openKONSEQUENZ

Architecture and Quality Standards for the Joint Development of Modular Open Source Software for Power Grid Distribution Management Systems (DMS)

What is openKONSEQUENZ?

Who:

A group of grid operators (supplying ~20m customers), software vendors, service providers and researchers.

Why:

- Complexity of existing systems grown in decades
- Costs due to system complexity and dependence on few manufacturers
- Quality does not meet recently increased regulatory standards
- Time requirements for feature updates are shorter than ever

How:

Develop new functionalities as external DMS modules using common agile open source development processes, and leveraging common architecture standards, quality standards, and GUI style-guides.

Quality Standards for Modules

- Common project and module classification
- Common quality assurance methodology

Code Quality

- Common coding guidelines
- unit tests and coverage
- configuration management
- automated build and testing

Design Quality

- Documentation of quality requirements and architecture design of modules – joint review
- Continuous reporting of common quality KPIs
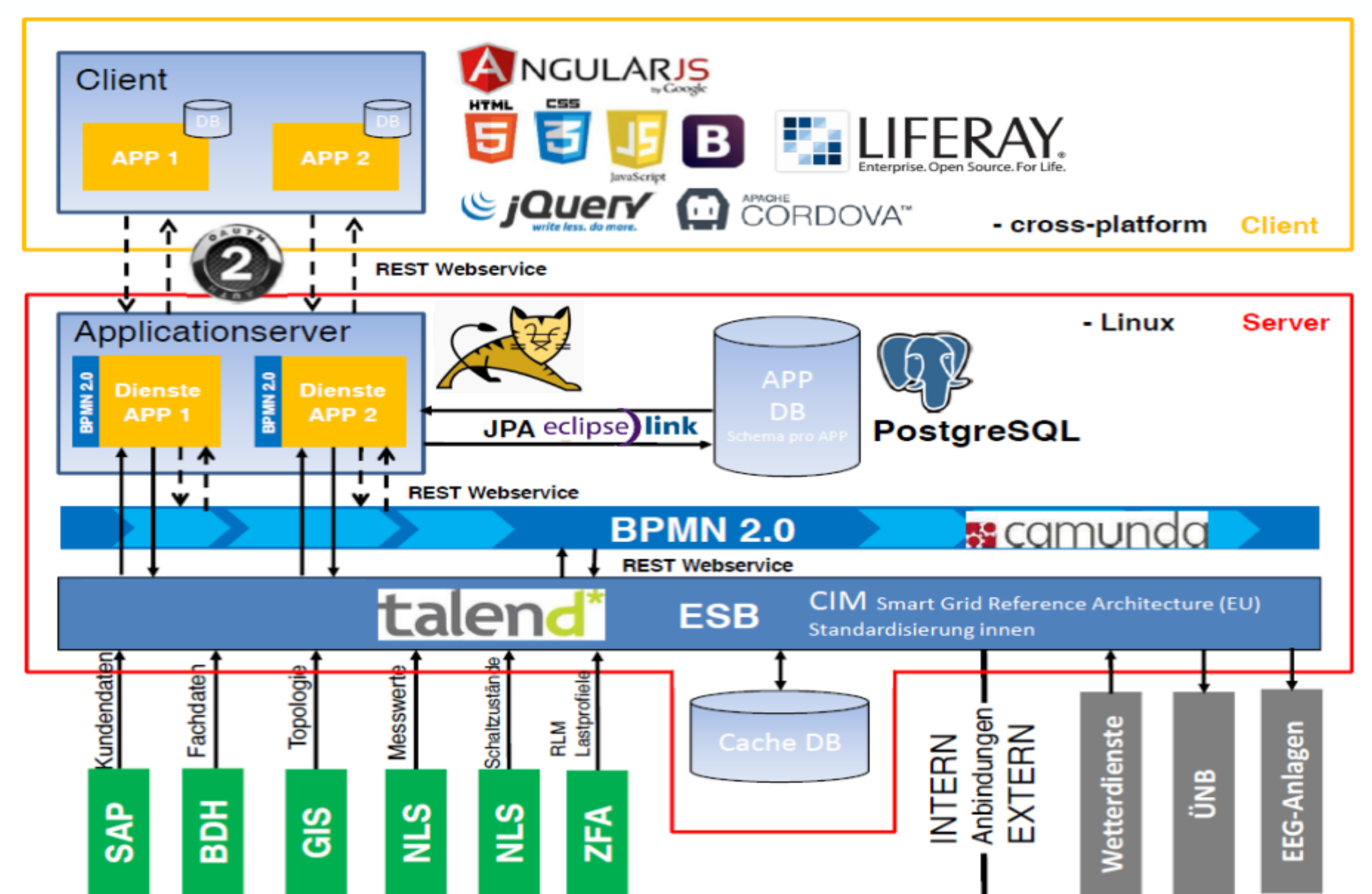- Verification with mock-ups

Product Quality

- automated QA on stageing platforms

- Common development setup / tools

Architecture Standards for Modules

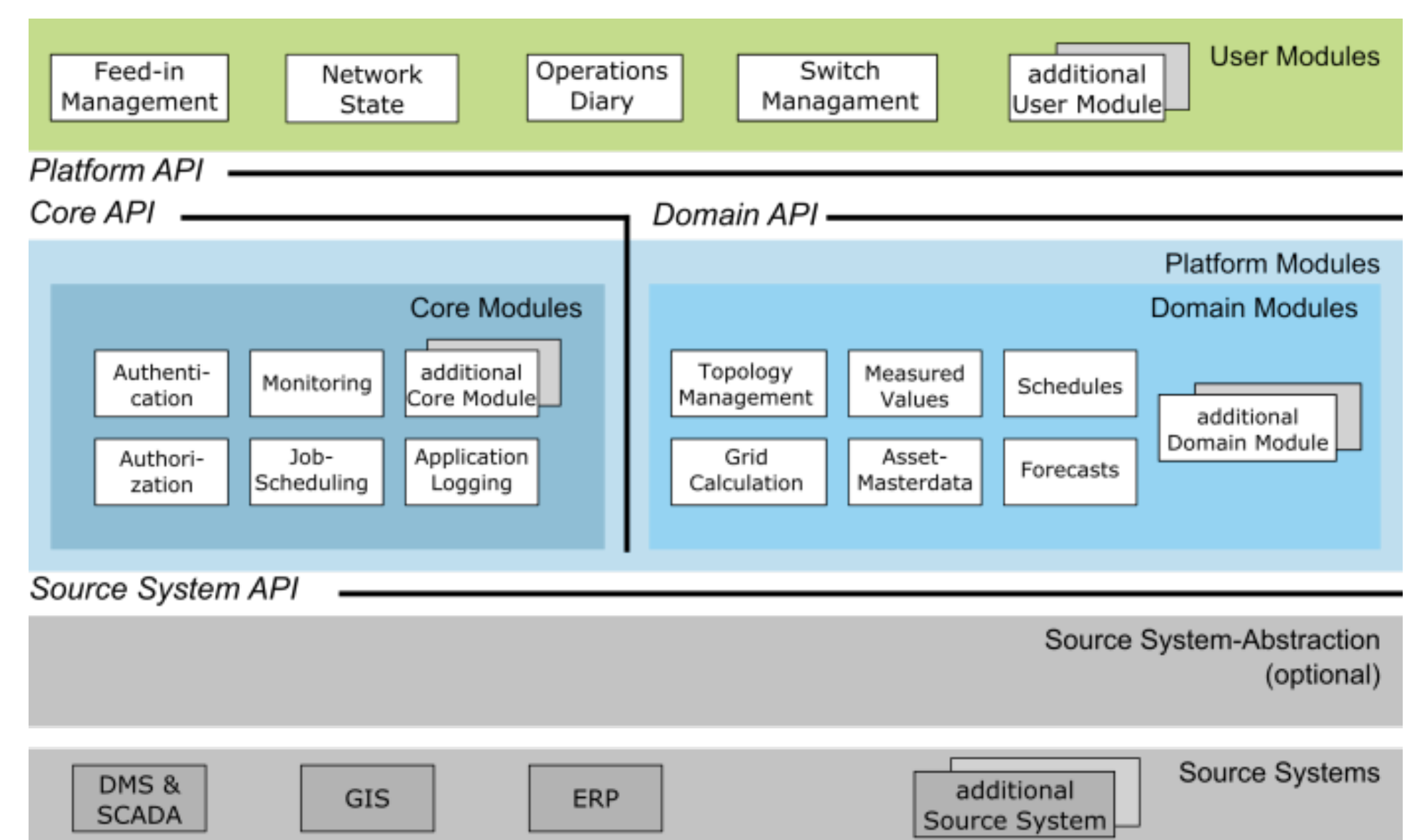### Technological Architecture Stack:

Reference Platform as common basis for different environments:

- Development
- Branch integration
- Quality assurance
- Demonstration
- Customer/Productive

Standardized Interfaces based on CIM (IEC 61970, IEC 61968, IEC 62325)

Platform Services for common core modules and electrical domain modules

- Common terminology and interdependencies

http://www.openKONSEQUENZ.de