



# Introducing Umicore

2020

# Who we are

**A global materials technology and recycling group**



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



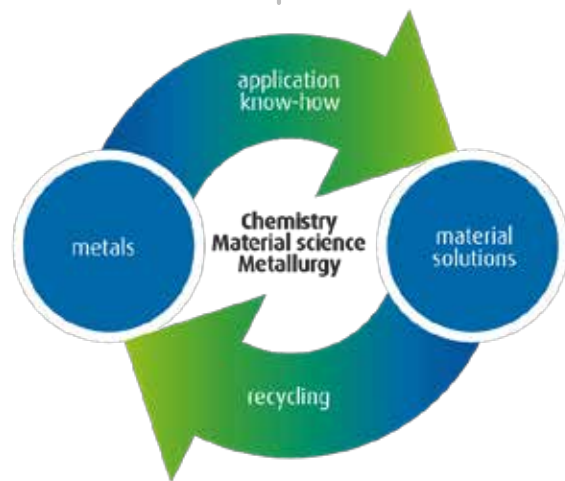
A leading supplier of key materials for rechargeable batteries used in electrified transportation and portable electronics



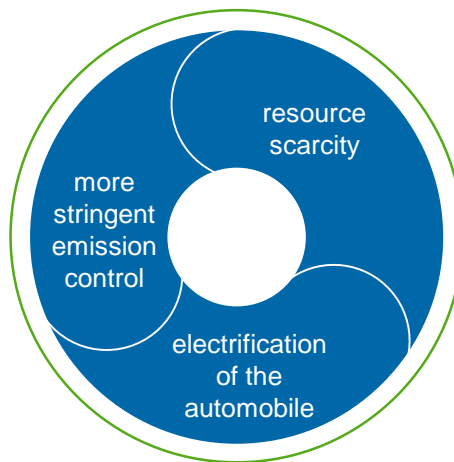
The world's leading recycler of complex waste streams containing precious and other valuable metals

# Our foundations

Unique business  
model



Supportive  
megatrends



Industry leader in  
sustainability



# Our strategy



**By 2020 we have...**



clear leadership in  
clean mobility  
materials and recycling

turned sustainability  
into a greater  
competitive edge



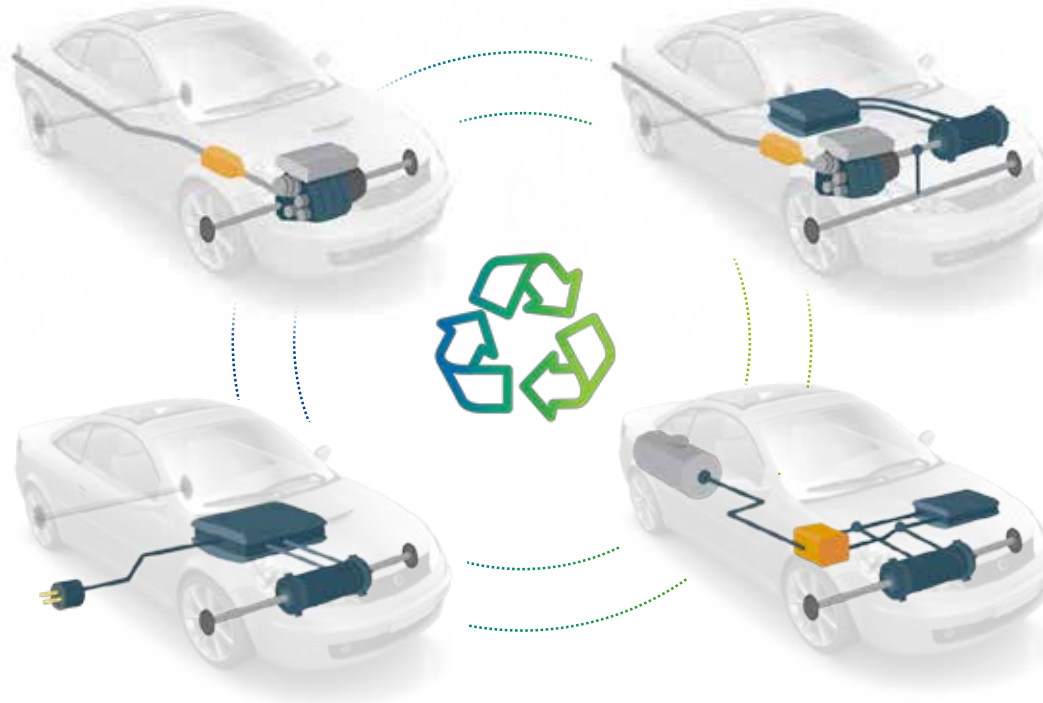
# Unique position in clean mobility materials

ICE  
Emission control  
catalysts

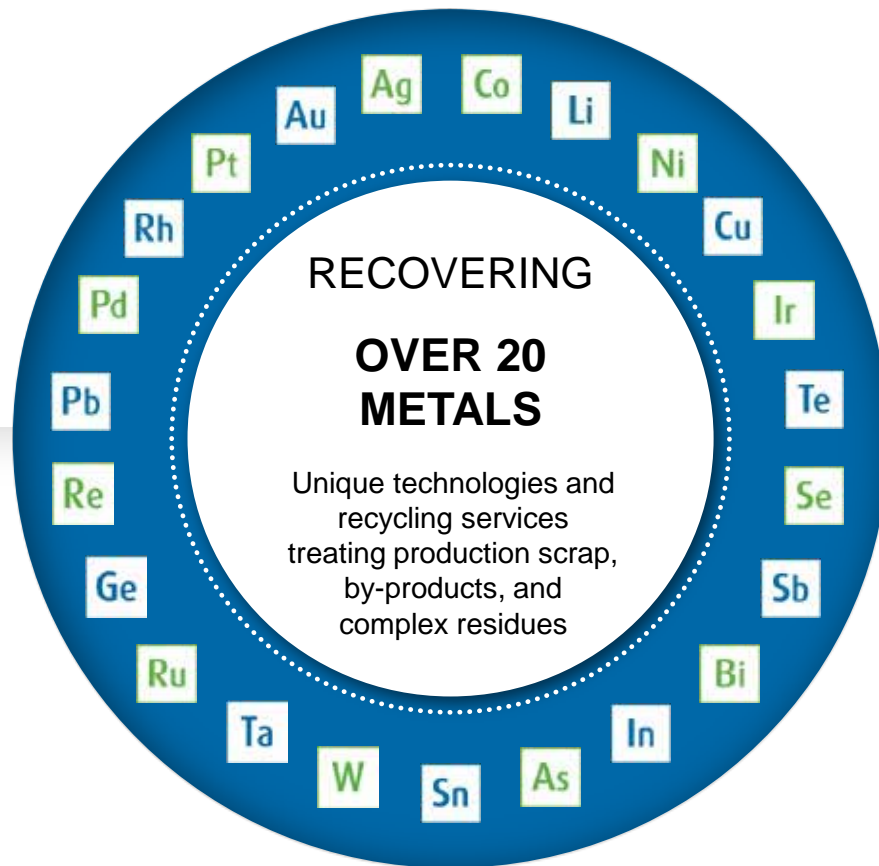
BEV  
Battery materials

(p)HEV  
Battery materials  
and emission  
control catalysts

Fuel cells  
Electro-catalyst and  
battery materials



# Unique position in recycling



# Turning sustainability into a greater competitive edge



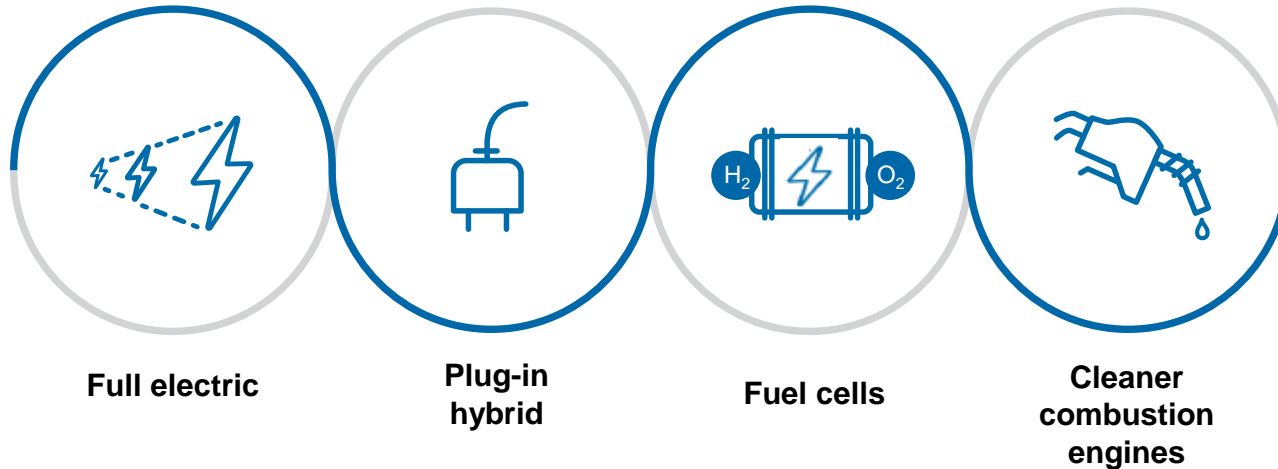
**We have transformed Umicore into  
a sustainability leader over the past 15 years**

The purpose is to generate more concrete benefits  
from our sustainability efforts eg:



# Preparing the ground for further growth

Clean Mobility innovation roadmap  
spanning the next 20 years



Battery Recycling  
gaining traction



# Recent developments for Umicore

# Milestones 2019-2020 (1)



- q 18 February 2019: Umicore partners with ABB FIA Formula E Championship to implement battery recycling program
- q 29 May 2019: Umicore and Glencore develop partnership for sustainable cobalt supply in battery materials
- q 23 September 2019: Umicore announces partnership with LG Chem for the supply of NMC cathode materials
- q 25 September 2019: Energy Department Announces Phase 1 Winners of Battery Recycling Prize
- q 24 October 2019: Umicore announces strategic supply agreement with Samsung SDI for NMC cathode materials
- q 2 December 2019: Umicore completes acquisition of cobalt refining and cathode precursor activities in Finland

## Milestones 2019-2020 (2)



- q 20 December 2019: Umicore confirms its commitment to ethical and sustainable cobalt
- q January 2020: Umicore has been ranked 14th in the 2020 top 100 of the world's most sustainable companies published by Corporate Knights
- q 23 January 2020: Sustainable Growth award
- q 24 January 2020: Umicore is one of the 42 global organizations agreeing to 10 principles for a sustainable battery value chain
- q 29 January 2020: Umicore wins the fifth Febeliec Energy Award with their implementation of a Battery Storage installation in Olen, Belgium.



# Annexes

# 18 February 2019: Umicore partners with ABB FIA Formula E Championship to implement battery recycling program



The Formula E batteries from seasons one and two, created by Williams Advanced Engineering, have been collected and are in the process of being recycled by Umicore. The process comprises sorting, dismantling and recycling with valuable metals being carefully recovered using proprietary and unique smelting technology followed by hydrometallurgical treatment.

The metals in the battery are infinitely recyclable without losing their properties. After collection the batteries are taken apart using methods to ensure the environment is not exposed to hazardous compounds. Recycling includes the recovery of the metals and their transformation into metal alloys that will be used again in new rechargeable batteries or other products.

Umicore is one of only a few companies worldwide to offer a complete recycling journey with minimal waste or impact on the environment.

## 29 May 2019: Umicore and Glencore develop partnership for sustainable cobalt supply in battery materials



Umicore and Glencore announce today that they have entered into a long-term revolving agreement for the supply of cobalt hydroxide (cobalt) to Umicore's battery materials value chain. The cobalt will be sourced from Glencore's state-of-the art industrial mining operations, KCC and Mutanda, located in the DRC. Umicore has assessed each operation as fully compliant with its sustainable procurement framework for cobalt which excludes Artisanal mined cobalt from its supply chain, as well as any form of child labor. The cobalt units will be shipped to Umicore's cobalt refineries globally, including the Kokkola refinery in Finland once the ongoing acquisition process is complete.

# 23 September 2019: Umicore announces partnership with LG Chem for the supply of NMC cathode materials



Umicore and LG Chem have concluded a multi-year strategic supply agreement for NMC (Nickel Manganese Cobalt) cathode materials to serve LG Chem's needs out of Umicore plants in Poland, Korea and China. The supply agreement takes effect in 2020 and covers a total volume of 125,000 metric tons to be delivered over several years. LG Chem will benefit from Umicore's experience of close to two decades in developing and producing cost-optimized cathode materials allowing long driving ranges, faster charge and low battery degradation. Most of the volumes covered by this agreement will be supplied from Umicore's greenfield facility in Poland. Umicore will be the first company to supply cathode materials to its global customers with identical quality and performance from its different production plants across regions. Umicore is also assisting LG Chem in closing the loop by recycling its production residues.

# 25 September 2019: Energy Department Announces Phase 1 Winners of Battery Recycling Prize



## **Collection:**

- Holman Parts Distribution (Pennsauken, NJ)
- Powering the Future (Glendale, WI)
- **Store Packs Umicore (Raleigh, NC)**
- LIBIoT - Lithium-Ion Battery collection using the Internet-of-Things (Albany, NY)

*“\$67,000 shared  
amongst three partners”*

## **Other Innovation Ideas:**

- SNT Laser Focused (Oklahoma City, OK)
- **Team EVBs (Seattle, WA)**
- **Team Portables (Seattle, WA)**



# 24 October 2019: Umicore announces strategic supply agreement with Samsung SDI for NMC cathode materials



Umicore has signed a multi-year strategic agreement with Samsung SDI for the supply of close to 80,000 metric tons of high-performance NMC (Nickel Manganese Cobalt) cathode materials starting in 2020. The cathode materials will be supplied from Umicore plants in different regions with the majority of volumes initially produced in Korea. A vast portion of the volumes are intended for automotive applications and a smaller part for energy storage systems.

The agreement provides Samsung SDI security of supply to accommodate their fast-growing lithium-ion battery business in Europe and Asia, particularly in automotive applications.

The sizeable volume commitment included in the agreement offers critical predictability and visibility along the EV supply chain, which allows EV manufacturers and their suppliers to plan and develop the needed capacities.

## 2 December 2019: Umicore completes acquisition of cobalt refining and cathode precursor activities in Finland



Umicore announced today that it has completed the acquisition of the cobalt refining and cathode precursor activities in Kokkola, Finland, from Freeport Cobalt for an amount of \$ 203 million on a debt and cash free basis (including approximately \$ 50 million of net working capital). All regulatory clearances in relation to the transaction have been obtained.

It is anticipated that the acquisition will be earnings accretive from 2020 and value accretive from 2021, after completion of the integration process and a reduction of the net working capital resulting from supply chain synergies

## 20 December 2019: Umicore confirms its commitment to ethical and sustainable cobalt (1)

Umicore commits to supply battery materials, including cobalt, in an ethical and sustainable way. We take all possible actions and measures in order to ensure clean and ethical cobalt in our supply chain.

Umicore was one of the first companies to proactively address issues such as human rights, child labor, occupational health and safety conditions and environmental impact related to the extraction of cobalt. Almost 15 years ago, Umicore made the decision to exclude entirely from its supply chain cobalt obtained from Artisanal and Small-scale Mining (ASM), as these involve unsafe and unhealthy working conditions and very often child labor, and established its specific sustainable procurement framework for cobalt.

## 20 December 2019: Umicore confirms its commitment to ethical and sustainable cobalt (2)



Since then, Umicore has acted as an industry leader to promote a responsible and sustainable supply of cobalt, exempt not only from ASM but also from abuses of the environment, workers' health and their safety, and became the first supplier of battery materials to have a reputable third party reviewing its supply chain framework in accordance with the OECD Due Diligence Guidelines.

Being the first company in the world with such a framework for cobalt and the first to obtain external validation for its ethical procurement approach in this area, Umicore is a true pioneer in providing its customers in the rechargeable battery value chain with materials of a certified clean and ethical origin.

Umicore's approach to ethical cobalt sourcing is further described in its [Sustainable Procurement Framework for Cobalt](#).

January 2020: Umicore has been ranked 14th in the 2020 top 100 of the world's most sustainable companies published by Corporate Knights, a research division focused on sustainable performance rankings.



The sixteenth edition of the Global 100 includes analysis of 7,395 corporations. The ranking includes companies from different countries worldwide encompassing all sectors of the economy, with collective annual sales in excess of 1 billion U.S. dollars.

It is the 7<sup>th</sup> time that Umicore has been listed in the index.

The ranking was based on a clean revenue metric. It measures the percentage of revenues earned from products or services that have environmental or well-defined social benefits.

## 23 January 2020: Sustainable Growth award

January 23<sup>rd</sup>, 2020, Umicore received Euronext's inaugural Sustainable Growth award during their New Year's Ceremony 2020. It was the first edition of this event called "Sustainability in Finance: Time to Act" celebrating the successes of sustainable companies.

Umicore was awarded the Sustainable Growth award for being the company with the strongest stock price performance over the past 10 years.

## January 2020: Umicore wins the fifth Febeliec Energy Award with their implementation of a Battery Storage installation in Olen, Belgium.

The main idea is to upload the batteries when we have an energy excess, and inject the uploaded energy during energy shortages. To ensure a balanced energy network.

Project leader Peter Zadora: *"Umicore is monitoring the evolution of batteries. With projects like the battery storage, we acquire more in-depth knowledge about the possible supply curve of battery materials to be recycled , the performance and aging process in these specific processes; this is a great example of circular economy and team work in Umicore and with Engie/Connected Energy."*

## January 2020: Umicore is one of the 42 global organizations agreeing to 10 principles for a sustainable battery value chain

During the World Economic Forum Annual Meeting this January 2020 in Davos, Switzerland, Umicore and 41 other organizations, including businesses from mining, chemicals, battery, automotive and energy industries, along with international organizations and global NGOs, agreed 10 guiding principles. These have been established by the Global Battery Alliance of the World Economic Forum and are designed to help develop the creation of a sustainable battery value chain by 2030, by which time batteries will be a major driver in decarbonizing the transport and power sectors through the use of electric vehicles and renewable energy.



# The 10 principles agreed by the organizations include:

- maximizing the productivity of batteries
- enabling a productive and safe second life use
- circular recovery of battery materials
- ensuring transparency of greenhouse gas emissions and their progressive reduction
- prioritizing energy efficiency measures and increasing the use of renewable energy
- fostering battery-enabled renewable energy integration
- supporting high quality job creation and skills development
- eliminating child and forced labor,
- protecting public health and the environment
- supporting responsible trade and anti-corruption practices, local value creation and economic diversification.



*materials for a better life*