

BUSINESS  
FINLAND

# Suomen rautatieala Euroopan markkinoille – EU:n kumppanuus- ohjelma ja Suomi-tarjooma

ITS Finland syysseminaari 24.11.2022

Olavi Keränen

Business Finland

# Europe's Rail (EU-RAIL)

- Euroopan rautatiealan toimijoiden EU Joint Undertaking **Shift2Rail** käynnisty 2016
- Projekteissa on viety eteenpäin rautatieteknologian ja –järjestelmien kehitystä
- Uudelle ohjelmakaudelle 2021–27 EU uudisti kumppanuuksia, ja uusi EU-RAIL on avoimempi ja tavoitteena on moderni yhteinen rautatiejärjestelmä Eurooppaan:

**“EU-RAIL will deliver the Single European Railway Area bringing to the market an integrated, sustainable and digital rail system of systems”**

- EU-RAILin budjetti on 1,2 mrd.€ kaudelle 2021–27 ja sen osapuolia ovat 29 perustajajäsentä.



Näissä projekteissa syntyy Euroopan yhteinen rautatiejärjestelmä. **System Pillarissa** arkkitehtuuri, **Innovation Pillarissa** sovellukset liikenteen hallintaan, automaatioon, connectivityyn, tavaraliikenteeseen, paikallisliikenteeseen, ilmastoneutraaliuteen. Tavoitevuosi 2050.

## Founding members

ADIF	ES	INDRA TALGO	ES
Alstom	FR	Jernbanedirektoratet	NO
ANGELRAIL	IT	Knorr-Bremse Systems	DE
AŽD Praha	CZ	ÖBB	AT
CAF	ES	PKP	PL
CEIT	ES	ProRail & NS	NL
České dráhy	CZ	Siemens Mobility	DE
Deutsche Bahn	DE	SNCF	FR
DLR	DE	Strukton Rail	NL
eSGR JV	ES	THALES SIX GTS	FR
Faiveley Transport	FR	Trafikverket	SE
FS	IT	voestalpine Railway	AT

# Europe's Rail – Institutional Partnership within EU's Horizon Europe Programme

Objective is to deliver the Single European Railway Area bringing to the market an integrated, sustainable and digital rail system of systems

**System Pillar:** Standardised architecture

**Innovation Pillar:** Seven flagship areas

**FA n°1:** Network management planning and control & Mobility management in a multimodal environment

**FA n°2:** Digital & automated up to autonomous train operations

**FA n°3:** Intelligent & integrated asset management

**FA n°4:** A Sustainable and green rail system

**FA n°5:** Sustainable digital green rail freight services

**FA n°6:** Regional rail services / Innovative rail services to revitalise capillary lines

**FA n°7:** Innovation on new approaches for guided transport modes

Transversal topic: Digital enablers

Exploratory Research and other activities



## EU-RAIL Call for proposals

**First call 233 M€ – closed**

- Haussa oli kuusi hakuotsikkoa, joissa yksi projekti per Flagship Area rahoitettiin. Konsortioiden vetäjät ovat *Founding Members* eli EU-RAIL-jäsenet.

**Second call 15 M€ on Flagship Area 7 and expl.research – deadline 14.12.2022**

- to explore new areas of rail research and innovation

**Call for Tender on System Pillar – closed**

- Tarjouspyynnöllä hankittiin "avail the EU-Rail with the necessary resources and sector input" järjestelmäarkkitehtuuria varten (lokakuu-22)

<https://rail-research.europa.eu/>

EU:n tavoitteita vuoteen 2050:

- Raideliikenteen osuus tavaraliikenteestä tuplattava
- Nopeat junayhteyden kolminkertaistettava
- 75 % maantieliikenteestä joko kiskoilla tai sisävesillä
- Automaation mahdollistamiseksi käytettävien teknologioiden päivitys: 5G, satelliittidata, yhtenäinen järjestelmäarkkitehtuuri

# Call topics for EU-RAIL's call 2022-2

## Calls for Flagship Area 7 and for Exploratory Research – deadline 14.12.2022

- 2022-FA7-01: Conceptual development of Automated Multi-Modal Mobility-Systems (“Moving Infrastructures”) – RIA project 3 M€
- 2022-FA7-02: Technological development of Maglev-derived systems – RIA project 1.5 M€
- 2022-FA7-03: HYPERLOOP industrial roadmap and pilots– IA project 2.3 M€
- 2022-EXPLR-01: New Railway station concept for green and socially inclusive smart cities – RIA project 0.7 M€
- 2022-EXPLR-02: Bridge Dynamics – IA project 1 M€
- 2022-EXPLR-03: Standardised offer/contract management for agile access to Rail Freight and multimodal services in – RIA project 1.3 M€
- 2022-EXPLR-04: Building a community of scientific research and and enabling a network of PhD (academia teaming with industry) – RIA project 2 M€
- 2022-EXPLR-05: Digitalisation and automation enabling new railway services for passengers and freight– RIA project 0.7 M€
- 2022-EXPLR-06: European value chains for rail supply– RIA project 0.7 M€
- 2022-EXPLR-07: DAC migration roadmap towards deployment– CSA project 1.5 M€

FA7 three topics:  
Innovation on  
new approaches

Seven topics of  
Exploratory  
research

Only one project  
will be funded  
per topic

# Finnish Offering – Suomi-tarjooma

- Markkinointityökalu tietyn suomalaisen toimialan/teollisuussektorin promoamiseen maailmalla
- Business Finlandin ja Team Finlandin maailmanlaajuinen verkosto käyttää viennin edistämistyössä ja Suomi-tietoisuuden levittämisessä
- Yritykset voivat itse hyödyntää kansainvälisissä kanssakäymisessä
- Tarjoomakuvauksia olemassa lukuisilta eri aloilta
  - Smart Automotive and Mobility, Smart Maritime Solutions, Mobile Machinery, Battery Superpower, Smart Forestry, Bio and Circular Offering, jne.

# Finnish Offering – esimerkki

**FINLAND**



**FORERUNNER  
IN MOBILE  
MACHINERY  
ELECTRIFICATION**

**WORLD CLASS MOBILE MACHINERY  
FROM FINLAND**



Finnish globally operating mobile machinery OEM's are among the world leaders in several off-road vehicle segments.

Electrification is a key topic among the Finnish mobile machinery OEM's; new solutions are developed and expected to be introduced in the coming years.

Strong expertise especially in the most demanding segments, such as material handling, forestry & mining applications.

Experienced partner network of specialised SMEs supporting the OEMs in developing innovative solutions.

## Celltech Solutions Oy

<https://celltech-group.com/>



### ABOUT US

Celltech is the leading manufacturer of battery systems for industrial vehicles in the Nordic region. Since 1984 we have been designing and manufacturing batteries and battery systems for industrial device and machine manufacturers. We have strong competence for professional users with local presence and global reach. Celltech is part of Adtech AB, company listed in Nasdaq Stockholm large cap with annual revenue of 1,1 billion EUR. With strong and committed owner we have financial capabilities to support of the rapid growth of our customers electrification projects.

### COMPETITIVE ADVANTAGE

Celltech is among the leading battery, power solution suppliers in Europe. We have been in the business for 30 years. Our skilled staff are highly experienced, possessing versatile skills to handle the requirements of our customers.

### CUSTOMERS

Vehicles and machine manufacturers

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## FINLAND

## Kempower Oy

<https://kempower.com/>



### ABOUT US

Power conversion using power modules is well known in industry and it is used in wide range of applications. Since the early 50s KEMPOWER has delivered thousands of power modules for welding machines and other applications, including the CERN particle accelerator in early 2010. Based on this extensive knowledge, Kempower was kick-started in 2018 to employ power modules in recharging applications. At Kempower, we believe that high quality power modules with connectivity services are the key elements for succeeding in electro-mobility. Our administration, research, engineering and manufacturing facilities are all located in Lahti, some 100 km north of Helsinki, Finland.

### COMPETITIVE ADVANTAGE

Our charging solutions exceed the usual recharging needs by providing the highest reliability, as well as the best user experience, on the market. The reliability of our products is based on our extensive knowledge of power electronics and usability gained from the heavy welding industry. Our solutions range from single DC charging stations through to satellite charging areas for traffic hubs and shopping malls, to extensive fleet-wide depot charging systems.

### CUSTOMERS

- Commercial vehicles & electric bus fleet charging
- Electric passenger car charging
- Support/Start
- Heavy commercial vehicle charging

### OFFERING FOR MOBILE MACHINERY ELECTRIFICATION

Electric vehicle (EV) charging solutions for every need: off-highway vehicles, buses, passenger cars and marine

### Products include:

- T-Series movable charging station
- C-Series scalable charging power unit
- S-Series advanced power distribution with satellite charging posts
- C-Station compact charging station
- ChargeEye charging management system

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## FINLAND

# Raideliikenteen Suomi-tarjooma



- Versio 1.0 valmistelu loppusuoralla
- Mukana noin 40 yritystä
- ITS ja SmartRail-ekosysteemi tehnyt merkittävää pohjatyötä
- Kansainvälinen näkökulma
- Tavoitteena mahdollisimman kattava katsaus raideliikennealan toimijoihin
- Julkaisutavoite 12/2022
- Päivitetään tarpeen mukaan