OsiSoft User´s Conference

2004

THE SIP PROJET

by
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Presentation

- How to integrate different automation platforms? The SIP Project

- This project was developed by a team formed by
  - Endesa Generación, S.A.: Florencio Alonso PM for Endesa
  - Endesa Servicios, S.L.: Mario Angel Iglesias
  - ABB Power Technology, S.A.: Emilio M. Dominguez (speaker) PM for ABB

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  - ABB Power Technology, S.A.: Miguel Larre
  - ABB Power Technology, S.A.: Eduardo Diaz

- Duration: one full year (from May ’03 to April ’04)

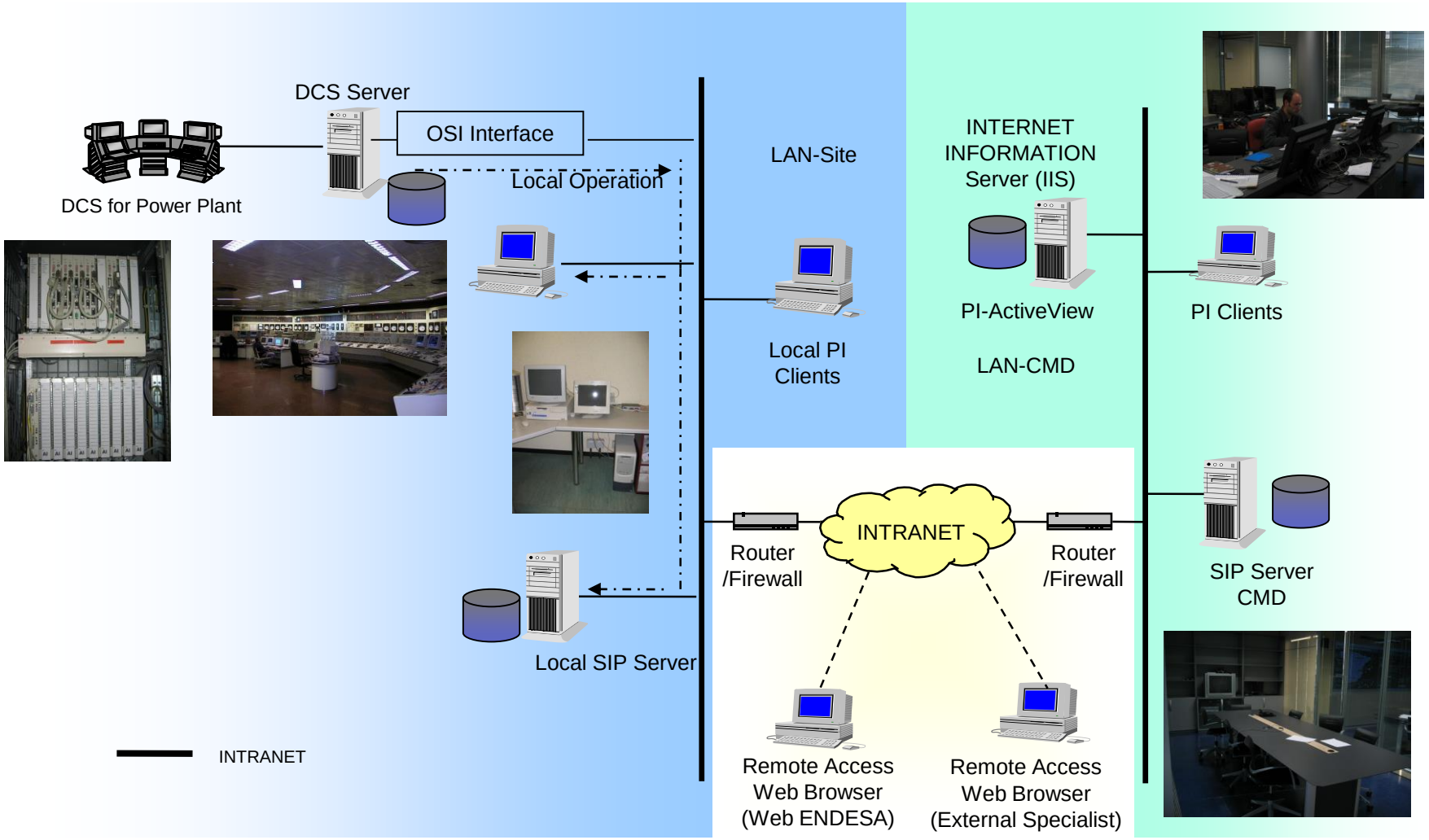
Basis

- Due to different platform for DCS on site Endesa wants to get whole information from the Power Plants with one tool.
  - ABB Distributed Control Systems:
    - Harmony Infi90 (Bailey), Advant OCS (ABB), Network 90 (Bailey)
  - Siemens:
    - Teleperm XP, Simatic S5, Simatic S7
  - Westinghouse:
    - WDPF
- Several Software Provider are evaluated and finally PI System from OsiSoft is chosen.

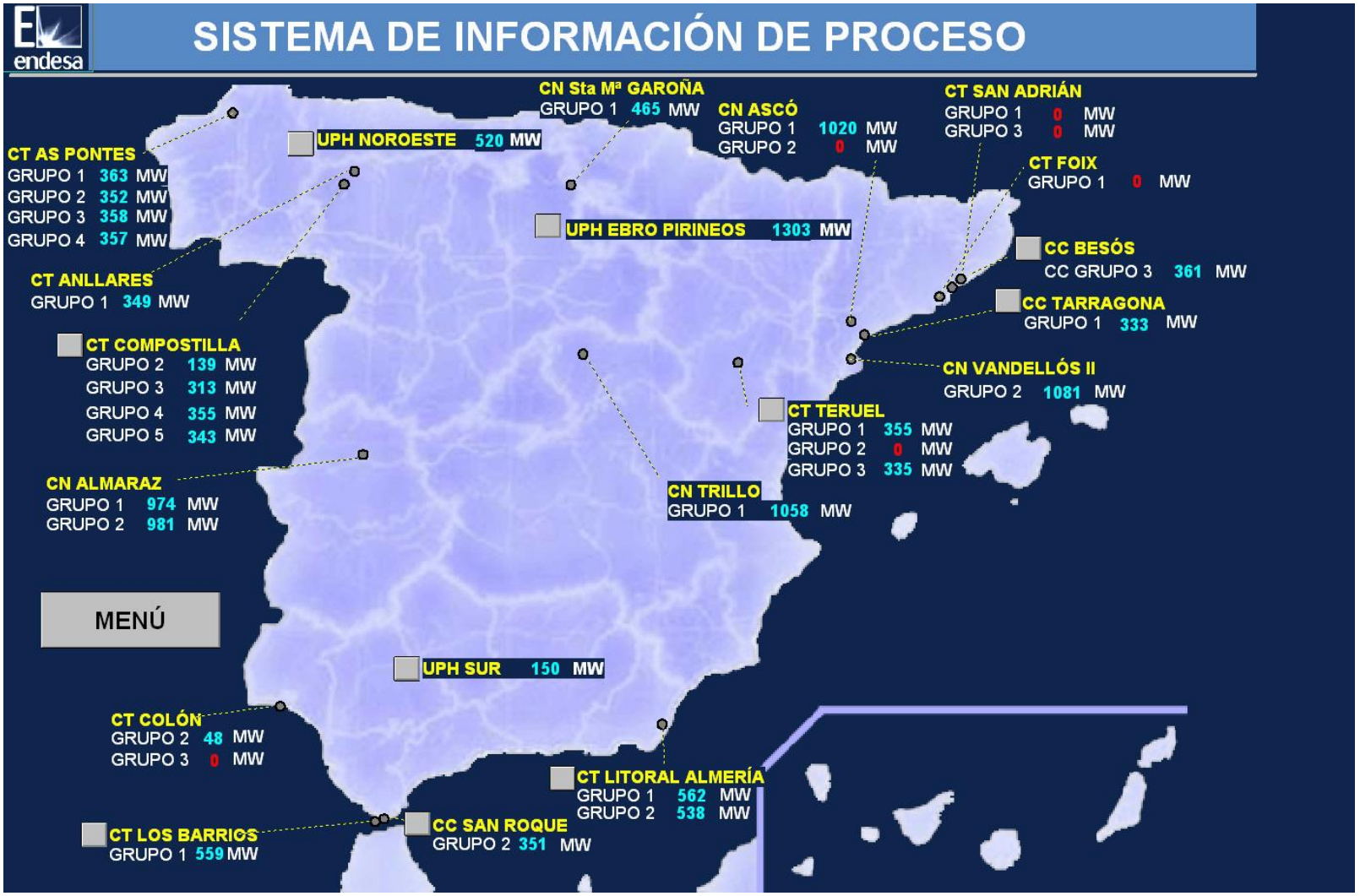
General

- Solution must be installed under operation
- DCS should run without any lack of functionality or operation
- Tag numbers...
  - Fossil Power Plant: 5000 tags per generator
  - Combined Cycle Power Plant: 3500 tags per generator
- Power to be monitoring: 15 GW (125 000 tags)
- Dispatch centre also included: ICCP protocol
- Client Applications: MS Excel, MS Internet Explorer and Process Book

Project Layout Overview



Spanish System

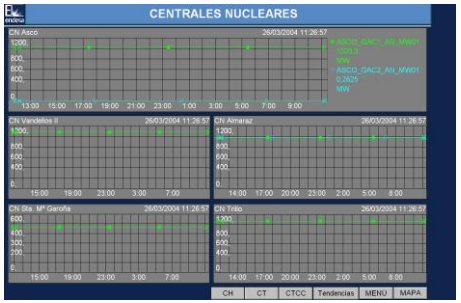


Server and Client Side

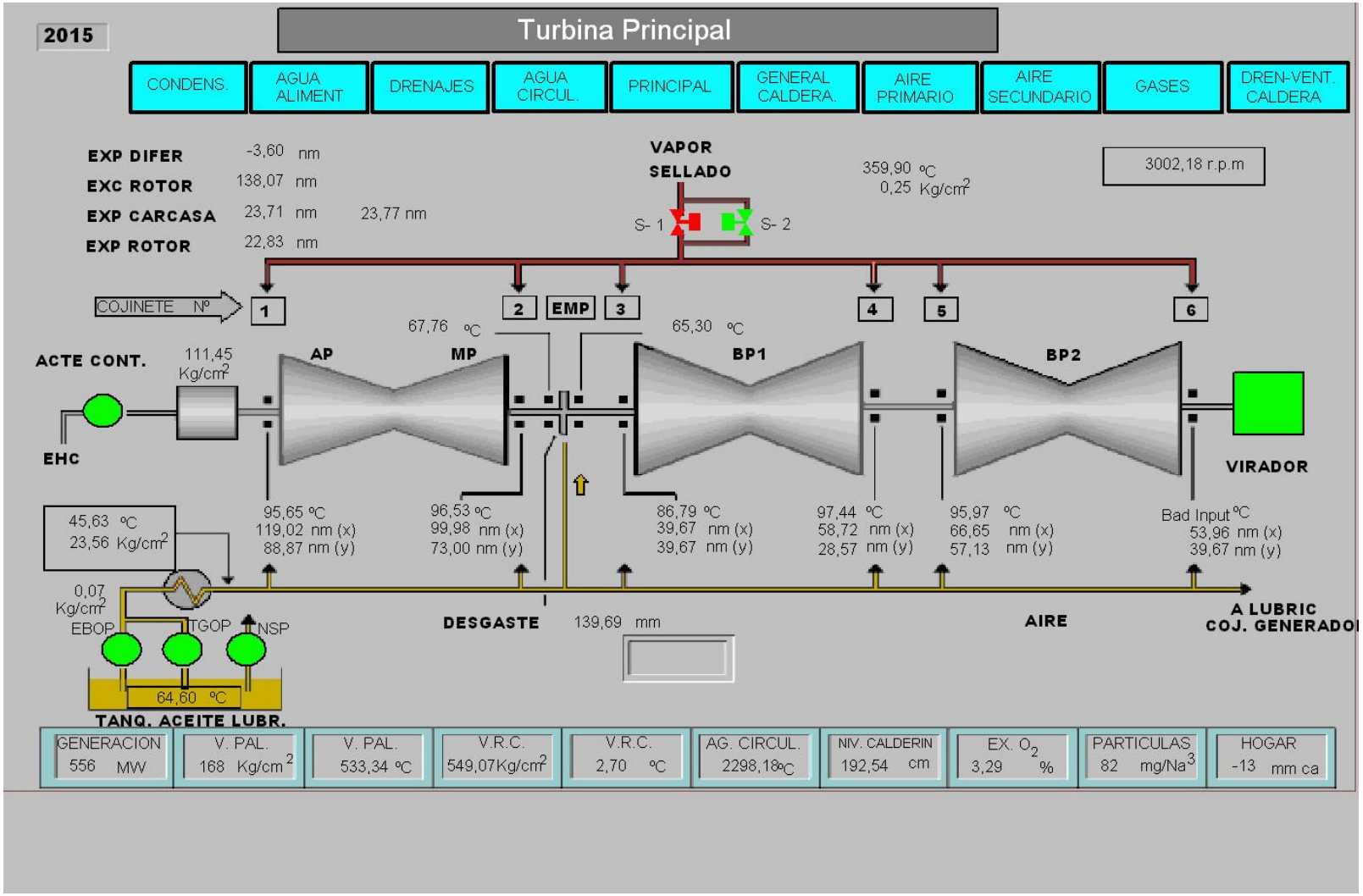
- One PI Server HW+SW on site for local backup
  - Standard solution: dedicated OPC Interface (API Node)
- One Central PI Server HW+SW for central buffering and central backup
- Distributed clients Intranet widespread
  - Administrators: SMT 3.0 Application
  - Standard clients: ProcessBook 2.3 and DataLink 2.1
  - Monitoring clients: MS Internet Explorer 6.0 and ActiveView

Excel Based Applications

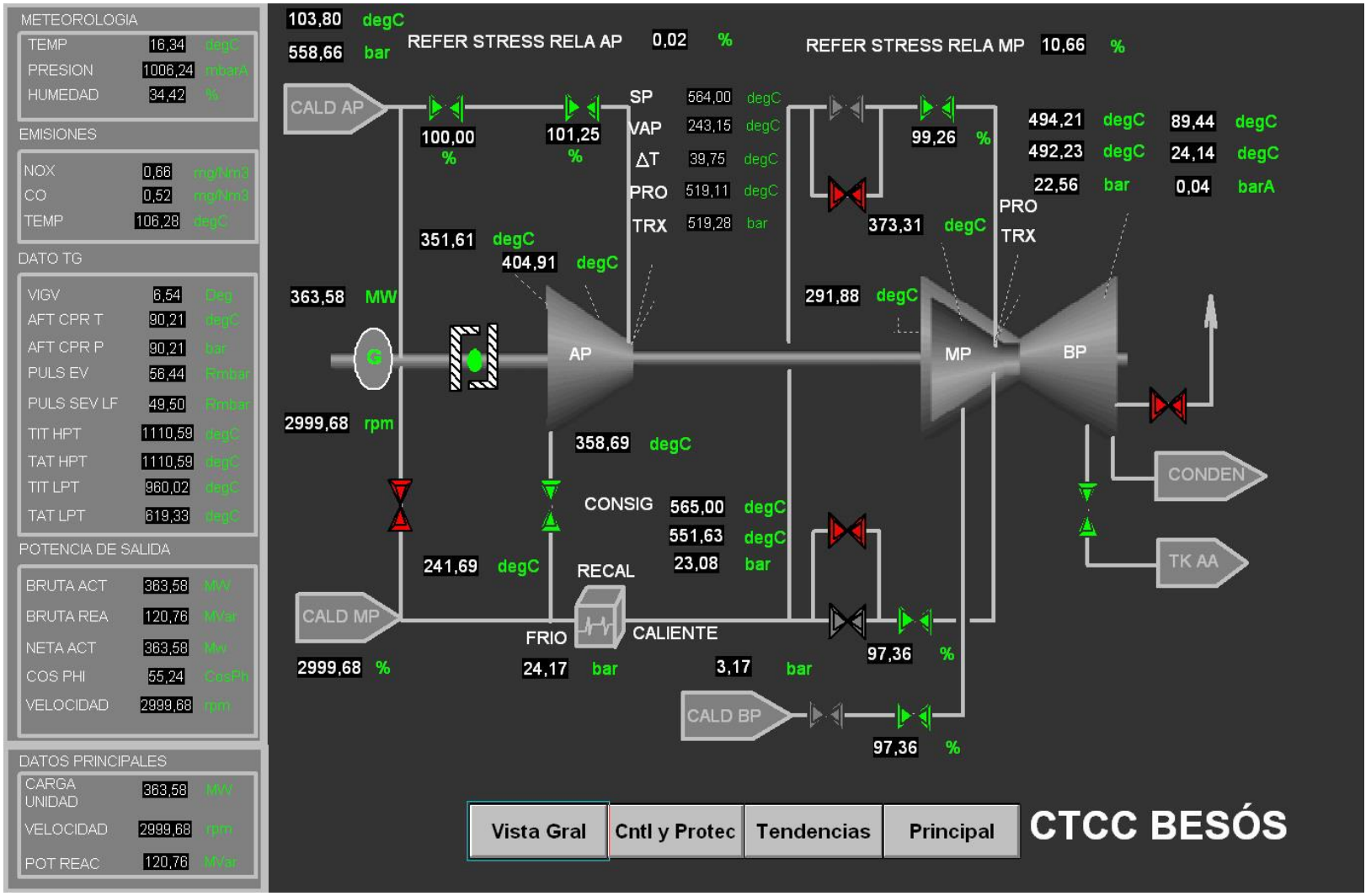
- Production Reports
- Combustible Report
- Maintenance Report
- Motors Report
- Temperatures Report
- Starts and Stops Report
- Chemist Report



PB Examples: Fossil Power Plant



PB Examples: Combined Cycle Power Plant



WWW for the Intranet

- Based on Internet Application Server and ActiveView
- Whole displays from PB have been converted to web pages
- MS Internet Information Server and ABB web application serve the data from a centralized way with small code and reused solution for each plant

Video

- CMD operation

Conclusion

- SIP Project means the origin and the basis for some other projects arround the power plants.
  - Emissions Control
  - Maintainance
  - Process Optimization
- “The key of this project is to make possible the information from the source to the decision maker just in some seconds instead of days or months as before due to different systems and functionalities”.


ABB