

Final Event
24-25th of May 2022

Welcome to the final event!



Powerful **A**dvanced **N**-Level **D**igital **A**rchitecture
for models of electrified vehicles and their components

Pr. Alain Bouscayrol, ULille
Dr. Willem van Dorp, UNR



www.project-panda.eu





Powerful Advanced N-level Digital Architecture for electrified vehicles and components

Research Innovation Action, 2018-2022, 11 partners (6 countries), 3.5 M€

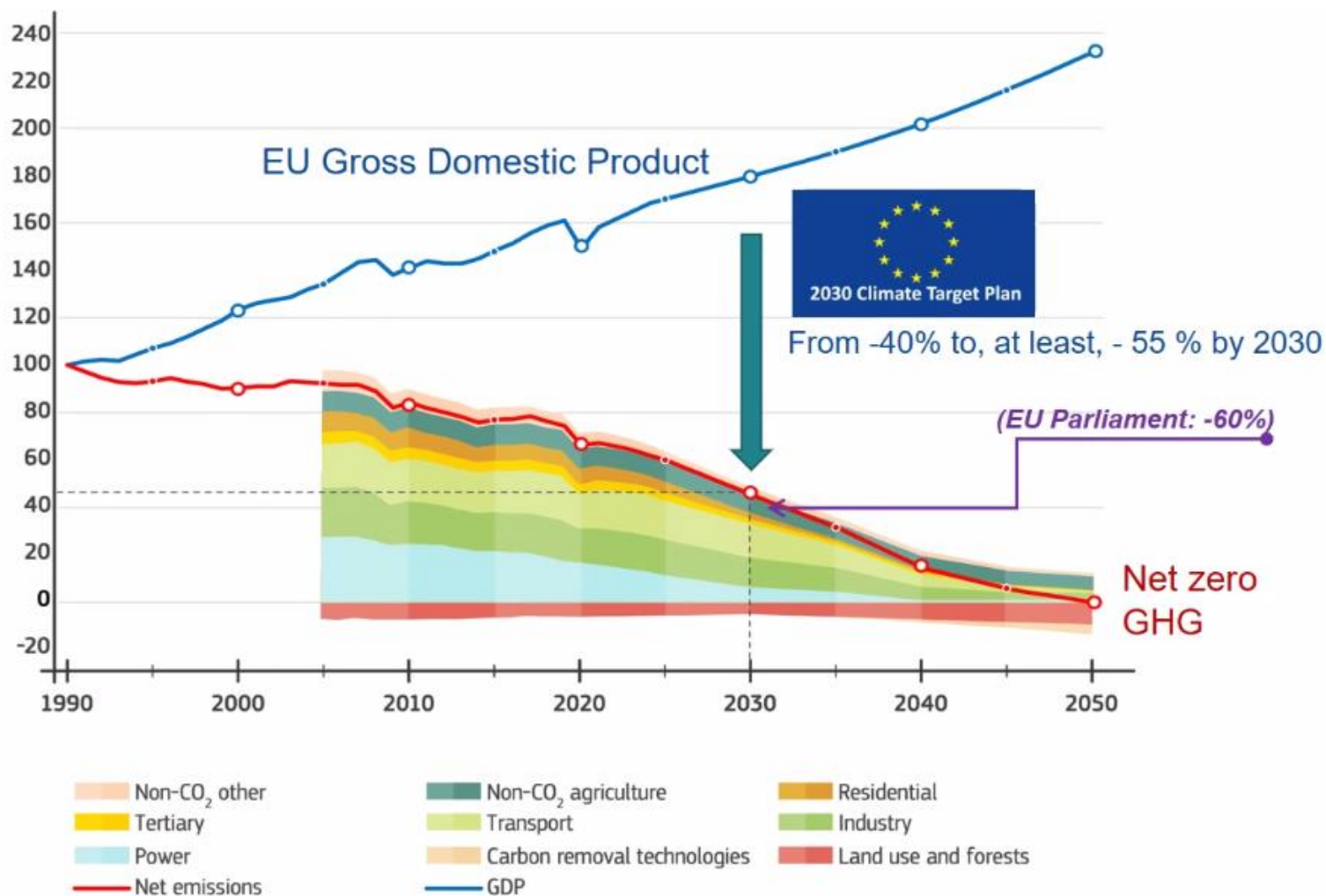


This project has received funding from the European Union's Horizon2020 research and innovation programme under Grant Agreement no. 824256.



Context of the transportation in Europe

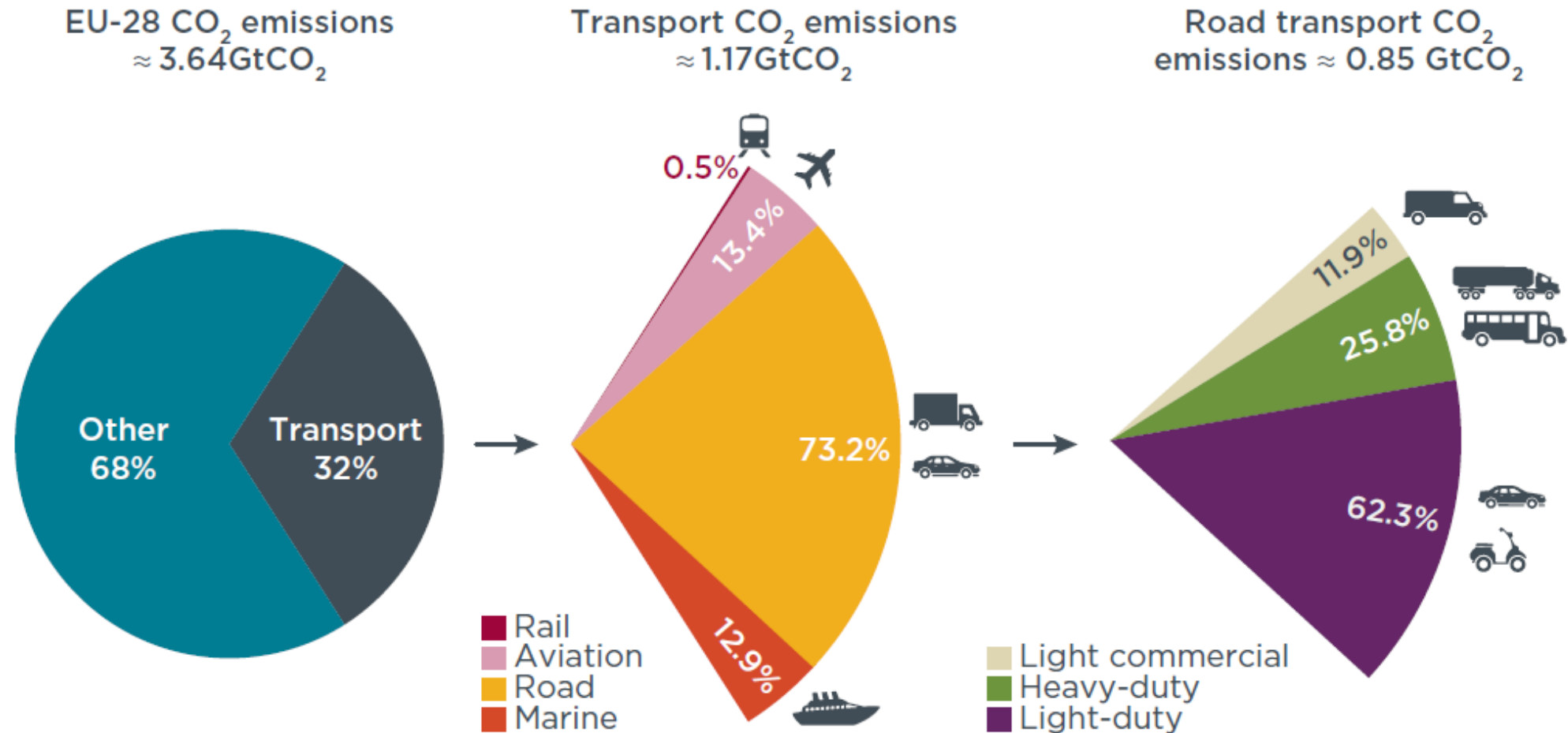
Green house gases (GHG) emission in the EU



[EEA 19]

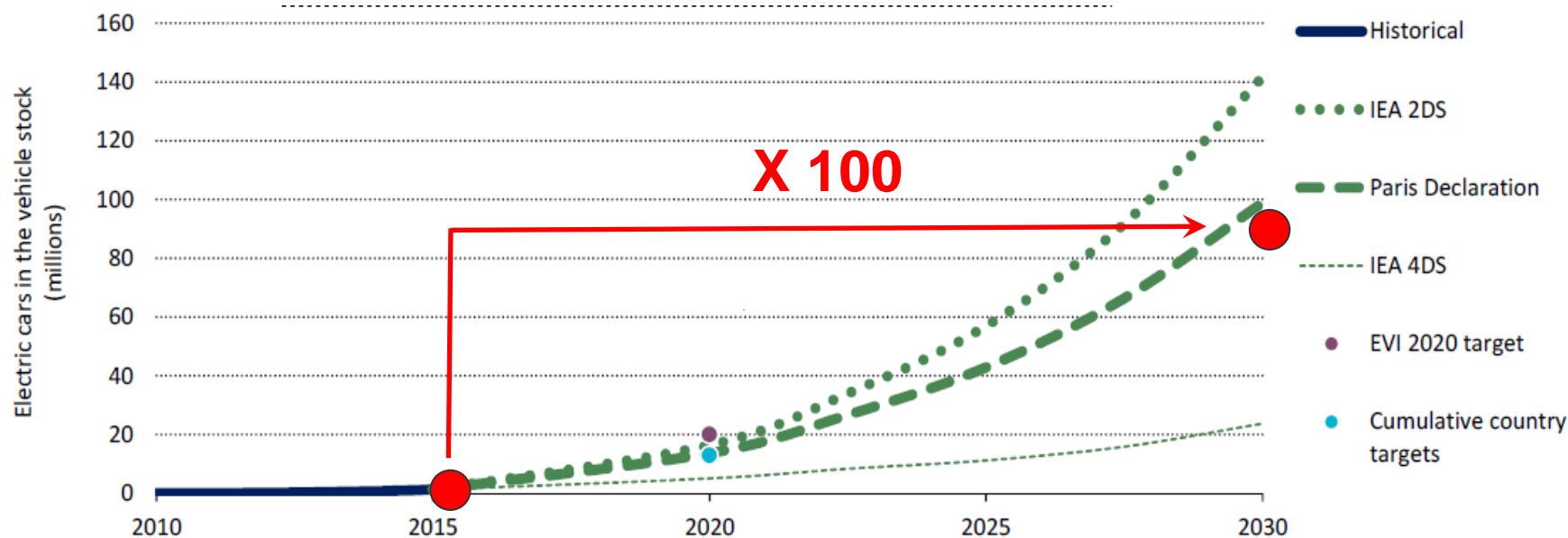
Only transport sector
has not decreased its
GHG emissions!

CO₂ emissions in the EU for 2015



[Rodríguez 2018]

Challenge of the EV development



Note: 2DS = 2°C Scenario; 4DS = 4°C Scenario.

From 1 M to 100 M of EVs in 15 years to limit global warming to +2°C

+ innovative EVs: longer range, shorter charging time, reduced cost, etc.



H2020 & transport challenges

H2020 = Research programme of the European Commission 2014-2020

Smart, green and integrated transport Programme = H2020 focus on transport applications

Power converters:

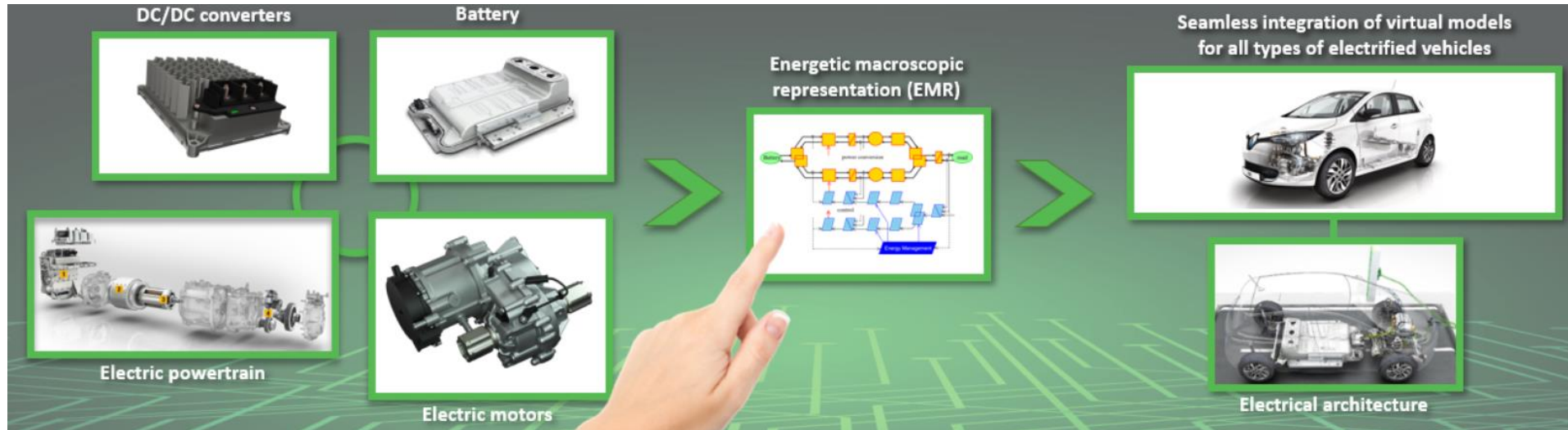
high efficiency, SiC & GAN, etc.

New batteries:

energy density, modularity, second life, etc.

User centric:

comfort management, connectivity, etc



New e-drives:

high efficiency, modularity, etc.

Simulation & testing:

co-simulation, cloud computing, HiL testing, etc.

Vehicle:

Lightweight, circular economy, etc.

H2020 & digitalisation of transport



EARPA¹ Task Force Modelling & Simulation:

- Digital transportation in the automotive sector to speed the innovation towards green vehicles
- Need of cross-cutting value of methods and tools for virtual development and validation

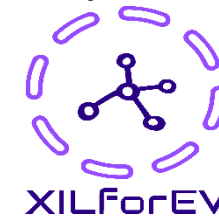
GV-07-2017 call of the transport programme:

Multi-level modelling and testing of electric vehicles and their components



LC-GV-02-2018 call of the transport programme:

Virtual product development and production of all types of electrified vehicles and components



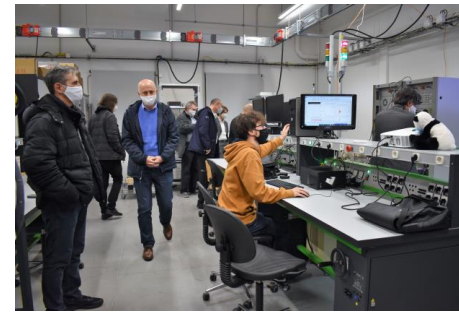
¹ European association of automotive R&D organisations, <https://www.earpa.eu/>

PANDA project

A brief history...



- 🐼 Sept 2016: **ELEPHANT**: ELEctrical Power Hardware N-level Testing for electric vehicles
- 🐼 Feb 2017: Proposal submitted to GV-2017 call
- 🐼 May 2017: ELEPHANT not successful
- 🐼 Mar 2018: ELEPHANT becomes PANDA
- 🐼 Apr 2018: Proposal submitted to GV02-2018 call
- 🐼 Jul 2018: **PANDA** approved for funding!
- 🐼 Dec 2018: Kick-off in Lille
- 🐼 Feb 2020: COVID'19
- 🐼 Mar 2021: Project extended by 6 months
- 🐼 May 2022: Final event!



Agenda



24 May 2022



8:30 Welcome coffee

9:00 **General introduction**

10:00 **PANDA key innovations & validations**

11:30 **Vehicles & Components demos**

(Battery Electric Vehicle, Fuel Cell Vehicle,
Hybrid Electric Vehicle, battery, e-drive)

14:15 **Linked H2020 projects**

(VISIONxEV, UPSCALE, XILforEV)

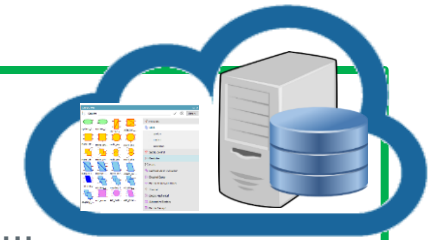
15:20 **Industrial feedbacks on PANDA**

(Renault TR, Siemens, Valeo,
TUV, Bluways, Typhoon)

16:45 End of the Day



25 May 2022



8:30 Welcome coffee

9:00 **Virtual Demos**

(Siemens Software, Typhoon HIL,
cloud of models, virtual prototypes)

11:00 **PANDA global vision**

(Carbon care, spin-off, future projects)

14:15 **Evaluation Group**

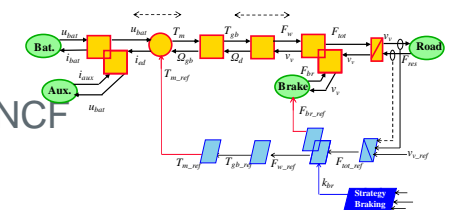
(Sherpa Engineering, MEL, SNCF

Segula Technologies, HVES)


16:10 **Closing remarks**

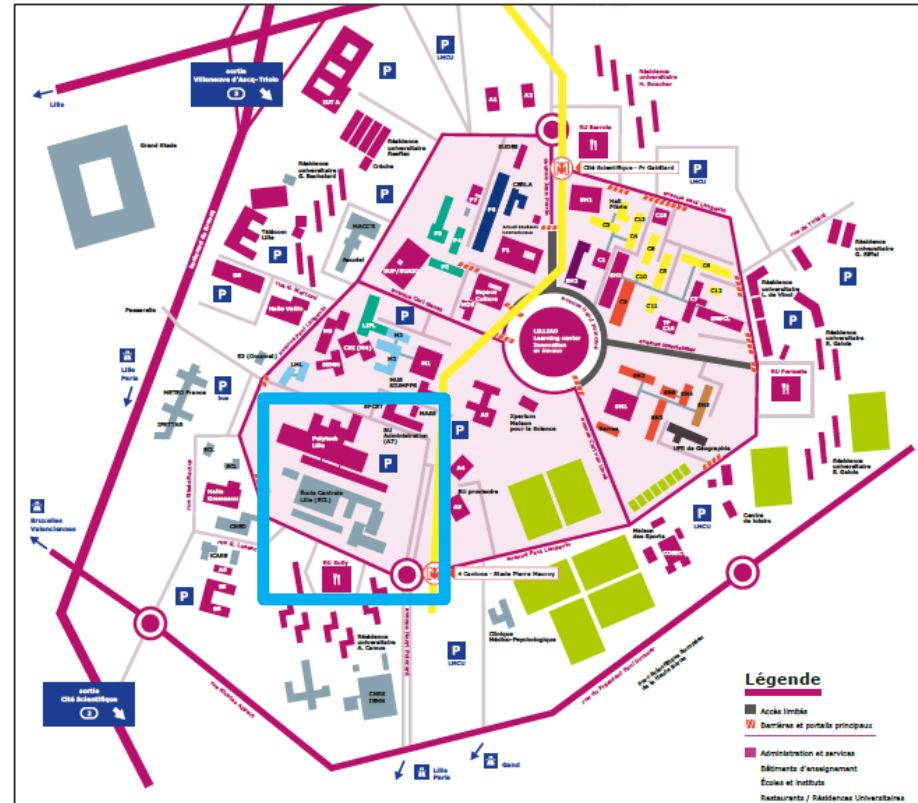
incl. President Regis Bordet

16:30 **Cocktail!**

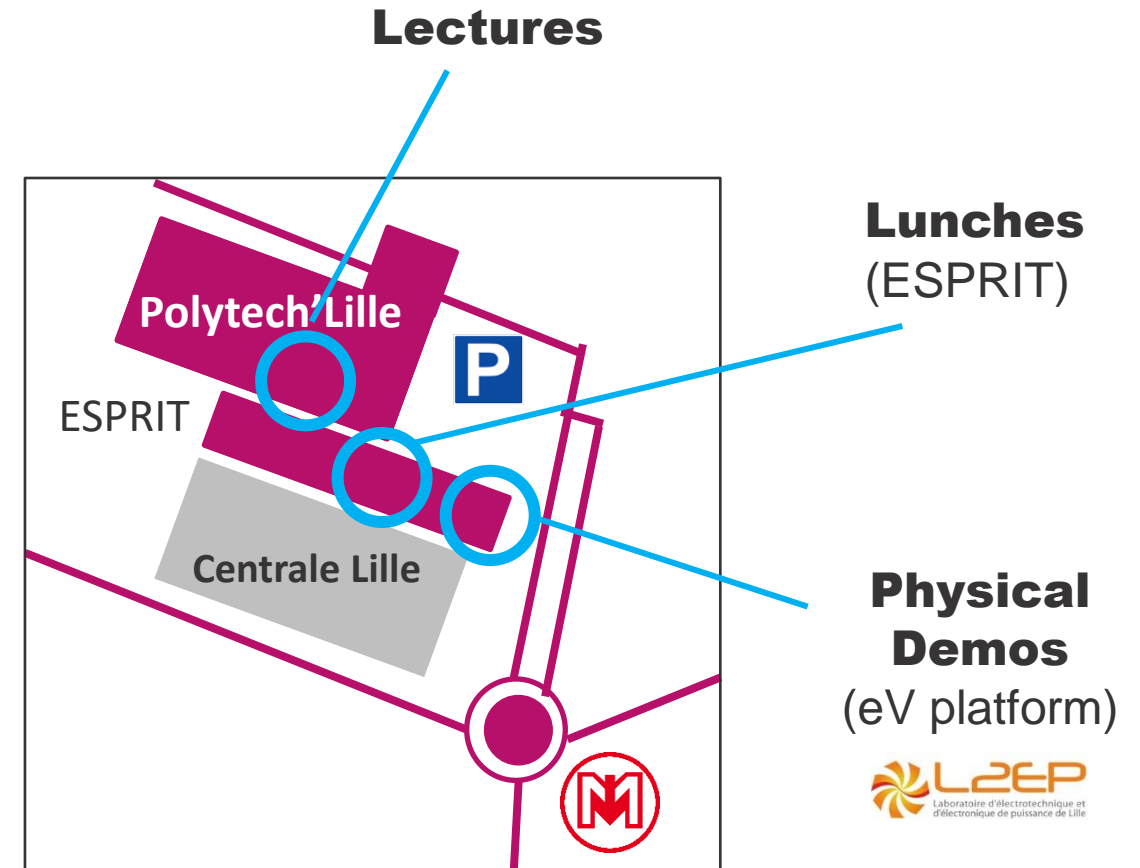
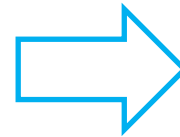


Locations

 **Université de Lille** 72,000 students



Campus "Cité Scientifique"



Supporting team



Amandine Lepoutre - Université de Lille
Logistics coordinator



Wieteke van Balen - Uniresearch
Hostess & support







Alessandra Lucini Paioni - Uniresearch
Chat moderator

and all PANDA volunteers!



Household remarks



-  Hybrid meeting: Physical + online
ULille TV team will broadcast the event
videos on the PANDA youtube channel later
-  All guests: Please use microphone when asking questions
First, give your name and affiliation
-  Moderator: Please repeat the question
-  Wifi: See your agenda and badges for logon details

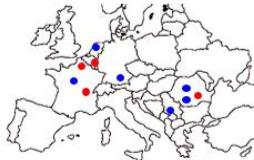



On-line


If you have a problem with ZOOM, stop and restart it.





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2018-2022, 11 partners (6 countries), 3.5 M€




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Slide 1  PANDA - GA 824256 2022/05/20

Paramètres audio ^ Chat Lever la main Q. et R. Quitter

CHAT: let us know if something's wrong (sound, screen)

Q&A: ask your questions to the speakers (with your name & affiliation please). The chairman will select the questions and give them to the speakers.



Enjoy our final event!

www.project-panda.eu

