K1-MET OVERVIEW

K1 MET
metallurgical competence center

Coordinated by

COMET Competence Centers for Excellent Technologies

FFG

Financially supported by

bmwfw

bmvit

SFG Im Auftrag des Wirtschaftslandesrates

Das Land Steiermark

Research STATE UPPER AUSTRIA

tirol Unser Land

MOTIVATION

Development of resource intensive processes

COMET K1 - 3rd CALL:

K1-MET - Competence Center for Excellent Technologies in Advanced Metallurgical and Environmental Process Development

Phase I : 2015 – 2019
Phase II : 2019 – 2023

Budget Phase I : 22,7 M€

Financing:
27 % FFG
13 % Federal states
5 % Scientific partners
55 % Industrial partners

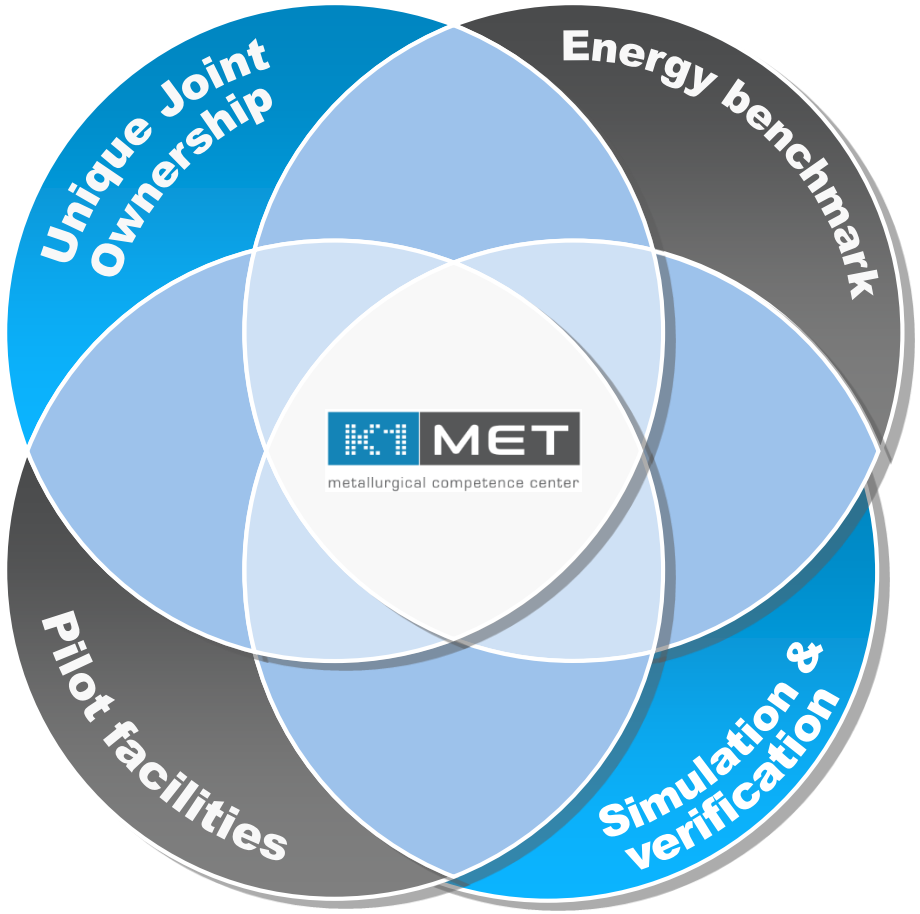
Locations:
Linz
Leoben

UNIQUE SELLING PROPOSITION (USP)

Competence center for metallurgy

Leading partners from science, technology and production

- Dust recycling and energy recovery
- Multi scale simulation units for all process steps
- Application center for refractories



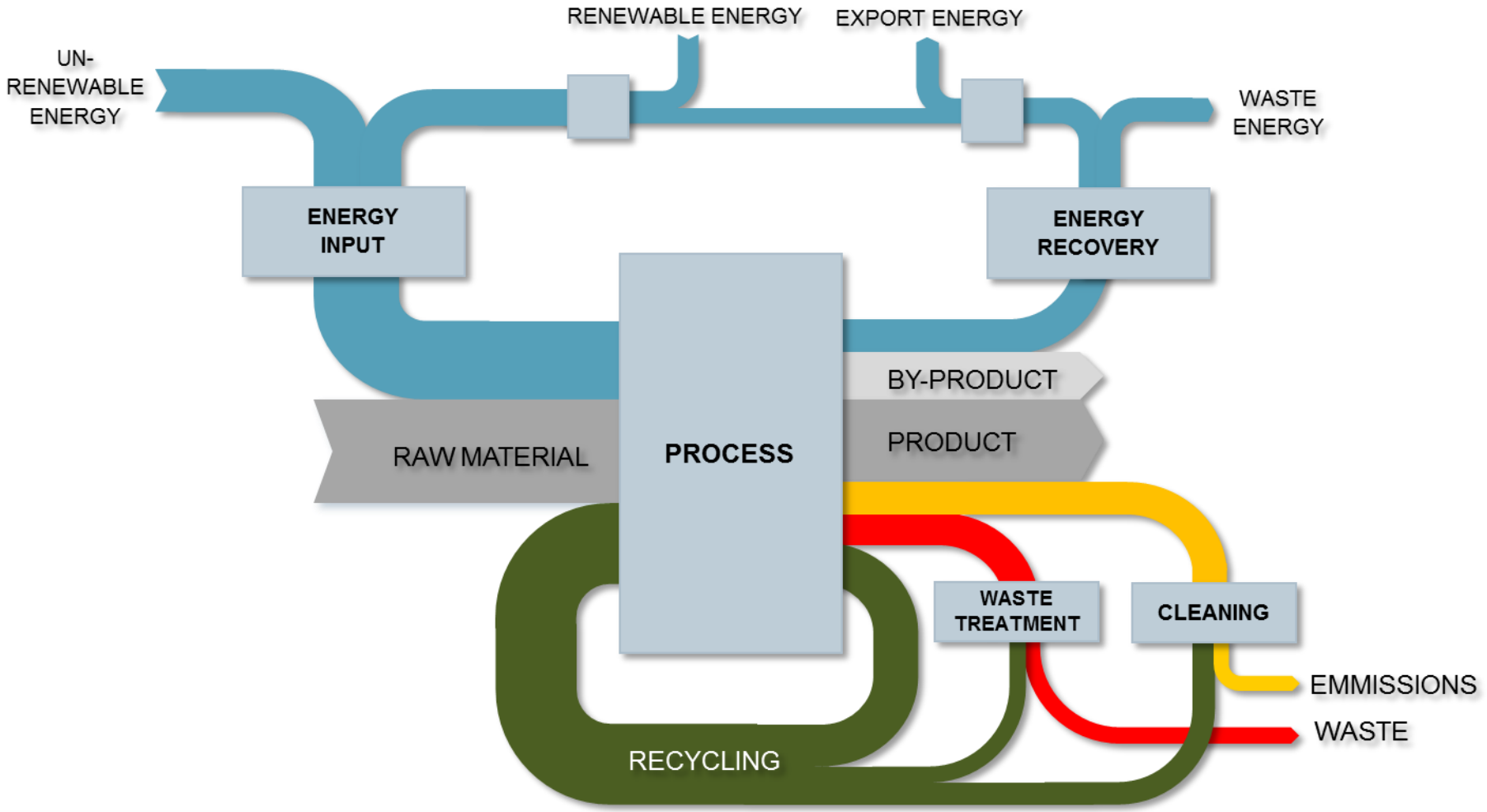
Leadership in metallurgical processes

Direct transfer of results from science to industry

UNIQUE SELLING PROPOSITION (USP)

K1-MET Research Topics

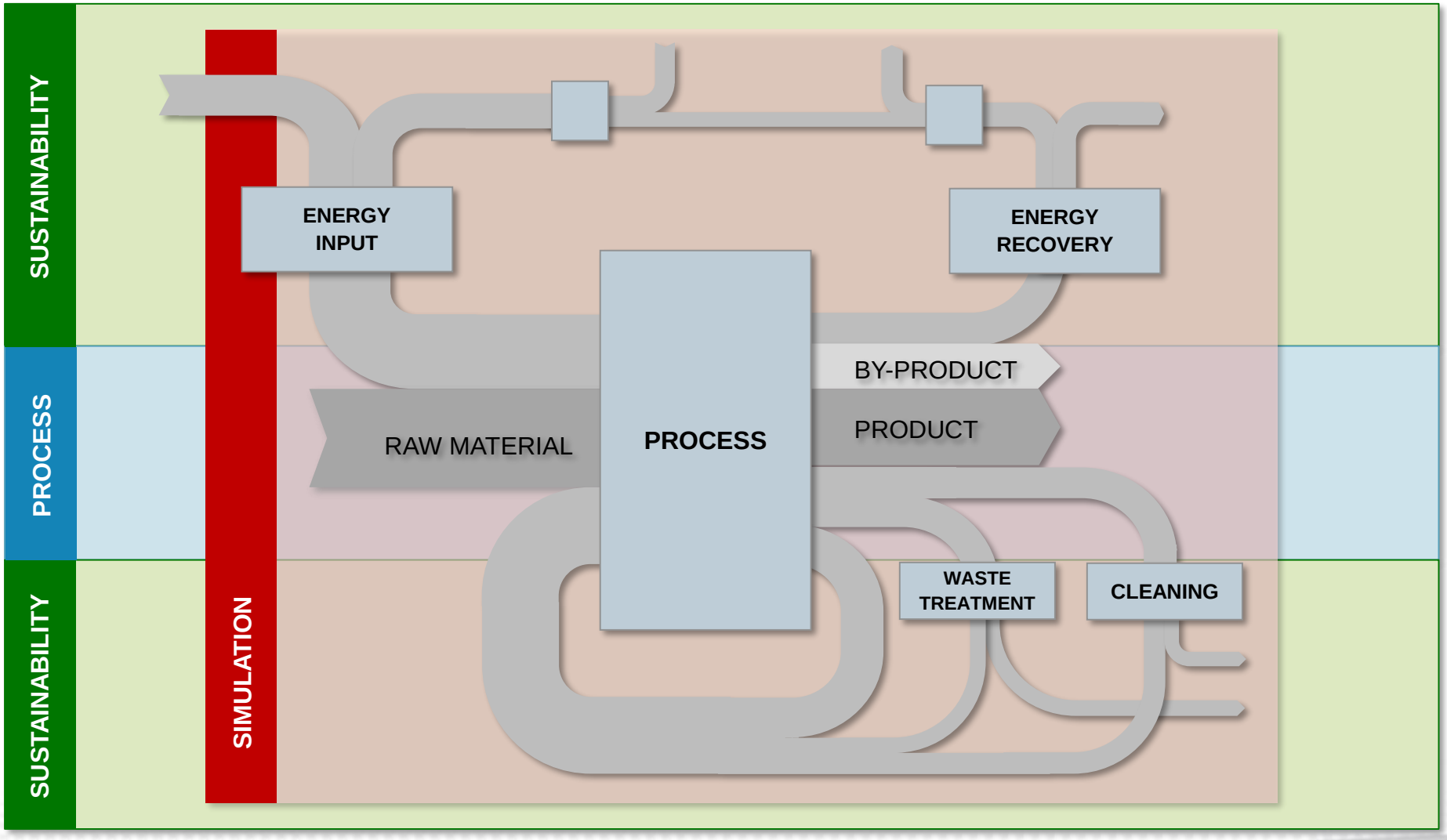
metallurgical competence center



UNIQUE SELLING PROPOSITION (USP)

K1-MET Cross sectorial approach

metallurgical competence center



REALIZATION

K1-MET Project matrix

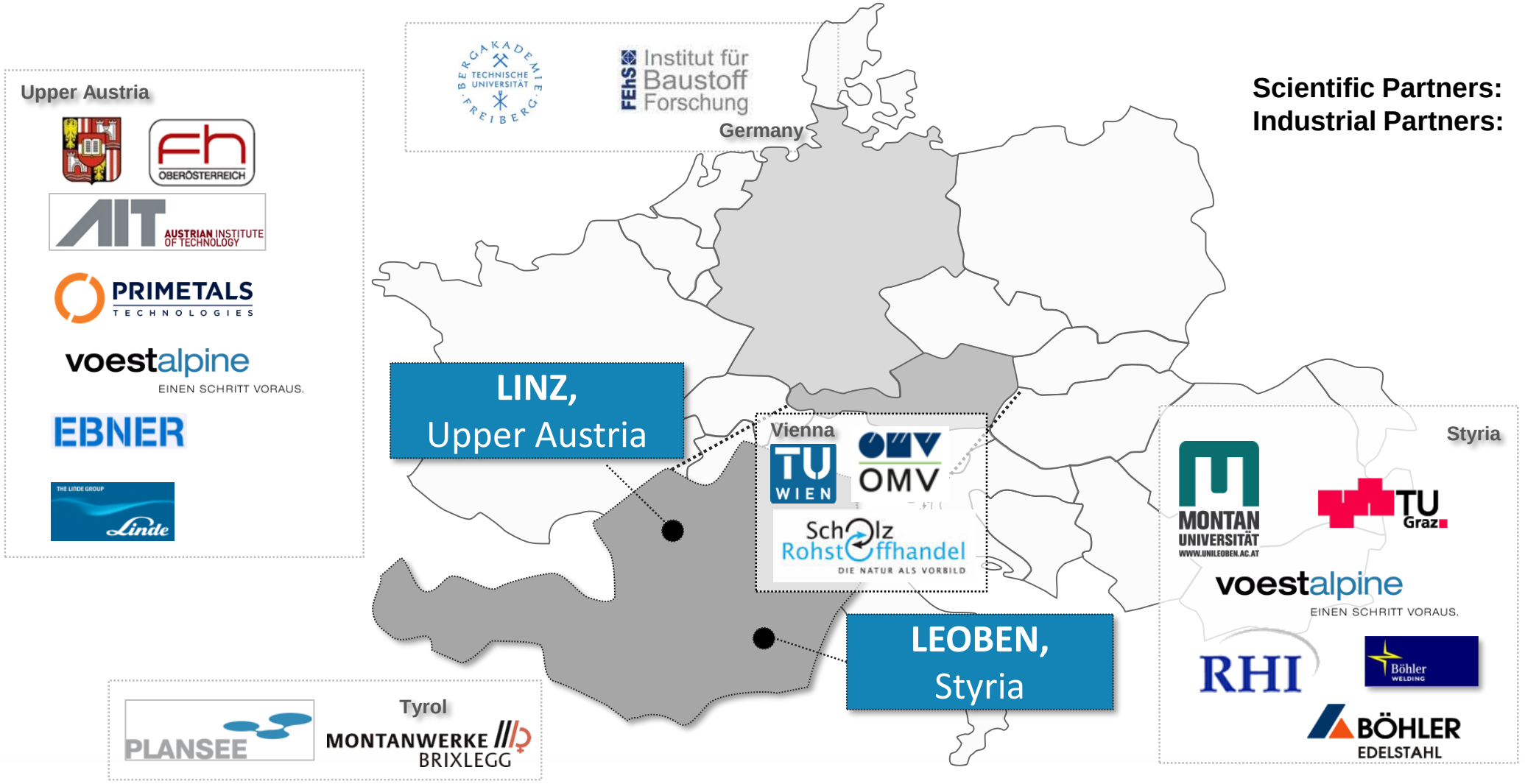
		Project	Sustain-ability	Process	Simulation
Area 1	1.1	Optimisation of sinter process	o		o
	1.2	Reducing agents	o		o
	1.3	Steelmaking slag and product development		o	o
	1.4	Dust Treatment	o	o	o
	1.5	Gas Cleaning solutions	o		o
Area 2	2.1	Process Optimization of Metals Reduction Technologies	o		o
	2.2	Optimize Converter Steelmaking by new Process Approaches		o	o
	2.3	Variation of Non-metallic Inclusion by ESR		o	
	2.4	Analysis of Refractory Wear Aiming to improve Lining Life Time		o	o
Area 3	3.1	Slags, refractories and inclusions in continuous casting		o	o
	3.2	Physical and numerical simulation of casting/rolling		o	o
	3.3	Surface oxidation in casting and steel processing		o	
	3.4	Energy Systems	o		o
Area 4	4.1	K1-MET Simulation Platform			o
	4.2	Bulk Solid Modelling	o		o
	4.3	Particle Flows	o		o
	4.4	Liquid Melt Models		o	o
	4.5	Numerical Real-Time Mould Flow Predictor		o	o
	4.6	Process Simulation of Complex Metallurgical Plants	o		o

REALIZATION

Locations and Partners

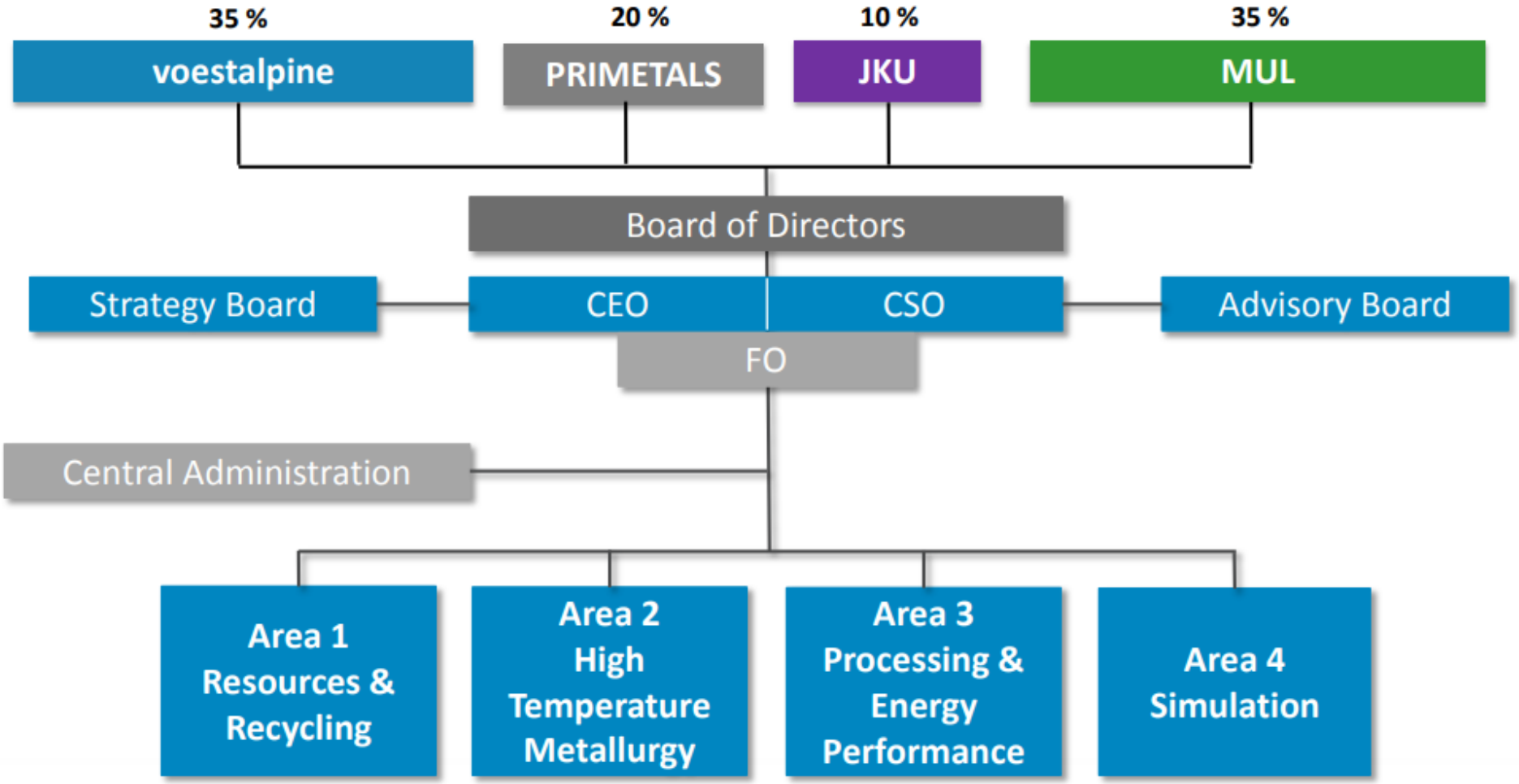
metallurgical competence center

Scientific Partners: 8
Industrial Partners: 12



K1-MET
Organization

metallurgical competence center



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Thank you!

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