



# **Solvay Investor Update**

24 September, 2018 London, Berkeley hotel

#### DISCLAIMER



This presentation may contain forward-looking information. Forward-looking statements describe expectations, plans, strategies, goals, future events or intentions. The achievement of forward-looking statements contained in this presentation is subject to risks and uncertainties relating to a number of factors, including general economic factors, interest rate and foreign currency exchange rate fluctuations, changing market conditions, product competition, the nature of product development, impact of acquisitions and divestitures, restructurings, products withdrawals, regulatory approval processes, all-in scenario of R&D projects and other unusual items.

Consequently, actual results or future events may differ materially from those expressed or implied by such forward-looking statements. Should known or unknown risks or uncertainties materialize, or should our assumptions prove inaccurate, actual results could vary materially from those anticipated. The Company undertakes no obligation to publicly update or revise any forward-looking statements.



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# WELCOME BY THE CHAIRMAN



Chairman of the Board of Directors





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## SOLVAY'S EXECUTIVE COMMITTEE



Jean-Pierre Clamadieu



Vincent De Cuyper



Hua Du



Pascal Juéry



Augusto Di Donfrancesco



Karim Hajjar



Cécile Tandeau de Marsac



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# OUR STRATEGIC JOURNEY TO A STRONGER SOLVAY

#### Jean-Pierre Clamadieu

Chief Executive Officer, Chairman of the Executive Committee





## OUR STRATEGIC JOURNEY TO A STRONGER SOLVAY

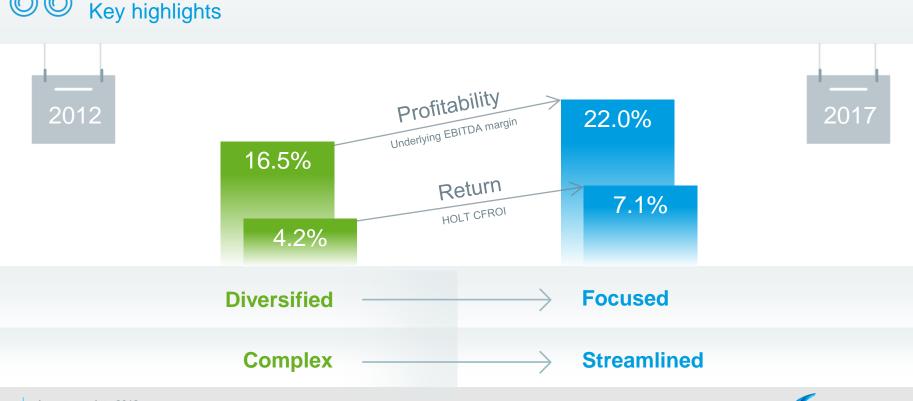
2012 – 2017			2018 – 2021+
Portfolio Transformation	EBITDA from growth segments 70%	sustainable solutions in portfolio 50%	
Synergies	22% EBITDA margin	68% cash conversion	Organic Growth Customer centricity & Innovation



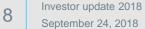
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## A MORE RESILIENT, MORE PROFITABLE GROUP

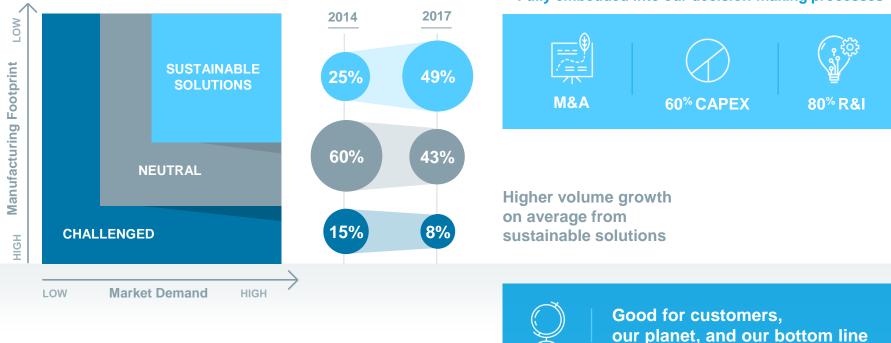
**Group transformation** 



asking more from chemistry®



## INTEGRATING SUSTAINABILITY INTO DECISION-MAKING DRIVES SUPERIOR FINANCIAL VALUE GROWTH



#### Fully embedded into our decision-making processes



## INNOVATION AT OUR CORE STRONG CONNECTIONS TO ADVANCE SCIENCE

	2012	2017	Progress
Research Intensity R&I Spend / Sales	2.4%	3.2%	→ +80bp

Strengthening our R&I capabilities to support strong pipeline of growth opportunities

A worldwide network of researchers connected to academic partners

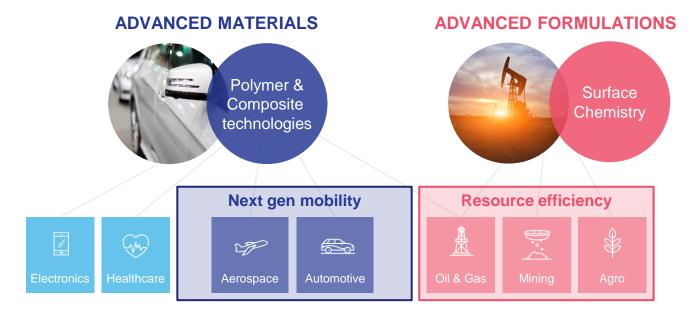


Establishing **world class** R&I centers





## ORGANIC GROWTH DRIVEN BY 2 GROWTH SEGMENTS



# Main end-markets represent 2/3 of segments' sales



Customer intimacy & market leadership





Strong technology portfolio





# ADVANCED MATERIALS NEXT GENERATION MOBILITY

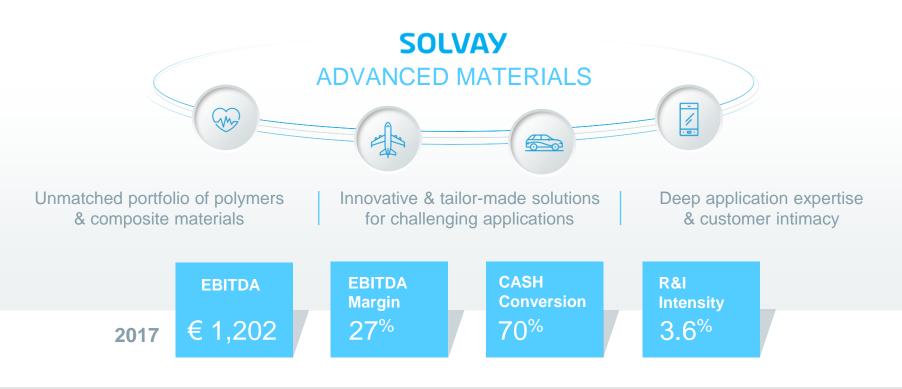
#### Augusto Di Donfrancesco

Member of the Executive Committee





## GLOBAL LEADER IN HIGH-PERFORMANCE MATERIALS WITH SUPERIOR GROWTH & PROSPECTS





## AIRCRAFT FUNDAMENTALS SUPPORT HIGHER GROWTH IN COMPOSITES







#### KEY PROGRAM RAMP-UPS PROPEL OUR CURRENT & MID-TERM GROWTH





**Resin infusion technology** for the LEAP engine of 737MAX



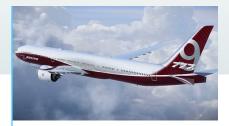
**Primary supplier** of composite materials for the F35 Joint Strike Fighter



**Resin infusion technology** for the LEAP engine of A320neo



Major supplier of primary and secondary structures for A220



Primary structures for 777X



Secondary structures, structural adhesives and surfacing films for the 787 Dreamliner



TECHNOLOGY LEADERSHIP, INNOVATION & PARTNERSHIPS SUPPORT FUTURE GROWTH 2025+

#### Resin infusion Technology Leader

- On key programs today
- Gaining momentum on new programs

# Launch of bonding technology

 Potential to eliminate fasteners – reduces cost and weight

## Thermoplastics technology

- Supports cost-effective fabrication
- Enables higher build rates

#### Proprietary programs with global customers

Multiple developments underway in CIVIL and DEFENSE markets



**AERO** 

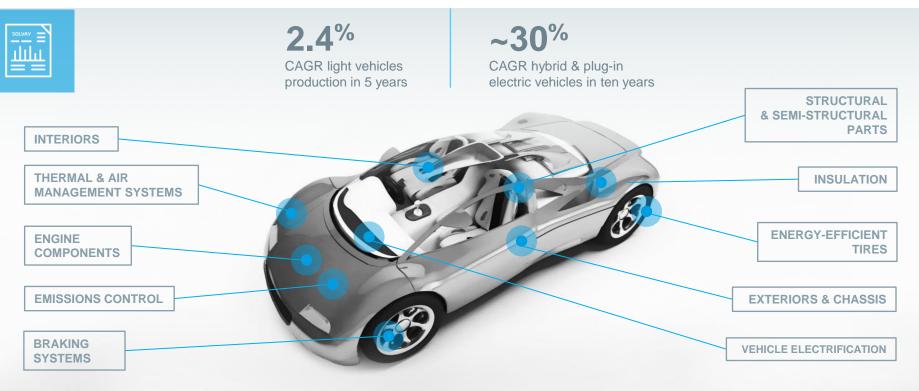
## SOLVAY IS UNIQUELY POSITIONED IN THERMOPLASTIC COMPOSITES

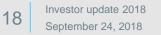




## WE MAKE CARS LIGHTER & MORE EFFICIENT INCREASED MATERIALS USAGE DRIVES GROWTH



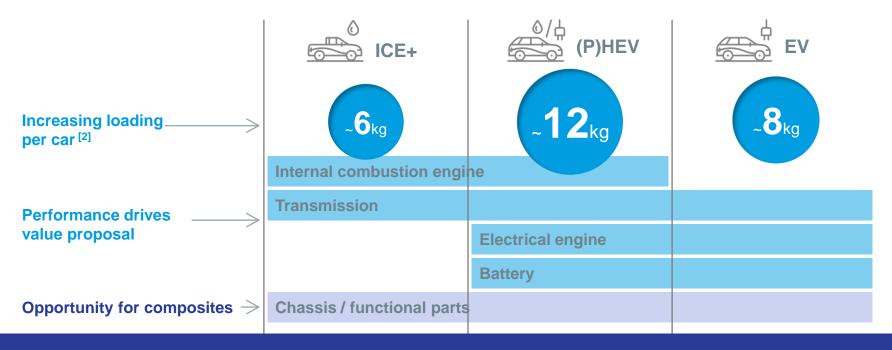






## SOLVAY POSITIONED IN ALL AUTO PLATFORMS OUTPACING THE INDUSTRY GROWTH BY 3X [1]





#### Technology shift —

#### **Big opportunity for Solvay**

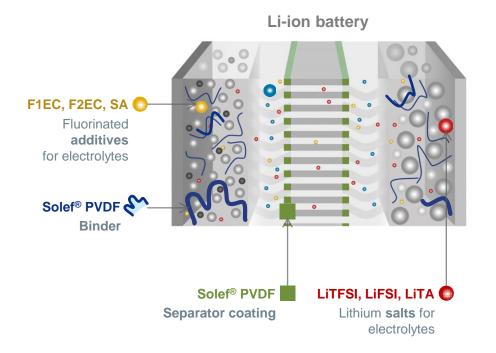
[1] For Solvay's polymer & composite technologies

Accessible market for Solvay polymer and composite technologies (excluding chassis / functional parts)



## WE ARE A TECHNOLOGY LEADER FOR MISSION CRITICAL BATTERY MATERIALS





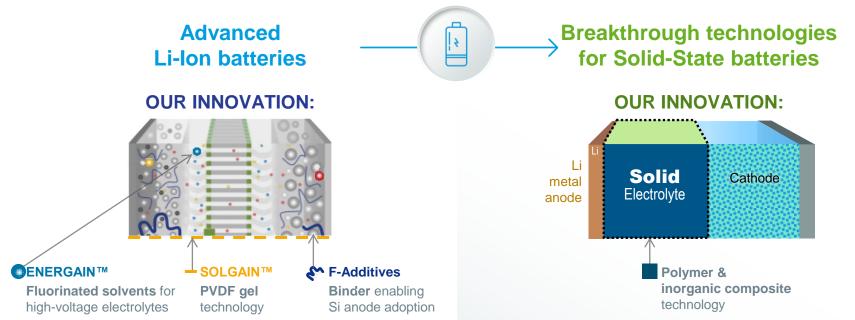
Solvay technologies enable key functionalities of the Li-ion battery

- $\rightarrow$  Safer
- $\rightarrow$  Better energy density
- $\rightarrow$  Better power
- $\rightarrow$  Lower cost

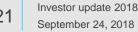


## AT THE FOREFRONT OF INNOVATION FOR FUTURE BATTERY





## Potential to grow sales to > €500 million in 10 years





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## NEXT GENERATION MOBILITY DRIVES SIGNIFICANT GROWTH OPPORTUNITIES IN ADVANCED MATERIALS

-1-1



#### DRIVEN **BY KEY TRENDS**

- Aerospace ramp-up and higher composite usage
- Automotive technology shifts / electrification
- Other markets including • healthcare, electronics need for high-performing polymers



- Unmatched portfolio of polymers & composite materials
- Innovative & tailor-made solutions for challenging applications
- Deep application expertise & • customer intimacy

LEADS TO **EBITDA GROWTH** POTENTIAL







# ADVANCED FORMULATIONS



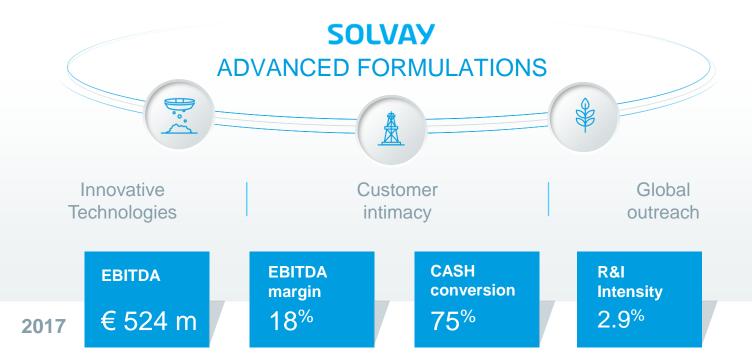
Member of the Executive Committee





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## UNIQUE PROVIDER OF SURFACE CHEMISTRIES





## **RESOURCE CONSTRAINTS REQUIRE MORE EFFICIENT SOLUTIONS**

Doing <b>more</b>			
with <b>less</b>	MINING	OIL & GAS	AGRO
↑ MORE	<b>Higher throughput</b> and yield of metals & minerals	Maximize cost performance and fracturing efficiency	Targeted use of ingredients for seeds & crops
↓ LESS	Reduce impact to employees and environment	Less clean water usage	Reduce environmental impact
	42% of	Advanced Formulations	sales
Investor update 2018			

asking more from chemistry®

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September 24, 2018

## STRONGLY POSITIONED IN THE MINING INDUSTRY VALUE CHAIN



METALS &

MINING	COMMINUTION	SEPARATION 100%	REFINING	MINERALS &
Open pit mine	Grinding & size reduction	Mineral flotation	Smelting	Copper ~60%
		Solvent extraction	Electro-winning	
		Alumina refining		Alumina ~20%



Global Leader in metal separation technologies with >100 years of developing solutions for the industry



minerals ~20%

## MINING CHEMICALS TO SIGNIFICANTLY OUTGROW MARKET



#### **Profitable Growth**

#### **NEW MINES**

- → Increasing number of new mines starts; plan to capture >50%
- → Enables expansion into new geographies

#### **NEW MARKETS**

- → Expand into other metals & minerals
- Macro trends drive increased demand

#### INNOVATION

- → Supports penetration into new markets
- Provides solutions to productivity and sustainability challenges

#### **Market drivers**

Ore quality decline - Increasing metal demand - Drive for productivity - Sustainability

Market CAGR of 3% projected over the next 4 years



## ELECTRIFICATION SUPPORTS INNOVATION-DRIVEN GROWTH IN MINING & MINERALS

**OPPORTUNITY** 

NEED

MARKET

SOLVAY INNOVATIONS







#### Electrification

Requiring more supply of copper, lithium, nickel & cobalt for batteries

#### Copper

- Cu market represents 60% of sales today
- Cu demand in EV's will increase from 185 thousand tons today to 1.74 million by 2027

#### Lithium / Cobalt / Nickel

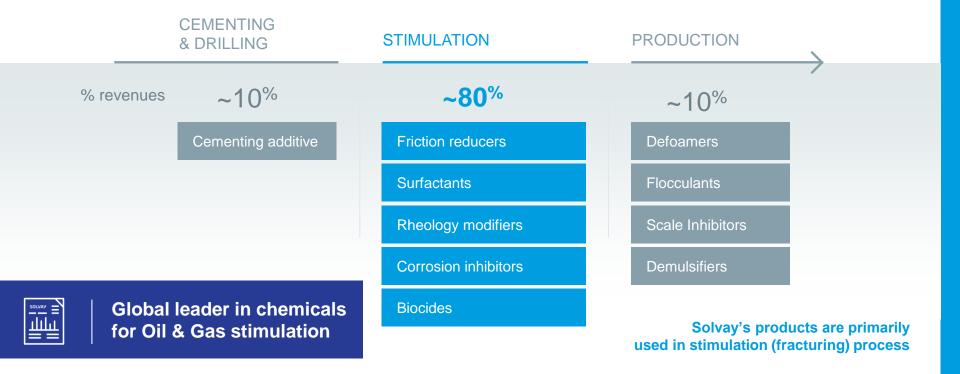
- Lithium represents brand new opportunities; market demand to increase threefold+ through 2025<sup>[1]</sup>
- Cobalt market demand to increase by 60% through 2025<sup>[1]</sup>

- Broad portfolio to address increasing needs of Cu producers in light of degrading quality ores
- Methodologies to enable improved selectivity and higher yields
- CYANEX 936 technology for Lithium solvent extraction, which significantly reduces production time while improving yield of Lithium
- CYNEX family to improve separation concentration of the cobalt and nickel



## A LEADER IN OILFIELD CHEMICALS PROVIDING COST EFFICIENT SOLUTIONS FOR STIMULATION







## OIL & GAS PILLARS FOR GROWTH



#### **Profitable Growth**

#### **INNOVATION**

- → Customized products and formulations to meet industry challenges
- → New Sales Ratio of 57% in 2018, up from 33% in 2014 from innovations

#### CUSTOMER FOCUS & SERVICE MODEL

- Digitalization to enhance efficiency and customer collaboration
- Exceptional customer responsiveness; labs near all major basins

#### GEOGRAPHIC EXPANSION

→ Secure partnerships beyond North America to enable expansion into new geographies

#### **Market drivers**

Drive for productivity & efficiency - Reduce fresh water consumption - Sustainable solutions

#### Market CAGR of 4-5% projected in the next 4 years



## WATER RE-USE AND RECYCLE SUPPORTS INNOVATION DRIVEN GROWTH IN OIL & GAS

**OPPORTUNITY** 

NNOVATIONS

SOLVAY

NEED

MARKET



TREND



Greener Solutions

Improving cost performance and product efficiency while reducing fresh water consumption

#### Salt tolerant products

 Provide equal or better performance in higher-salt recycled waters

#### **High efficiency products**

 Enhanced properties needed so that less fresh water is consumed

- NEW Friction Reducers enable more efficient fracturing while reducing fresh water consumption
- Next generation of polymers provide better proppant placement with less fluid versus conventional systems, offering greater productivity in oil recovery



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## INNOVATING TO SOLVE AGRO INDUSTRY'S GREATEST CHALLENGES







Greener Solutions

Seed treatments & nutrients to boost germination



NNOVATIONS

SOLVAY

#### **Crop protection**

- Need more efficient delivery of herbicides to protect crops and improve yield
- Improve weed resistance issues

 STARGUAR™ Innovation for crop protection that maximizes the on-target application of herbicides by reducing spray drift to almost zero



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## RESOURCE EFFICIENCY DRIVES SIGNIFICANT GROWTH OPPORTUNITIES IN ADVANCED FORMULATIONS

 $\pm$ 



- Maximize mining yield as ore quality degrades
- Greater demand for metals related to electrification
- Improve Oil & Gas productivity
   while reducing eco impact
- Agro and other markets need for greener solutions



- Innovative technologies to improve process yield and reduce eco impact
- Customer intimacy
   to capture market trends
   and needs
- Global outreach allowing geographical expansion

LEADS TO EBITDA GROWTH POTENTIAL

+6 to 10% Advanced Formulations





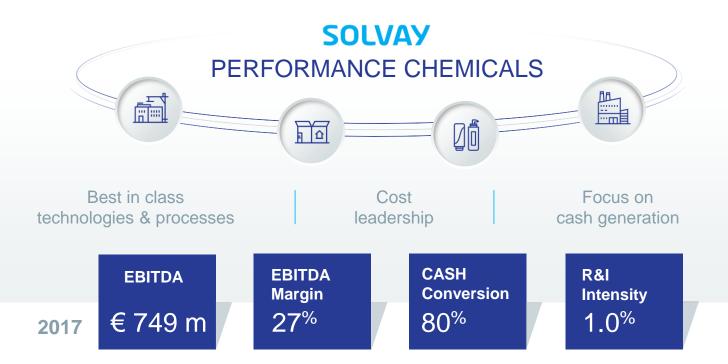
# PERFORMANCE CHEMICALS SODA ASH MARKET UPDATE





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#### MARKET LEADERSHIP SOLID CASH GENERATION





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## BALANCED SODA ASH MARKET BUT EXPECTED TO TIGHTEN

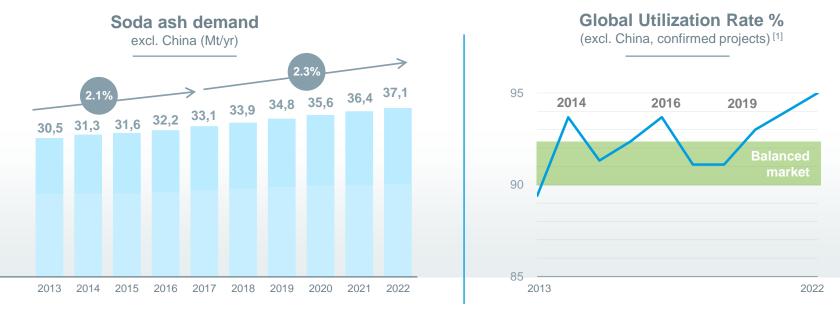


#### Solvay relentlessly improving its competitiveness

Competitive industrial footprint - World-class network



## MARKET EXPECTED TO TIGHTEN SIGNIFICANT PRICE INCREASE NECESSARY





Global demand remains robust

Market expected to tighten further with Turkish volumes largely absorbed

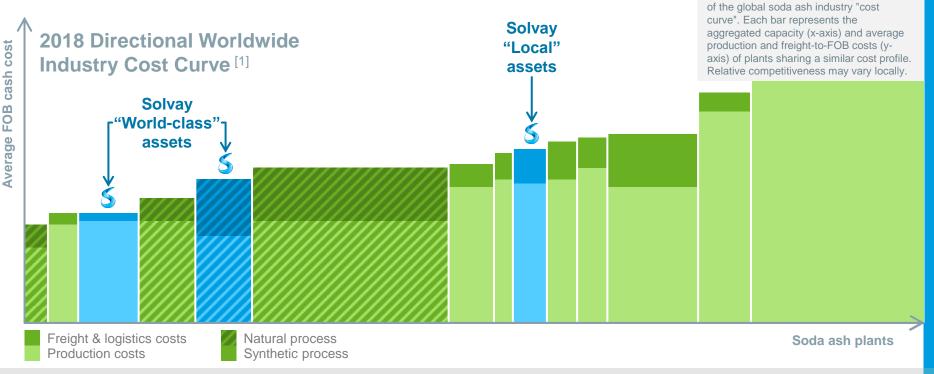
Significant price increases needed for supply additions to balance supply/demand in coming years



Investor update 2018 September 24, 2018  Production divided by Nameplate capacity Source: IHS Markit\_Chemical Supply & Demand (Spring Edition 2018); Solvay internal estimates



## COST COMPETITIVENESS KEY SUCCESS FACTOR SOLVAY REMAINS WELL POSITIONED



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Note: Directional schematic representation

## LEADERSHIP POSITIONS IN PERFORMANCE CHEMICALS SUPPORT GROWTH



 Robust demand in main markets of flat glass, container glass, household goods & packaging

• Tightening of soda ash supply

Strong demand for Peroxides



- Maintaining a competitive industrial footprint & world class assets
- Price increases

 $\pm$ 

• Focus on cash

LEADS TO EBITDA GROWTH POTENTIAL

+2 to 6% Performance Chemicals





# POSITIONED FOR FUTURE VALUE CREATION

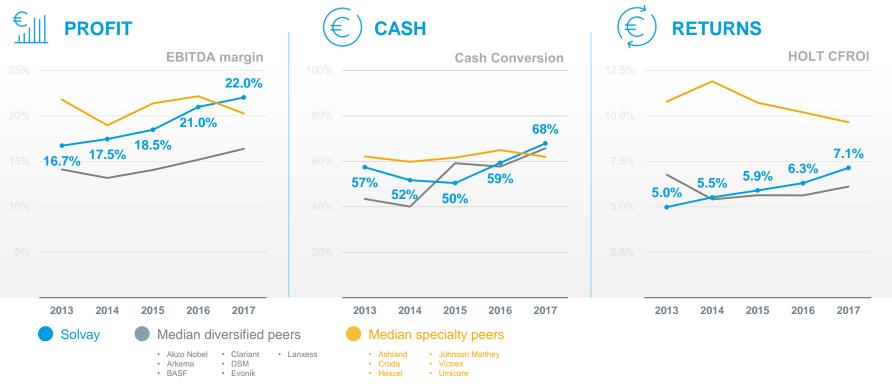


Chief Financial Officer, Member of the Executive Committee





## FINANCIAL VALUE DELIVERY EVOLVING FROM DIVERSIFIED TOWARDS SPECIALTY

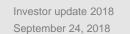




## STRONG OPERATIONAL CASH FLOW

#### Cumulative over 2016-2017 (in € billion)

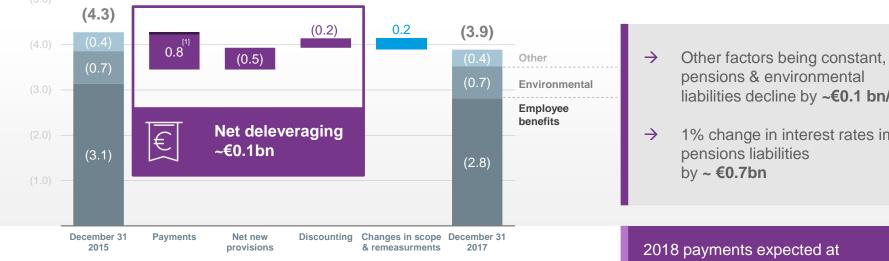






## LEGACY OBLIGATIONS FUNDED MODEST DELEVERAGING CONTINUES

Provisions over 2016-2017 (in € billion)



- liabilities decline by ~€0.1 bn/year
- 1% change in interest rates impact

## ~€0.4 billion

- Employees benefits €0.2 billion
- Environmental: €0.1 billion •

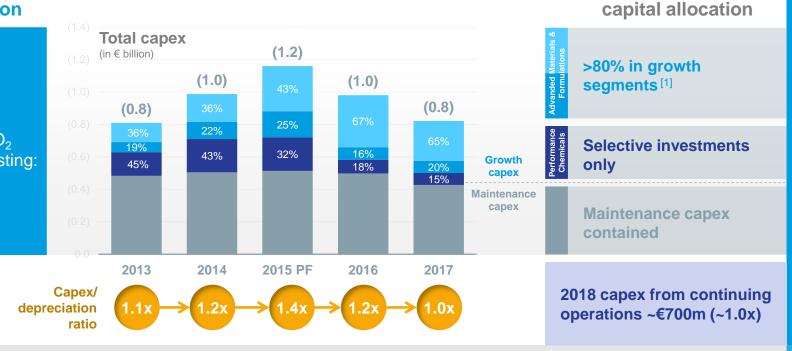


## CAPEX DISCIPLINE TO CONTINUE

Sustainable value creation

IRR > 15%

€25 / tonne CO<sub>2</sub>
eq. internal costing:
Less Risk

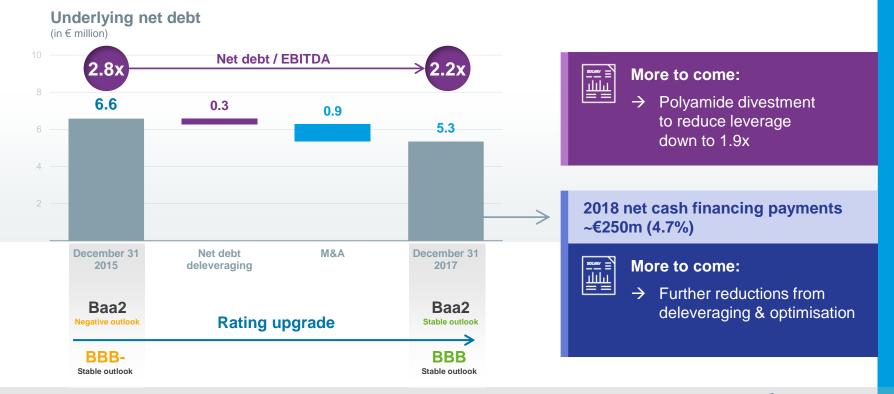


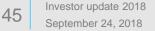


Coherent

44 Investor update 2018 September 24, 2018 [1] % in chart represents % of segment growth capex vs total growth capex

## IMPROVED CREDIT **STRENGTH** FINANCING CHARGES WILL DECLINE FURTHER







## POTENTIAL FOR SUPERIOR GROWTH

c	2019-2021 potential for organic EBITDA growth <sup>[1]</sup>	Driven by key market positions and innovation					
Advanced Materials	+6-10%	<ul> <li>Next gen batteries for Automotive</li> <li>Thermoplastics for Aerospace</li> <li>New applications in healthcare and electronics</li> </ul>					
Advanced Formulations	+6-10%	<ul> <li>Technologies for improved metal selectivity</li> <li>Next generation of O&amp;G products to improve productivity</li> <li>Innovations to penetrate new markets</li> </ul>					
Performance Chemicals	+2-6%	<ul> <li>Maintaining world-class assets</li> <li>Price increases</li> <li>Focus on cash</li> </ul>					
SUPPORTED BY	Existing capacity and selective investments	Customer intimacy Simplification of organization Operational excellence digital capabilities					





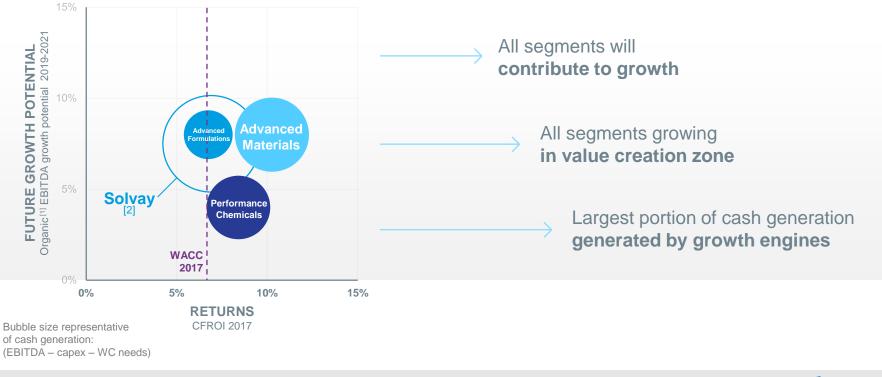
Accelerated digital deployment

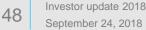
- ~100 proof of concepts
- 3 priority projects scaling up

Upgraded excellence centre 100 professionals to support implementation



### MORE GROWTH POTENTIAL FOR MORE VALUE

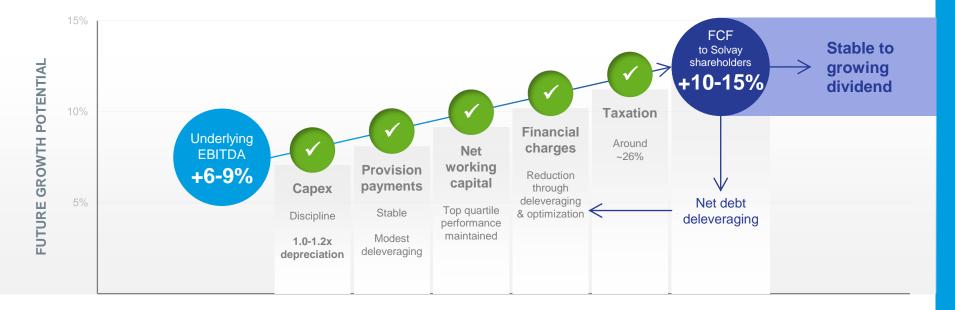




Organic growth excludes forex conversion and scope effects
 Includes diluting effect of Corporate & Business Services



## SUPERIOR FREE CASH FLOW TO SHAREHOLDERS GROWTH





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## **ABSOLUTE** REDUCTION IN GHG EMISSIONS HIGHER GROWTH & REDUCED STRATEGIC RISK



**Raising our ambition** in absolute value

 $\rightarrow$  -1MT by 2025

-20% emissions reduction  $\rightarrow$ vs no action scenario

#### ✓ Coherent and integrated into our operations

- Operational CAPEX: CO<sub>2</sub> €25/t
- Strategic SPM: CO<sub>2</sub> €75/t
- Governance 20% long term incentives  $\rightarrow$

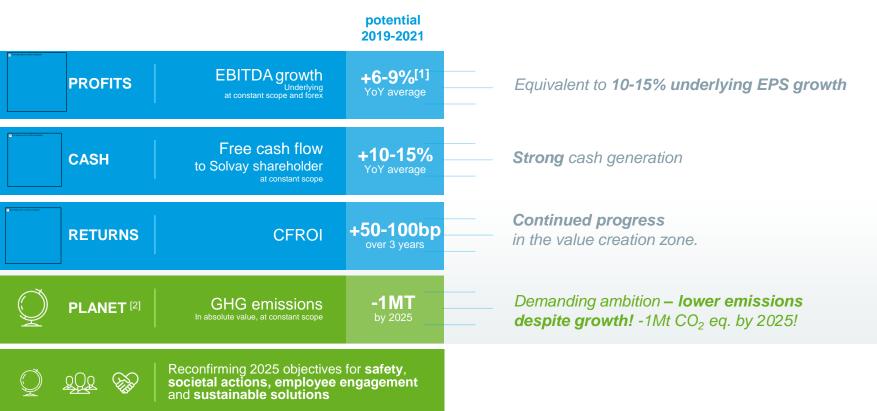
#### ✓ Proactive engagement with key customers



Scope 1 & 2 emissions covered by the Kyoto Protocol

GHG emissions prior to 2017 were restated for 2017 scope, already excluding Polyamide.

## POTENTIAL FOR FUTURE VALUE CREATION



[1] Guidance does not reflect changes in IFRS requirements. As referred to in the annex, whilst absolutel levels of EBITDA will be impacted by IFRS16, relative growth rates in profitability will not be significantly impacted.



[2] GHG emissions prior to 2017 were restated for 2017 scope, already excluding Polyamide.

# CLOSING REMARKS

#### Jean-Pierre Clamadieu

Chief Executive Officer, Chairman of the Executive Committee



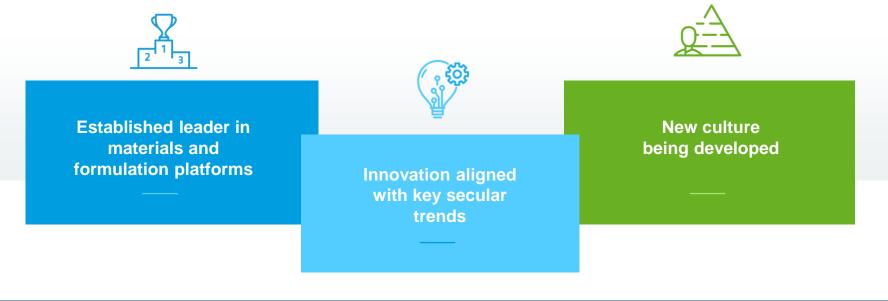


# CONTINUE THE TRANSFORMATION OF THE CULTURE TO SUPPORT GROWTH





## SOLVAY PLATFORM FOR STRONG ORGANIC GROWTH



# Strong volume growth & cash generation

Leading to compelling shareholder returns





# Ready for a GREAT RUN lead by a new CEO ...

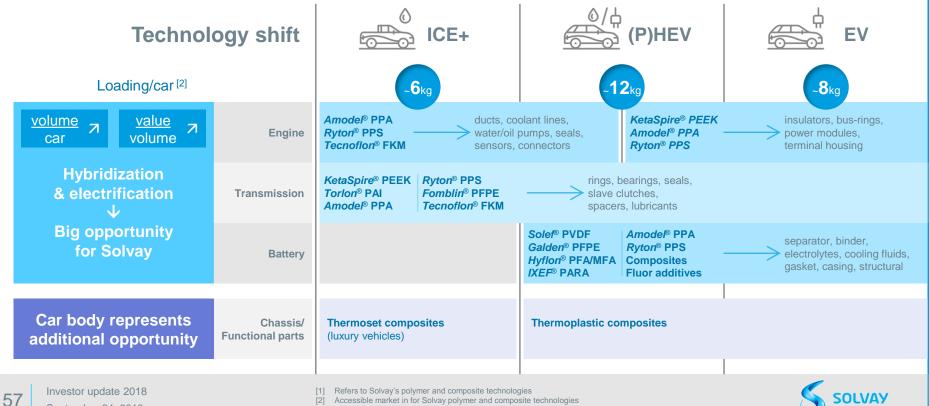




## **ANNEXES**



## SOLVAY POSITIONED IN ALL AUTO PLATFORMS OUTPACING THE INDUSTRY GROWTH BY 3X<sup>[1]</sup>



Accessible market in for Solvay polymer and composite technologies

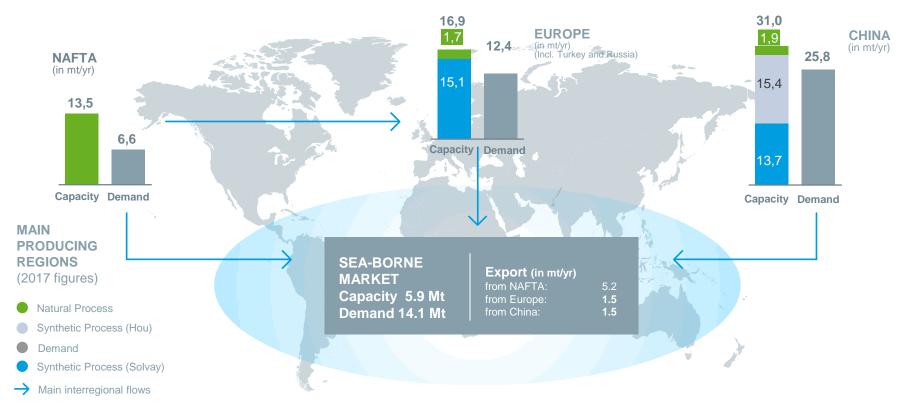
sking more from chemistry®

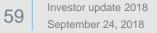
## BROADEST PORTFOLIO OF ADVANCED MATERIALS DIFFERENTIATING SOLVAY FROM COMPETITION

	Aromatics			Fluoropolymers				High Perf Composites							
	HPPA	PPS	PEEK	PSU	PTFE	PVDF	PFA	FKM	PFPE	Carbon Fiber	Thermoset Prepreg	Resin Infusion	Adhesives & Surfacing films	Thermo- plastic prepreg	Out-of- Autoclave prepreg
SOLVAY asking more from chemistry*	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$
	$\checkmark$					$\checkmark$									
C = BASF We create chemistry	$\checkmark$			$\checkmark$											
🍠 Celanese		$\checkmark$												$\checkmark$	
DAIKIN					$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$							
	$\checkmark$														
dyneon					$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$	$\checkmark$						
	$\checkmark$				$\checkmark$		$\checkmark$	$\checkmark$	$\checkmark$						
EMS	$\checkmark$														
	$\checkmark$		$\checkmark$												
HEXCEL										$\checkmark$	$\checkmark$				$\checkmark$
KUREHA 7		$\checkmark$				$\checkmark$									
'TORAY'										$\checkmark$	$\checkmark$			$\checkmark$	$\checkmark$
victrex'	$\checkmark$		$\checkmark$												



## **GLOBAL SODA ASH MARKET**

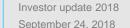






## ON TRACK TO FULLY DELIVER AGAINST PREVIOUS COMMITMENTS





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[1] At constant scope and forex, as presented in 2016 and 2017 full year results.

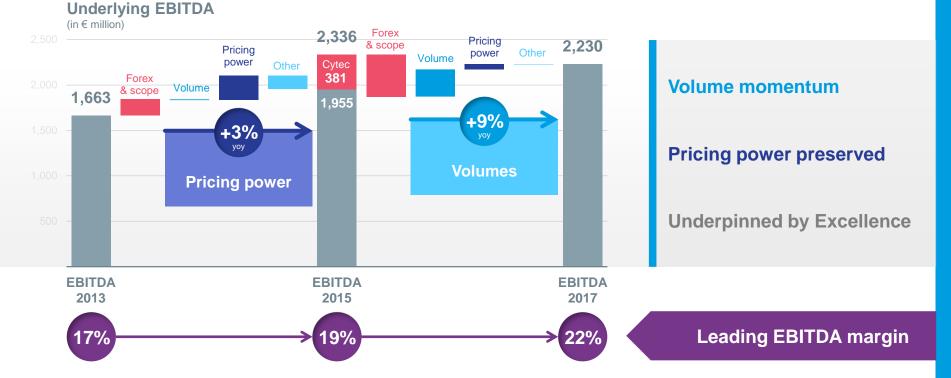
2] Based on historic results 2016-2017 and the reconfirmed guidance published on 21 July 2018

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[3] Overachievement despite divestments of Acetow and Vinythai.

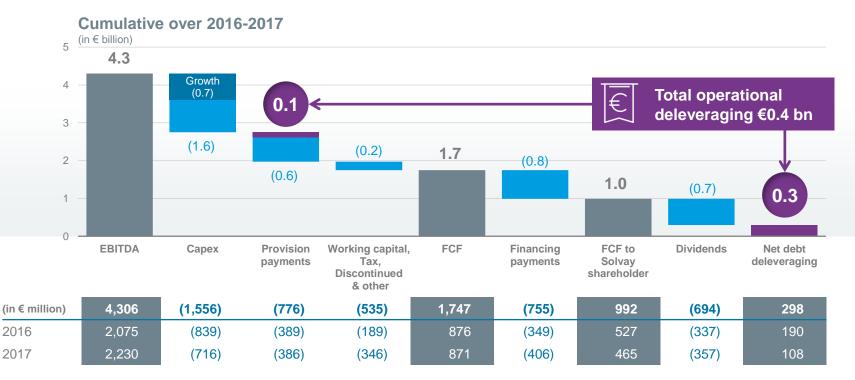
## TRANSFORMATION AND EXCELLENCE DELIVER QUALITY EARNINGS





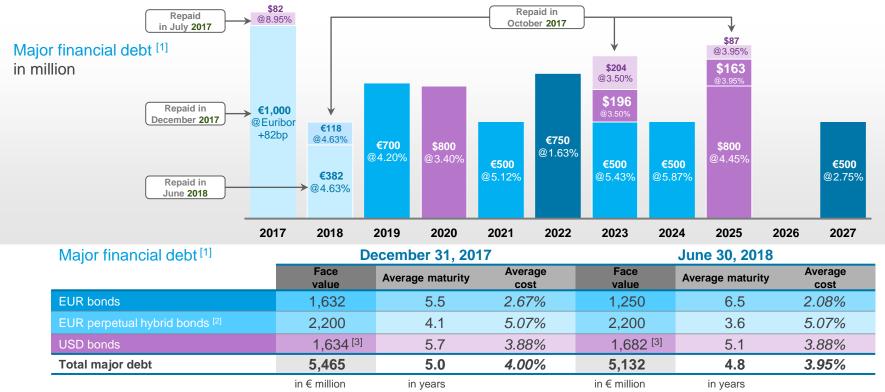


## STRONG CASH FLOW LEADING TO CONTINUED OPERATIONAL DELEVERAGING





## DEBT PROFILE BALANCED MATURITIES ALLOWING FLEXIBILITY



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[1] Major debt only, excluding cost of currency swaps

2] At first call date

JUSD 1.960 million

## IFRS 16 TO AFFECT EBITDA, P&L & DEBT

- IFRS 16 implementation
  - → Capitalizes leases, previously considered as operating leases
  - → Taking effect for 2019 accounts
  - → Solvay is opting for a modified retrospective implementation of 2018, instead of a full restatement
- Previous year figures to be presented pro forma
  - → EBITDA, depreciation, financial charges, capex and net financial debt increase
  - → Profit for the period decreases slightly
  - → Free cash flow to Solvay shareholders remains unchanged
- Earnings and free cash-flow growth potential (as described in presentation) not impacted

#### Pro forma 2017 figures

Underlying key figures (in € million)	2017	IFRS 16 impact	<b>2017</b> pro forma
EBITDA	2,230	+90	2,320
Advanced Materials	1,202	+19	1,221
Advanced Formulations	524	+8	532
Performance Chemicals	749	+31	780
Corporate & Business Services	(244)	+32	(212)
EBITDA margin	22%	+1pp	23%
Depreciation & amortization	(704)	-83	(787)
Net financial charges	(394)	-14	(408)
Result for the year	992	-6	987
Capex (of continuing operations)	(716)	-75	(781)
Free cash flow	871	+14	885
Free cash flow to Solvay shareholders	465	-	465
Net financial debt	(5,346)	-410	(5,756)





## **GLOSSARY**



### **GLOSSARY**

#### **Accident rate**

Expressed in Medical Treatment Accident Rate (MTAR) or number of accidents requiring medical treatment / million working hours

#### Business cash generation

EBITDA-CAPEX-Working Capital changes

#### **Capital expenditure (CAPEX)**

Cash paid for the acquisition of tangible and intangible assets

#### **CFROI (Solvay definition)**

Cash flow return on investment, calculated as the ratio between recurring cash flow and invested capital, where

- Recurring cash flow = underlying EBITDA + (dividends from associates and joint ventures – earnings from associates and joint ventures) – recurring capex – tax;
- Invested capital = replacement value of fixed assets + working capital + carrying amount of associates and joint ventures;
- Recurring capex is normalized at 2% of the replacement value of fixed assets net of goodwill values;
- Tax is normalized at % of (underlying EBIT earnings from associates and joint ventures), and set at 30% until 2018.

#### **HOLT CFROI**

HOLT CFROI is a proprietary cash flow return on investment metric of Credit Suisse calculated as an IRR taking into account i) the cash flow generated by a company In the past and prospectively and ii) the amount and estimated lifespan of its operating assets. The metric does not include goodwill and is expressed in real terms (i.e. real returns and not nominal ones).

#### **Cash conversion**

(Underlying EBITDA – Capex) / underlying EBITDA

**EBITDA margin** Underlying EBITDA / net sales

#### **Employee engagement index**

Index (0%-100%) probing the engagement of Solvay employees based on a questionnaire; Index measured biennially

#### Free cash flow (FCF)

Cash flow from operating activities (including dividends from associates and joint ventures and excluding cash flow related to acquisitions of subsidiaries) and Cash flow from investing activities (excluding acquisitions and disposals of subsidiaries and other investments and excluding loans to associates and non-consolidated investments)



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### GLOSSARY

#### Greenhouse gas (GHG) intensity

Expressed as CO2 equivalent emissions / EBITDA (in kg/€); The scope of CO2 equivalent emissions is further defined in the annual report

#### **Net sales**

Sales of goods and value added services corresponding to Solvay's know-how and core business. Net sales exclude other revenues primarily comprising commodity and utility trading transactions and other revenue deemed as incidental by the Group

#### **Societal actions**

Expressed as % of Solvay employees involved in societal actions

#### Sustainable Portfolio Management (SPM)

Expressed as the % of Group net sales assessed as sustainable solutions with the SPM methodology. This methodology assesses Solvay's product/application combinations on 2 axes:

- Environmental footprint of production and supply chain
- · Alignment of market with sustainability

#### **Underlying EBITDA**

Earnings before interest and taxes, depreciation and amortization (EBITDA), with IFRS figures adjusted to provide a more comparable indication of Solvay's fundamental performance over the reference periods. The adjustments to the IFRS definition are for:

- · Results from portfolio management and reassessments,
- Results from legacy remediation and major litigations,
- M&A related impacts, mainly including non-cash Purchase Price Acquisition impacts (e.g. inventory step-up) and retention bonuses relative to Chemlogics and other acquisitions,
- Adjustments of equity earnings for impairment gains or losses and unrealized foreign exchange gains or losses on debt

#### **Underlying net debt**

Non-current financial debt + current financial debt – cash & cash equivalents – other financial instruments receivables, reclassifying as debt 100% of the hybrid perpetual bonds, considered as equity under IFRS.











#### **Nicolas Boël**

is responsible for management and oversight of the board and its review of the Group's performance in meeting objectives in key areas of business performance and corporate social responsibility and in defining the Group's strategy. He has been a member of the Solvay Board of Directors since 1998. A member of the Solvay family, Nicolas served in a variety of sales and executive positions both in Europe and North America for Corus, one of the world's largest steel producers and which was acquired by Indian conglomerate, Tata Steel, in 2007. Nicolas began his career at his family's Belgian steel company Usines Gustave Boël in 1989. He is a Board member of SOFINA and member of their Nomination and Remuneration Committees.

Chairman of the Board of Directors

Nicolas Boël was appointed Chairman of the Board of Directors for the Solvay Group in May of 2012. Nicolas, a Belgian national, holds a bachelors degree in economics from the University of Louvain-la-Neuve and earned a masters in business administration from the College of William & Mary in Williamsburg.







#### Jean-Pierre Clamadieu

began his career in France in the Ministry of Industry and as a technical advisor to the Minister of Labor. He joined Rhône-Poulenc in 1993 where he held several positions, including President of Rhodia Chemicals Latin America, President of Rhodia Eco Services, Senior Vice-President Corporate Purchasing, and President of the Pharmaceuticals & Agrochemicals Division. He was appointed CEO of the Rhodia Group in 2003 and Chairman & CEO in 2008.

Chief Executive Officer, Chairman of the Executive Committee

After the merger with Solvay, he became member of the Executive Committee in September 2011 and Chairman of the Executive Committee and CEO in 2012. Jean-Pierre Clamadieu, a French national, holds a degree in engineering awarded by the Ecole Nationale Supérieure des Mines de Paris. He also holds seats on the Boards of Directors of Faurecia and Axa.







#### **Vincent De Cuyper**

began his career at Solvay in 1987 and has held various positions in production and project management when sent on international assignments in France, Thailand and Argentina.

In 1999, he was appointed Manager of the Vinythai plant in Map Ta Put in Thailand and, subsequently, Managing Director of Vinythai PCL. He also became Group General Manager of the Chemicals Sector of Solvay.

#### Member of the Executive Committee

Vincent De Cuyper joined the Executive Committee of Solvay in 2006.

Vincent De Cuyper, a Belgian national, holds a degree in Civil Chemical Engineering awarded by the Catholic University of Louvainla-Neuve







#### Augusto Di Donfrancesco

began his Solvay career in 1987 as a process engineer in Rosignano, Italy. He has held multiple roles within the Solvay Group in Production, Technology, Human Resources and Commercial Operations in the Chemicals and Plastics divisions. In 2005 he moved to Buenos Aires, Argentina, to become the General Manager of Solvay's formerly owned Solvay Indupa. In 2009 he came to Brussels as General Manager of Specialty Polymers, and then returned to Italy in 2011 to become President of the newly created Global Business Unit Solvay Specialty Polymers.

In 2018, he joined the Executive Committee of Solvay. Augusto Di Donfrancesco, an Italian national, graduated from Pisa University in 1985 with a Bachelor's degree in Chemical Engineering.



Member of the Executive Committee





#### Hua Du

began his career with Solvay as President of Solvay Rare Earth Systems in 2010. In 2015, he was appointed as the President of the new Global Business Unit Special Chem, which combines the former GBUs Rare Earths Systems and Special Chemicals as well as the fluorine part of the GBU Aroma Performance. He has been appointed Member of the Executive Committee in 2018.

Member of the Executive Committee

Before joining Solvay, he worked for more than 13 years at Rohm & Haas and Dow Chemical in the electronic materials business.

Hua Du, a national of Hong Kong SAR, China, graduated in 1990 from Beijing University with a major in BS Chemistry. In 1995, he obtained a PhD in Organic Chemistry from the University of Illinois, Urbana-Champaign.







#### Karim Hajjar

began his career in 1984 at Grant Thornton Chartered Accountants, where after few years he became a partner. He moved on to Royal Dutch/Shell in 1995 and undertook a number of roles, the last of which was as Deputy Global CFO of Shell Chemicals. Karim Hajjar held the CFO position of Tarmac Group from 2005 to 2009 and its Group Managing Director until 2010.

Chief Financial Officer, Member of the Executive Committee

Before joining Solvay as member of the Executive and CFO in September 2013, Karim Hajjar was Director Finance and Planning at Imperial Tobacco Group Plc.

Karim Hajjar is a British national and is an Economics graduate from the City University in London







#### **Pascal Juéry**

After a first experience in south-Korea, he started his career at the internal audit at Rhône-Poulenc in 1988. After that, he took several responsibilities for Rhodia Novecare. In 2006 he was appointed Rhodia Group Sales Director. In 2008, he returned to the USA to take to head of Rhodia Novecare as Managing Director. Since 2010 Pascal Juéry has been member of Rhodia Executive Committee.

Member of the Executive Committee

Since 2014 Pascal Juéry has joined the Executive Committee of Solvay. He is also President of the UIC (Union des Industries Chimiques) in France.

Pascal Juéry, a French national, holds a bachelor from the Paris European Business School (ESCP-Europe).







#### Cécile Tandeau de Marsac

started her career in Nestlé Group working in the Marketing and Human Resources Functions during 20 years. In 2007, she joined Rhodia and was appointed Human Resources Director for Polyamide and Energy Services GBUs and for the Human Resources Function. She led the growth ambition project Rhodia Move for Growth in 2010. Then she joined, at the very beginning of the integration process with Solvay, the Integration Management Office as IMO partner.

#### Member of the Executive Committee

In September 2012, she was appointed Group General Manager Human Resources and joined Solvay Executive Committee in 2018. Cécile Tandeau de Marsac is graduate from a Management and Business School –Ecole Supérieure de Commerce de Rouen (E.S.C Rouen).



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