



Feasibility analysis and development of on-road charging solutions  
for future electric vehicles

## Italian Test Site

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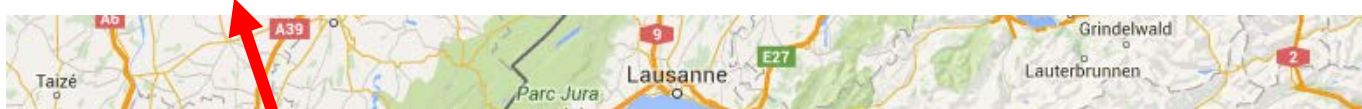
FABRIC Conference, Brussels, 2 Feb. 2016



# Agenda

1. The test-site
  - Solutions location
2. Actual status on the grid side
  - Work done!
3. Actual status for the Solution
  - Transmitters & Receiver
  - Power electronics
4. Future Activities
  - Transmitter
  - Power electronic
5. ICT
6. Conclusions

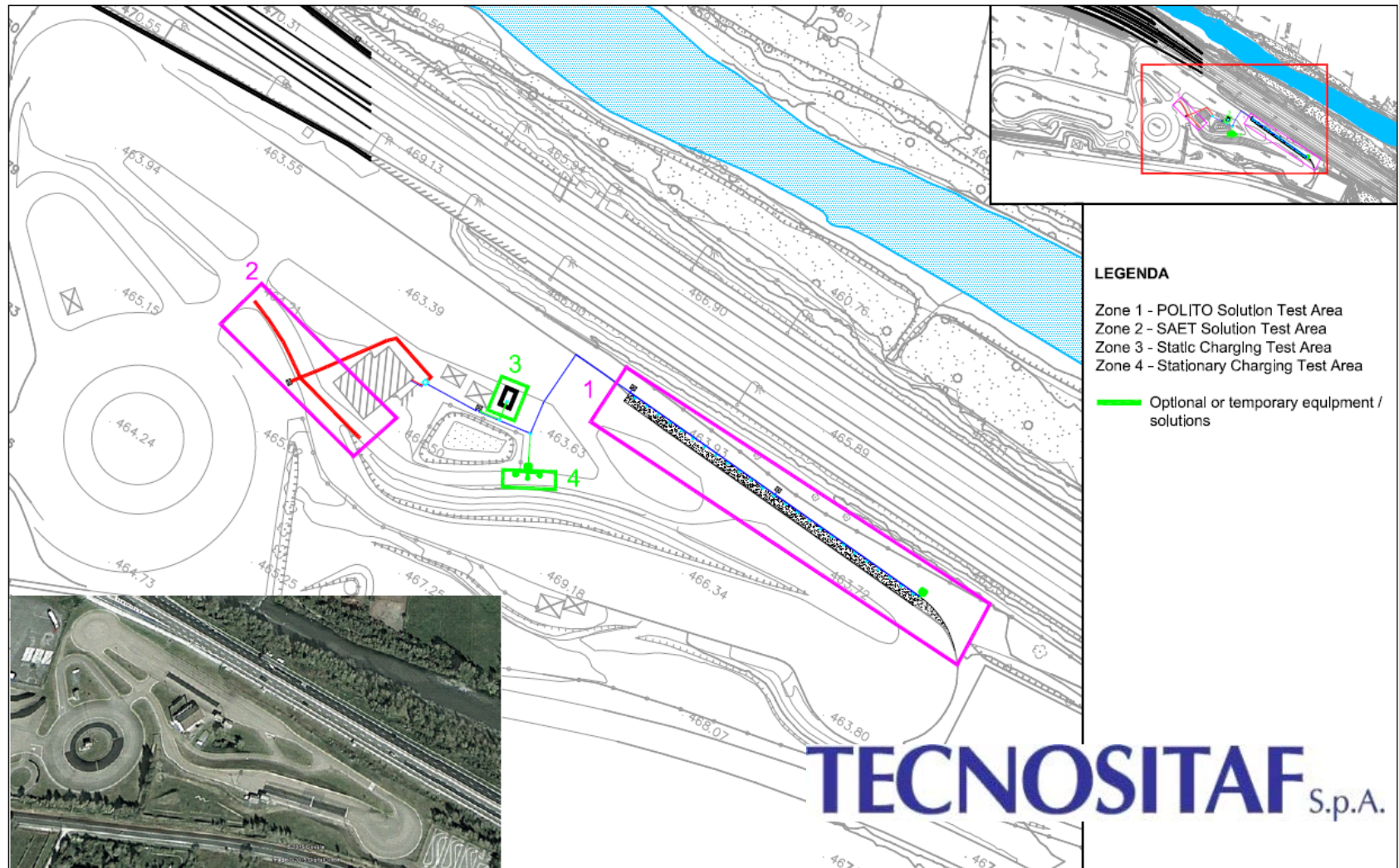
# The Susa test-site



The Italian test site by Susa , Piedmont - ITALY

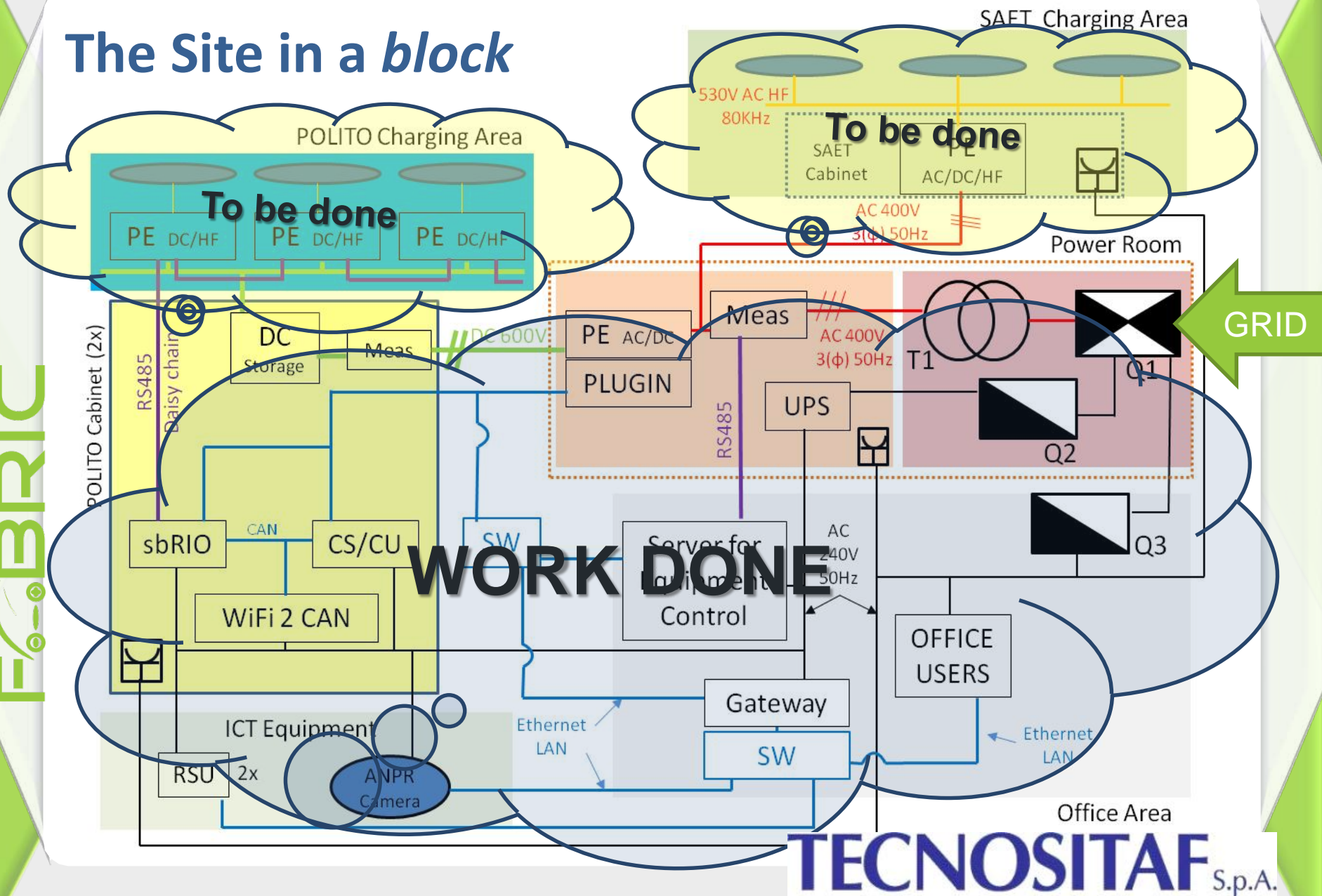


# Test site – civil works overview



# The Site in a *block*

FABRIC





# The Grid Adaptation



**TECNOSITAF** S.p.A.

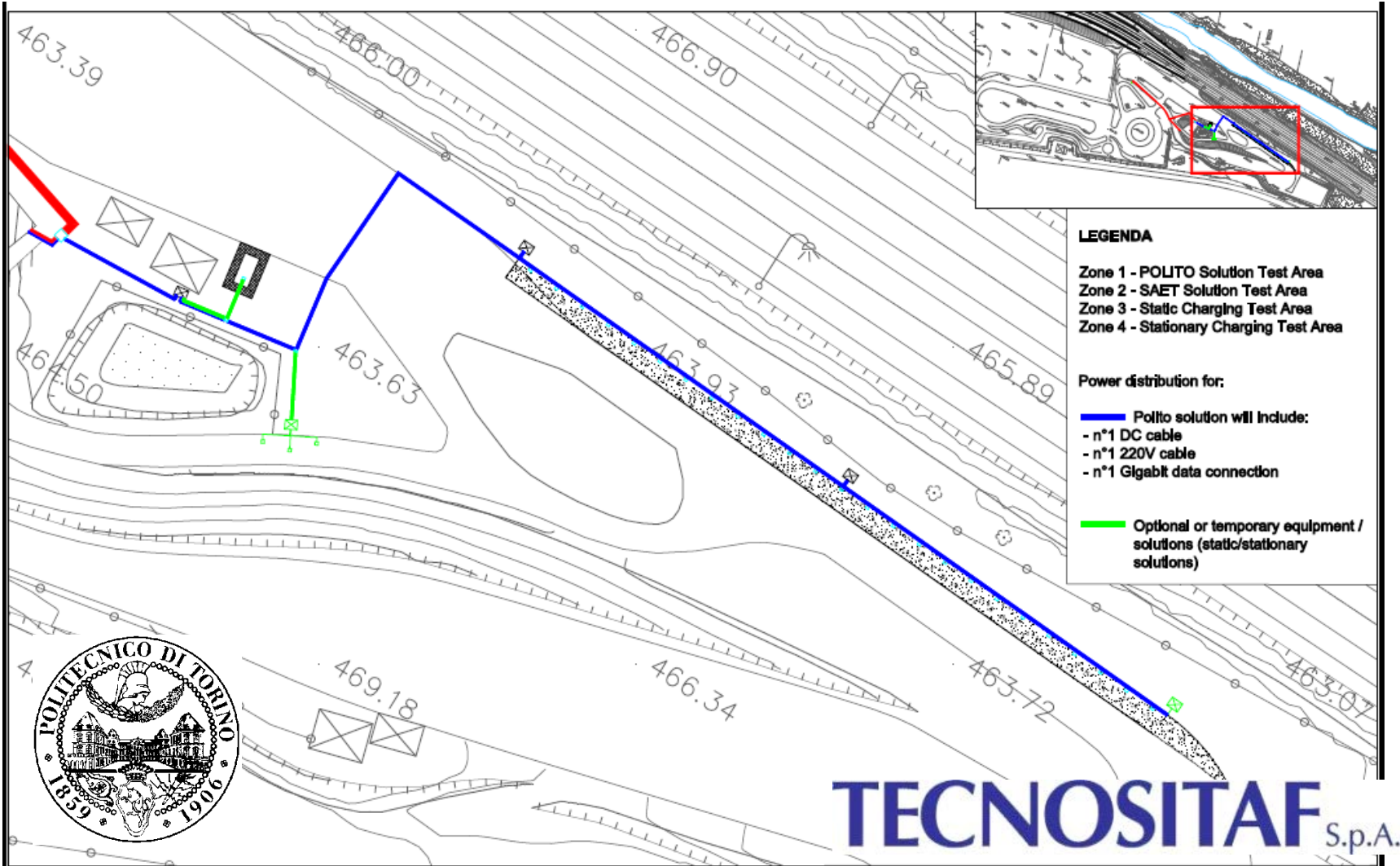
# The Control Room



**TECNOSITAF** S.p.A.

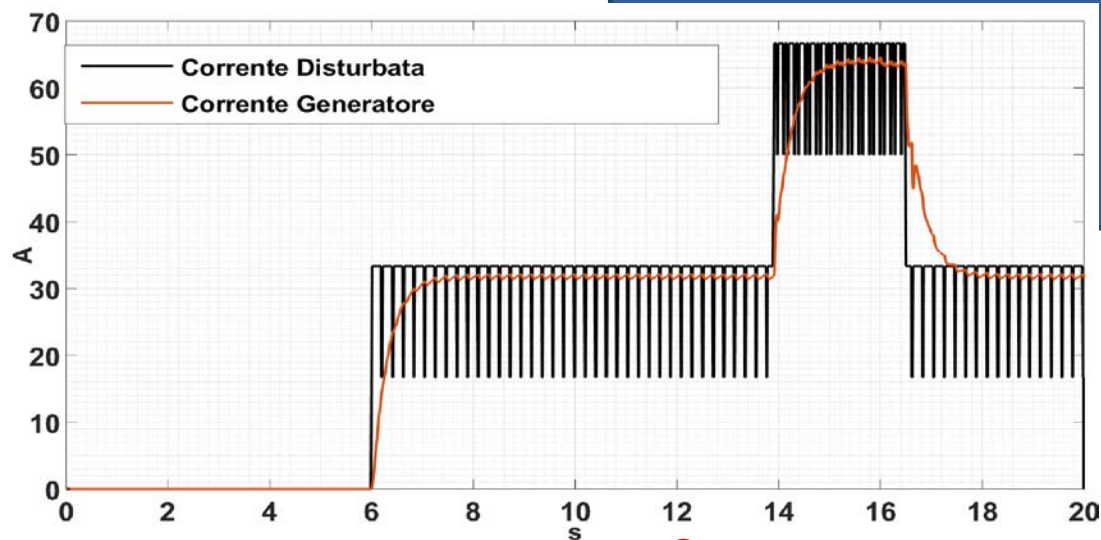
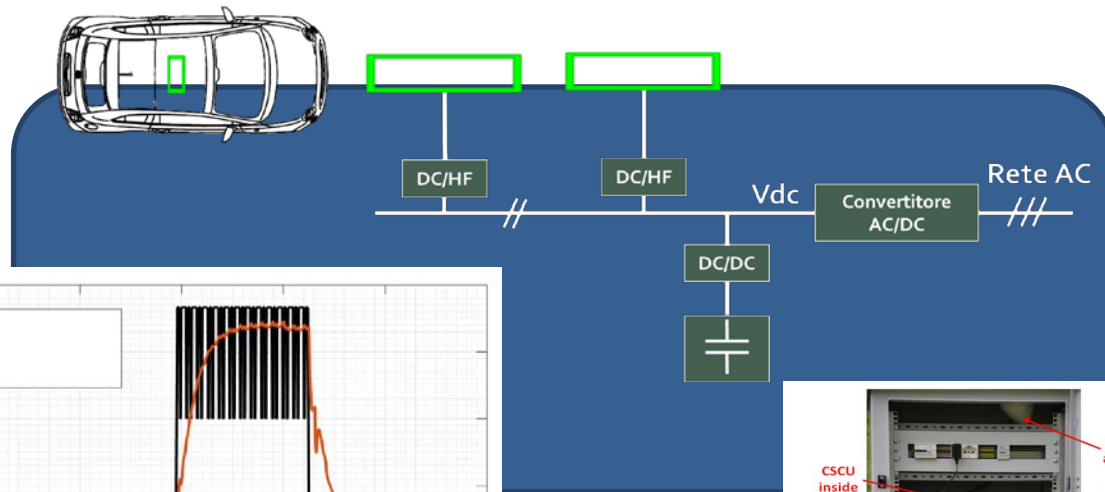


# POLITO TEST AREA



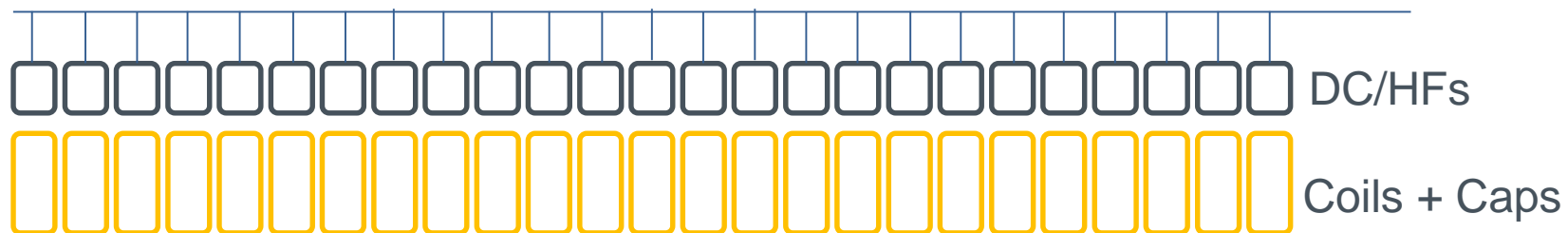
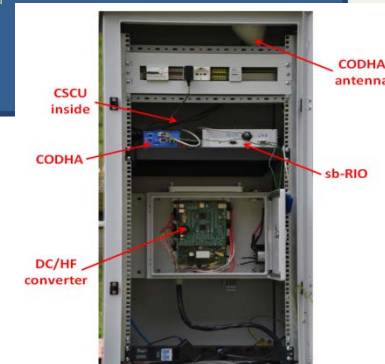


# Plans



Maxwell  
3.5Farad  
supercaps

600Vdc



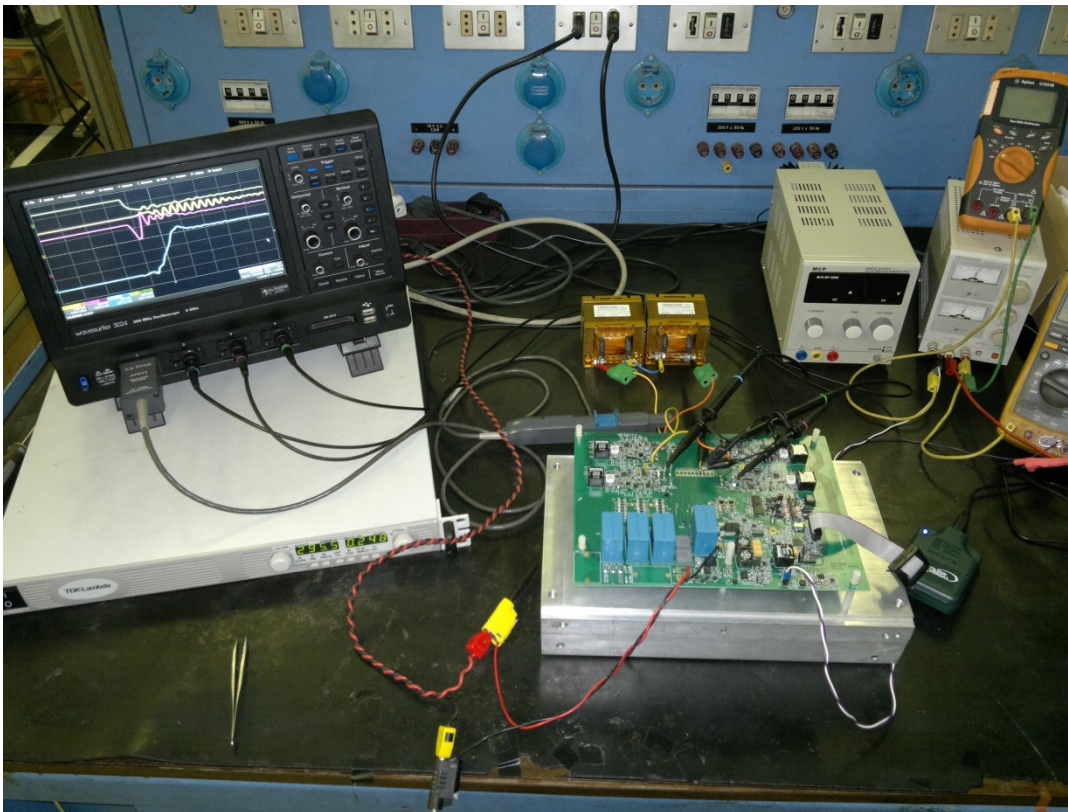
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# Power transmitters stage status

Status: **1<sup>st</sup> proto done**

Devel.: **Cost evaluation for 50pc**

Design: **2<sup>nd</sup> proto under construction**



Same communication  
protocol for CAN interfacing

RS485 for synchronization

NEED to reduce cost

Target 50 pieces



# Planned activities

TIME	dic-15				gen-16				feb-16				mar-16				apr-16				mag-16				giu-16				lug-16				ago-16			
COMPONENTS	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
Capacitors																																				
Coirls																																				
LC																																				
LC in road																																				
PE raw																																				
PE mounted																																				
Power and Signal Cables																																				
Manholes																																				
Shelters																																				
Supercondensatori																																				
Control room																																				
ICT - cabling																																				
ICT-components																																				
ANPR																																				
UPS																																				
Power Metering																																				
Sensing In-Out																																				
EMF-EMC metering																																				

	Problem solving
	Installation/Realization
	Basic Testing
	Functional testing
	Corrections

Quite in time: orders for coils a capacitors have been placed  
Power electronics are under revision





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# Thank you!



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