

# Data-driven systems and AI supporting circular economy in steel industry



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Alchimia Project



Presentation for REACT cluster webinar

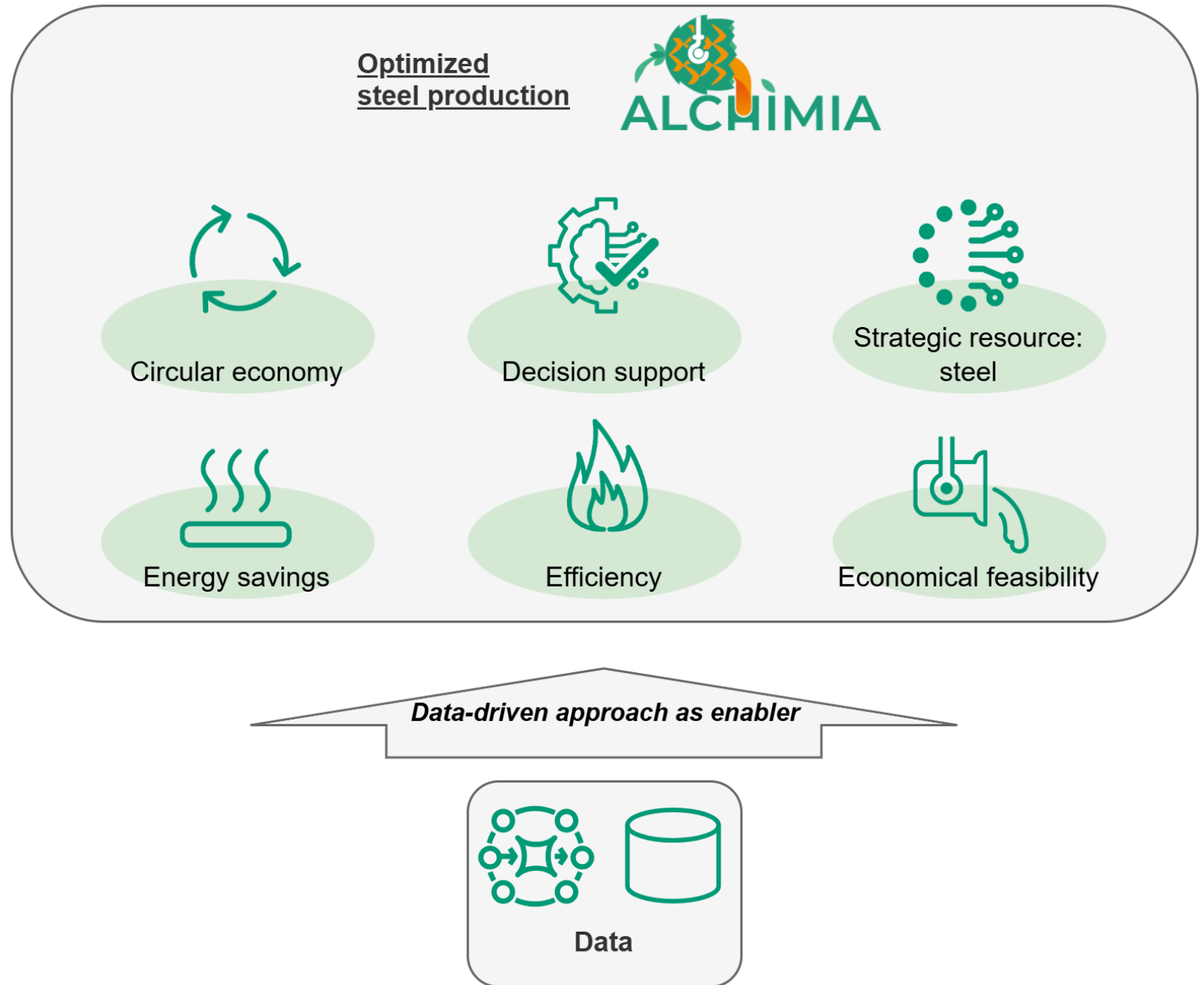
"From data to decisions: How can AI and big data support decision-making in resource recovery from waste?"

## Presentation outline

- Project goals and problems
- Variety of models
- Optimizing scrap reuse



# Data and AI for circular, efficient steel production





## Who we are

**Atos**

**Bfi**



**FONDERIA  
DI TORBOLE**  
EF GROUP

**EXUS**



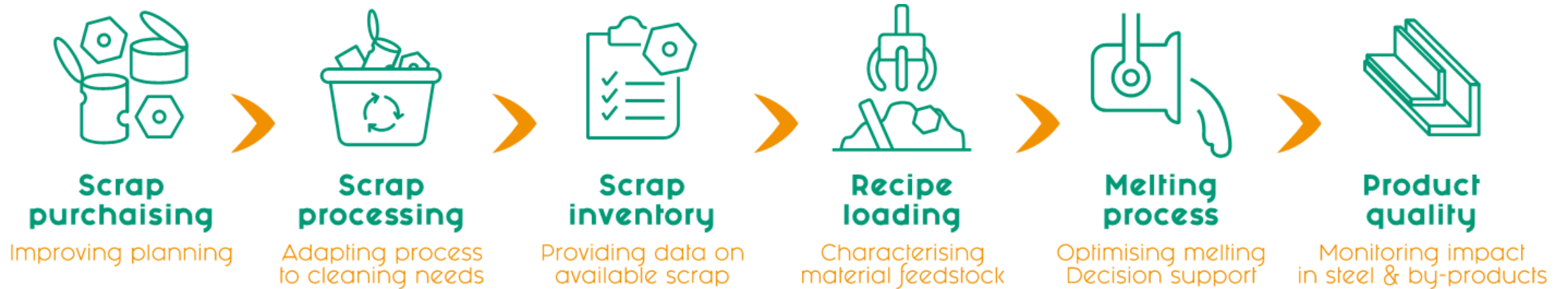
**MANDAT  
INTERNATIONAL**



**Sant'Anna**  
Scuola Universitaria Superiore Pisa



## Use case Celsa: electric steelmaking route



-> Scrap is the raw material

-> Collection of data-intensive optimization problems



## Use case FdT: automotive parts



- Preserve quality standards
- Minimising environmental impacts and costs
- Reducing inefficiencies and wastes of energy and material



# Federated Learning; Continual Learning

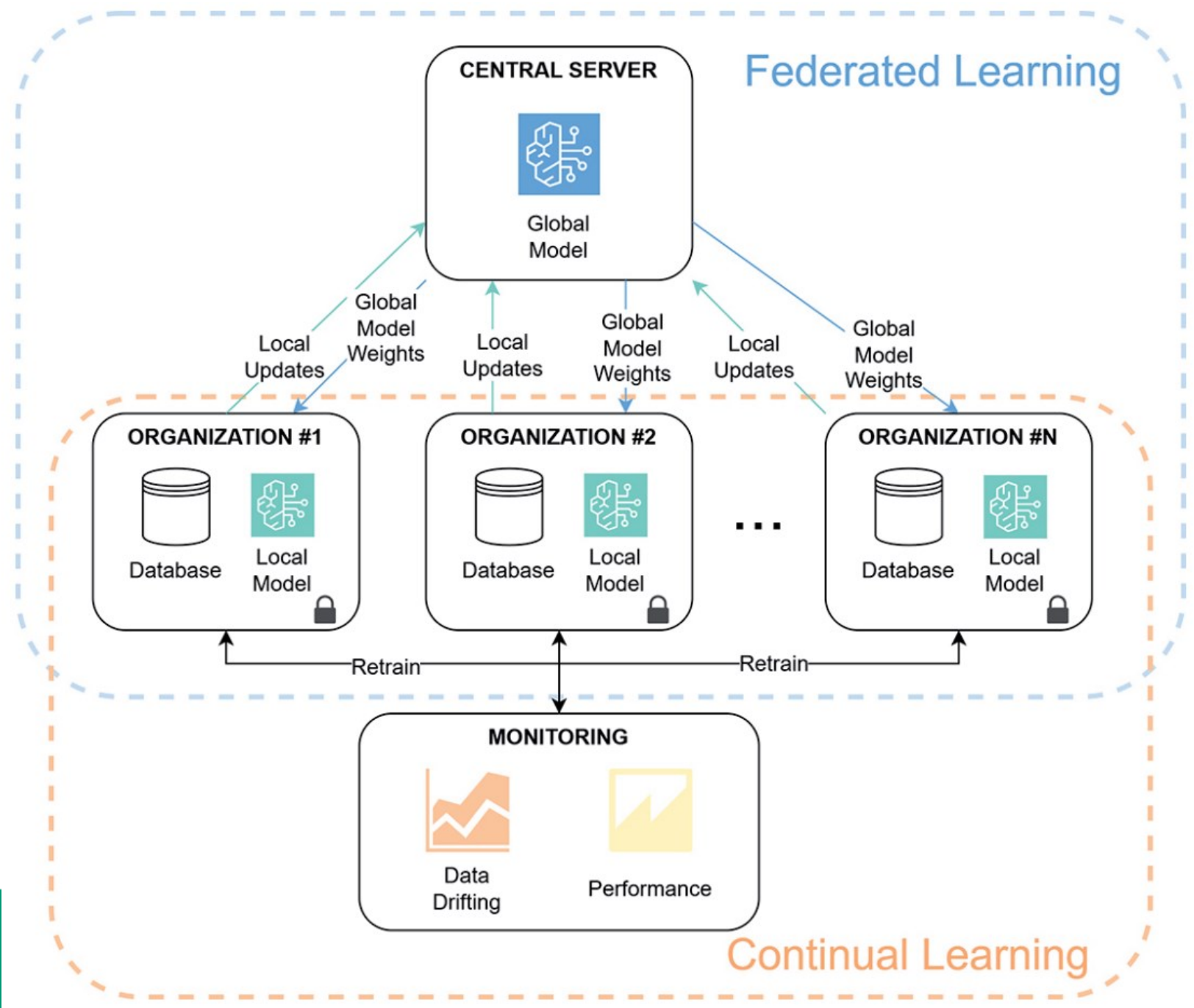
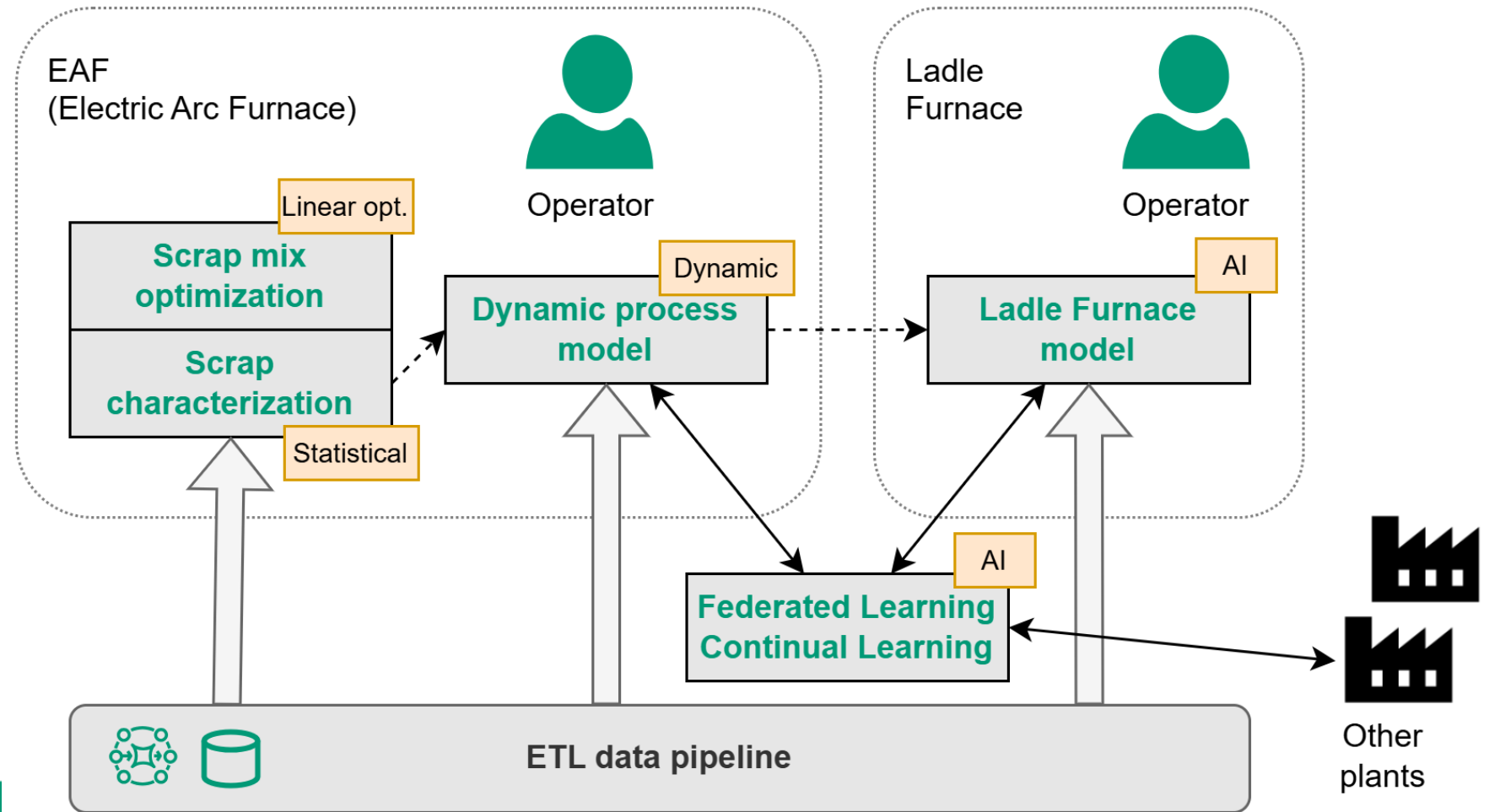


Image from:  
[doi:10.5281/zenodo.14741719](https://doi.org/10.5281/zenodo.14741719)



# AI and non-AI models together

Project subset:  
EAF and LF models  
Use case Celsa





# THANK YOU!



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