



# *Bayer 2022: Delivering Value Creation*



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# Global Megatrends in Health & Nutrition

Attractive Macro Drivers of Our Businesses

Megatrends through 2050

Societal Needs

Our Mission

## Aging Population



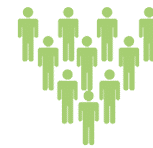
People 60+ more than doubling<sup>1</sup>

>20% of total population<sup>1</sup>

Preserve and restore health

## Growing Population

+2.2bn people<sup>1</sup>



+50% more food and feed required to meet growing demand<sup>2</sup>

Secure sufficient supply of quality food

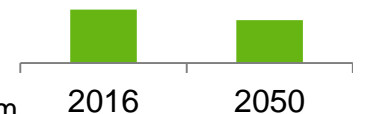
## Pressure on Ecosystems



-17%

Harvest losses from climate change<sup>3</sup>

-20%



Significant loss in arable land per capita<sup>4</sup>

Use natural resources more efficiently and responsibly

We leverage science to address these societal needs – with the ultimate goal to improve people’s lives



Science For A Better Life

<sup>1</sup> UNDESA 2017 (United Nations Department of Economic and Social Affairs, Population Division (2017). World Population Prospects: The 2017 Revision)

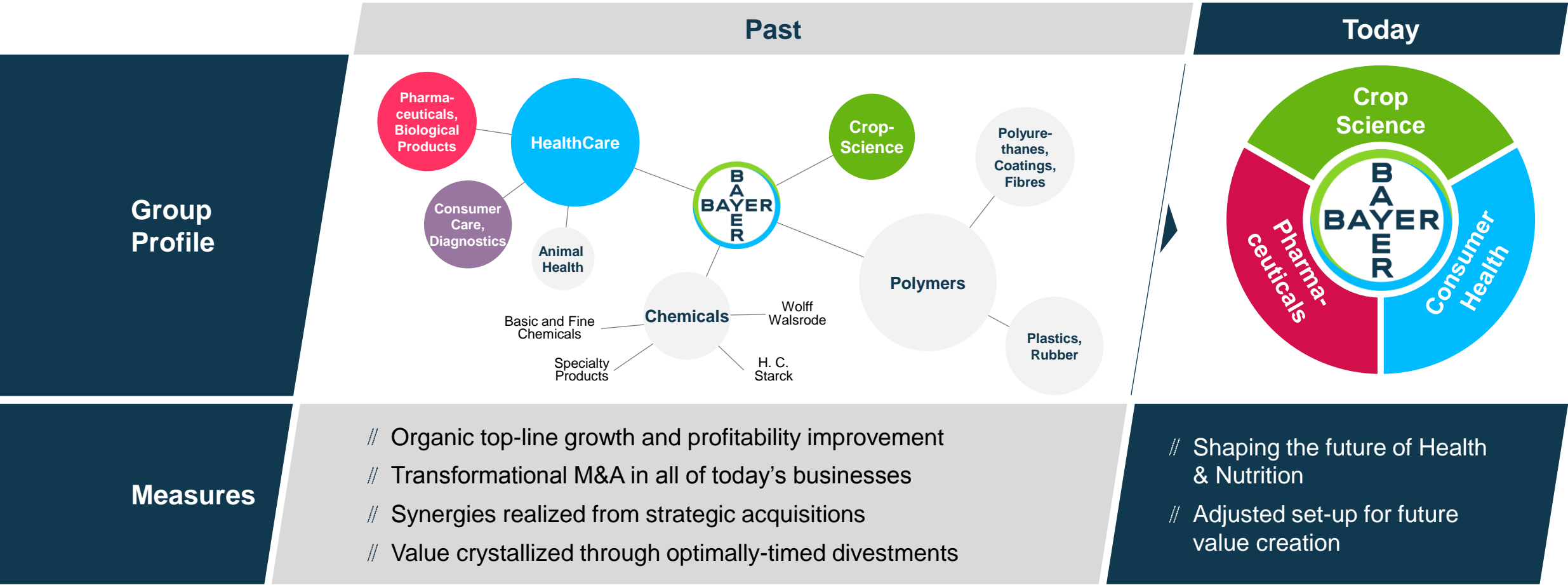
<sup>2</sup> FAO 2017, (FAO Global Perspective Studies)

<sup>3</sup> Nelson et. al, (2014); FAO 2016 “Climate change and food security”

<sup>4</sup> FAOSTAT (accessed Oct 30, 2018) for 1961-2016 data on land, FAO 2012 for 2030 and 2050 data on land, and UNDEDA 2017: World Population Prospects for world population data



# Transformation into a Leader in Health & Nutrition – Next Phase to Deliver Future Value Creation





# We are a Global Leader in Health & Nutrition

Well-Positioned Across Our Businesses



**~€45bn 2018 Pro-forma Sales<sup>1</sup>**

## Crop Science

~€19bn / ~43% of Group  
#1 Position

**Growing ahead of competition over last five years on average**

**Best-in-class profitability through the cycle**

- // Leading portfolio of seed & traits, crop protection and digital farming
- // World-class R&D platform with best talent and technology in the industry
- // Positioned to shape the future of agriculture: development of tailored solutions to address farmers' individual needs and challenges

## Pharmaceuticals

~€17bn / ~38% of Group  
#2 Position in Cardiovascular

**One of the fastest growing Pharma businesses over the past five years**  
**Xarelto and Eylea among the world's leading Pharma brands**

- // Innovative medicines in areas of high unmet medical need
- // Therapeutic focus areas: Cardiology, Oncology, Gynecology, Hematology and Ophthalmology
- // Strong position in emerging markets
- // Leading in Radiology and Women's Health

## Consumer Health

~€5bn / ~12% of Group  
#2 Position

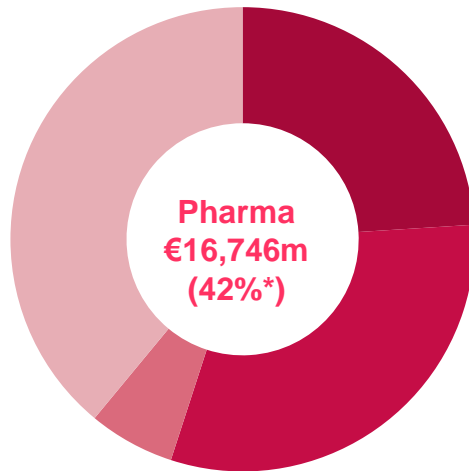
**Leading Positions in 7 of the Top 10 OTC Markets**

- // Focus categories: Allergy & Cold, Cough, Sinus and Flu; Nutritionals; Dermatology; Pain and Cardio; Digestive Health
- // Concentrated portfolio of 16 mega-brands with annual sales of >€100m

<sup>1</sup> The unaudited Pro-forma data are presented as if both the acquisition of Monsanto and the associated divestments had taken place as of January 1, 2018. Sales of Monsanto are presented in periods as per the Bayer fiscal year. One-time effects of business operations, the accounting for discontinued operations and the recognition and measurement of sales from certain business transactions have been adjusted in line with our accounting. Due to this simplified procedure, they explicitly do not reflect sales according to IFRS or IDW RH HFA 1.004, meaning they have not been audited.

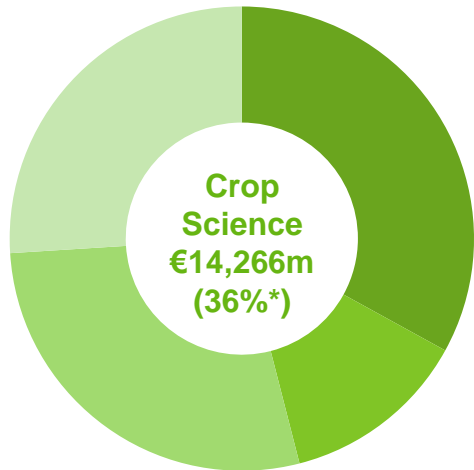
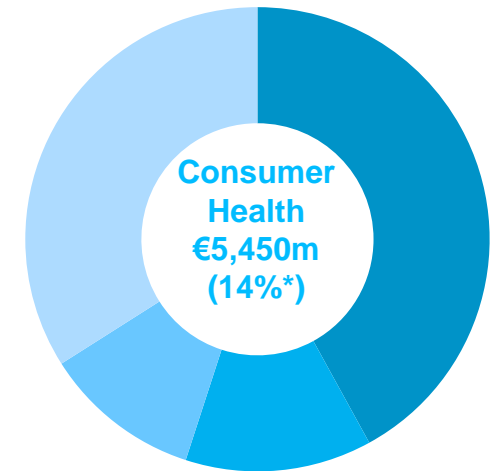


# FY 2018 – Sales Breakdown by Region



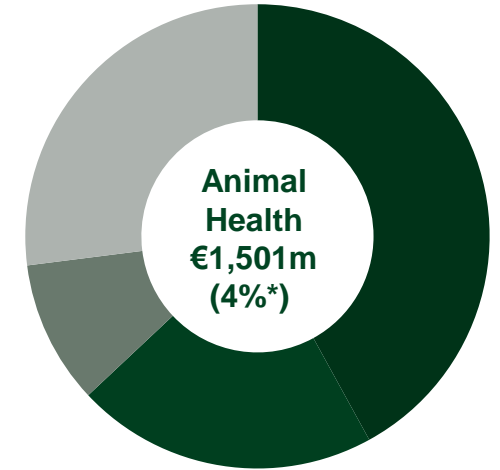
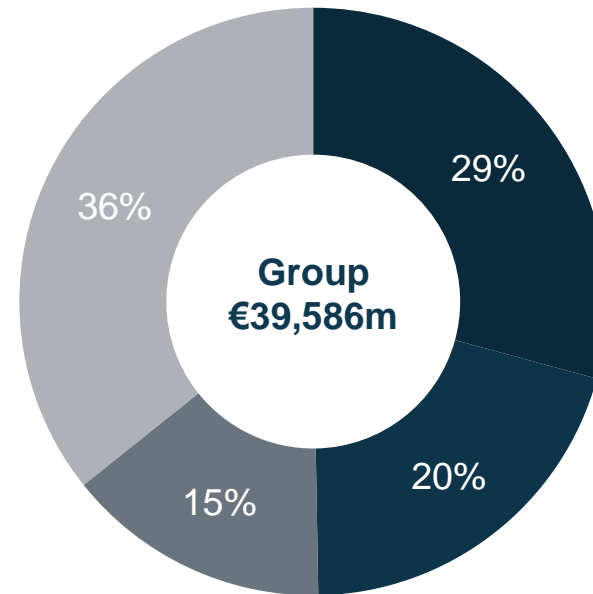
Europe / Middle East / Africa

North America



Latin America

Asia / Pacific



in € million; Δ% yoy, Fx & portfolio adj.; \*Sales share; remaining 4% all other segments and corporate

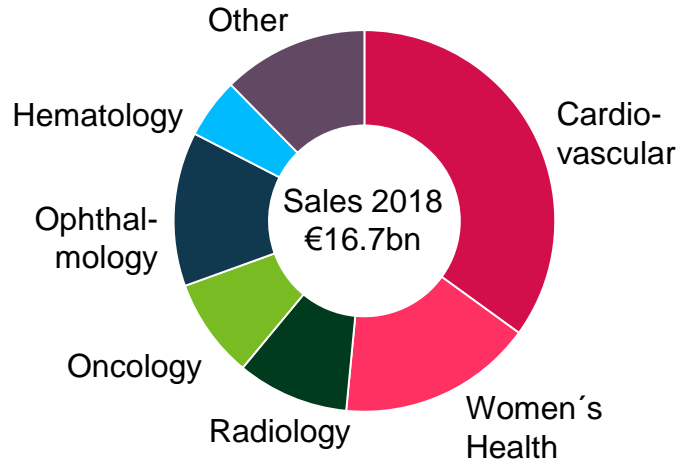




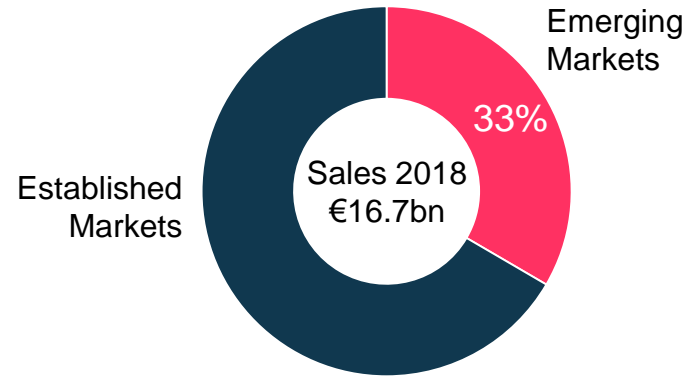
# Pharma

## Innovative Medicines in Areas of High Unmet Medical Need

### Therapeutic area focus



### Emerging markets exposure



### Global leadership in important therapeutic areas

- // **No. 1** in Retinal Diseases
- // **No. 1** in Women's Health
- // **No. 1** in Radiology
- // **No. 2** in Cardiovascular
- // **No. 2** in Hematology

### Leading Brands



Emerging markets include Latin America, Asia (w/o Japan, Australia, New Zealand), Africa and Middle East incl. Turkey, Eastern Europe

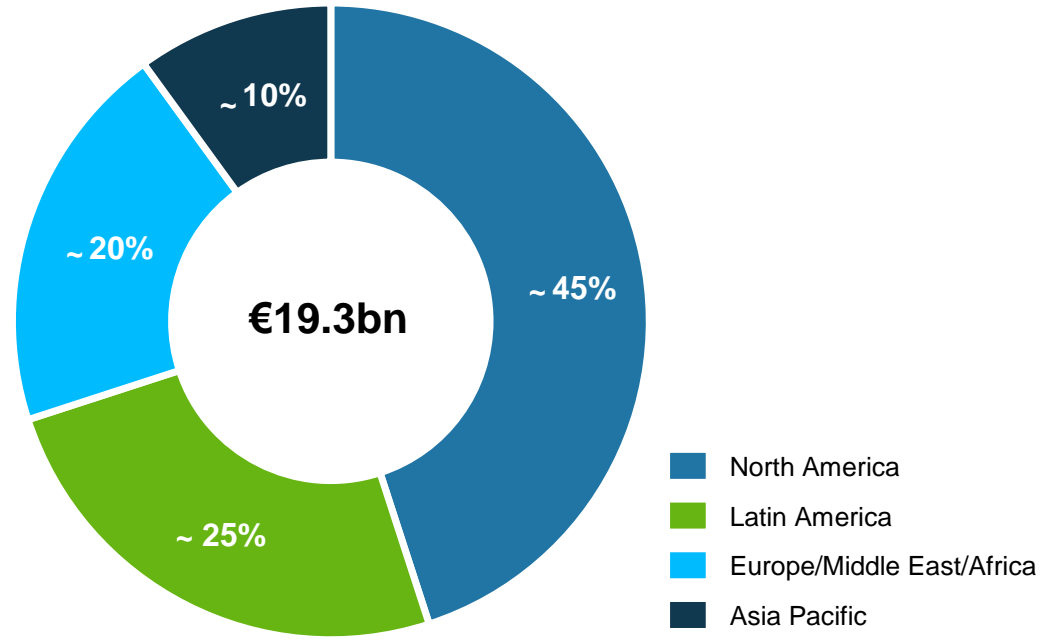


# Crop Science

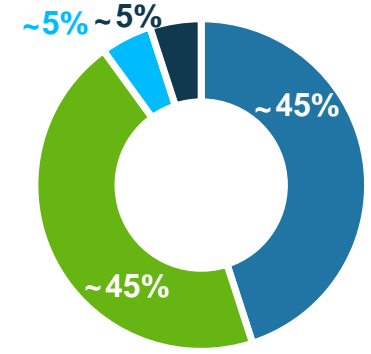
## World's Broadest Commercial Footprint in Agriculture

~7,800 Customer-facing Employees with Significant Opportunity to Optimize Portfolio Across Key Regions

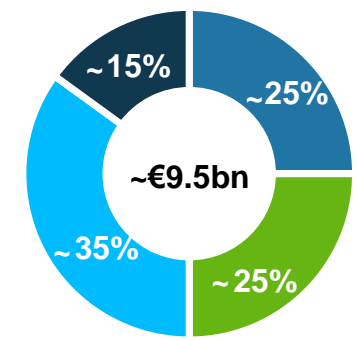
### Sales 2018<sup>1</sup>



### Seed & Trait Technology Acres 2017/2018<sup>2</sup>: >400m acres (160m ha)



### Crop Protection Sales 2018<sup>1</sup>



<sup>1</sup> The unaudited Pro-forma data are presented as if both the acquisition of Monsanto and the associated divestments had taken place as of January 1, 2018. Sales of Monsanto are presented in periods as per the Bayer fiscal year. One-time effects of business operations, the accounting for discontinued operations and the recognition and measurement of sales from certain business transactions have been adjusted in line with our accounting. Rounded to the nearest 5%.  
<sup>2</sup> Internal estimates; represents acres containing at least one Bayer seed or biotech trait technologies



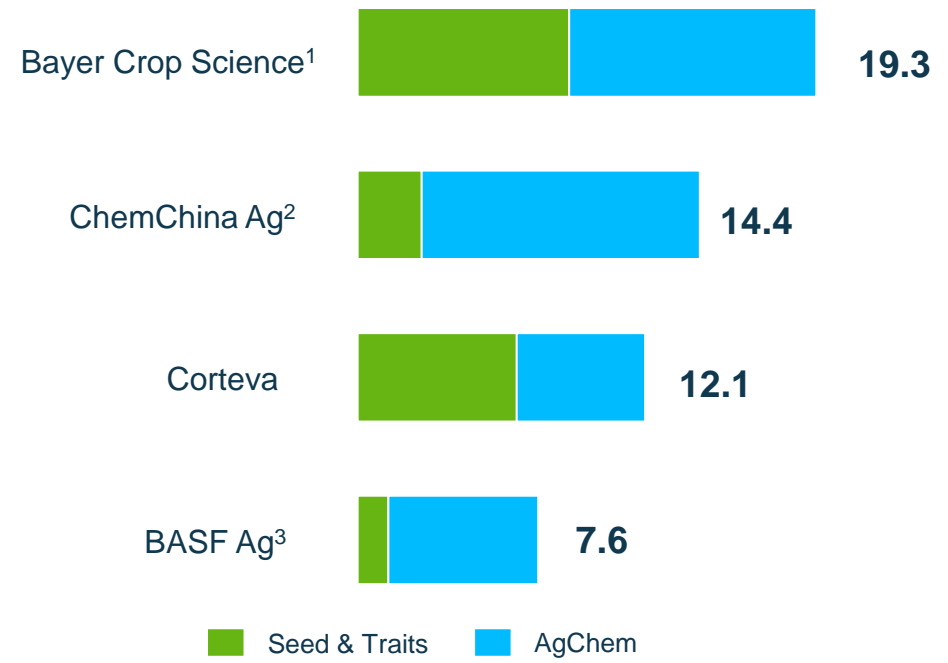


# Crop Science

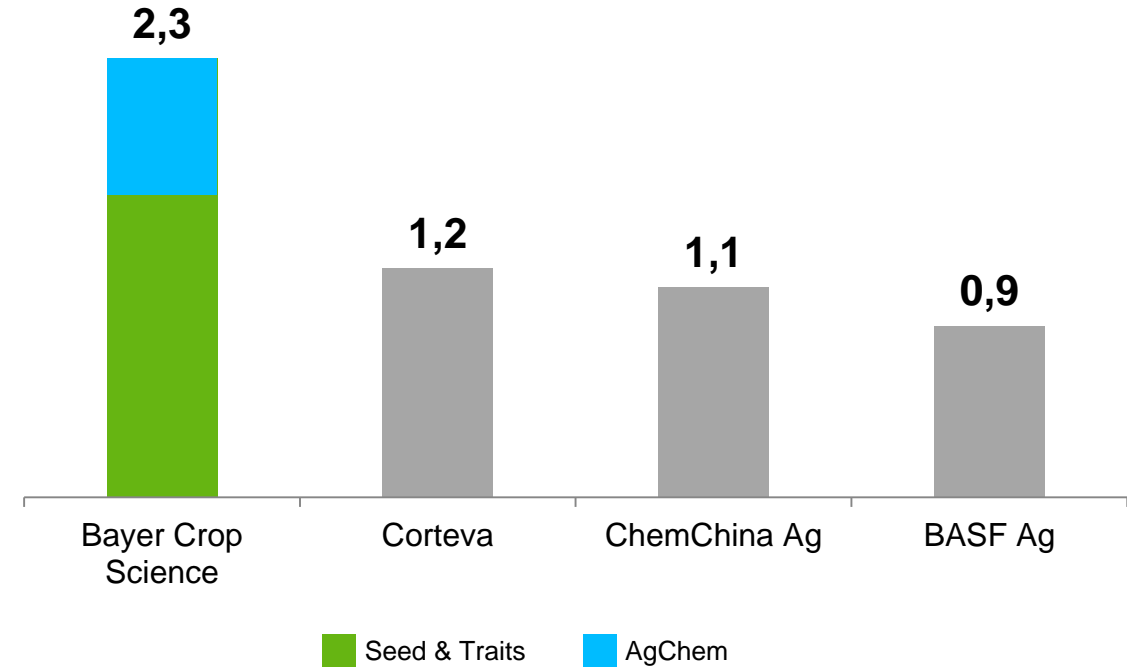
## The Established Leader in Crop Science

Industry Leading Sales and Unmatched Investment in R&D

### Sales 2018 (€bn)



### 2018 Ag R&D Investment (€bn)<sup>1</sup>



<sup>1</sup> The unaudited Pro-forma data are presented as if both the acquisition of Monsanto and the associated divestments had taken place as of January 1, 2017. Sales of Monsanto are presented in periods as per the Bayer fiscal year. One-time effects of business operations, the accounting for discontinued operations and the recognition and measurement of sales from certain business transactions have been adjusted in line with our accounting.  
<sup>2</sup> Excludes non-agro business sales of ADAMA (nutritional supplements, aromatic products, industrial products)  
<sup>3</sup> Includes BASF Ag Sales 2018 as reported plus €1.4bn (€2.027m sales FY 2018 excluding €586m sales from Jan '18 until cut-off in Aug '18) reported sales in 2018 from Bayer businesses sold to BASF. Split between Seed and CP businesses based on internal estimates.  
<sup>4</sup> Exchange rate: FY 2018: ~1.18 USD/EUR  
<sup>5</sup> Competitor Pro forma R&D cost split not available



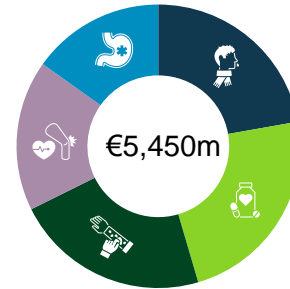
# Consumer Health

## We Will Focus on our Core OTC Categories To Leverage our Science and Marketing Capabilities

### Categories to accelerate

- Allergy + Cough + Cold
- Nutritional
- Dermatology
- Pain + Cardio
- Digestive Health

### Sales Split 2018<sup>1</sup>



### Global Position<sup>2</sup>

- #5
- #2
- #2
- #4
- #2

### Main Brands

- 
- 
- 
- 
- 

### Categories to exit

- // Divestment of Rx Dermatology - US business closed; closing ex-US expected in H2 2019<sup>3</sup>
- // Explore exit options for Sun- and Footcare in 2019

- 
- 
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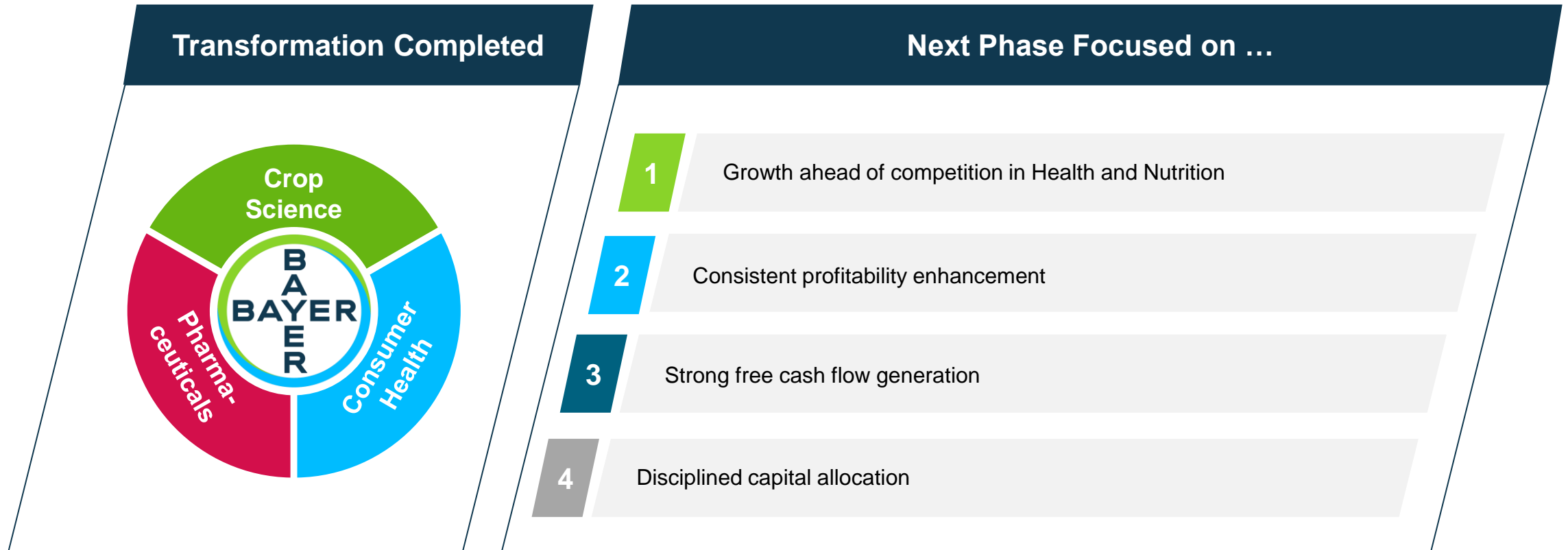
<sup>1</sup> Excluding Derma Rx, Sun care, Footcare

<sup>2</sup> PARS database January 2019

<sup>3</sup> Subject to the fulfillment of customary closing conditions



# Next Phase to Deliver Value Creation





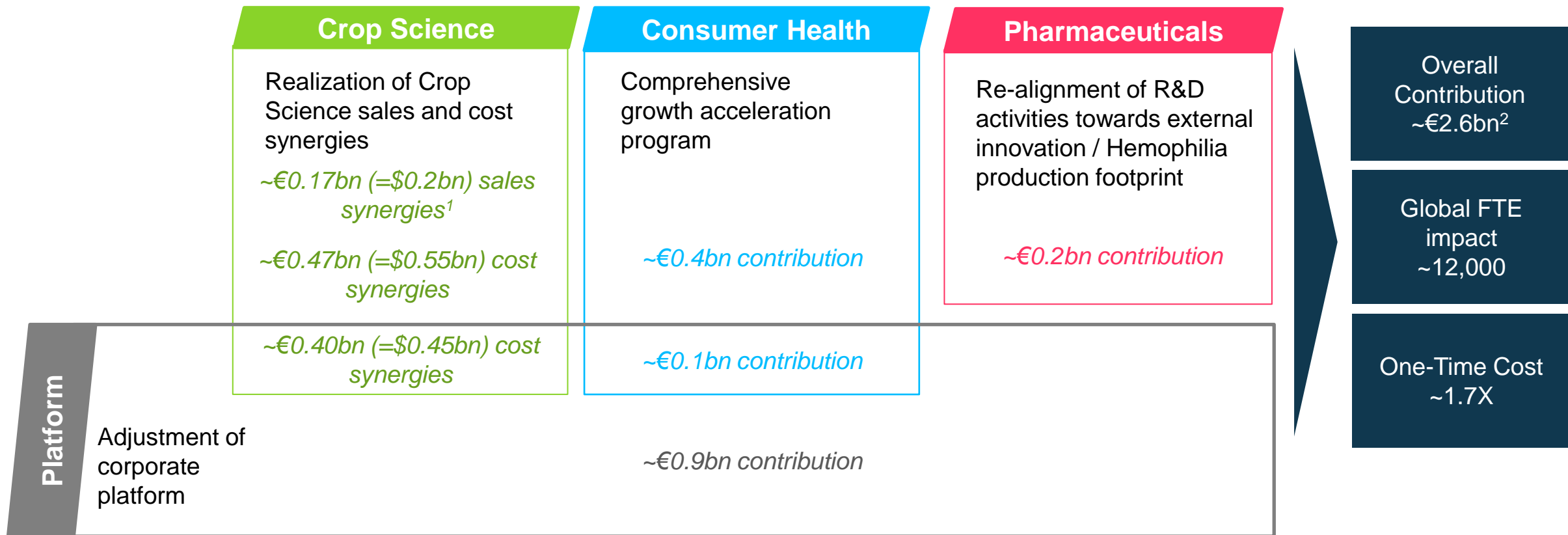
# We Focus on Growth in Attractive Markets

Bayer Group	Market		Bayer's growth levers
	Size 2017	CAGR 2018-2022	
Crop Science	~€90bn <sup>1</sup>	~3% <sup>2</sup>	<ul style="list-style-type: none"> <li>// Using our leading positions in Agriculture, Pharmaceuticals and Self-care to address societal needs and benefit from global megatrends</li> <li>// Drive innovation</li> </ul>
Pharmaceuticals	~€870bn <sup>3</sup>	4-5%	<ul style="list-style-type: none"> <li>// Leading portfolio of seed &amp; traits, crop protection and digital farming</li> <li>// World-class R&amp;D platform with best talent and technology in the industry</li> <li>// Positioned to shape the future of agriculture: Development of tailored solutions to address farmers' individual needs and challenges</li> </ul>
Consumer Health	~€140bn <sup>4</sup>	3-4%	<ul style="list-style-type: none"> <li>// Innovative medicines in areas of high unmet medical need</li> <li>// Therapeutic focus areas: Cardiology, Oncology, Gynecology, Hematology and Ophthalmology</li> <li>// Leverage external innovation and partnering as well as pipeline and potential of current products</li> </ul>
			<ul style="list-style-type: none"> <li>// Branded self-care solutions that help transform people's daily health</li> <li>// Focus on five core categories</li> </ul>

<sup>1</sup> Pro-forma calculations Bayer, Bayer CS market model; <sup>2</sup> excluding potential cyclical recovery of the Crop Science market; <sup>3</sup> IQVIA ; <sup>4</sup> Market model in-market sales OTC medicines, data from IQVIA, Nicholas Hall



# Bayer 2022 Synergy & Efficiency Programs



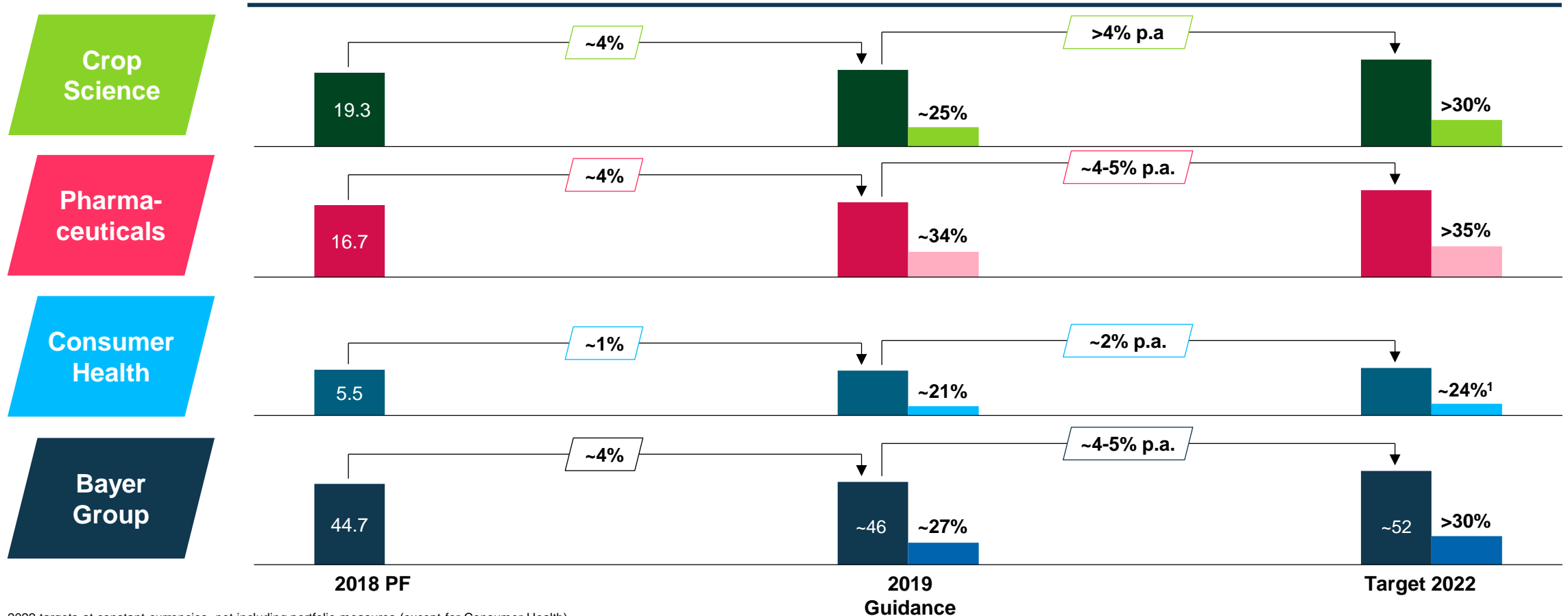
<sup>1</sup> EBITDA before special items impact from sales synergies

<sup>2</sup> Indicative Phasing: ~30% effective in 2020, ~70% in 2021 and 100% in 2022



# Targeting Significant Profitability Improvements Across All Divisions

Sales and EBITDA before special items (margin) development (in €bn, %)



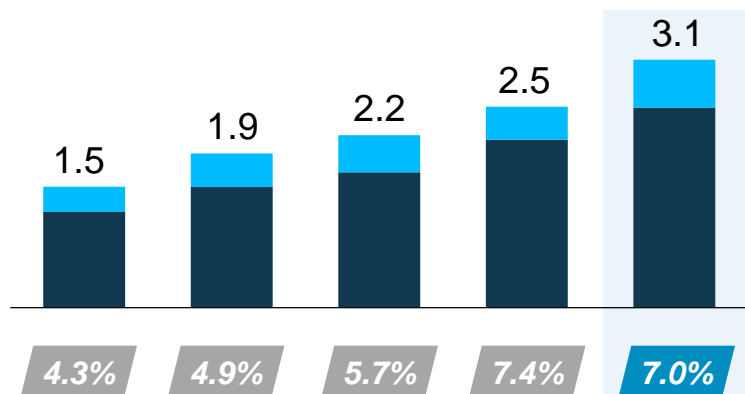




# Cash Flow Improvement Focusing on Capex and Working Capital Optimization



**Capex spend**  
in €bn



- // Annual contribution of ~0.5bn EUR by 2022
- // Past and current levels impacted by single large-scale investments in fixed assets
- // Licensing will continue to be an element to drive growth

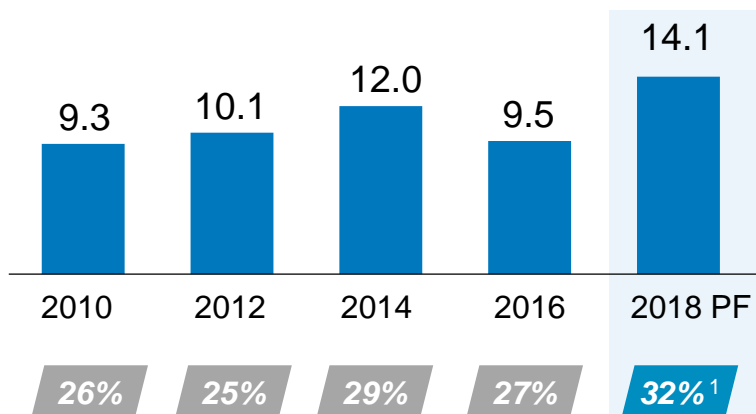
in % of sales

**Focused CapEx below current levels** → ~ 5-6%

Intangibles Fixed assets



**Working Capital**  
in €bn



- // Annual contribution of ~0.5bn EUR by 2022
- // Focus on optimization of inventory levels and receivables management

in % of sales

**Working capital optimization** → ~ 32%

<sup>1</sup> Crop Science 48%, Pharmaceuticals 24%, Consumer Health 24%



# Group Targets - Value Creation from Strengthened Base

## Triple Leverage

€bn		2018 PF	Guidance 2019	Target 2022	CAGR 2018-22 <sup>2</sup>
Sales <sup>1</sup>	Total Group	44.7	~46 (~4%)	~52	~4%
	Crop Science	19.3	~4%		>4%
	Pharmaceuticals	16.7	~4%		~4-5%
	Consumer Health	5.5	~1%		~2%
EBITDA before special items (%)	Total Group		~12.2 (~27%)	~16 (>30%)	~9%
	Crop Science		~25%	>30%	
	Pharmaceuticals		~34%	>35%	
	Consumer Health		~21%	~24% <sup>4</sup>	
Core EPS (€)			~6.8	~10	~10%
FCF		~4.7 <sup>3</sup>	~3-4	~8	~18%
Net financial debt		~35.7 <sup>3</sup>	~36 <sup>5</sup>	~26-28	

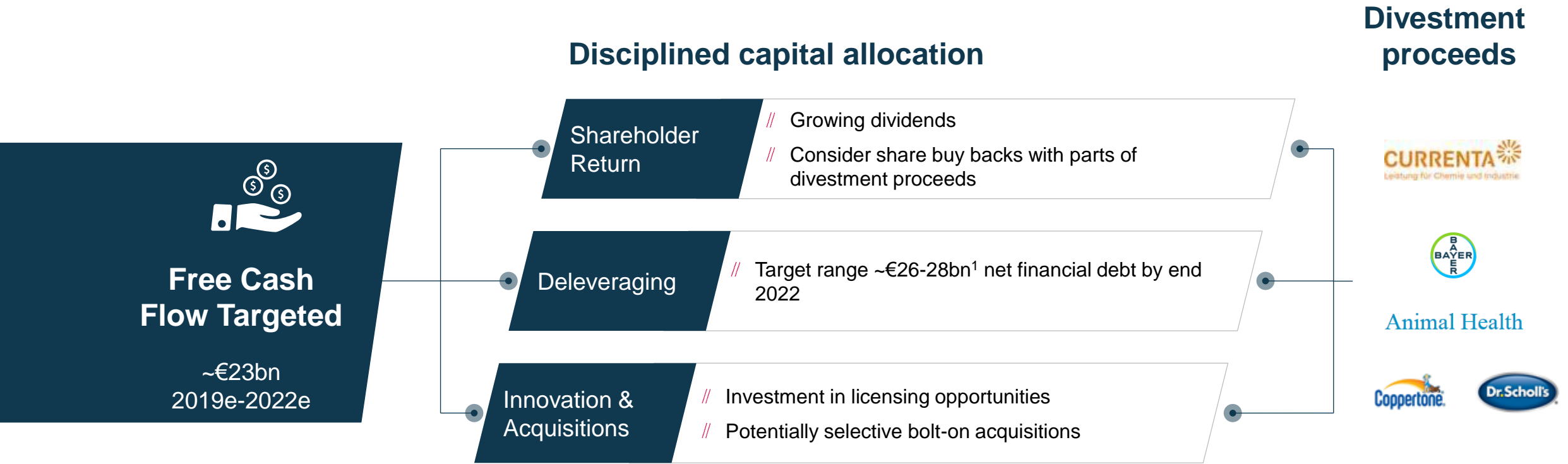
2022 targets at constant currencies, not including portfolio measures (except for Consumer Health)

<sup>1</sup> Sales: cpa growth; <sup>2</sup> CAGR from 2018 base year; <sup>3</sup> as reported; <sup>4</sup> includes portfolio measures; <sup>5</sup> including around ~€1bn lease liability due to IFRS 16



# We Have Clear Priorities for Capital Allocation

Focus on Shareholder Return, Innovation and Deleveraging



<sup>1</sup> Before M&A / Portfolio



# We Will Create Significant Value Through 2022 and Beyond

Focus on Execution and Driving Sustained Profitable Growth...

**1**

**We have completed Bayer's portfolio transformation into a global leader in Health & Nutrition**

**2**

**The next phase is focused on driving value creation through (i) growth ahead of competition enabled by innovation and portfolio measures (ii) profitability enhancement through Bayer 2022 synergy and efficiency programs and (iii) strong cash generation**

**3**

**We target Sales, Core EPS and FCF CAGR\* until 2022 of 4%, 10% and 18%, respectively**

**4**

**Strong FCF along with proceeds from divestments enable (i) growing dividends, (ii) quick deleveraging of our balance sheet and (iii) selective bolt-ons and in-licensing transactions**



## Q1 2019 & Outlook 2019



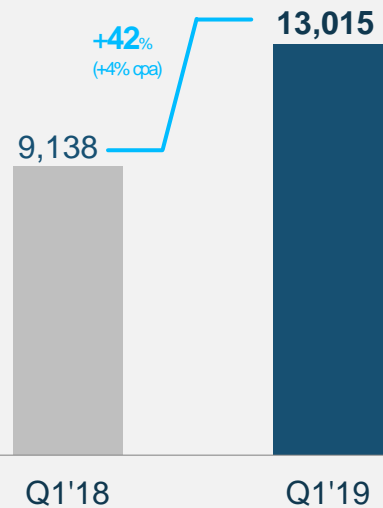


# Q1 Results

## Sales

In million €, Δ% yoy, Fx & portfolio adj.

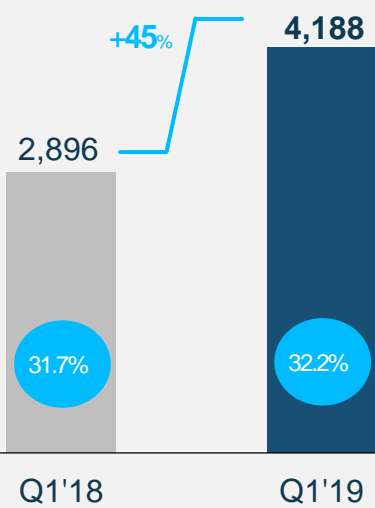
Positive Fx effect of €108m



## EBITDA

In million €, before special items

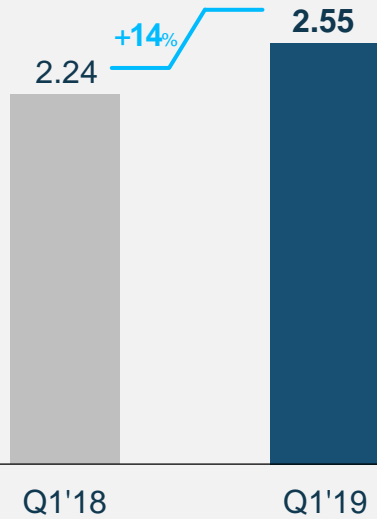
Negative Fx effect of €110m



## Core EPS

In €, Cont. Operations

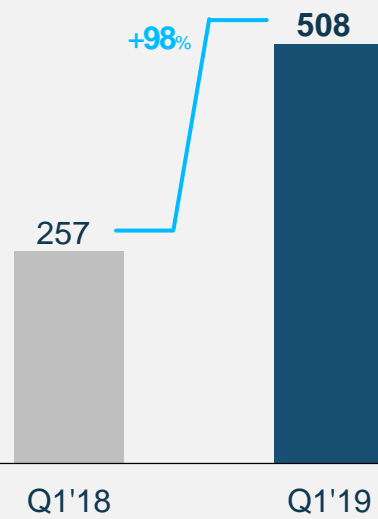
- # of shares increased from 886m to 980m
- Core financial result went from -€106m to -€370m



## Free Cash Flow

In € million

Expanded CS business working capital need offset by positive PH and CH development



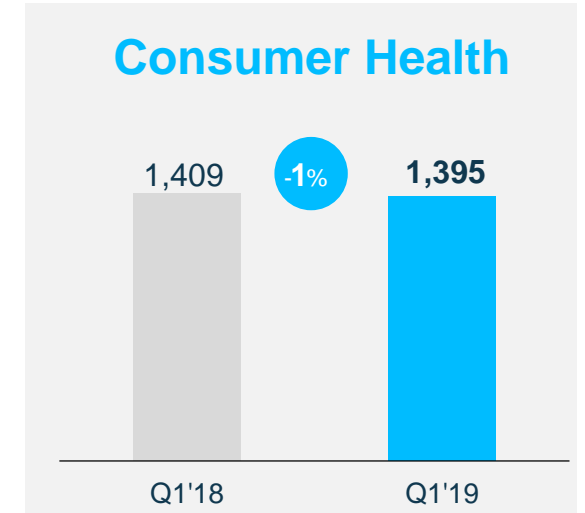
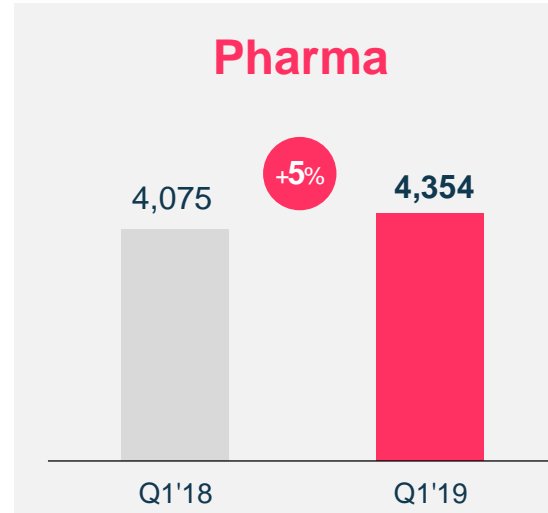
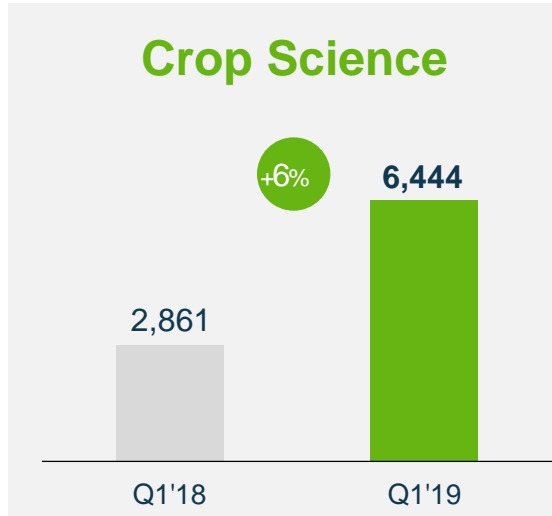




# Divisional Q1 Results

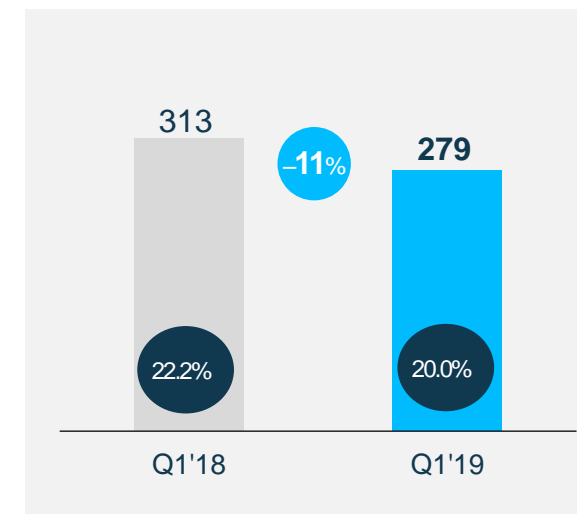
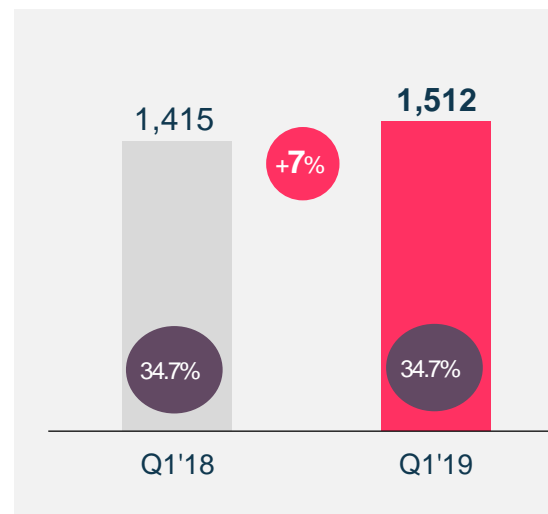
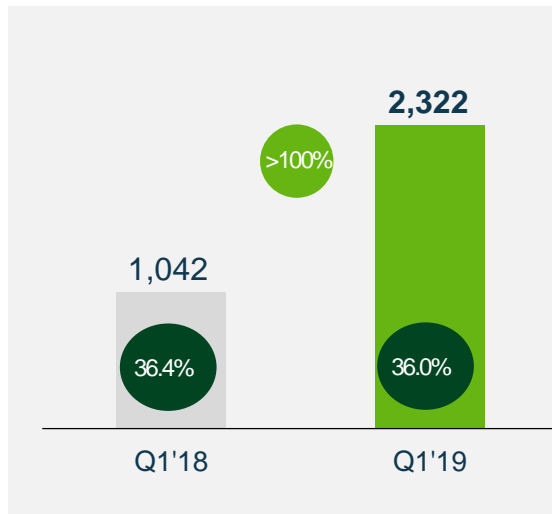
## Sales

In million €, Δ% yoy, Fx & portfolio adj.



## EBITDA

In million €, Δ% yoy, before special items



● EBITDA Margin before special items



# FY 2019 Guidance Confirmed

	2018 <sup>1</sup>	Group Forecast 2019 (at constant currencies)	Δ 2018 – 2019	
<b>Sales</b>	€39.6bn	~€46bn	+~16% (thereof +~12% portfolio)	<b>Fx-sensitivity:</b>  ± 1% change of the € vs all other currencies =  〒 ~€340m on Sales &  〒 ~€100m on EBITDA (before special items)
<b>EBITDA</b> (before special items)	€9.5bn	~€12.2bn	+~28%	
<b>Core EPS</b>	€5.94	~€6.80	+~14%	
<b>Free Cash Flow</b>	€4.7bn	~€3-4bn	~(-15%) – (-36%)	



# Progress in All Focus Areas

**1**

## ***Target Delivery***

- Deliver on operational targets

**2**

## ***Crop Science***

- Integration of acquired business to shape the future of agriculture

**3**

## ***Pharmaceuticals***

- Further strengthening of pipeline and intensify external sourcing

**4**

## ***Consumer Health***

- Drive performance improvement

**5**

## ***Efficiency / Bayer 2022***

- Execute efficiency improvement program and realize synergies

**6**

## ***Portfolio Measures***

- Execution of announced portfolio measures for sharpened business focus



## Appendix





# FY 2019 Guidance: Further Growth Expected for All Segments

	<b>Sales 2018</b>	<b>EBITDA-margin 2018</b> (before special items)	<b>Sales Growth 2019</b> (cpa <sup>2</sup> )	<b>EBITDA-margin 2019</b> (before special items)
	(at constant currencies)			
<b>Crop Science</b>	€14.3bn <sup>1</sup>	18.6%	~4%	~25%
<b>Pharma</b>	€16.7bn	33.4%	~4%	~34%
<b>Consumer Health</b>	€5.5bn	20.1%	~1%	~21%
<b>Animal Health</b>	€1.5bn	23.9%	~4%	~24%

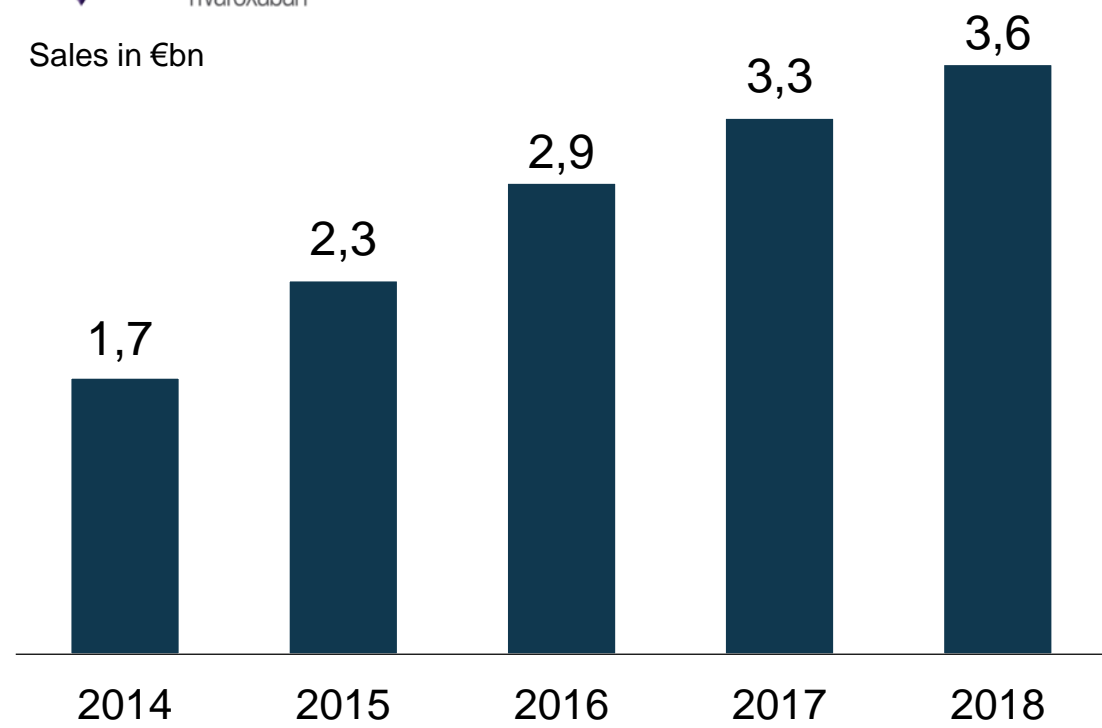


# Pharma

## Xarelto – Continued Growth of a Leading Anticoagulant



Sales in €bn



- // Most broadly indicated anticoagulant for use in venous and arterial thromboembolic conditions
- // A leading pharma brand with global sales of €5.2bn in 2018 incl. sales at Johnson & Johnson
- // New CAD/PAD indication launching in EU and the US
- // Peak sales potential: >€5.0bn<sup>1</sup>
- // Further growth driven by:
  - // Under-served patient populations
  - // Demographics
  - // Shift from warfarin
  - // New indications targeting patients currently not treated with anticoagulants

CAD: Coronary artery disease; PAD: Peripheral artery disease  
<sup>1</sup> Ex-US sales plus royalty from J&J as reported by Bayer



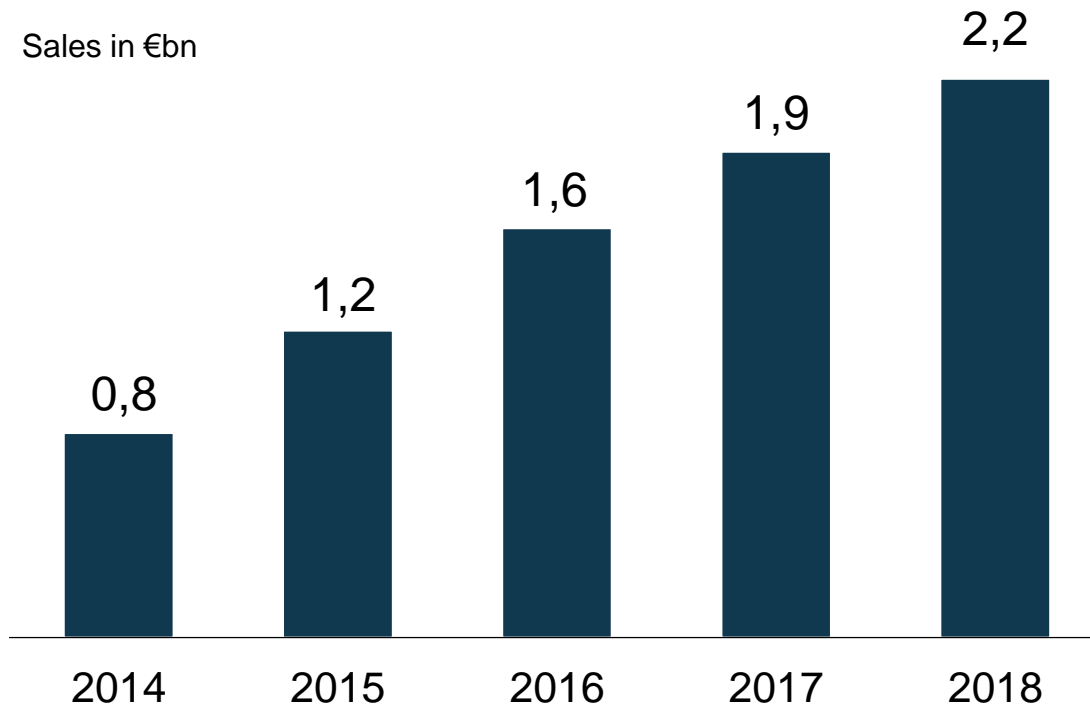


# Pharma

## Eylea – A Leader in Retinal Diseases



Sales in €bn



// A leader in retinal diseases with global brand sales of €5.6bn in 2018 incl. sales at Regeneron<sup>1</sup>

// Approved for the treatment of 5 retinal diseases: wAMD, DME, BRVO, CRVO, mCNV

// Treat and extend dosing regimen with injection intervals of up to 12 weeks or more for wAMD

// Peak sales potential: >€2.5bn<sup>2</sup>

// Further growth driven by:

// Continued generation of real-life experience in wAMD across key markets and treatment-naïve patient share gains

// Market expansion in DME

<sup>1</sup> Marketed by Bayer ex-US only; <sup>2</sup> As reported by Bayer

wAMD: Wet age related macular degeneration; DME: Diabetic macular edema; BRVO: Branch retinal vein occlusion; CRVO: Central retinal vein occlusion, mCNV: Myopic choroidal neovascularization



# Pharma

## Late-stage Pipeline with Progress in Oncology

Darolutamide met Primary Endpoint in Phase III-trial and FDA-approval of Vitrakvi







	Vitrakvi	Darolutamide	Copanlisib	Finerenone	Vericiguat
<b>Indication</b>	// TRK-fusion Cancer	// Prostate Cancer	// Lymphoma	// Diabetic Kidney Disease	// Chronic Heart Failure
<b>Status</b>	// FDA approved / in registration	// Phase III (nmCRPC) // Phase III (mHSPC)	// Launched in the US // Phase III	// Phase III	// Phase III (HFrEF) // Phase II (HFpEF)
<b>Commercial Potential</b>	// PSP >€750m	// PSP ≥€1bn	// PSP ≥€0.5bn	// PSP ≥€1bn	// PSP ~€0.5bn
<b>Clinical Completion</b>	// Clinical program ongoing	// Completed (ARAMIS, nmCRPC) // Aug 2022e (ARASENS, mHSPC)	// May 2020e (CHRONOS-3) // Sep 2021e (CHRONOS-4)	// April 2020e (FIDELIO-DKD) // June 2021e (FIGARO-DKD)	// Jan 2020e (VICTORIA, HFrEF) // Dec 2019e (VITALY, HFpEF)

NTRK: Neurotrophic receptor tyrosine kinase; nmCRPC: Non-metastatic castration resistant prostate cancer; mHSPC: Metastatic hormone sensitive prostate cancer; HFrEF: Heart failure with reduced ejection fraction; HFpEF: Heart failure with preserved ejection fraction; PSP: Peak sales potential



# Consumer Health

## Strong Consumer Brands Built up Over Decades

Brand	Category	Age	Sales 2018	CAGR 2014-2018	# of studies <sup>2</sup>
 ASPIRIN	Pain, Cardio, Cough & Cold	120	€975m	3.0%	88
 Claritin	Allergy	26 <sup>1</sup>	€516m	-1.0%	82
 Bepanthen	Dermatology	75	€371m	7.0%	116
 ALEVE	Pain	43 <sup>1</sup>	€351m	-0.9%	42
 Alka-Seltzer	Digestive Health, Cough & Cold	88	€225m	-1.2%	7
 elevit	Nutritionals	35	€209m	20.9%	6

<sup>1</sup> Rx launch; <sup>2</sup> Past 20 years of clinical data, as of December 2018



# Consumer Health US Turnaround Plan

## Levers and key focus areas

## First actions

**People &  
Organization**



- // Increase category and brand building experience
- // Drive leaner more agile organization

- // Right-size the organization
- // New leadership team in place

**Q4 2018  
Q1 2019**

**Winning  
Portfolio**



- // Focus our resources on categories where we can win

- // Divested Rx Dermatology
- // Explore exit options: Suncare / Footcare

**H2 2018  
2019**

**Accelerate growth-  
focused Innovation**



- // Rebuild innovation pipeline

- // Strengthen innovation for core brands
- // Establish Rx-to-OTC switch pipeline

**2020**

**Modernized  
Marketing & Sales**



- // Rebuild brand fundamentals
- // Accelerate digital

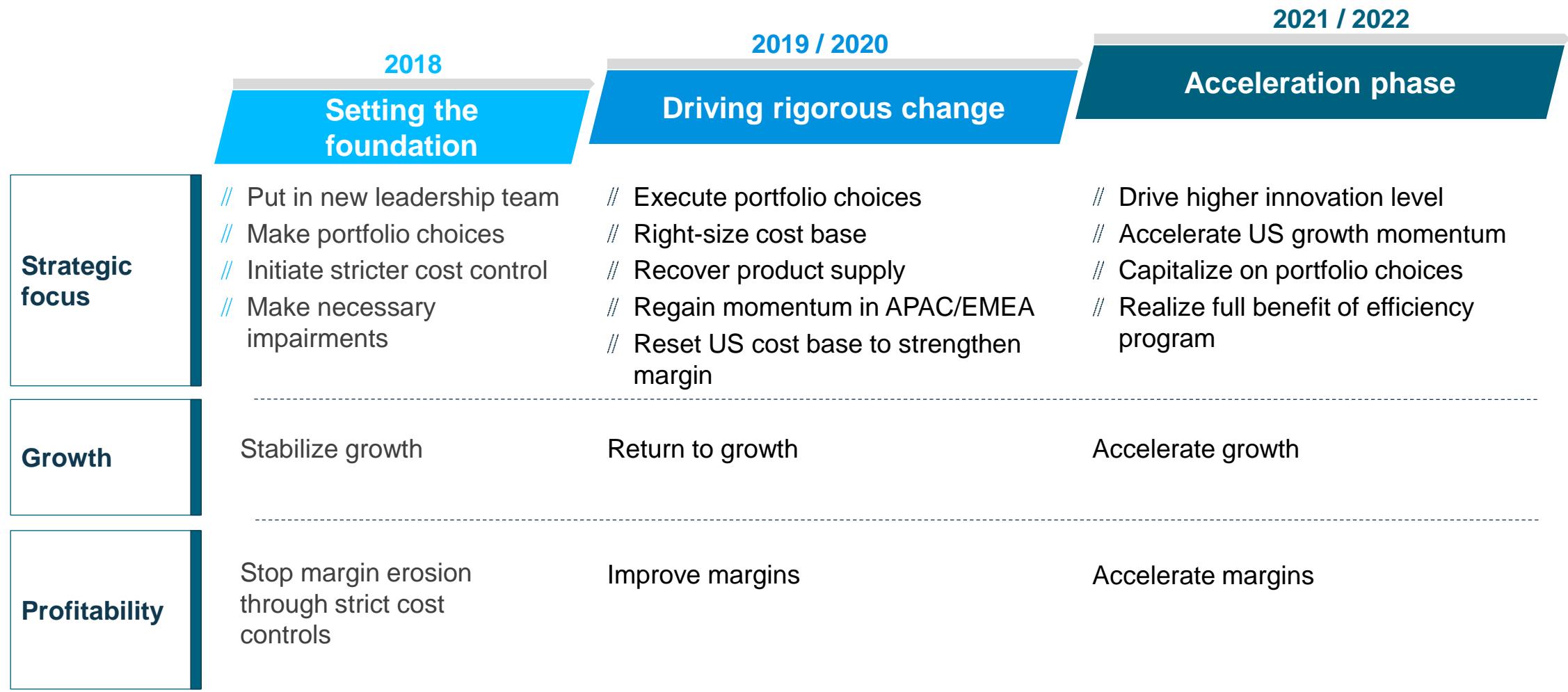
- // Step up e-commerce
  - Amazon 2018e sales +60%
  - Online (8.3%) to offline (8.7%) share

**2018**



# Consumer Health

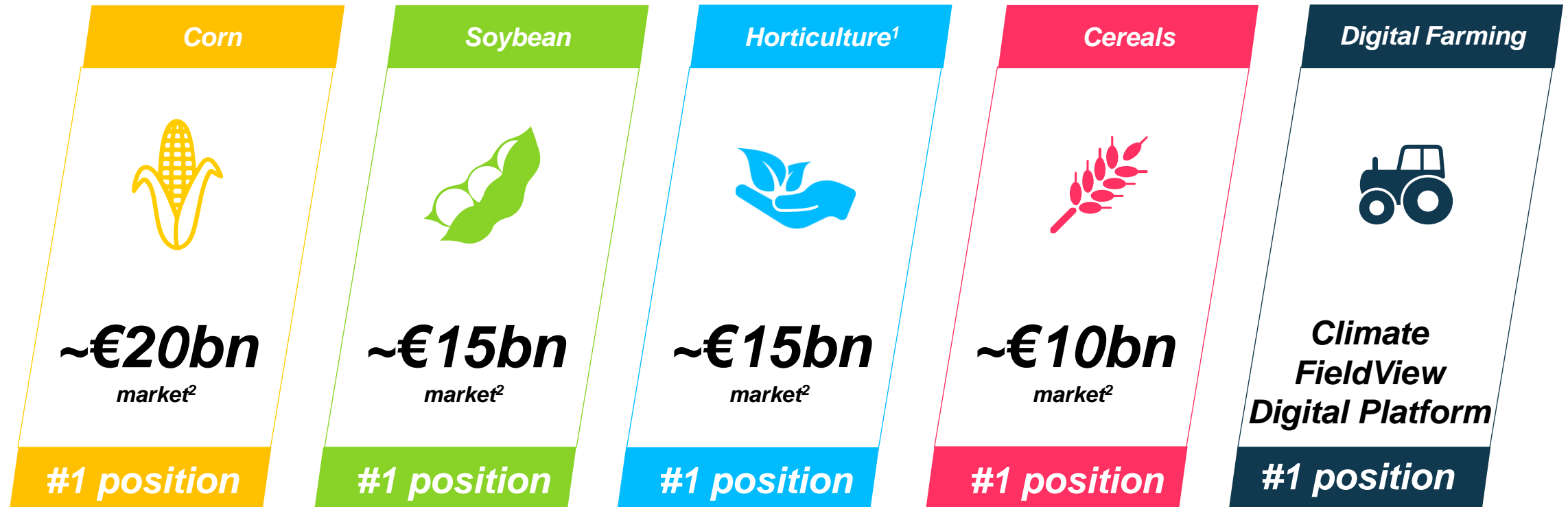
## Our Strategic and Operational Roadmap





# Crop Science Leading Position in All Major Categories

Crop Science Market<sup>2</sup> Currently Valued at ~€90bn // ~3% Long-term CAGR Expected



<sup>1</sup> Includes fruits, vegetables, flowers and nuts

<sup>2</sup> Includes seeds, traits, crop protection chemistries and environmental science; does not include fertilizer

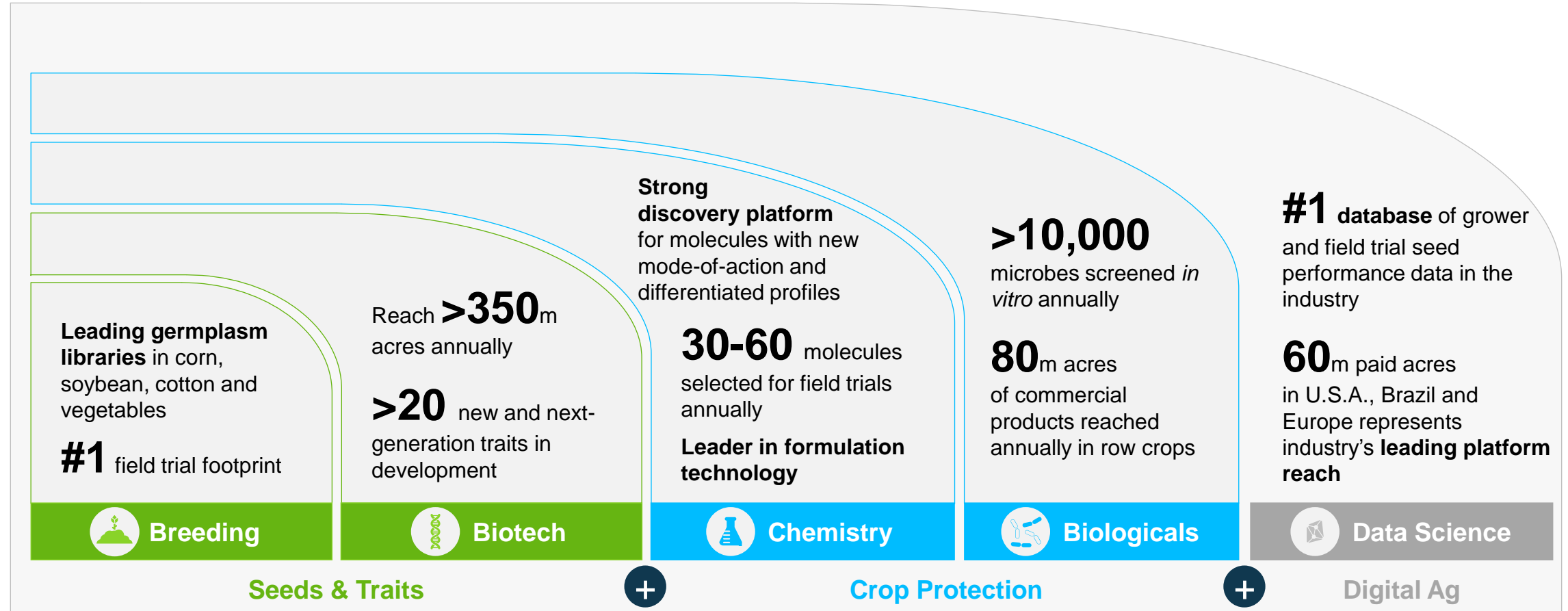
Note: Reflecting BCS' portfolio after divestments. Market sizes rounded to nearest \$5bn. Source: Pro-forma calculations Bayer; Bayer CS market model



# Crop Science

## Next Growth Opportunity: Convergence of Leading R&D Platforms

Extensive Germplasm and Biotech Foundation, Combined with Leadership in Chemistry and Biologicals and Data Science Optimization, Serves As Innovation Engine To Accelerate Benefits Across The Industry



**Best positioned to discover, combine and tailor solutions for growers**

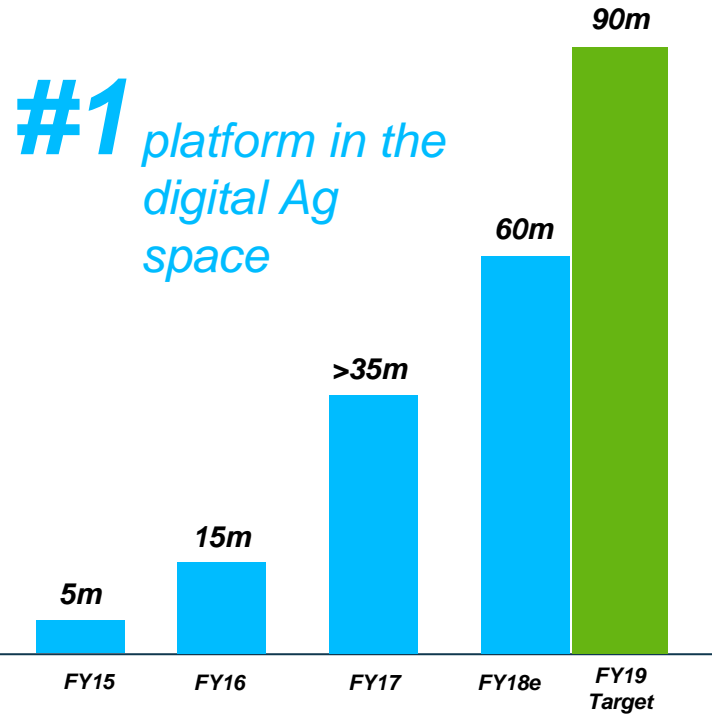


# Crop Science

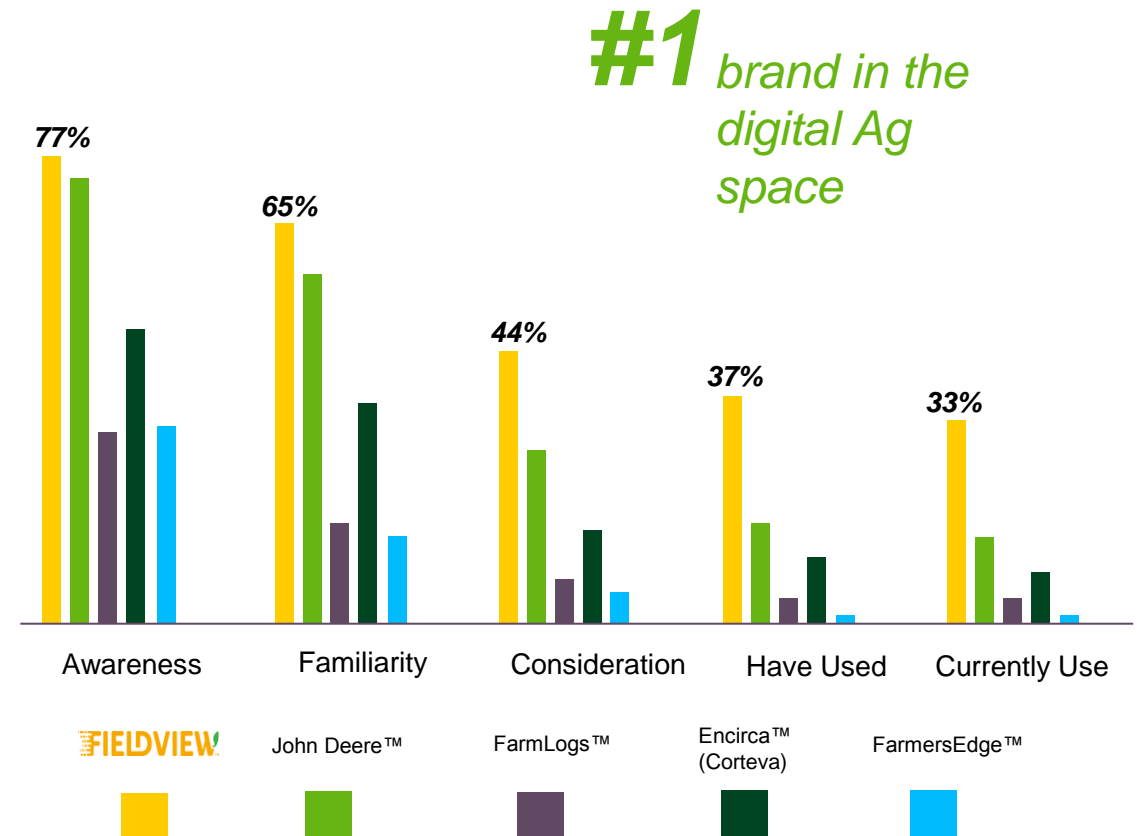
## FieldView: The Leading Brand and Platform for Growers

Our Value Creation is Supported by our Performance Trends; Paid Acres >7x Closest Competitor

### Global Paid Acres<sup>1</sup>



### Brand Health<sup>2</sup> (U.S.)



>35 next-generation projects in the pipeline

<sup>1</sup> Internal estimates  
<sup>2</sup> 2018 Brand Health Monitor





Thank you

