

13th UIC Sustainability Conference



Working together on railway
energy solutions

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12, 13, 14 October 2016

AGENDA

- A EUROPEAN PARTNERSHIP
- THE NEED FOR INTERNATIONAL HARMONISATION
- A SMART TECHNOLOGY
- BENEFITS FOR THE TRAIN COMPANIES

European partnership for railway energy settlement systems



Welcome Netherlands

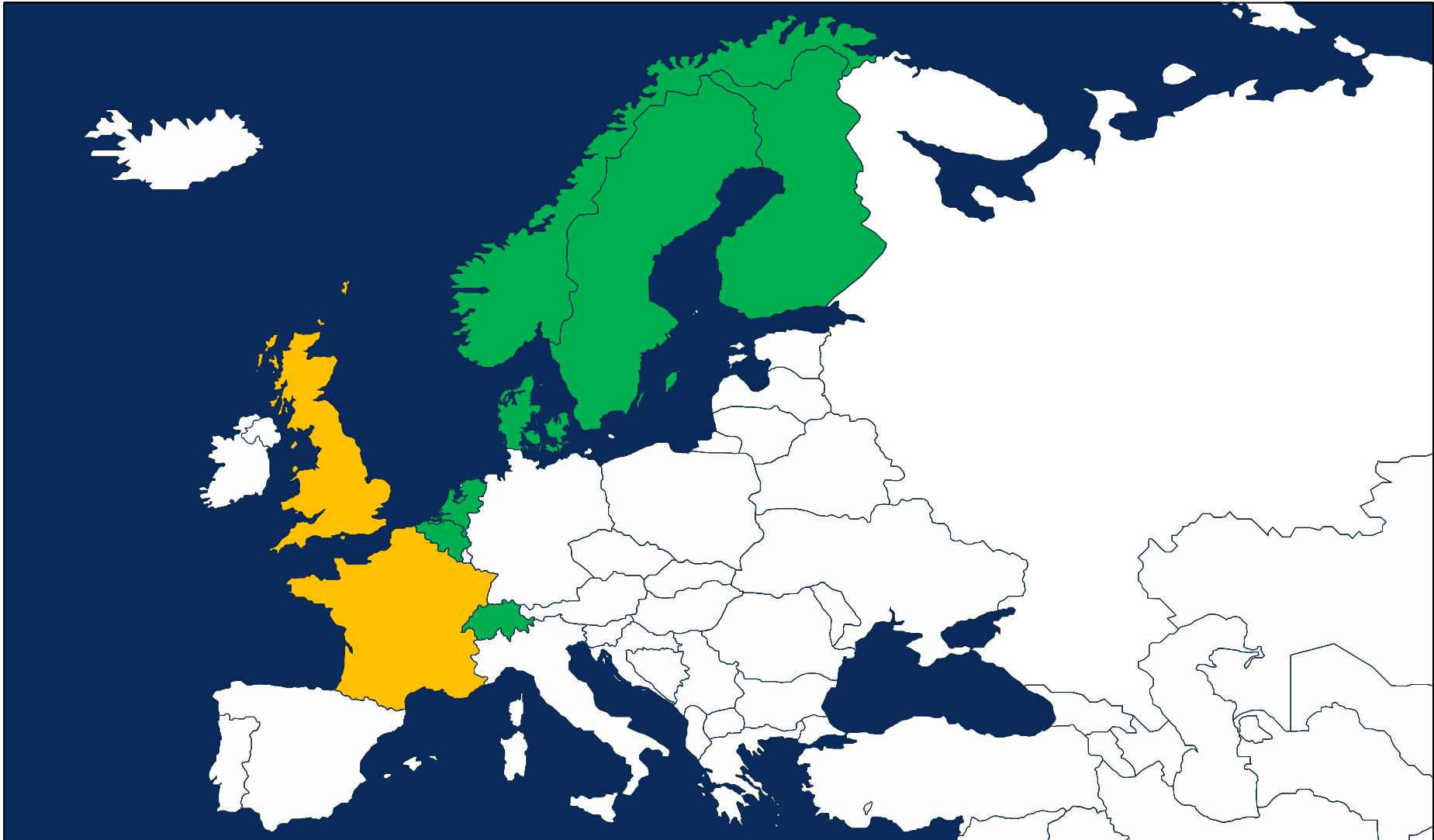




Finnish Transport Agency



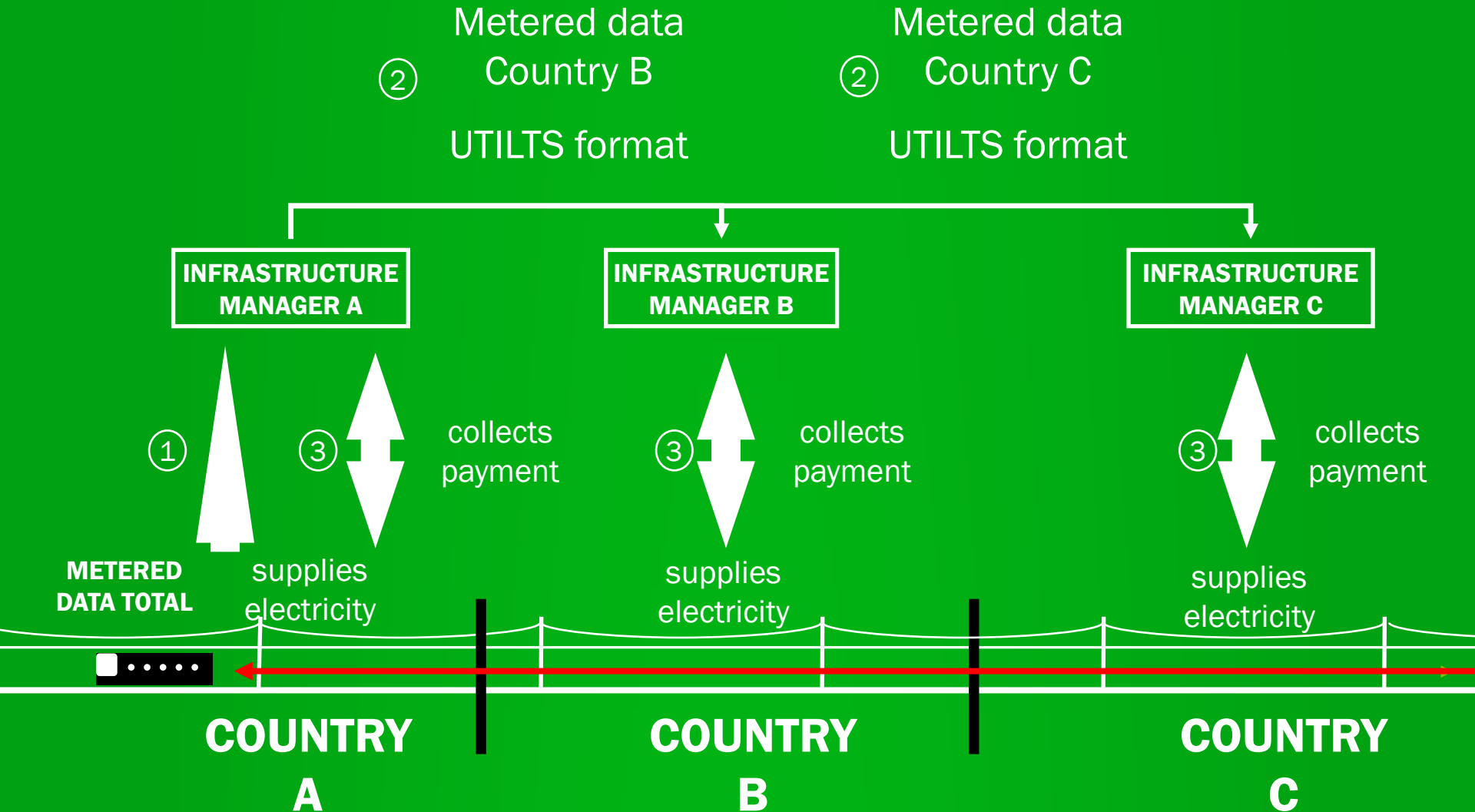
Eress in Europe



Shared benefits

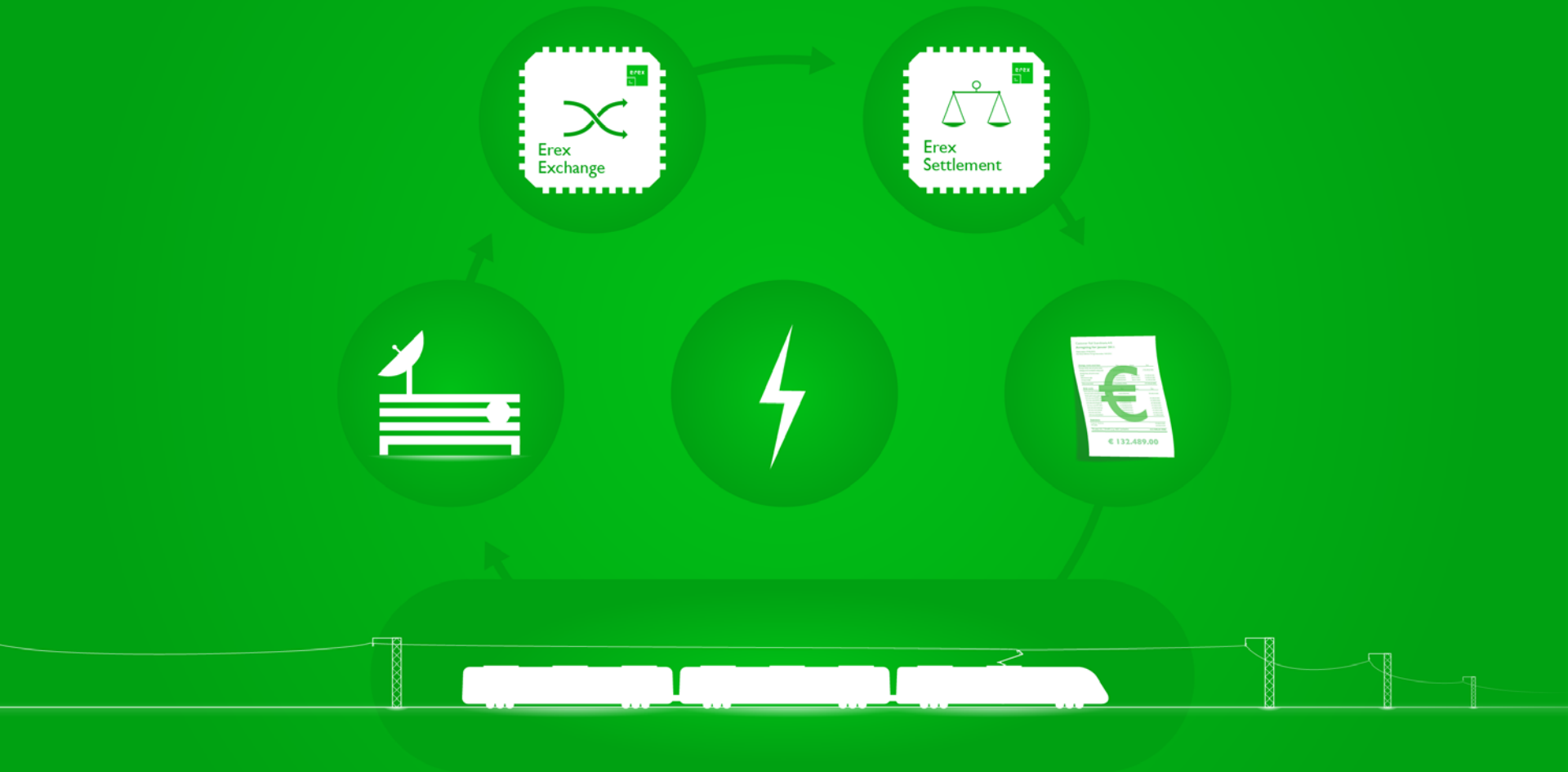


THE NEED FOR INTERNATIONAL HARMONISATION



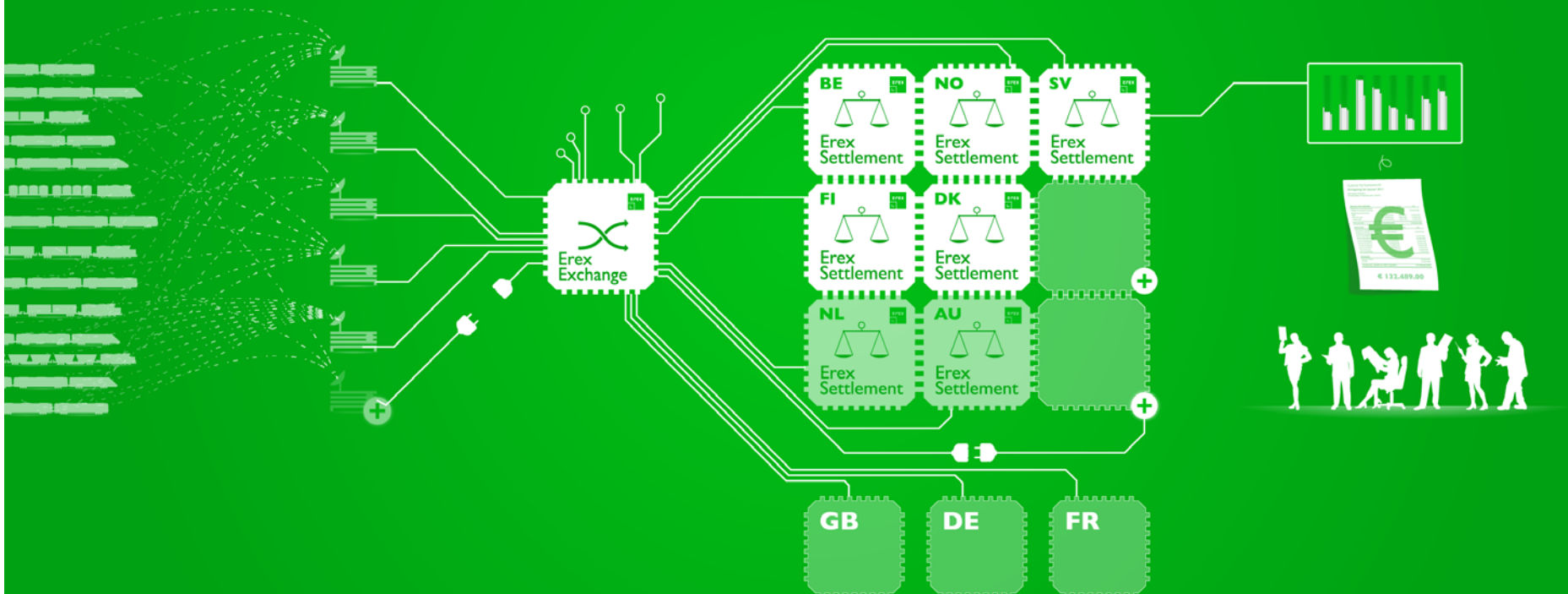
A SMART TECHNOLOGY

The Erex ecosystem



Data flow

Train metering point ➔ Data collector ➔ Erex Exchange ➔ Settlement system ➔ Invoice ➔ Customer



BENEFITS FOR THE TRAIN COMPANIES

A landscape photograph of a Norwegian coastal scene. In the foreground, there is a rocky shore covered in brown seaweed. To the right, a grassy hillside with autumn-colored trees rises. In the middle ground, a calm lake reflects the sky. A vibrant rainbow arches across the dark, overcast sky, with its reflection visible in the water. A small cluster of houses is visible on the far shore.

NORWAY

TOMORROW TODAY

Motivation for energy efficiency in settlement rules

All regenerated
breaking energy sold
to market price

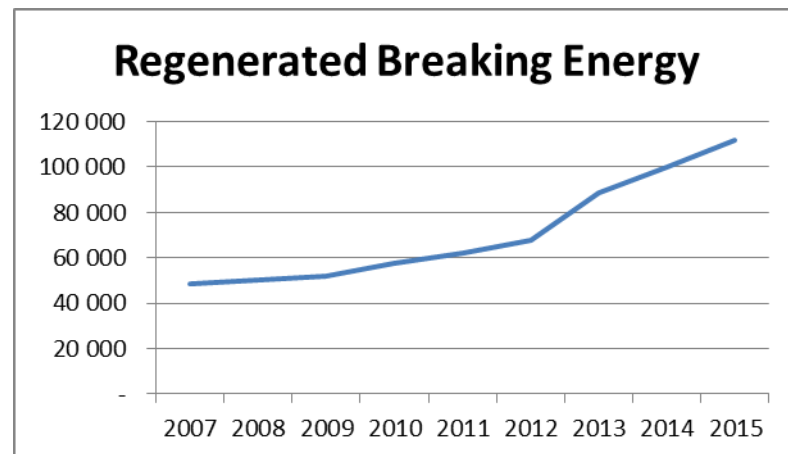
Incentive for train
companies to become
more energy efficient

Increased the
regenerated breaking
volume with 130%

Invoice spesification			
For energy supply in February 2014			
Invoice-type: Settlement			
Processing date: 05.05.2014			



Cost energy trading	Price	Volume	Cost
Costs bought energy			
Energy delivered to consumption point		5,575.3050 MWh	
Energy returned from point		965.6996 MWh	
Net energy delivered to consumption point	260.87 NOK/MWh	4,609.6054 MWh	1,202,519.91 NOK
Other costs related to consumption			
Administrasjonskostnader krafthandel			15,672.66 NOK
Opprinnelsesgarantier			9,219.21 NOK
Total energy trading costs			1,227,411.78 NOK



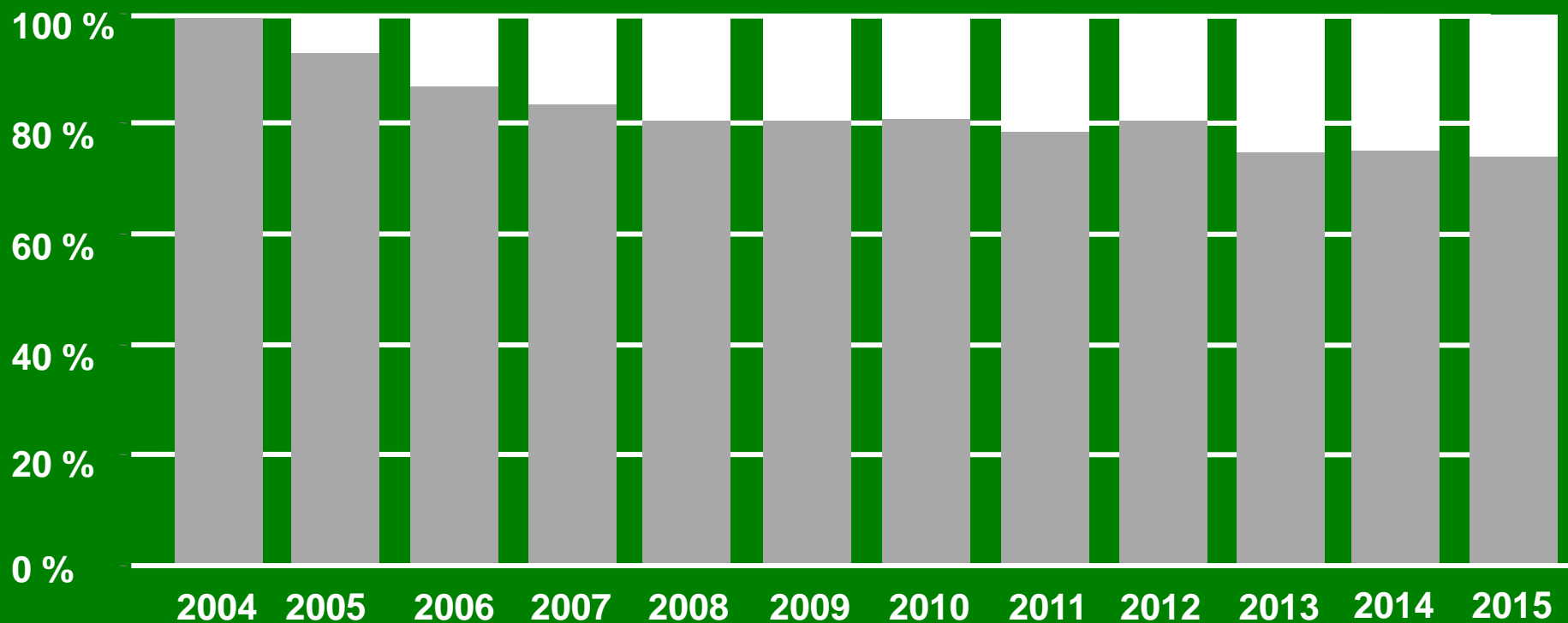


Focus areas in NSB energy saving program

- Reduced consumption of traction energy
- Efficient parking
- Climate control on-board trains



Reduction in wh/grossTkm reference year 2004

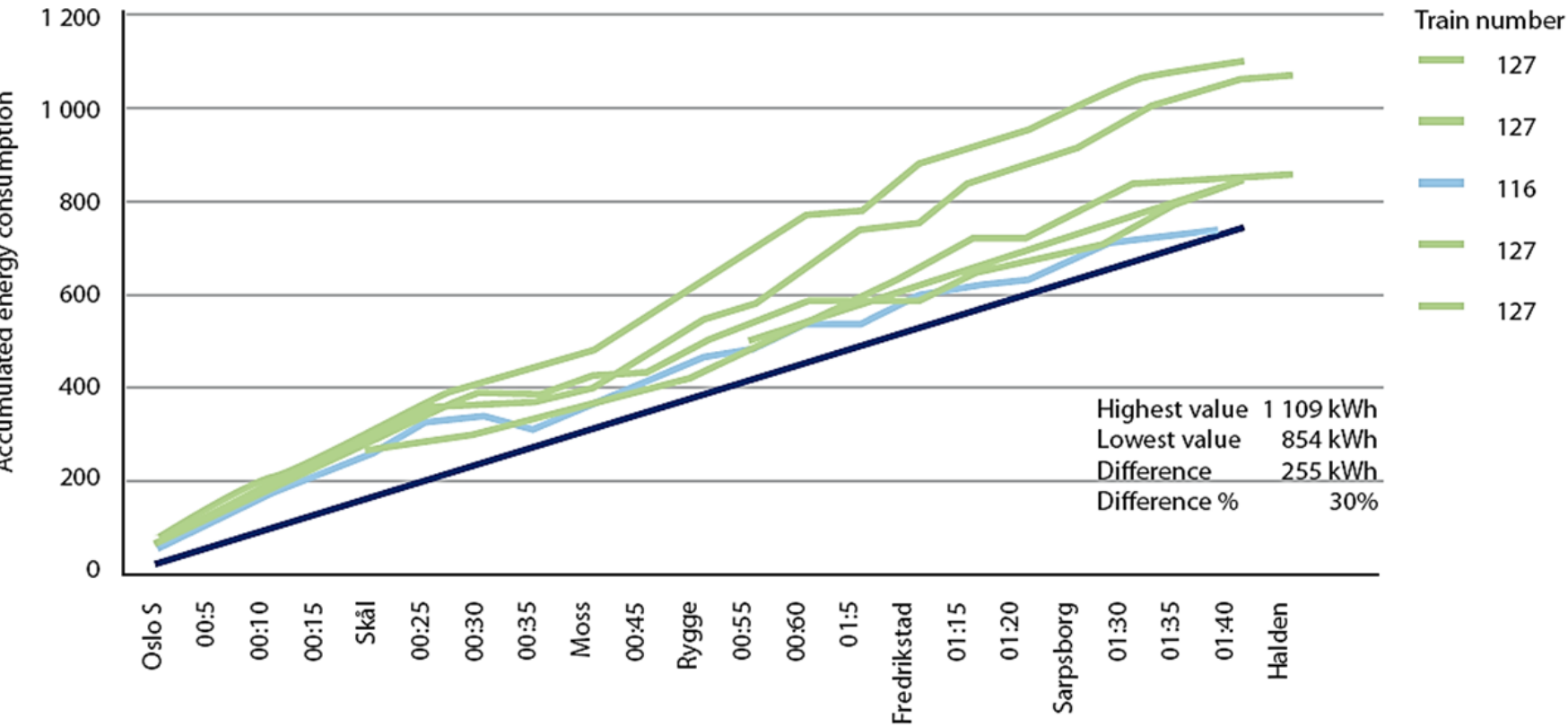




43.000.000 EURO



Train 73-04 from Oslo to Halden, May 2006. Journey time 1h 45m, distance 136.6 km



Eress Award 2017



*Best Energy Efficiency
project for Railways*

- The objective is to give international recognition to projects made by students from Universities around Europe, who have made systematic and innovative studies about how to efficiently use and preserve energy on railways and/or on trains
- A summary of the project needs to be sent in writing in English (max. 3 pages).
- Deadline 1st March 2017
- Contact: info@eress.eu



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