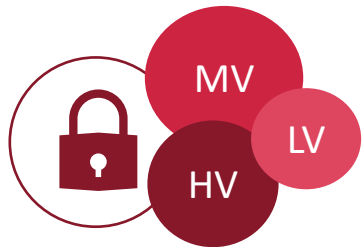


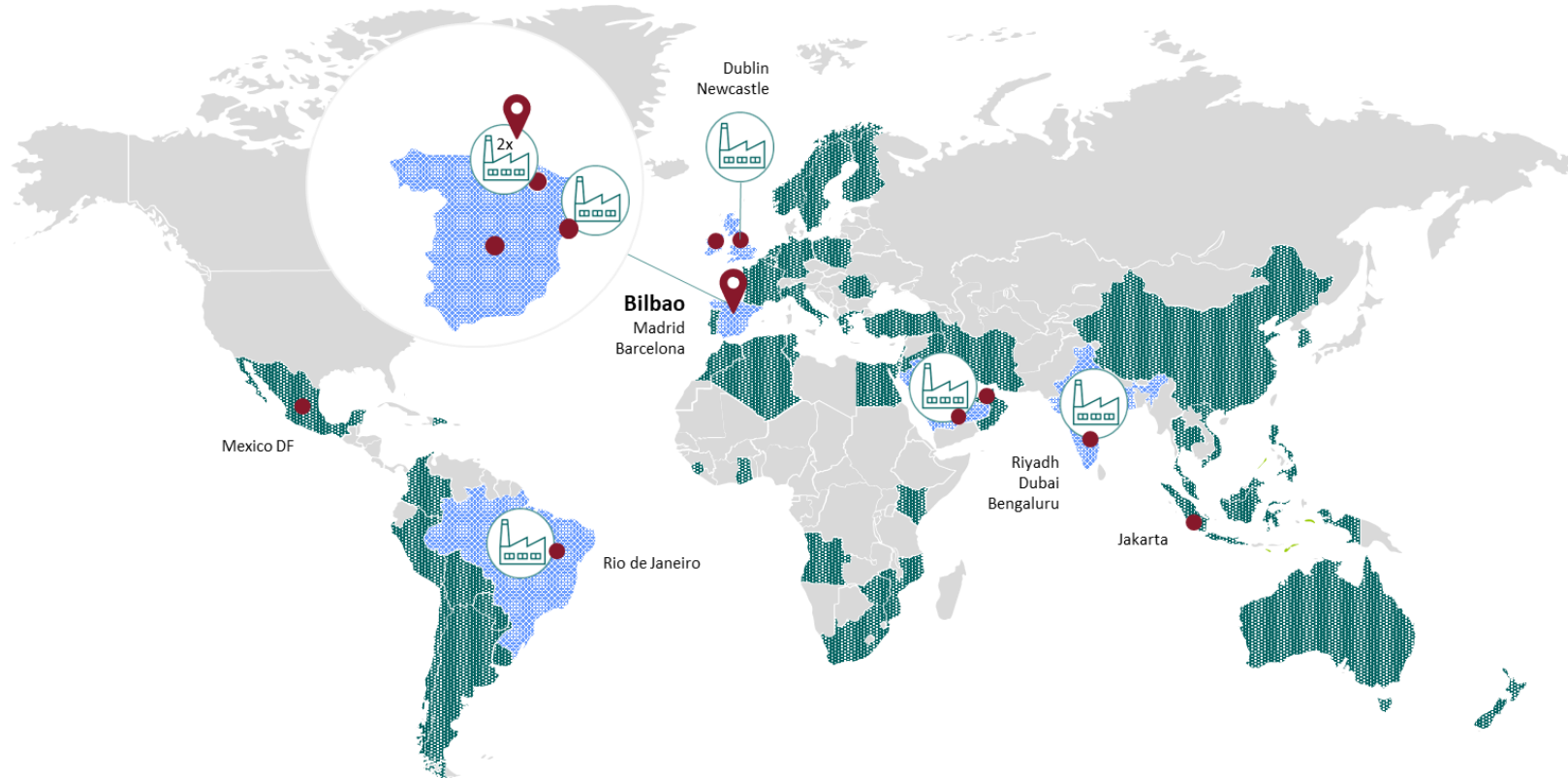
Making the Smart Grid Real



High tech integrated HV, MV & LV solutions to help utilities and electrical companies to achieve energy transition challenges



**High tech integrated HV, MV & LV solutions
to help utilities and electrical companies to achieve
energy transition challenges**



+ 400 professionals
Spain, UK, Ireland, KSA, India, Brazil;
Indonesia, Mexico, UAE



Manufacturing & testing

7 Sites
Headquarters in Bilbao, Spain



85 Countries
References



Flexible & Cybersecure

1

A complete integrated **solution**,
substation gateway + local HMI + LAN switches IEDs + P&C IEDs + communication devices
engineering & system integration services



All protection functions

- **Distributed Busbar Protection** with Ethernet HSR or PRP redundant communication between central unit and bay units, based on process bus.
- **Line Differential Protection** with Distance Backup. Both functions are suitable for lines of any voltage level, overhead or under ground, multiterminal, and single or parallel circuits.
- **Transformer Protection** for up to four winding transformers or autotransformer, of any voltage level, with single or double circuit breaker.
- **Feeder Protection** IED for distribution feeders, transformers and generators, transmission line backup, and BCU (Bay Control Unit for single or double circuit breaker).
- **Automatic Voltage Regulator** for up to 5 power transformers in parallel.
- **Distance Protection** suitable for lines of any voltage level, single or double circuit breaker with any configuration: overhead or underground, single or parallel circuits.

Flexible & Cybersecure

Systems integration



Systems, integrators, OEM
References



SAS

COMMS

- | | |
|---------------|----------------|
| • HV RTUs | • HV telecom |
| • Protections | • Subs. Switth |
| • Tools | |



Making a conventional MV switchgear smarter



2



**Making a conventional
RMU smarter**



The solution integrates all functions required to:

RELAY

1. Cover the **protection** of MV/LV Transformers

RTU

2. **Monitor the MV feeders** (measurement of voltages, currents and powers), and enable the local and remote control of the switchgear
3. Additional functions:
 - **Fault detection** both between phases and between phase and ground, with indication of the direction of the same.
 - **Integration** of other devices like self-powered relays or battery chargers by means of communication protocols
 - Communication with **control centers** using industrial communications protocols like IEC 60870- 5-104, 101 or DNP3.
 - **Remote** management (firmware update, device configuration).
 - **Cybersecurity**

Systems integration



S.Subst.Automation, LBS
LV Supervision Systems,
References



DAS

COMMS

- MV RTUs
- MV Protections
- Switches, Modems, Routers
- Sensors & Couplers

NEW USP Flexible RTU – Secondary RTU

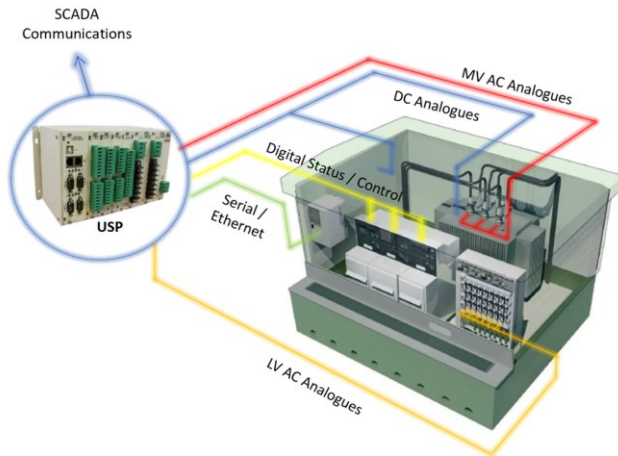


WEBINAR

- Compact Modular Unit
- Low/Medium I/O Counts
- 2x Ethernet Ports + 4x Serial Ports
- Downloadable Functionality
- Extensive Security Features
- Secure Web HMI – Full Network Line Diagram
- Centralised Software management

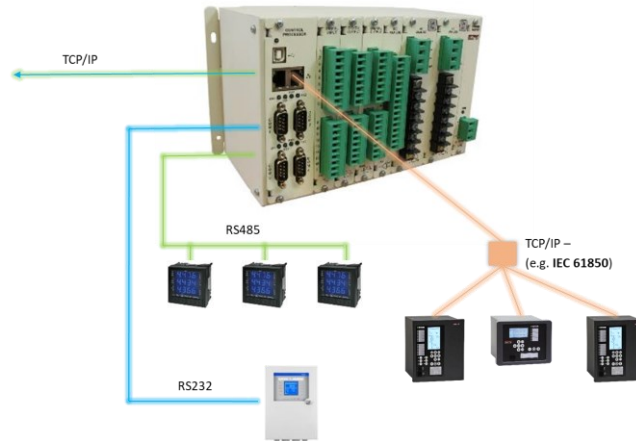
1

MV/LV Secondary Substations Renewable Connections



2

IED Gateway



3

Flexible RTU RMU Use Case

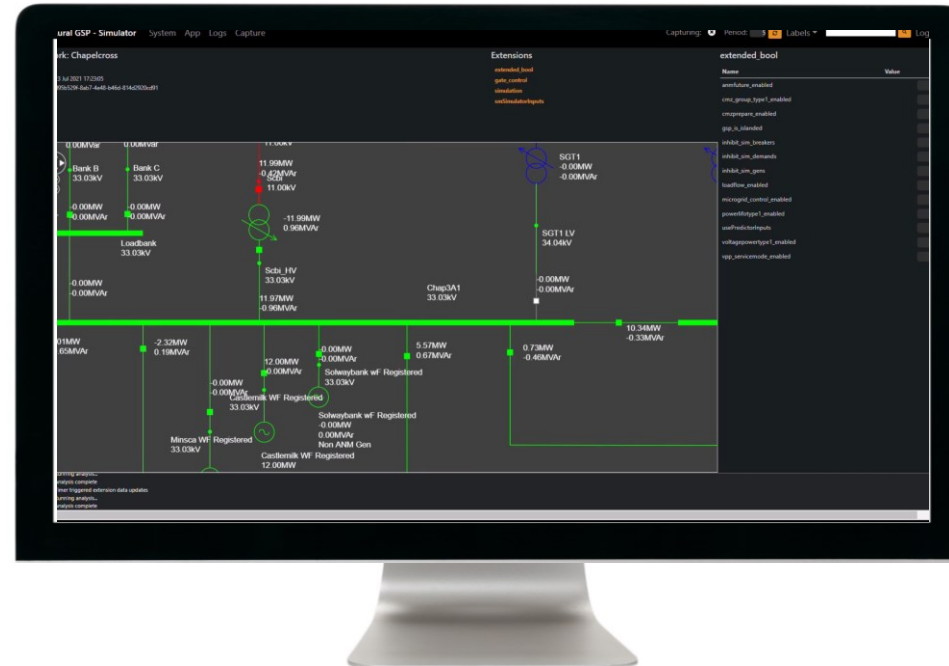


4

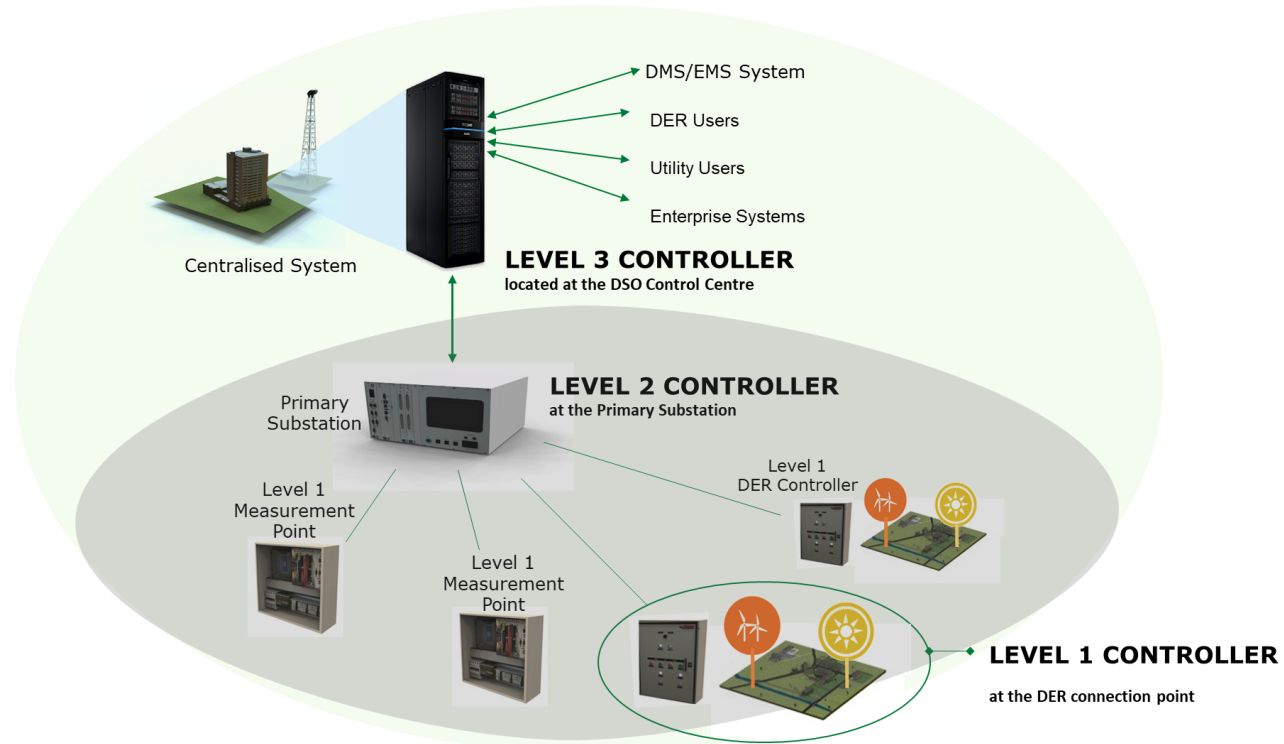
Generator Constraint Controller



Standalone / Integrated Controllers at the connection point of Distributed Energy Resources (DERs)



**Accelerating RES Integration
with a scalable ANM System**



Accelerating RES Integration with a scalable ANM System

Real Time Management | Forecasting | Transmission Support (VPP) | Resilience

Systems integration



ANM / DERMS
References

Turnkey ANM System HW + SW + Services



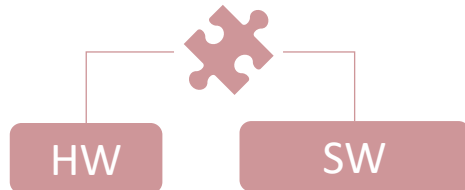
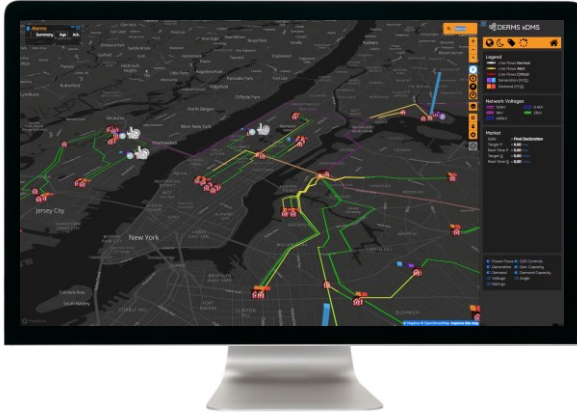
HW

SW

- Xcell
- USP 020
- Altair

- Constellation

Turnkey ANM System HW + SW + Services

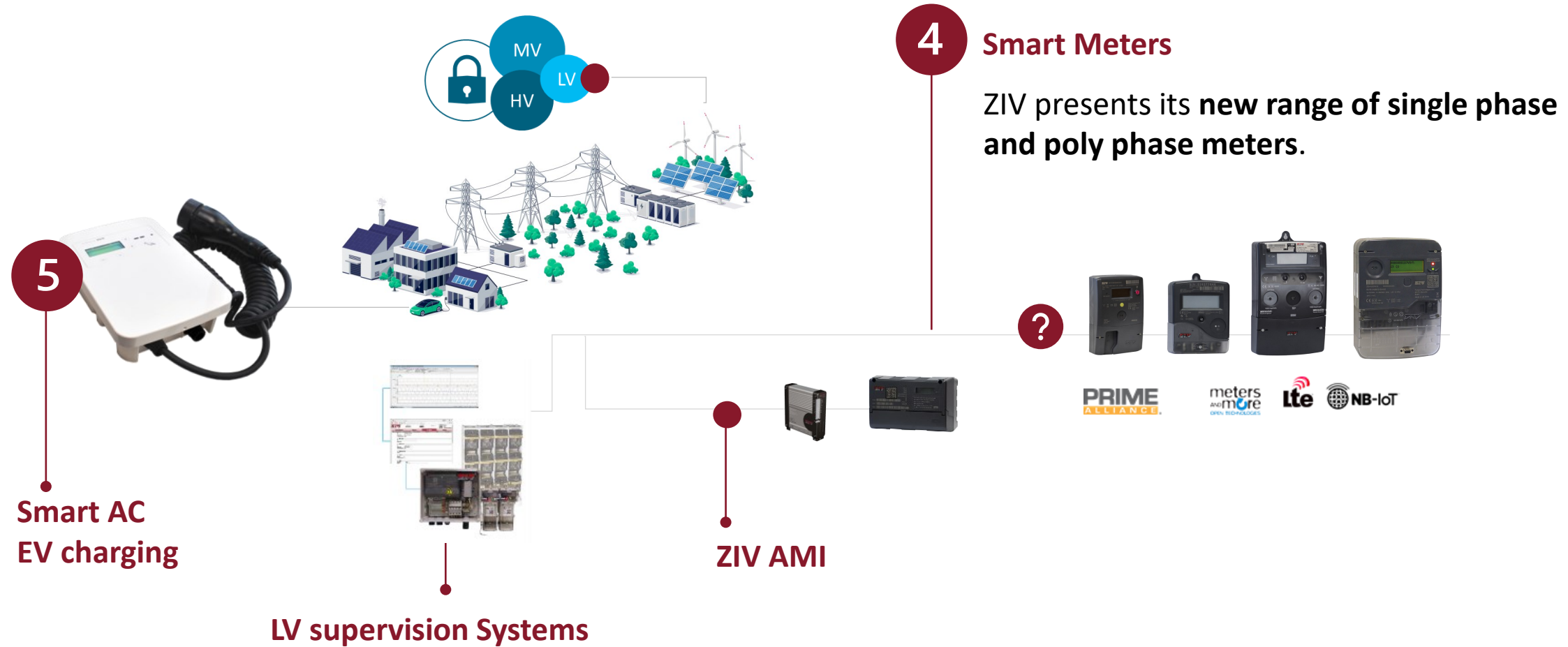


**A scalable framework
for Advanced Network
Management Systems**



ANM Typical Applications







WEBINAR

PRIME
ALLIANCE

meters
AND more
OPEN TECHNOLOGIES

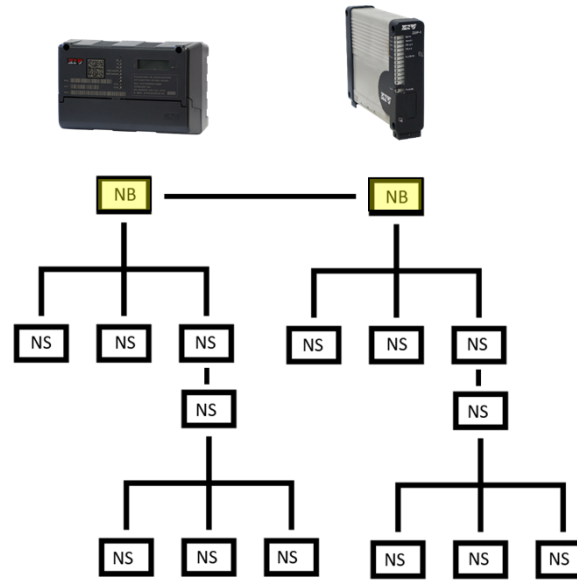
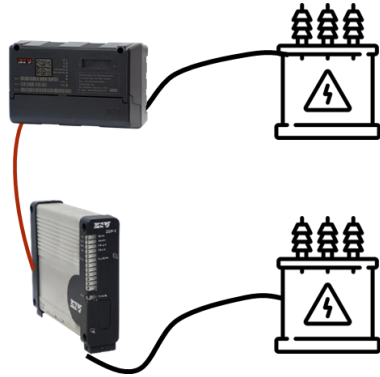
 **lte**

 **NB-IoT**

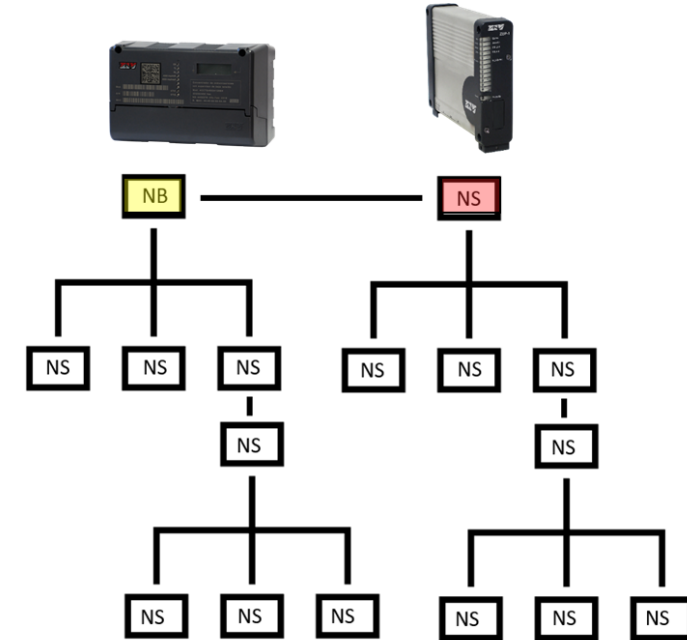
ZIV presents its new range of single phase and poly phase meters.

Among other features, these meters upgrade its PLC modem for PRIME 1.4, certified to communicate in all 8 channels FCC, three-phase injection and overcurrent protection relays.

PRIME over TCP

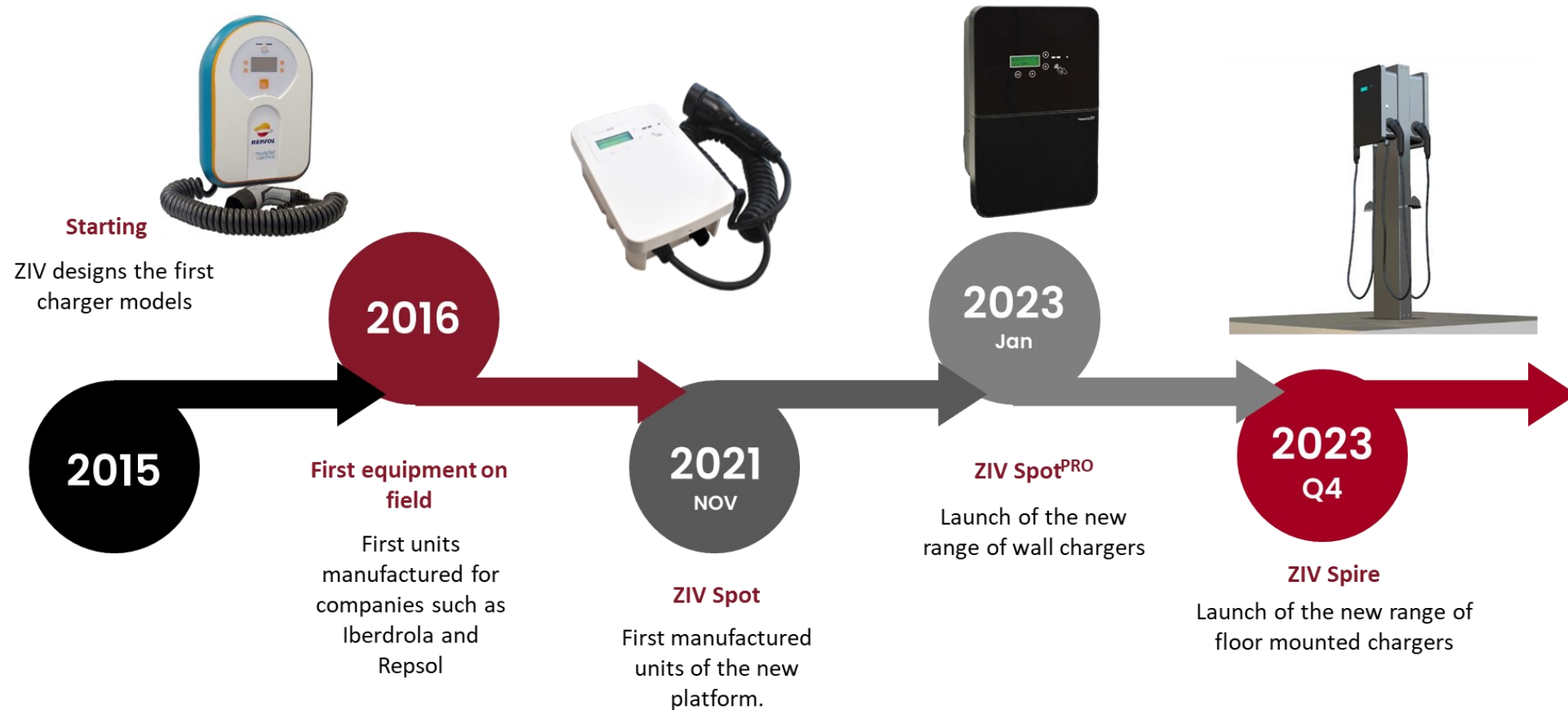


PRIME over UDP



ZIV AMI devices will complete the new PRIME 1.4 networks,

making available phase detection from the meters that enhances the knowledge of the low voltage network in the last mile, three-phase injection, the possibility to choose between channels of communication and that will enable and smooth evolution of the smart meter communication networks from PRIME 1.3 to PRIME 1.4.

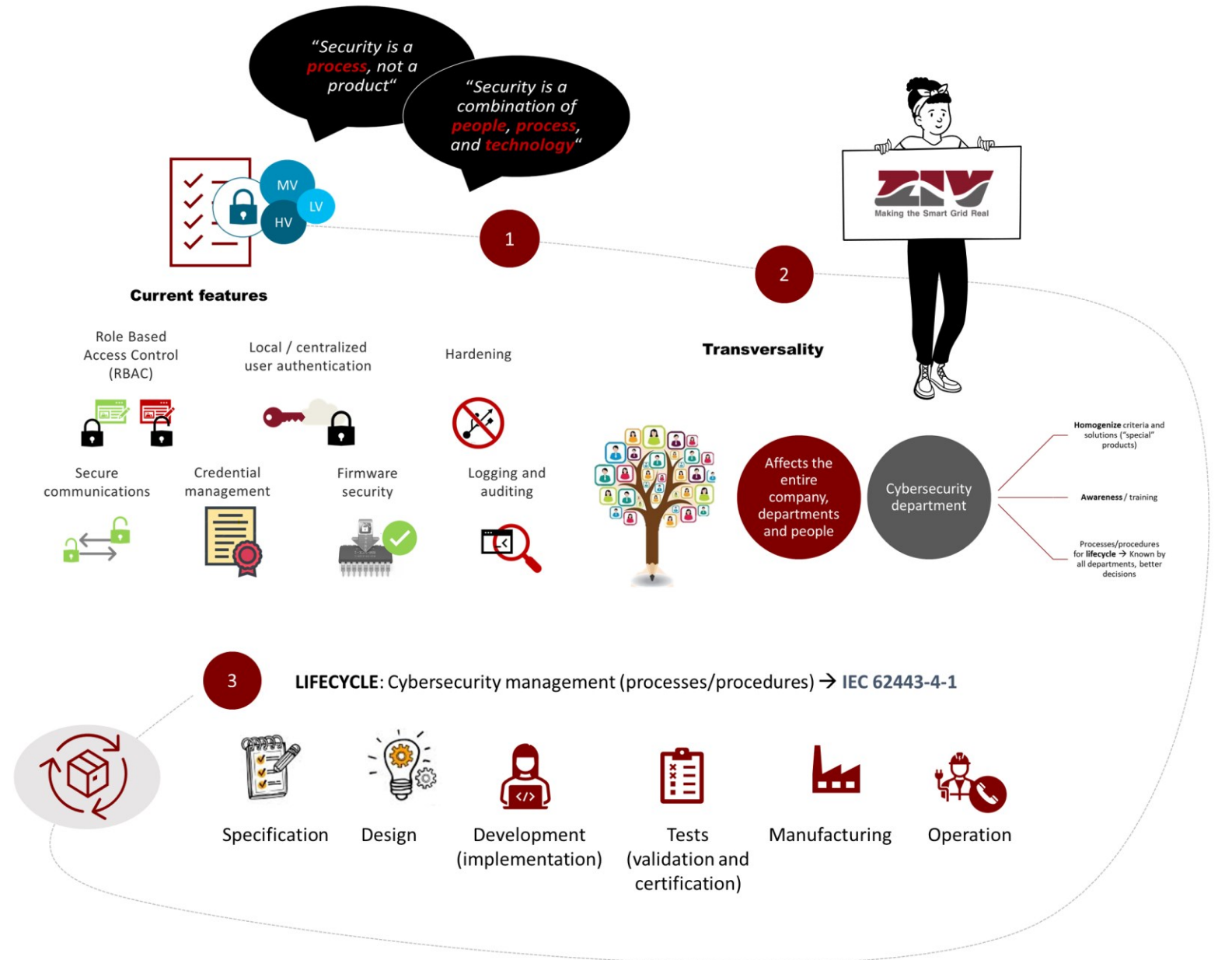


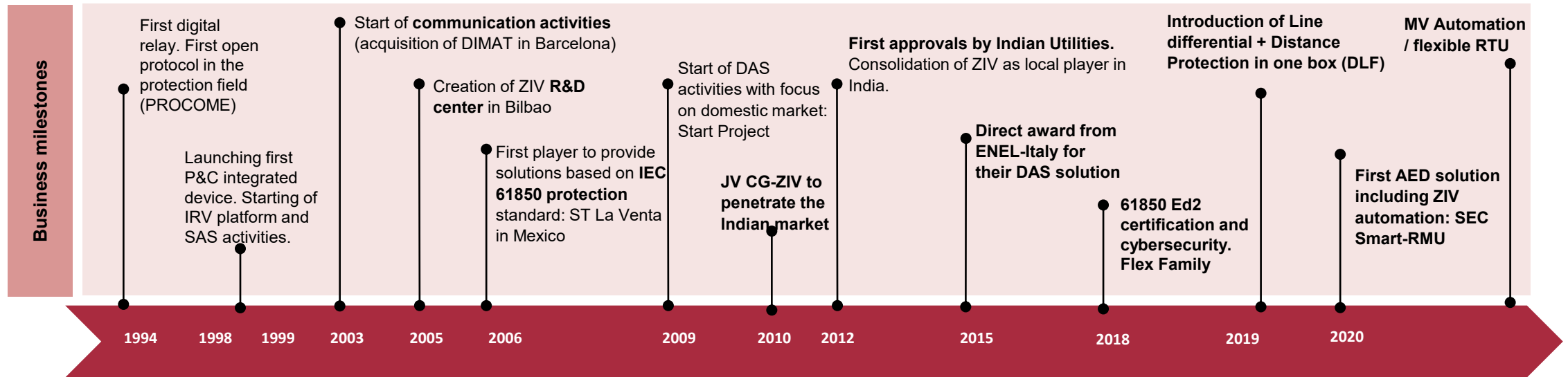
Cybersecurity

is not just a set of functions implemented in a device, it equally applies to all the company procedures and departments.

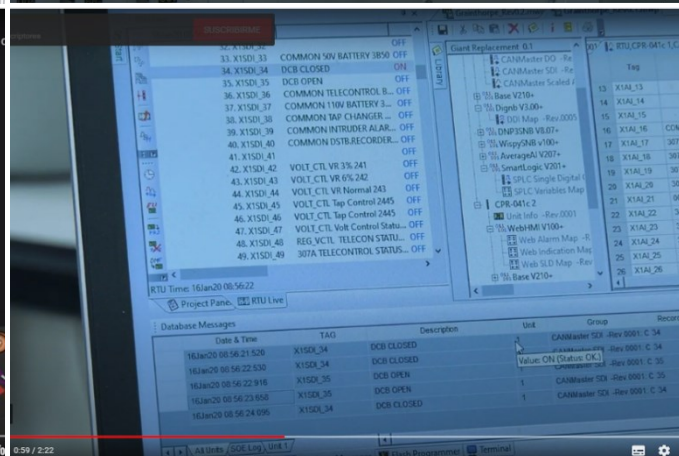


WEBINAR





- Company created in 1993. Core business: Protection & Control devices.
- 1998 ZIV do Brazil is created.
- 2012 CG acquires the company and ZIV starts managing ZIV Automation Ireland/UK (a business that was part of GC Group)
- 2017 alfanar becomes the new sole shareholder.



Thank you!

MEHDI.DRIRA@zivautomation.com

