

# Outotec

**THE BIG PICTURE**

By making prudent choices today, we can ensure the prosperous growth of businesses and societies worldwide, while preserving the planet for future generations.

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27/07/2016 Outotec's Interim report January-June 2016

26/07/2016 Markku Teräsvasara assumes the duties of Outotec's CEO on October 1, 2016

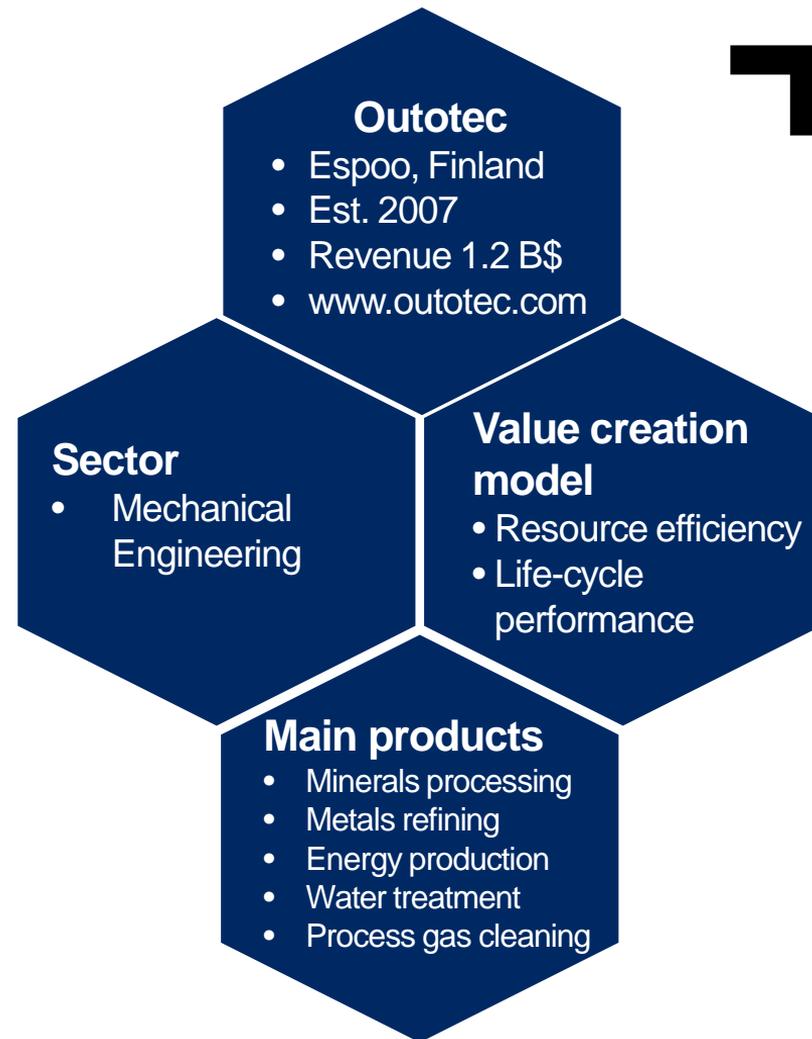
26/07/2016 Outotec to deliver process equipment for SANGAN iron project in Iran

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# The Company

- Outotec develops technology solutions and life-cycle services for its customers in two business units:
  - **Minerals Processing.** Outotec provides the mining industry with sustainable minerals processing solutions, from pre-feasibility studies to complete plants and life cycle service. Outotec designs and delivers minerals processing equipment, optimized processes, including intelligent automation and control systems, as well as complete plants.
  - **Metals, Energy & Water.** Outotec provides sustainable solutions for metal processing, renewable energy production and industrial water treatment.
- Outotec develops technologies which **utilize natural resources and raw materials efficiently**, reduce energy and water consumption, produce **less waste and emissions** as well as minimize the plant's lifetime operating costs.



# Outotec makes the Circular Economy happen

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- Outotec's approach to the Circular Economy is somewhat different than for most companies: The key focus is on the **impact of Outotec's products on the business and emissions of their customer**.
- The key is to identify so called '**hot spots**' in the value chain, as these solutions have much bigger impact than, for instance, the measures taken in Outotec's own premises.
- For Outotec's customers, the key issues typically are **total cost of ownership (TCO)**, **asset performance**, **process efficiency**, and **energy consumption** vis-à-vis **CO<sub>2</sub> and other emissions**.
- As Outotec manufactures **equipment with an extremely long life-cycle**, it is more important to focus on the **life-cycle performance** of the equipment than to focus on the production phase.



# Commitment to sustainability



- Outotec's mission, 'sustainable use of Earth's natural resources', defines the purpose of the company along with its core value – **commitment to sustainability**.
- Outotec **optimizes life-cycle performance** and return on their customers' investments.
- As the majority of Outotec's **manufacturing is outsourced**, sustainability along the supply chain is highly important to the company. Global supply chain management has been a prioritized development area for Outotec since 2010.
- Outotec's sustainability agenda 2020
  - Customers generate **20% less CO<sub>2</sub>** by using Outotec's metals-related technologies.
  - **50% reduction in fresh make-up water / tonne of ore** in non-ferrous metal concentrators using Outotec's solutions.
  - Double the energy produced through Outotec's **waste-to-energy solutions** compared to 2013.



# Outotec's contribution to the Circular Economy

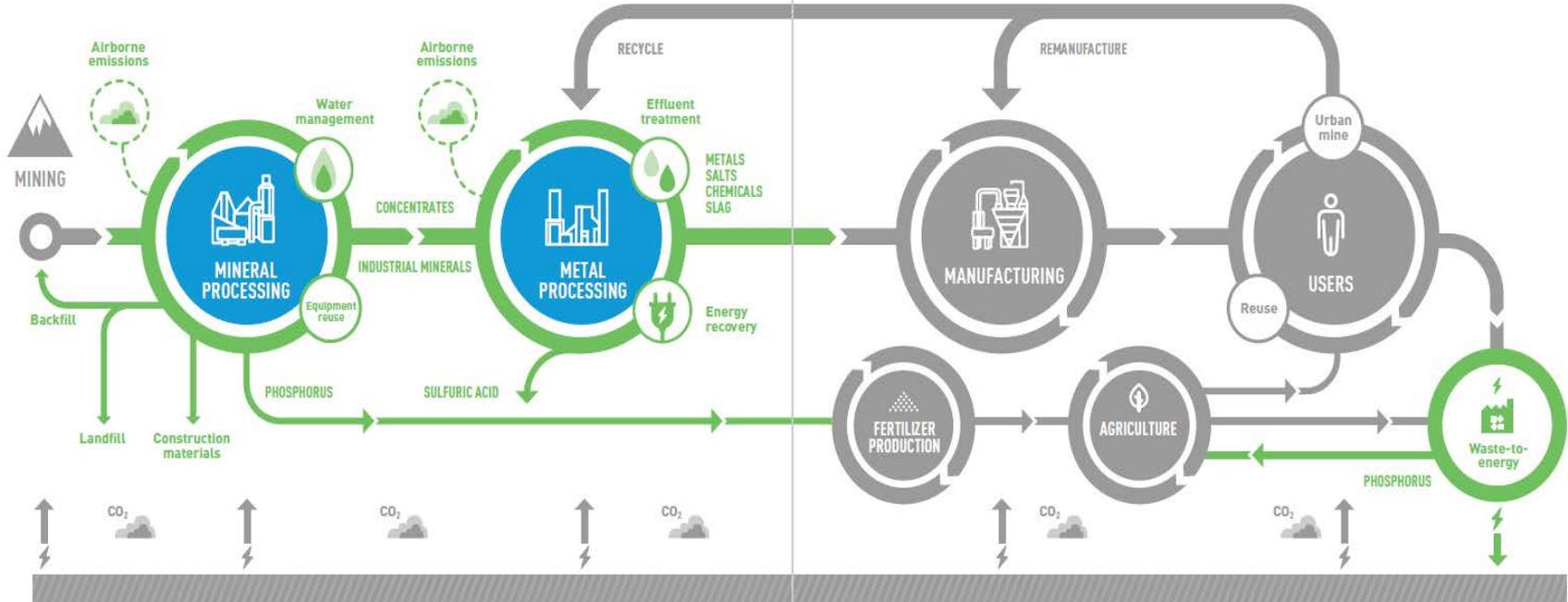


that Outotec excels in.

## RESOURCE EXTRACTION

## PRIMARY AND SECONDARY PRODUCTION

## RECYCLING



● The green flow arrows represent Outotec's contributions to the circular economy.

# Outotec provides resource-efficient solutions for the production of minerals, metals & energy

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- **Outotec's greatest contribution to the circular economy** involves providing **resource-efficient solutions** for the production of metals and energy.
- **Resource efficiency** is a **vital building block of the circular economy**. It means using the Earth's limited resources sparingly and sustainably while minimizing environmental impacts.
- Starting from resource extraction, Outotec selects the most suitable process for each ore type, aiming to **maximize metal yields** while **minimizing energy and water consumption**, waste and landfill.
- In primary metal processing, the focus is on methods enabling **high recovery of valuable metals**, energy recovery, the effective processing of impurities, effluents and by-products, and minimized emissions.
- Outotec also offers solutions for **recovering metals from residues, scrap and used products**.



# Extending the life-cycle of Outotec's products through service and maintenance

Outotec



- Outotec offers their customers **service and maintenance** supported by good availability of **spare parts**.
- Maintenance visits and plant audits are business as usual. Outotec offers also **outsourcing of maintenance** (planning of maintenance activities, spare part logistics etc.).
- The goal is to **extend product life-cycle** and to *increase the availability* of the equipment by **shortening the maintenance breaks** and **reducing the risk of failure and unplanned maintenance**.
- Outotec offers also monitoring of the condition of their products.
- **Modernization** of equipment is commonly used. This can mean either **refurbishment** or **upgrade** type business.
- Traditionally Outotec has been selling mainly equipment but in the future they will offer also **apps** (e.g. energy efficiency apps), production control systems and management information systems. Outotec's products are typically **easy to recycle**, as they are made of recyclable materials and have a **modular design**.

