

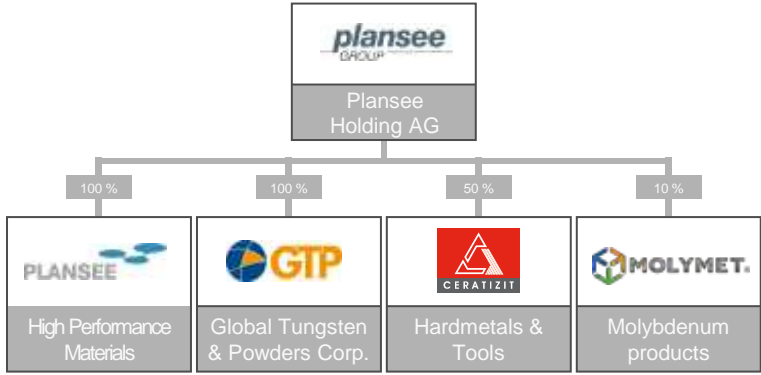
**Responsible sourcing, processing  
and recycling of tungsten.  
A contribution to a resource efficient  
and sustainable economy**

**Klaus Rissbacher**

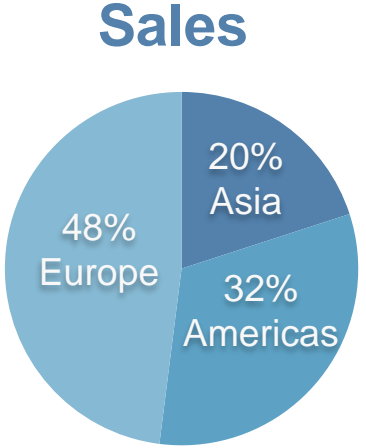
**/22.5.2013 FFG-BMVIT Intelligente  
Produktion d. Zukunft**

# Plansee Group - Strong metals for a High-Tech World

We develop, produce and market products that are based on the high-technology materials Molybdenum and Tungsten.



- 29 production sites across three continents
- The global sales network spans 50 countries
- Sales: 1.52 billion EUR in 2011/12
- 1 billion EUR invested within the last 10 years
- 6.120 employees



## Locations



# Responsible sourcing and processing

## Strategic goals:

- Long-term and sustainable Mo + W supply of the Plansee Group
- Secured access to primary raw material sources
- Refrain from purchasing or using “conflict minerals”
- Socially and environmentally responsible sourcing in accordance with the Plansee Group’s Code of Conduct
- Resource and energy efficient processing

## Measures:

- Vertical integration
- Primary and secondary raw material sourcing
- **Recycling and industrial Re-use of Molybdenum and Tungsten**
- Energy efficiency improvement
- Process & product optimization

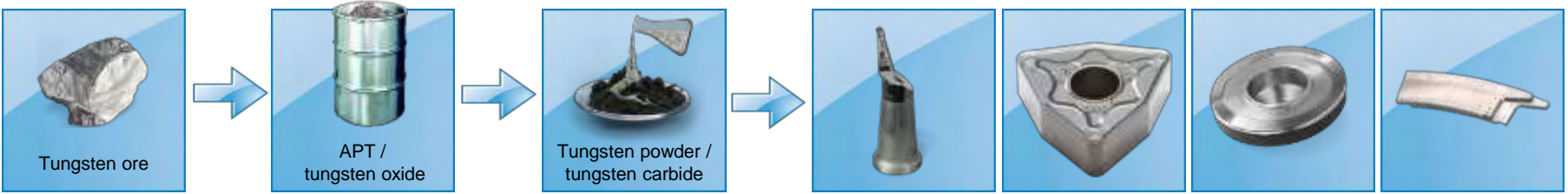
# Vertical integration

## Plansee Group Tungsten Road Map

From a tungsten processor to a vertically integrated group of companies

- End-to-end supplier covering the entire value added chain
- Handle all processing steps throughout the value chain

From ore/concentrate and powders to fabricated products

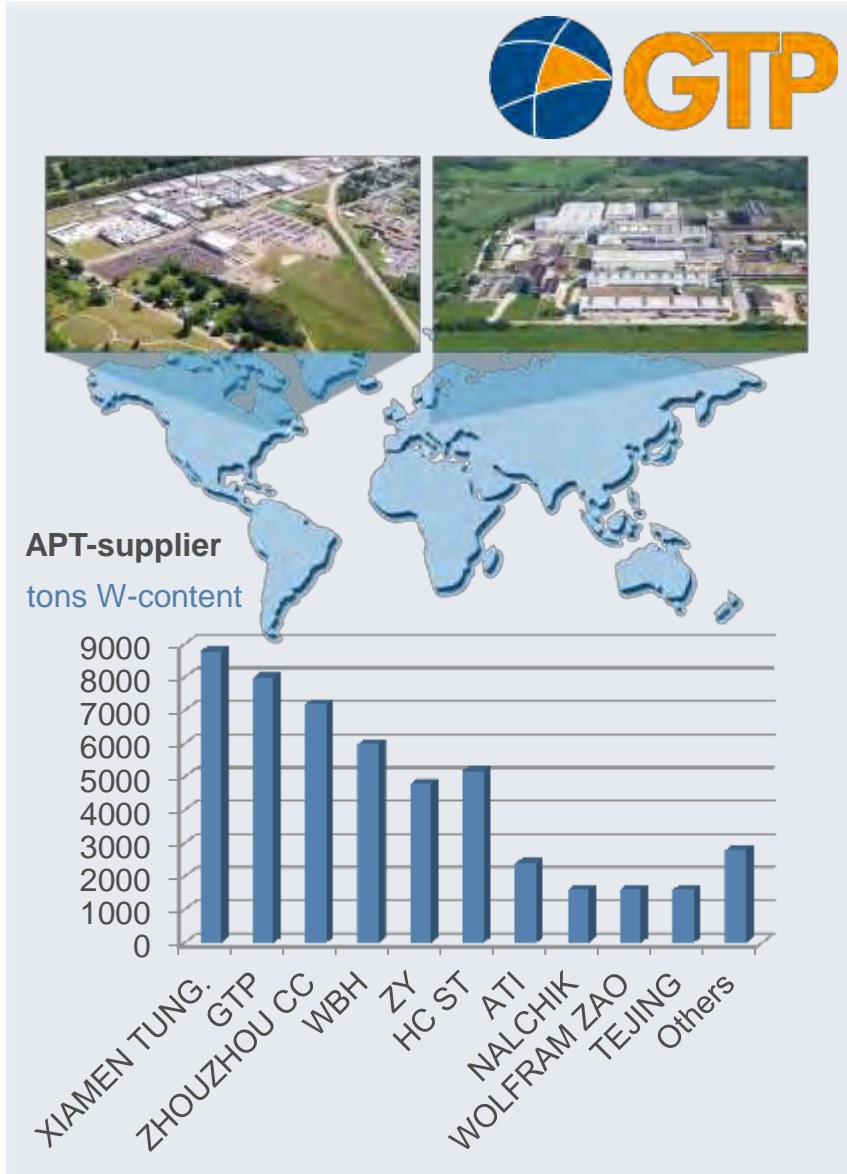


The Plansee Group developed into a strategic tungsten supplier of leading companies around the globe

# Vertical integration – Global Tungsten & Powders

Acquisition of GTP to realize and expand the vertical integration of the Plansee Group to become the leading Western producer of W- and WC-powders by:

- Plants in the US and Europe
- State of the art technology to guarantee competitive processing of various raw materials
- Recycling of secondary raw materials and processing of tungsten concentrates directly from mines
- Continuous investment in technology and capacity extension



# Primary & secondary raw material sourcing

The Plansee Group procures its tungsten from two sources:

Tungsten concentrates directly from the mine  
→no conflict minerals



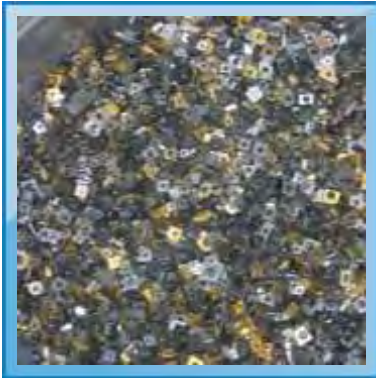
**Recycling of scrap**

# Secondary raw material sourcing (scrap) and recycling

- Take back agreements with Plansee Group customers
- Collection systems for hard metal containing scrap
- Cooperation with waste disposal / recycling companies

## Hard scrap: end of life products

(cutting inserts, wear parts, tools, punches and dies, etc.)

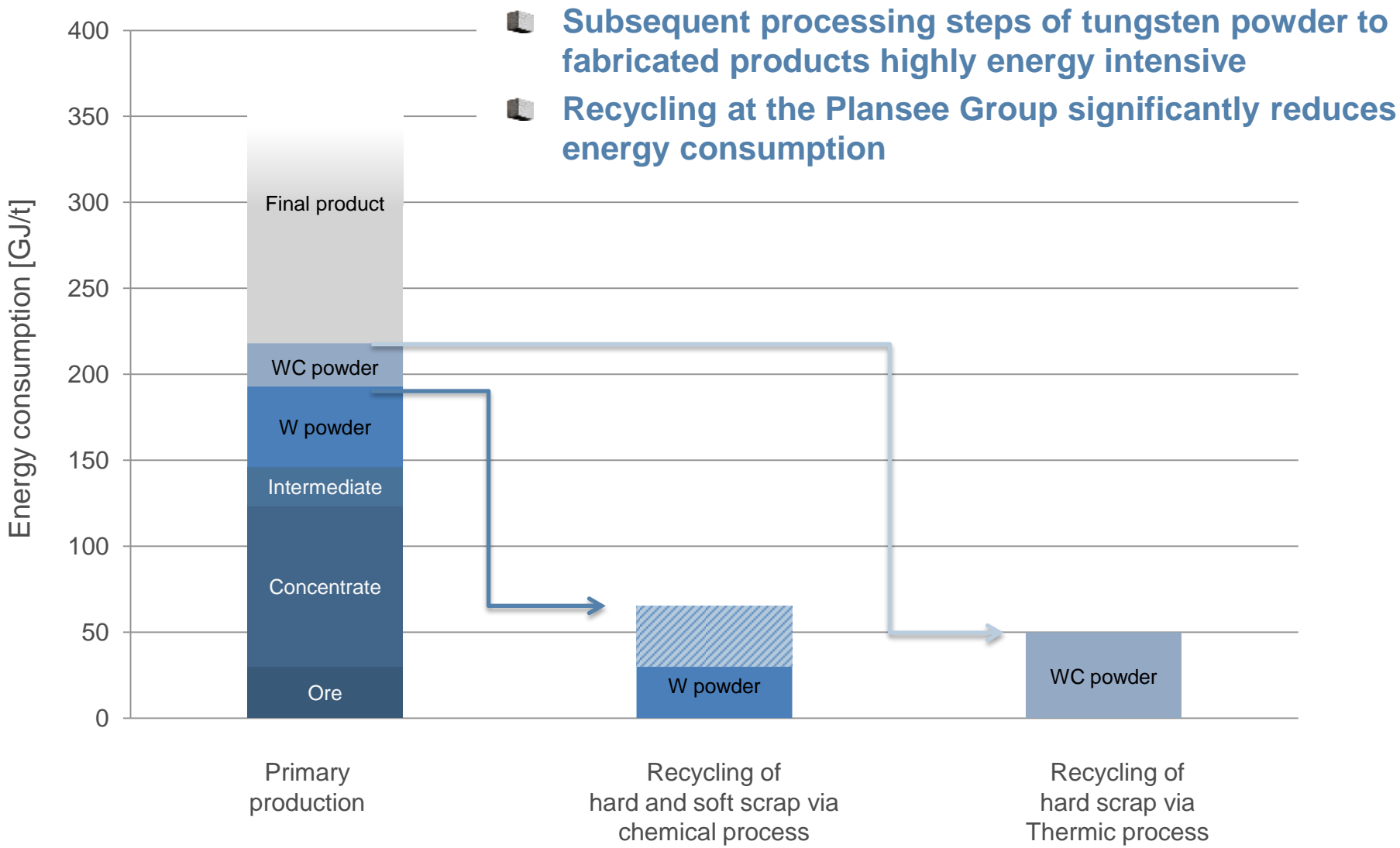


## Soft scrap: by-product of tungsten processing

(shavings, turnings, grinding sludge, sweepings and powders, etc.)

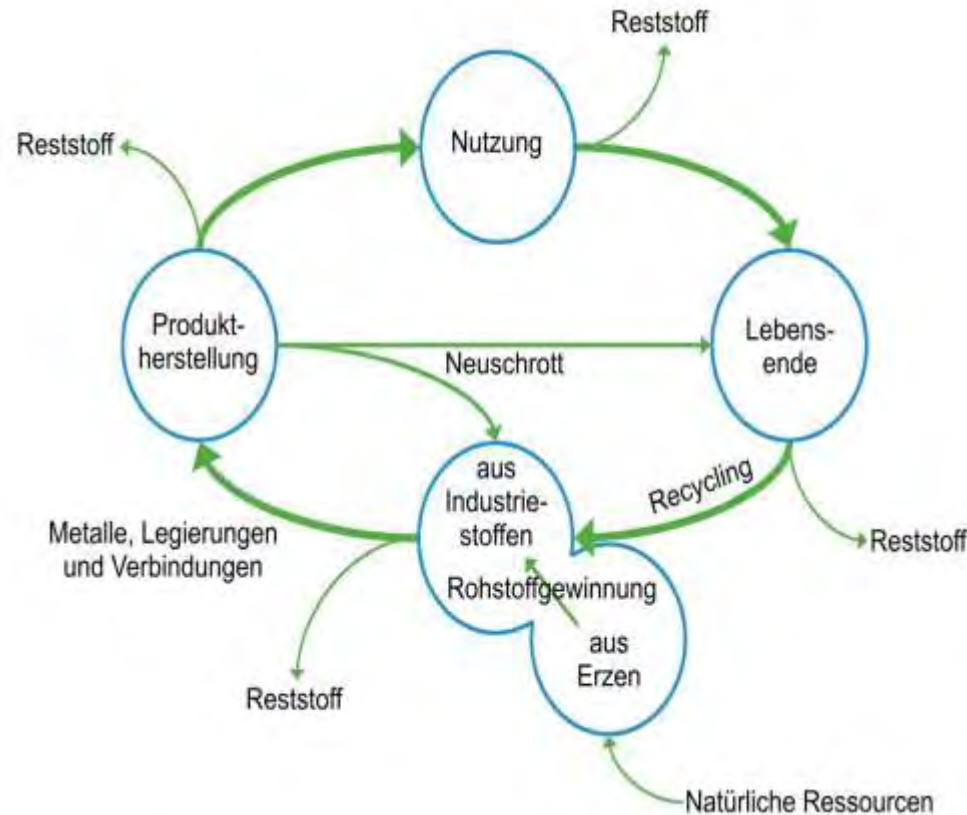


# Energy efficiency improvement—carbon footprint reduction





# „Recycling and industrial Reuse“ as a key enabling technology in a resource constrained world



- We are one of the global leading companies in Molybdenum & Tungsten based products
- Strong Metals for a High Tech World → Molybdenum and Tungsten as enabling technology made in Austria
- We close the loop and secure supply by recycling production scrap and end of life materials
- Continuous investment in R&D&D and deployment crucial
- Austrian centered Innovation Eco-System needed

# Thank you for your attention

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