



INTERNATIONAL UNION
OF RAILWAYS

Welcome to the workshop

ENERGY MANAGEMENT SYSTEMS

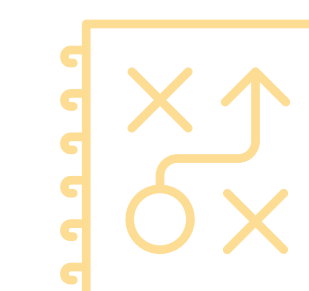
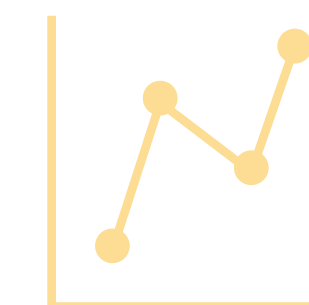
FOR ENERGY EFFICIENCY AND DECARBONISATION IN RAIL

Proposed by
the UIC Energy efficiency and CO₂ Emissions Sector

Funded by UIC Members:
CFL (LUX), FS (ITA), FTIA/VÄYLÄ (FIN), IP (PRT),
PRORAIL (NLD)

Organised by BLS Cargo, UIC & the Sector's core members:
Gerald Olde Monnikhof, ProRail
Dimitra Giannopoulou, BLS Cargo
Stijn Rogghé, BLS Cargo
Philippe Stefanos, UIC

**Energy efficiency & decarbonisation best practice
workshops (P945)**



| | |
|--------|---------|
| 3509,4 | 3480,36 |
| 33,715 | 322,664 |
| 33,715 | 309,672 |

| | |
|--------|---------|
| 19,489 | 267,945 |
| 26,82 | 0,151 |
| 10,048 | 1,883 |



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ENERGY MANAGEMENT SYSTEMS

FOR ENERGY EFFICIENCY AND DECARBONISATION IN RAIL

Welcome / Introduction

Kind reminder:

Please avoid leaving your microphone open if not speaking



Philippe Stefanos

Workshop timeline

| | | | | |
|---|--------------|--|-------------------|--|
| ▶ | 10:00 | Welcome Introduction | UIC | Philippe Stefanos |
| | 10:10 | Legal framework, EED | CER | Ethem Pekin |
| | 10:30 | Sharing useful simple startup guidance for companies with limited resources | Eastvision | Gregor Hribar |
| | 10:50 | Implementation insights and practical steps towards certification | SŽ | Tomaž Štor |
| | 11:10 | Implementation insights and practical steps towards certification | BLS Cargo | Dimitra Giannopoulou / Stijn Rogghé |
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| | 11:50 | Questions / discussion Closing remarks | All | |

Introduction

Digitalisation and Energy Measurement Systems (EMS) are covering more and more spans of the rail operation fields;

Opening doors to efficient monitoring and improvement

Because of that possibility, and for energy sustainability,

Energy Management Systems (EnMS) are now mandatory for large energy consumers.

Such “data-driven” improvements and strategies are at hand, and AI also opens doors to mass and transversal analyses.

Initial idea

An Energy Management System must be implemented for many railway companies.



What is the best or most efficient or simplest way to do it while meeting the requirements?

How have the others been doing?

It would be useful to share experience, practical information about the implementation and certification of EnMSs

Purpose of the workshop

How

- Understanding the requirements
- Sharing practical experience in development and implementation
- Looking into useful energy saving practice emerging from the implementation
- Understanding the certification stage

PURPOSE OF THE WORKSHOP

About:

- Data scope
- Data collection
- Data processing
- Setting the EnMS
- Process to EnMS certification
- Certification process itself
- Experience about all
- Exploitation of the (certified) EnMS
- Ripping benefits of energy monitoring & optimisation

You are all invited to share, with questions or at the end of the presentations, the findings and challenges regarding:

- ▶ Data management
- ▶ EnMS implementation experience
- ▶ Certification experience
- ▶ Data-driven energy efficiency/saving practices
- ▶ Any EnMS/energy saving technical aspects

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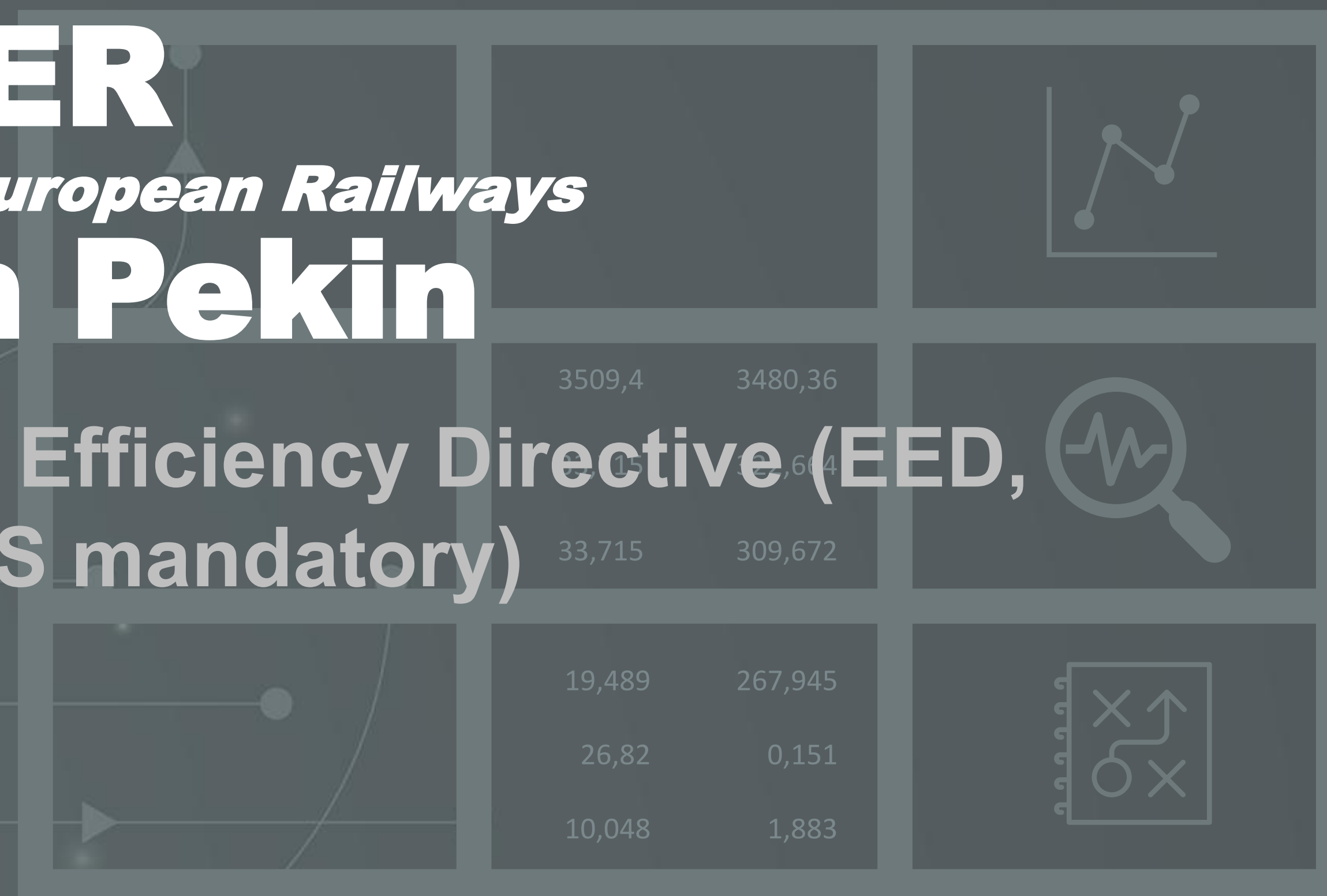
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CER

Community of European Railways

Ethem Pekin

Legal framework: Energy Efficiency Directive (EED,
Making EnMS mandatory)



Ethem Pekin

Head of Economic Policy and Sustainability

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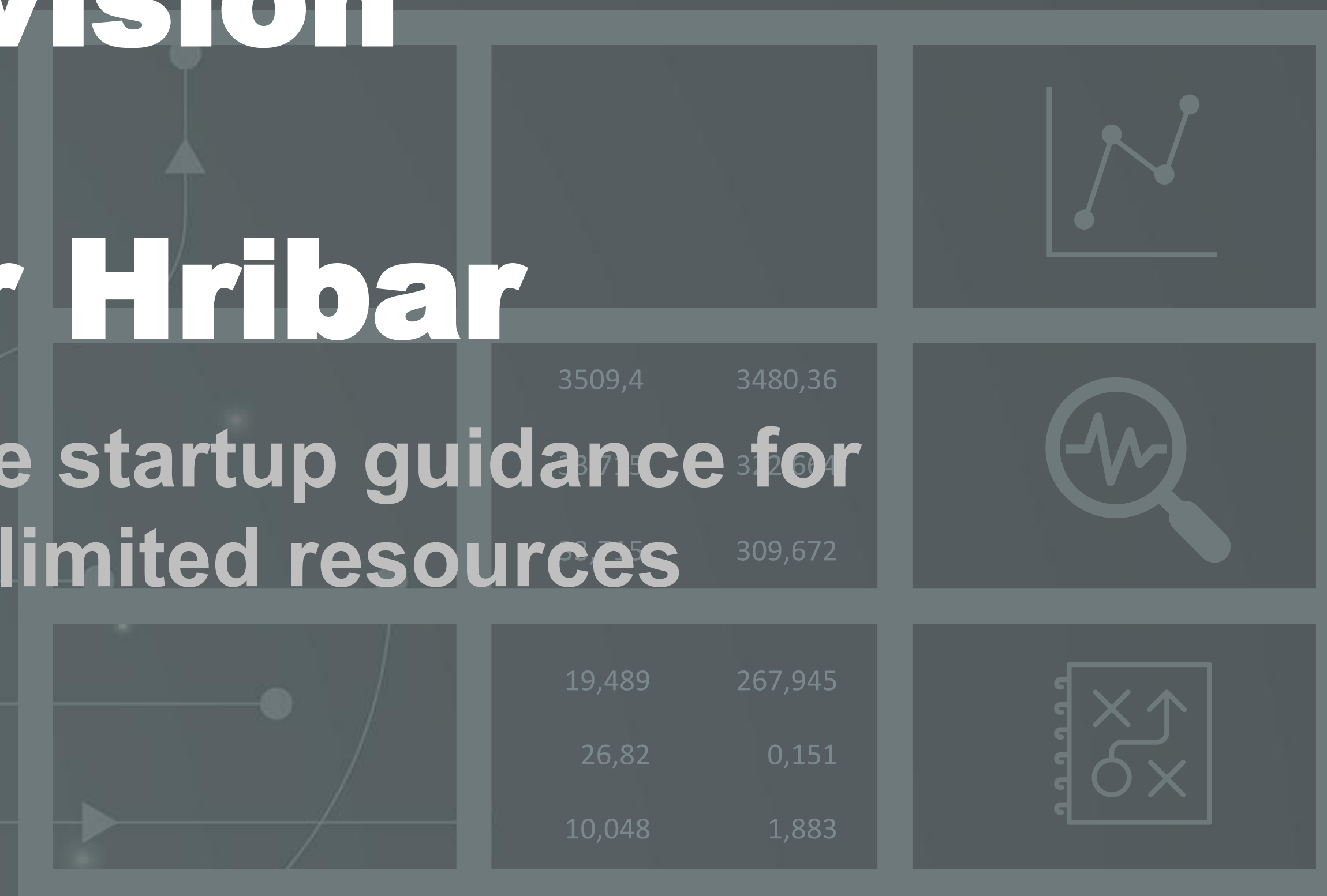


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Eastvision

Gregor Hribar


Sharing useful simple startup guidance for
companies with limited resources



Gregor Hribar

Mechanical and Energy engineering

Workshop timeline

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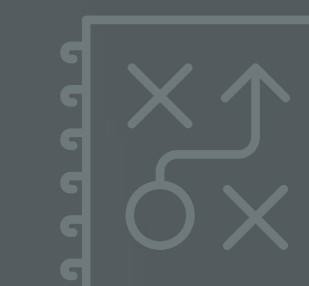
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SŽ

Slovenske železnice (Slovenian railways)

Tomaž Štor

Implementation insights and practical steps towards certification




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Tomaž Štor

Sustainability, Quality and Process Optimisation, Energy efficiency and CO2

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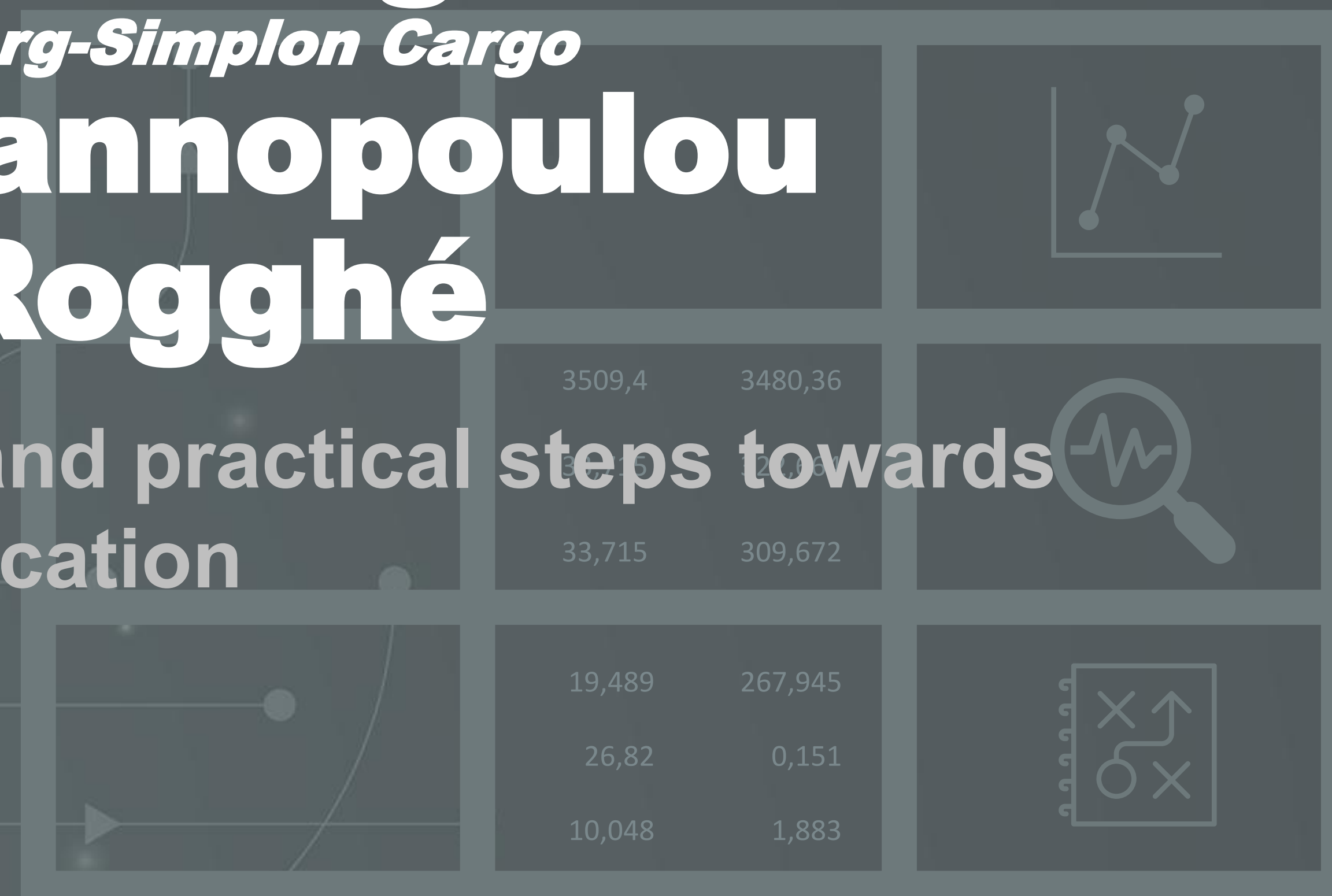
BLS Cargo Belgium

Berne-Lötschberg-Simplon Cargo

Dimitra Giannopoulou

Stijn Rogghé

Implementation insights and practical steps towards
certification



Dimitra Giannopoulou | Stijn Rogghé

Sustainability Coordinator | Energy & Trainpath Manager



ISO 50001 Implementation

Practical Steps to Certification

Dimitra Giannopoulou
Stijn Rogghé
05/06/2026

—○ Overview

1. Who are we
2. ISO 50001 at BLS Cargo Nord
3. Timeline to certification
4. Preparation phase
5. From analysis to energy projects
6. Continual improvement
7. Certification audit
8. Q&A

Who we are

19,757

TRAINS OPERATED IN 2024

52%

MARKET SHARE

Challengers in the European rail freight market hold a market share of 48%. We're an important part of it.

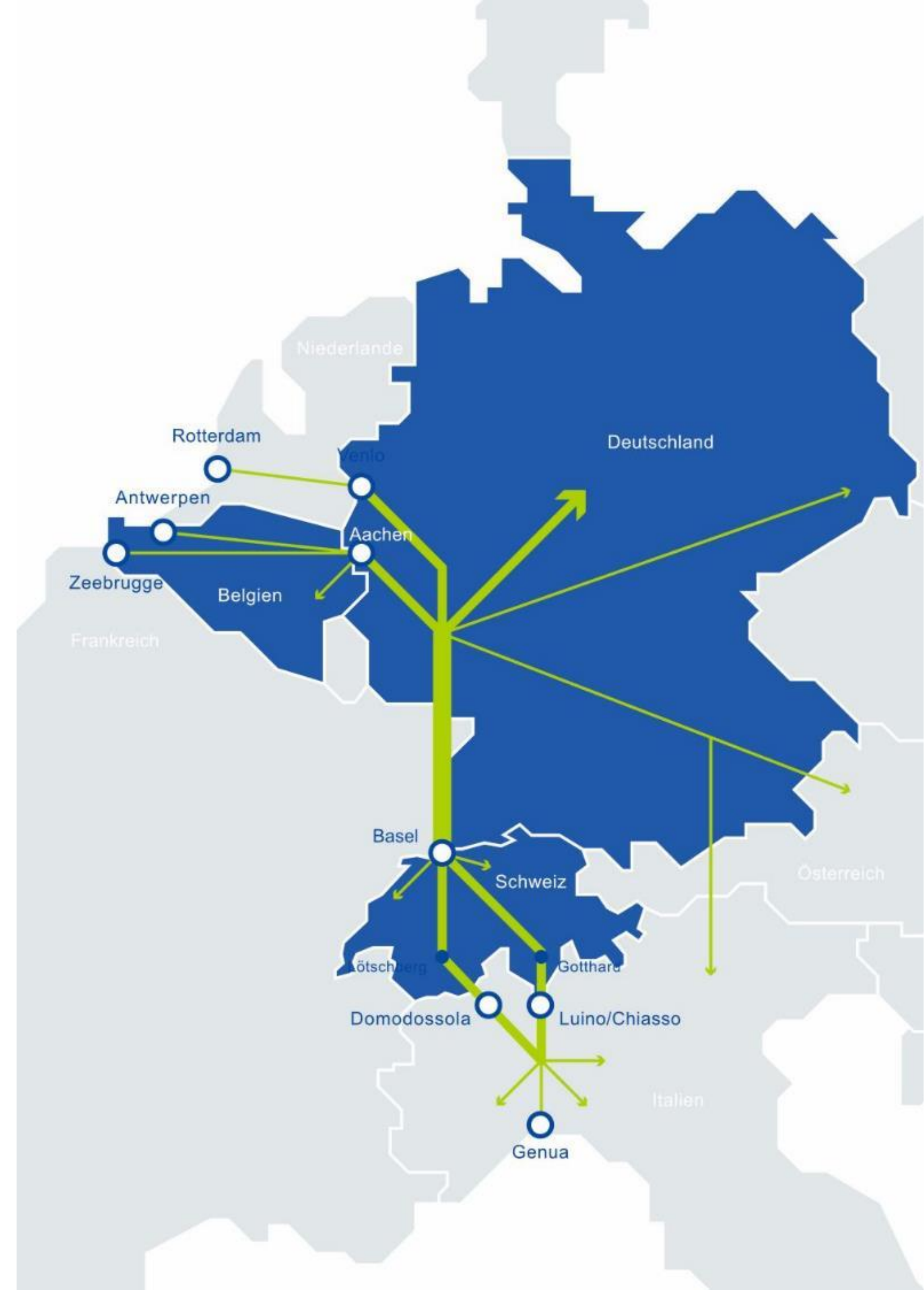
150

OWN LOCOMOTIVES

445

FULL-TIME POSITIONS IN 2024

Of these, 37% work in Belgium, 28% in Switzerland, 23% in Germany and 12% in Italy.



—○ ISO 50001 at BLS Cargo Nord

Regulatory driver

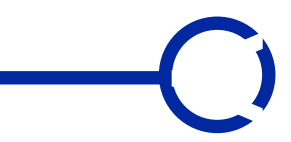
EnEfG (DE): mandatory Energy or Environmental Management System (> 7.5 GWh/year)

Why ISO 50001

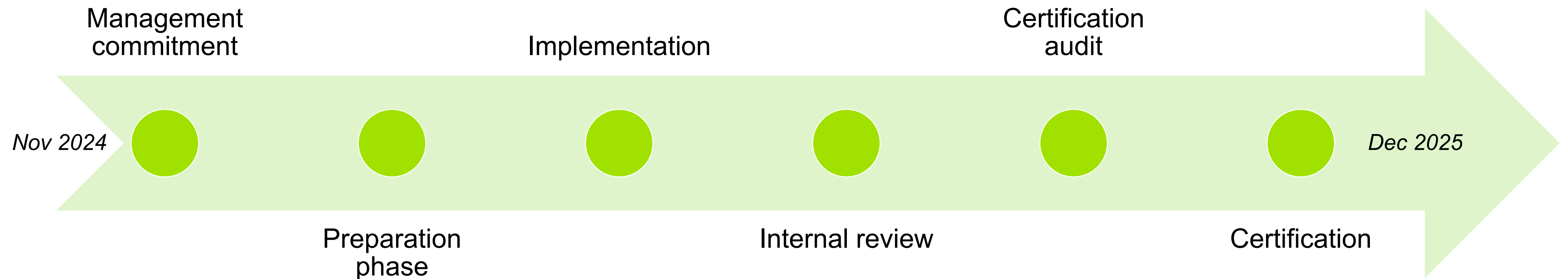
- Globally recognized energy management standard
- Focus on continuous improvement of energy performance
- Alignment with existing management systems

Co-benefits

- Structured approach to energy management
- Reduction of energy costs
- Access to funding (e.g. RED II in Belgium)
- Contribution to CO₂ reduction targets



Timeline to certification



—○ Preparation phase - Data readiness

Structured data as backbone of decision-making

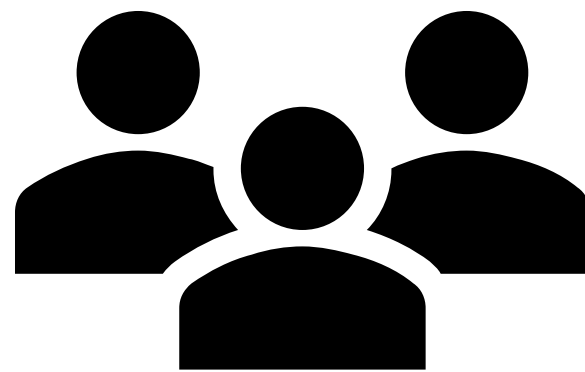
- Centralised collection of traction energy, buildings and mobility data
- Standardised data model across countries
- **Data sources and integration**
 - Energy data (EMS)
 - Infrastructure data (Trainpath)
 - Operational data (ERP)
- **Data quality and governance**
 - Alignment between all sources
- **From availability to usability**
 - Enables identification of consumption patterns



—○ Preparation phase - EnMS foundations

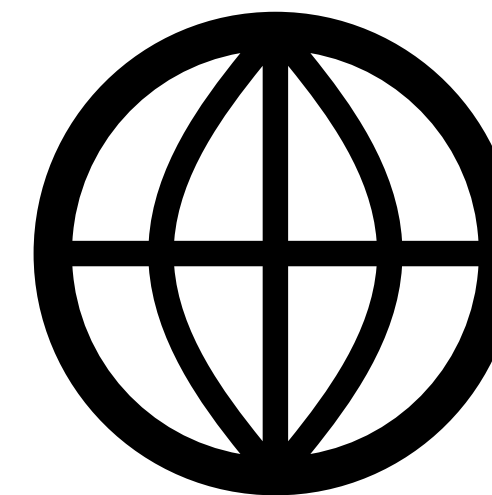
Organisation & roles

- Energy team established
- Roles and responsibilities defined
- ISO 50001 training



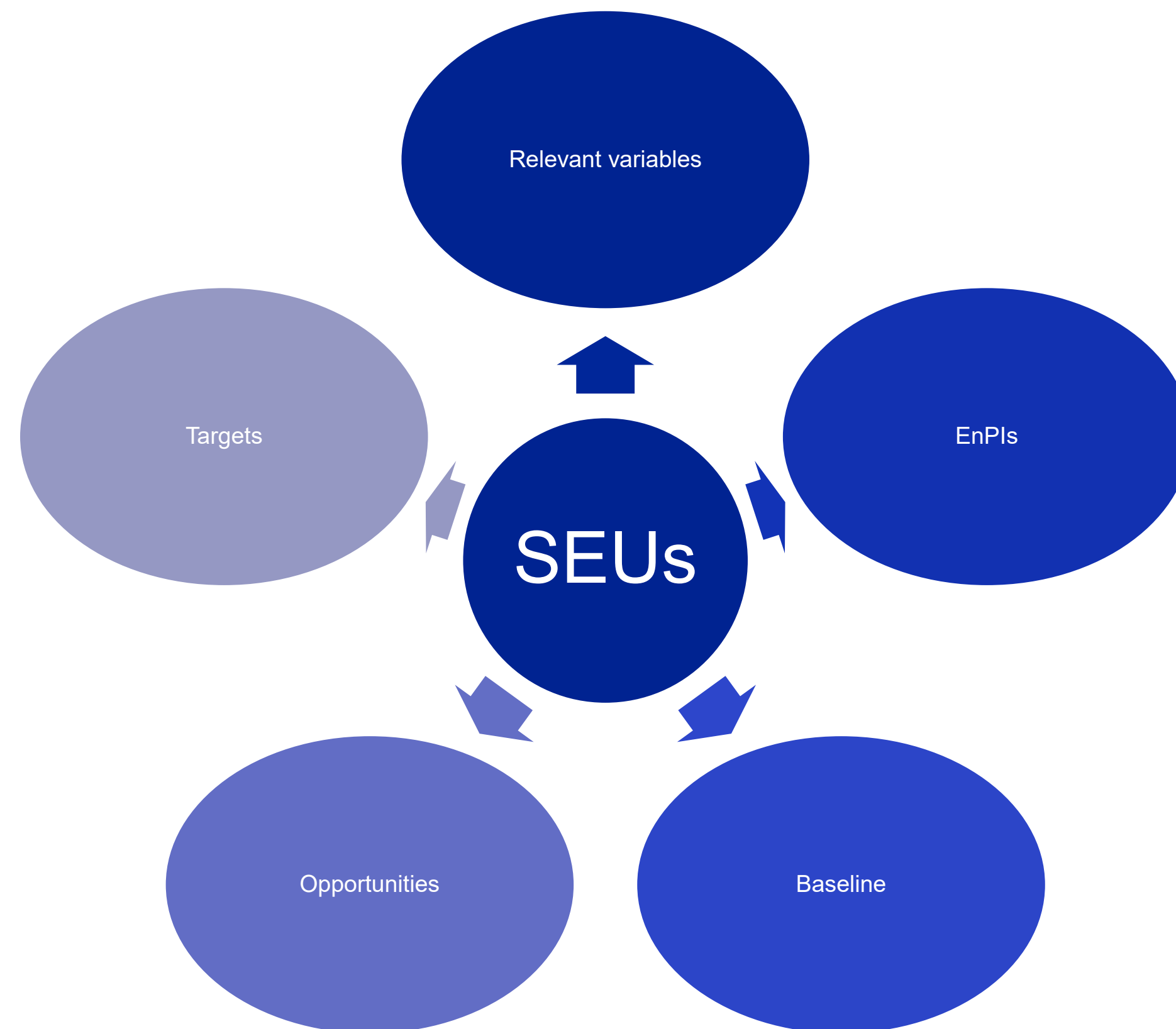
Context of the organisation

- Scope definition
- Risk and opportunities
- Stakeholder requirements

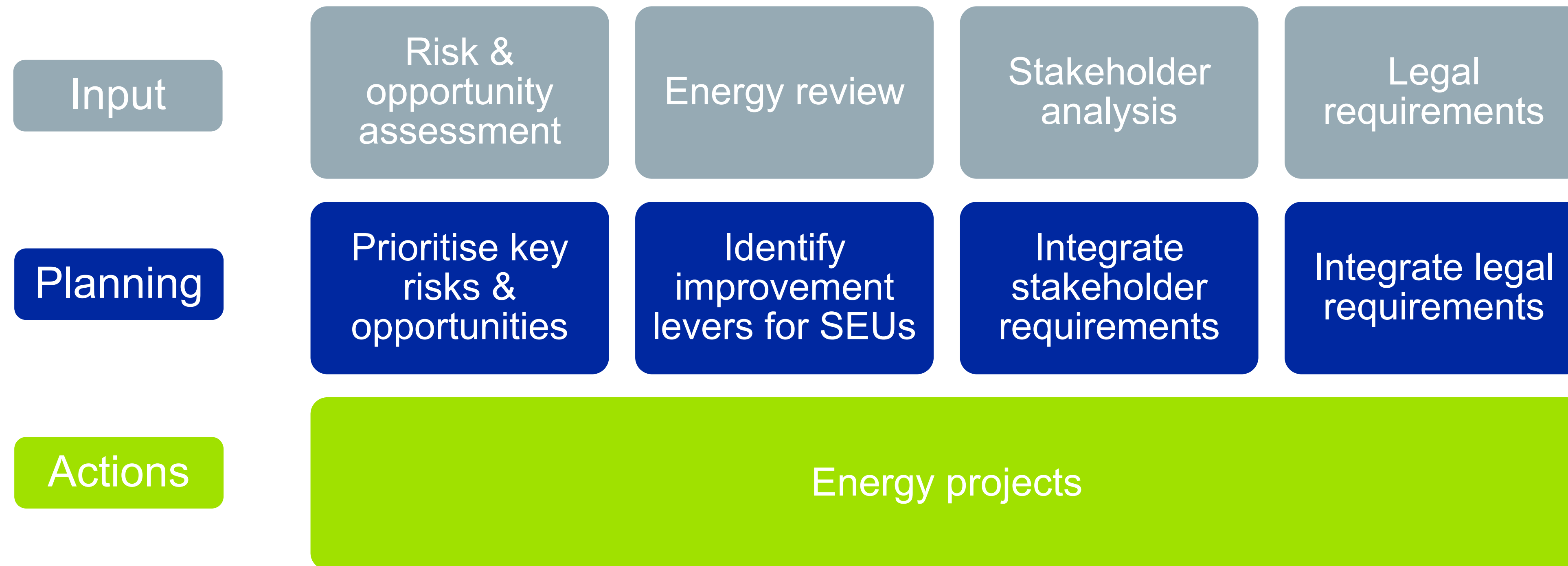


—○ Preparation phase - Energy review

- Energy consumption categorised into: Traction, Mobility and Buildings
- Traction dominates → SEUs identified within traction based on consumption and improvement potential



From analysis to energy projects



—○ Certification audit

Audit overview

- Duration: 6.5 days
- Locations: Belgium and Germany (office sites)
- Involved: energy team and other departments (e.g. training, TD, QHSE)
- On-site verification: locomotive visit

Outcome

- ISO 50001 certification achieved
- Minor non-conformities identified
- Corrective action plan defined (root cause analysis)
- Follow-up audit after 1 year



Continual improvement

Monitoring

- Energy performance monitored via EnPIs

Review

- Periodic energy review
- Internal audits
- Management review

Improvement actions

- Follow up of energy projects
- Corrective actions from audits



Thank you!

BLS Cargo Nord NV
Noordersingel 21
B-2140 Borgerhout (Antwerpen)
blscargo.be

Q&A

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DNV

Det Norske Veritas

Matthijs Dierick

Certification

| | | |
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drs ing Matthijs Dierick

Team Leader Training, Certification Sales Training Benelux, Business Assurance

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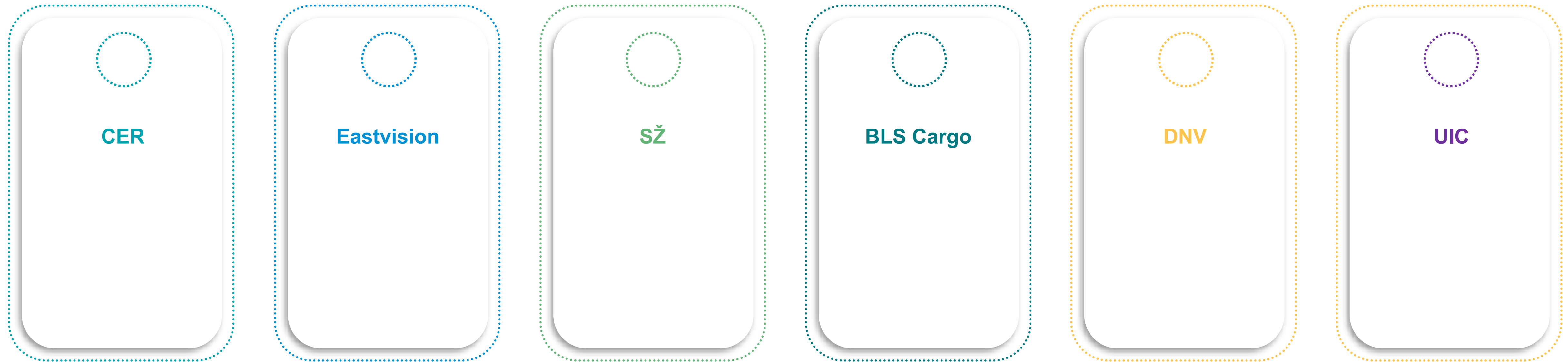


10 minutes

Questions

Discussion

Panel discussion / Q&A



UIC is thankful to its funding Members:

- **CFL (LUX)**
- **FS (ITA)**
- **FTIA/VÄYLÄ (FIN)**
- **IP (PRT)**
- **PRORAIL (NLD)**

Closing remarks



Enjoyed this webinar?
Happy to hear your feedback!

Continuing with us:

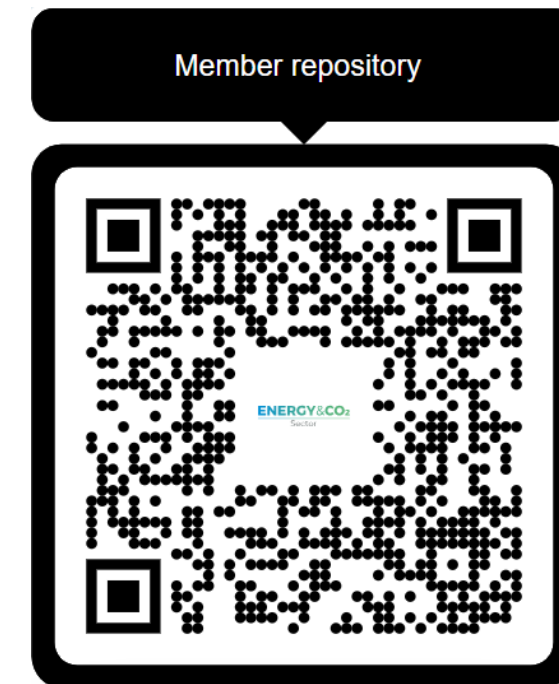
Members are welcome to the **UIC Energy & CO2 Sector!**
Partners are welcome for project collab. & sponsorship!



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Documents to be made available on the event page

Thank you for your attention



Credits:

Workshop proposed by the:

UIC **ENERGY&CO₂**
Sector

Co-organised by UIC & the Sector's core members:

Gerald Olde Monnikhof, ProRail
Dimitra Giannopoulou, BLS Cargo
Stijn Rogghé, BLS Cargo
Philippe Stefanos,

UIC Energy efficiency & decarbonisation
best practice workshops



Philippe Stefanos

*Energy & CO2 and Data, SFERA, Energy Settlement, Air Quality,
Sustainability advisor
Stefanos@uic.org*

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Energy efficiency & CO2 emissions Sector

Break time



Until 11:05