

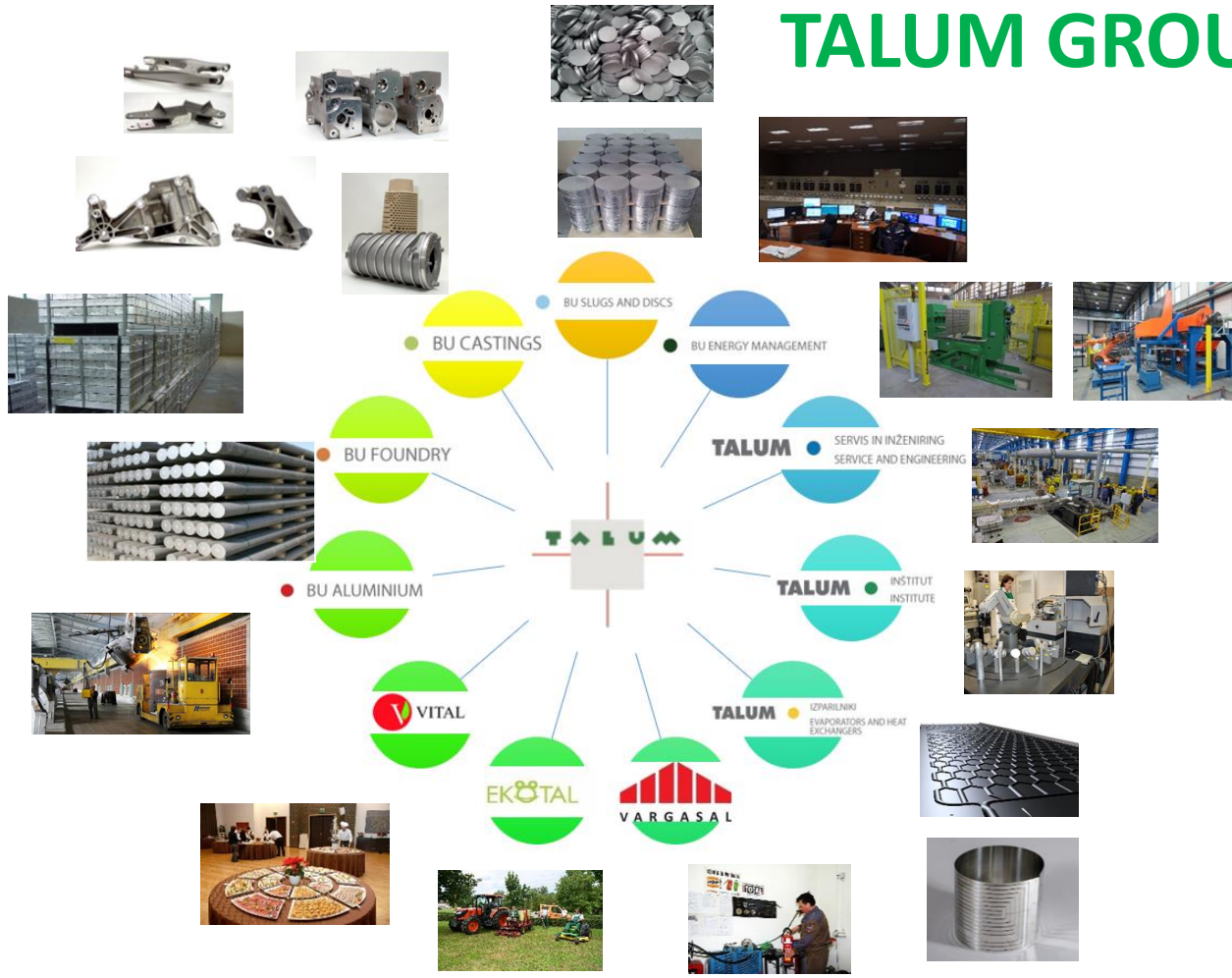
The Lightness of the Future

INNOVATIVE APPROACHES AND PARTNERSHIPS

Boosting Innovation for EU Industry 2019

3 April 2019, Ljubljana

TALUM GROUP



Important driver of Slovenian economy

- 8th place in the ranking of the largest exporters.
- Most efficient producer according to the power-efficiency in the world (AP18).
- 18th place in the ranking of the largest companies by total revenue from sales.
- One of the largest employers in the last three years.
- Over the past 10 years, more than 100 million EUR has been invested in development and equipment.

TALUM strategy for the next 5 years

- Development of new niche aluminium products with higher value added based on primary and secondary aluminium.
- Continuous growth of slugs production.
- Intensive growth of castings production with implementation of HPDC.
- Increase of value-added of our products due to higher complexity and integration of our own knowledge and experiences.



REPUBLIKA SLOVENIJA
MINISTRSTVO ZA IZOBRAŽEVANJE,
ZNANOST IN ŠPORT

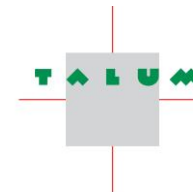
EUROPEAN UNION
EUROPEAN REGIONAL
DEVELOPMENT FUND
INVESTING IN YOUR FUTURE



REPUBLIKA SLOVENIJA
SLUŽBA VLADE REPUBLIKE SLOVENIJE ZA RAZVOJ
IN EVROPSKO KOHEZIJSKO POLITIKO

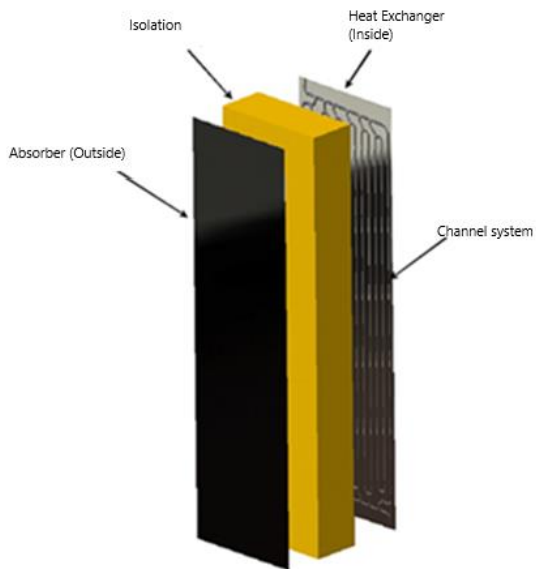


SLOVENIJA – AVSTRILIJA
SLOVENIEN – ÖSTERREICH
Evropska unija | Evropski sklad za regionalni razvoj
Regionalna razvojna in evropska politika Slovenije



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Aluminium Building Skins – Energy Active Facades Network



M-era.Net

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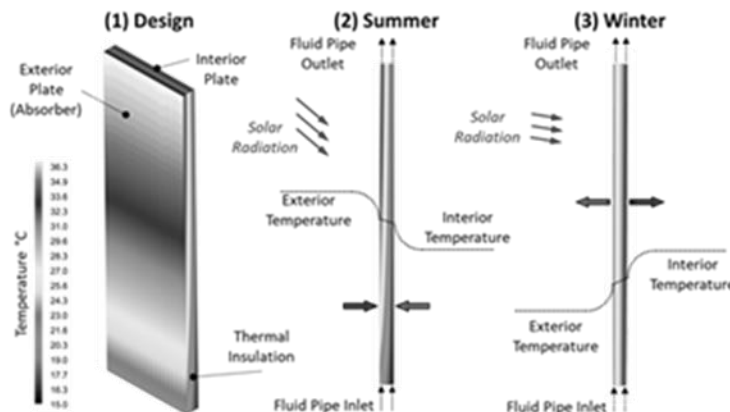


Design of corrosion resistant coatings targeted for versatile applications

MAteRials and Technologies for New Applications



Raw Materials	Materials	Design	Tools	Production	Usage
Fe Ore	Special steels Ni alloys	High-strength Steels	Tool steels for hot-work	Forged products	Car Electric Energetics
Other Metals	Aluminum alloys	Tool Steels	Forging	Casted Products	Oil / Gas Construction Aerospace
Aluminum Ore	Thermosets/MC		HPD casting	Polymer Products	Pharmaceutics Food Electro
Other raw materials and recycled materials	Metal Powders	„Additive manufacturing“ 3D Metal printing Multi Component 3D print (various metals + other materials)	Tool steels for plastic-work	Metal Products	Car Medicine
	Precious Metals		Multicomponent Products	Specific challenging use	



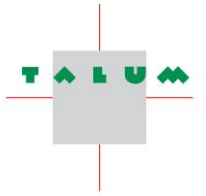
Superhidrofobna površina - AISi9Cu3

Institut "Jožef Stefan", Ljubljana, Slovenija

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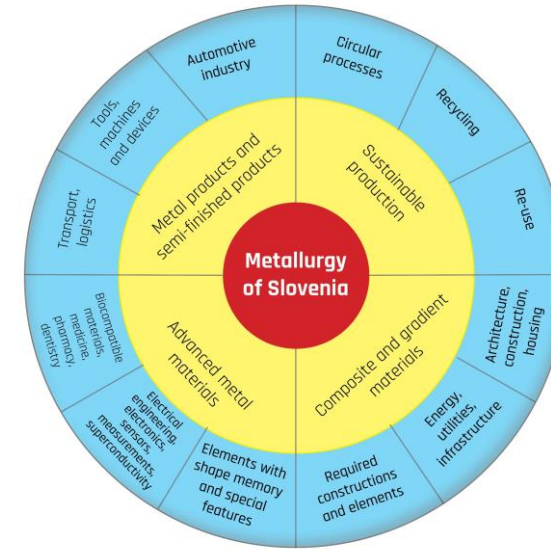
Odsek za fizikalno in organsko kemijo - K3



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Strategic council for metallurgy

- Established in year 2013.
- In the metal-processing chain is employed every 10th Slovenian, which represents 8.5% of GDP.
- Strategy for the Development of Metallurgy in Slovenia 2015-2025.
- Active and coordinated cooperation in providing an incentive systematic business environment, a quality education process and training of personnel, and the preparation of joint research and development projects.



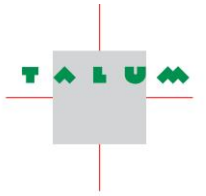
S4 PRIORITY AREAS

- HEALTHY WORKING AND LIVING ENVIRONMENT
 - Smart cities and communities
 - Smart buildings and homes, including wood chain
- NATURAL AND TRADITIONAL RESOURCES FOR THE FUTURE
 - Networks for the transition to circular economy
 - Sustainable food production
 - Sustainable tourism
- (S)INDUSTRY4.0
 - Factories of the Future (FoF)
 - Health –medicine
 - Mobility
 - **Development of materials as end products**





SRIP MATPRO

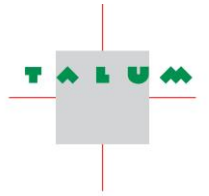


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- Integration, cooperation and investing in joint development, and consequently in the competitiveness and existence on the global market of Slovenian metal industry .
- The goal is to establish production chains for the production of more complex products with higher added value and greater potential for placement in global value chains.
- **3 KEY PROJECTS FOR 2019**
- Establishment of the SiPCAST Pilot Center (Slovenian pilot Center for advanced solidification technologies for light metals).
- Establishment of the Career Platform - Pilot HRD. Long-term forecasting of competences (general and specific) to ensure the long-term competitiveness of the Slovenian economy.
- Emphasis on connecting multicomponent materials - design an interdisciplinary program for composites.

Focused (priority) areas - to promote joint research and development projects

- a) The area of steels and special alloys**
 1. The concept of ultra-pure steels and alloys
 2. High-strength steels and their forming
 3. Advanced metal materials for specific applications
- b) The area of aluminium**
 1. New high-strength and ultra-pure alloy Al
 2. Alternative manufacturing methods and maximum recycling Al
 3. Alloy casting Al alloys
- c) The area of technologies**
 1. Rapid Prototyping and additive technologies
 2. Recycling (metallic materials, rare earths, composites, additional materials, by-products)
 3. Advanced casting technology and casting
 4. Modern technologies for processing polymers and hybrid materials
- d) The field of multicomponent smart materials**
 1. Multi-component smart fibers and textiles
 2. Composite
- e) The area of functional coatings and advanced binders for metals**
 1. Functional coatings
 2. Pitch and binders



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Thank you for your attention!

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www.talum.si