

# Fresh Food Corridors

Fresher. Cheaper. Cooler. Greener



Co-financed by the European Union  
Connecting Europe Facility



FRESH  
FOOD  
CORRIDORS

# Project Background



- The Fresh Food Corridors (FFC) project is co-financed by the European Union
- In December 2015, the (FFC) was confirmed and granted by the EU with 19 partners from Europe and Israel



# The EU freight

- ▶ EU freight market share:



~75%



~18%



~ 7%

- ▶ CO<sub>2</sub> emissions from rail transport are 3.5 times lower than those from the road transport.



# The EU freight























- Over 2 million reefer containers going in and out of Europe every year, with 5% growth on average.
- The share of Rail freight in Europe has remained steady for the last decade.
- A single rail can substitute up to 50 trucks
- But traders need flexibility, reliability & scale



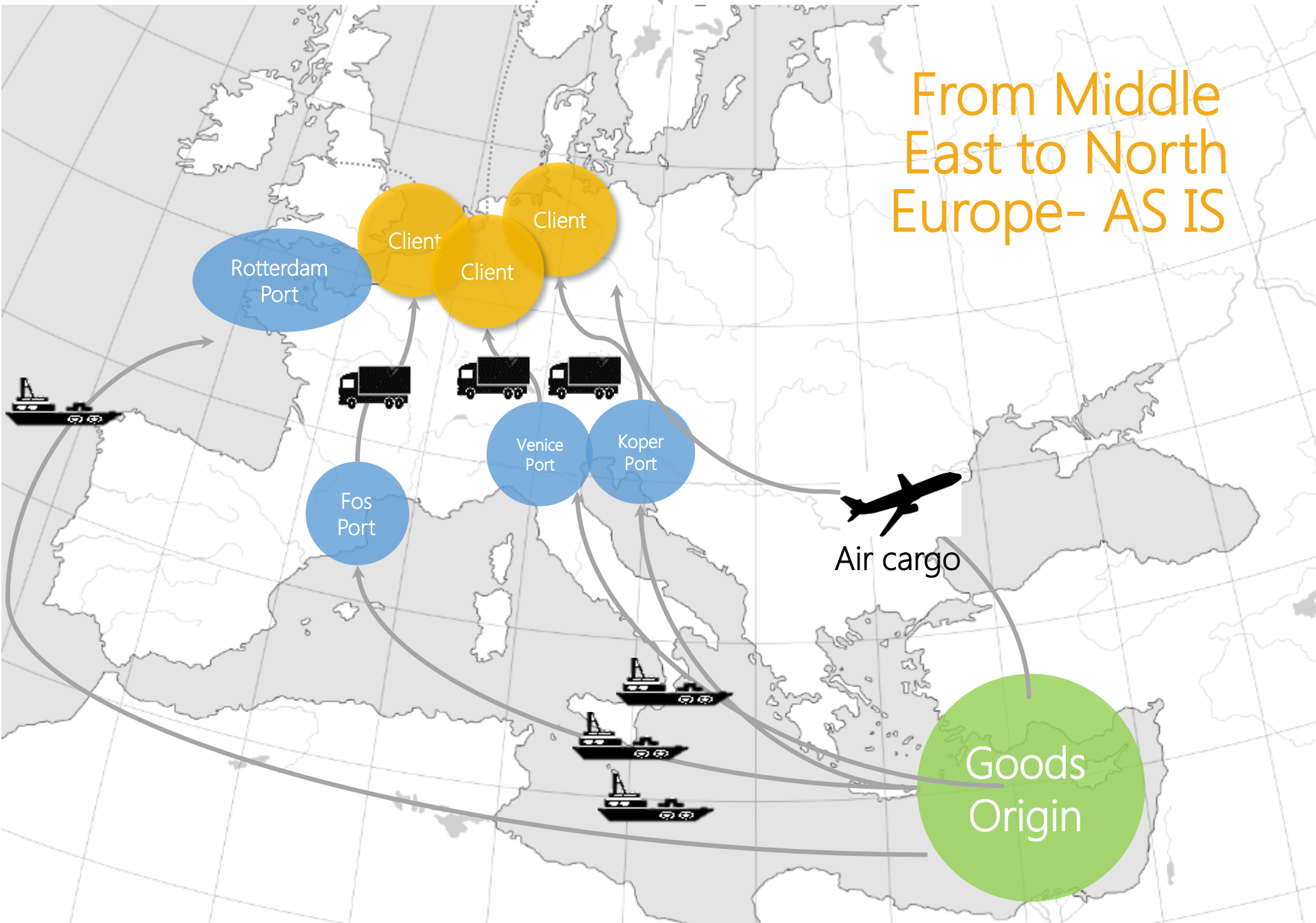
# Project Objectives

- ▶ **Shortening delivery times** of refrigerated goods, hence extending their shelf-life and value
- ▶ **Reduce costs of land transportation** using reefer trains using the existing European railway network
- ▶ **Reduce Co2 emissions, congestion and road fatalities** associated with land transportation using new technologies for power supply on rail
- ▶ **Advance existing IT Systems** to Support Business & Administration Processes of Perishables Trade



	Slovenia Corridor	France Corridor	Italy Corridor	Egypt – Cyprus Corridor	La Spezia
Port Authority					
Forwarder		Lvanto		NA	NA
Terminal operator				NA	NA
Train Carrier				NA	NA
Shipping Company				NA	NA
Exporters				NA	NA
Technology provider				NA	NA
IT Platform					NA
Dissemination					
Technical Management					
Project Management					

# From Middle East to North Europe- AS IS



# Transit time from Israel to Rotterdam

- ▶ By vessel to Rotterdam – 14 days (calling 3 ports on the route)
- ▶ By vessel and truck via Fos, Koper, Venice – 7 days
- ▶ Cutting by half the delivery time = Expanding goods shelf time





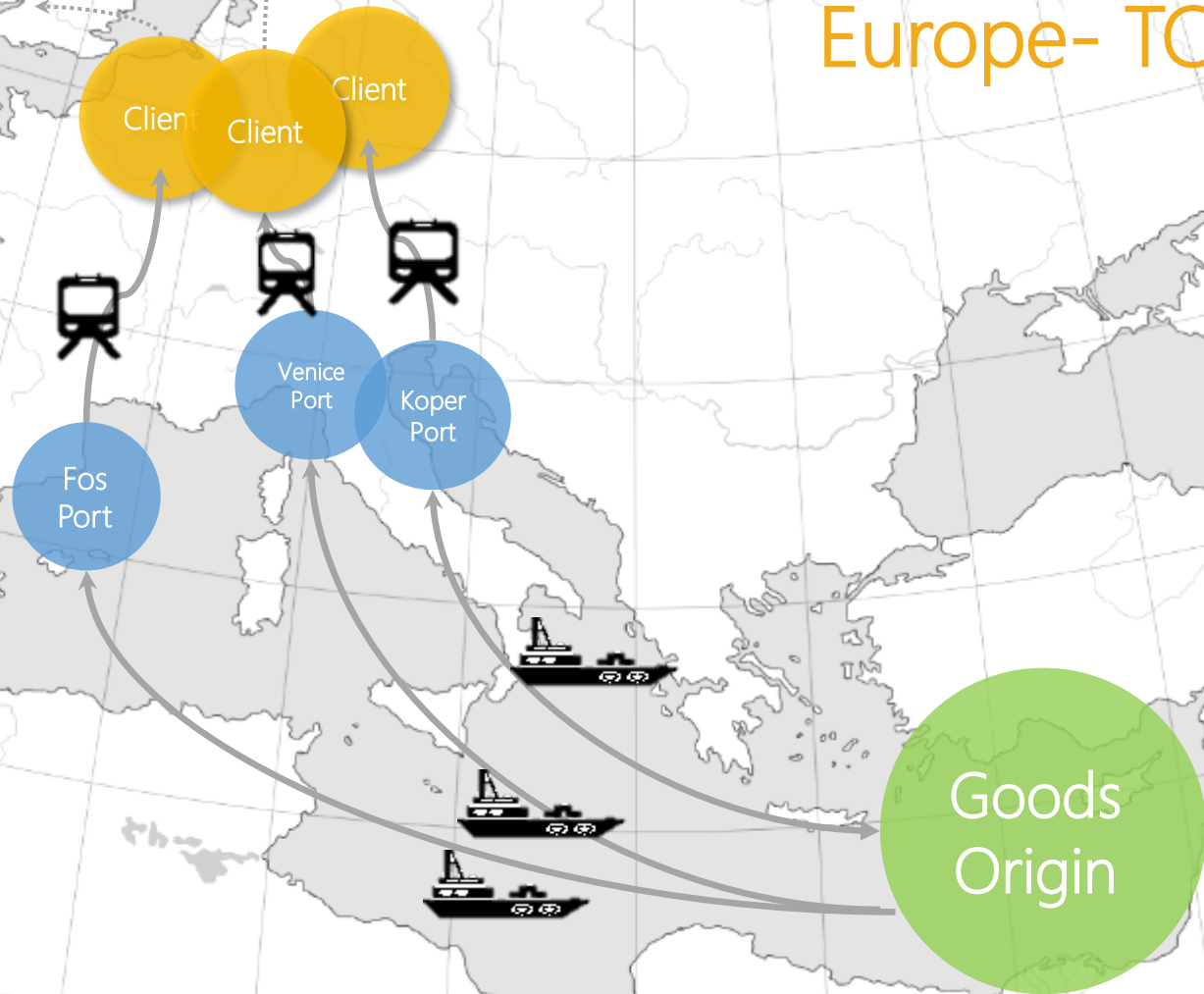
# EXPORT OF SELECTED AGRICULTURAL PRODUCTS FROM ISRAEL



PRODUCTS	TONS
Potatoes	209,718
Sweet potatoes	9,071
Carrots	172,273
Peppers	104,546
Avocado	53,183
Dates	17,988
Mango	13,998
Celery	13,670
Tomatoes	3,670
Tomatoes, cherry	2,600
Eggplants	441



# From Middle East to North Europe- TO BE

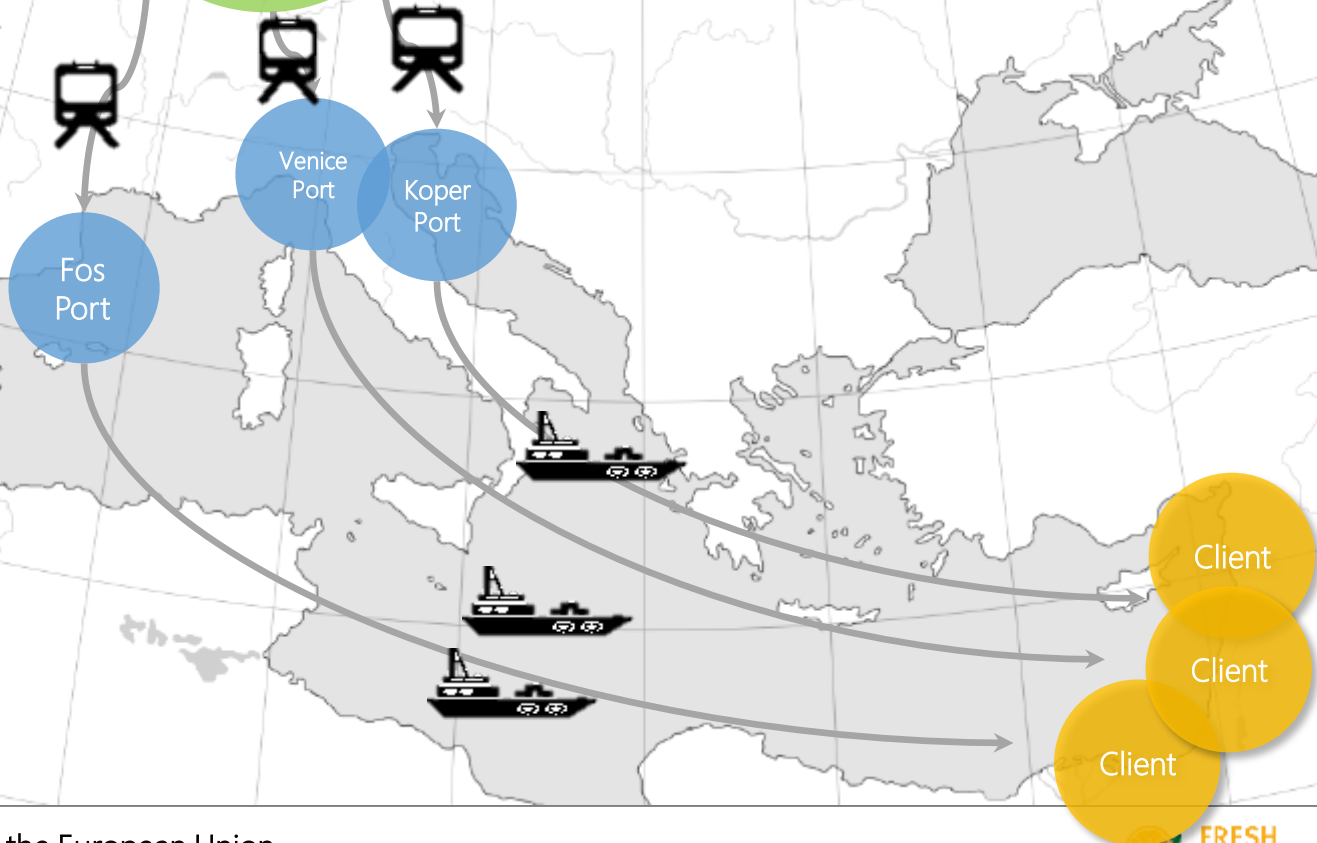


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# From Europe to Middle East (cargo back) - TO BE

Goods Origin



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# FoS Corridor

Type of goods:  
Peppers  
Potatoes  
Citrus  
Avocado

Client

Fos Port

Goods Origin



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# Rail Technologies



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## 1<sup>st</sup> season - Gensets

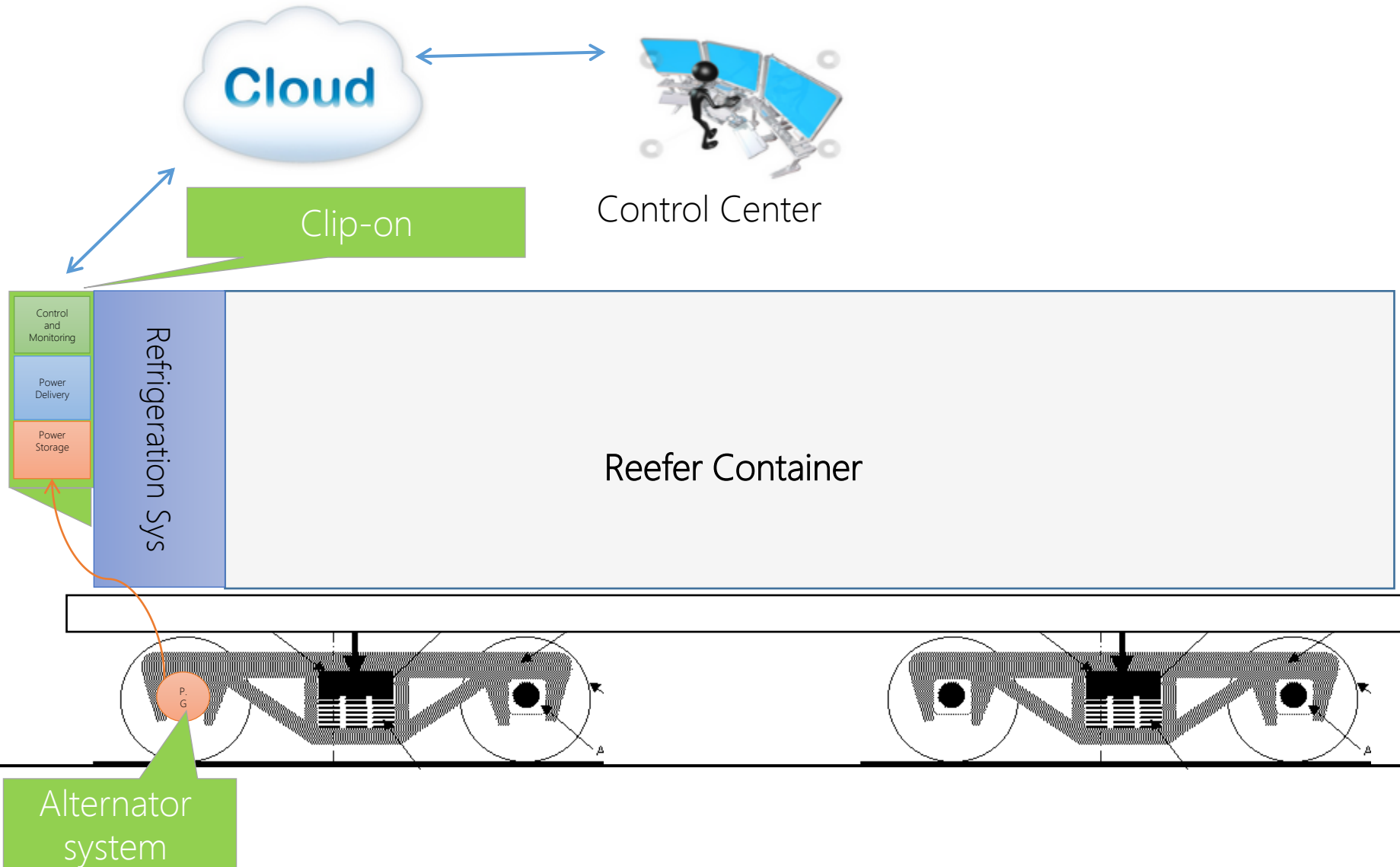


- CARRIER Generator Set (Genset) Model 69RG15-130W, EPA Tier4 certified
- 15kW output to power ISO reefer containers
- 120-gallon (492-liter) fuel tank
- Industry standard, proven 2.2-liter diesel engine
- FuelWise™ two-speed functionality built in, for up to 34% fuel savings versus previous standard units



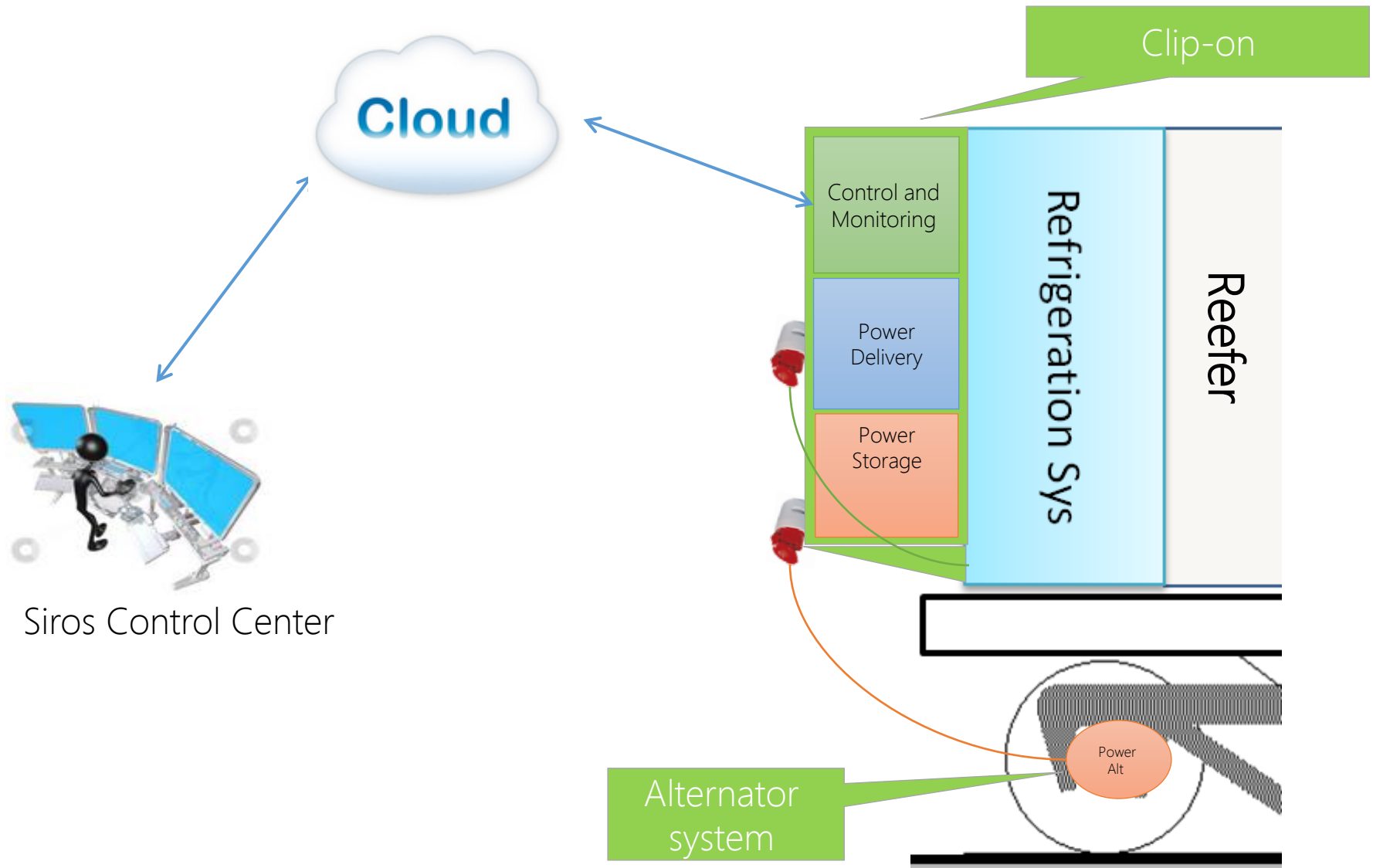
- ✓ Intelligent power system for reefer transportation
- ✓ Efficiently converts train motion (kinetic energy) to electric energy
- ✓ Addresses operational, logistical and environmental issues enabling rail reefer transport
- ✓ High reliability, low maintenance and low life cycle cost
- ✓ Patented algorithm for power management
- ✓ On-line monitoring application

# Siros Sustainable Power System





# Siros Sustainable Power System



Siros Control Center



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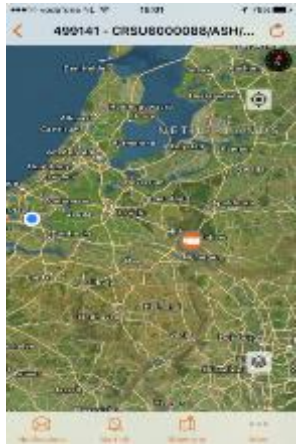


# FFC 1<sup>st</sup> Season - Main achievements

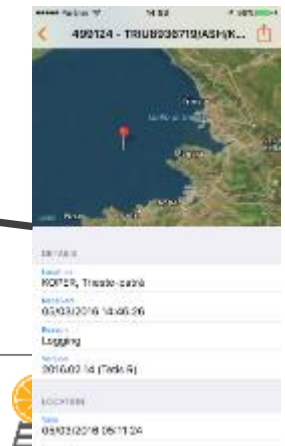
- [5 referred block trains](#)
- Carrying 160 referred containers
- Containing 4,200 tons of produce
  - [8 types of produce](#)
- [Travelled over 6,400 KM across Europe](#)
- Replaced 160 trucks off the road
- Arrived [to 15 destinations](#) in 6 countries
- Tracing & Monitoring units installed on the containers providing tracking [DATA](#)



FFC Containers route monitored via innovative system providing GPS position, temperature, humidity and door status in real time



All units		409124
Location	RADOVLJICA, Otoce	
Received	06/03/2016 09:31:50	
Reason	Logging	
Version	2016.02.14 (Tets R)	
Location		
Valid	06/03/2016 09:31:53	
Location	(14.2332,46.3102)	
Altitude	398 m	
IO		
Door	Closed	
Button	Off	
Battery	62% / 3.91v	
Temp internal	6.1c	
Humidity	92%	
Temp external	5c	
Commands		



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# 5 Trains routes



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# FFC1: Departing Koper (05/03/2016)



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# FFC3: Departing Venice(09/05/2016)



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# FFC5: Departing Marseille –FoS (21/5/2016)



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# Challenges

- ▶ Creating a sustainable service in real life
- ▶ To expand the service to additional ports in Europe
- ▶ Mature rail reefer technology
- ▶ Last mile infrastructure



## Come visit us

- ▶ Our stand in Fruit Logistica, Berlin: 8-10.02.17
- ▶ Our website: [ffcproject.com](http://ffcproject.com)
- ▶ Contact: [contactus@ffcproject.com](mailto:contactus@ffcproject.com)



Thank You!



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