ETSI IoT Week 2022

Demonstrate SAREF-based Semantic Interoperability in action

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H2020 Interconnect Project

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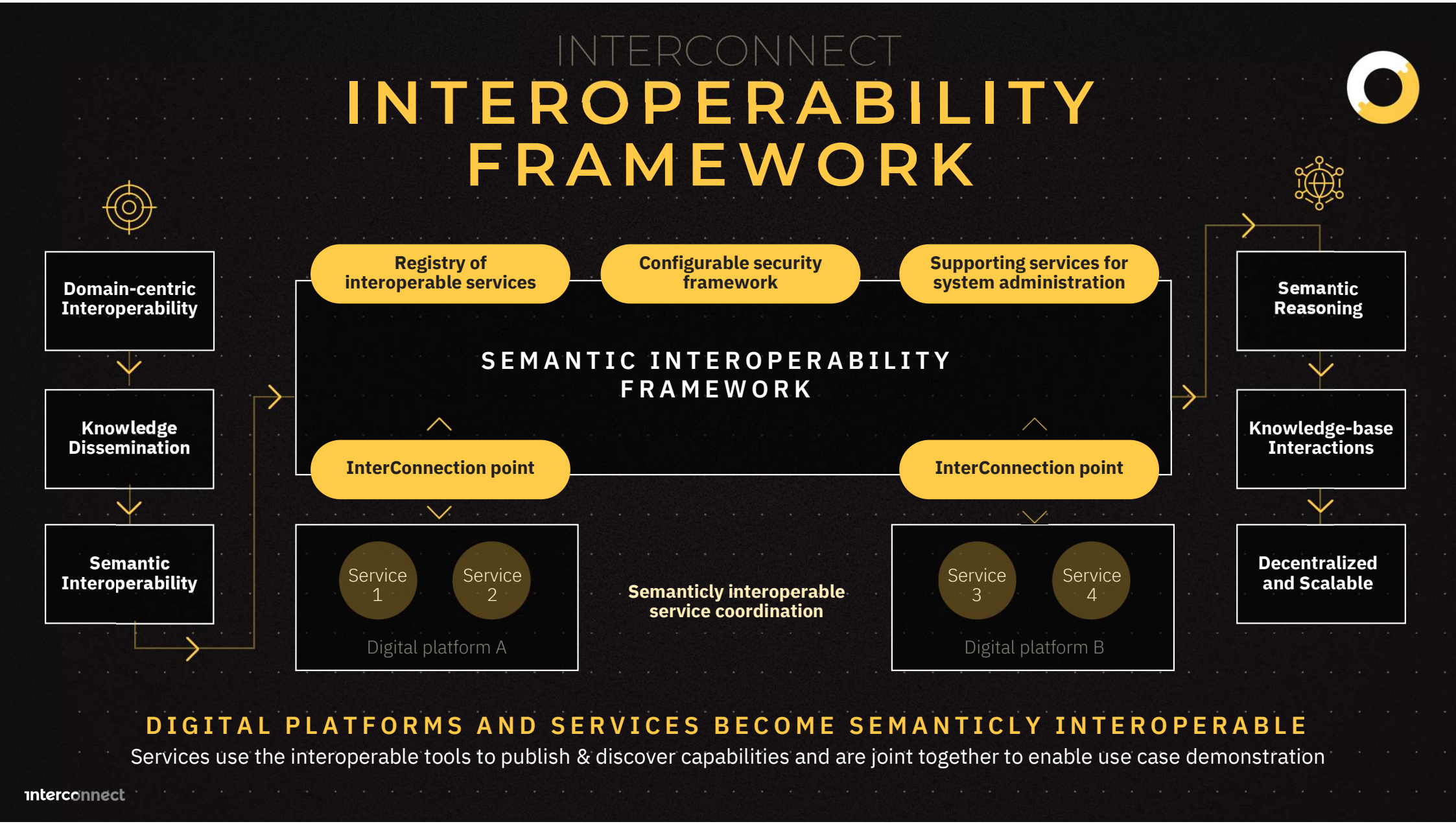
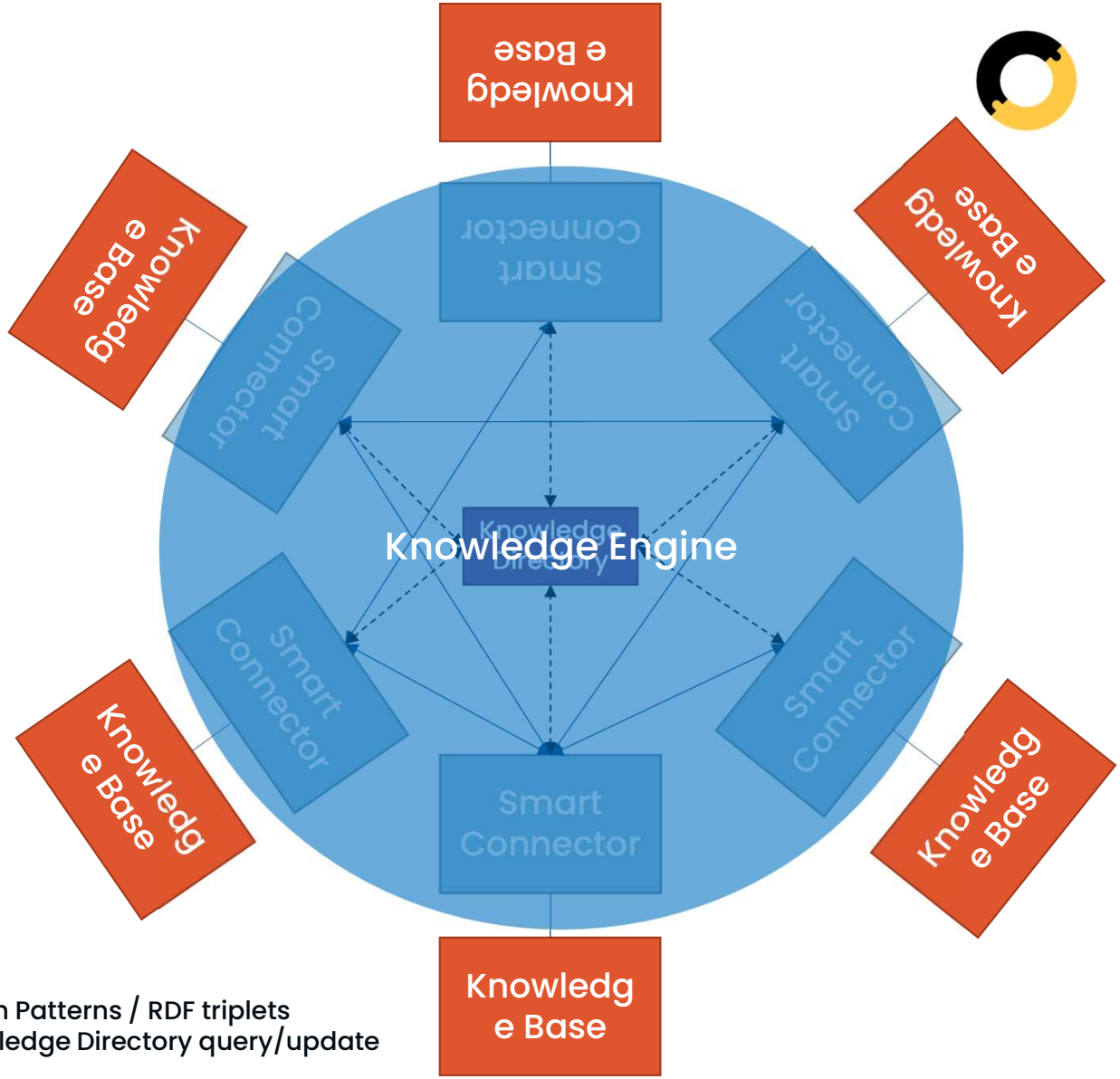

INTERCONNECT
INTEROPERABILITY FRAMEWORK
Domain-centric Interoperability
Knowledge Dissemination
Semantic Interoperability
Registry of interoperable services
Configurable security framework
Supporting services for system administration
SEMANTIC INTEROPERABILITY FRAMEWORK
InterConnection point
InterConnection point
Service 1
Service 2
Digital platform A
Semantic service coordination
Service 3
Service 4
Digital platform B
Semantic Reasoning
Knowledge-base Interactions
Decentralized and Scalable
DIGITAL PLATFORMS AND SERVICES BECOME SEMANTICLY INTEROPERABLE
Services use the interoperable tools to publish & discover capabilities and are joint together to enable use case demonstration
interconnect

The Knowledge Engine

- The Knowledge Engine is composed out of Smart Connectors and the Knowledge Directory
- The Knowledge Base is your application
- Each Knowledge Base has its own Smart Connector
- The Smart Connector is a generic piece of software, that facilitates communication and reasoning



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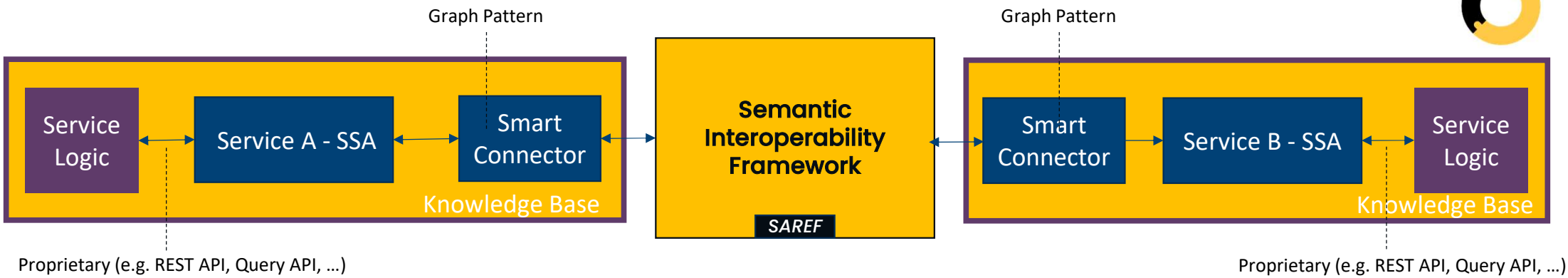
Knowledge Dissemination



ASK

POST

```
?f rdf:type ic-fc:PointForecast .
?f saref:hasTime ?sd .
?sd rdf:type time:Interval .
?sd saref:hasBeginning ?bsd .
?bsd time:inXSDDateTimeStamp ?start_date .
?f saref:hasTime ?ed .
?ed rdf:type time:Interval .
?ed saref:hasEnd ?eed .
?eed time:inXSDDateTimeStamp ?end_date .
?f ic-data:hasDataPoint ?hdp .
?hdp rdf:type ic-data:TimeSeries .
?hdp ic-data:hasTopologicalAssociation ?installation_code .
?installation_code rdf:type saref:device .
```

ANSWER

REACT

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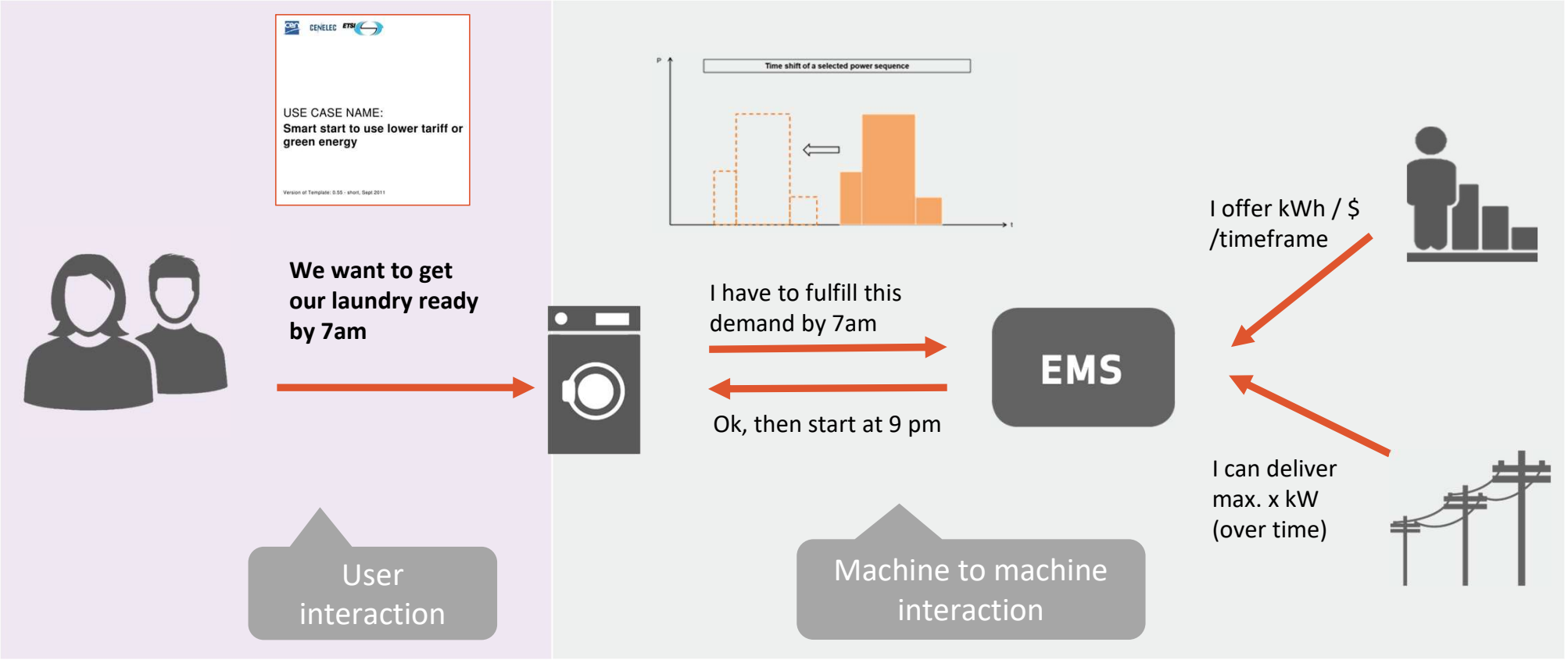
Use case: users allow smart appliances to offer flexibility managed by an Energy Management System



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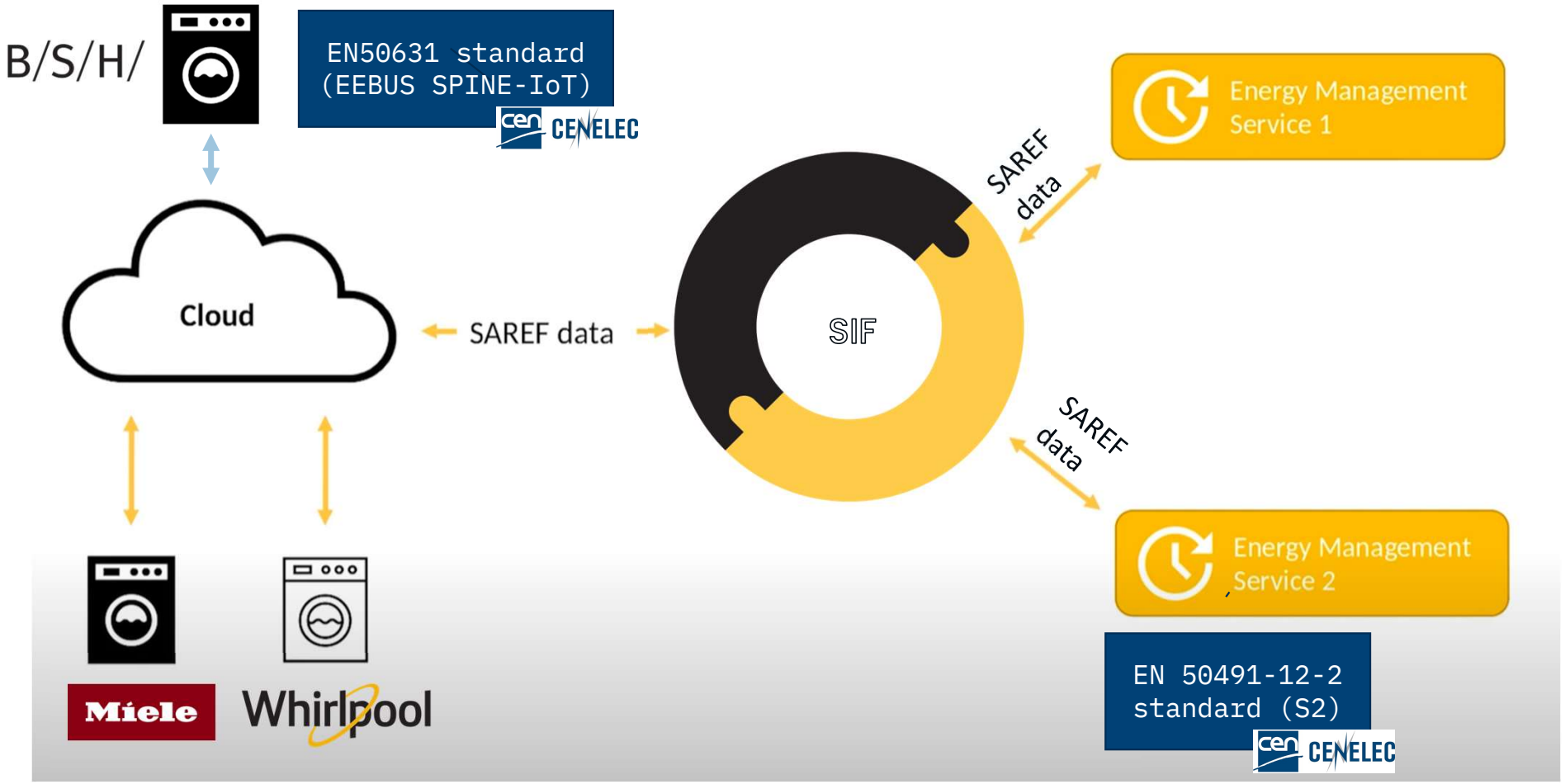
Plug & play Energy Management Service