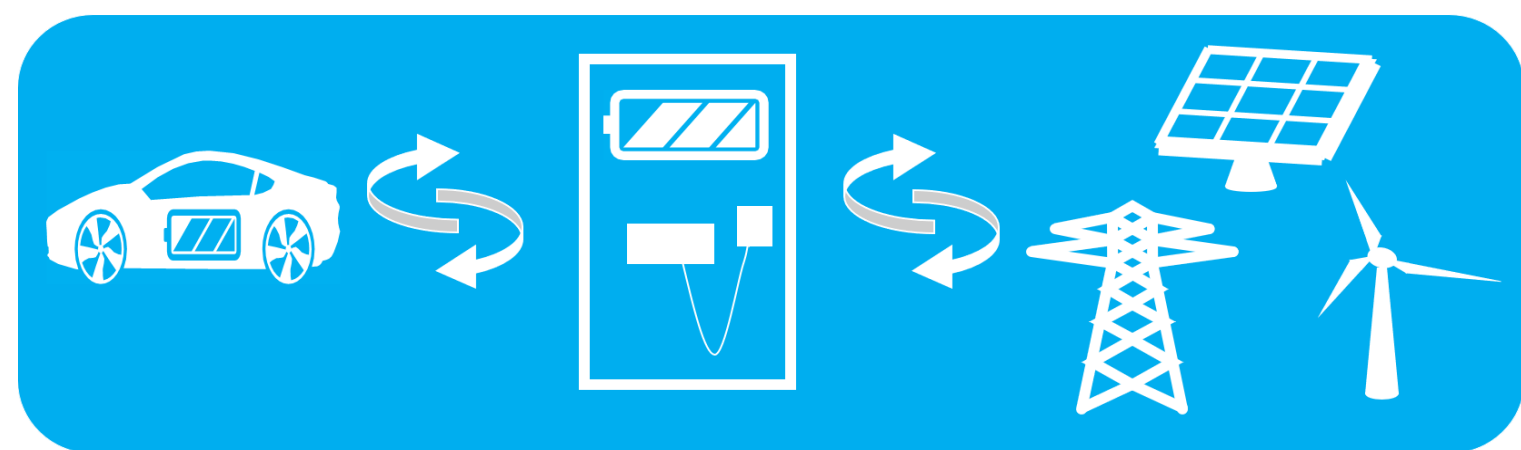


### Motivation

- > **Interoperability** is the ability of two or more systems to exchange information
- > **One of the key problems** in the system integration of smart grid technologies is the currently insufficient interoperability of smart grid components and solutions
- > **Interoperability Testing** supports identifying issues, increase awareness and improve correct standard usage

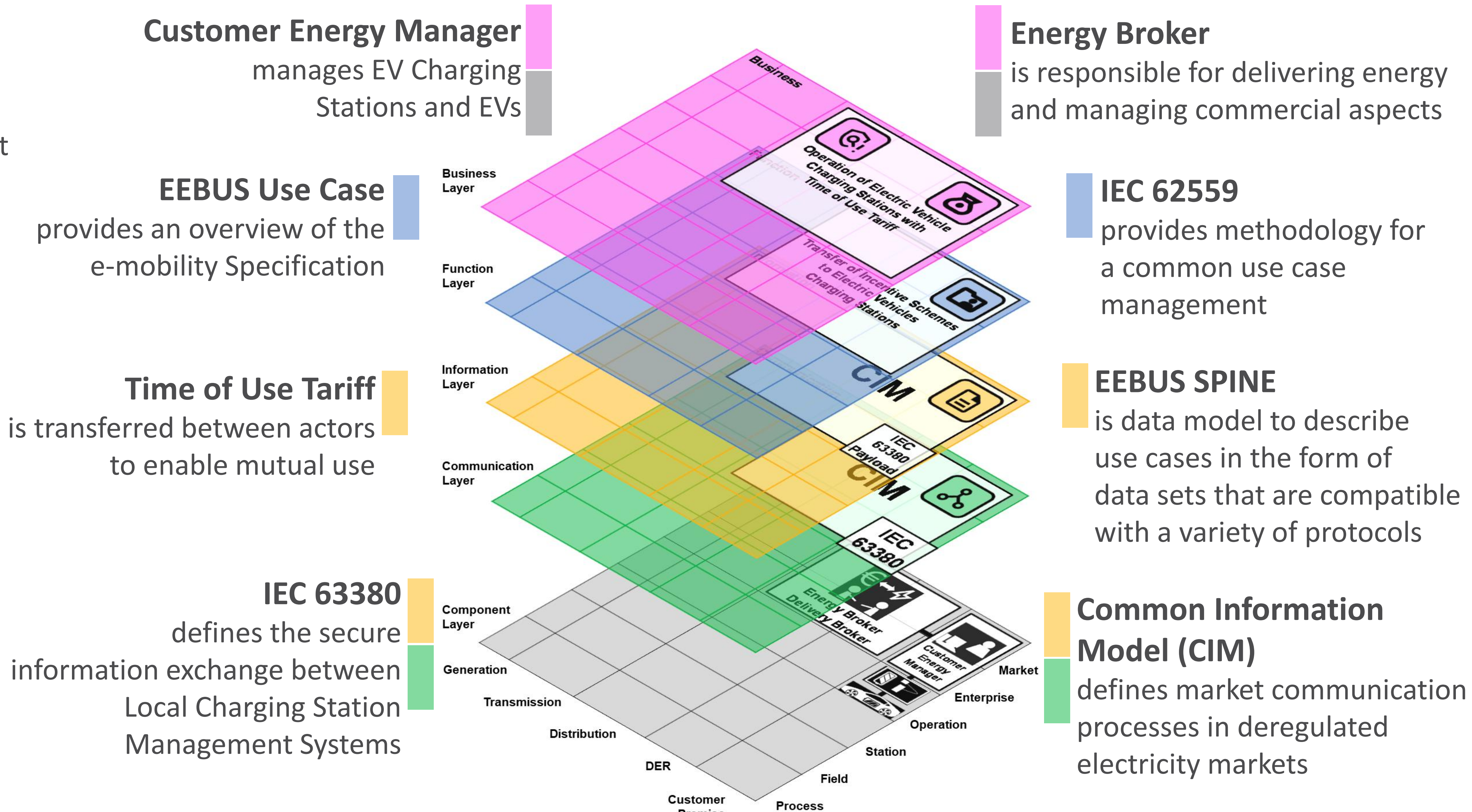


#### Goal of InterOpEnergy

Establish Interoperability Testing in the Energy Sector based on two use cases:

- > Time of Use Tariff for EV Charging
- > CGMES Data Exchange

### Use Case: Time of Use Tariff with EV Charging



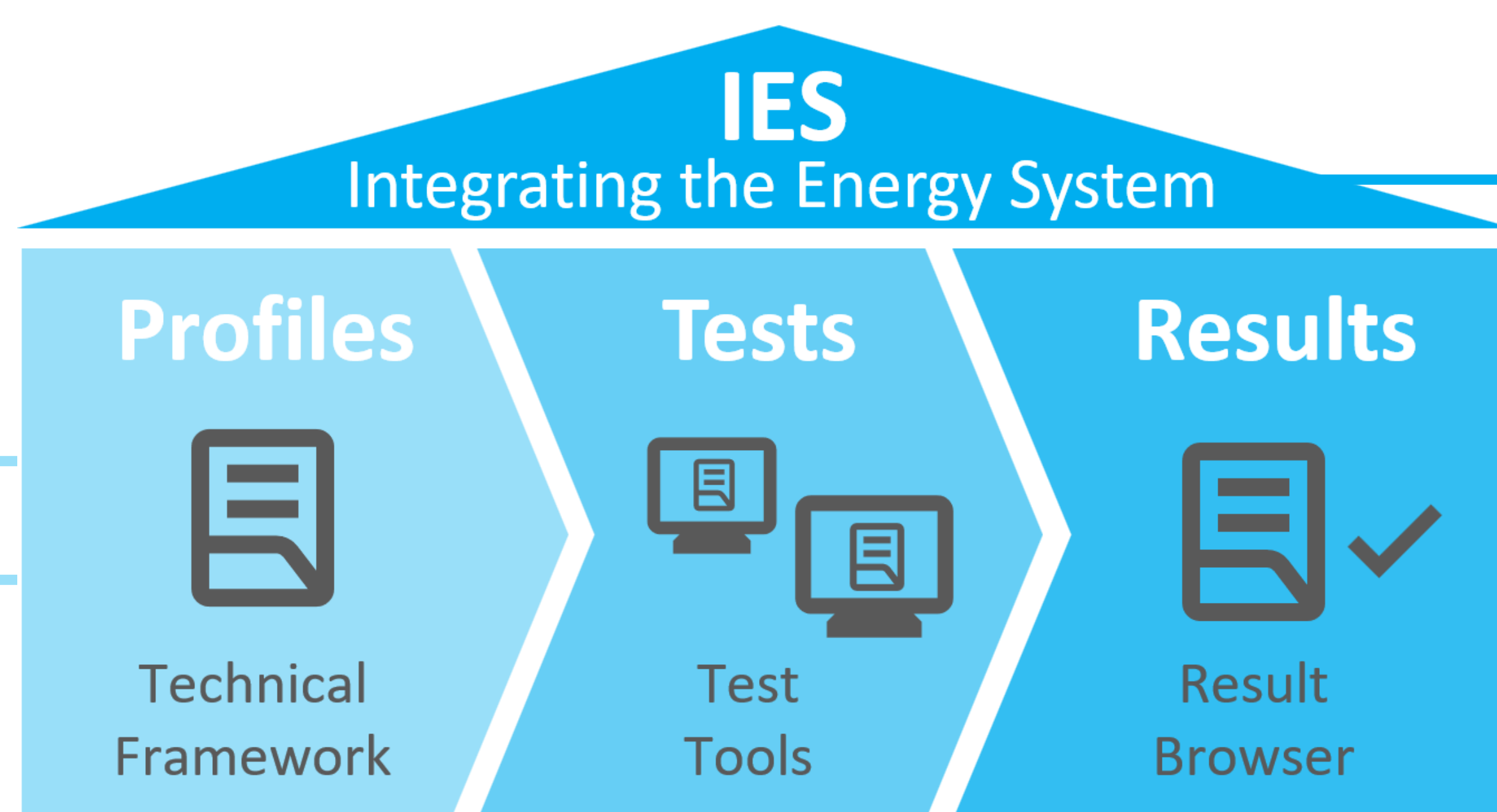
### Interoperability Testing with IES Approach

#### IES Technical Framework Template

- > It is based on SGAM
- > It defines how interoperability is to be implemented following a Top-Down Business Logic

#### Integration Profile

- > provides informative descriptions of the functions
- > provides normative specifications for data exchange with existing standards



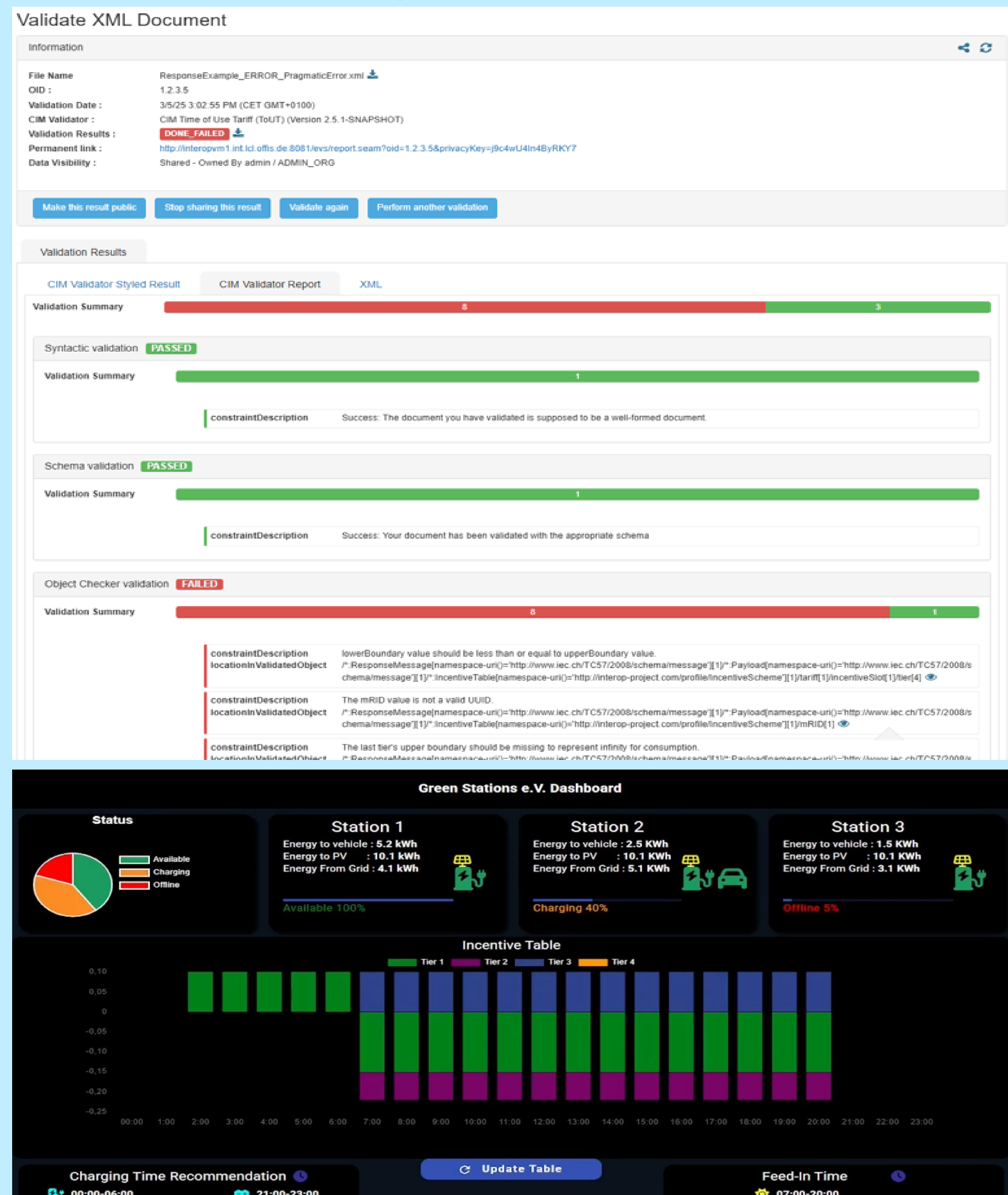
#### IES Cookbook

is a practical guide to test interoperability of integration profile

Sell



#### IHE Gazelle Testing Tool and Example Dashboard



#### AI-based Test Cases

- > LLMs help participants to generate a larger number of test cases
- > They also help standardise the process of documenting and formatting test cases

#### Data Space

- > The Data Space Connector is a fundamental intermediary component within a data space
- > It enables secure, compliant and interoperable data exchange between data providers and consumers

#### Asset Administration Shell (AAS)

- > AAS is a standardised digital representation of assets
- > It is the cornerstone of interoperability in Industry 4.0
- > It can provide the digital basis for FAIR Data Space Connector

### Join Our Upcoming Testing Events

- > Optimise use case through test cases, e.g., Validation of the Summer/Winter Time changeover
- > Gain recognition as a successful participant and share experiences with professionals from other domains
- > Ensure products continue to meet the growing interoperability requirements driven by real-world challenges
- > **Contact us to participate on our upcoming test events!**

