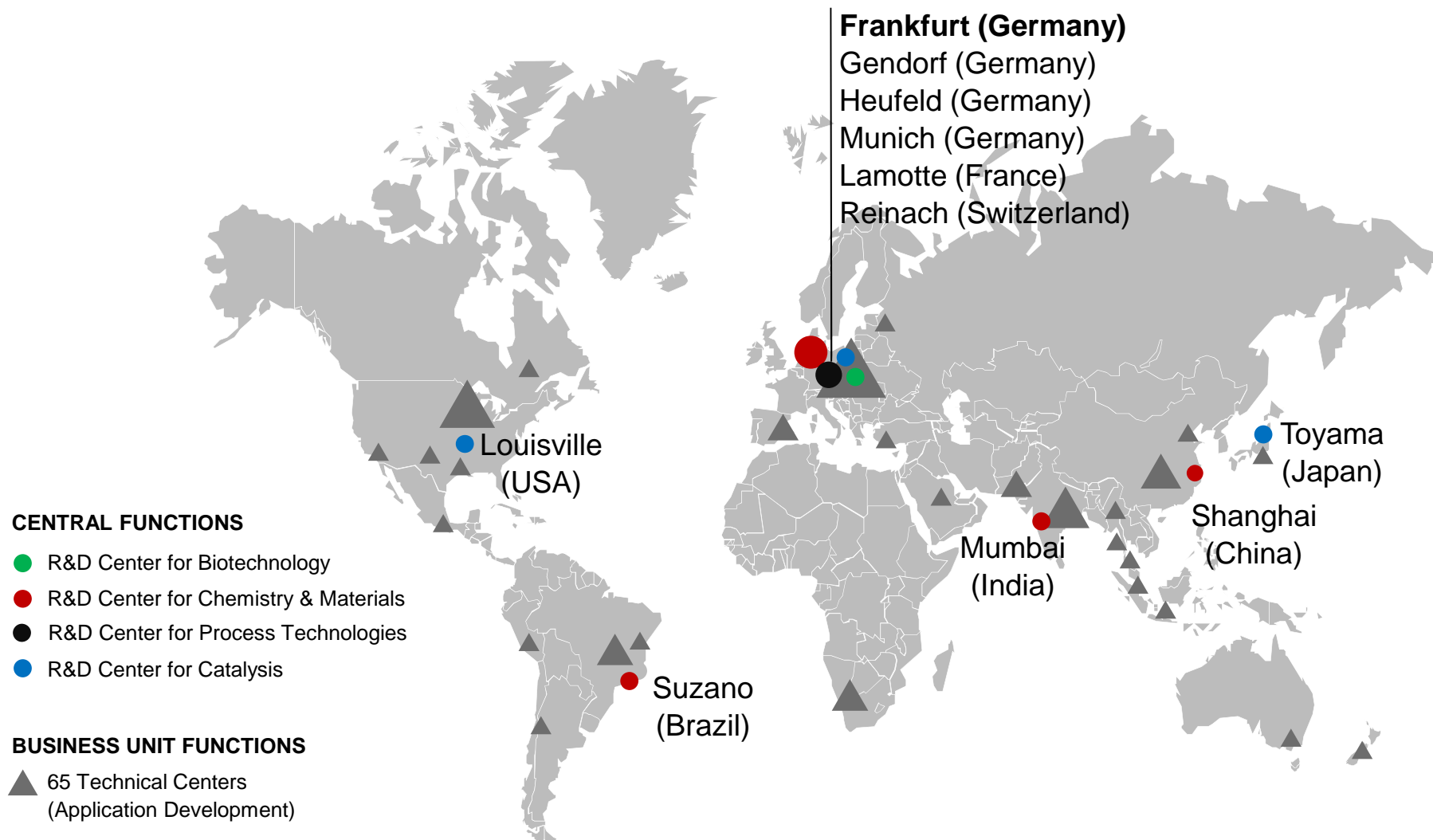
65

technical application
centers around the world

R&D activities focus on

- Strong platforms in Chemistry & Materials, Biotechnology, Catalysis, and Process Technology
- Translation of megatrends in sustainable solutions, e.g. renewable energy, renewable raw materials

Clariant's Global Innovation Network



Clariant Innovation Center – the Global Hub of R&D

CLARIANT INNOVATION CENTER IN FRANKFURT, GERMANY

- Coordination of global R&D activities
- Completion scheduled for Q3/2013
- Investment: CHF 125 million
- Workforce of 500
- One of the most modern research centers worldwide



Megatrend: Renewable Resources

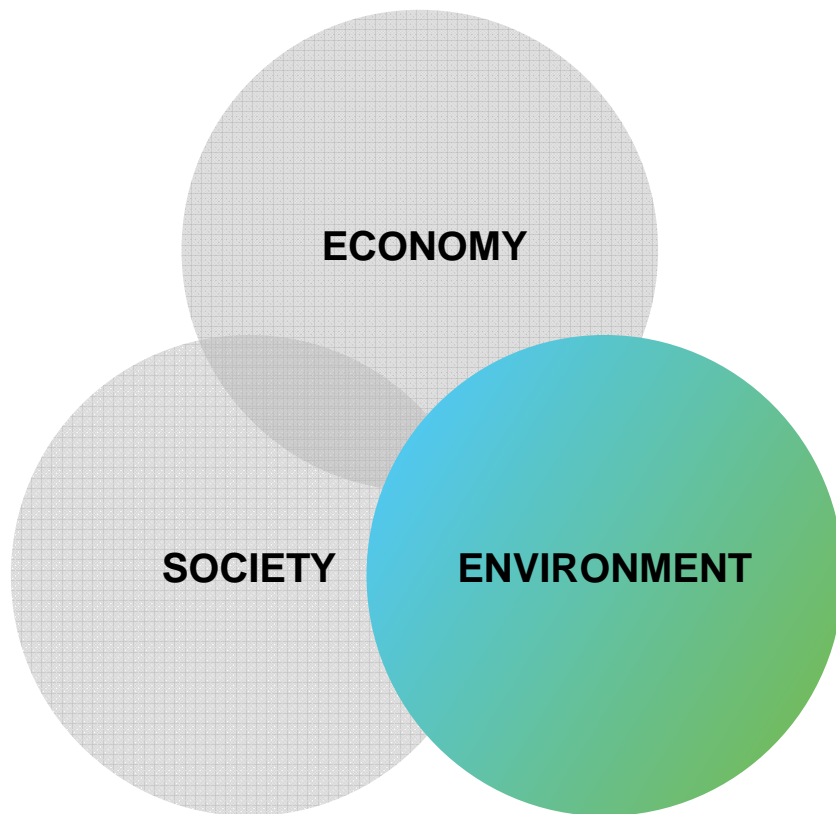
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Sustainability is Anchored in Clariant's Strategy



Environmental Targets 2020 (based on 2005)

-30%
Energy Consumption

-40%
Direct CO₂ Emissions

-40%
Waste Water

-25%
Water Usage

-35%
Direct and indirect
emissions of
Greenhouse Gases

-45%
Waste

Strong emphasis on
Green Chemistry & Renewables Raw Materials

Megatrend: Renewable Resources

sunliquid[®] – Bioethanol from lignocellulose



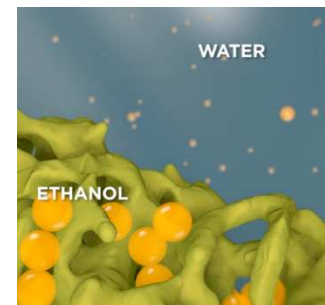
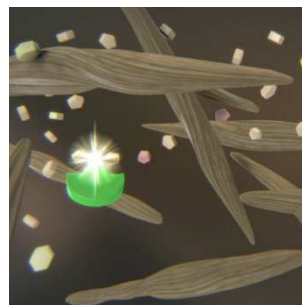
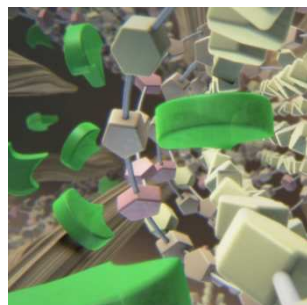
sunliquid[®]

- An integrated process being developed by Clariant for manufacturing **bioethanol from cellulose** obtained from left-over straw waste from food production, e.g. **wheat straw**.
- With this **second generation bio fuel** process applying novel **enzyme technologies**, Clariant avoids the conflict between food and fuel.
- Cellulosic sugars open the pathway to sustainable **bio-based chemicals**

Megatrend: Renewable Resources

sunliquid[®] – Bioethanol from lignocellulose

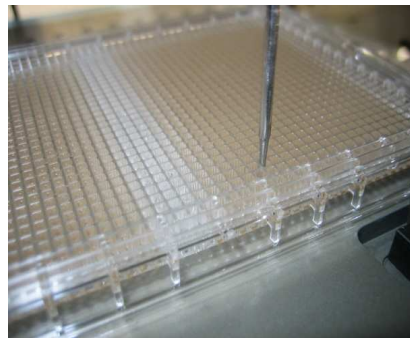
- Feedstock and process specific enzymes produced process integrated
- Microorganisms tailored to the raw material employed
- Simultaneous fermentation of C6 and C5 sugars
- Energy saving ethanol separation with adsorber structures
- High process yield: 4–5 tons of straw for 1 ton of ethanol
- Highly efficient process for the sustainable production of cellulosic ethanol made from agricultural residues
- No food-versus-fuel debate
- No fossil energy needed for ethanol production; CO₂ savings of up to 95%



Innovation in Biotechnology

World-leading screening technologies

- World-leading fully automated ultra **high-throughput screening**
- Unique setup, highly specialized for **optimization of enzymes and microorganisms**
- Evaluation of up to **100,000 samples per day**
- Large **spectrum of assay formats**
- Screening of bacterial & fungal **expression hosts**

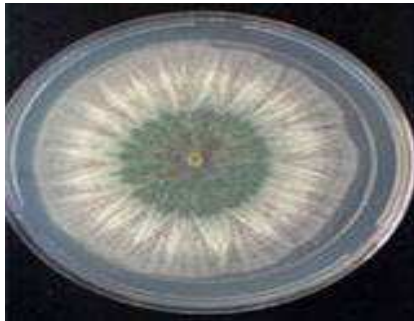


Innovation in Biotechnology

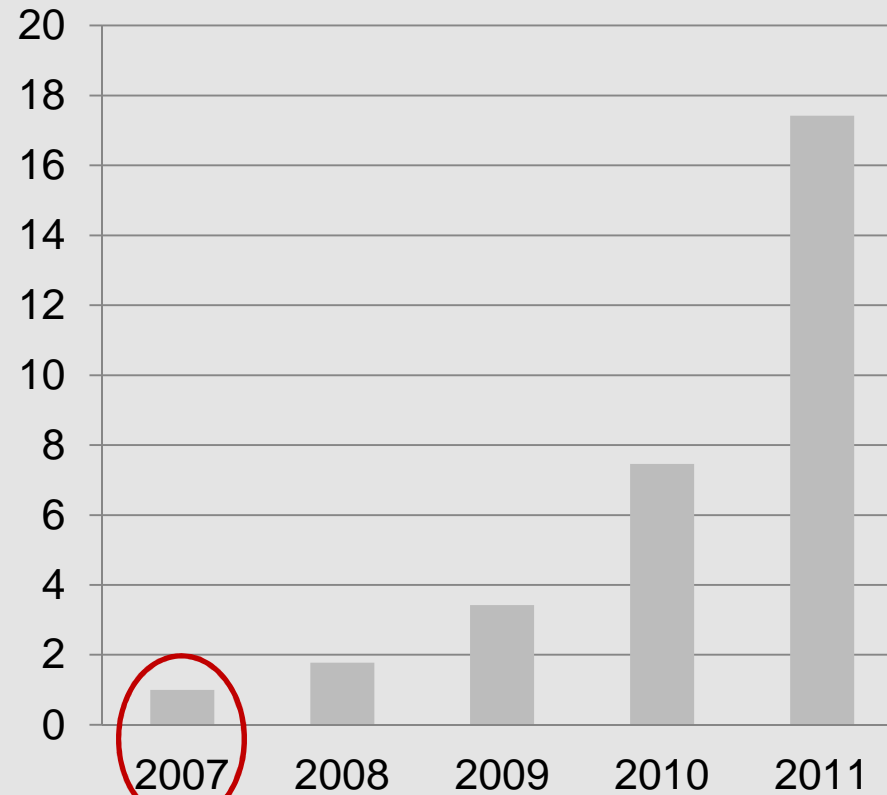
Example: Optimized Enzyme Production

High yield fungal production strain

Result: 17-fold higher protein expression & secretion than benchmark strain

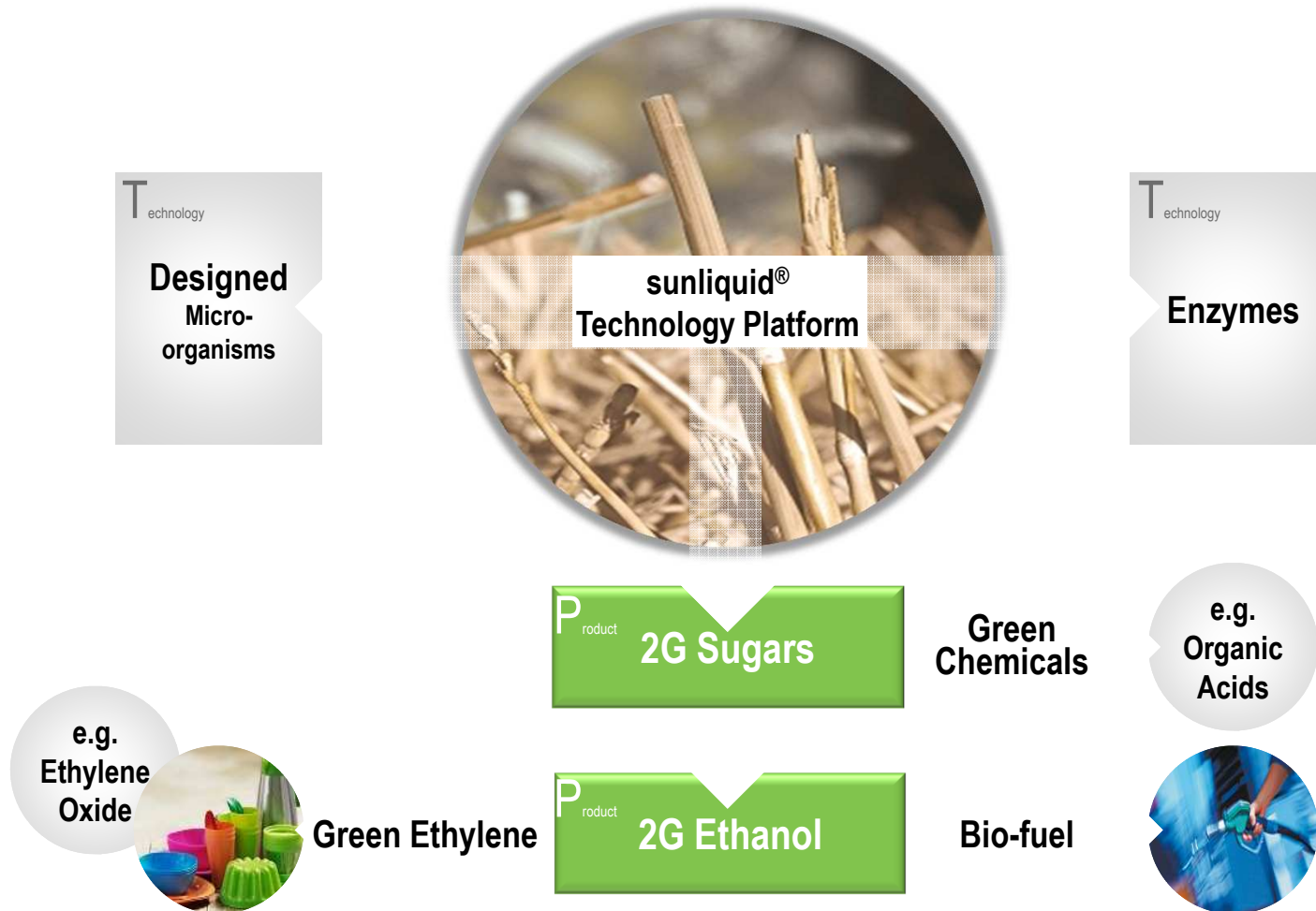


enhancement in protein production
(factor)



Benchmark: industrial cellulase producer

Megatrend: Renewable Resources sunliquid[®] - 2G platform for green chemicals



Summary

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Summary

- New innovation chain established to address global megatrends
- R&D Platforms for Chemistry & Materials, Biotechnology, Catalysis and Process Technologies
- Drive for Innovation Excellence
- Open Innovation with customers, academic and industrial partners along the value chain

Chemistry & Materials

Biotechnology

Catalysis

Process Technology

