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.
Introduction to Umicore
Who we are

We deliver sustainable solutions to address global megatrends

Our products and services accelerate global mobility transformation, cater for the growing need for advanced materials and enable even greater circularity for critical metals

We are the leading circular materials technology company fulfilling its mission to create sustainable value through materials for a better life
A global supplier, locally

- **COLLEAGUES**: 11,050
- **PRODUCTION SITES**: 46
- **R&D | TECHNICAL CENTERS**: 15

**Regions**
- **North America**: 688 colleagues, 10 production sites, 1 R&D center
- **Europe**: 6,220 colleagues, 18 production sites, 7 R&D centers
- **Asia / Pacific**: 3,323 colleagues, 12 production sites, 6 R&D centers
- **South America**: 660 colleagues, 5 production sites, 1 R&D center
- **Africa**: 159 colleagues, 1 production site, 1 R&D center
Our strongly rooted foundations

Unique business model
INTERNAL DRIVER

Supportive megatrends
EXTERNAL DRIVER

Let’s go for zero

Industry leader in sustainability

INTERNAL DRIVER
Chemistry Material science Metallurgy
Material solutions
application know-how
recycling
metals

EXTERNAL DRIVER
Mobility transformation
Growing need for advanced materials
Circularity for critical metals

Investor presentation - September 2022
Building on Horizon 2020 achievements “Fit” and ready for the future

HORIZON 2020 SUCCESSFULLY DELIVERED

- Clear leadership in clean mobility materials and recycling
- Doubled the size of the business in terms of earnings
- Turned sustainability into a greater competitive edge
- Rebalanced portfolio & earnings contributions

PUSHING INDUSTRY STANDARDS IN TERMS OF SUSTAINABILITY

REVENUES 2020
€3.2bn
+7%
CAGR 15-20

ADJUSTED EBIT 2020
€536m
+12%
CAGR 15-20

ROCE
12.1%

REVENUES
€4.0bn

Free Cash Flow
€989m

ADJUSTED EBIT
€972m

ROCE
22.2%

Net debt / LTM adj. EBITDA ratio, well in I.G. territory
0.77

Let’s go for zero
Accelerating megatrends driving all activities

- Rechargeable Battery Materials
- Electro-Optic Materials
- Metal Deposition Solutions
- Cobalt & Specialty Materials
- Precious Metals Chemistry
- Precious Metals Refining
- Jewelry & Industrial Metals
- Precious Metals Management

GROWING NEED FOR ADVANCED MATERIALS

MOBILITY TRANSFORMATION

CIRCULARITY FOR CRITICAL METALS

ENERGY & SURFACE TECHNOLOGIES

CATALYSIS

RECYCLING
H1 2022 achievements

**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
- Battery Recycling Solution

### Revenues (excl. metal)
- **Group** 2,147.9m€
  - 25%
  - 42%
  - 33%

### Adj. EBIT
- **Group** 461.0m€
  - 44%
  - 34%
  - 22%
- **Adj. EBIT margin** 21.0%

### Cap. Employed (av.)
- **Group** 4,426.0m€
  - 35%
  - 55%
- **ROCE** 20.8%
RISE pillars enabling all activities to thrive, making Umicore a net beneficiary from megatrends

<table>
<thead>
<tr>
<th>Unique portfolio of mutually reinforcing activities</th>
<th>Strong foundations and successful track record</th>
<th>Anticipating megatrends and embracing them as our business drivers</th>
<th>Sustainability deeply embedded in our DNA</th>
</tr>
</thead>
</table>

**R**
Reliable Transformation Partner
We listen to the voice of our customers and focus on solving their issues

**I**
Innovation & Technology Leader
We are an innovation and technology leader delivering value through innovation in metal science, metallurgy and metal chemistry

**S**
Sustainability Champion
We embed sustainability in our products and services and in the way we do business

**E**
Excellence in execution
We achieve competitive cost positions through investment in operational excellence and digital
Mobility transformation unlocking transformational growth for Umicore

2021

€ 4.0 bn

2030 Vision

+ €5 bn to €6 bn

Profitable growth with adjusted EBITDA margins > 20% throughout the period

Uninterrupted value creation at Group level

Note: Based on gradual PGM prices normalization scenario and battery metal prices at 2021 levels
Net beneficiary of a changing world

Megatrends
Supporting our business model

Portfolio
Synergetic, coherent, competitive

Purpose
Sustainability at the core

Umicore 2030
RISE

Writing the next chapter of Umicore as the circular materials technology company

2030
GROWTH
>100% Revenues

PROFIT
>20% EBITDA margin

RETURN
15% ROCE

Grow like a start-up
Create value as an established company
Mobility transformation radically accelerating
Uniquely positioned to help the world transition to cleaner mobility

ICE equipped vehicles will remain the dominant clean mobility drive train for the next 10+ years.
Automotive Catalysts
Capture peak profitability and maximize value

Umicore catalyst technologies prevented 2.8 million tons of NOx emissions from being emitted into the air in 2021

Using average lifetime of 200,000 km including NOx, HC, CO, excluding PM
Rechargeable Battery Materials
Capture profitable growth and create sustainable value

Value-creative strategic partnerships across the value chain

Broad technology & IP portfolio covering design-to-performance and design-to-cost applications, incl. next-gen technologies

Pioneering responsibly-sourced materials and becoming the driving force to decarbonize the battery value chain

Step-change in process, operational and organizational excellence

Umicore cathode materials prevented over 9.5 million tons of GHG emissions from being emitted in 2021

Considering recycling, production, processing into batteries and the use of batteries in full EVs
Battery Recycling Solutions
Capture profitable growth in circular battery value chain

Supporting our customers with a circular offering from the start and ready to accelerate together

Long-standing materials and process technology know-how

Embedded sustainability value through sustainable recycling operations

Over 10 years of pilot scale experience gives a head start to scale to 150kt capacity units

Recycled material up to 96% lower CO₂ footprint vs. primary materials

LCA-analyses performed according the ISO14040/44
Fuel Cell Catalysts
Capturing the emerging growth

Long-term global leader in PEM fuel cell catalysts at industrial scale

Industry-leading materials in terms of durability, performance and PGM loading

Embedded sustainability value delivering high performance solutions for zero emissions transport

Scaling-up production footprint in most cost-efficient way

Umicore PEM catalysts prevented 147,000 tons of GHG emissions from being emitted in 2021

PEM: Proton-exchange membrane
Using average personal vehicle lifetime of 200,000 km
## Key enabling technology in various sectors
### Attractive markets and differentiated technology

<table>
<thead>
<tr>
<th>Serving demanding high-tech applications</th>
<th>Synergies in R&amp;D, metal management</th>
<th>Circularity = efficient and sustainable business model</th>
<th>Key differentiator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cobalt &amp; Specialty Materials</td>
<td>Plating, chemicals, automotive, construction</td>
<td>Residues from tooling and chemical industries</td>
<td>Flexible supply, market and application knowledge</td>
</tr>
<tr>
<td>Metal Deposition Solutions</td>
<td>Consumer electronics, decorative applications, automotive</td>
<td>Residues from electroplating baths</td>
<td>Application knowledge, technical support</td>
</tr>
<tr>
<td>Electro-Optic Materials</td>
<td>Space, optics and electronics</td>
<td>Ge bearing residues</td>
<td>Superior performances through quality and purity, recycling</td>
</tr>
<tr>
<td>Precious Metals Refining</td>
<td>Metal recycling and refining industry</td>
<td>Recycling 17 metals</td>
<td>Ability to process complex streams, customer service</td>
</tr>
<tr>
<td>Precious Metals Management</td>
<td>Precious metal consumers (internal and external)</td>
<td>Traceability</td>
<td>Market knowledge, security of supply</td>
</tr>
<tr>
<td>Jewelry &amp; Industrial Metals</td>
<td>Jewelry, high-purity glass, chemicals</td>
<td>Recycling Gold, Silver, Platinum from jewellery and industrial applications</td>
<td>Application and market knowledge, closed-loop offering</td>
</tr>
<tr>
<td>Precious Metals Chemistry</td>
<td>Life science, fine chemicals</td>
<td>Closed-loop offering (with PMR)</td>
<td>Chemical synthesis of complex metal based molecules</td>
</tr>
</tbody>
</table>

- **Key differentiator**
  - Serving demanding high-tech applications
  - Synergies in R&D, metal management
  - Circularity = efficient and sustainable business model
Precious Metals Refining

Leadership in sustainable, complex and low carbon recycling

Trusted partner for more than 20 years, recovering 17 different metals from more than 200 complex waste streams

Offering superior metal yields touching the full metal value chain with leading CO₂ performance with next generation technology

Responsibly sourced materials at the heart of our operations

Enhance operational excellence through digitalization and automation and continuous debottlenecking

1.8 million tons of GHG emissions avoided in 2021 through material input mix & recycling
We Go for Zero Sustainability Champion
Let's Go for Zero
the ambitions behind being a Sustainability Champion

Net Zero
GHG emissions by 2035

Zero harm
Zero inequality

Let’s go for zero

Net Zero GHG emissions by 2035

Scope 1+2
792,000 tons CO₂e baseline

2019

Scope 3
7.1 tons CO₂e/ton purchased materials intensity baseline

2025 -20%

2030 -50%

-42% tons CO₂e/ton purchased materials

2035 -100%

Net Zero scope 1+2 GHG

Zero inequality

WHERE WE ARE TODAY

11,050
Group employees

25%
Women in management

21.6%
Non-Europeans in senior management

75
Nationalities

WE GO FOR

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

Increased cultural diversity in management teams by 2025

Measuring and disclosing Pay Equality
Zero harm

- Minimizing impact on the environment
- -25% diffuse emissions by 2025 with continuous improvement of other types of metal emissions
- New water stewardship program

Wellbeing @ work
- Zero work related injuries
- Zero excess exposure
- Mental, physical, occupational and social wellbeing at work for all

Sustainable sourcing champion
- Driving positive impact in the value chain
Umicore 2030 – RISE
Growth, returns and cashflows
Horizon 2020 strategy financial targets
Delivered on financial targets

<table>
<thead>
<tr>
<th>Accelerating profitable growth</th>
<th>2015 – 2020 Targets</th>
<th>2020 Values</th>
<th>2021 Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAGR revenues of 7 %</td>
<td></td>
<td>7 %</td>
<td>9 %</td>
</tr>
<tr>
<td>CAGR adj. EBITDA of 8 %</td>
<td></td>
<td>12 %</td>
<td>18 %</td>
</tr>
<tr>
<td>Double adj. EBIT to € 0.5bn by 2020</td>
<td>Achieved in 2018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High investments &amp; strong returns</td>
<td>Group ROCE &gt; 15 %</td>
<td>12.1 %</td>
<td>22.2 %</td>
</tr>
</tbody>
</table>

Delivered on top-line growth ambition

<table>
<thead>
<tr>
<th>2015 – 2020 Targets</th>
<th>2020 Values</th>
<th>2021 Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at the detriment of margins – double digit earnings growth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strong value creation notwithstanding ROCE headwinds due to delayed capacity utilization in Rechargeable Battery Materials in China</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Record 2021 results with record precious metal prices as accelerator</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Horizon 2020 strategy drove step-change
Doubled in size: earnings, capital employed and value

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>STEP CHANGE</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workforce ('000)</td>
<td>8.8</td>
<td>+ 26%</td>
<td>11.1</td>
</tr>
<tr>
<td>Revenues (€ bn)</td>
<td>2.3</td>
<td>x 1.7</td>
<td>4.0</td>
</tr>
<tr>
<td>adj EBITDA (€ bn)</td>
<td>0.47</td>
<td>x 2.7</td>
<td>1.25</td>
</tr>
<tr>
<td>Average Capital Employed (€ bn)</td>
<td>2.2</td>
<td>x 2.0</td>
<td>4.4</td>
</tr>
<tr>
<td>Enterprise Value (€ bn)</td>
<td>4.5</td>
<td>x 2.1</td>
<td>9.6</td>
</tr>
<tr>
<td>Market Cap (€ bn)</td>
<td>4.2</td>
<td>x 2.1</td>
<td>8.6</td>
</tr>
</tbody>
</table>

Doubled size of the Group driven by strong underlying market growth and accelerated by metal prices

Substantial growth investments, yet to generate full payback potential

Strong double digit shareholder returns (with increased volatility in recent years)

Balanced earnings growth across different business groups

Enterprise Value and Market Cap calculated end of calendar year
TSR = Total Shareholder Return = Market Cap accretion (eoy) + dividend payout
Workforce = fully consolidated entities

Doubled size of the Group

- 2015 to 2021: 8.8 to 11.1
- Workforce grew by 26%

Revenues

- 2015: 2.3 bn
- 2021: 4.0 bn
- Multiplied by 1.7

adj EBITDA

- 2015: 0.47 bn
- 2021: 1.25 bn
- Multiplied by 2.7

Average Capital Employed

- 2015: 2.2 bn
- 2021: 4.4 bn
- Multiplied by 2.0

Enterprise Value

- 2015: 4.5 bn
- 2021: 9.6 bn
- Multiplied by 2.1

Market Cap

- 2015: 4.2 bn
- 2021: 8.6 bn
- Multiplied by 2.1

2021 at average 2020 precious metal prices

Balanced earnings growth across different business groups
## Differentiated sources of value creation

Balancing growth, returns and cash flows for the Group

<table>
<thead>
<tr>
<th>Value driver</th>
<th>Low</th>
<th>Contribution to Umicore’s value creation</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Earnings growth</strong> (adj EBITDA growth)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Return-driver</strong> (adj ROCE &gt; Cost of Capital)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Free Operational CF generation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Attractive earnings growth** driven by Rechargeable Battery Materials & Battery Recycling Solutions
- Group growth rate depends on metal prices
- Group returns above Cost of Capital across the plan despite sizeable growth investments
- Reinvest significant free cash flows of Catalysis & Recycling in E&ST
- Cash flow payback as from second half of decade

**GROUP**

**Trend vector from 2021-2026 to 2026-2030**
Umicore Group earnings growth ambition
Secular earnings growth while maintaining attractive historical margins

adj EBITDA

Double digit CAGR at 2020 rates

+ 18 % CAGR

+ 13 % at 2020 rates


2021 actual reported adjusted EBITDA
2026 assuming a gradual PGM price normalization scenario
at aver 2020 PGM prices

Revenues
adj EBITDA
margin

2021
€ 4 bn
€ 1.25 bn
31 %

2026 ambition
+ € 2.5 bn to € 3 bn
vs 2021
appr. € 1.5 bn
> 20 %

2030 vision
+ € 2.5 bn to € 3 bn
vs 2026
> 20%

Phased growth conditional upon value creative returns from contracts

Ambitious 2026 growth plan with Rechargeable Battery Materials as transformative factor and growth in Catalysis

Growth expected to be non-linear and dependent on metal price trends

Substantial growth beyond 2026 from battery materials, battery recycling and fuel cells

Attractive Group margins in line with historic average (assuming normalized PGM prices)

Group margin profile

Group adj EBITDA includes Corporate adj EBITDA: from - € 52m in 2021 to appr. - € 75m in 2026 and higher in 2030
All financial KPIs based on current Umicore reporting definitions
Growth investments to accelerate

Over 3/4th of Group capex in battery materials, battery recycling & fuel cells

- Bulk of Group capex oriented towards secular growth opportunities
- Rechargeable Battery Materials & Battery Recycling Solutions most significant growth projects in 2022-2026
- Lower share of capex in Catalysis notwithstanding initial fuel cell growth investments

Capex 2015-2021

- Catalysis
- E&ST
- Recycling
- Corporate

€ 2.8 bn

Capex 2022-2026*

- Catalysts
- E&ST
- Recycling
- Corporate

> € 5 bn

Phased capex and conditional upon value creative returns

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel cell capex as % of Catalysis</td>
<td>&lt; 20 %</td>
</tr>
<tr>
<td>Rechargeable Battery Materials capex</td>
<td>&gt; 90 %</td>
</tr>
<tr>
<td>Battery Recycling Solutions capex</td>
<td>appr. 50 %</td>
</tr>
<tr>
<td>Total as % of Group total</td>
<td>&gt; 75 %</td>
</tr>
</tbody>
</table>

* Net investments incl co-financing
Capital allocation shift to accelerate
Doubling of capital employed subject to value creative returns

Average Capital Employed
- Catalysis
- E&ST
- Recycling

Close to doubling of average capital employed by 2026 (vs 2021) driven by Rechargeable Battery Materials & Battery Recycling Solutions

Catalysis
stable base up to 2026 (incl. fuel cell investments); significantly lower base as from mid-decade; substantial working capital release anticipated

E&ST
grow to appr. 2/3rd of group capital base driven by Rechargeable Battery Materials expansion

Recycling
Increase in capital base through large scale Battery Recycling plant & ESG investments in Hoboken

Further growth beyond 2026 depending on growth pace in Rechargeable Battery Materials and Battery Recycling Solutions

Trend vector 2030 vs 2026

GROUP

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2021</th>
<th>2026</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>E&amp;ST in % of average Group Cap Employed</td>
<td>~ 1/3rd</td>
<td>~ 50%</td>
<td>~ 2/3rd</td>
<td>&gt; 2/3rd</td>
</tr>
</tbody>
</table>

Group totals include Corporate. Capital Employed sensitive to prevailing metal prices through NWC. Projections assume gradual normalization of PGM prices and battery material metal prices in line with 2021 average price.
### Capital allocation shift to accelerate

Group returns above cost of capital with some temporary dilution in E&ST

<table>
<thead>
<tr>
<th></th>
<th>Catalysis</th>
<th>E&amp;ST</th>
<th>Recycling</th>
<th>GROUP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ROCE</strong></td>
<td>2015 - '20 average – ~14 %</td>
<td>2015 - '20 average – ~11 %</td>
<td>2015 - '20 average – ~37 %</td>
<td>2015 - '20 average – ~14 %</td>
</tr>
<tr>
<td><strong>Lower capital employed base drives higher returns</strong></td>
<td></td>
<td>Near-term returns dampened by Rechargeable Battery Materials’ growth costs and investments. Above cost of capital shortly after 2026</td>
<td>Highly value-creative returns on higher capital base incl. Battery Recycling; assumes normalized PGM prices</td>
<td>Stay above cost of capital across the plan and create substantial value towards end of decade once mid-decade investments are ramped-up</td>
</tr>
<tr>
<td>2026 ambition</td>
<td>~ 20 %</td>
<td>2026 ambition</td>
<td>2026 ambition</td>
<td>2026 ambition</td>
</tr>
<tr>
<td>2030 vision</td>
<td>&gt; 20 %</td>
<td>2030 vision</td>
<td>2030 vision</td>
<td>2030 vision</td>
</tr>
<tr>
<td></td>
<td>&gt; 8 %</td>
<td>&gt; 12.5 %</td>
<td>&gt; 30 %</td>
<td>&gt; 12.5 %</td>
</tr>
<tr>
<td></td>
<td>&gt; 20 %</td>
<td></td>
<td>~ 20 %</td>
<td>15 %</td>
</tr>
</tbody>
</table>

Capital Employed sensitive to prevailing metal prices through NWC. Current cost of capital slightly below 10%.
Operational cash flow profile

Substantial free cash flows in Catalysis & Recycling reinvested into E&ST

Cumulative cash flows 2022 - 2026

- Catalysis
- E&ST
- Recycling

€ 6 - 7 bn

Group free operational cash flow appr. break even

adj EBITDA  Net capex + change in NWC  Free oper CF

Potential for substantial operational free cash flows after 2026 depending on level of growth investments to accommodate post-2030 growth

Substantial free cash flows in Catalysis and Recycling Accelerating further beyond 2026

Reinvested in Rechargeable Battery Materials expansion

E&ST cash payback after capacity ramped-up (> 2026)

Group total includes Corporate
Free Operational CF defined as adj EBITDA – equity accounted contribution – Capex – change in NWC
Net capex includes co-financing
Funding levers
From full autonomous funding to co-funding partnership model

Policy unchanged:
Maintain Investment Grade status

<table>
<thead>
<tr>
<th>Embedded in group strategy</th>
<th>Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strong free operational cash flow generation</strong></td>
<td><strong>Capital Market funding</strong></td>
</tr>
<tr>
<td>Catalysis &amp; Recycling as strong free cash flow generators</td>
<td>To accelerate Rechargeable Battery Materials expansion, conditional upon business &amp; return visibility.</td>
</tr>
<tr>
<td><strong>ESG-focused debt funding appetite</strong></td>
<td></td>
</tr>
<tr>
<td>Leverage on growing debt appetite &amp; capacity in the market for ESG- and electrification-focused projects</td>
<td></td>
</tr>
<tr>
<td><strong>Co-funding partnership model</strong></td>
<td></td>
</tr>
<tr>
<td>Customers open to participate in operational funding in return for capacity assurances &amp; technology commitment</td>
<td></td>
</tr>
<tr>
<td><strong>Joint Venture investment sharing</strong></td>
<td></td>
</tr>
<tr>
<td>Selective strategic JV set-ups allow to share the upfront investment burden in return for sharing the returns</td>
<td></td>
</tr>
<tr>
<td><strong>Grants and other funding incentive mechanisms</strong></td>
<td></td>
</tr>
<tr>
<td>Access substantial support funding for the electrification transformation as an established player with proven technology and industrialization skills</td>
<td></td>
</tr>
</tbody>
</table>
Financial review H1 2022
### Strong performance in H1 2022

**Key figures**

Umicore delivers first-half performance in line with Q1 outlook, in a challenging market context, and makes good progress in the execution of the “Umicore 2030 – RISE” strategy.

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>REVENUES</strong></td>
<td>€ 2.1 bn</td>
<td>Stable YoY</td>
</tr>
<tr>
<td>Adjusted NET PROFIT (Group share)</td>
<td>€ 321 m</td>
<td>Adjusted EPS € 1.34, Interim dividend of € 0.25 per share</td>
</tr>
<tr>
<td>Adjusted EBIT</td>
<td>€ 461 m</td>
<td>-26% YoY</td>
</tr>
<tr>
<td>Adjusted EBITDA</td>
<td>€ 601 m</td>
<td>-21% YoY</td>
</tr>
<tr>
<td>Free Operating Cash Flow</td>
<td>€ 320 m</td>
<td></td>
</tr>
<tr>
<td>Net debt stable at € 955 m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net debt / LTM Adj. EBITDA 0.88x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAPEX</td>
<td>€ 190 m</td>
<td></td>
</tr>
<tr>
<td>ROCE</td>
<td>20.8%</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** All references to revenues in this document refer to revenues excluding metals (all revenue elements – value of purchased metals).
Key highlights of H1 2022

Strong performance despite market environment characterized by significant external challenges

**Catalysis**: outperforming global car market driven by further market share gains in light-duty gasoline; adj. EBIT slightly below H1 2021 record level

**Energy & Surface Technologies**: strong performance of Cobalt & Specialty Materials and positive impact from unexpected spike in lithium price in Rechargeable Battery Materials

**Recycling**: second-highest level performance in business group history, despite lower precious metal prices

Strong operational cash flows including a less than anticipated increase in net working capital, resulting in stable net financial debt compared to end of 2021

Active implementation of RISE 2030 strategy with key milestones achieved

In Rechargeable Battery Materials:

- Further build-out of long-term, value creative customer partnerships
- Inauguration of new global R&D center in Korea and agreement with Idemitsu Kosan Co. to jointly develop catholyte materials for solid-state batteries
- Announced plans to build local production footprint in Canada; important step in global rollout of regional supply chains to three continents
- Start of production in greenfield CAM plan in **Nysa, Poland**

Ambition to achieve net zero Scope 1 and 2 GHG emissions by 2035 complemented with ambitious target for **Scope 3**: 42% reduction of CO2e/ton of purchased materials by 2030
Strong Adj. EBIT(DA) and margins
Close to 1H 2021 exceptional record performance despite challenging market context

- Adjusted EBIT of € 461 million, down 26% compared to record level of H1 21 and up 33 % compared to H2 21
  - Strong operational performance
  - Less favourable precious metal price environment, volatile battery materials metal prices
  - Impact of higher costs linked to general cost inflation and innovation
  - Net forex tailwind
- Adjusted EBITDA of € 601 million, down 21% compared to H1 21 and up 23 % compared to H2 21
  - Adjusted Group D&A slightly up
  - Continued margin uptrend following H1 21 peak
**Strong free operating cash flow generation**

Cash flow from operations after changes in working capital at € 521 million

Smaller than anticipated increase in cash working capital of € 152 million, reflecting working capital management, temporary positive effects in the month of June and lower than expected metal prices.

NWC increase in E&ST mitigated by a decrease in Catalysis and Recycling.

Free cash flow from operations of € 320 million

Capex and capitalized development expenses slightly up year on year to € 201 million

E&ST accounting for 2/3rd of Group capex, driven by RBM

Continued focus on capex efficiency across businesses

---

*Free cashflow from operations = cashflow generated from operations – capex & capitalized development expenses*
Net cash flow bridge
Stable net financial debt versus end 2021

Free operating cashflow of € 320 million, including € 152 million increase in working capital and € 201 million investments.

Funded a combined € 308 million cash outflow related to taxes, net interest charges, dividends & net purchase of own shares.

Resulting in a stable net financial debt vs December 2021 and a corresponding strong leverage ratio (0.88x LTM adj EBITDA).
## Full P&L

<table>
<thead>
<tr>
<th>Million €</th>
<th>H1 2021</th>
<th>H1 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted EBIT</td>
<td>625</td>
<td>461</td>
</tr>
<tr>
<td>- Net finance cost</td>
<td>(52)</td>
<td>(46)</td>
</tr>
<tr>
<td>- Adjusted Tax</td>
<td>(140)</td>
<td>(92)</td>
</tr>
<tr>
<td>Adjusted net result</td>
<td>433</td>
<td>323</td>
</tr>
<tr>
<td>- Minorities</td>
<td>(5)</td>
<td>(1)</td>
</tr>
<tr>
<td><strong>Adjusted net result Group share</strong></td>
<td>428</td>
<td>321</td>
</tr>
<tr>
<td><strong>Adjusted EPS</strong></td>
<td>1.78</td>
<td>1.34</td>
</tr>
</tbody>
</table>

### Adjustments to EBIT
- (39) €
- (28) €

### Adjustments to net result Group
- (20) €
- (12) €

### Net result Group share
- 400 €
- 309 €

### Adjust. EBIT below last year’s record level, reflected in lower Net result Group share

### Decrease in adjusted net financial cost due to lower forex charges more than offsetting higher net interest charges

### Lower adjusted tax charges reflecting the lower year on year taxable profit, as well as a lower adjusted effective group tax rate (22.8 % vs 24.9 %).

### Limited adjustments to EBIT of - € 20 million, mainly linked to environmental provisions.
Solid capital structure

€ 1.0 billion free-cash-flow in 2021, drove the decreasing net debt and a gearing ratio down to 0.77x

End of H1 2022 corresponds to:
- 0.88x net debt to adj. EBITDA ratio
- 21.6% gearing ratio
Based on the performance in the first half of the year and assuming precious metal prices remain at current\(^1\) levels for the remainder of the year, Umicore expects its adjusted EBIT for the full year 2022 to be somewhat above consensus\(^2\), including some € 220 million uplift from precious metal prices versus 2020 (taking into account the effect of strategic hedging).

This outlook incorporates a cost inflation headwind estimated less than € 150 million for the full year, excluding offsetting measures such as pricing, and assumes no further significant disruptions to the economy or Umicore’s operations from geopolitical developments, the pandemic or additional supply-chain constraints.

---

\(^1\) Current refers to the date of this publication i.e., 29 July 2022
\(^2\) 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](https://vara-services.com/umicore). Consensus adjusted EBIT for Umicore Group in 2022 amounted to € 828 million at the time of this publication.
Guidance for full year 2022

**CATALYSIS**

It is anticipated that car production will remain impacted by the ongoing supply disruptions. Notwithstanding the related limited visibility, Umicore expects to continue to benefit from its strong market position in gasoline applications. Taking into account the strong performance in the first half of the year and the current assumptions on volumes for 2022, adjusted EBIT in **Catalysis** for the full year is expected to be close to the record level achieved in 2021, somewhat above consensus\(^1\), despite the impact of cost inflation.

**E&ST**

Based on the first-half performance and anticipating a normalization in Cobalt & Specialty Materials, Umicore expects adjusted EBIT in **Energy & Surface Technologies** for the full year 2022 to be above the level of the previous year and above current consensus expectations\(^2\).

**RECYCLING**

Umicore expects adjusted EBIT for **Recycling** for the full year 2022 to be in line with current consensus\(^3\). This is based on the assumption that current precious metal prices will continue to prevail. This also takes into account a somewhat improved supply mix in Precious Metals Refining compared to the first half.

As announced previously, **Corporate** costs are expected to continue to increase above inflation in 2022 as Umicore is committed to its longer-term innovation and digitalization and is preparing its systems and organization for future expansion.

---

\(^1\) Catalysis adjusted EBIT for the FY 2021 amounted to 326 m€, Vara Research consensus adjusted EBIT for Catalysis amounted to 281 m€ at the time of this publication

\(^2\) Energy & Surface Technologies adjusted EBIT for FY 2021 amounted to 139 m€, Vara Research consensus adjusted EBIT for E&ST amounted to 148 m€ at the time of this publication

\(^3\) Recycling adjusted EBIT for the FY 2021 amounted to 573 m€, Vara Research consensus adjusted EBIT for Recycling amounted to 475 m€ at the time of this publication
Key Investment Considerations
Net beneficiary of a changing world

Megatrends
Supporting our business model

Portfolio
Synergetic, coherent, competitive

Purpose
Sustainability at the core

Umicore 2030
RISE

Writing the next chapter of Umicore as the circular materials technology company

2030
GROWTH
>100% Revenues

PROFIT
>20% EBITDA margin

RETURN
15% ROCE

Grow like a start-up

Create value as an established company
Creating value as an established company while growing as a start-up company

- **Well-diversified business profile** with broad product, end-market and customer base driven by a common theme of sustainability and ever-growing megatrends, *source of varied and synergetic value-creating growth.*

- **Strong track record of and commitment to innovation** to maintain competitive lead (R&D spending of ~6% of revenues in 2021)

- **Robust financial performance** across cycles and **strong balance sheet, while continuously investing in growth**

- **Experienced** board, management team, and clear governance principles

- **Record earnings in 2021** building on strong underlying operational performance in all business groups demonstrating the merits of the strategy building on complementary activities and further supported by an exceptional precious metal price environment.
Annexes
Business Group Overview
Catalysis
## Catalysis overview

### Automotive Catalysts

We are one of the leading producers of emission control catalysts for gasoline and diesel on-road and non-road applications, power generation and industrial processes to meet environmental standards around the world.

### Precious Metals Chemistry

We are experts in metals-based catalysis for life-enhancing applications. Emission treatment technologies, cancer treatments, the production of fine chemicals and advanced electronics – all are made possible by our organometallic technology know-how.

### Fuel Cell & Stationary Catalysts

We are a leading player in emissions control catalysis for industrial plants and shipping, and supply state-of-the-art fuel cell catalysts for zero emission mobility and green hydrogen production.
Catalysis

Balancing growth, returns and cash flows

**Value driver**

<table>
<thead>
<tr>
<th>Low</th>
<th>Contribution to Umicore’s value creation</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings growth&lt;br&gt;(adj EBITDA growth)</td>
<td>![Low Value Driver Diagram]</td>
<td>![High Value Driver Diagram]</td>
</tr>
<tr>
<td>Return-driver&lt;br&gt;(adj ROCE &gt; Cost of Capital)</td>
<td>![Low Value Driver Diagram]</td>
<td>![High Value Driver Diagram]</td>
</tr>
<tr>
<td>Free Operational CF generation</td>
<td>![Low Value Driver Diagram]</td>
<td>![High Value Driver Diagram]</td>
</tr>
</tbody>
</table>

- Capture unprecedented value peak in Automotive Catalysts in the decade
- Prepare growth acceleration in fuel cell catalysts after mid-decade
- Reduction in Cap Empl in Automotive Catalysts to drive high(er) returns
- Initial payback in fuel cells towards end of decade (lower capital intensity)
- High free cash flows over the plan
- Transition from growth to free cash flow focused business model in Automotive Catalysts
Substantial free cash flows accelerating as from mid-decade.

Close to €0.5 bn
€0.4 bn
+ 15% CAGR
+ 12% at 2020 rates

Double digit CAGR at 2020 rates
Mid single digit CAGR 2021-2026

Catalysis
Committed to capture medium-term growth while driving efficiency & cash

Revenues
adj EBITDA margin

2021
€1.69 bn
€0.40 bn
24%

2026 ambition
appr. €2.0 bn
close to €0.5 bn
> 20%

2030 vision
> 2021 and < 2026
comparable vs 2026

< 5%
<10%
< 30%

Fuel cell catalysts in % of adj EBITDA

Attractive medium-term growth from car market recovery, final legislation cycle and HDD expansion.

Maintain margins above historical average through continued operational efficiency focus.

Substantial free cash flows accelerating as from mid-decade.

Strong position in fuel cells with meaningful growth contribution as from mid-decade and material contribution as from next decade.

Substantial fuel cell acceleration after 2030.
Catalysis H1 2022

Revenues -1% and adj. EBITDA margin at 23%

• Strong performance despite significant disruptions in global industries and supply-chains
• **Automotive Catalysts**
  • Outstanding performance against challenging backdrop
  • Volumes down less than market, reflecting strong market position and market share gains in gasoline technologies for LDV
  • Revenues broadly flat YoY with product mix offsetting lower volumes. Earnings well up sequentially and close to H1 2021 record level despite cost inflation
• **Precious Metals Chemistry**
  • Higher revenues driven by strong demand for homogenous catalysts and inorganic chemicals
• **Fuel Cell & Stationary Catalysts**
  • Lower revenues from PEM fuel cell catalysts reflecting COVID-19 lockdowns in major Chinese cities resulting in postponements of customers orders

**Revenues (m€)**

<table>
<thead>
<tr>
<th>Year</th>
<th>H1</th>
<th>H2</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1,360</td>
<td>1,460</td>
<td>1,364</td>
<td>1,687</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>652</td>
<td>743</td>
<td>794</td>
<td>908</td>
<td>897</td>
</tr>
</tbody>
</table>

**Adjusted EBIT (m€) & EBIT(DA) margin**

<table>
<thead>
<tr>
<th>Year</th>
<th>H1</th>
<th>H2</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>17,4%</td>
<td>18,1%</td>
<td>17,2%</td>
<td>23,8%</td>
<td>19,3%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12,4%</td>
<td>12,7%</td>
<td>11,3%</td>
<td>122</td>
<td>18,9%</td>
</tr>
</tbody>
</table>

Investor presentation - September 2022
Zoom in on Automotive Catalysts (AC) and Fuel Cell & Stationary Catalysts (FCS)
# Catalysis: capture peak in Automotive Catalysts and emerging growth in Fuel Cells

<table>
<thead>
<tr>
<th>Fuel Cells: prepare growth acceleration after mid-decade</th>
<th>Automotive Catalysts: extending value capturing through presence in most attractive market segments with right technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Strong position in light-duty gasoline; segment benefiting most from upcoming emissions legislation</td>
<td></td>
</tr>
<tr>
<td>- Growing share in HDD segment in China and Europe</td>
<td></td>
</tr>
</tbody>
</table>

---

## Continued focus on maximizing business value

<table>
<thead>
<tr>
<th>2022-2027</th>
<th>2028-2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continued focus on high-capacity utilization (&gt;85%)</td>
<td>Keep capacity utilization high (&gt;85%) and align operations with market evolution</td>
</tr>
<tr>
<td>Continued focus on process efficiency</td>
<td>Annual fixed cost reduction of € 100 Mn in 2030</td>
</tr>
<tr>
<td>Technology value pricing as core principle</td>
<td></td>
</tr>
</tbody>
</table>

---

~ € 3 billion cash delivered between 2022 and 2030
Accelerating mobility transformation
ICE remains dominant powertrain solution in 2030

Light-duty vehicles
Proportion by powertrain in global production
Source: Umicore market model – LDV

<table>
<thead>
<tr>
<th>Year</th>
<th>BEV</th>
<th>FC</th>
<th>PHEV</th>
<th>ICE only</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>5%</td>
<td>95%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2022</td>
<td>10%</td>
<td>90%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2023</td>
<td>20%</td>
<td>80%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2024</td>
<td>30%</td>
<td>70%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2025</td>
<td>40%</td>
<td>60%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2026</td>
<td>50%</td>
<td>50%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2027</td>
<td>60%</td>
<td>40%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2028</td>
<td>70%</td>
<td>30%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2029</td>
<td>80%</td>
<td>20%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2030</td>
<td>90%</td>
<td>10%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Heavy-duty vehicles
Proportion by powertrain in global production
Source: Umicore market model – HDV (incl. medium-duty vehicles, on-road vehicles only)

<table>
<thead>
<tr>
<th>Year</th>
<th>BEV</th>
<th>FC</th>
<th>CNG/LNG</th>
<th>PHEV</th>
<th>ICE only</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>1%</td>
<td>99%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2022</td>
<td>2%</td>
<td>98%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2023</td>
<td>4%</td>
<td>96%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2024</td>
<td>6%</td>
<td>94%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2025</td>
<td>8%</td>
<td>92%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2026</td>
<td>10%</td>
<td>90%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2027</td>
<td>12%</td>
<td>88%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2028</td>
<td>14%</td>
<td>86%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2029</td>
<td>16%</td>
<td>84%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2030</td>
<td>18%</td>
<td>82%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

BEV: battery electric vehicle
FC: fuel cell vehicle
CNG/LNG: Compressed natural gas / Liquefied natural gas
PHEV: plug-in (hybrid) vehicle
ICE: internal combustion engine (gasoline/diesel) only

95% in 2021
66% by 2030
98% in 2021
78% by 2030
Attractive value to capture the next decade
Emission catalyst market moving towards unprecedented value peak

Value growth driven by market rebound and tighter legislation for light-duty and heavy-duty vehicles.

Total addressable market in 2030 still exceeding addressable market in 2021.

Attractive market profile – Ability to capture peak profitability and afterwards generate significant amount of free cash flow.

Source: Umicore market model – LDV and HDV (includes emissionized Heavy-Duty and Medium-Duty Vehicles; on-road only)
Automotive Catalysts – RISE
Capture peak profitability and maximize value

Capture maximum value from market peak
• Maintain strong position in light-duty gasoline catalysts globally
• Continued growth in heavy-duty catalysts in China and Europe

Maximize business value throughout the plan

Throughout period:
€ ~3 Bn total cash delivered and critical talent pool, supporting Umicore growth
ROCE ~20% in 2030 and adj. EBITDA margin ~20%
PEM catalyst market to witness exponential growth towards 2040

Global PEM catalyst demand per application (t)

- 7 tons in 2021
- 24 tons in 2025
- 90 tons in 2030
- 300 – 400 tons in 2040

Source: Umicore market model (HDV incl. MDV)

Strong regulatory support for hydrogen economy in Europe and APAC region

PEM catalyst demand to grow exponentially as of 2025 driven by increasing penetration of fuel cell HDV as well as electrolysis

Global addressable market of 90t for Umicore by 2030
# Fuel Cells – RISE

Capture emerging growth as leading fuel cell catalyst provider

<table>
<thead>
<tr>
<th>R</th>
<th>I</th>
<th>S</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliable Transformation Partner</td>
<td>Innovation &amp; Technology Leader</td>
<td>Sustainability Champion</td>
<td>Excellence in execution</td>
</tr>
<tr>
<td>BUILDING CUSTOMER COOPERATIONS ACROSS THE VALUE CHAIN</td>
<td>BENCHMARK MATERIALS – INNOVATION AND RESEARCH AT THE HEART OF THE FUEL CELL GROWTH STRATEGY</td>
<td>KEY PARTNER FOR THE TRANSITION TO ZERO-EMISSIONS MOBILITY</td>
<td>SCALING-UP PRODUCTION FOOTPRINT IN MOST COST-EFFICIENT WAY</td>
</tr>
</tbody>
</table>

Capture near term growth in fuel cells for HDV/MDV and long range LDV

Adjacent opportunities - market potential for green electrolysis

Head start, based on proven technology leadership
Profitable today and value accretive throughout period
Energy & Surface Technologies
### Energy & Surface Technologies overview

#### Rechargeable Battery Materials
- We are a pioneer in battery materials and a leading cathode material supplier for rechargeable lithium-ion batteries, giving added range and performance to electric vehicles, and longer battery life for portable electronics.

#### Cobalt & Specialty Materials
- We are experts in sourcing, production and distribution of cobalt and nickel products. Our materials are at the heart of everyday products such as rechargeable batteries, tools, paints and tyres. Our recycling and refining processes, give new life to cobalt and other metals.

#### Metal Deposition Solutions
- We are one of the world's leading suppliers of products for (precious) metal-based electroplating and PVD coating of surfaces in the nano and micrometre range. Our solutions for the highest demands are used in many products of daily use or enable their production in the first place.

#### Electro-Optic Materials
- We are a leading supplier of material solutions for the space, optics and electronics sectors, including products for thermal imaging, wafers for space solar cells, high brightness LEDs and chemicals for fiber optics.
Balancing growth, returns and cash flows

Value driver

<table>
<thead>
<tr>
<th>Value driver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings growth (adj EBITDA growth)</td>
</tr>
<tr>
<td>Return-driver (adj ROCE &gt; Cost of Capital)</td>
</tr>
<tr>
<td>Free Operational CF generation</td>
</tr>
</tbody>
</table>

**Low**

**Contribution to Umicore’s value creation**

**High**

- Unprecedented transformational growth in Rechargeable Battery Materials
- Partial payback by 2026 from high growth investments in Rechargeable Battery Materials; becoming value creative shortly thereafter
- Significant upfront growth investments dampen free cash flows; strong free cash flows once new greenfield sites are ramped-up

E&ST

Trend vector from 2021-2026 to 2026-2030
Rechargeable Battery Materials to drive transformative growth

**Revenues**
- **2021**: €1.17 bn
- **2026 ambition**: + €2.5 bn to €3 bn vs 2021
- **2030 vision**: + €2.5 bn to €3.5 bn vs 2026

**adj EBITDA margin**
- **2021**: €0.26 bn, 22%
- **2026 ambition**: €0.6 to 0.8 bn, <20%
- **2030 vision**: higher vs 2026

**adj EBITDA**
- 2021: €0.26 bn
- 2026 ambition: €0.6 to 0.8 bn
- Non-linear, approx. 20% CAGR, 2021-2026 or approx. x 2.5

Step-change in revenues & earnings as from mid-decade driven by Rechargeable Battery Materials

Robust underlying EBITDA margins despite impact from substantial upfront growth & start-up costs. Margin increase after 2026

Material but phased investments conditional upon value creative returns from contracts

Non-Rechargeable Battery Materials businesses target selective growth, maintaining +20% adj EBITDA margins

Phased growth conditional upon value creative returns from contracts
E&ST H1 2022

Revenues +21% and adj. EBIT +44%, reflecting higher revenues and earnings in Cobalt & Specialty Materials and Rechargeable Battery Materials

**Rechargeable Battery Materials**
As anticipated and announced in December, cathode material volumes were subdued
Volumes headwinds more than offset by positive impact from unexpected spike in lithium price

**Cobalt & Specialty Materials**
Continued, exceptionally strong market demand in combination with favorable cobalt and nickel price environment in cobalt and nickel chemicals and related distribution activities

**Metal Deposition Solutions**
Stable revenues with higher order levels of decorative and platinized applications compensating lower demand for precious metal-based electrolytes

**Electro-Optic Materials**
Slightly higher revenues driven by strong demand for germanium substrates from the space and automotive industry
Zoom in on Rechargeable Battery Materials (RBM)
Electrification increasing at fast pace, triggered by regulatory push and OEM commitments

**Light-duty vehicles**
Proportion by powertrain in global car production

Source: Umicore market model

**Medium- and Heavy-duty vehicles**
Proportion by powertrain in global car production

Source: Umicore market model

BEV: battery electric vehicle
FC: fuel cell vehicle
CNG/LNG: Compressed natural gas / Liquefied natural gas
PHEV: plug-in (hybrid) vehicle
ICE: internal combustion engine (gasoline/diesel) only
Umicore chemistries addressing ~75% of total Light-duty EV CAM demand

Global CAM demand (GWh) LDV only – Chemistry split

- NMC/NCA, Manganese-rich
- L(M)FP

Source: Umicore market model

Evolving technologies reflecting car OEMs’ need for performance- and cost-focused solutions

NM(C) chemistries (incl. Mn-rich) represent vast majority of EV CAM demand in 2030

Solid-state batteries expected to gain traction based on NMC, with a single digit market share expected towards 2030
>20% annual market growth across all regions

CAM demand (GWh) across regions LDV only

Europe, China and North America expected to represent ~90% of total LDV CAM demand

Ongoing regionalization of supply chain:
- Geopolitical context
- OEMs’ sustainability considerations
- Security of supply

Source: Umicore market model
1. Pioneering Battery Materials
- Starting of CAM R&D in 1995
- Early move into industrial scale CAM production
- Business-model: OEM Tier 2 / direct to cell makers
- Technical interface: cell makers

2. Re-Shaping
- Market shift to OEM Tier-1 involvement business models, next to cell makers
- Technical interface: OEM
- Customer and platform diversification
- Pioneering new OEM co-investment / partnership model to secure demand and share investments

3. Ramping-up
- Expanding global footprint to support customer SC needs “from mine to battery”
- Accelerate implementation of advanced chemistries roadmap & SSB

4. Value creative growth
- Significant growth in sweet-spot phase for returns
- Visible impact of Umicore Scope 3 initiative to decarbonize BEV supply chain
- Full roll-out of advanced CAM technologies / SSB
Cathode active materials crucial for the mobility transformation …

CAM critical component determining electrification success

- Key technological lever for battery performance
- Biggest single contributor to overall battery cost
- Critical driver of long-term cell technology strategy

Investor presentation - September 2022
... requiring critical competences and skills for CAM producers to succeed

**Product**
- High performance and quality product with customized end specs
- Joint development with customers and partners
- Strong technology and IP portfolio and continuous innovation

**Process**
- Mastering complexity and flexibility of production process
- Continuous industrialization and process innovation
- Extensive quality and purity control

**Supply**
- Strategic access to raw materials – low carbon intensity, highest ESG requirements
- Metal refining expertise enhancing supply flexibility
- Regionalized production footprint along value chain

Ample opportunities for differentiation and gaining advantage over competitors
Rechargeable Battery Materials – RISE
Capture profitable growth and create sustainable value

Extend leadership in Europe
---

Enter North America with local production
---

Reinforce market position in Asia

**R**
Reliable Transformation Partner
VALUE CREATIVE STRATEGIC PARTNERSHIPS ACROSS THE VALUE CHAIN

**I**
Innovation & Technology Leader
TECHNOLOGY & IP PORTFOLIO COVERING PERFORMANCE & COST

**S**
Sustainability Champion
KEY PARTNER IN TRANSITION TO LOW CARBON MOBILITY

**E**
Excellence in execution
STEP-CHANGE IN PROCESS, OPERATIONAL AND ORGANIZATIONAL EXCELLENCE

Sustainable EBITDA growth with margins ~ 20% in 2030
Value accretive after 2026
Recycling
Recycling overview

**Precious Metals Refining**
We operate the world’s most sophisticated precious metals recycling facility and we are experts in treating the most complex materials. Our refining and recycling technology gives used metals a new lease of life. Our processes help bring value to the circular economy.

**Precious Metals Management**
We supply and handle all precious metals, ensuring physical delivery by using both the output of our precious metals refineries and our network of industrial partners and banks. We offer our customers tailor-made solutions for delivering, hedging and trading precious metals.

**Jewelry & Industrial Metals**
We are experts in developing products and processes based on precious metals such as gold, silver and platinum. Our customers use these materials to make fine jewelry, coins, high-purity glass and industrial catalysts. We provide our customers with sustainable and responsible sourcing of these metals and closed-loop recycling.

**Battery Recycling Solutions**
Our leading technology closes the loop for rechargeable batteries. We use proprietary high-quality recycling processes to recover all valuable metals in an environmentally sound manner. We offer a unique sustainable and circular approach.
Recycling
Balancing growth, returns and cash flows

Value driver

<table>
<thead>
<tr>
<th>Low</th>
<th>Contribution to Umicore’s value creation</th>
<th>High</th>
</tr>
</thead>
</table>
| Earnings growth  
(adj EBITDA growth) | Normalizing PGM prices | Stable PGM prices | Battery Recycling |
| Return-driver  
(adj ROCE > Cost of Capital) | Cost of Capital | | |
| Free Operational CF generation | | | |

- Earnings path to depend on prevailing metal prices
- Initial battery recycling payback second half of decade
- Highly value creative returns across the plan (even with lower metal prices)
- Battery recycling capital investment to somewhat dilute returns
- Significant free cash flows despite important mid-decade battery recycling investments

RECYCLING  
Trend vector from 2021-2026 to 2026-2030
Recycling

Strong margins, returns & cash flows and Battery Recycling kicking in mid-decade

- Includes one initial large-scale battery recycling plant, operational by 2026 with full contribution by end of the decade.

- Potential for additional growth + 21% CAGR normalization well above historical levels

- High single digit CAGR at 2020 rates

- Close to €0.5 bn

- €0.64 bn

- Normalization well above historical levels

- Earnings dependent on assumed metal prices but continue to generating superior margins even at normalized PGM prices

- Includes substantial Battery Recycling Solutions - related development costs up to 2025

- Substantial free cash flow generation, accelerating as from battery recycling plant commissioning

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenues</th>
<th>adj EBITDA</th>
<th>adj EBITDA margin</th>
<th>Battery Recycling in % of adj EBITDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>€1.11 bn</td>
<td>€0.64 bn</td>
<td>58%</td>
<td>n.r.</td>
</tr>
<tr>
<td>2026 ambition</td>
<td>&gt; €1.0 bn</td>
<td>close to €0.5 bn</td>
<td>&gt; 40%</td>
<td>&lt; 10%</td>
</tr>
<tr>
<td>2030 vision</td>
<td>&gt; €1.0 bn</td>
<td>&lt; 40%</td>
<td>&gt; 30%</td>
<td></td>
</tr>
</tbody>
</table>

Sizeable additional battery recycling growth potential
Recycling H1 2022

Revenues -18% and adj. EBITDA margin 47.8%

Very strong performance, well above historical levels, albeit below record H1 21

Precious Metals Refining
Robust operational performance with stable volumes YoY
Below H1 21 record performance, reflecting impact of lower PGM-prices, a somewhat less favorable supply mix and cost inflation

Jewelry & Industrial Metals
Strong performance across all product lines
Continued strong demand for platinum engineered materials used in glass applications and performance catalysts
Higher volumes for investment products, benefitting from safe-haven buying

Precious Metals Management
Strong performance, however, below exceptional H1 21, reflecting less favorable trading conditions, in particular for rhodium
Zoom in on Precious Metal Refining (PMR) and Battery Recycling Solutions (BRS)
Recycling: Precious Metals Refining as solid platform to enable success in Battery Recycling

EBITDA

Precious Metals Refining
Undisputed leader in complex precious metals recycling with minimized carbon footprint

Battery Recycling: Pioneer in Europe
- Leverage 10kt plant and recycling know-how to establish strong position
- Prepare high-volume plant in EU

Battery Recycling: Scale-up in Europe and prepare entry in North America
- Launch 150kt plant in 2026 as pioneer in Europe
- Umicore Pyro/Hydro technology best in cost and sustainability

Recycling Business Group maintaining superior returns despite normalizing PGM prices, investing in battery recycling and sustainability
Precious Metal Refining

Largest and most complex precious metals recycling operation in the world

Leading refiner of 17 different metals

Processes more than 200 different types of raw materials

World class environmental and quality standards
The value chain of metals

- Ores & concentrates
- Complex mining concentrates & residues
- Smelting & refining residues
- Complex production scrap
- New products
- Complex end-of-life materials

Mines → Smelters & refiners → Industry → Consumers

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

Direct:
through metal yield

Indirect:
through raw material availability

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

Ag, Au, Pt, Ir, Rh, Ru, Pd, In, Sb, As, Te, Sn, Pb, Bi, Cu, Ni, Se
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
Production scrap primary source of supply towards 2030

End-of-life EV batteries and production scrap available for recycling (kMT, global)

Continuous startup of battery plants expected to produce significant pre-consumer scraps

Diverse and complex input feed mix

Diversified, flexible and robust recycling technology crucial

Source: Umicore forecast data
Global recycling need accelerating significantly post 2030
Robust technology to cope with feed mix changes

End-of-life EV batteries and production scrap available for recycling – per region (kMT, global)

From 2030 end-of-life expected to become the vast majority of supply feed

Regional markets expected to emerge with specific dynamics (differentiated applications and battery technologies, regulation,...)

Importance of tuning offering for the different regional markets

Source: Umicore forecast data
Recycling is crucial for the mobility transformation...

Recycling as critical additional source of supply

SECURING RAW MATERIALS

MAJOR ESG ADVANTAGES

Multiple use of minerals versus single use of fossil fuels

Upcoming recycled content targets for new battery production

Mandatory End-of-Life battery recycling

Proven and traceable sustainably sourced metals (battery passport)

Reduces the need for primary natural resources

Enabling regional supply chains and critical material price visibility

Recycled material up to 96% lower CO2 footprint vs primary materials

Investor presentation - September 2022
...requiring critical competences and skills for battery recyclers to succeed

**Process**
- Effective volume & mass reduction at massive scale (> 100kt/y)
- High metal extraction yields
- Capable to process complex feed mix

**Sustainable process:**
- Safe elimination of hazardous compounds
- Manage occupational health exposure risk
- Low environmental impact

**Product**
- Output of high-quality battery grade materials (no downcycling)
- Realize effective compatibility with existing primary CAM-flowsheet
- Products for high-volume addressable markets

**Services**
- Capability to collect and treat a wide variety of materials (production scrap, off-spec components, end-of-life batteries, modules, cells, black mass)
- Closed-loop operating system offering our partners a user-friendly interface and compliancy information
- Competence center with integrated offering – “design for circularity”
Battery Recycling Solutions – RISE
Capture profitable growth in circular battery value chain

| Scale up as frontrunner in Europe and prepare industrial presence in North America |
| Leverage the optimal pyro-hydro balance as differentiating technology |
| Attract multiple sources for short- and long-term feed |

| R | I | S | E |
| Reliable Transformation Partner | Innovation & Technology Leader | Sustainability Champion | Excellence in execution |
| SUPPORTING OUR CUSTOMERS WITH A CIRCULAR OFFERING FROM THE START, READY TO ACCELERATE TOGETHER | SCIENCE MEETS BUSINESS: LONG-STANDING MATERIALS AND TECHNOLOGY KNOW-HOW | KEY ENabler FOR THE CIRCULAR ECONOMY | SCALABLE TECHNOLOGY DELIVERING ON MARKET REQUIREMENTS |

Establishing Battery Recycling Solutions as key enabler for a circular and low-carbon battery value chain
## Financial KPIs

<table>
<thead>
<tr>
<th></th>
<th>FY 2020</th>
<th>FY 2021</th>
<th>H1 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Turnover</strong></td>
<td>20.710 m€</td>
<td>24.054 m€</td>
<td>13.839 m€</td>
</tr>
<tr>
<td><strong>Revenues (excluding metal)</strong></td>
<td>3.239 m€</td>
<td>3.963 m€</td>
<td>2.147,9 m€</td>
</tr>
<tr>
<td><strong>Adjusted EBITDA</strong></td>
<td>804 m€</td>
<td>1.251 m€</td>
<td>601 m€</td>
</tr>
<tr>
<td><strong>Adjusted EBIT (</strong>)**</td>
<td>536 m€</td>
<td>971 m€</td>
<td>461,0 m€</td>
</tr>
<tr>
<td>of which associates</td>
<td>8 m€</td>
<td>21 m€</td>
<td>11 m€</td>
</tr>
<tr>
<td><strong>Total EBIT</strong></td>
<td>299 m€</td>
<td>896 m€</td>
<td>441 m€</td>
</tr>
<tr>
<td><strong>Adjusted EBIT margin</strong></td>
<td>16.3%</td>
<td>24.0%</td>
<td>21.0%</td>
</tr>
<tr>
<td><strong>Adjusted net profit, Group share</strong></td>
<td>322 m€</td>
<td>667 m€</td>
<td>321 m€</td>
</tr>
<tr>
<td><strong>Adjusted Earning per share</strong></td>
<td>1,34</td>
<td>2,77</td>
<td>1,34</td>
</tr>
<tr>
<td><strong>Net profit, Group share</strong></td>
<td>131 m€</td>
<td>619 m€</td>
<td>309 m€</td>
</tr>
<tr>
<td><strong>R&amp;D expenditure</strong></td>
<td>223 m€</td>
<td>245 m€</td>
<td>141 m€</td>
</tr>
<tr>
<td><strong>Capital expenditure</strong></td>
<td>403 m€</td>
<td>389 m€</td>
<td>189,8 m€</td>
</tr>
<tr>
<td><strong>Net cash flow before financing</strong></td>
<td>99 m€</td>
<td>787 m€</td>
<td>230 m€</td>
</tr>
<tr>
<td><strong>Total assets, end of period</strong></td>
<td>8.341 m€</td>
<td>9.045 m€</td>
<td>10.259 m€</td>
</tr>
<tr>
<td><strong>Group shareholders’ equity, end of period</strong></td>
<td>2.557 m€</td>
<td>3.113 m€</td>
<td>3.410 m€</td>
</tr>
<tr>
<td><strong>Consolidated net financial debt, end of period</strong></td>
<td>1.414 m€</td>
<td>960 m€</td>
<td>955 m€</td>
</tr>
<tr>
<td><strong>Gearing ratio, end of period</strong></td>
<td>35.0%</td>
<td>23.3%</td>
<td>21.6%</td>
</tr>
<tr>
<td><strong>Net debt / LTM adj. EBITDA</strong></td>
<td>1.76x</td>
<td>0.77x</td>
<td>0.88x</td>
</tr>
<tr>
<td><strong>Capital employed, end of period</strong></td>
<td>4.457 m€</td>
<td>4.377 m€</td>
<td>4.475 m€</td>
</tr>
<tr>
<td><strong>Capital employed, average</strong></td>
<td>4.451 m€</td>
<td>4.384 m€</td>
<td>4.426 m€</td>
</tr>
<tr>
<td><strong>Return on capital employed (ROCE)</strong></td>
<td>12.1%</td>
<td>22.2%</td>
<td>20.8%</td>
</tr>
<tr>
<td><strong>Workforce, end of period (fully consolidated)</strong></td>
<td>10.859</td>
<td>11.050</td>
<td>11.350</td>
</tr>
<tr>
<td><strong>Workforce, end of period (associates)</strong></td>
<td>2.460</td>
<td>2.589</td>
<td>2.702</td>
</tr>
<tr>
<td><strong>Accident frequency rate</strong></td>
<td>2.52</td>
<td>3.70</td>
<td>3.85</td>
</tr>
<tr>
<td><strong>Accident severity rate</strong></td>
<td>0.47</td>
<td>0.12</td>
<td>0.08</td>
</tr>
</tbody>
</table>
### CATALYSIS

<table>
<thead>
<tr>
<th>(in million €)</th>
<th>FY 2020</th>
<th>FY 2021</th>
<th>H1 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total turnover</td>
<td>5,917</td>
<td>8,155</td>
<td>3,907</td>
</tr>
<tr>
<td>Total revenues (excluding metal)</td>
<td>1,364</td>
<td>1,687</td>
<td>897</td>
</tr>
<tr>
<td>Adjusted EBITDA</td>
<td>234</td>
<td>402</td>
<td>206</td>
</tr>
<tr>
<td>Adjusted EBIT</td>
<td>154</td>
<td>328</td>
<td>170</td>
</tr>
<tr>
<td>Total EBIT</td>
<td>96</td>
<td>308</td>
<td>168</td>
</tr>
<tr>
<td>Adjusted EBIT margin</td>
<td>11.3%</td>
<td>19.3%</td>
<td>18.9%</td>
</tr>
<tr>
<td>R&amp;D expenditure</td>
<td>139</td>
<td>142</td>
<td>72</td>
</tr>
<tr>
<td>Capital expenditure</td>
<td>64</td>
<td>70</td>
<td>23</td>
</tr>
<tr>
<td>Capital employed, end of period</td>
<td>1,727</td>
<td>1,551</td>
<td>1,486</td>
</tr>
<tr>
<td>Capital employed, average</td>
<td>1,596</td>
<td>1,743</td>
<td>1,519</td>
</tr>
<tr>
<td>ROCE</td>
<td>9.6%</td>
<td>18.7%</td>
<td>22.4%</td>
</tr>
<tr>
<td>Workforce, end of period (fully consolidated)</td>
<td>3.073</td>
<td>3.007</td>
<td>3.033</td>
</tr>
</tbody>
</table>

### ENERGY & SURFACE TECHNOLOGIES

<table>
<thead>
<tr>
<th>(in million €)</th>
<th>FY 2020</th>
<th>FY 2021</th>
<th>H1 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total turnover</td>
<td>2,811</td>
<td>3,534</td>
<td>2,229</td>
</tr>
<tr>
<td>Total revenues (excluding metal)</td>
<td>1,045</td>
<td>1,174</td>
<td>717</td>
</tr>
<tr>
<td>Adjusted EBITDA</td>
<td>186</td>
<td>262</td>
<td>172</td>
</tr>
<tr>
<td>Adjusted EBIT of which associates</td>
<td>75</td>
<td>139</td>
<td>112</td>
</tr>
<tr>
<td>Total EBIT</td>
<td>(36)</td>
<td>141</td>
<td>112</td>
</tr>
<tr>
<td>Adjusted EBIT margin</td>
<td>6.7%</td>
<td>11.2%</td>
<td>15.2%</td>
</tr>
<tr>
<td>R&amp;D expenditure</td>
<td>58</td>
<td>64</td>
<td>41</td>
</tr>
<tr>
<td>Capital expenditure</td>
<td>252</td>
<td>219</td>
<td>129</td>
</tr>
<tr>
<td>Capital employed, end of period</td>
<td>2,133</td>
<td>2,275</td>
<td>2,484</td>
</tr>
<tr>
<td>Capital employed, average</td>
<td>2,209</td>
<td>2,198</td>
<td>2,380</td>
</tr>
<tr>
<td>ROCE</td>
<td>3.4%</td>
<td>6.3%</td>
<td>9.4%</td>
</tr>
<tr>
<td>Workforce, end of period (fully consolidated)</td>
<td>3.761</td>
<td>3.836</td>
<td>3.981</td>
</tr>
</tbody>
</table>

### RECYCLING

<table>
<thead>
<tr>
<th>(in million €)</th>
<th>FY 2020</th>
<th>FY 2021</th>
<th>H1 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total turnover</td>
<td>13,904</td>
<td>15,609</td>
<td>9,075</td>
</tr>
<tr>
<td>Total revenues (excluding metal)</td>
<td>836</td>
<td>1,108</td>
<td>537</td>
</tr>
<tr>
<td>Adjusted EBITDA</td>
<td>425</td>
<td>640</td>
<td>257</td>
</tr>
<tr>
<td>Adjusted EBIT</td>
<td>362</td>
<td>573</td>
<td>221</td>
</tr>
<tr>
<td>Total EBIT</td>
<td>311</td>
<td>529</td>
<td>217</td>
</tr>
<tr>
<td>Adjusted EBIT margin</td>
<td>43.3%</td>
<td>51.7%</td>
<td>41.2%</td>
</tr>
<tr>
<td>R&amp;D expenditure</td>
<td>10</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Capital expenditure</td>
<td>72</td>
<td>83</td>
<td>30</td>
</tr>
<tr>
<td>Capital employed, end of period</td>
<td>447</td>
<td>461</td>
<td>426</td>
</tr>
<tr>
<td>Capital employed, average</td>
<td>502</td>
<td>345</td>
<td>443</td>
</tr>
<tr>
<td>ROCE</td>
<td>72.0%</td>
<td>165.9%</td>
<td>99.9%</td>
</tr>
<tr>
<td>Workforce, end of period (fully consolidated)</td>
<td>2.769</td>
<td>2.867</td>
<td>2.930</td>
</tr>
</tbody>
</table>
materials for a better life