



umicore
materials for a better life

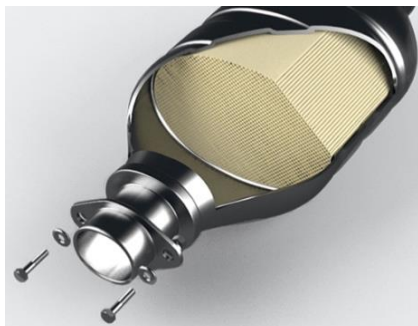
Umicore Investor Presentation

November 2020



Introduction to Umicore

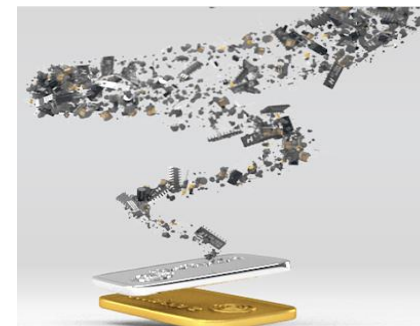
We are a global materials technology and recycling group



One of three global leaders in emission control catalysts for light-duty and heavy-duty vehicles and for all fuel types



A leading supplier of key materials for rechargeable batteries used in electrified transportation and portable electronics

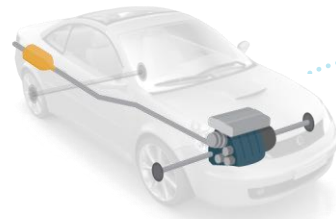


The world's leading recycler of complex waste streams containing precious and other valuable metals

With a unique position in clean mobility materials and recycling

Internal Combustion Engine

Umicore provides:
Emission control catalysts



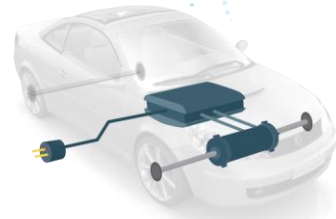
Plug-In Hybrid Electric Vehicle

Umicore provides:
Battery cathode materials and
emission control catalysts



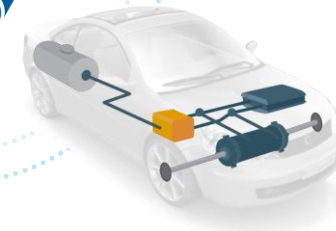
Full Electric Vehicle

Umicore provides:
Battery cathode materials



Fuel cells

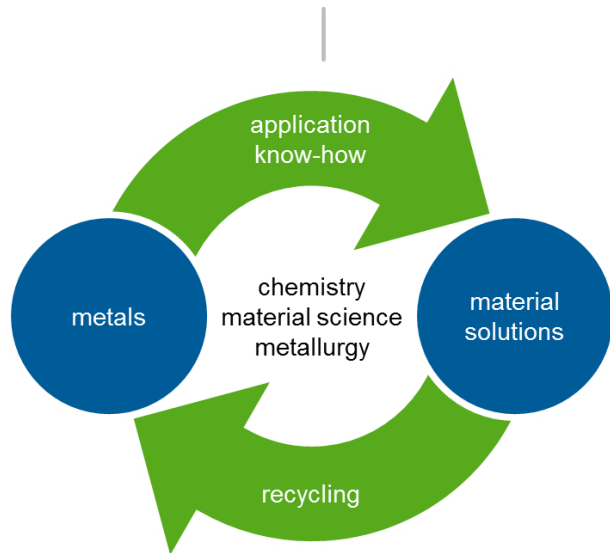
Umicore provides:
Electro-catalyst and
battery cathode materials



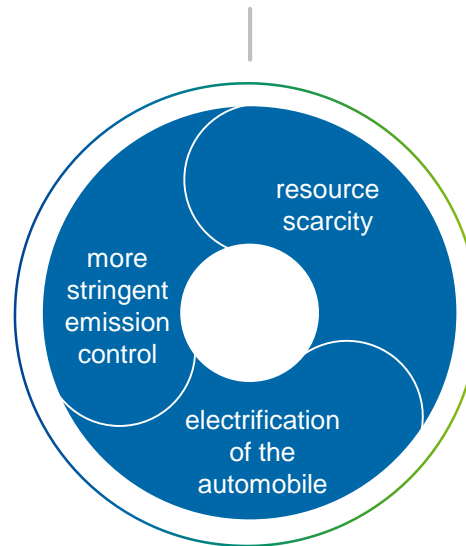
Present across all drive trains and offering sustainable closed-loop services

Built on sound foundations

Unique business model



Supportive megatrends & legislation



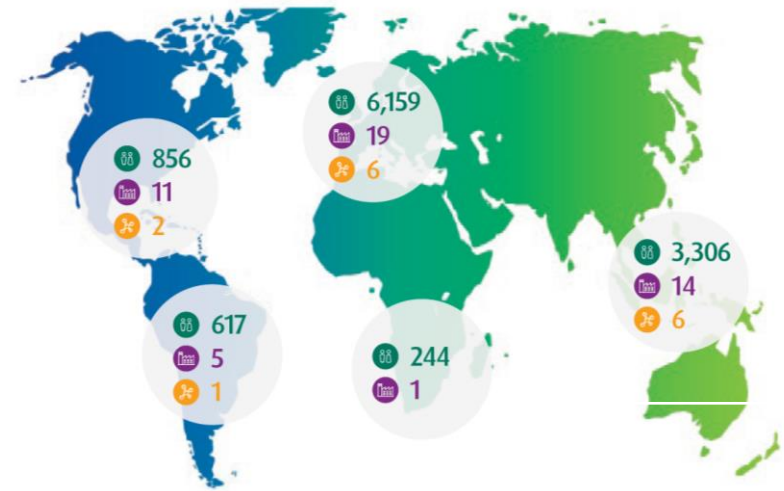
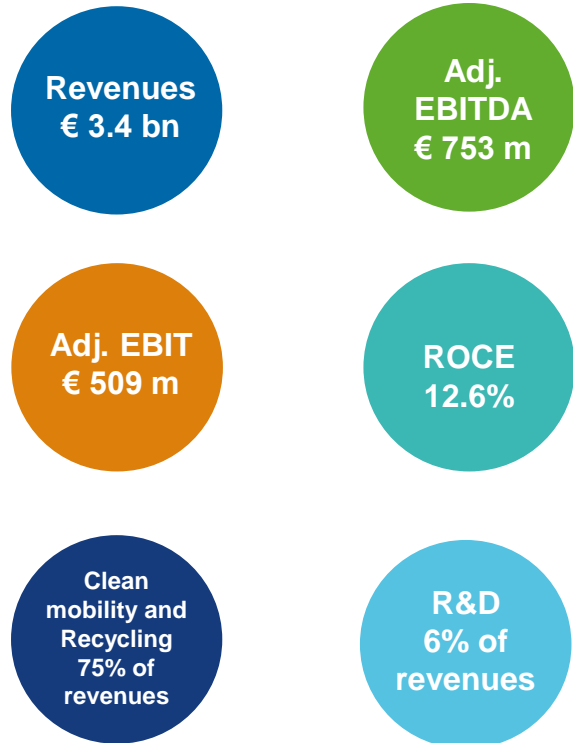
Industry leader in sustainability



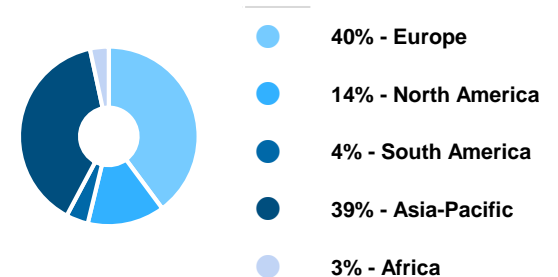
We help improve air quality, make electrified transport possible and tackle resource scarcity

With a robust financial performance and a global presence

Key figures (FY 2019)



Revenues* by geography



* 2019 data

We deliver on our Horizon 2020 strategy



Clear leadership
in clean mobility
materials and
recycling



Doubled the size
of the business in
terms of earnings



Rebalanced the
portfolio
& earnings
contributions



Turned
sustainability into
a greater
competitive edge

With a focused & balanced Group structure



CATALYSIS

Automotive Catalysts
Precious Metals Chemistry



ENERGY & SURFACE TECHNOLOGIES

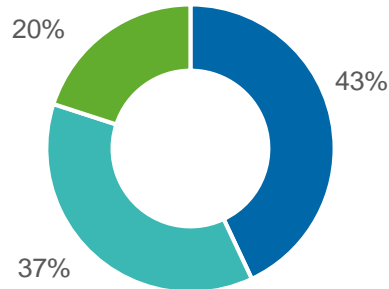
Rechargeable Battery Materials
Cobalt & Specialty Materials
Electroplating
Electro-Optic Materials



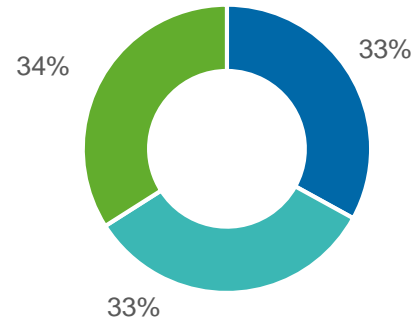
RECYCLING

Precious Metals Refining
Jewelry & Industrial Metals
Precious Metals Management

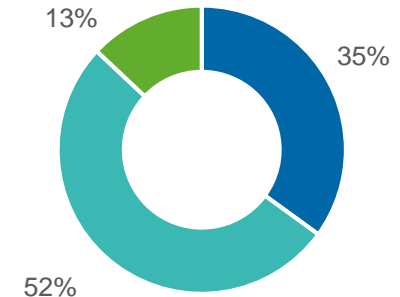
Revenues*
(excluding metal)



Adj. EBIT*



Capital employed*
(average)



* FY 2019 data; corporate not included

Strong growth drivers:

Tightening emission norms for LDV and HDD, in particular in China, Europe and India

Significant value uplift especially in gasoline catalysts

Increasing share of gasoline platforms in the global mix

Increasing uptake of fuel cell drivetrains

Umicore **best positioned** to capture growth in growing gasoline segment; largest share of cGPF platforms won in China and Europe

Umicore **well positioned** to capture growth in HDD segments

Umicore **expanding capacity in fuel cells**



Unique position in Rechargeable Battery Materials for xEV



Electrification confirmed as main avenue to drastically reduce vehicle emissions in mid- and long-term

Strongly supported by **legislation** and evidenced by massive roll-out of car OEM's e-mobility strategies

Increasing electrification drives **strong market demand** in mid and long-term

Technology roadmap offers ample room for **innovation and differentiation**

Product

Process

Closed loop offering

Umicore uniquely positioned to address long-term requirements of this industry, while managing short-term fluctuations with agility

Full spectrum of highest quality cathode materials

Process technology and ability to scale up fast

Innovation pipeline spanning next 20 years

Integrated supply chain and battery recycling



RECYCLING

Unique position in Recycling



Metallurgical leadership and proprietary technologies for treating complex residues and by-products



Closing the loop in product businesses by offering recycling services



Over 200 different input streams



Recovery of more than **20 different metals**

Increasing **resource scarcity** and need for **closing the loop**

Growing complexity of materials to recycle

Increased availability of complex materials, in particular end-of-life materials

Eco-efficient recycling processes are becoming the norm

Umicore uniquely positioned to capture growth as the **world's largest and most complex** precious metal recycler with **world class environmental and quality standards**

Solid framework for value creation



Strong growth

- Multiple growth drivers
- Secular trends
- Supporting legislation
- Privilege organic growth
- Complementary M&A, with focus on value creation



Focus on returns

- Earnings growth objective
- Group and segment returns > cost of capital
- 15%+ ROCE target
- Value creation precedes ROCE maximization



Focus on cashflows and solid capital structure

- Prioritize cash for strategic organic growth projects
- Currently in accelerated investment phase
- Strong self-funding capacity (normalized excl. current acceleration)
- Cash return to shareholders

Maintaining a healthy capital structure

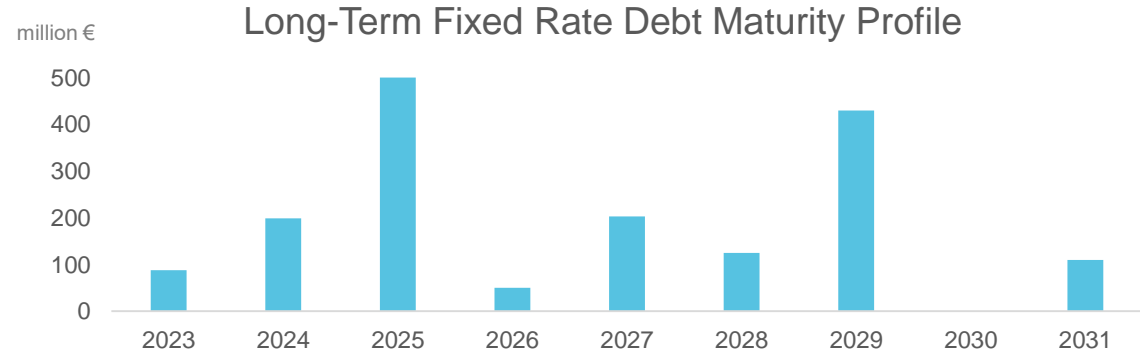
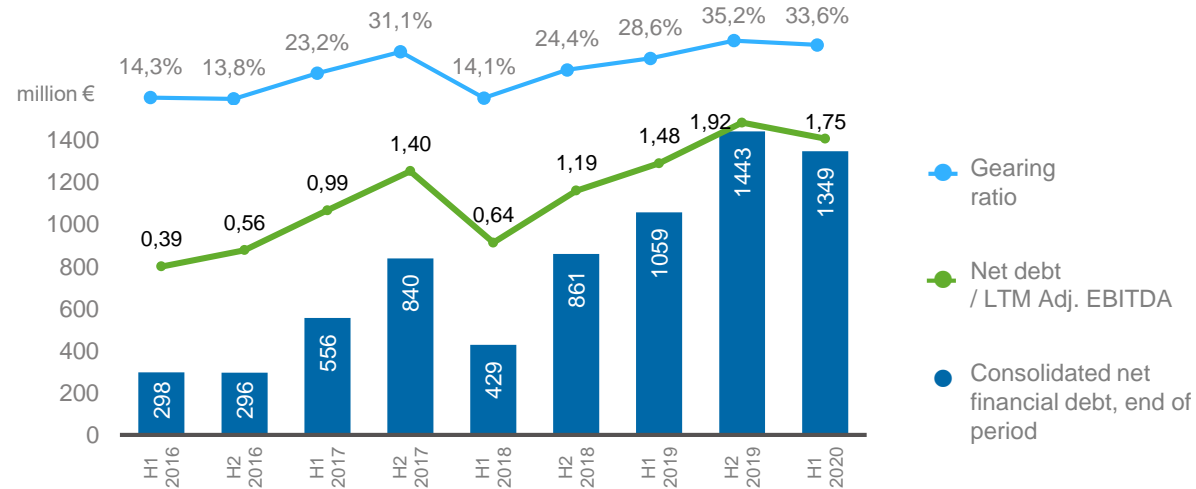
H1 20 net financial debt of € 1,349 m, slightly below the level of end 2019

Corresponds to robust credit ratios :

- Net debt / LTM Adjusted EBITDA ratio of 1.75x
- Net gearing ratio of 34 %

Further extended and diversified strong liquidity base in June 2020:

- € 125 m 8-year EIB loan
- € 500 m 5-year convertible bond
- € 1.2 bn cash on balance sheet at 30 June in addition to appr. € 1 bn of committed undrawn credit lines





Business Group Overview

Catalysis



Catalysis

Automotive Catalysts

A world leader in emission control catalysts for light-duty and heavy-duty vehicles and for all fuel types. Complemented by smaller stationary catalyst applications (marine, power generation, ...).



Precious Metals Chemistry

Develops and produces metal-based catalysts used in chemistry, life sciences and pharmaceutical applications. Also has a complete portfolio of catalyst technologies for fuel cells.





Automotive Catalysts: business model



We develop technologies which allow our customers to meet automotive emission legislation at the lowest Total Cost of Ownership

Complete catalyst systems to reduce exhaust gas emissions



Customer focus



People engagement

Operational excellence



Global manufacturing & technical footprint

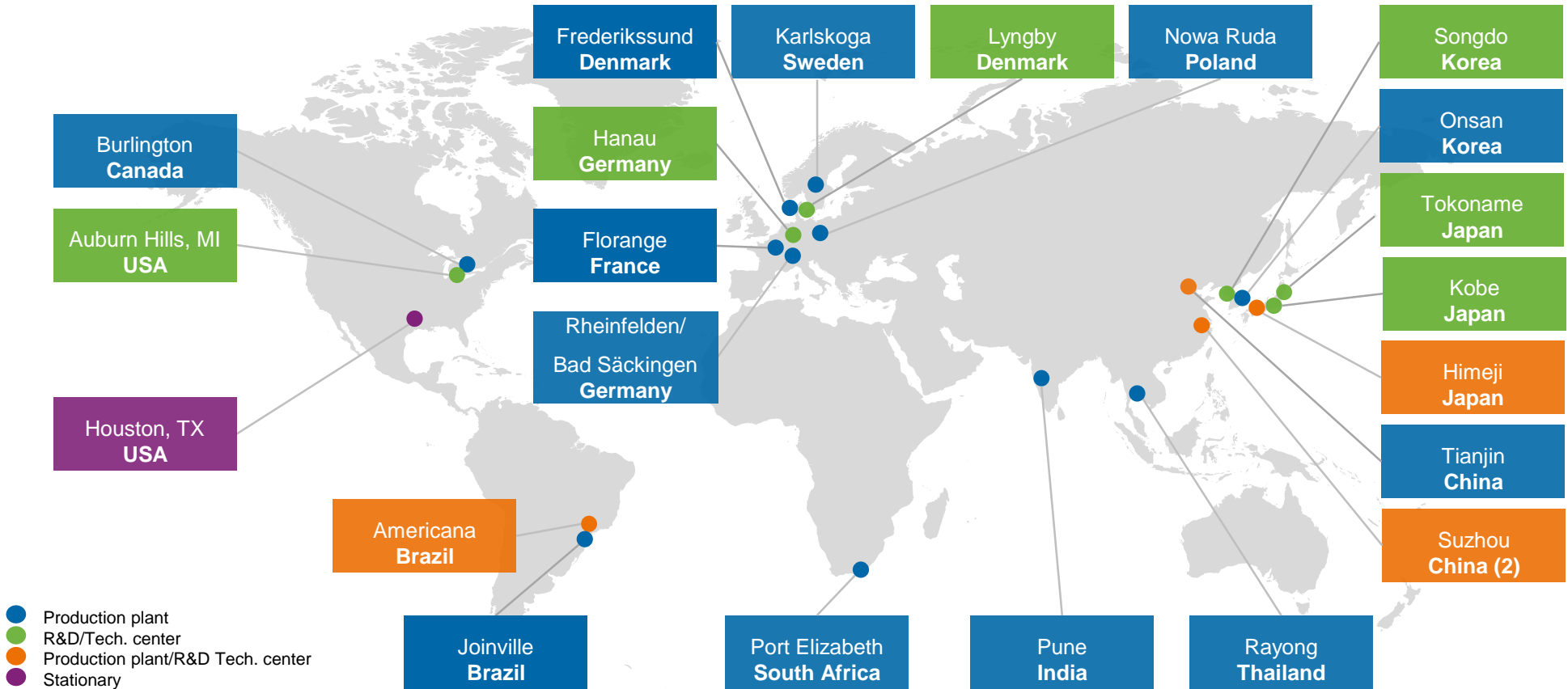




Automotive Catalysts Production Footprint



17 plants in 14 countries, 9 R&D / tech. centers in 7 countries





Catalysis – major milestones in 2019

Sustained investments
in **product and
process innovation**

Capacity expansions
to support growth of
Automotive Catalysts in
China, Poland and India

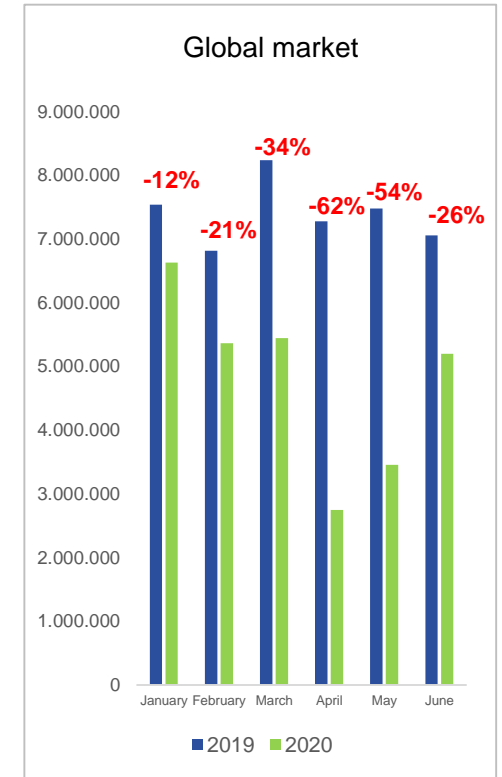
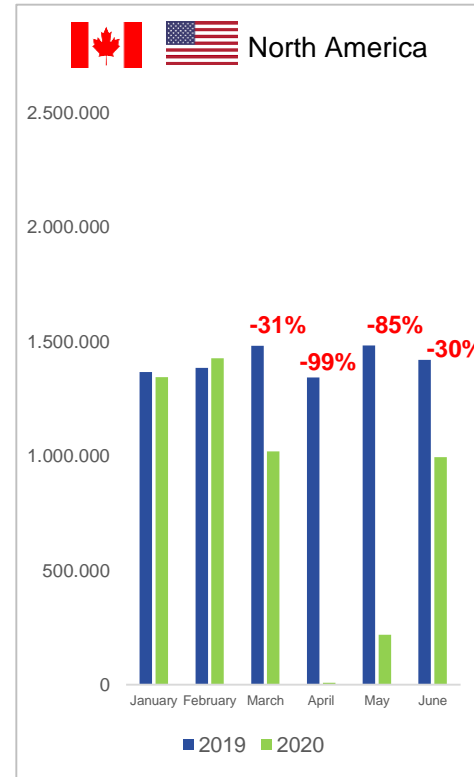
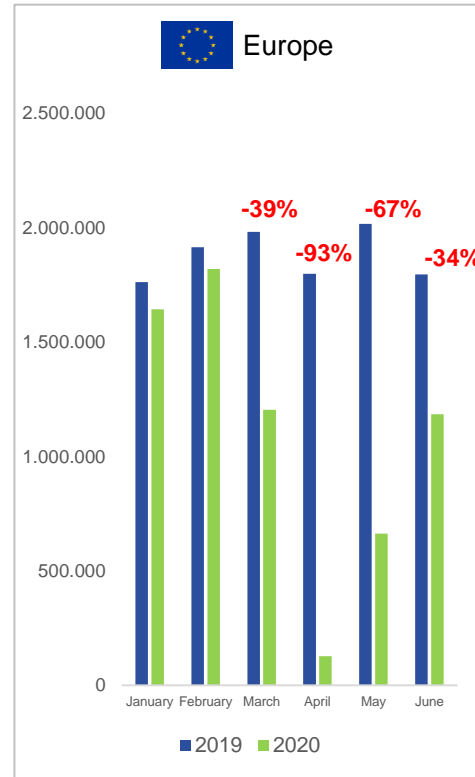
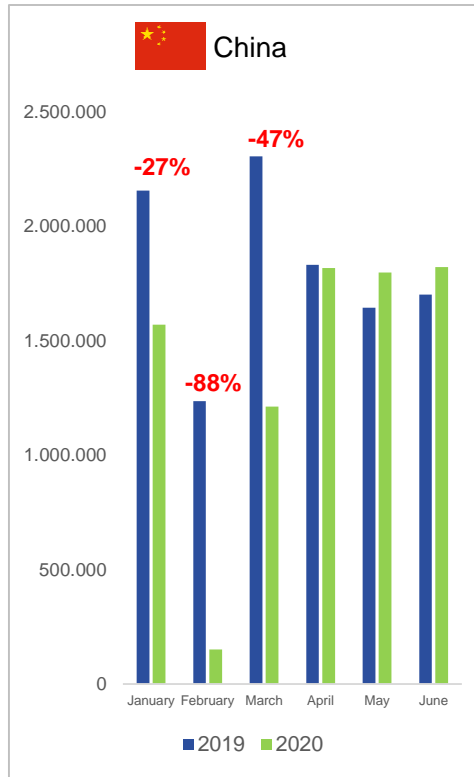
Opening of new plant
for **fuel cell catalysts**
in Korea



COVID-19 outbreak: impact on auto-industry



H1 2020 YoY evolution of passenger car production across all powertrains (source: IHS & Umicore - 20/07/2020)



H1 2020 global car production down 35% YoY



Catalysis H1 2020 performance



Revenues -20% and Adj. EBIT -75%; severe impact from COVID-19 and related car OEM production shutdowns

Automotive Catalysts

Widespread car OEM production shutdowns and car sales plunging

Severe impact on revenues and volumes

Further outperformance of LDV market in China

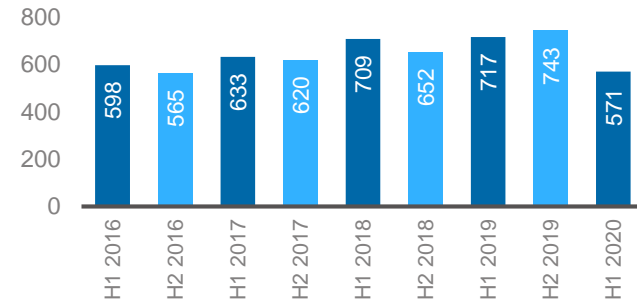
HDD less down than market given higher demand for China V technologies

Precious Metals Chemistry

Revenues down due to COVID-19 impact on automotive industry

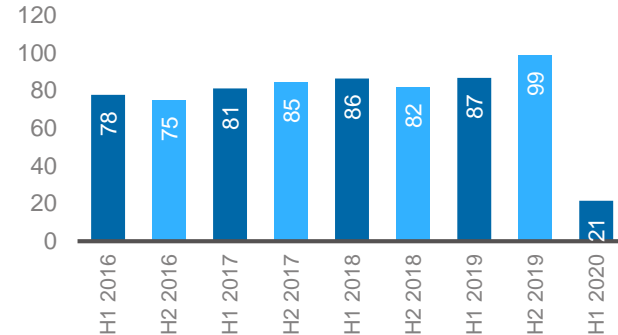
Continued strong demand for pharmaceutical ingredients and fuel cell catalysts

REVENUES



● H1
● H2

Adjusted EBIT



million €



Impressions



Catalyst elements



Test bench



Bad-Säckingen plant AC, Germany



Canned catalyst



Installation stationary DNOx catalyst



Nowa Ruda plant AC, Poland



Business Group Overview

Energy & Surface Technologies



Energy & Surface Technologies



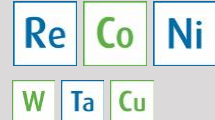
Rechargeable Battery Materials

A leading cathode material supplier for lithium-ion rechargeable batteries used in electrified vehicles and portable electronics.



Cobalt & Specialty Materials

Refines and recycles cobalt and nickel; produces cobalt and nickel specialty chemicals for a wide range of applications (incl. tires, catalysts, surface treatment). Also includes battery recycling.



Electroplating

Supplies precious metal electrolytes & processes for technical, functional and decorative applications.



Electro-Optic Materials

Supplier of products for thermal imaging as well as wafers for space solar cells and high brightness LEDs, chemicals for fiber optics and thin film applications.



Rechargeable Battery Materials: business model



Product innovation
based on strong
application know-how



Process innovation
fuels productivity
improvements while
maintaining highest quality
standards (stringent
automotive standards)



Established industrial
footprint **close to the
customer**



**Strong industrialization
capabilities** building on
historical Umicore key
competences



Integrated process flows
with guaranteed access
to critical raw materials
allows **an agile market
approach**



It takes a lot to play in the automotive league

Car OEMs need :

High quality cathode materials

- ... **custom made** for **different types** of xEVs
 - ... in **massive volumes**
 - ... at the highest **speed and flexibility**
 - ... at a **competitive price**
 - ...without any **sustainability image risk**.
- excellent product quality on 20+ specs
 - wide spectrum of cathode material technologies
 - industrial capabilities
 - ability to scale up fast
 - cost-efficient processes
 - ethically sourced materials

**It takes product technology,
process technology and supply**



Product, process and supply

Key success factors

3 Supply



- Feed flexibility
- Battery recycling

1 Product Technology

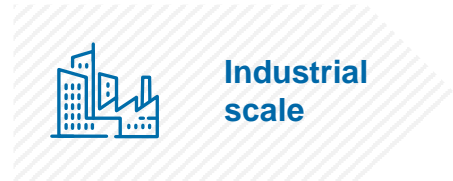


Wide spectrum of cathode material technologies

2 Process Technology



- Ability to scale up fast
- Cost-efficient processes
- Industrial capabilities



Best in class product quality on 20+ specs:
continuous fine-tuning at lab, pilot and industrial scale



Product
technology

Cathode material specs to fulfil cell performance specs



Cathode material product specs

- Particle size
- Morphology
- Composition
- Purity
- Packing density
- Porosity
- Consistency
- and more...



Cathode material performance specs

- Capacity
- Power (charge/discharge)
- Cycle life
- Safety
- Charge efficiency
- and more...

Tailoring cathode material characteristics to the cell specs requires:

Fundamental chemistry know-how to design the right product composition during lab phase

Ability to further enhance the product designs during the qualification cycles in pilot phase



Process
technology

Rechargeable Battery Materials

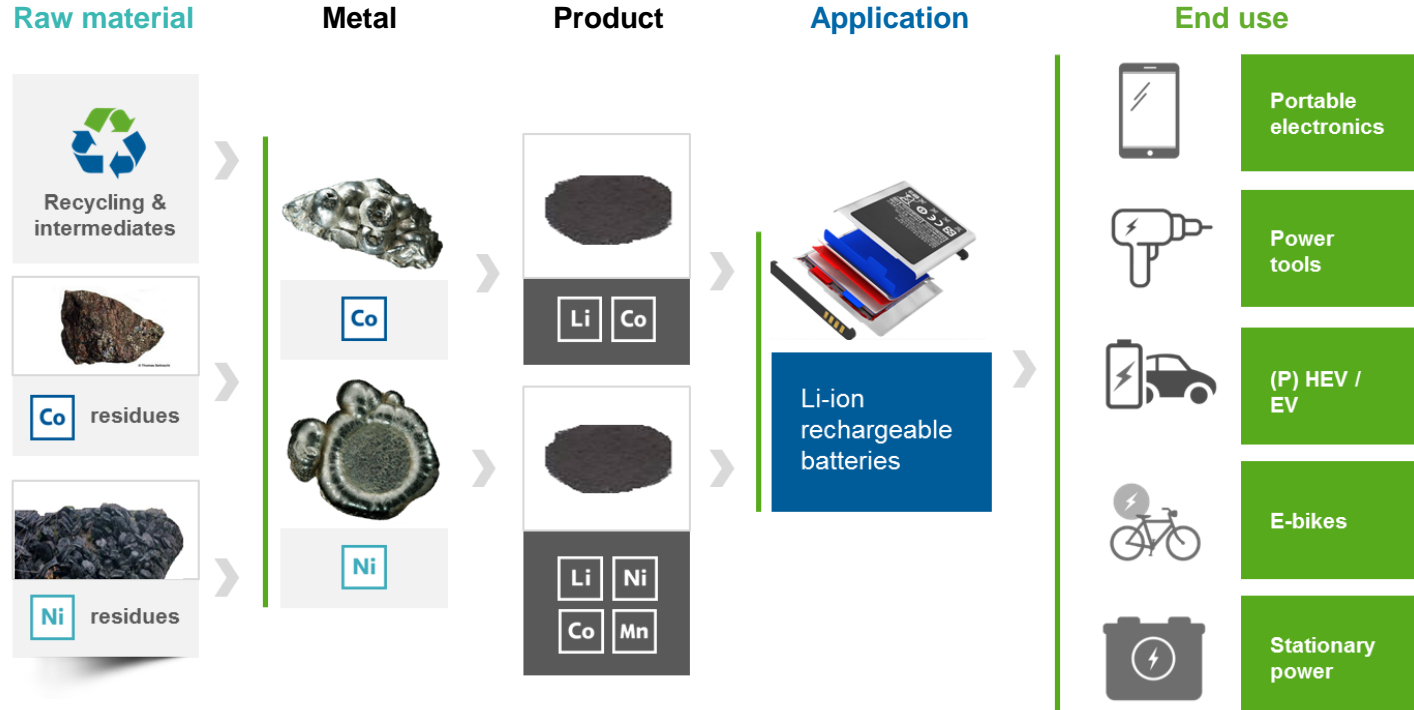


Expansion projects timeline



Access to raw materials

Unique integration in the value chain



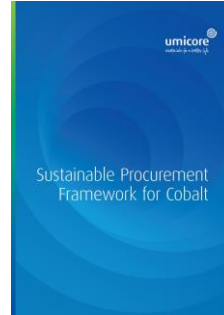
Umicore Flexibility in supply feed, high speed to market and responsiveness to customer needs

Access to raw materials

Battery recycling as critical additional source of supply



- Umicore is fully aligned with OECD Due Diligence for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas
- Certified clean and ethical supply to our customers
- Urban mining indispensable for global electrification of transportation
- Proven industrial capabilities for all types and formats of Li-ion batteries
- Patented recycling technology
- High recovery rates for lithium, cobalt, nickel and copper
- Highest environmental standards



Umicore

**Flexibility in supply feed, high speed to market
and responsiveness to customer needs**



E&ST – major milestones in 2019

Capacity expansions

- Commissioning greenfield plant in China
- Start of construction greenfield plant in Poland

Commissioning of new **Process Competence Center** (Olen, Belgium)

Acquisition of cobalt refinery and cathode precursor activities in Kokkola, Finland

Multi-year cathode materials supply agreements with leading EV battery makers, LG Chem and Samsung SDI

Conclusion of **long-term supply partnerships for sustainable cobalt**

Support for long-term growth

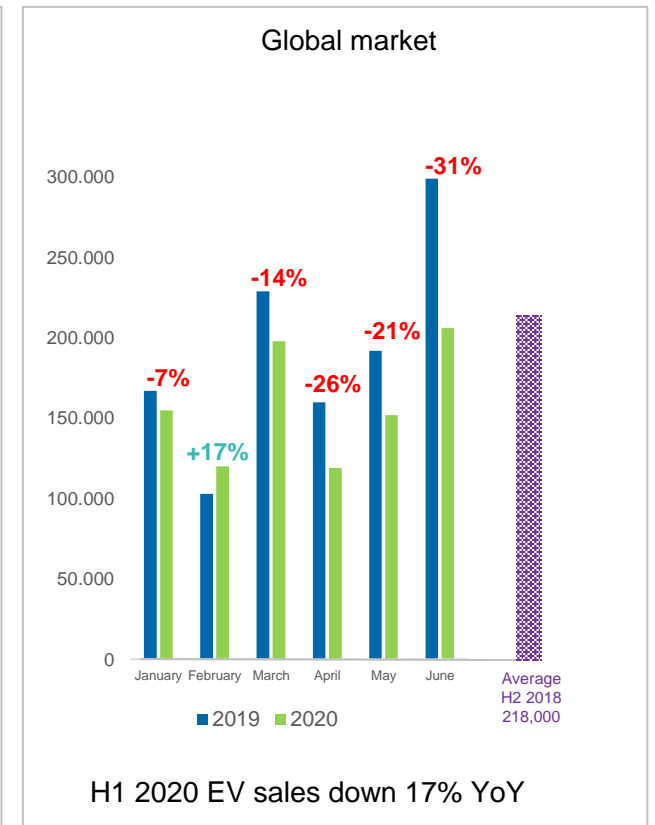
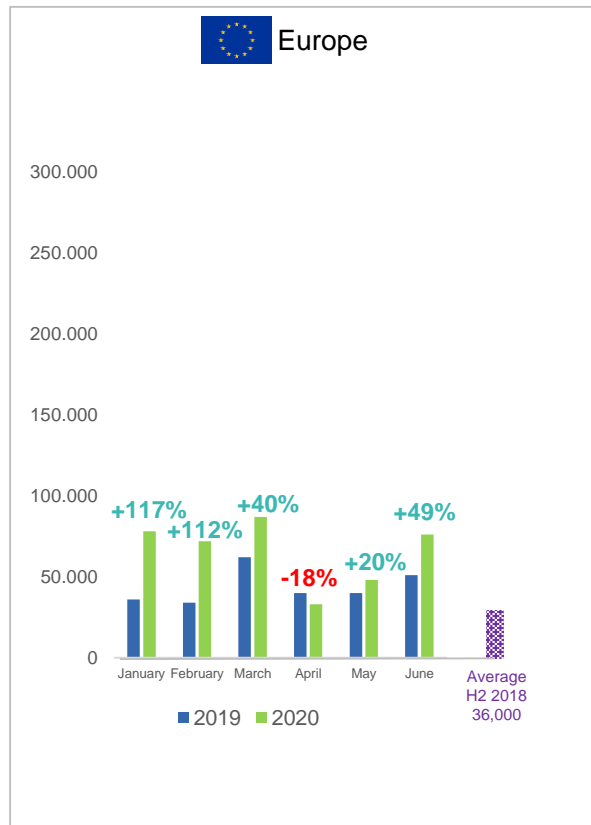
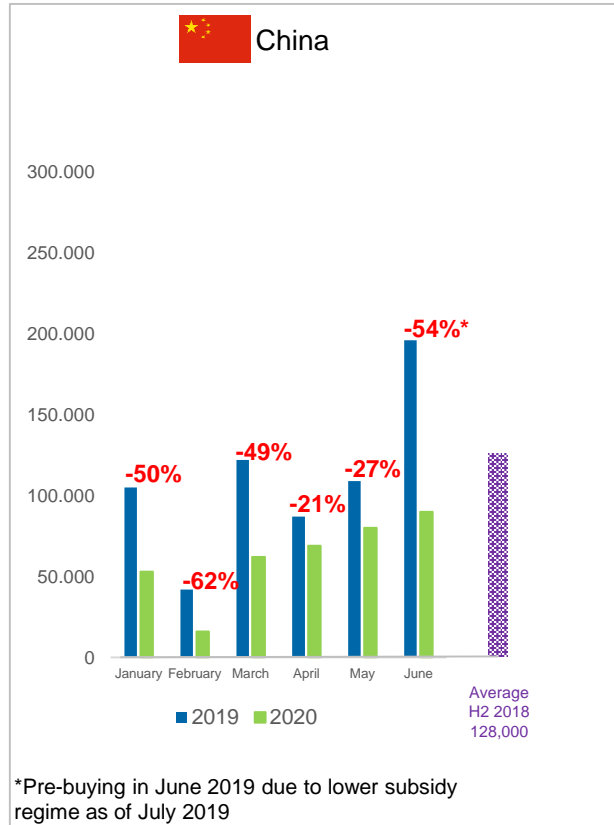
- Obtained support within framework of IPCEI* for batteries
- Global Battery Alliance initiative



COVID-19 outbreak: impact on EV sales



H1 2020 YoY evolution of BEV and pHEV car sales (source: EV Volumes)





E&ST H1 2020 performance



Revenues -8%; Adj. EBIT -47%; severe COVID-19 impact and higher fixed costs

Rechargeable Battery Materials

Overall volumes of cathode materials lower YoY and materially lower than expected due to COVID-19

Higher fixed costs related to recent and ongoing expansions

Significant negative operating leverage

Positive contribution of Kokkola activities acquired in Dec. '19

Construction of Nysa plant delayed due to COVID-19 restrictions; commissioning planned in H1 2021

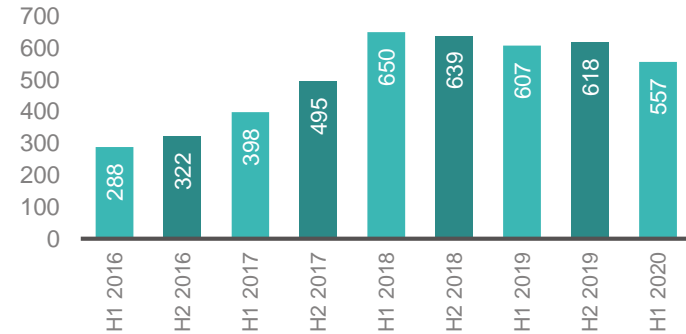
Cobalt & Specialty Materials

Most end-markets impacted by COVID-19

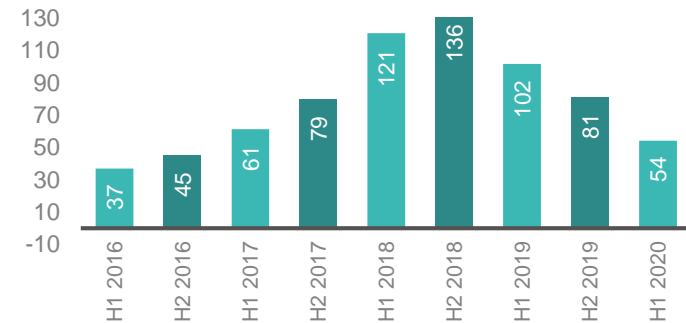
Lower cobalt and nickel prices impacted refining & recycling activities

Electroplating recorded slightly higher revenues; revenues in **Electro-Optic Materials** were roughly stable

REVENUES



Adjusted EBIT



million €

Impressions



EV car battery pack



Packaging finished product



RBM Cheonan production sites, Korea



Business Group Overview

Recycling



Recycling

Precious Metals Refining

Operates the world's most sophisticated precious metals recycling facility and recovers 17 precious and other valuable metals from complex waste streams.



Precious Metals Management

Services for hedging, leasing, purchasing and sale of precious and platinum group metals to internal and external customers



Jewelry & Industrial Metals

Supplier of precious metals based products for jewelry and industrial applications, recycler of jewellery and production scrap and producer of platinum-based equipment for the glass and chemical industries.





Precious Metal Refining


Largest and most complex precious metals recycling operation in the world



Processes more than 200 different types of raw materials



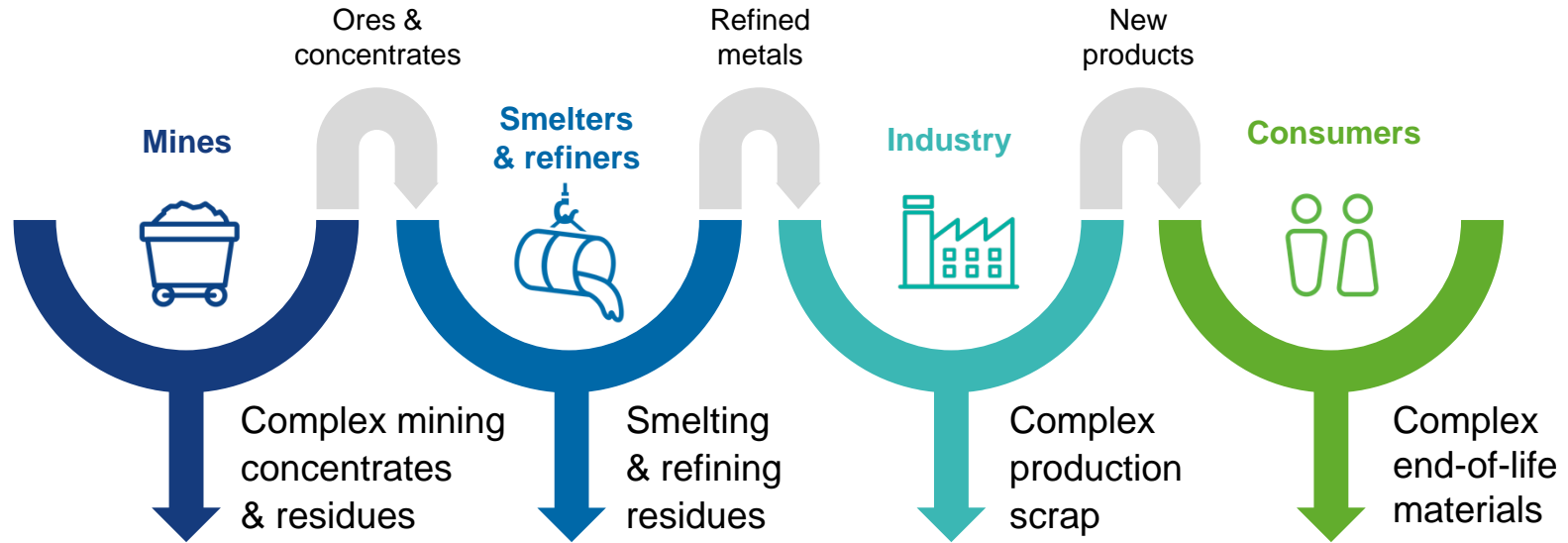
Leading refiner of 17 different metals



World class environmental and quality standards



The value chain of metals



Industrial by-products

End-of life materials



Revenue Drivers



Main revenue drivers

Treatment & refining charges

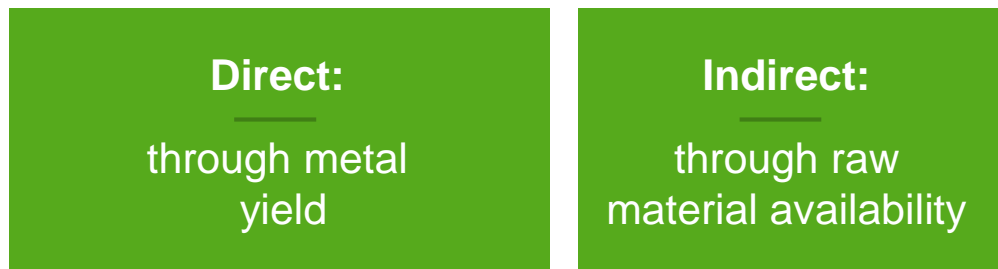
Treatment charges are determined, among other criteria, by the complexity of the materials

Metal yield

Umicore assumes the risk of recovery above or under the contractually agreed recovery rate



Metal price exposure



Ag	Au	Pt	Ir	Rh	In	Sb	As
		Ru	Pd		Te	Sn	Pb
					Bi	Cu	
					Ni	Se	

Managing the effects of metal price movements on earnings

Systematic hedging of transactional exposure

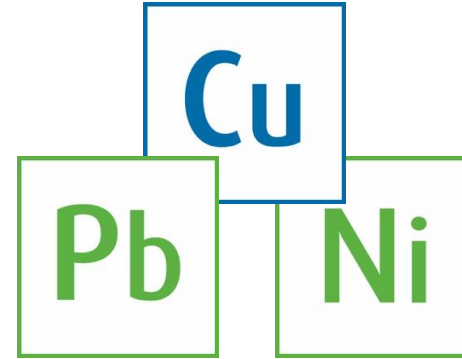
Depending on market conditions hedging of (part of) structural metal price exposure through contractual arrangements

Impact on working capital is mitigated by toll-refining – metals remain property of the supplier during treatment



Umicore has unique technology

Umicore is unique due to its proprietary complex flowsheet that combines three metallurgical streams



This enables

Flexibility to treat a broad range of input materials

Recovery & valorization of the most metals

Ability to optimize feed and therefore profitability

Scope to broaden to new types of materials in future

- Umicore technology guarantees **environmentally friendly** processing, a high yield and a more competitive cost
- Umicore introduced its unique Ultra High Temperature technology for Battery Recycling more than 5 years ago



Recycling – major milestones in 2019

Completion of multi-year **expansion** program at Hoboken plant

Upgrade of key equipment during extended shutdown

Investments to sustain and improve the **environmental performance** of the plant



Recycling H1 2020 performance



Revenues +40%; Adj. EBIT +150%; increased volumes, higher metal prices and favorable supply mix

Precious Metals Recycling

Higher processed volumes (vs. extended maintenance in H1 19)

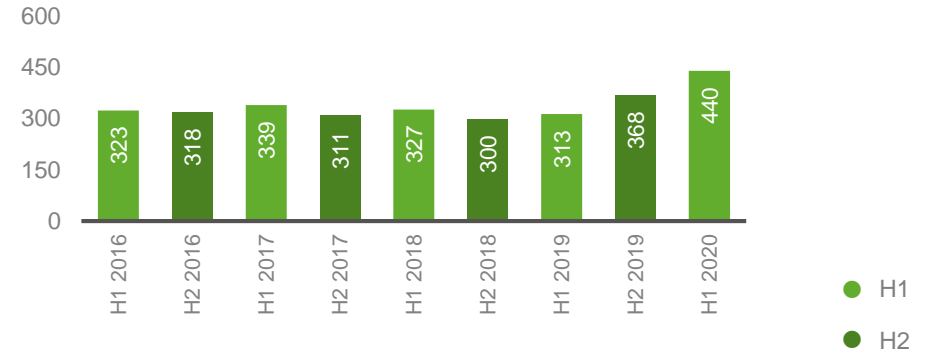
Higher metal prices

Robust supply conditions and optimization of input mix

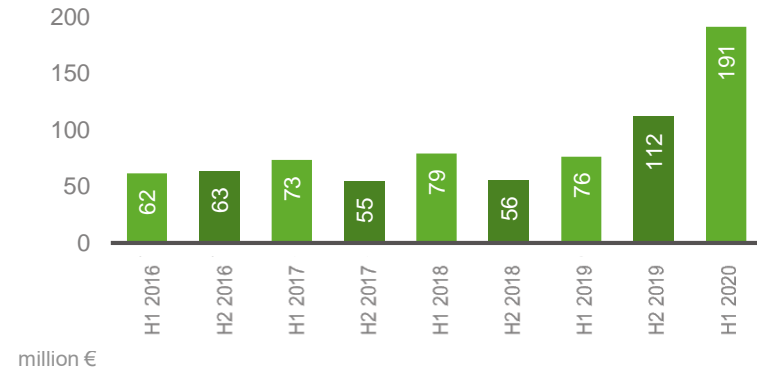
Increased **Jewelry & Industrial Metals** revenues

Substantial earnings contribution from **Precious Metals Management**

REVENUES



Adjusted EBIT





Impressions



PMR Hoboken recycling plant, Belgium



H1 2020 financial review

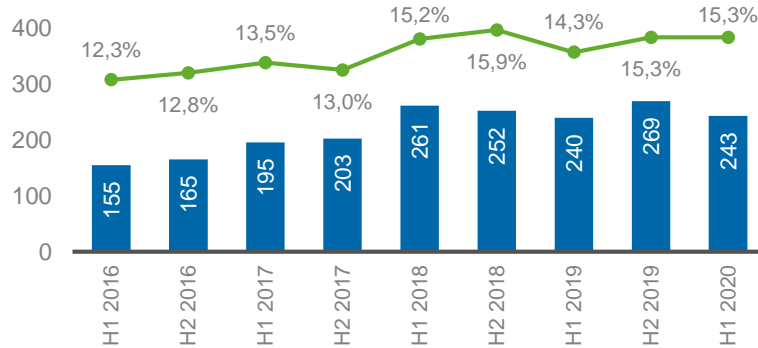
Key figures H1 2020

REVENUES € 1.6 bn -4% YoY	Adjusted EBIT € 243 m Stable YoY	Free Operating Cash Flow € 108 m Net debt at € 1,349 m Net debt / LTM Adj. EBITDA 1.75x
Adjusted NET PROFIT (Group share) € 148 m Adjusted EPS € 0.62 Interim dividend of € 0.25 per share	Adjusted EBITDA € 376 m +5% YoY	CAPEX € 152 m
		ROCE 10.9%

Strong performance in Recycling offset COVID-19 impact in Catalysis and E&ST

Recycling results offset impact of automotive industry downturn on Catalysis and E&ST

Adj. EBIT & Adj. EBIT margin

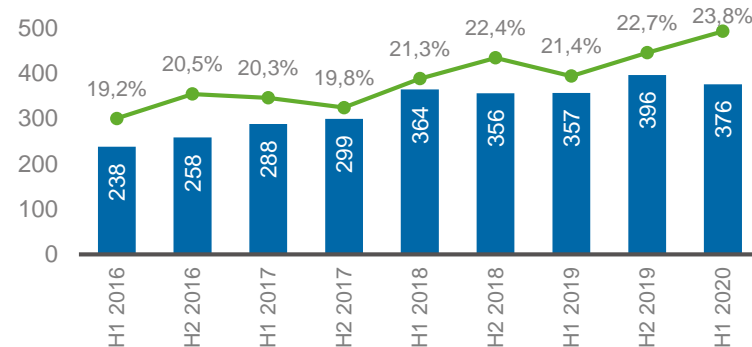


Adjusted EBIT at € 243 million, in line with H1 19

Stellar Adjusted EBIT growth in Recycling offset by decreases in Catalysis and E&ST
 € 16 million higher D&A charges year on year from recent investments & acquisition

Increased Adjusted EBIT margin, supported by higher Recycling margin

Adj. EBITDA & Adj. EBITDA margin



Adjusted EBITDA increasing 5%

Strong operating cash flow with second highest half year Adjusted EBITDA contribution of recent years

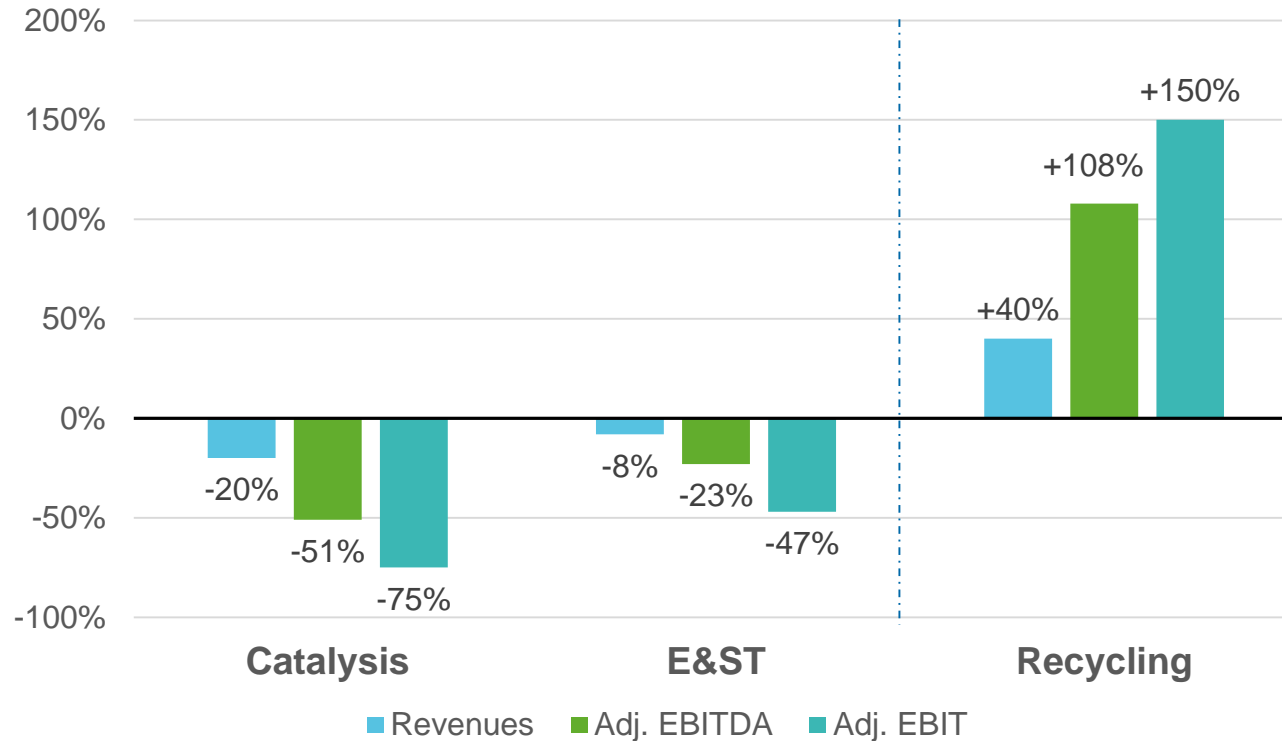
High Adjusted EBITDA margin further increased in H1 20

million €

Pronounced offsetting operating leverage effects

Negative in Catalysis and E&ST vs positive in Recycling

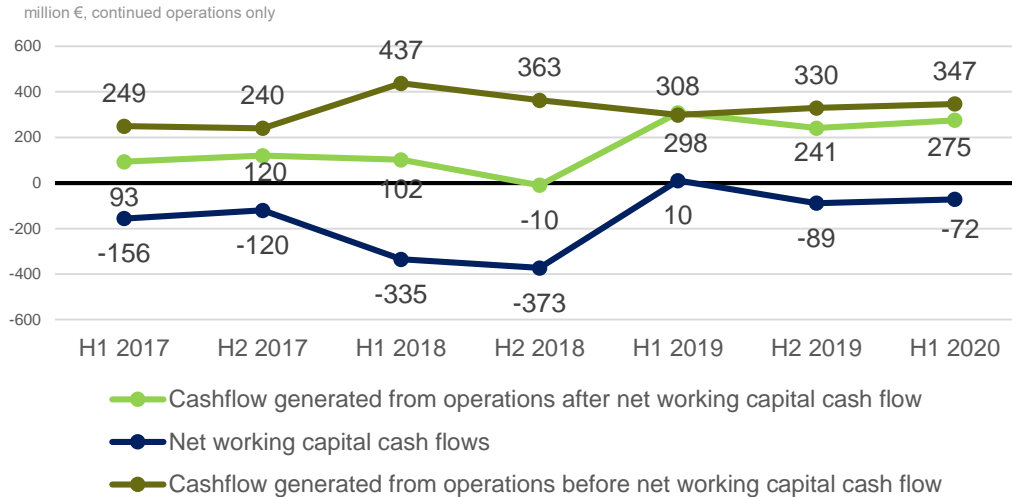
H1 YoY evolution



Group

Revenues -4%
Adj. EBITDA +5%
Adj. EBIT +1%

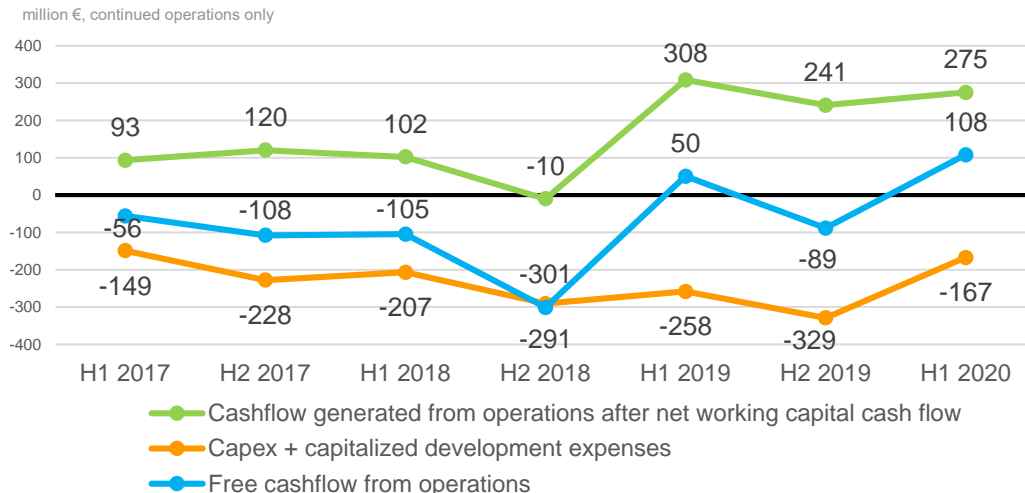
Increase in free operating cash flows



Cash flow from operations before changes in working capital up at € 347 million

Increase in cash working capital of € 72 million mostly driven by higher precious metal prices

Cash working capital increase in Catalysis and Recycling, partly offset by decrease in E&ST



Free cash flow from operations up at € 108 million

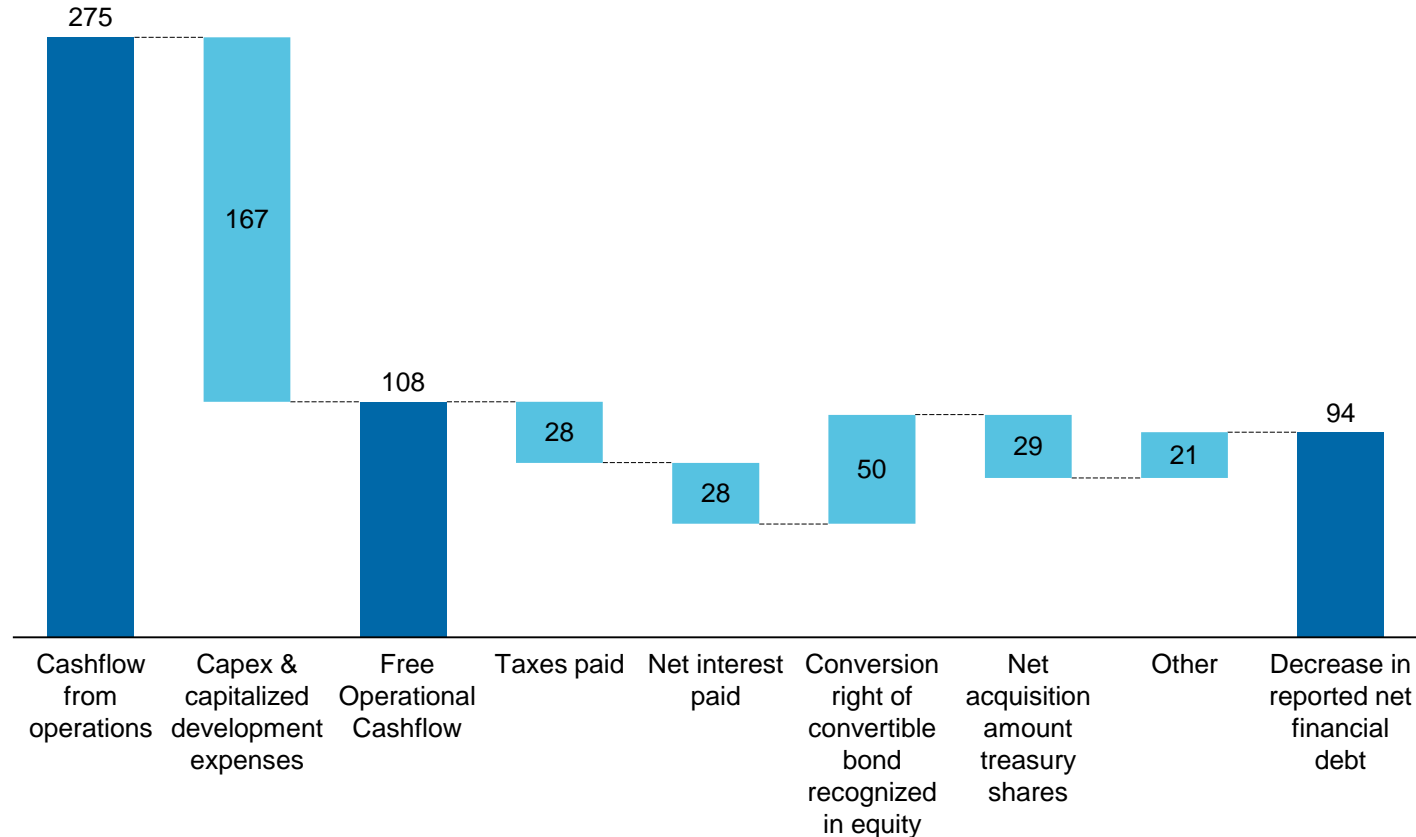
More than double last year's number

Capex delayed in view of market context (€ 152 million vs € 241 million in H1 19)

*Free cashflow from operations = cashflow generated from operations – capex & capitalized development expenses

Net cash flow bridge

million €



Free operating cashflow of € 108 million translating in similar decrease in reported net financial debt (€94 million) versus start of the year

Includes € 50 million portion of convertible bond accounted for as equity

Combined cash out related to net interest charges and taxes below level of H1 19

Benefiting from absence of final 2019 dividend payout



Outlook

2020 Group outlook



Solid performance in 2020 despite unprecedented and challenging market context

Umicore expects its full year adjusted EBIT to be in the range of € 465 million to € 490 million with adjusted EBIT in Catalysis and Energy & Surface Technologies well below the level of 2019 and adjusted EBIT in Recycling well above the level of 2019, as previously communicated. This outlook statement is made under the assumption that the ongoing spread of the COVID-19 pandemic, in particular in Europe and North America, will not lead to major new disruptions in operations or market demand.

2020 Segment outlook



CATALYSIS

Based on current market trends, Umicore now expects global car production to be down by approximately 20% for the full year (compared to its previous assumption of a 25% decrease). In this scenario, **Umicore expects adjusted EBIT for Catalysis for the full year of 2020 to be in the range of € 130 million to € 140 million.**

In 2021, the business group is expected to continue to benefit from its strong market position in gasoline LDV applications, particularly in Europe and China, supplemented by the initial impact from China VI legislation for heavy-duty diesel applications and cost savings resulting from the cost reduction measures carried out in 2020.



ENERGY & SURFACE TECHNOLOGIES

Umicore expects adjusted EBIT for Energy & Surface Technologies for the full year 2020 to be in the range of € 70 million to € 75 million.

For next year we expect sales volumes in cathode materials to benefit from the growing penetration rate of electric vehicles and the launch of new platforms for which Umicore's materials have been qualified. However, as this business continues to be driven by technology innovation and comes at a high level of fixed costs, it will take more time in the current market context to achieve the desired scale effects. In addition, the unfavourable pricing environment is expected to persist in China due to the excess capacity in the industry.



RECYCLING

Considering the planned 4-weeks maintenance shutdown in the Precious Metals Refining business unit, which was completed over the summer, and seasonality effects in Jewelry and Industrial Metals, **Umicore expects adjusted EBIT for Recycling in 2020 to be in the range of € 320 million to € 330 million.**

The business group's earnings are expected to continue to benefit next year from a favorable supply environment and metal prices hedged at attractive levels while remaining exposed to the price evolution of unhedgeable metals which is difficult to predict.

Long-term growth drivers remain intact



ENERGY & SURFACE TECHNOLOGIES

COVID-19 stimuli plans aimed at a 'green recovery' in China and Europe

China: Extension of NEV subsidy plan from 2020 until end 2022 and confirmation of increased mandatory NEV credit targets for 2021-2023

Europe: EU recovery plan predicated on European Green deal, including ambition towards zero-emission mobility. Stimuli packages in several countries (Germany, France, Spain) with subsidies for electrified vehicles



CATALYSIS

Tightening emission norms continue to be on the agenda in key regions, confirming the need for more complex automotive catalyst technologies going forward



RECYCLING

Resource scarcity and complexity of materials

Path towards a more circular economy



Key Investment Considerations

Key investment considerations

- **Well positioned to take advantage of accelerating global megatrends** : more stringent emission control, electrification of the automobile and resource scarcity
 - Global presence and unique competences acquired over many years;
 - A market leader in most key product markets and particularly in automotive catalysts, cathode materials and complex polymetallic recycling;
 - Strong organic growth prospects supported by legislation
- **Well-diversified business profile** with broad product, end-market and customer base driven by a common theme of sustainability
- **Strong track record of and commitment to innovation to maintain competitive lead** (R&D spending of ~6% of revenues in 2019)
- **Robust financial performance** across cycles; focus on margin and returns
- **Strong balance sheet** with recent substantial growth investments
- **Experienced board, management team, and clear governance principles**

Forward-looking statements

This presentation contains forward-looking information that involves risks and uncertainties, including statements about Umicore's plans, objectives, expectations and intentions.

Readers are cautioned that forward-looking statements include known and unknown risks and are subject to significant business, economic and competitive uncertainties and contingencies, many of which are beyond the control of Umicore.

Should one or more of these risks, uncertainties or contingencies materialize, or should any underlying assumptions prove incorrect, actual results could vary materially from those anticipated, expected, estimated or projected.

As a result, neither Umicore nor any other person assumes any responsibility for the accuracy of these forward-looking statements.





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