



umicore
materials for a better life

Umicore Investor Presentation

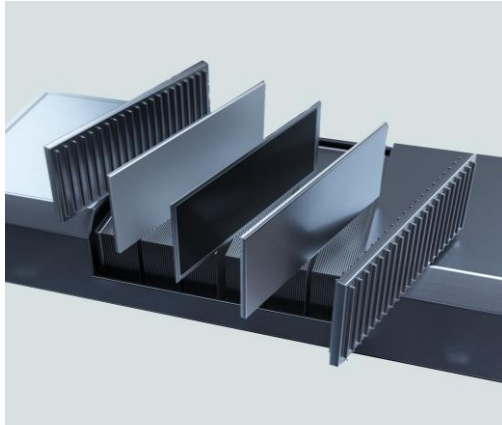
October 2021



Introduction to Umicore

Who we are

A global materials technology and recycling group



A global leader in automotive catalysts for internal combustion engines, hybrids and fuel cell powered vehicles



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

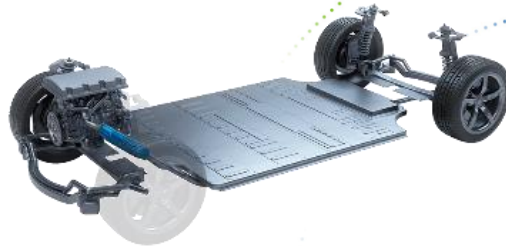


The world's leading recycler of complex waste streams containing precious and other valuable metals

Unique position in clean mobility materials

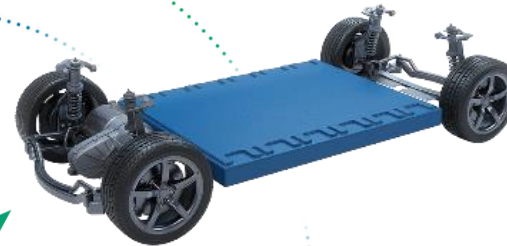
**Internal
Combustion
Engine**

Emission control
catalysts



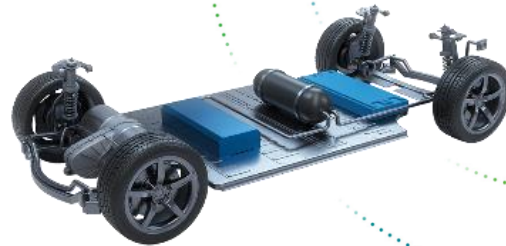
**Full Electric
Vehicle**

Battery cathode
materials



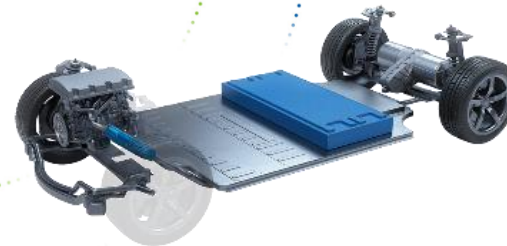
**Fuel Cells
Vehicle**

Electro-catalyst and
battery cathode
materials



**Plug-in Hybrid
Electric Vehicle**

Battery cathode materials
and emission control
catalysts



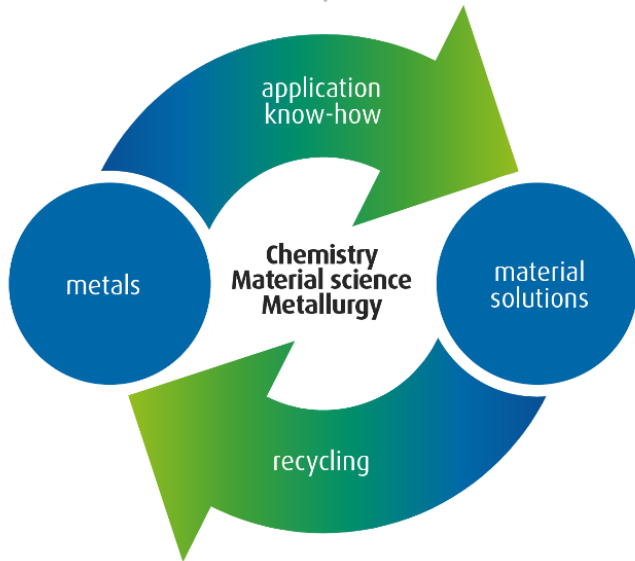
Built on sound foundations

A longstanding leader in sustainability

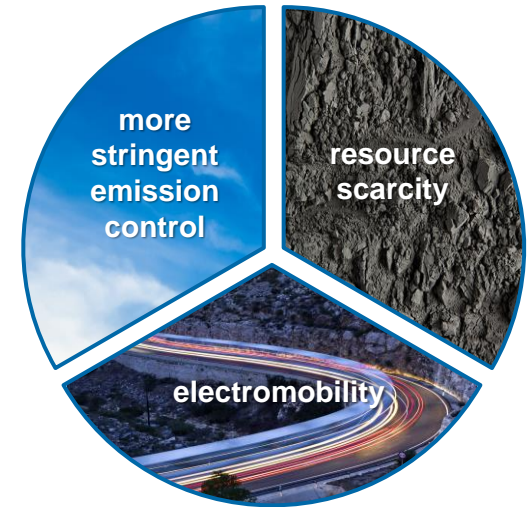
Unique business model

Industry leader in sustainability

Supportive megatrends



Net Zero GHG. Zero regrets.
Endless possibilities.



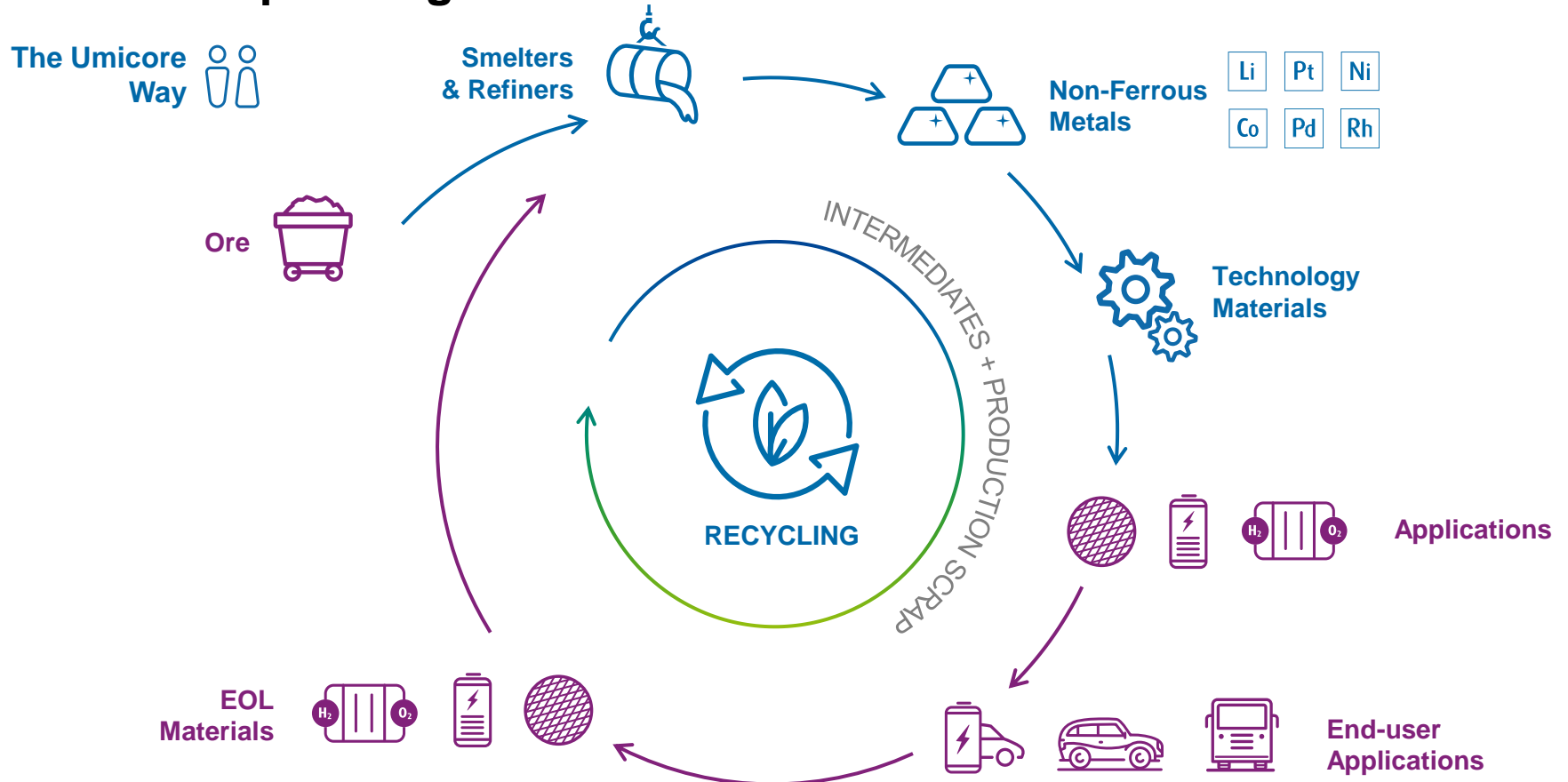
A global leader in recycling

Recovering over 20 metals, offering the highest metal yields



Closing the loop

With a unique integration in the value chain



Our mission

Materials for a better life



Over 20 years of sustainability leadership

Delivering solutions to tackle pressing societal challenges
in clean mobility and circular economy

Safeguarding our planet's precious resources by
reducing the use of primary materials

Setting new industry benchmarks through our
technology and innovation

Our strategic approach

is supported by



Unique business model & complementarity of activities

Early strategic positioning in the markets we serve

Strong commitment to innovation

Solid financial structure



Clear leadership in clean mobility materials and recycling

Setting new industry standards in sustainability



Our Group structure



CATALYSIS

Automotive Catalysts
Precious Metals Chemistry
Fuel Cell & Stationary Catalysts



ENERGY & SURFACE TECHNOLOGIES

Rechargeable Battery Materials

Cobalt & Specialty Materials
Metal Deposition Solutions
Electro-Optic Materials



RECYCLING

Precious Metals Refining
Precious Metals Management

Jewelry & Industrial Metals

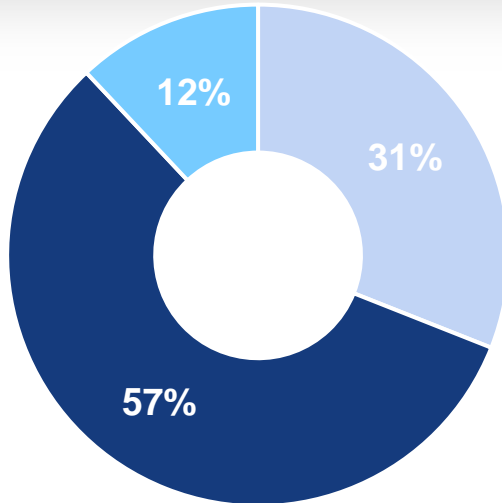
Key figures H1 2021

Revenues
€ 2.1 bn

Adjusted EBIT
€ 625 m

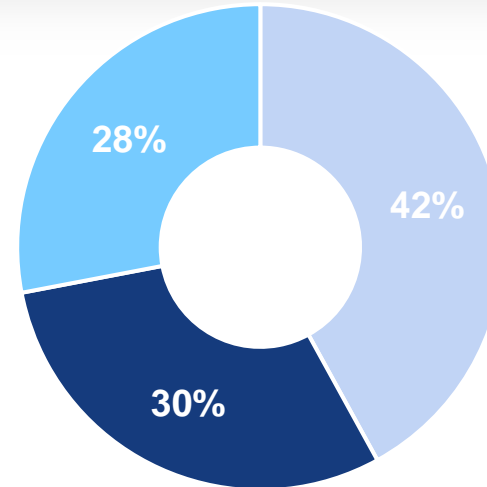
Adjusted EPS
€ 1.78/share

R&D spend
€ 118 m



Adjusted EBIT by

- Energy & Surface Technologies
- Recycling
- Catalysis

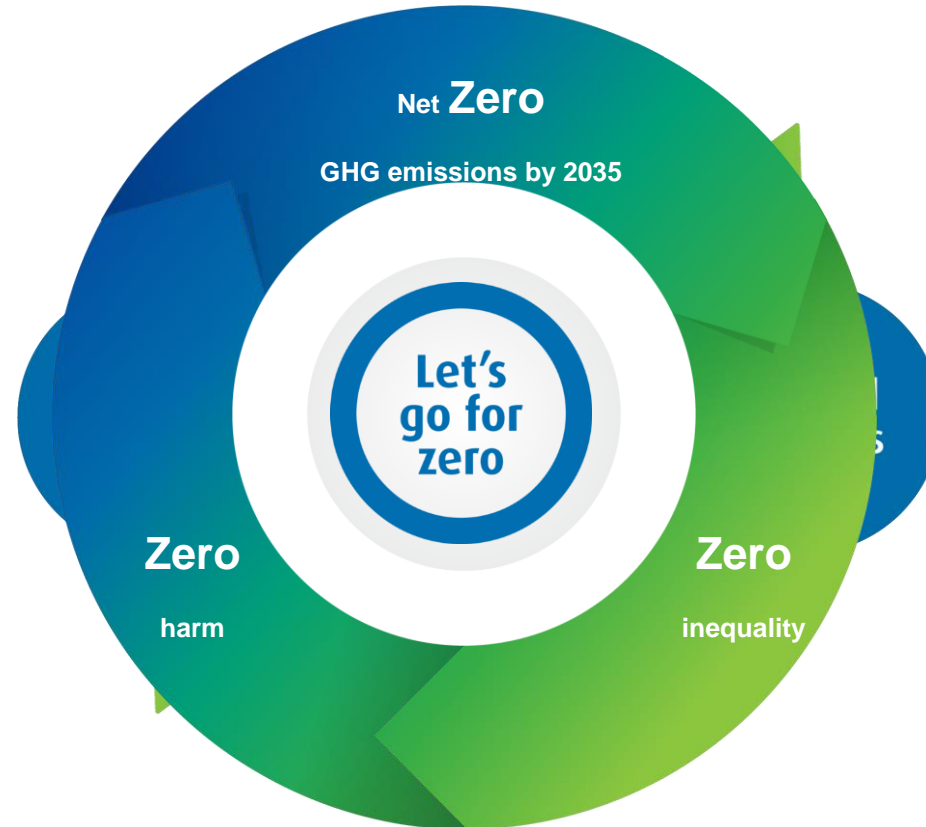


Revenues by

- Energy & Surface Technologies
- Recycling
- Catalysis

We continue to be a leader in sustainability

Broader, bolder, faster, better



Net Zero GHG. Zero regrets.
Endless possibilities.

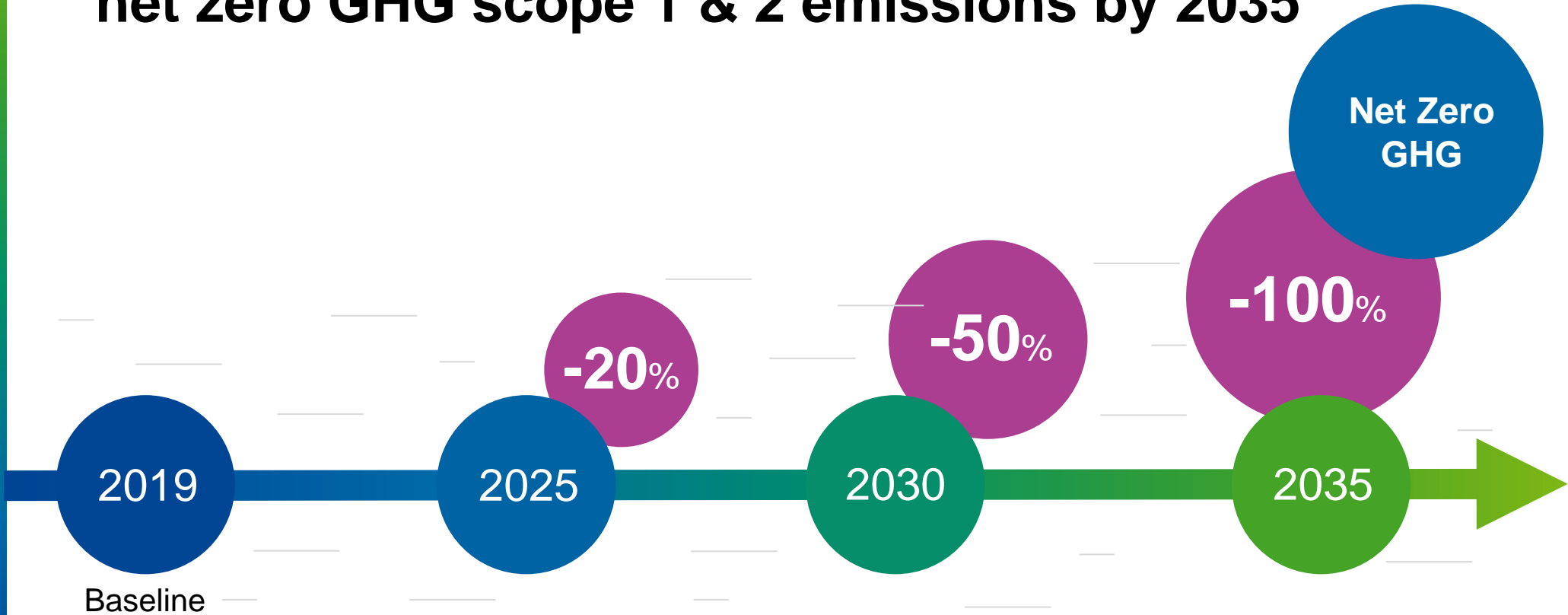
Net zero

GHG

by 2035

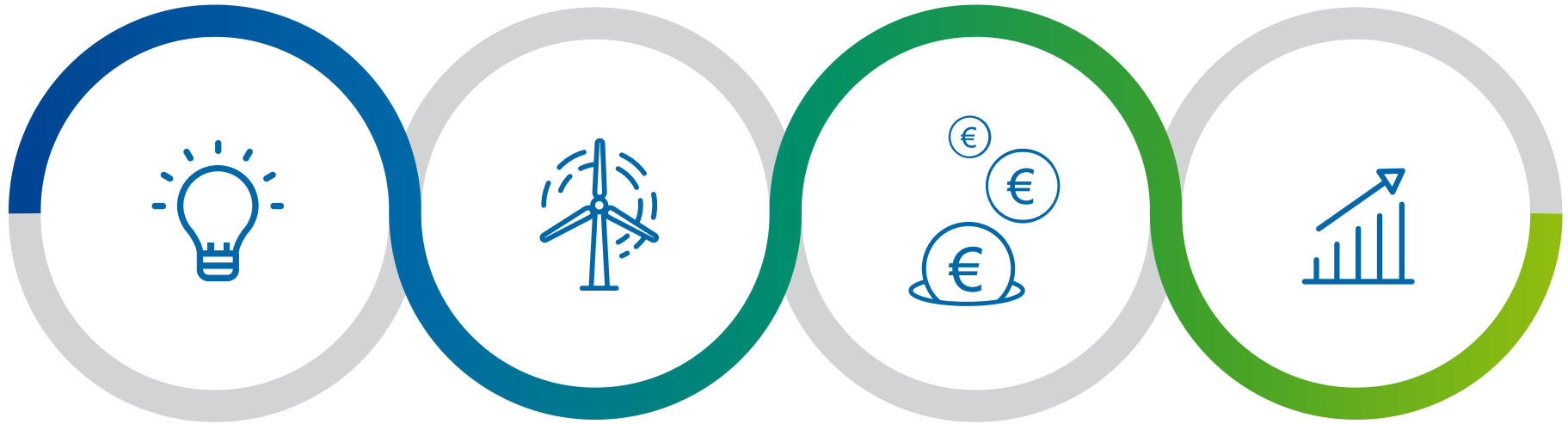


Our ambitious commitment: net zero GHG scope 1 & 2 emissions by 2035



Net zero GHG emissions by 2035

Powered by



**Innovation & strategic
collaboration**

**Renewable
electricity**

**Energy and
process efficiency**

**Carbon Neutral
growth**

Carbon neutral growth

CASE STUDY

Rechargeable Battery Materials manufacturing plant in Poland: carbon neutral as of start of production in 2021

- Cathode manufacturing: intense scope 2 activity
- Availability of low-carbon electricity supply key criteria in selection of location for Umicore's first cathode production plant in Europe
- Use of wind, hydro and photovoltaic energy
- In addition, continuous focus on process and energy efficiency
- Strong example for other expansion projects within Umicore

**Net zero GHG
strategy
includes:**

Organic expansions and M&A:
net zero GHG emissions key criterion
in all project assessments

Zero

harm



Managing our impact with care

Continue our commitment to significantly reduce our emissions



-25% diffuse
emissions
by 2025
(vs 2020)

Continuous
improvement
on metal
emissions

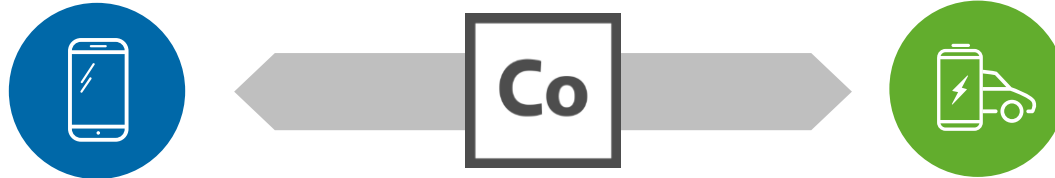
Caring for safety and wellbeing at work



Pioneering approach

Over 15 years of sustainable & ethical sourcing

Umicore was the first company ever to receive
third-party validation
for its cobalt due diligence practices



Co-founding member of the **Global Battery Alliance** and co-initiator and first contributor to the **Fund for the prevention of child labor in mining communities**

Zero

Inequality



Diversity of thought to keep us ahead



WHERE
WE ARE
TODAY

10,859

Group employees in 2020

23%

Women in management
in 2020

20%

Non-Europeans in senior
management in 2020

74

nationalities

WE
GO FOR

Gender parity in management as soon as possible with **35%** women in management by 2030

Increased non-European representation in management teams by 2025

Measuring and disclosing **Pay Equality**



Let's go for zero

Net Zero GHG. Zero regrets.
Endless possibilities.



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.



Precious Metals Chemistry

Develops and produces metal-based catalysts used in chemistry, life sciences and pharmaceutical applications.



Fuel Cells & Stationary Catalysts

Combines Umicore's fuel cell catalyst activities and smaller stationary catalyst activities (marine, power generation, ...) building on a strong technology portfolio.





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

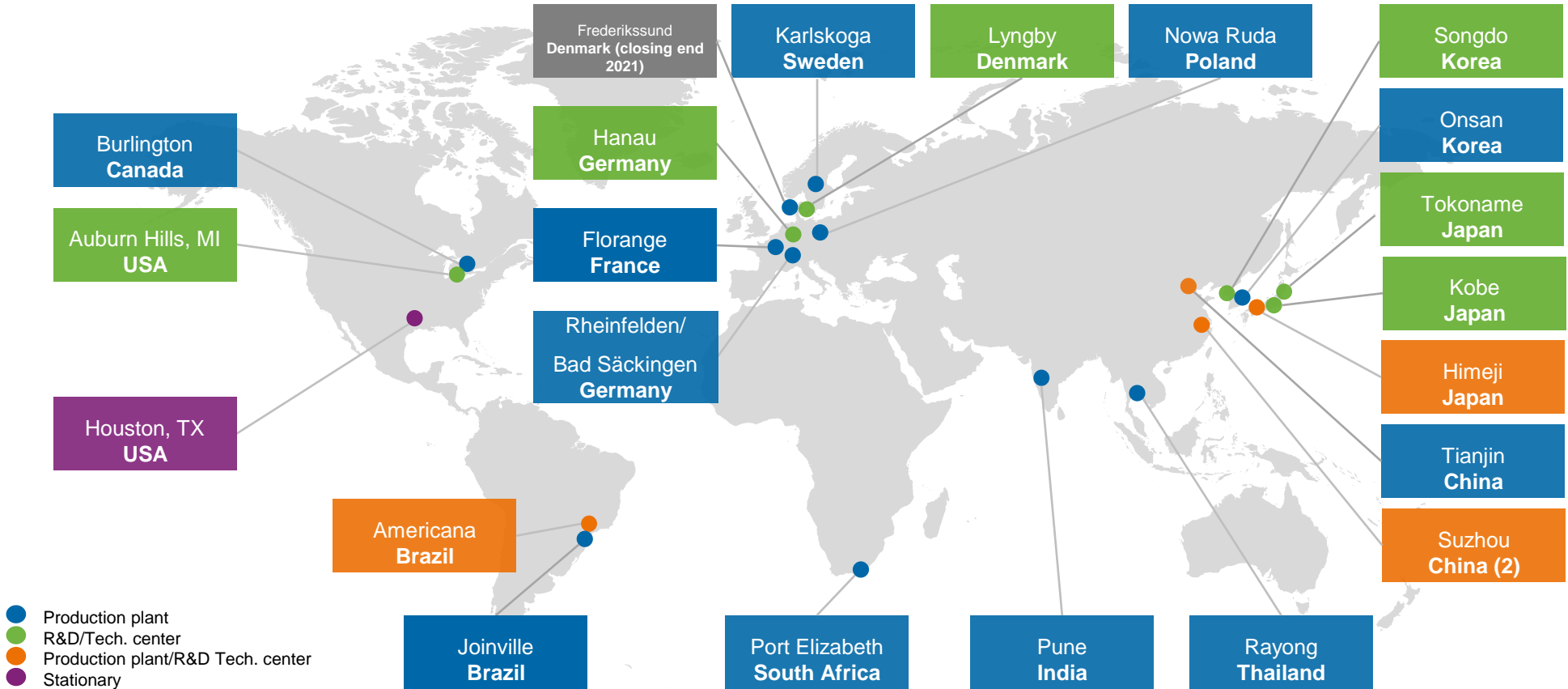




Automotive Catalysts Production Footprint



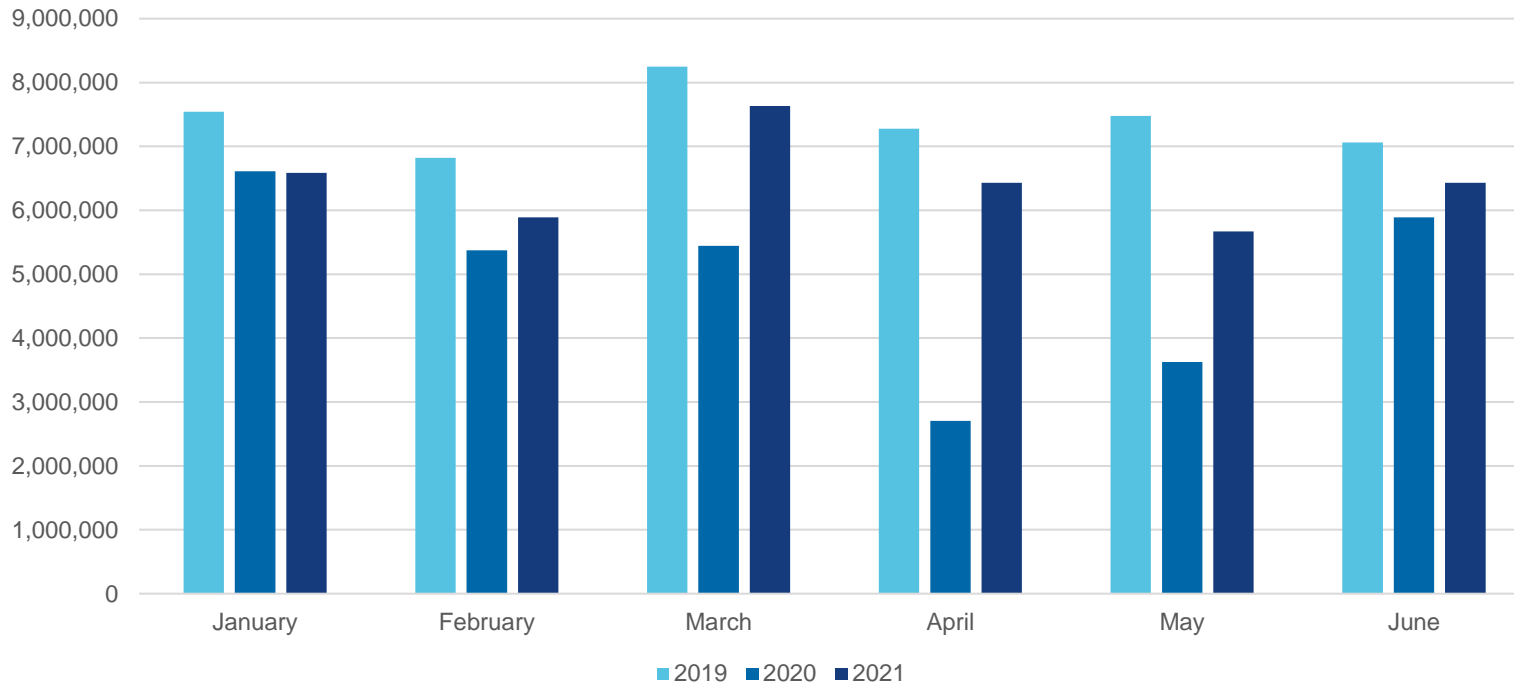
17 plants in 14 countries, 9 R&D / tech. centers in 7 countries



Auto industry recovering from COVID-19



Monthly global passenger car production across all powertrains (source: IHS & Umicore - 19/07/2021)



H1 2021 global car production +30% vs H1 2020

H1 21 global car production still 13% below pre-COVID H1 2019 levels

First signs of slowdown in Q2 reflecting impact from semi-conductor shortages



Catalysis H1 2021 performance

Revenues +59% and adj. EBIT +853%



Automotive Catalysts

Strongly outperforming recovering car market in key regions

Further market share gains and favorable platform mix in LDV, esp. in Europe and China

Strong demand for China V HDD catalysts

Cost savings and production footprint optimization

Precious Metals Chemistry

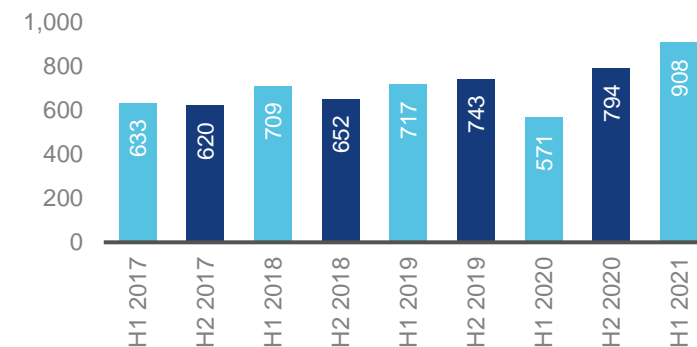
Strong demand for homogenous catalysts and exceptional PGM environment

Fuel Cell & Stationary Catalysts

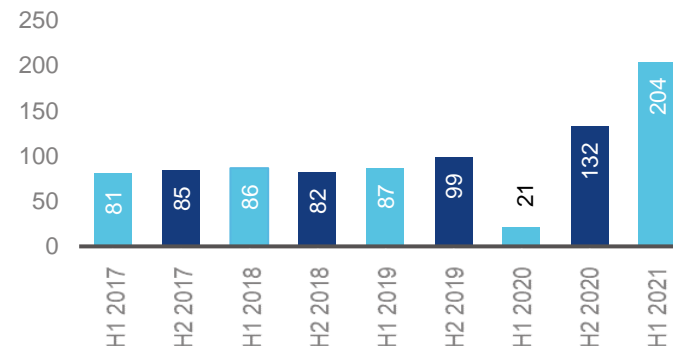
Doubling of PEM fuel cell catalysts sales volumes driven by strong demand from existing customers and customer wins in China

Substantially lower sales of stationary catalysts

REVENUES



Adjusted EBIT





Impressions



Catalyst elements



Test bench



Bad-Säckingen plant AC, Germany



Canned catalyst



Installation stationary DNOx catalyst



Nowa Ruda plant AC, Poland



Catalysis

Unique position in Catalysts

Strong growth drivers:

Increasing uptake of fuel cell drivetrains and attractive growth opportunities in the hydrogen economy

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

Significant value uplift especially in gasoline catalysts. Increasing share of gasoline platforms in the global mix

Accelerating demand for Umicore's catalysts used in fuel cell vehicles. R&D and production capacity in Germany and Korea;

R&D program and joint development agreements to establish future success in PGM-catalysts for hydrogen storage/release and green electrolysis

Umicore emission control catalysts **best positioned** to capture growth in growing gasoline segment

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



Business Group Overview

Energy & Surface Technologies



Energy & Surface Technologies



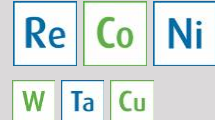
Rechargeable Battery Materials

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



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).



Metal Deposition Solutions

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

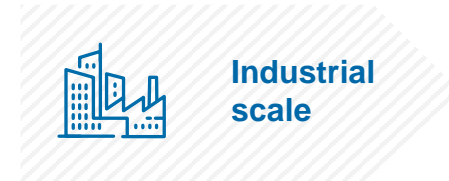
Wide spectrum of cathode material technologies

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

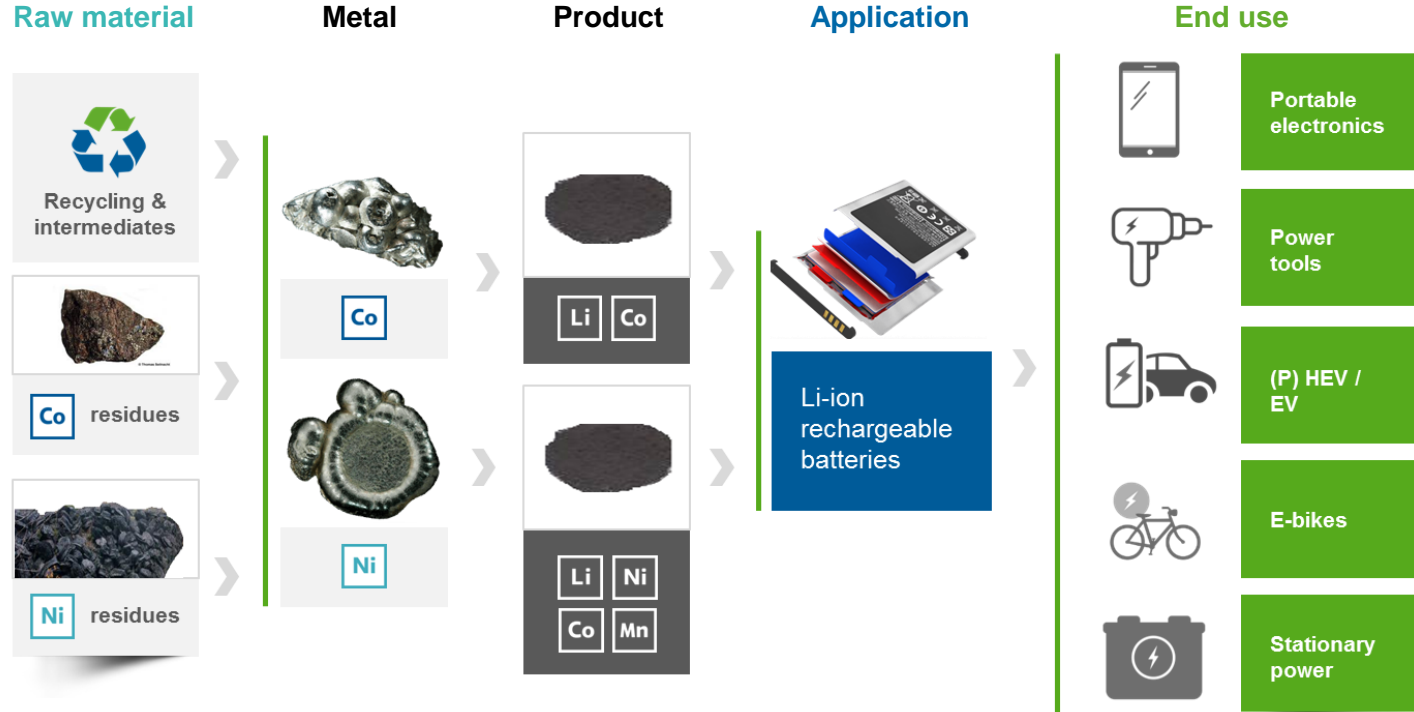


Expansion projects timeline



Access to raw materials

Unique integration in the value chain



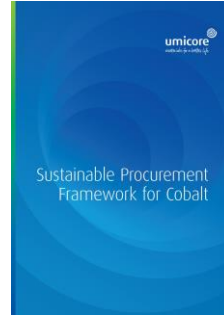
Umicore Flexibility in supply feed, high speed to market and responsiveness to customer needs

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 H1 2021 performance

Revenues +7% and adj. EBIT +44%

Rechargeable Battery Materials

Substantial increase in cathode materials volumes primarily for the European EV market, both YoY and sequentially

Lower contribution from cobalt refining activities

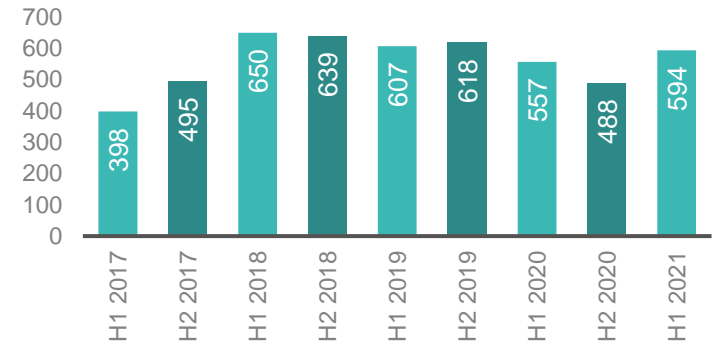
Higher fixed costs (recent and ongoing expansions; R&D)

Cobalt & Specialty Materials benefiting from a continued post-COVID-19 recovery in demand, especially for cobalt and nickel chemicals and tool materials

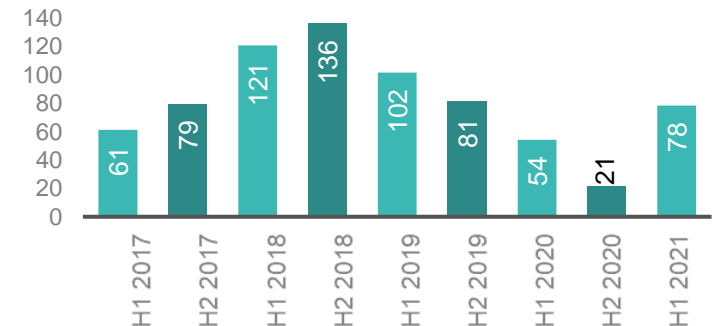
Metal Deposition Solutions benefiting from strong demand across key end markets

Stable revenues for **Electro-Optic Materials**

REVENUES



Adjusted EBIT





E&ST H1 2021



Commissioning of cathode materials plant in Nysa, Poland



First industrial scale cathode materials production plant in Europe

Commissioned end of H1 2021 with initial commercial production volumes expected around year-end

Carbon neutral as of start of production with 100% green power supply

Closing of long-term PPA with Engie for the supply of renewable electricity to Nysa

Impressions



EV car battery pack



Packaging finished product



RBM Cheonan production sites, Korea



Energy & Surface Technologies



Unique position in Rechargeable Battery Materials for EVs

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



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



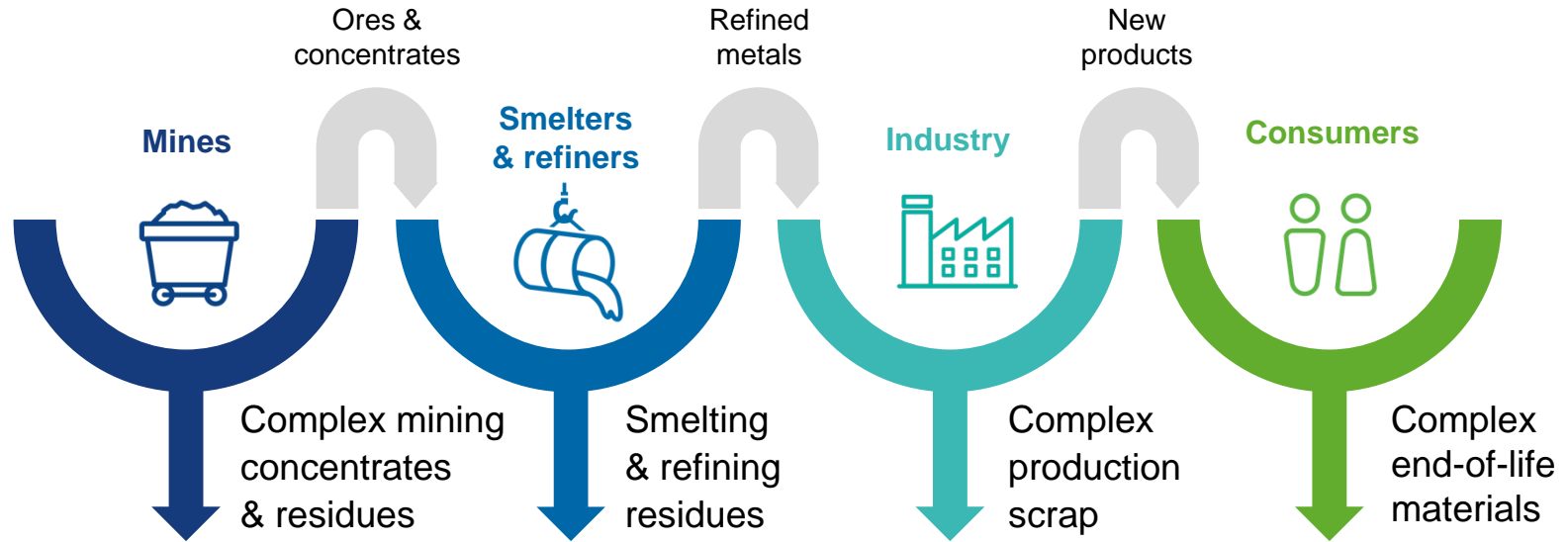
Leading refiner of 17 different metals



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

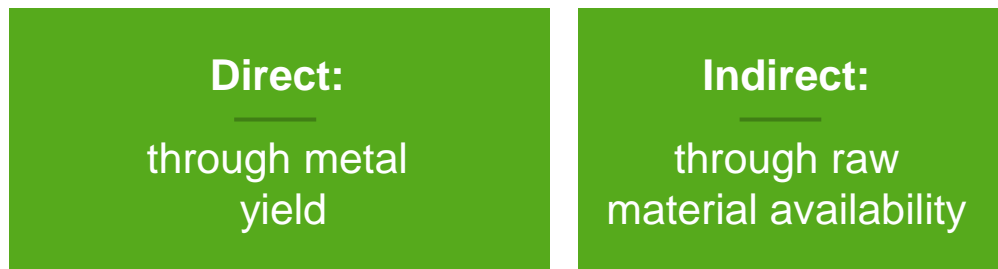
Treatment charges are determined, among other criteria, by the complexity of the materials

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

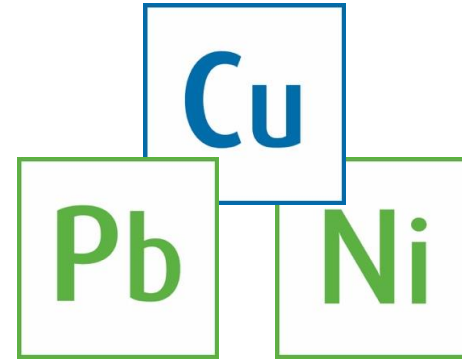
Depending on market conditions hedging of (part of) structural metal price exposure through contractual arrangements

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

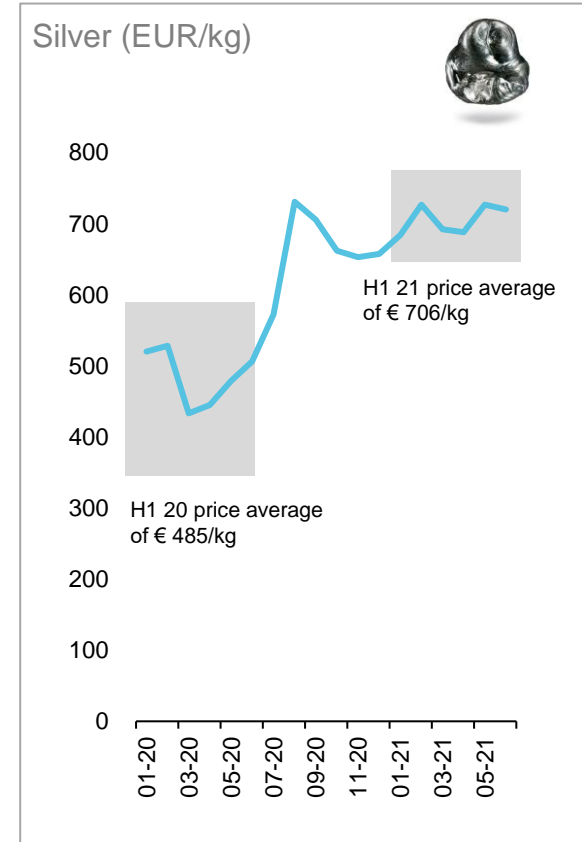
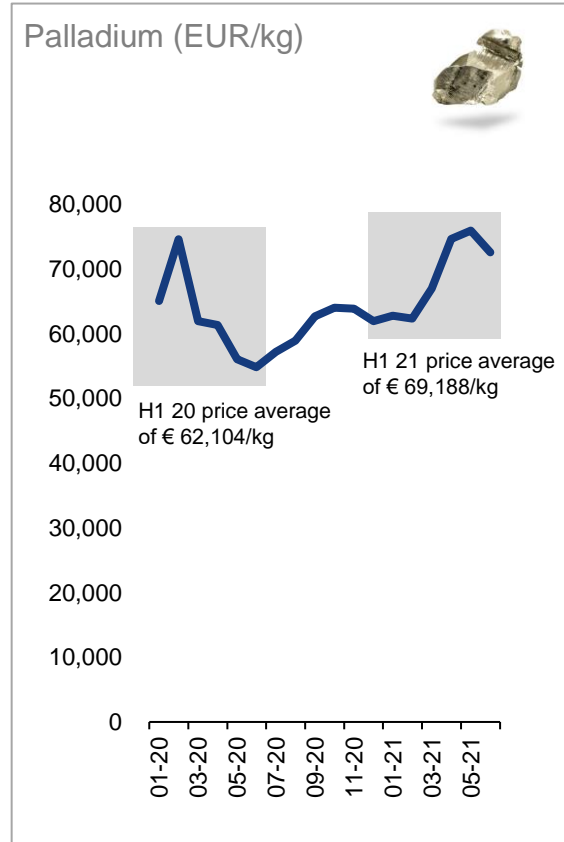
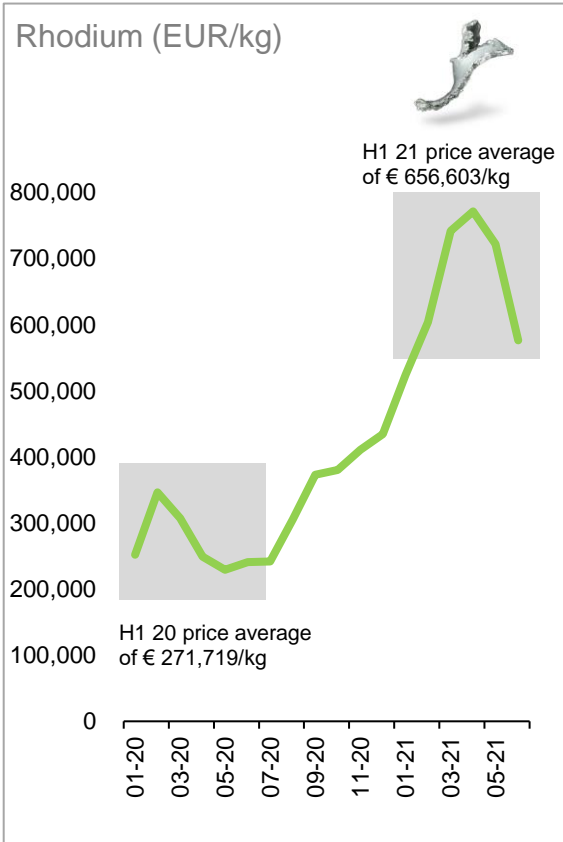
Ability to optimize feed and therefore profitability

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



Exceptionally high and volatile precious metals prices, in particular rhodium





Recycling H1 2021 performance

Revenues +48% and adj. EBIT +94%

Precious Metals Refining

Record precious metals prices

Excellent supply and trading conditions

Strong demand across end-markets and regions

Robust operational performance and optimal capacity use;
volumes in line with high levels of H1 20

Jewelry & Industrial metals

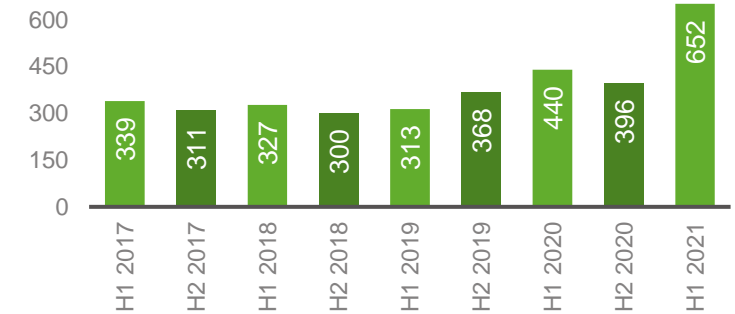
Strong uplift in demand for investment and jewelry products

Higher demand for platinum engineered materials

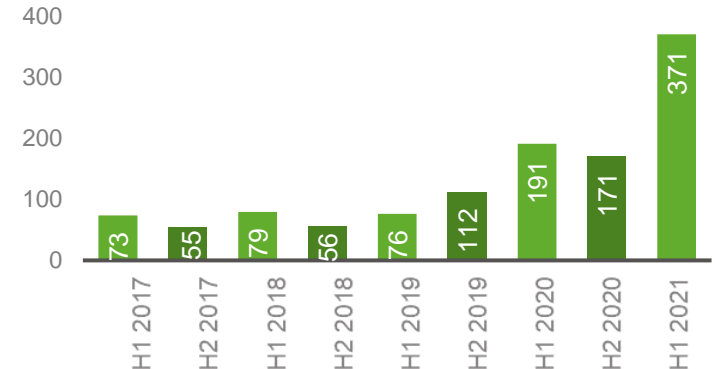
Precious Metals Management

Significantly higher earnings contribution due to favorable trading conditions

REVENUES



Adjusted EBIT





Impressions



PMR Hoboken recycling plant, Belgium



Recycling

Unique position in Recycling

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**



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**



Financial review H1 2021

Key figures H1 2021

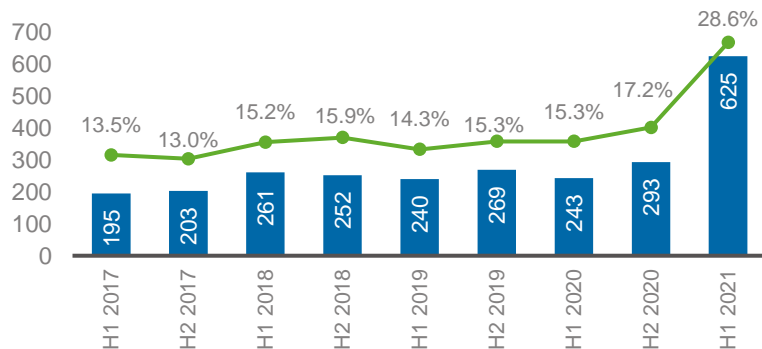
REVENUES € 2.1 bn +37% YoY	Adjusted EBIT € 625 m +157% YoY	Free Operating Cash Flow € 656 m Net debt at € 1,040 m Net debt / LTM Adj. EBITDA 0.87x
Adjusted NET PROFIT (Group share) € 428 m Adjusted EPS € 1.78 Interim dividend of € 0.25 per share	Adjusted EBITDA € 762 m +103% YoY	CAPEX € 166 m
		ROCE 28.4%

Strong performance across business groups driving record results

Outstanding Adj. EBIT(DA) and margins

Driven by demand recovery and exceptional metal price environment

Adj. EBIT & Adj. EBIT margin



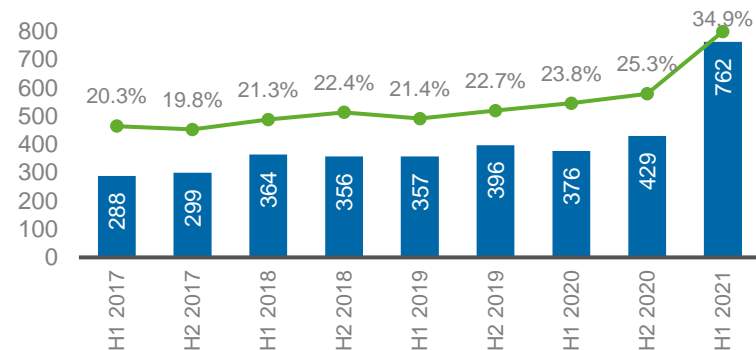
Adjusted EBIT at € 625 million, up 157% compared to H1 20, which was severely impacted by COVID-19 pandemic

Recovery in underlying demand

Strong boost from record precious metal prices

Cost saving benefits

Adj. EBITDA & Adj. EBITDA margin



Adjusted EBITDA at € 762 million, doubling compared to H1 20

Slight increase in adjusted Group D&A

Higher margins across Business Groups, particularly in Recycling and Catalysis

Full P&L

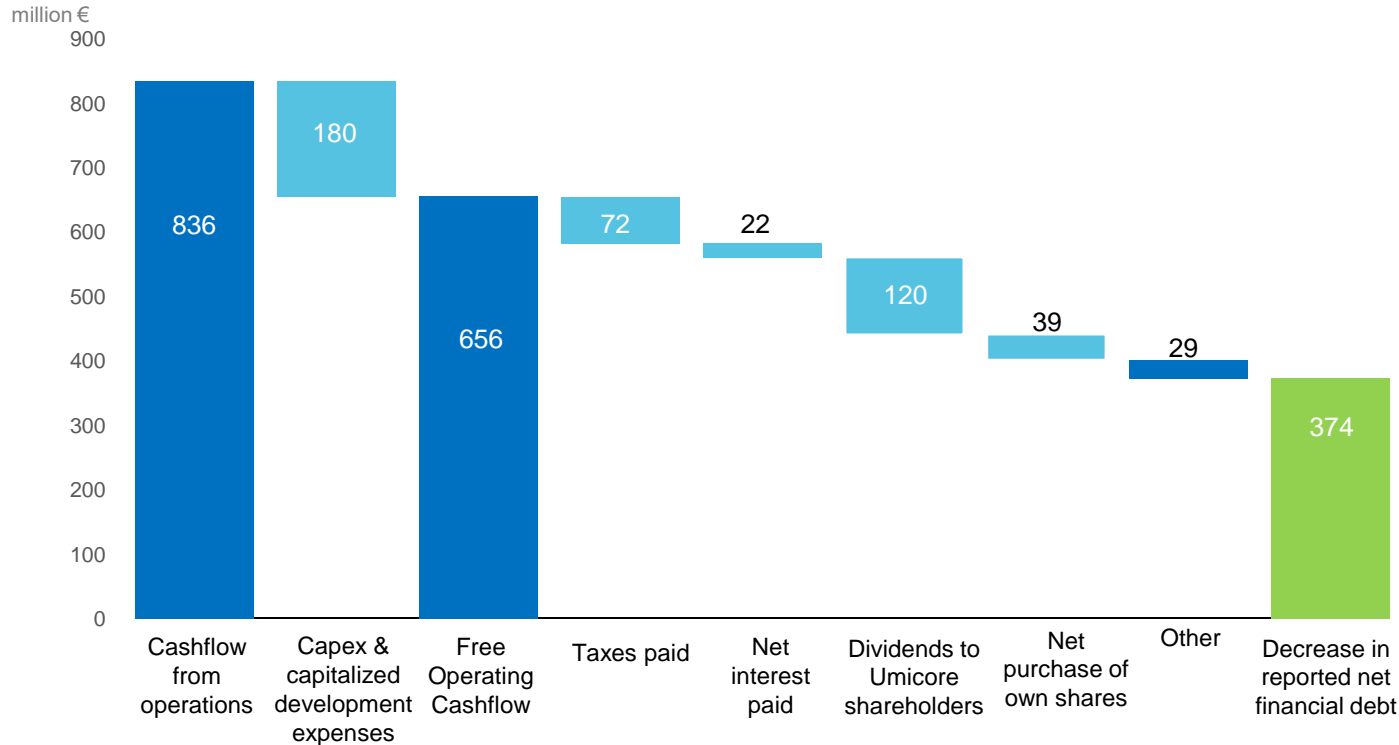
Million €	H1 2020	H1 2021
Adjusted EBIT	243	625
- Net finance cost	(45)	(52)
- Adjusted Tax	(47)	(140)
Adjusted net result	151	433
- Minorities	(3)	(5)
Adjusted net result Group share	148	428
<i>Adjusted EPS</i>	<i>0.62</i>	<i>1.78</i>
Adjustments to net result Group share	(57)	(28)
Net result Group share	91	400

Substantial increase in Adj. net Group result and Adj. EPS, reflecting strong Adj. EBIT increase

Increase in adjusted net financial cost due to higher interest and forex charges.

Substantially higher adjusted tax charges tracking the higher taxable profit with stable effective adjusted Group tax rate (24.9%)

Net cash flow bridge

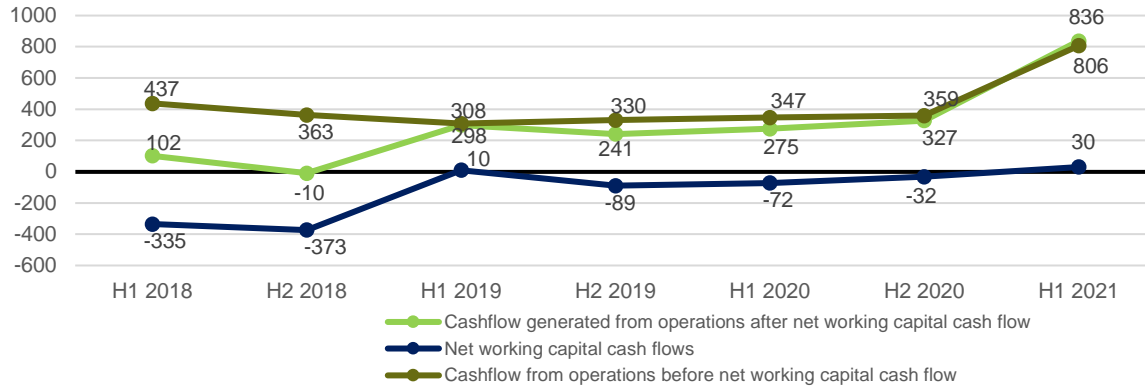


Free operating cashflow of € 656 million, including € 30 million working capital reduction, driving a € 374m decrease in reported net financial debt

Combined cash out of € 214 million related to net interest charges, taxes and dividend

Free operating cash flow at record level

million €, continued operations only

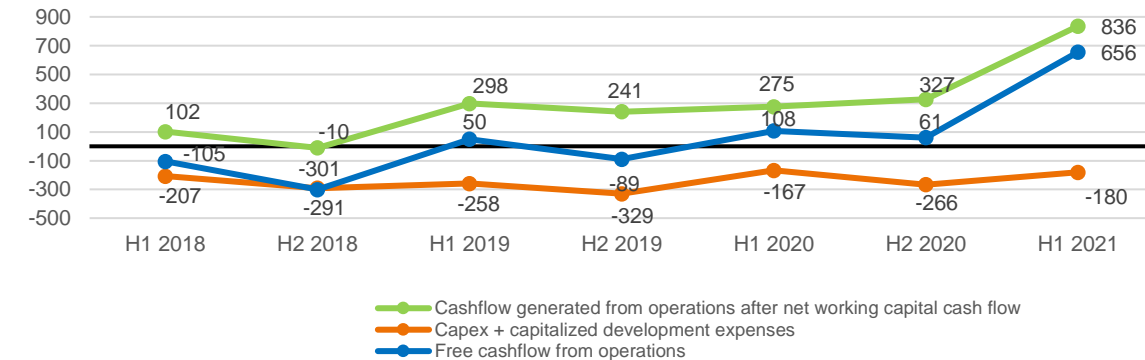


Cash flow from operations after changes in working capital tripled to a record € 836 million

Decrease in cash working capital of € 30 million, including positive cut-off effects of appr. € 250 million end of June

Cash working capital increase in Catalysis more than offset by a decrease in E&ST and Recycling

million €, continued operations only



Free cash flow from operations substantially up to € 656 million

Capex and capitalized development expenses increased to € 180m year on year and were concentrated in E&ST.

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

Adjustments to EBIT

million €	H1 2020	H2 2020	H1 2021
Restructuring-related	(31)	(97)	(10)
Selected asset-impairments	(31)	(14)	(17)
Environmental	(1)	(55)	(42)
Other	(9)	1	30
Total EBIT adjustments	(72)	(165)	(39)
Adjusted tax result	14	30	5
Financial result	-	-	6
Adjusted minority result	(1)	3	-
Net adjustments (Group Share)	(58)	(134)	(28)

- € 39 million EBIT adjustments :

- Additional Hoboken green zone provision of € 41 million
- - € 24 million adjustment related to closure of HDD plant in Frederikssund (Denmark) and impairment of related IP
- € 32 million positive adjustment related to a tax credit in Brazil
- Net result impact after tax : - € 28 million



Outlook

Guidance for full year 2021 slightly revised

Umicore revises slightly its full year 2021 outlook and now expects adjusted EBIT to *approach* € 1 billion. This compares to the previous expectation of adjusted EBIT *slightly exceeding* € 1 billion as communicated on 30 July and reflects the recent decline in PGM prices, as well as a stronger than anticipated impact of the global semiconductor shortage on car production.

Despite this more challenging market context, Umicore remains fully on track to deliver an outstanding performance in 2021. This outlook is based on current¹ metal prices and visibility. It assumes no material further degradation of the semiconductor supply situation and incorporates rising transportation costs and higher energy prices.

¹ "Current" refers to the date of the press release publication i.e., 18 October 2021.

Guidance for full year 2021 slightly revised



CATALYSIS

2021 adj. EBIT expected to more than double compared to 2020¹

Despite a more severe chip shortage impact on car production in H2 than anticipated in July, Umicore confirms that it will still outperform the car market for the full year due to a favorable platform mix and market share gains in light-duty gasoline technologies, particularly in Europe and China.



ENERGY & SURFACE TECHNOLOGIES

2021 adj. EBIT expected to grow meaningfully and expected to be in line with current market consensus²

Demand for NMC cathode materials reflecting EV production and qualification adjustments due to chip shortage.

Umicore volumes of cathode materials for H2 impacted but total volumes for 2021 still expected to well exceed the level of the previous year.

Commercial production in the greenfield cathode materials plant in Nysa, Poland is postponed to the second quarter of 2022

On a segment level, impact in RBM offset by a stronger than anticipated H2 in CSM



RECYCLING

2021 adj. EBIT expected to reach exceptional levels, well above last year, albeit slightly below current market consensus³

Assuming current³ metal prices prevail throughout remainder of the year

Further decline in PGM prices, in particular rhodium and palladium, compared to the levels taken into account for the guidance communicated at the end of July.

Planned maintenance shutdown of the Hoboken smelter in H2

¹ Catalysis adjusted EBIT reached € 154 million in 2020;

² Consensus adjusted EBIT for Energy & Surface Technologies stood at € 134 million at the time of publication i.e., 18 October 2021

³ Recycling adjusted EBIT amounted to € 362 million in 2020. Consensus adjusted EBIT for Recycling amounted to € 616 million at the time of publication i.e., 18 October 2021. "Current" also refers to this date



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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