



*Establishment of a FramewORk for
Transforming current EPES into a more
resilient, reliable and secure system all over
its value chain*



This project has received funding from the European Union's Horizon Europe Energy Research and Innovation programme under Grant Agreement No. 101075665

The Horizon Europe project eFORT: establishment of a FramewORk for Transforming current EPES into a more resilient, reliable and secure system all over its value chain

Esteban Gutiérrez

CIRCE Technological center

edgutierrez@fcirce.es





Miguel Gutierrez Jr./The Texas Tribune

“It looked like the end of the world”: Listen to the stories of Texans who lived through 2021’s historic winter storm

BY JACOB OHARA, ASHLEY MIZNAZI AND TODD WISEMAN FEB. 17, 2022

One year later, dozens of Texans from around the state shared their memories about an unforgettable storm. [FULL STORY →](#)



PG&E: California utility firm files for bankruptcy after deadly 2018 wildfires

Company is facing hundreds of lawsuits from victims of recent fires and tens of billions of dollars in potential liabilities



A home burns as the Camp fire rages through Paradise, California, on 9 November. PG&E is facing billions of dollars in liabilities over 2018 wildfires. Photograph: Noah Berger/AP

Industroyer: An in-depth look at the culprit behind Ukraine's power grid blackout

Malware which speaks the language of industrial machines is a danger to all of our critical services.



Source: <https://www.entsoe.eu/data/map/>

Objective

Main objective of the eFORT Project is...

... to make **European power grids more resilient and reliable to failures, cyberattacks, physical disturbances and data privacy issues.**

How?

To this end, a set of **technological innovations** will be developed for the **detection, prevention and mitigation** of risks and vulnerabilities with positive impacts on power system operation and stability.

The eFORT solutions will be demonstrated at **TSO, DSO, substation and consumer levels** in **4 real demonstration grids** that have been selected considering their complementarities and relevance to tackle the main threats of current European power systems.



The project in a nutshell

**Programme
HORIZON**

**Total budget
9 321 022.50€**

**Project Coordinator
CIRCE**

**Total partners
23 partners**



Demo overview

- **D1 – Escúzar (Granada, Spain)**

- Microgrid and user level
- DER resources



- **D3 – Sarentino Valley (Italy)**

- MV and LV distribution
- Smart plant regulation and grid control



- **D2 – Delft (The Netherlands)**

- Pan-European transmission system (TENNET infrastructure in NTH and Germany)
- Generation, substations and TSO-DSO points

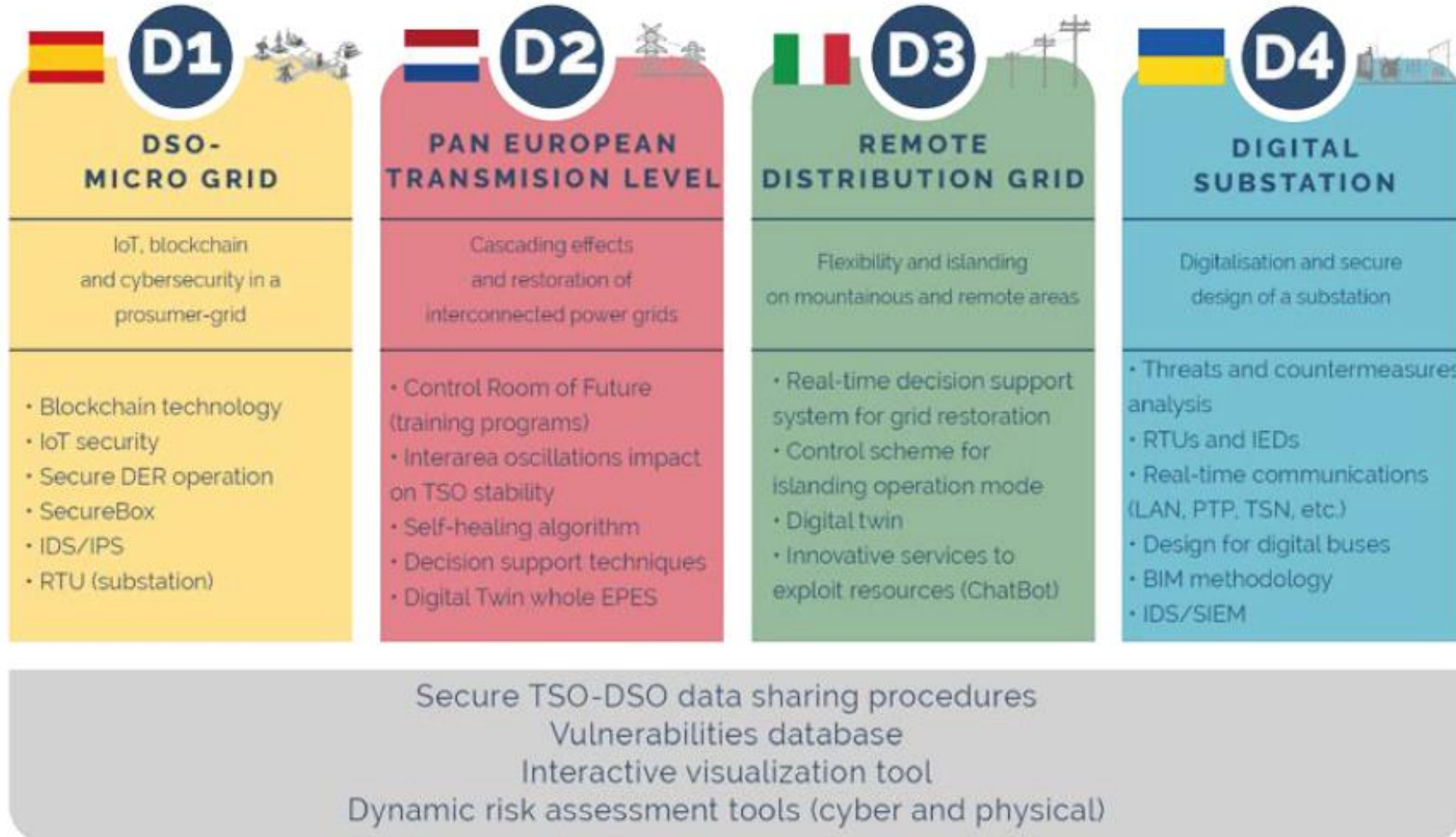


- **D4 – Iltsi (Ukraine)**

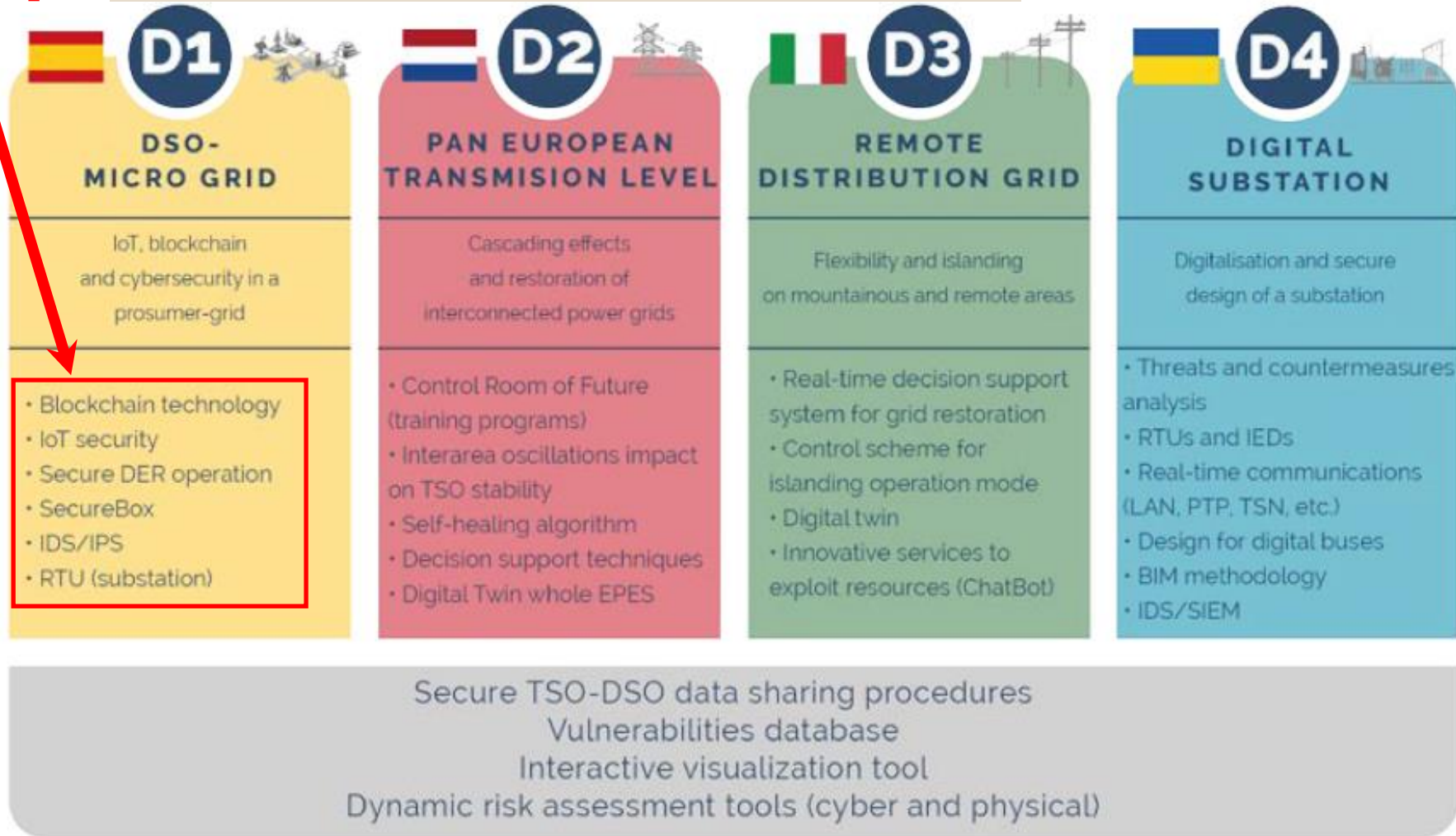
- Substation secure operation and design
- Digital SAS



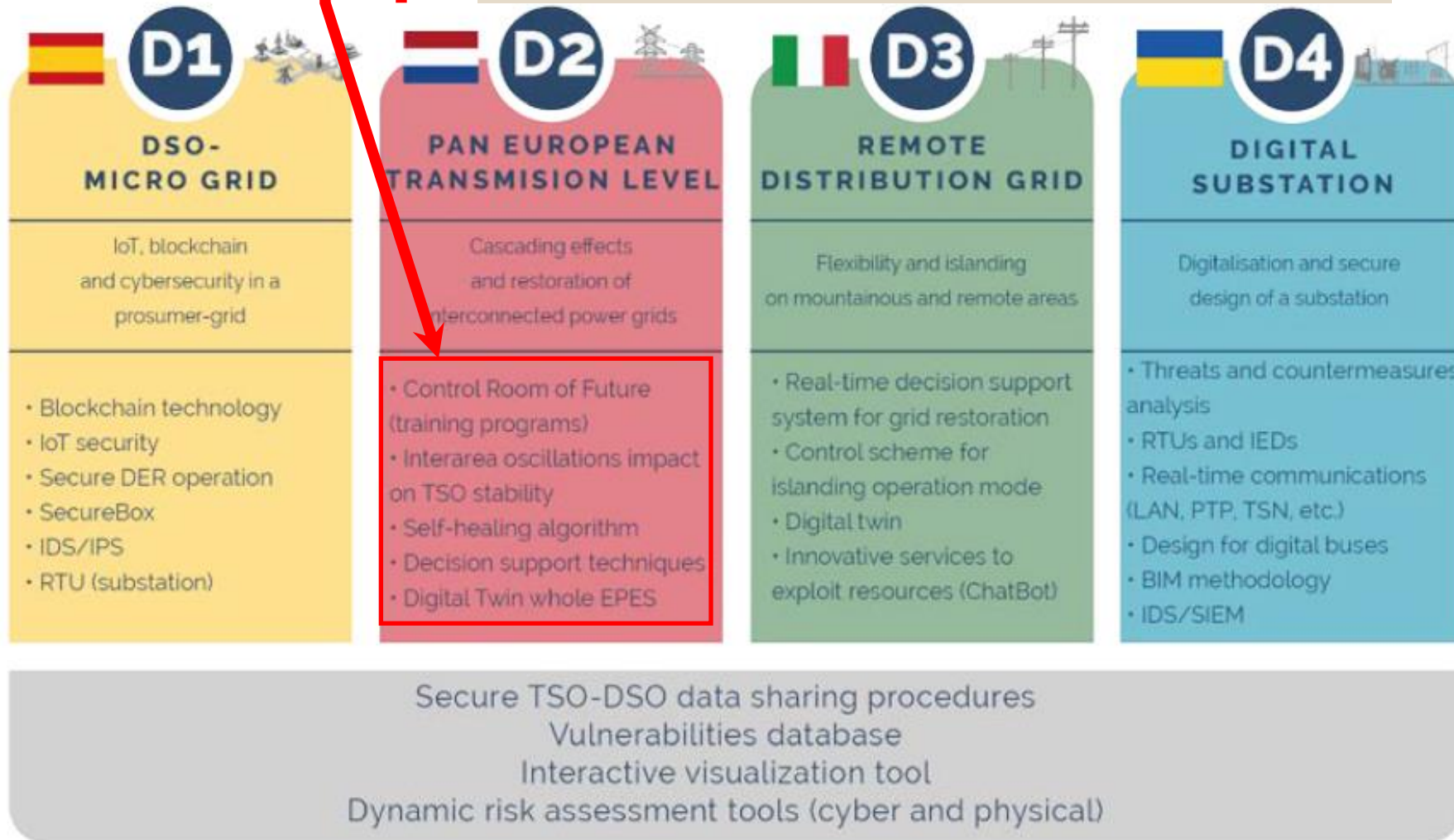
Demo cases



- Blockchain for grid resiliency and verification
- SecureBox

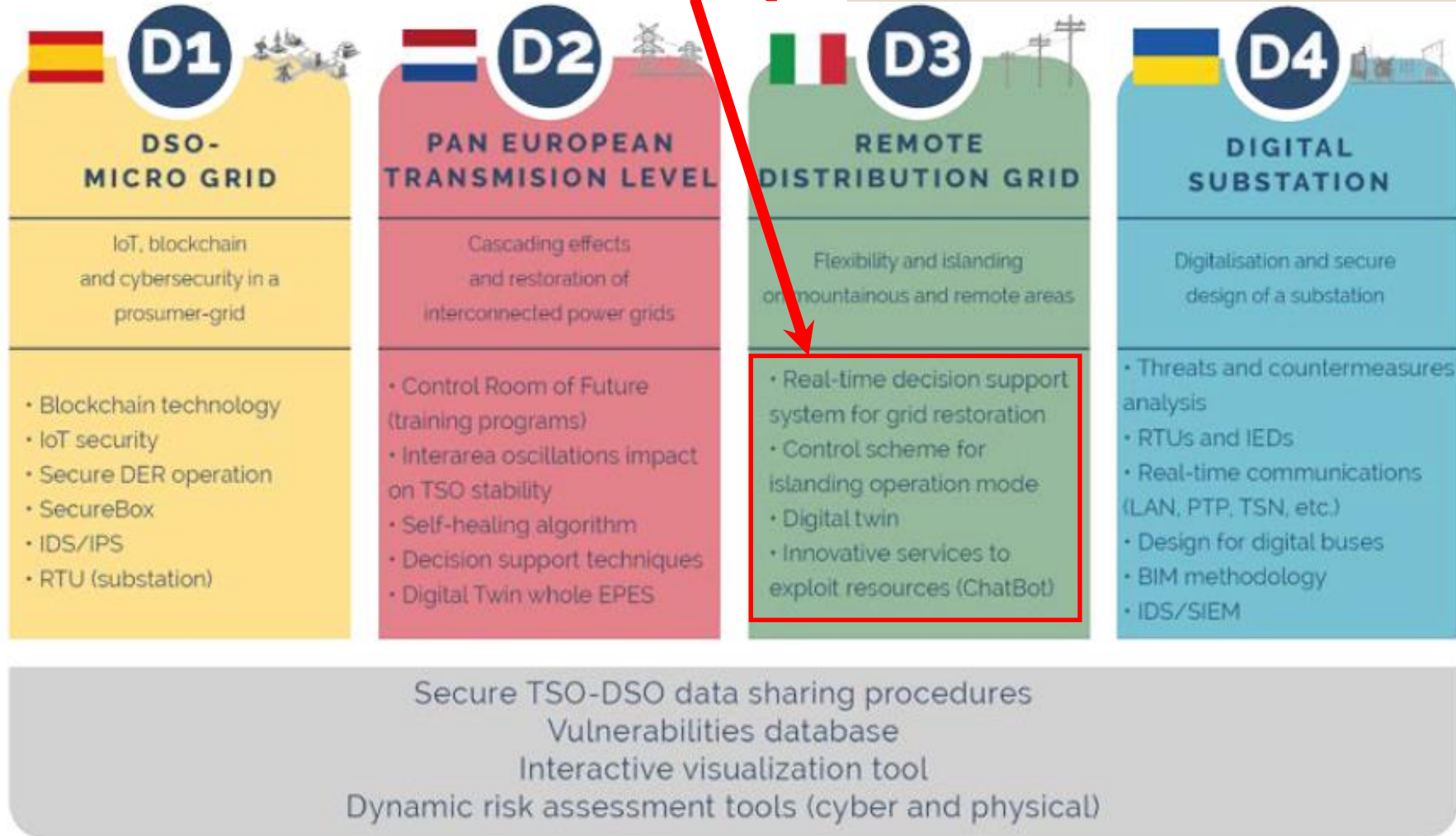


• Control Room of the Future



Demo case

- Islanding Operation Mode



Demo cases

- IDS
- Secure Design



Thank you!

Conctac us:
Esteban Gutiérrez
Technical project leader:
edgutierrez@fcirce.es

Visit and follow
www.efort-project.eu



@efortproject



efort-project



eFORT project

This work has been Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Climate, Infrastructure and Environment Executive Agency (CINEA). Neither the European Union nor the granting authority can be held responsible for them.



This project has received funding from the European Union's Horizon Europe Energy Research and Innovation programme under Grant Agreement No. 101075665

