



**umicore**  
*materials for a better life*

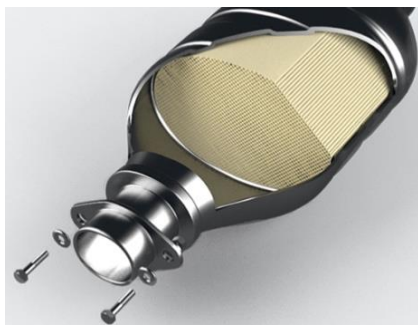
# Umicore Investor Presentation

February 2021



# Introduction to Umicore

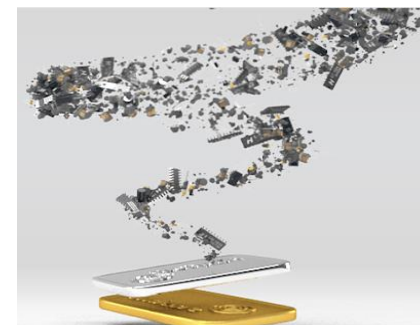
# We are a global materials technology and recycling group



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



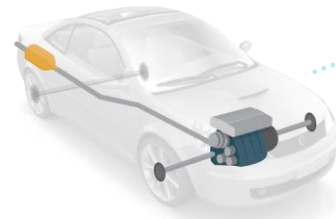
The world's leading recycler of complex waste streams containing precious and other valuable metals



# With a unique position in clean mobility materials and recycling

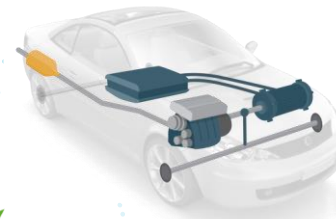
## Internal Combustion Engine

Umicore provides:  
Emission control catalysts



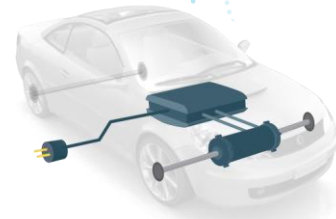
## Plug-In Hybrid Electric Vehicle

Umicore provides:  
Battery cathode materials and  
emission control catalysts



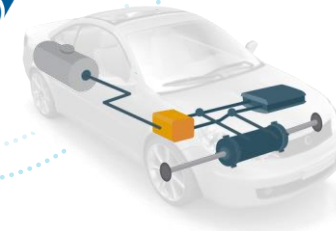
## Full Electric Vehicle

Umicore provides:  
Battery cathode materials



## Fuel cells

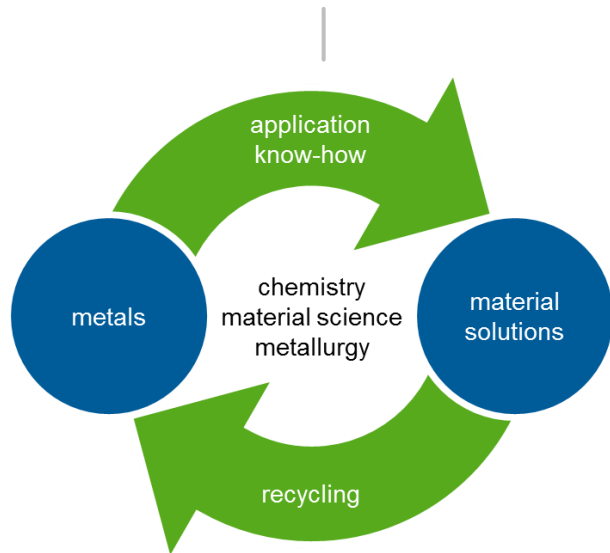
Umicore provides:  
Electro-catalyst and  
battery cathode materials



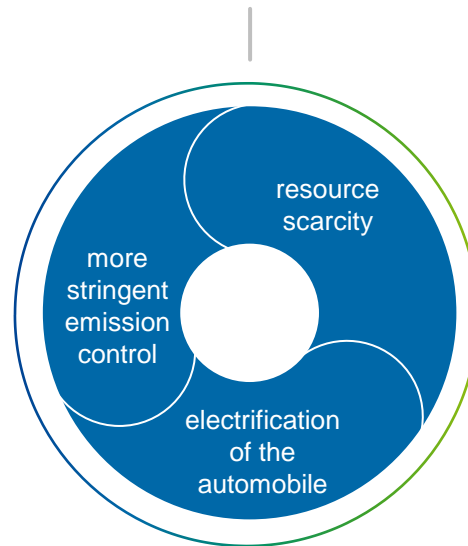
Present across all drive trains and offering sustainable closed-loop services

# Built on sound foundations

Unique business model



Supportive megatrends & legislation



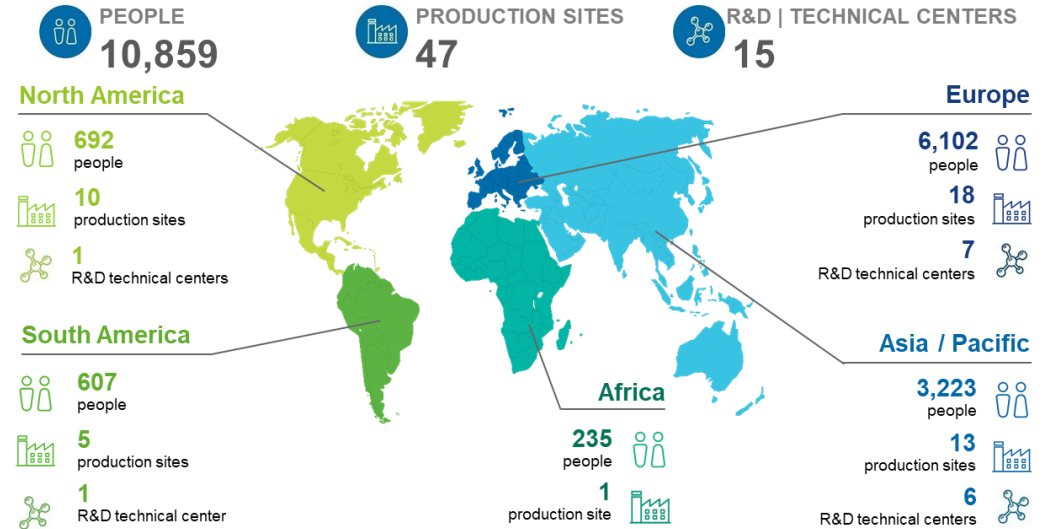
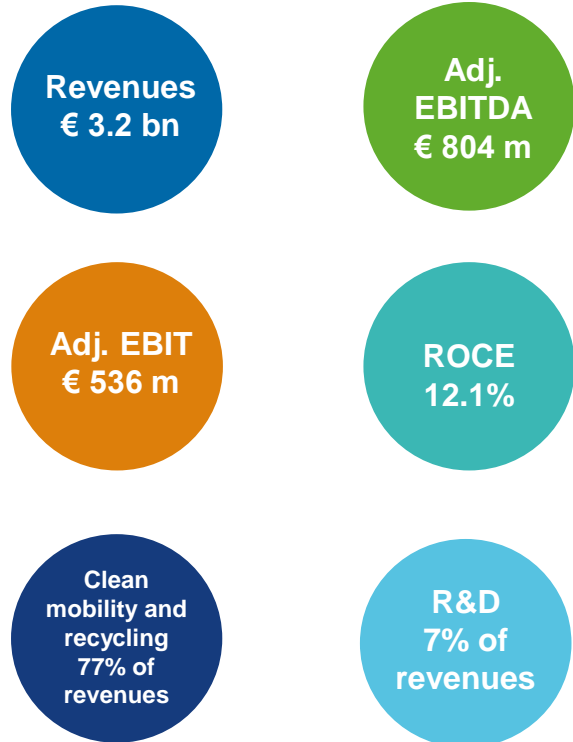
Industry leader in sustainability



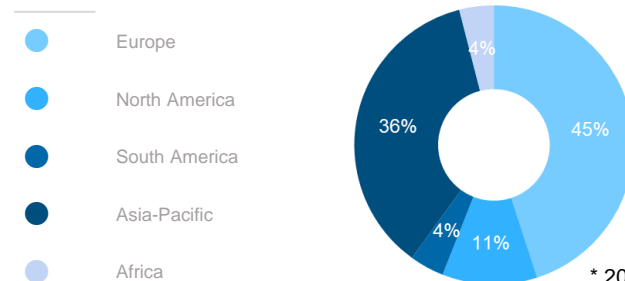
We help improve air quality, make electrified transport possible and tackle resource scarcity

# With a robust financial performance and a global presence

## Key figures (FY 2020)



### REVENUES BY GEOGRAPHY\*



\* 2020 data

# Successfully delivered Horizon 2020 growth strategy

## horizon 2020



Clear leadership in clean mobility materials and recycling

Turned sustainability into a greater competitive edge



Rebalanced the portfolio & earnings contributions

Doubled the size of the business in terms of earnings



# With a focused Group structure



## CATALYSIS

Automotive Catalysts  
Precious Metals Chemistry



## ENERGY & SURFACE TECHNOLOGIES

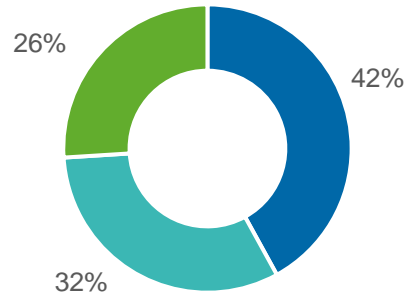
Rechargeable Battery Materials  
Cobalt & Specialty Materials  
Electroplating  
Electro-Optic Materials



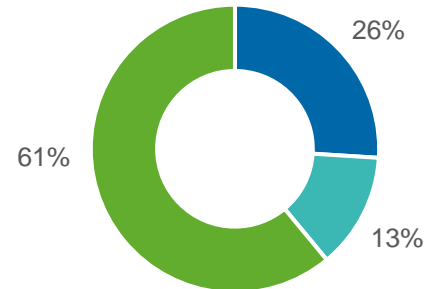
## RECYCLING

Precious Metals Refining  
Jewelry & Industrial Metals  
Precious Metals Management

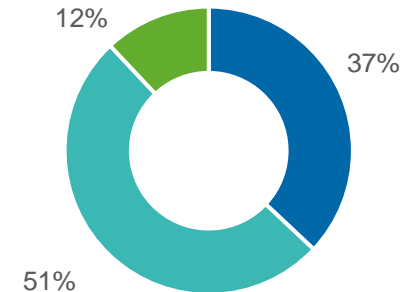
Revenues\*  
(excluding metal)



Adj. EBIT\*



Capital employed\*  
(average)



\* FY 2020 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; technology leader in cGPF platforms 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

# Strong funding base



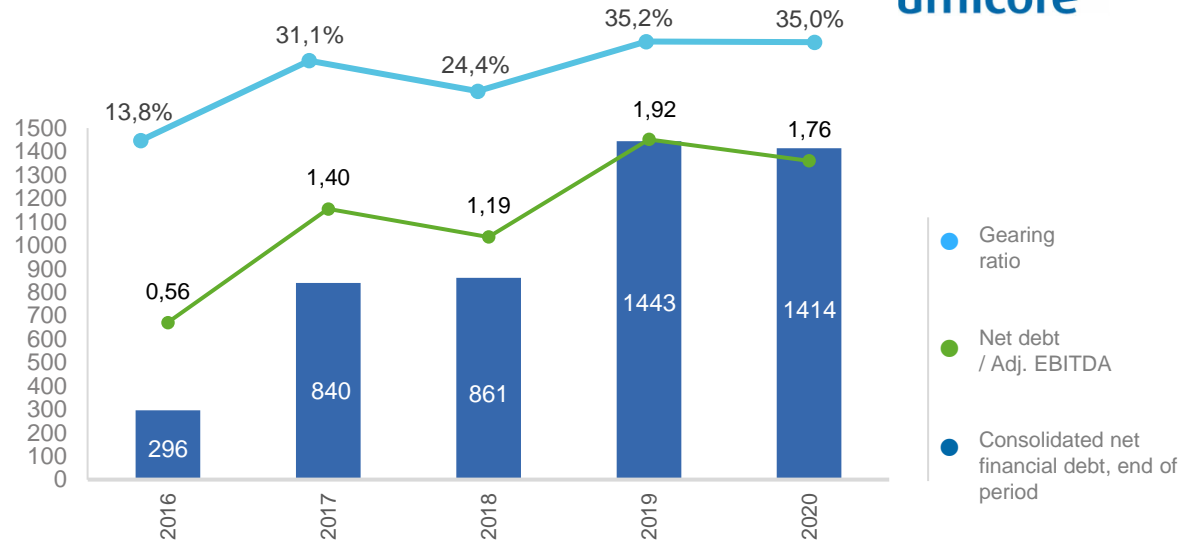
**Stable net financial debt of € 1,414 m, slightly below the level of end 2019**

**Corresponds to robust credit ratios :**

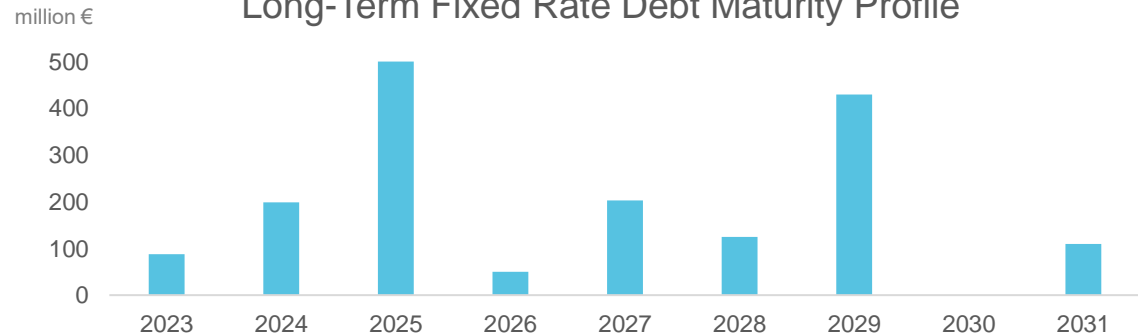
- Net debt / Adjusted EBITDA ratio of 1.76x
- Net gearing ratio of 35%

**Further diversification of LT funding base :**

- € 125 m 8-year EIB loan
- € 500 m 5-year convertible bond



## Long-Term Fixed Rate Debt Maturity Profile







# 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

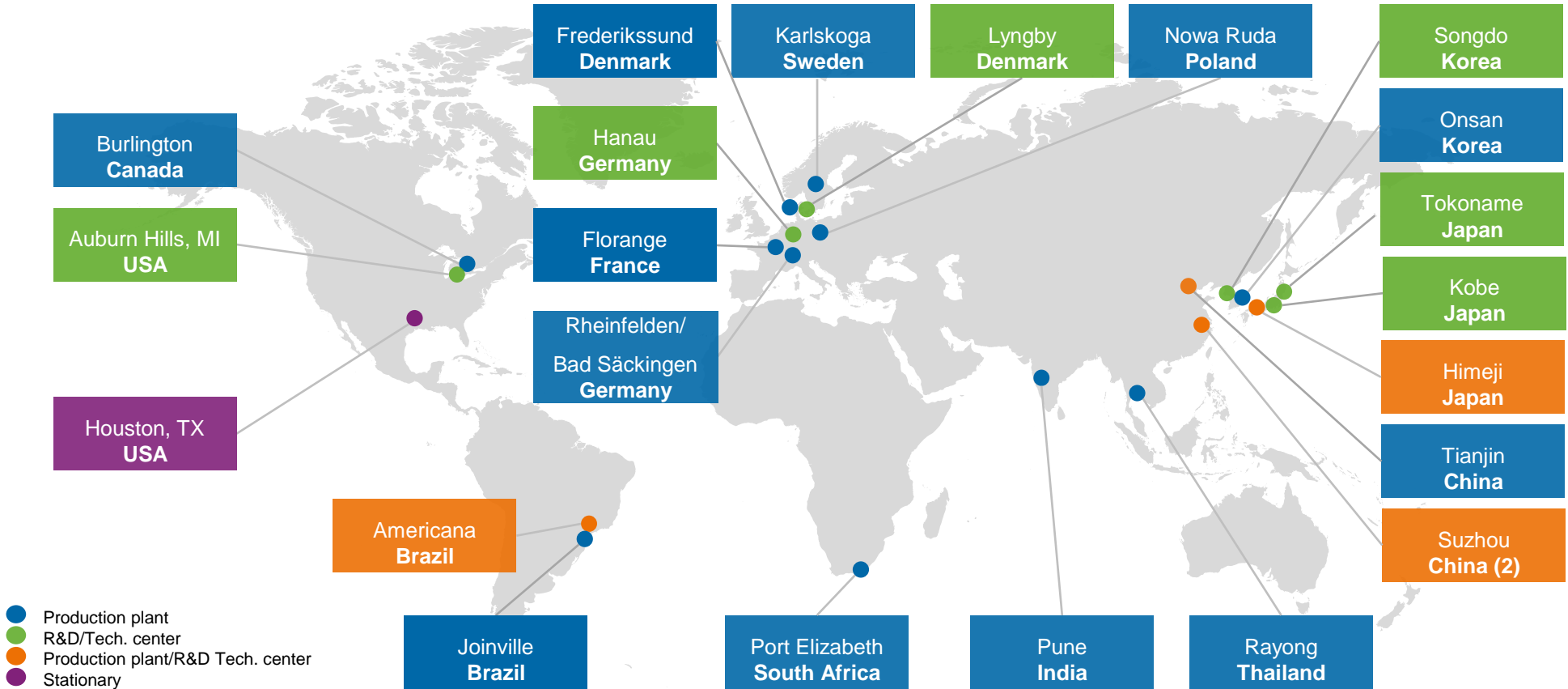




# Automotive Catalysts Production Footprint



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





# Catalysis – major milestones in 2020

Sustained investments  
in **product and  
process innovation**

Ramp-up of new plant  
for **fuel cell catalysts**  
in Korea

**Capacity expansions**  
to support growth of  
Automotive Catalysts in  
LDV and HDD in China

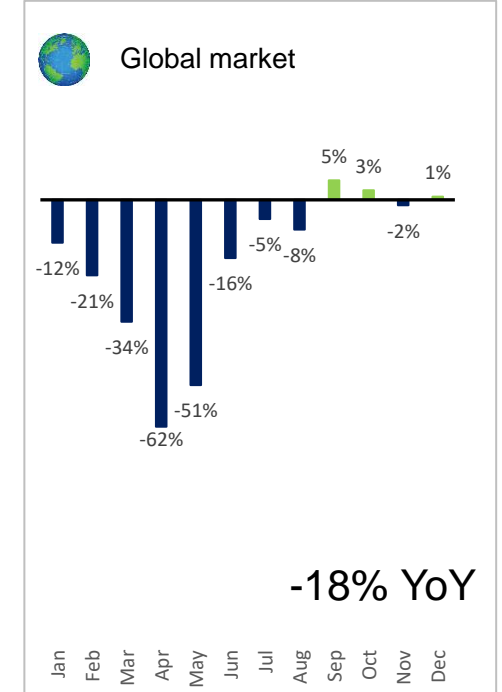
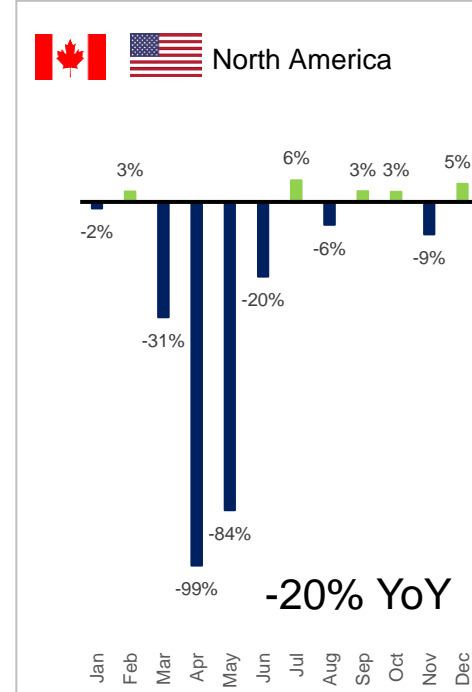
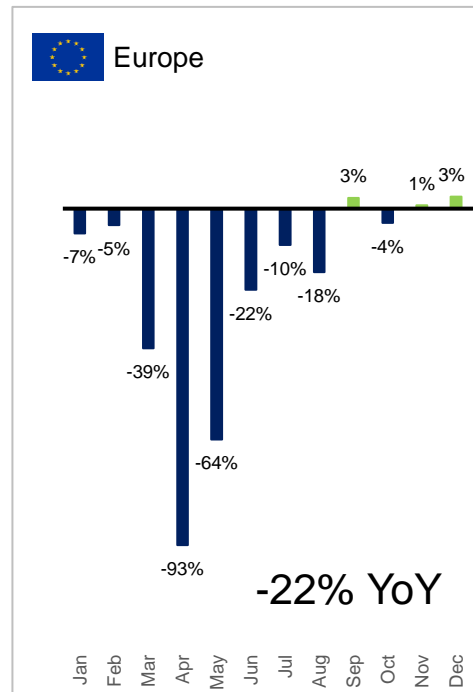
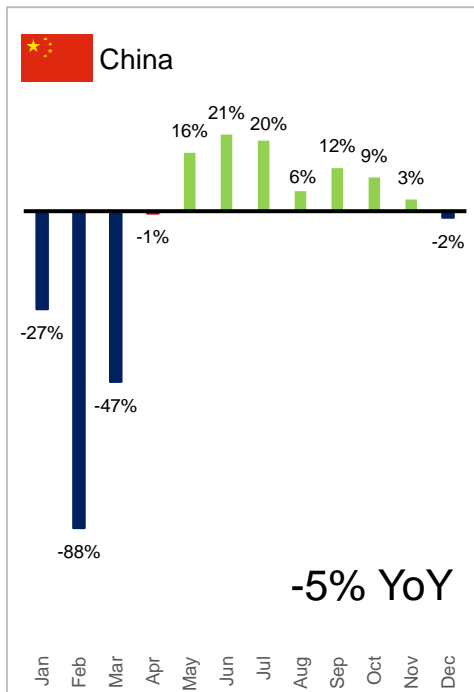
Rationalization of  
production footprint and  
savings in  
manufacturing and  
SG&A costs





# COVID-19 outbreak: significant impact on automotive industry

FY 2020 YoY evolution of passenger car production across all powertrains (source: IHS & Umicore - 31/12/2020)



H1: shut down of car OEM's assembly lines and dealerships in key regions as a result of government imposed lock-downs  
H2: pick-up in global car demand, albeit with discrepancies between regions in terms of timing, speed and intensity of the recovery



# Catalysis FY 2020 performance



Revenues -7% and Adj. EBIT -17%; reflecting severe impact from the pandemic in H1

## Automotive Catalysts

Revenue decline much lower than global car market contraction

Disproportionate benefit from market recovery in H2

Outperformed LDV market in China and Europe

Higher sales of catalysts for HDD applications

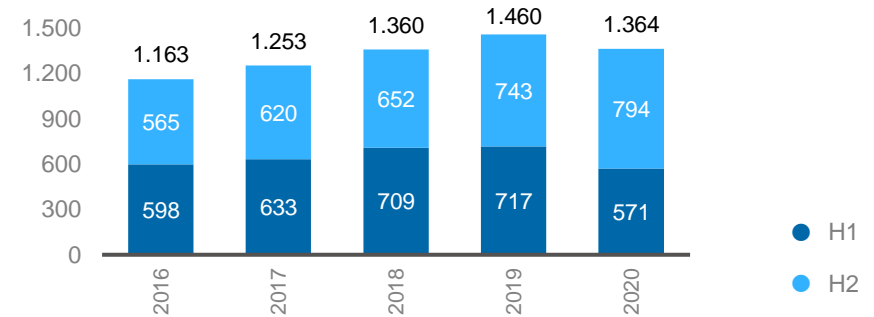
Cost savings (footprint adjustments + operational excellence initiatives)

## Precious Metals Chemistry

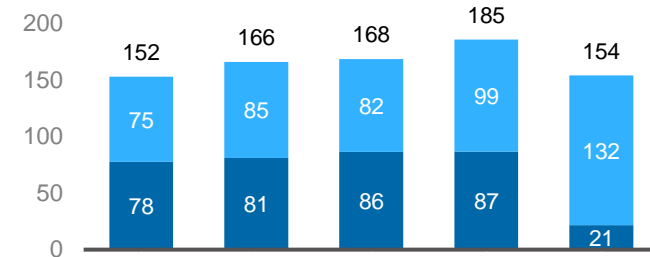
Revenues down due to COVID-19 impact on automotive industry

Continued strong demand for fuel cell catalysts

## REVENUES



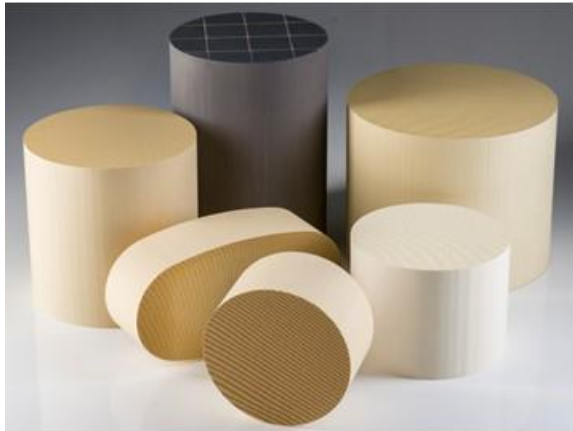
## Adjusted EBIT



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

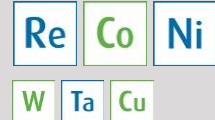
## Rechargeable Battery Materials

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



Raw materials

- Feed flexibility
- Battery recycling

### 1 Product Technology



Lab scale

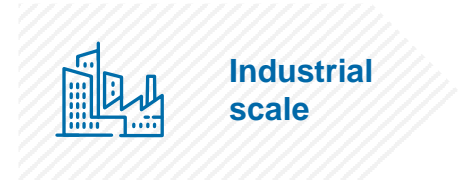
Wide spectrum of cathode material technologies

### 2 Process Technology



Pilot scale

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



Industrial scale

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



# 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

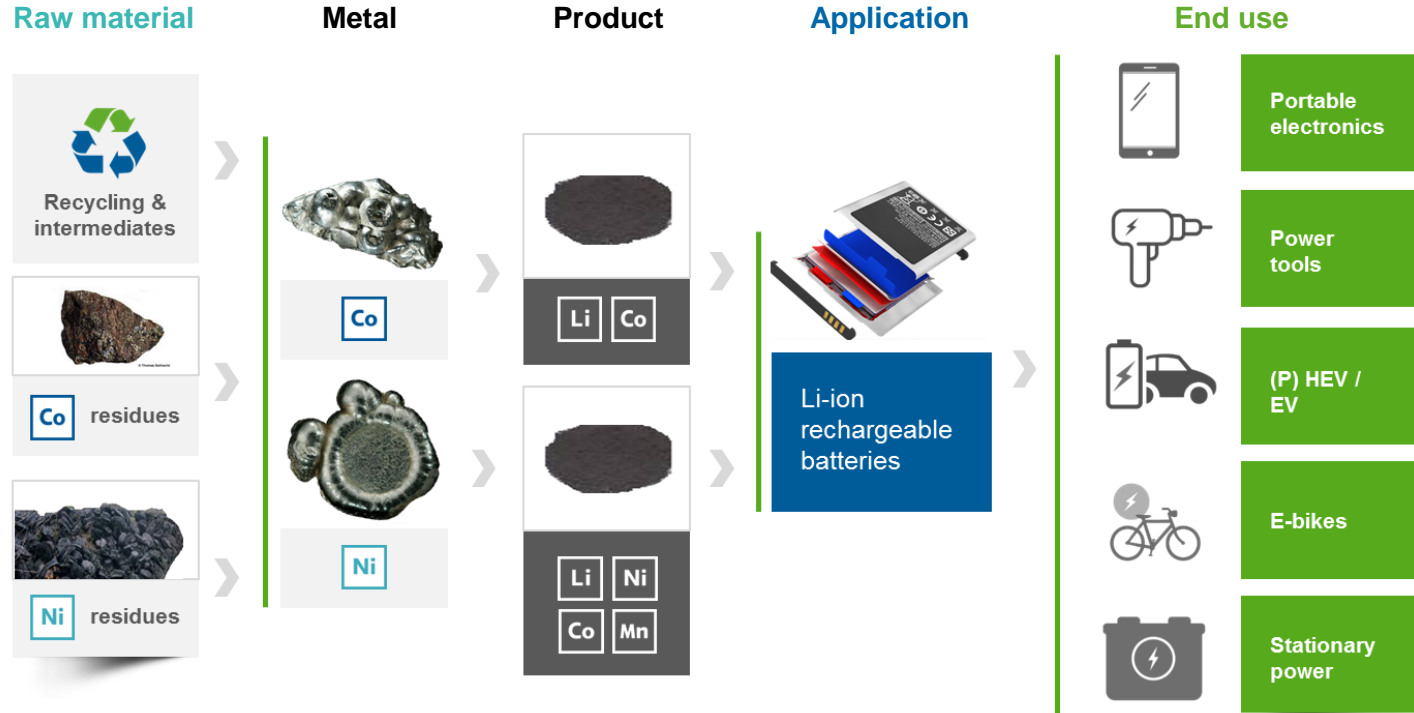


## Expansion projects timeline



# Access to raw materials

## Unique integration in the value chain



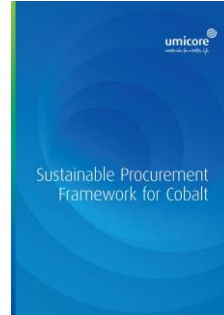
**Umicore** Flexibility in supply feed, high speed to market and responsiveness to customer needs

# 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 2020

## Push towards electrification stronger than ever

EU: ambition of zero-emission mobility and commitment to increasingly stringent CO2 emission targets

China: extension of NEV subsidy plan extended and higher NEV penetration rate (20% by 2025, 50% by 2035)

## Progress with strategic expansion in Europe

Ongoing construction of greenfield plant in Poland, despite incurred delay of 6 month as a result of COVID-19 lock-down measures imposed by governments

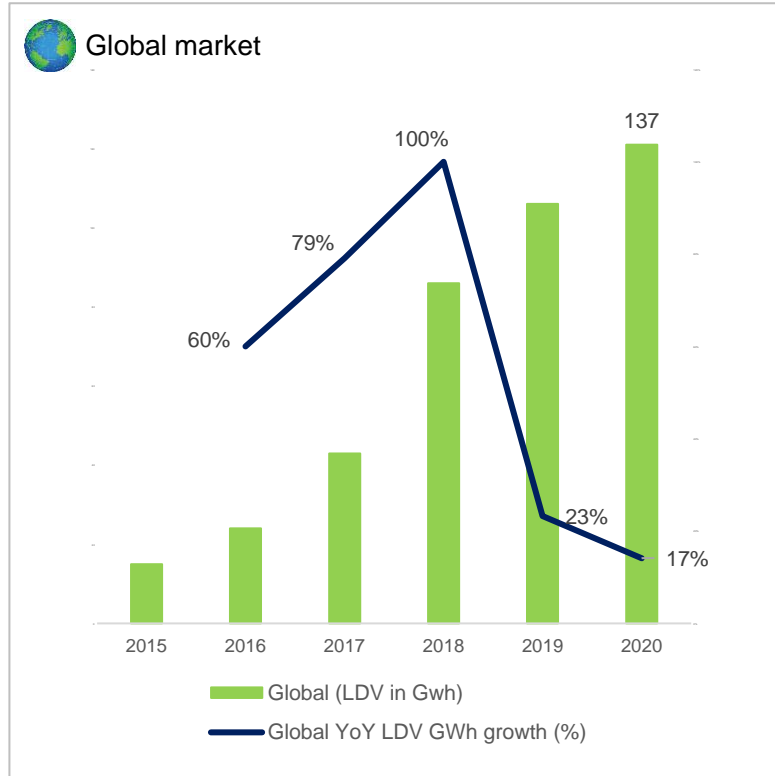
## Step-up in R&D expenditures

Higher R&D expenditures reflecting the higher spend on new product and process technologies in battery materials



# EV battery demand evolution

Evolution global EV LDV battery demand (GWh)



Source: EV Volumes, Umicore

Global EV battery market in 2020 up 17% to 137 GWh, driven by Europe

Regional differences in demand patterns:

Little year-on-year growth in China, well below industry anticipations

More than doubling of demand in Europe driven by CO2 Directive

Contrasting evolution in China with demand dropping in H1 2020 and some recovery starting at year-end 2020



# E&ST FY 2020 performance



Revenues -15%; Adj. EBIT -59%; severe COVID-19 impact and significant negative operating leverage

## Rechargeable Battery Materials

Lower cathode materials revenues: higher NMC volumes for EVs; lower LCO and ESS volumes

Pricing pressure, underutilized capacity in China

Higher fixed costs related to expansions

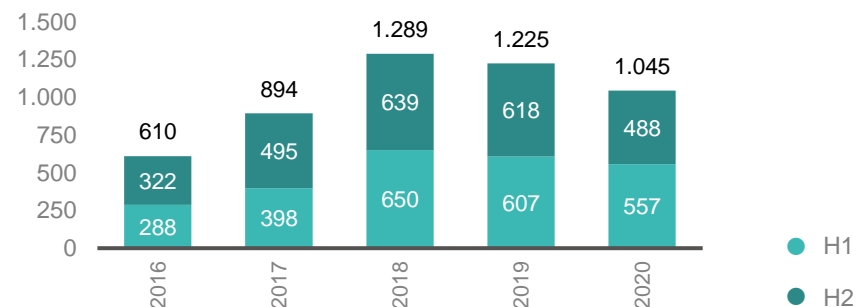
## Cobalt & Specialty Materials

Lower revenues reflecting impact of COVID-19

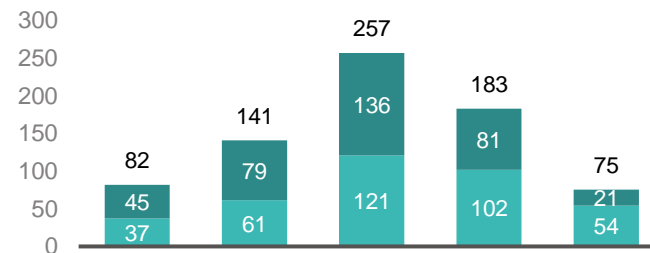
Lower contribution from refining & recycling activities; reduced demand for cobalt and nickel chemicals

**Electroplating** recorded slightly higher revenues; revenues in **Electro-Optic Materials** decreased

## 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



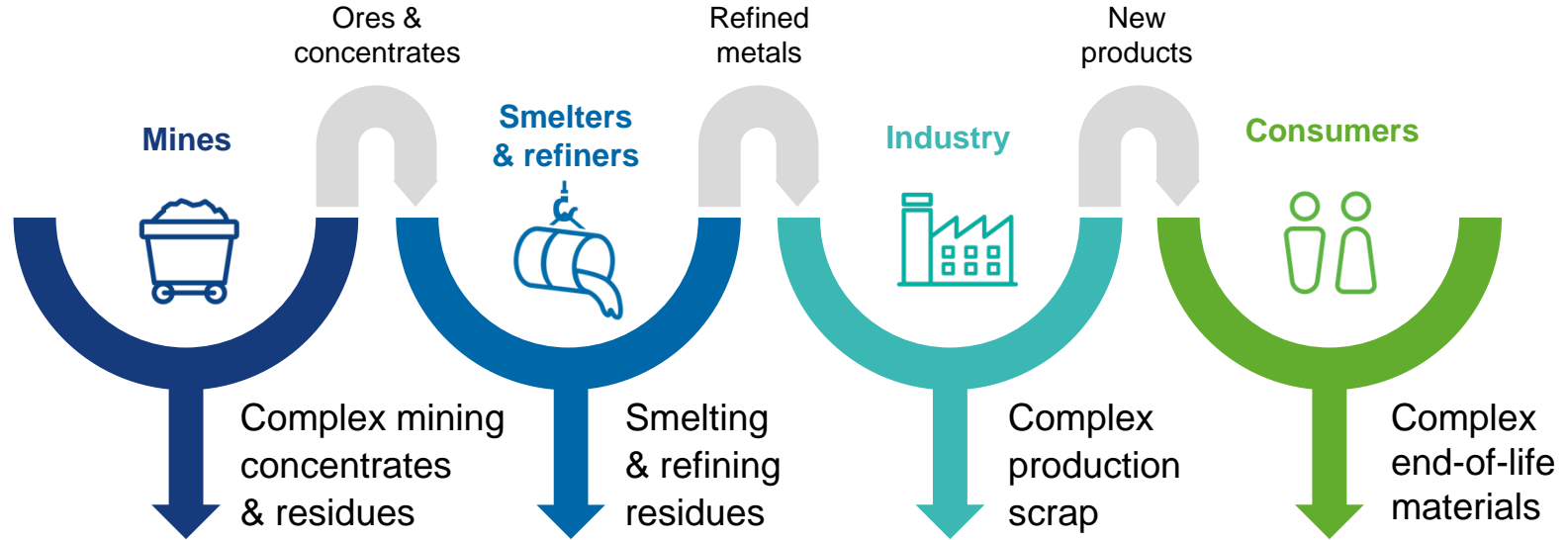
Leading refiner of 17 different metals

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

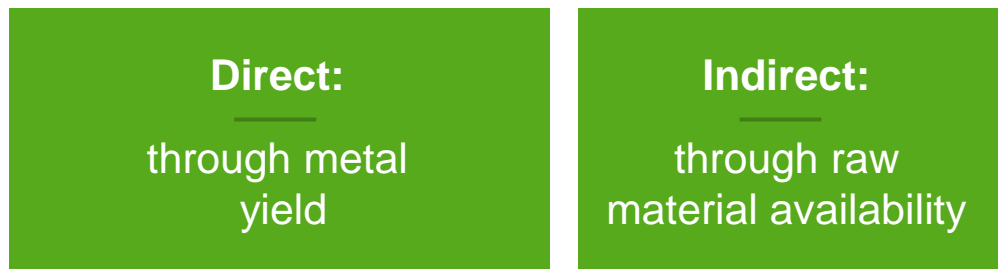
Treatment charges are determined, among other criteria, by the complexity of the materials

### Metal yield

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



# Metal price exposure



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

## Managing the effects of metal price movements on earnings

Systematic hedging of transactional exposure

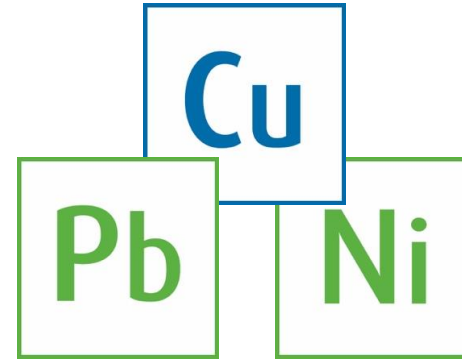
Depending on market conditions hedging of (part of) structural metal price exposure through contractual arrangements

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 2020

Leveraging **unique recycling technology** to treat high complex, PGM rich, materials

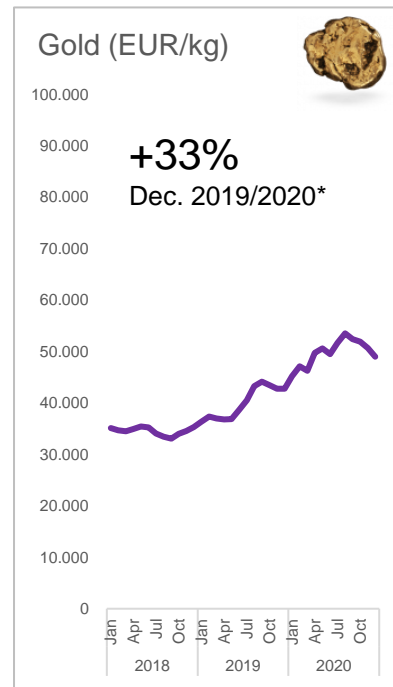
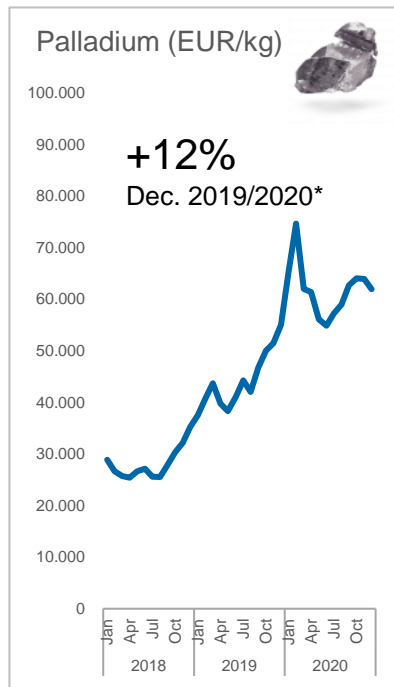
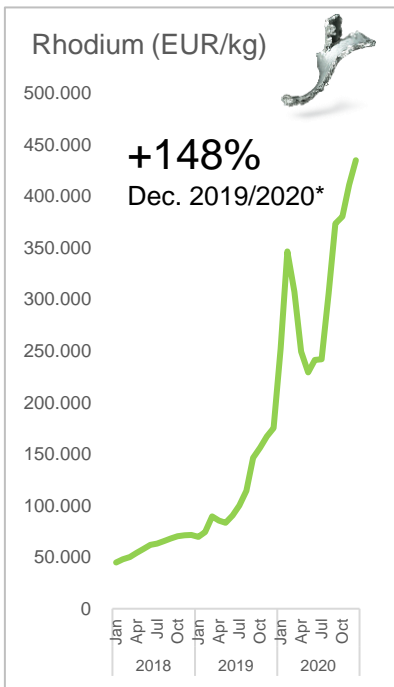
Launch of multi-year investment plan to **further improve robustness** of the Hoboken operations

Continued investments to sustain and improve the **environmental performance** of the plant



# Recycling FY 2020 performance

An exceptional metal price environment, in particular for rhodium



Historically high and volatile precious and PGM price levels in 2020, in particular for rhodium.

Rhodium price surged in H2 20 in a context of tight supply and high demand from the car industry as a result of increasingly stringent emission norms.

Current prices for precious and PGM metals already well above the average received prices in 2020.

Source: Umicore

\*Comparison of average metal rates December 2019 vs December 2020



# Recycling FY 2020 performance



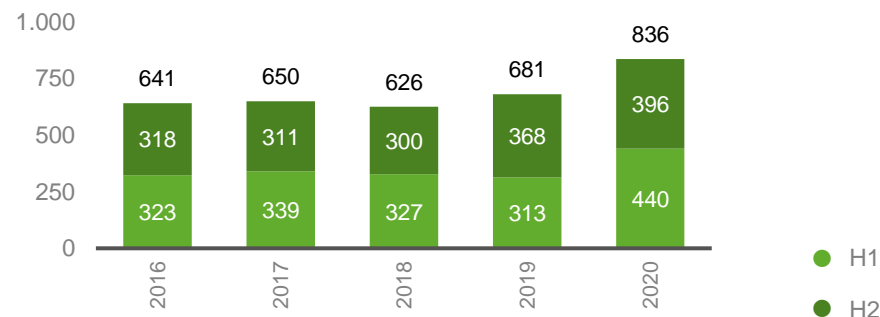
Revenues +23%; Adj. EBIT +92%; higher metal prices and to a lesser extent favorable trading conditions and supply mix

## Precious Metals Recycling

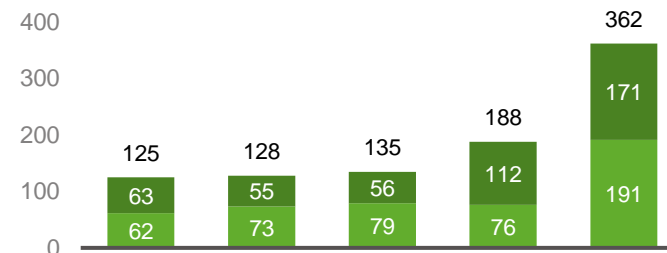
- Higher metal prices, particularly for PGMs
- Supportive supply environment
- Supportive trading conditions
- Higher processed volumes (vs. extended maintenance in '19)

Increased **Jewelry & Industrial Metals** revenues  
Substantial increase in earnings contribution from **Precious Metals Management**

### REVENUES



### Adjusted EBIT



million €



# Impressions



PMR Hoboken recycling plant, Belgium





# FY 2020 financial review

# Key figures FY 2020

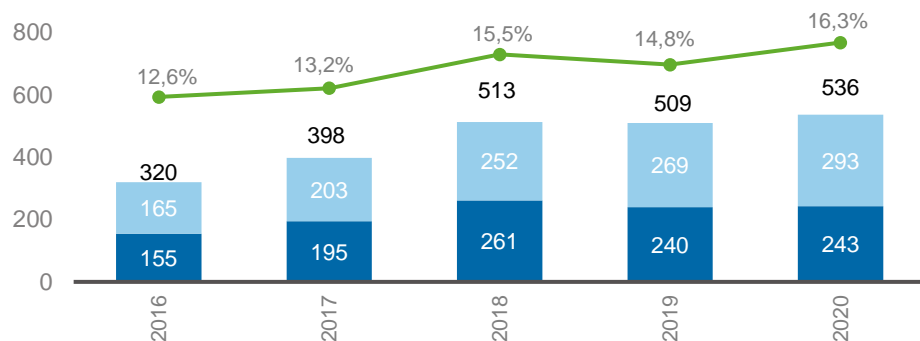
<b>REVENUES</b> <b>€ 3.2 bn</b> -4% YoY	<b>Adjusted EBIT</b> <b>€ 536 m</b> +5% YoY	<b>Free Operating Cash Flow</b> <b>€ 167 m</b> (- € 39 m in 2019) <b>Net debt at € 1,414 m</b> <b>Net debt / LTM Adj. EBITDA 1.76x</b>
<b>Adjusted NET PROFIT</b> (Group share) <b>€ 322 m</b> Adjusted EPS € 1.34 Proposed gross annual dividend of € 0.75 per share	<b>Adjusted EBITDA</b> <b>€ 804 m</b> +7% YoY	<b>CAPEX</b> <b>€ 403 m</b>
		<b>ROCE</b> <b>12.1%</b>

## Record earnings in unprecedented conditions

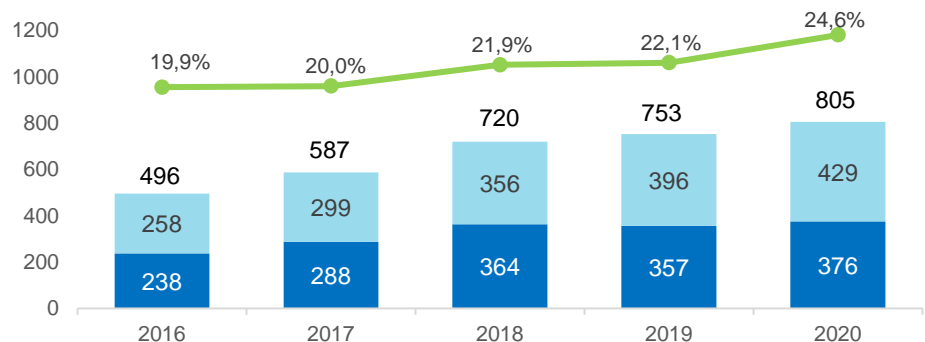
*Note: All references to revenues in this document refer to revenues excluding metals (all revenue elements – value of purchased metals)*

# Record Adj. EBIT(DA) and margins

## Adj. EBIT & Adj. EBIT margin



## Adj. EBITDA & Adj. EBITDA margin



Group, excluding discontinued activities, million €

## Record adj. EBIT (€ 536 m) and record adj. EBIT margin

Stellar adj. EBIT growth in Recycling more than offset decreases in Catalysis and E&ST.

Includes € 24 m higher D&A charges year on year from recent investments and acquisition.

Strong rebound in Catalysis with 2H adj. EBIT, up 34 % year on year.

Record adj. EBIT margin driven by higher metal margin in Recycling.

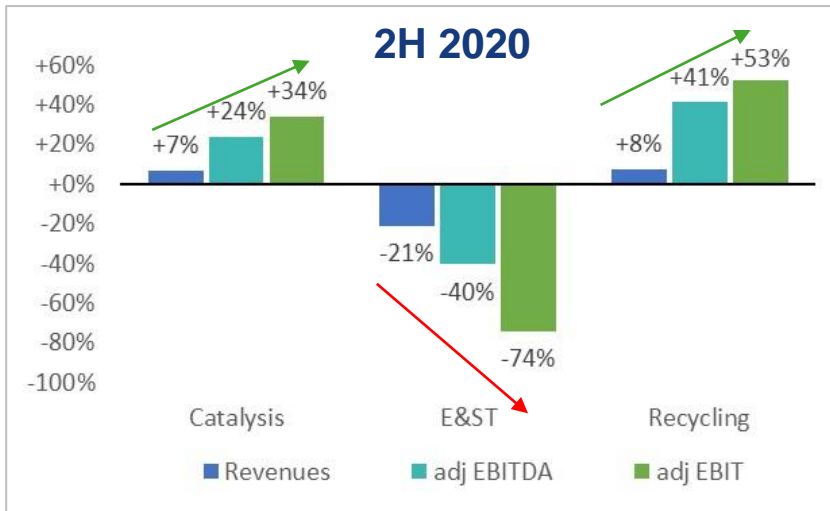
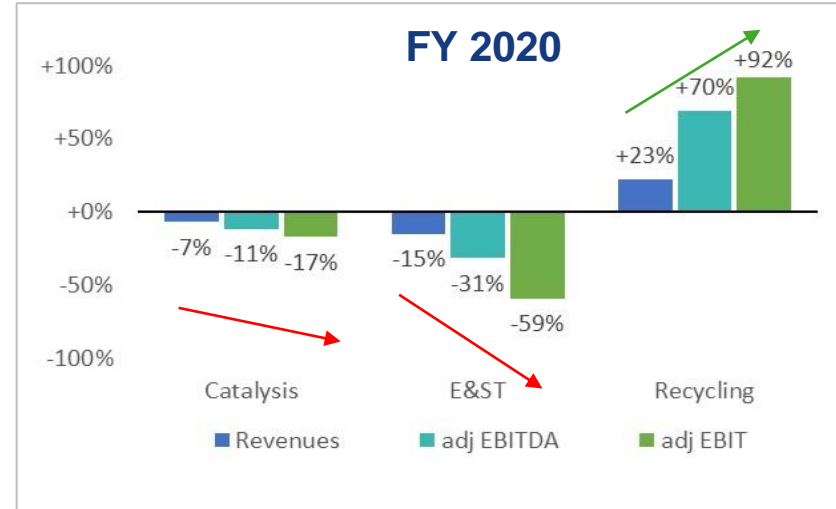
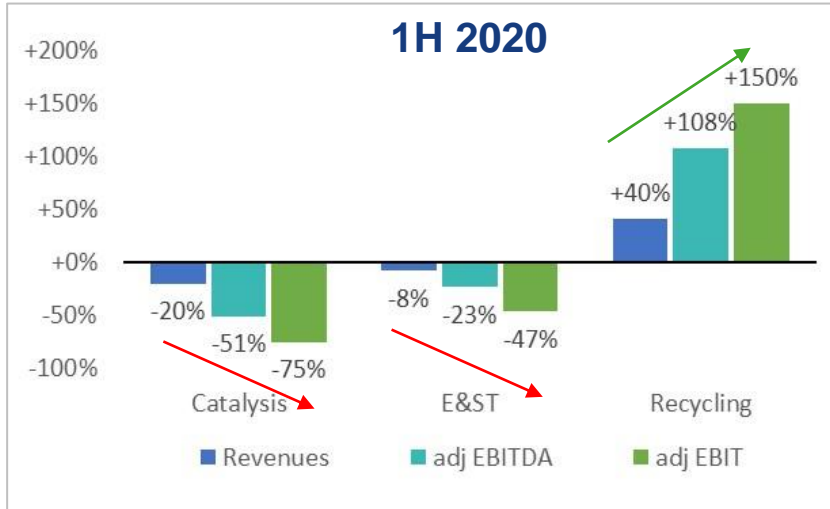
## Record adj. EBITDA (€ 804 m) and record adj. EBITDA margin

Strong operating cash flow with highest adjusted EBITDA contribution in history.

Adj. EBITDA up 7 % year on year vs + 5 % for adj. EBIT.

Adj EBITDA margins more resilient across business groups than adj. EBIT.

# Pronounced operating leverage effects

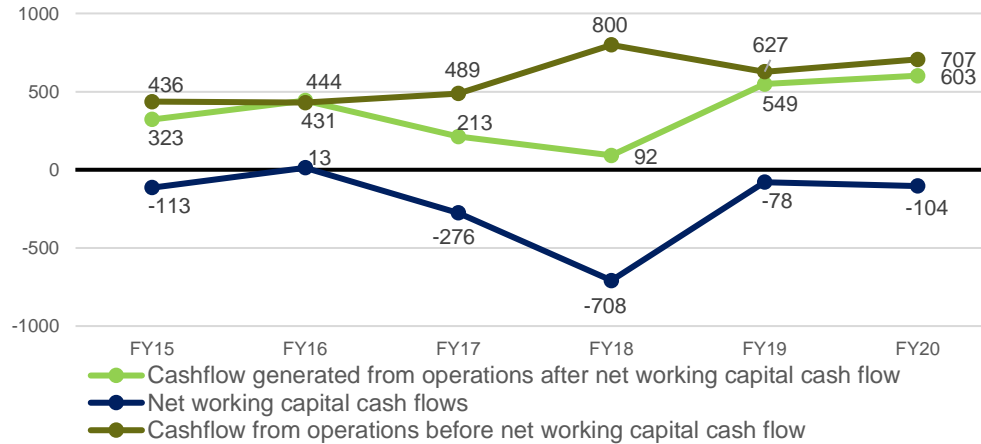


## Group (YoY delta in %)

	1H 2020	2H 2020	FY 2020
Revenues	-4%	-3%	-4%
Adj. EBITDA	+5%	+8%	+7%
Adj. EBIT	+1%	+9%	+5%

# Increase in free operating cash flows

million €, continued operations only



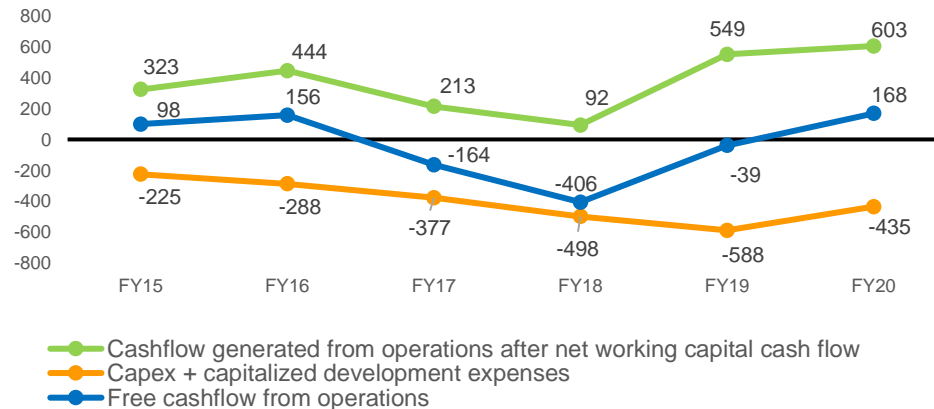
**Cash flow from operations before changes in working capital up 13 % at € 707 m**

Increase in cash working capital of € 104 m mostly driven by higher PGM prices

Cash working capital increase mostly in Catalysis (Recycling to a lesser extent); decrease in E&ST

Cash flow from operations after working capital up 10 % at € 603 m

million €, continued operations only



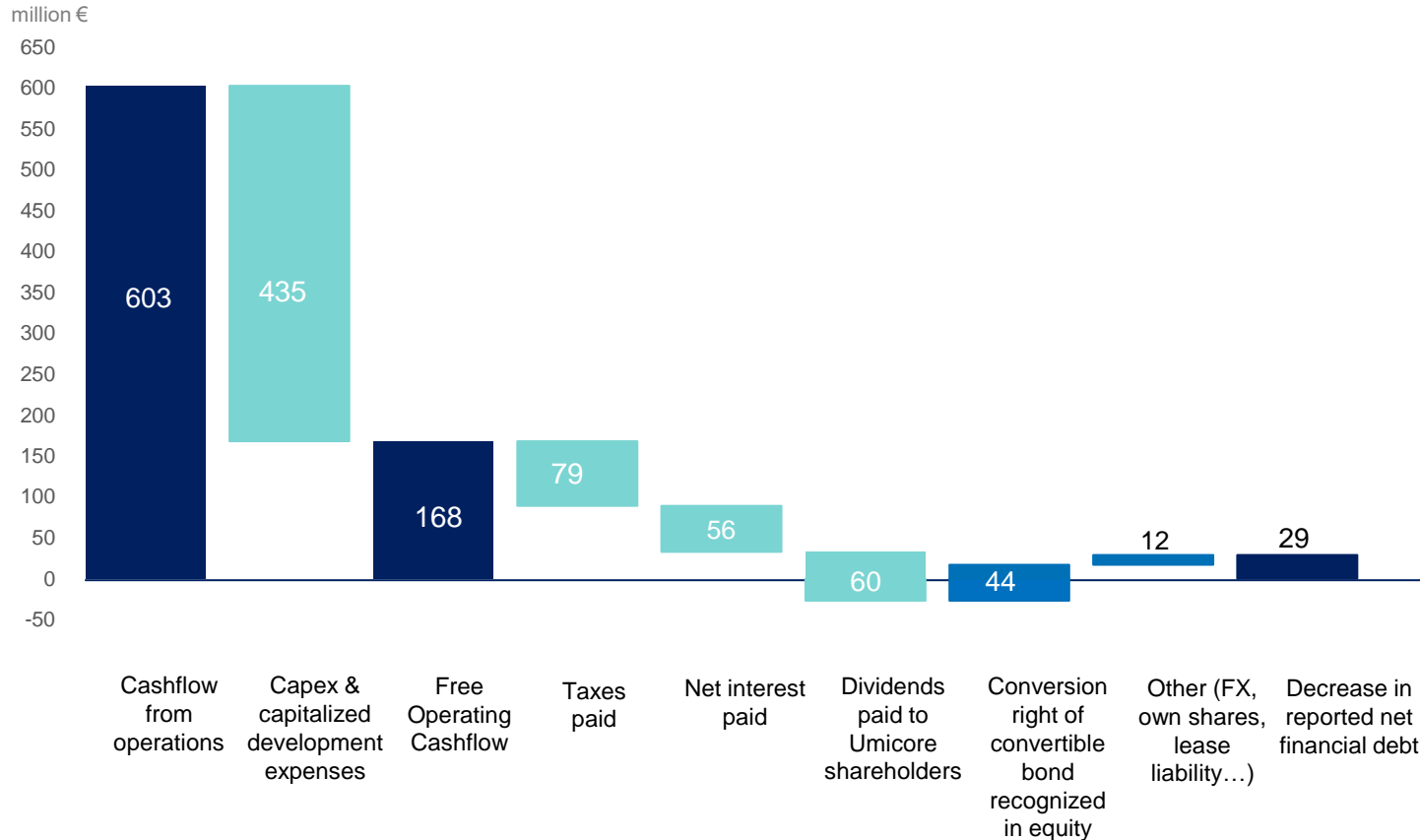
**Free cash flow from operations up from - € 39 m in 2019 to € 168 m**

Highest amount in recent years

Selective capex spending in view of market context (€ 403 m vs € 553 m in 2019)

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

# Net cash flow bridge



Free operating cashflow of € 168 million resulting in a € 29 million decrease in reported net debt

€ 44 million portion of convertible bond accounted for as equity

Dividend cash out of € 60 m limited to interim dividend payout in H2 20



# Outlook

## Umicore expects to achieve substantial growth in earnings in 2021, with growth in all business Groups

Given the current limited visibility, this outlook statement is made under the assumption that the ongoing COVID-19 outbreak would not result in additional material or protracted disruptions to the economy or Umicore's operations



### CATALYSIS

Further benefit from leading edge technology offering in gasoline applications for LDV in China and Europe

Initial impact of China VI legislation for HDD applications

Savings from footprint adjustments and cost improvements carried out in 2020



### ENERGY & SURFACE TECHNOLOGIES

Substantial growth in sales volumes of cathode materials for EVs

Persisting Chinese overcapacity and pricing pressure

Some € 50m increase in fixed costs in Rechargeable Battery Materials

Volume growth to result in meaningful Adj. EBIT growth, in line with current market consensus<sup>1</sup>



### RECYCLING

Favorable metal prices

Supportive supply mix and moderate volume growth in Precious Metals Refining

If current elevated metal price levels were to prevail throughout the year, Adj. EBIT would increase very significantly vs 2020

<sup>1</sup> Umicore has engaged Vara Research GmbH to survey brokerage analysts to provide analysts' consensus estimates to the market. The most recent consensus is available on <https://vara-services.com/umicore/>



# 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

- **Record earnings in 2020 despite challenging market context due to COVID-19, demonstrating the merits of the strategy building on complementary activities**
- **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 technology 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 ~7% of revenues in 2020)
- **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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