

150 years



# Cautionary note regarding forward-looking statements

This presentation may contain forward-looking statements that are subject to risks and uncertainties, including those pertaining to the anticipated benefits to be realized from the proposals described herein. Forward-looking statements may include, in particular, statements about future events, future financial performance, plans, strategies, expectations, prospects, competitive environment, regulation and supply and demand. BASF has based these forward-looking statements on its views and assumptions with respect to future events and financial performance. Actual financial performance could differ materially from that projected in the forward-looking statements due to the inherent uncertainty of estimates, forecasts and projections, and financial performance may be better or worse than anticipated. Given these uncertainties, readers should not put undue reliance on any forward-looking statements. The information contained in this presentation is subject to change without notice and BASF does not undertake any duty to update the forwardlooking statements, and the estimates and assumptions associated with them, except to the extent required by applicable laws and regulations.



# 'We create chemistry for a sustainable future' entering the 5<sup>th</sup> year

#### What did we say in 2011?

#### The chemical market will continue to grow at about 5% p.a. fueled by

- a growing middle class in emerging markets
- demand for innovations for higher living standards and more sustainable solutions

#### BASF wants to continue to grow above market focusing on

- adding value as One Company
- expansion of product portfolio downstream towards functionalized materials & solutions
- higher capex particularly in emerging markets
- increased investment in R&D

#### BASF is committed to delivering long-term shareholder value by

- growing EBITDA faster than sales
- earning a substantial EBIT after cost of capital
- steadily increasing its dividend



# 'We create chemistry for a sustainable future' entering the 5<sup>th</sup> year

#### What did we not mention in 2011?

#### U.S. shale gas

was seen as an opportunity, but not as an industry game changer.

#### **Coal in China**

We did not foresee the government's move to incentivize coal over gas for chemical production.

#### Oil & Gas

We were conspicuously silent about Oil & Gas – maintain its share of Group sales, earnings and capex.

#### **Portfolio pruning**

Acquisitions were a strategic lever for growth – we focused on portfolio pruning and smaller acquisitions.



## What do we want to achieve today and tomorrow?

- Enable you to deep dive into our business portfolio and introduce our business leaders to you
- Demonstrate how we drive value
- Highlight our approach to innovation and showcase specific examples
- Provide a medium-term outlook





# Fundamental trends intact; environment for chemical industry more challenging

CAGR 2010 - 2015	2011 view	today's view
Global GDP	3.4%	2.6%
Industrial production	4.6%	3.2%
Chemical production (excl. pharma)	4.9%	3.9%
thereof growth contribution of emerging markets	82%	91%

## Market dynamics have changed since 2011

- Low growth in Europe, Japan and the U.S.
- Strong growth stimulus in China with spillover effects to other emerging markets
- Lower feedstock costs
- Proliferation of some technologies resulted in increased competition
- Faster build-up of significant new capacities in China resulted in overcapacities
- Faster than expected commoditization in selected product lines

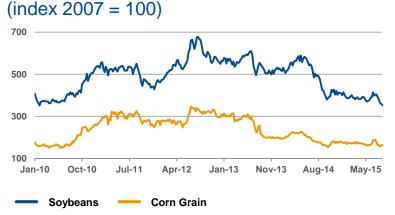
## Lower predictability and higher volatility in the economic environment



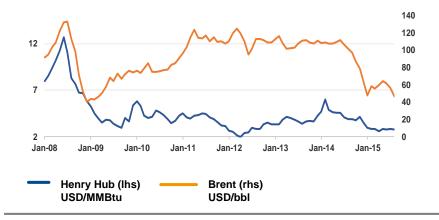
## Exchange rates reflect geopolitical situations (index 2010 = 100)



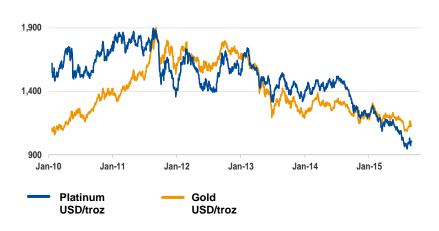
### Soft commodity prices at peak and trough



#### Highly volatile oil and natural gas prices



#### **Precious metal prices**



## ■ ■ BASF We create chemistry

### Chemicals remains a growth industry



Agriculture



Health & nutrition



Energy & resources



Construction & housing



Consumer goods



Transportation



Electrical & Electronics

#### Chemistry as enabler for current and future needs



...people by 2050



...of the world population will live in cities by 2050



...more primary energy consumption by 2050

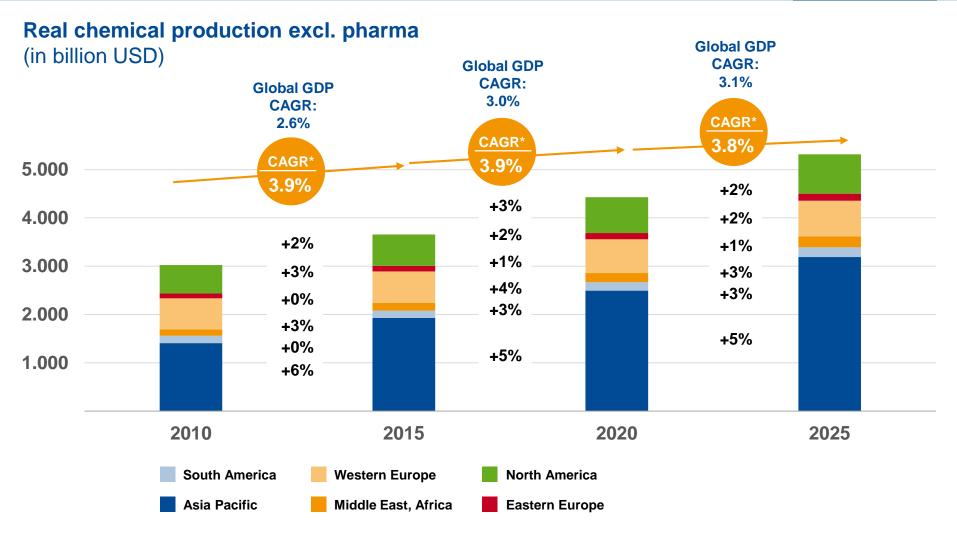


...more food needed by 2050

150 years



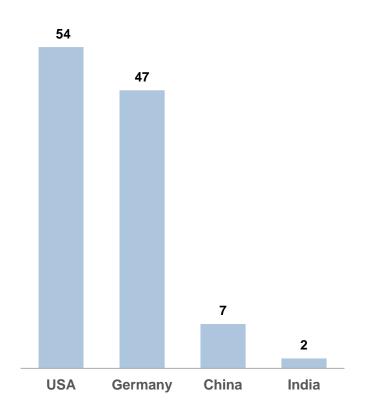
# **Emerging markets driving chemical production growth above global GDP**





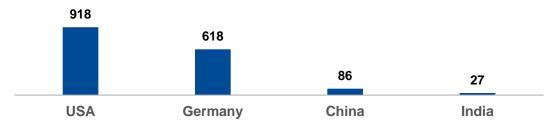
# China and India still have a huge economic catch-up potential

## **GDP per capita, 2014** (in USD thousands)



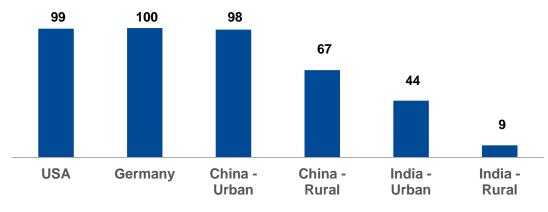
#### Passenger cars, 2014

(per 1,000 driving population)



#### Refrigerator ownership, 2013\*

(percent of households)

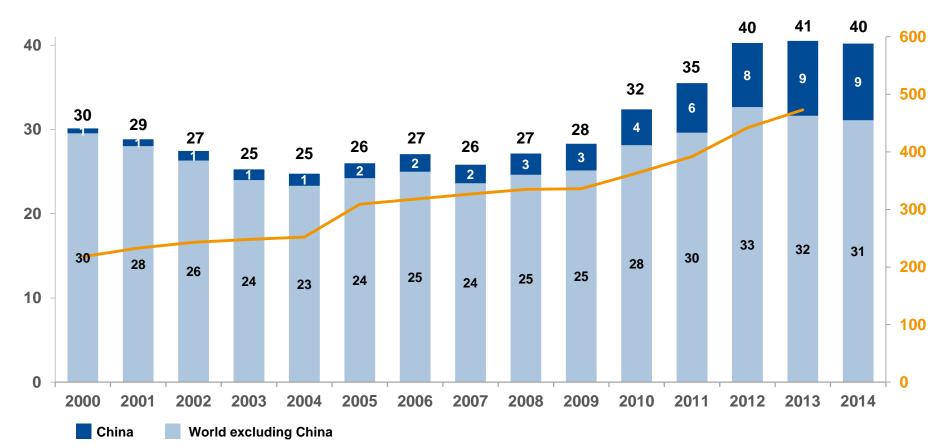




# R&D efforts in chemicals are increasing, strongly driven by China



Number of chemical patents (in 1,000)

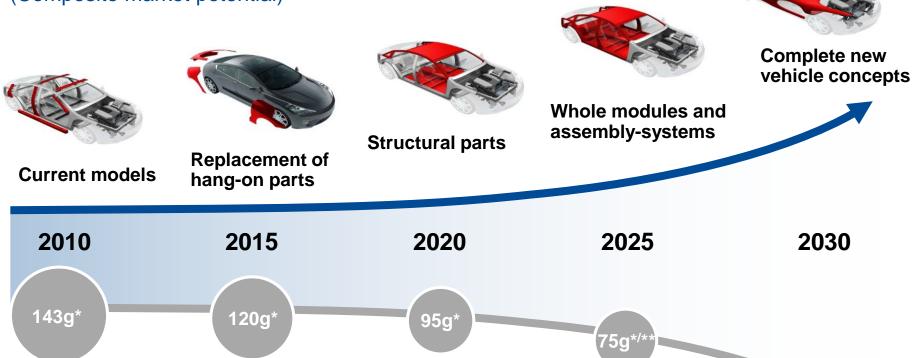




### Innovations continue to drive growth

Lightweight composites help to reduce weight in automobiles

(Composite market potential)



Legislation on reduction of CO<sub>2</sub> emissions in Europe

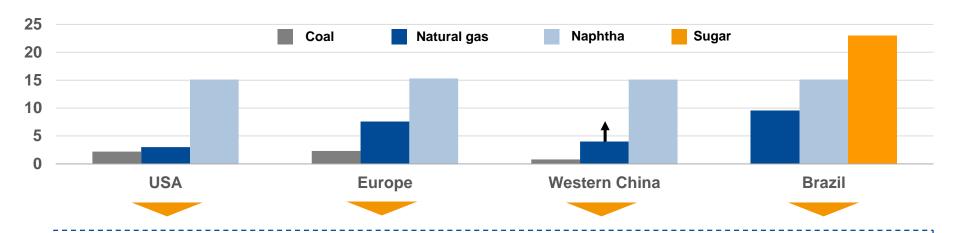
(Other countries such as Japan, South Korea, USA, China pursue similar trends)



## Raw material specifics drive regional value chains

#### 5-year average 2010-2014

(heating value in €/Gigajoule)



- Shale gas driven projects to supply captive demand and local markets
- No feedstock cost advantage
- Further strengthening of Verbund sites
- Focus on innovations
- Evaluation of coalbased projects (e.g. BDO in Korla)
- Investments in differentiated products

- Renewables still with highest costs
- Selected projects provide upside opportunity

BASF adapts to benefit from local conditions

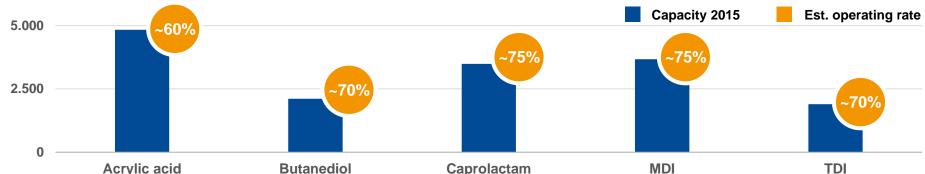
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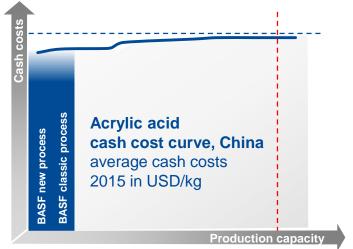
## Overcapacities in Asia will be absorbed over time

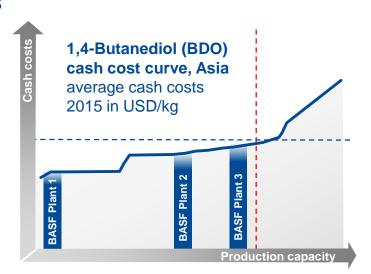
#### Overcapacities in Asia will persist for some years

(Industry capacities in kt, operating rate in percent)



#### **BASF** benefits from attractive cost positions







# Political environment more challenging, but with opportunities for innovation

#### Climate change / Greenhouse gas reduction

- G7 call for "Decarbonization" by 2100
- Europe: Ambitious reduction of 40% by 2030 (base 1990)
- USA: Reduction target of 26-28% by 2025 (base 2005)
- China: Announced to stop emissions increase as of 2030
- Emissions trading introduced in South Korea, rollout in China planned for 2016

#### **Chemical industry regulations**

- EU: Focus on precautionary principle; regulatory topics such as Endocrine Disruptors
- South Korea and China: Similar regulatory structure as REACH
- USA: Toxic Substances Control Act (TSCA) reform in progress, implementation expected by 2016

#### **Trade**

- Upside through bilateral agreements, but...
  - increasingly negative environment (in Europe) regarding TTIP\*
  - in the USA, TPP\*\* faces stronger criticism than TTIP





## Components of growth



	Net sales 2010	Volumes	Prices	FX	M&A	Sales CAGR 2010 - 2014
BASF Group w/o Oil & Gas	51.4	+3.2 (+1.5% CAGR)	+3.9	-1.6	+2.2	+3.6%
Oil & Gas	8.2	+5.5 (+13.7% CAGR)	+1.0	-0.1	+0.6	+15.7%

## Portfolio development towards more market-driven and innovative businesses



#### **Acquisitions**

- Functional crop care
- Personal care & food
- Omega-3 fatty acids
- Enzymes
- Battery materials
- Specialty plastics
- Selected assets in Oil & Gas
- ...

~ €4.5 billion sales in emerging and innovation-driven businesses

## BASF core business

Selected transactions 2010 - 2014

#### **Strong partnerships**

- Gazprom
- Monsanto
- Petronas
- Shell
- Sinopec
- Statoil
- Total
- Yara

#### **Divestitures**

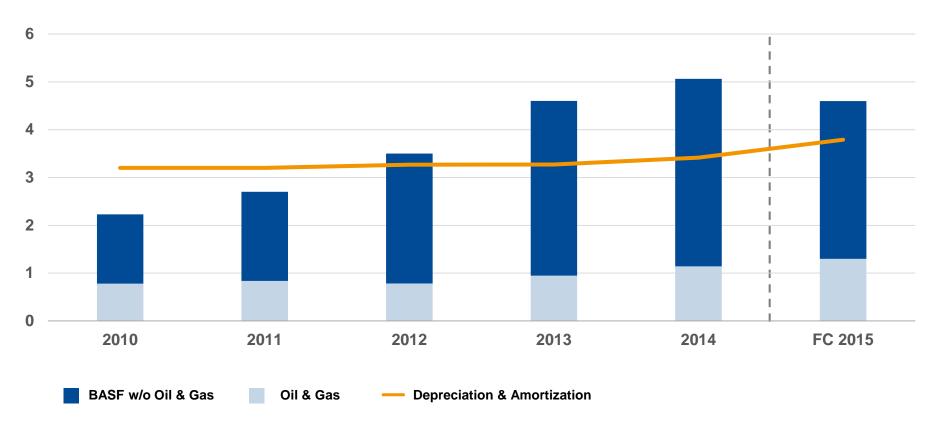
- Styrenics
- Fertilizers
- Construction equipment, flooring and wall systems
- Decorative paints in Europe
- Selected assets in Oil & Gas
- ...

~ **€7 billion sales\***in businesses with limited fit and differentiation potential



# Capital expenditures peaked in 2014, reduction in coming years planned

Investments\* 2010 – FC 2015 (in billion €)



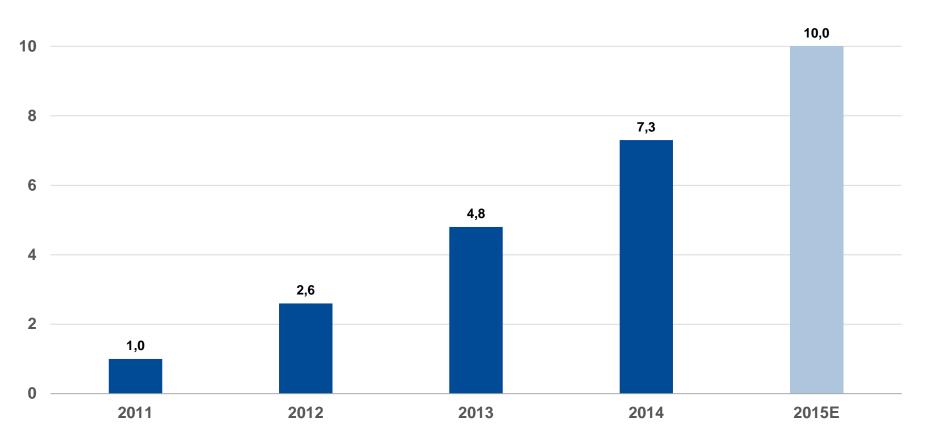
<sup>\*</sup> Investments in fixed assets, according to financial reporting (excl. non-consolidated. JV, financial assets), excluding additions to property, plant and equipment resulting from acquisitions, capitalized exploration, restoration obligation and IT investments



### **Innovations drive sales**

#### **Sales from innovations\***

(in billion €)





### Steady earnings growth

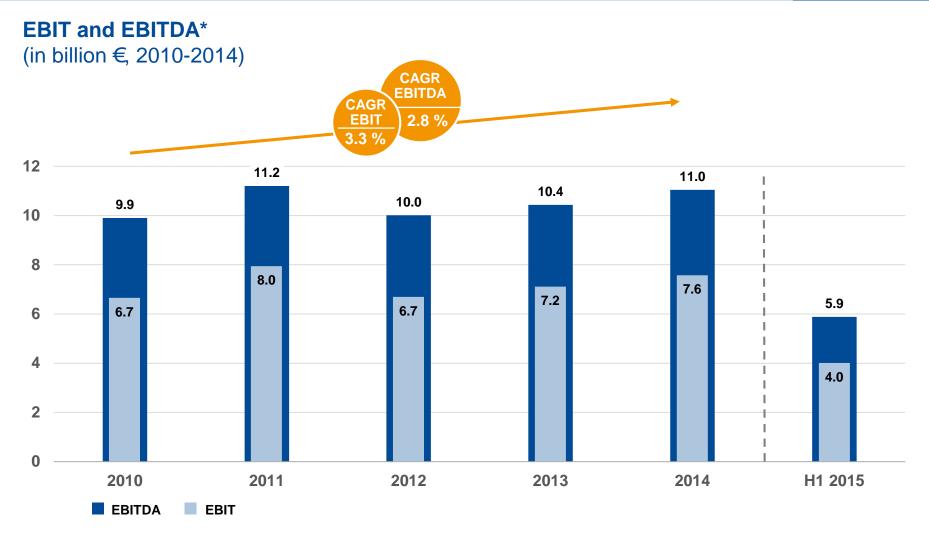
#### **EBIT and EBITDA\***

(in billion €, 2001 - 2014)





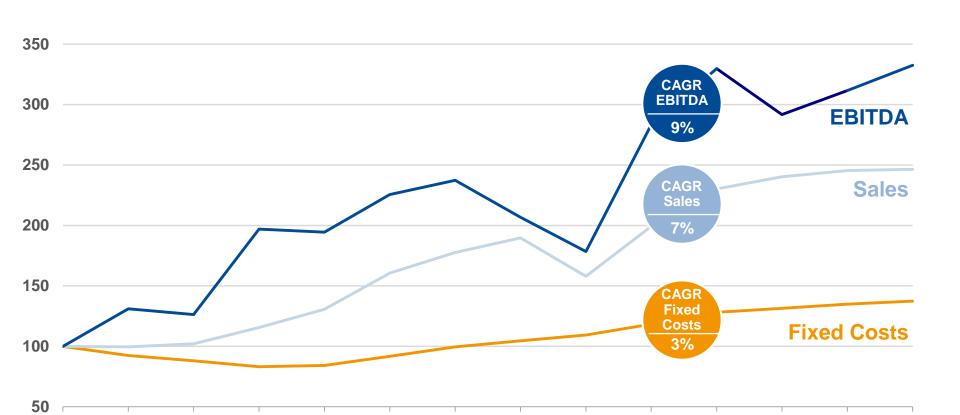
## EBITDA peak performance of 2011 again achieved in 2014





## Strong track record in operational excellence

BASF Group\* 2001–2014 (Index; CAGR 2001–2014)

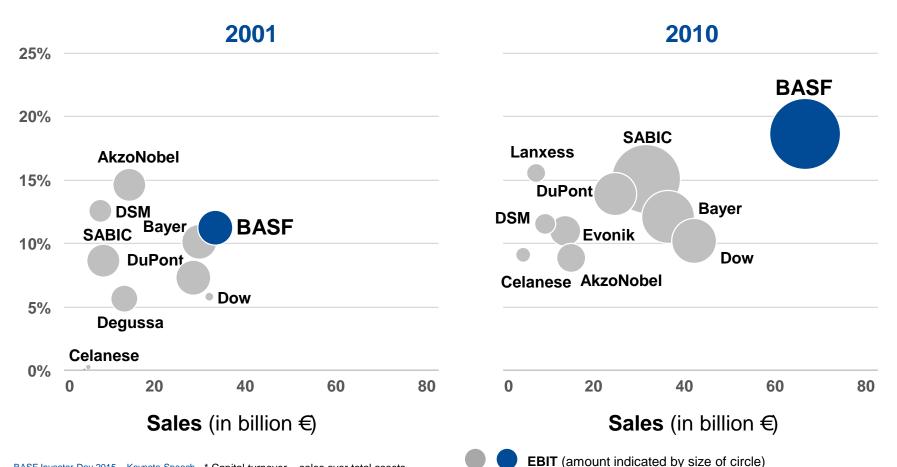




# Best-in-class asset profitability – Capital turnover improved by 2% p.a.\*

#### **EBITDA** on total assets

(in %)

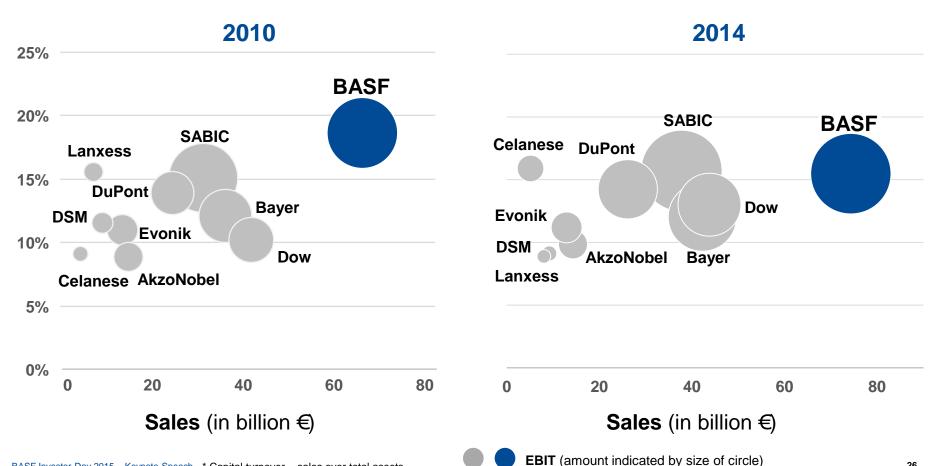




## Capital turnover slightly down due to margin decline and growth investments

#### EBITDA on total assets

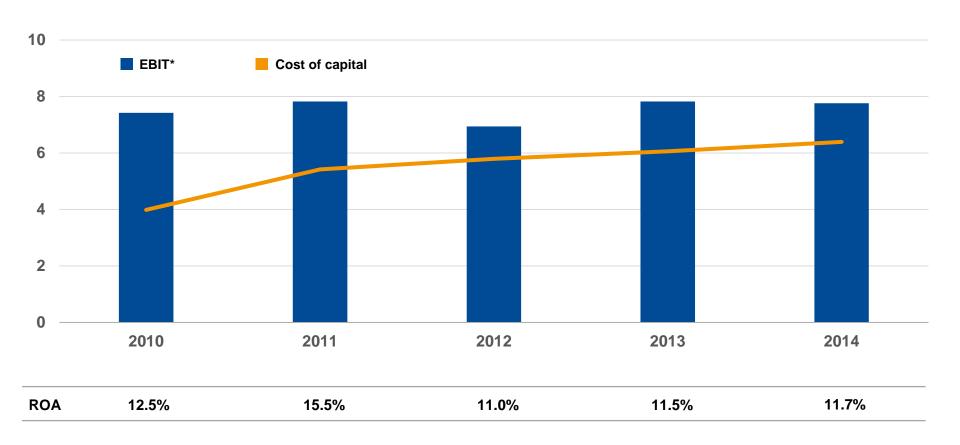
(in %)





## Significant premium despite higher investments

EBIT\* after cost of capital (in billion €)

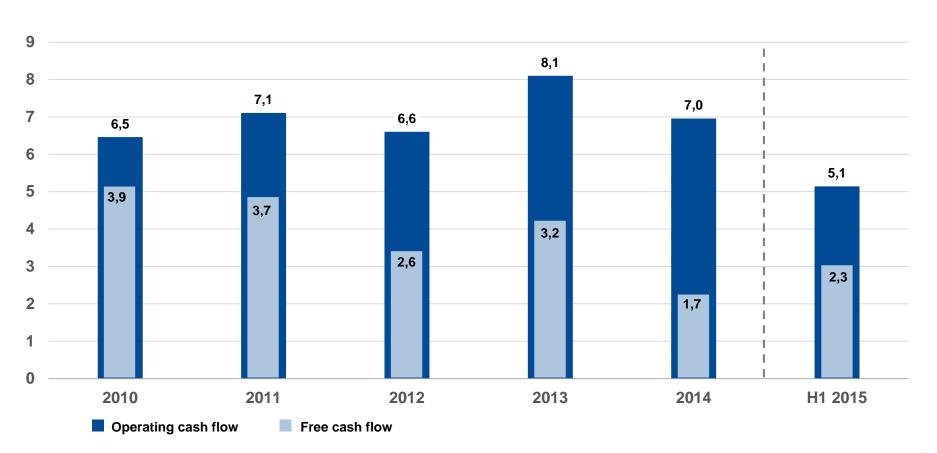


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# Free cash flow to recover after capex peaked



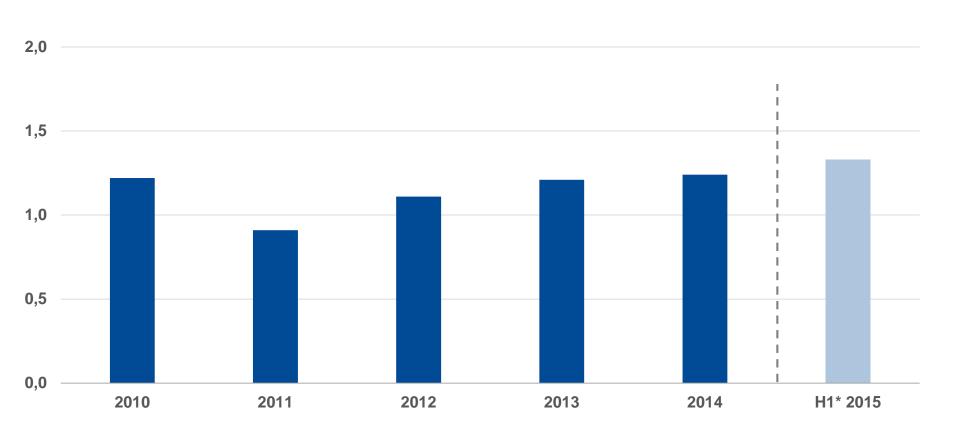
Cash flow (in billion €)





# BASF maintains solid A ratings with Standard & Poor's and Moody's

Net debt / EBITDA, as reported

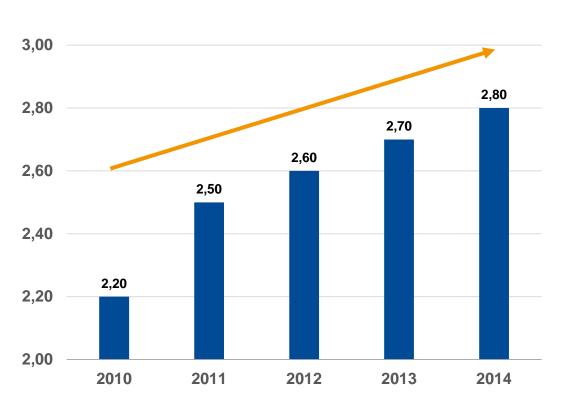


## Delivering consistent, long-term shareholder value



### Dividend per share

(in €)



#### **Progressive dividend policy**

 We want to increase or at least maintain our dividend

#### **Key facts**

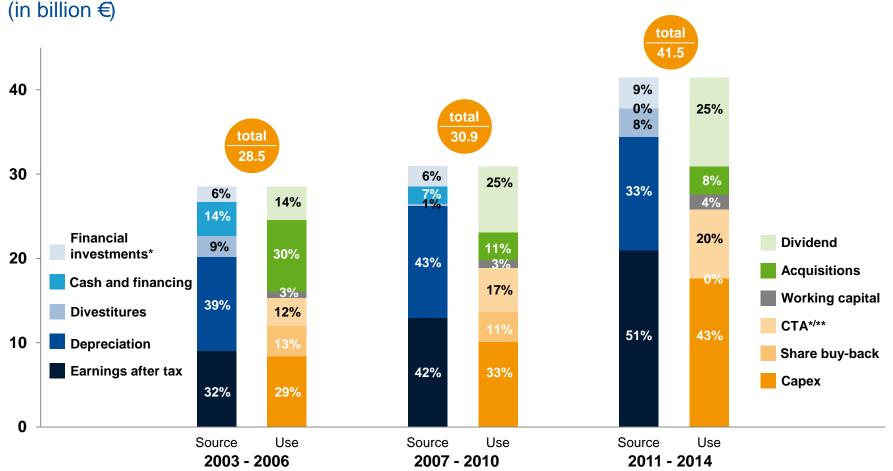
- Delivered on progressive dividend policy
- Supported by strong cash flow generation
- ~€12 billion dividends paid since 2010
- Dividend yield above 3% in any given year since 2005

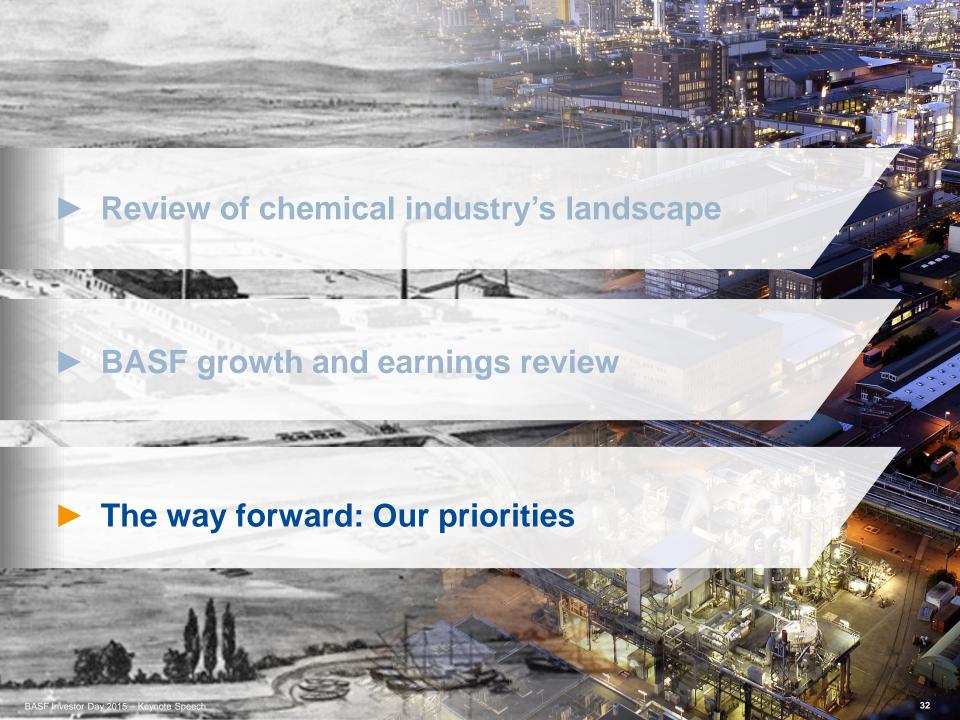
150 years



### Capital allocation: Source and use of funds – 2003-2014

Source and use of funds
(in billion €)







# Fundamental trends intact; chemical production growing faster than GDP

CAGR 2015 - 2020	2011 view	today's view	
Global GDP	3.2%	3.0%	
Industrial production	3.7%	3.5%	
Chemical production (excl. pharma)	4.0%	3.9%	
thereof growth contribution of emerging markets	89%	82%	



# Fundamental growth trends intact; but increased volatility

- Emerging markets with lower growth dynamics
- Potential overcapacities due to shale gas induced US-investments
- Oil price has to go up: when, how much?

#### This will require constant adaptation:

- Balancing risks through diversified portfolio
- Flexibility of asset base
- Timing of strategic measures



## Our strategic principles



We add value as one company.



We drive sustainable solutions.



We innovate to make our customers more successful.



We form the best team.



# The way forward: Our priorities

- Grow sales and earnings faster than global chemical production, driven by
  - Continued focus on innovations
  - Capital expenditures
  - Acquisitions
  - Operational excellence and Verbund advantages
- Continue to prune our portfolio
- Maintain industry-leading position in sustainability
- Focus on cash generation / conversion

## Verbund remains the cornerstone of BASF



#### Verbund: the basis

Verbund generates
>€1 billion p.a. global cost savings & supports sustainability







### Verbund: a different perspective

Example: Copper-Chabazite catalysts Industry-leading technology for NOx control

### **Intermediates**

#### **Catalysts**



Cost efficient, industrial scale production for catalysts template

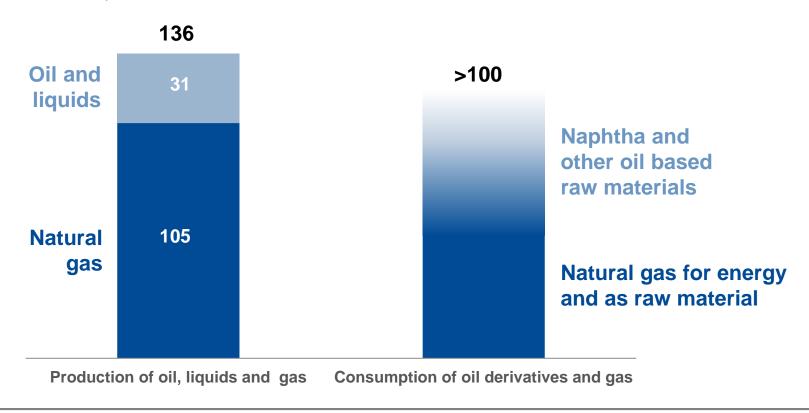
Development, production and marketing of NOx reduction catalyst

150 years



# Managing volatility: BASF almost perfectly hedged on hydrocarbon price changes

BASF production and consumption of oil and gas (in million boe, 2014)



BASF hydrocarbon consumption almost equals hydrocarbon production

BASF Investor Day 2015 – Keynote Speech

## ■ BASF We create chemistry

## Strategic lever: Continuous portfolio development

## Specialties and solutions

- Attractive markets
- Differentiation by customer proximity and innovations

## **Differentiated** commodities

- Attractive markets
- Differentiation by process technologies and integration

fields Innovation

pipeline

Growth

**Acquisitions** 

~ 50%

~ 50%

target (in % of sales\*)

Divestment of businesses e.g. due to lower market attractiveness

Commoditization leads to restructuring

Divestment of businesses e.g. due to loss of differentiation

### Keep a balanced portfolio

## Strategic lever: Acquisitions



### We want to acquire businesses which ...

- Generate profitable growth above the industry average
- Are innovation-driven
- Offer a special value proposition to customers
- Reduce earnings cyclicality

- Provide a minimum return on investment of 8% p.a. after tax
- Are EPS accretive by year three at the latest

Strategic acquisition criteria

Financial acquisition criteria



### Strategic lever: Capital expenditures – our philosophy

#### **Differentiated commodities**

- With proprietary technology and/or Verbund advantages
- Focus on:
  - emerging markets
  - backward integration in the US
  - upgrading our asset base in Europe

### **Specialties and solutions**

- Incremental investments for new products
- Regional expansion of businesses

#### Oil & Gas

- Focus investment budget by active portfolio optimization to secure free cash flow
- Keep reserve-to-production ratio of approx. 10 years

# Implementation of increased capex program will drive profitable growth



### Selected major capex projects

Aroma chemicals
SAP
Crop protection products
Automotive catalysts
Butadiene
Admixture systems
Specialty plastics
Oil & Gas

TDI complex
Precious metal
recycling
Specialty amines
Crop protection
products
Oil & Gas

Surfactants Butanediol / PolyTHF®
Acrolic acid & SAP Neopentylglycol
yeling Resins Specialty amines
ecialty amines
op protection
ducts
& Gas
Innovation Campus Automotive catalysts
Process catalysts

Europe

Surfactants Butanediol / PolyTHF®
Neopentylglycol
Resins Specialty amines
Specialty plastics Ethylene oxide
Crop protection Isononanol
products Coating resins
Innovation Campus Automotive catalysts
Process catalysts

Cracker expansion MDI

**Amines Polyamides** 

North America
Chelating agents
Polyurethane systems
Cracker flexibilization
Cracker flexibilization
Formic acid
Butanediol expansion
Battery materials
Crop protection products
Dispersion polymers
Ammonia

South America

Asia Pacific\*

China

Automotive coatings Acrylic acid & SAP
Crop protection products Acrylates
Oil & Gas Crop protection products
Oil & Gas

Care chemicals Automotive catalysts
Polymer dispersions Polymer dispersions
Polyurethane specialties Specialty plastics
Specialty plastics Aroma chemicals
2-Ethylhexanoic acid
Polyisobutene
Innovation Campus

### **Capex spending**

- Temporarily increased capex is necessary
  - to build the base for further growth
  - to strengthen our value chains
  - to increase our footprint in emerging markets
- Capex peaked in 2014 with €5.4 billion\*\*

Start-ups 2011 - 2014

Start-ups planned for 2015 - 2017



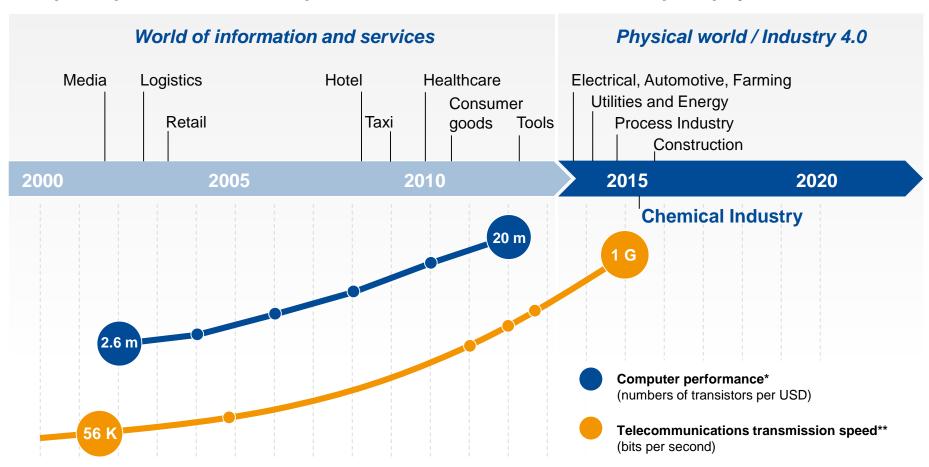
## Strategic lever: Innovations – our philosophy

- Allow for creativity
- Balance incremental und disruptive innovations
- Manage innovation pipeline efficiently on all levels
- Build on our global R&D Verbund
- Leverage external collaborations even more
- Align R&D activities with business models:
  - Differentiated commodities
    - Focus on improving processes and addressing raw material change
    - Launch selected product innovations
  - Specialties and solutions
    - Develop new, tailored offerings in close collaboration with customers
    - Pursue solution-oriented approach
- Keep annual R&D spending at ~3% of sales\*

## **BASF**We create chemistry

## Strategic lever: Innovations Industry 4.0

### Computer performance and speed of information sufficient to impact physical world

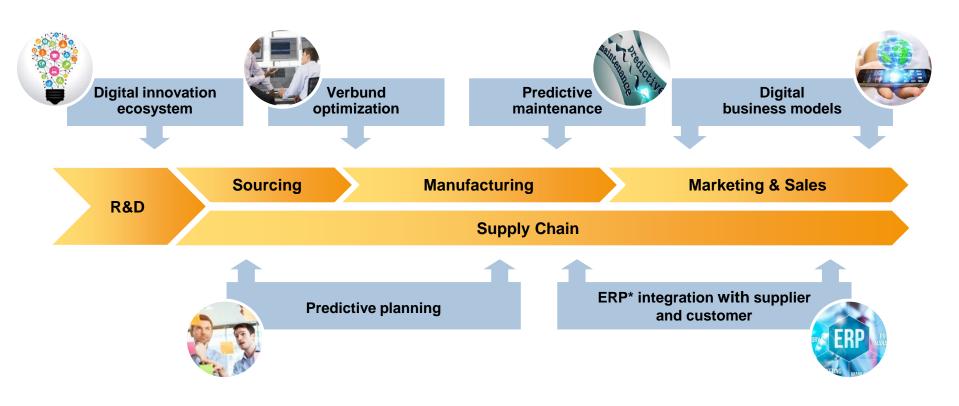




## BASF We create chemistry

## Strategic lever: Innovations Industry 4.0 will benefit BASF in the future

#### Applications along BASF's value chain

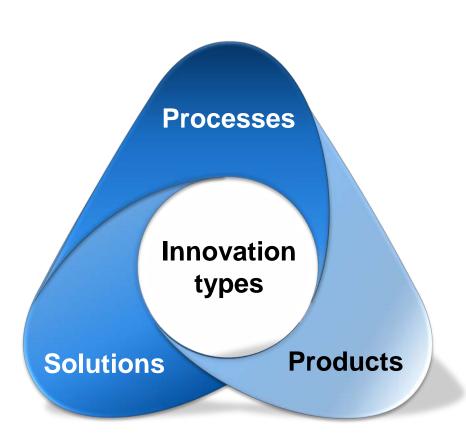


Several opportunities identified at every step of BASF's value chain

## ■ ■ BASF We create chemistry

## Strategic lever: Innovations

**Innovation types** 



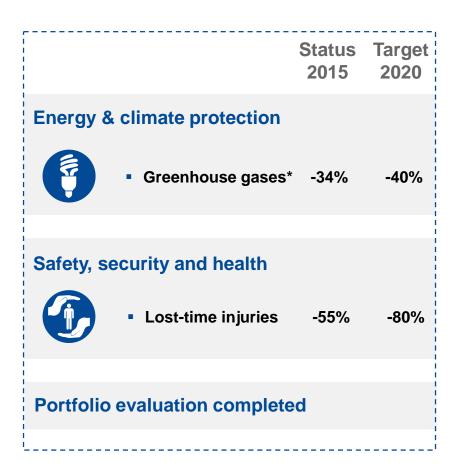
Developing solutions for many aspects of life (Innovation examples to be presented tomorrow)



## Sustainability and transparency are key to BASF's strategy



Clear sustainability targets, e.g.



Public recognition for sustainability and transparency\*\*



150 years



# Strategic lever: Sustainability Sustainability goals along the value chain

### **Suppliers**

Evaluation of 70% of relevant suppliers with regard to their sustainability performance by 2020

#### **BASF**

#### **Energy & climate protection**

- Greenhouse gas reduction\* of 40% by 2020 (base 2002)
- Energy efficiency: Introduction of certified energy management system at all major sites by 2020

#### Water

 Introduction of sustainable water management at all relevant sites by 2025

#### Safety, health and security

<ul><li>"Risk assessment" of products by 2020</li></ul>	>99%
<ul> <li>Health Performance Index** (annual goal)</li> </ul>	>0.9
<ul><li>Lost-time injuries*** by 2025</li></ul>	0.5
<ul> <li>Process safety incidents*** by 2025</li> </ul>	0.5

#### **Employees**

- Women in leadership positions
- Non-German senior executives
- Senior executives with international experience



### Customers

Increase the share of Accelerators from 23% to 28% by 2020

## BASF We create chemistry

## Strategic lever: Sustainability Sustainable Solution Steering



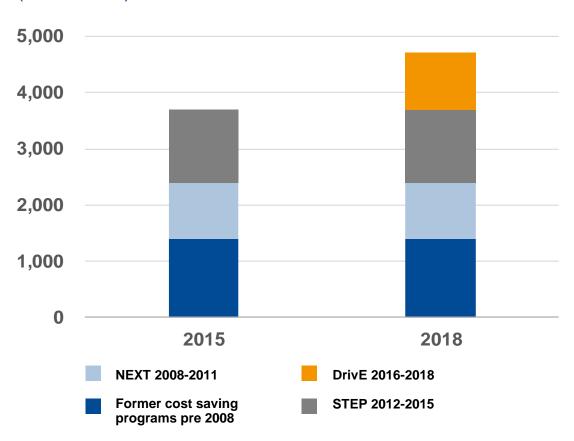
- Novel methodology to screen and steer our portfolio\*
- 23% Accelerators:
  - outgrow their marketsby 2-10%
  - deliver margins >10%
     above the average
  - represent >60% of BASF's R&D pipeline
- 74% Performers
- <1% of Challenged products</p>

Increase the share of Accelerators from 23% in 2014 to 28% by 2020

## Strategic lever: Operational excellence DrivE with ~€1 bn earnings contribution







### **DrivE program**

- Targeted annual earnings contribution of €1 billion by end of 2018
- Optimization of processes and structures in all regions, e.g.
  - manufacturing
  - incremental capacities
  - productivity increase
- Project timeline: 2016–2018



## Strategic direction chemicals business\*: Profitable growth

- Utilize and expand unique Verbund integration
- Flexible business models
- Strong operational excellence
- Specialties and solutions:
  - Focus on fast-moving, customer-facing end markets
  - Differentiate through knowledge-based offerings, innovative and sustainable products and solutions
- Differentiated commodities:
  - Focus on integrated value chains with competitive advantages
  - Differentiate through process innovations and stringent cost management
  - Focused capex to support growth



## Strategic direction Agricultural Solutions: Feeding a growing population

- Continue profitable growth in all indications
- Differentiate through strong innovation pipeline
- Continue to expand our portfolio to Innovations beyond Crop Protection
- Net sales target of €6 billion in 2015 and €8 billion in 2020
- 25% average annual EBITDA\* margin target



## Strategic direction Oil & Gas: Selective growth in E&P

- Continue to generate industry-leading profit margins
- Continue to provide hydrocarbon hedge
- Strengthen E&P activities in core regions and activities with limited exploration risk
- Focus on
  - key partnerships
  - operational excellence
  - active portfolio management
- Keep ambitious production growth target for 2018 of ~190 million boe
- Generate strong free cash flow



# Profitability of BASF will grow faster than global chemical production

### Financial targets for next years

- Sales growth\*
   Slightly faster than the global chemical production
- EBITDA growth
   Well above global chemical production
- Deliver attractive returns
   Earn a significant premium on cost of capital
- Remain a strong cash provider
   Continuously generate high levels of free cash flow
- Progressive dividend policy
   We want to grow or at least maintain our dividend



## The way forward: Our priorities

- Grow sales and earnings faster than global chemical production, driven by
  - Continued focus on innovations (R&D spending about 3% of sales\*)
  - Capital expenditures (slightly above depreciation levels)
  - Acquisitions
  - Operational excellence and Verbund advantages
     (€1 billion program; 2016-2018)
- Continue to prune our portfolio
- Maintain industry-leading position in sustainability
- Focus on cash generation / conversion

### 5 numbers to take home

>=15 billion free cash flow\*



2 billion dividends paid\*



## 150 years of excellence

## 150 years



We create chemistry