

STAKEHOLDERS DAY CONFERENCE

NEW DELHI, INDIA

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 Research & Innovation Park,
IIT Delhi, New Delhi and online



Session 2B: International Perspective

12 February 2025

Standardizing Smart Lifts: The transition to IoT

by

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Smart Lifts IoT System

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- What are Smart Lifts
- Scope of the standard
- Why is it of interest?
- The recipe
- The timeline
- A few words on oneM2M
- The PoC Project

Smart Lifts IoT Systems

A Glimpse into the Smart Lifts EcoSystem



Communication networks



Control Rooms (remote tests, predictive maintenance, etc.)



Augmented reality for technicians and users



Building Managers



Smart Building

Smart City



Intelligent services for users

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Whose Business is it?

People of the trade

- A few big companies, of course, we all know some of their names
- A surprisingly large number of SMEs, operating mainly in maintenance but also, in areas such as design and construction of lifts, and manufacturing of control systems and telemetry devices (what is now called “the edge” in IoT)

And... users!

- Building managers and, in certain cases, managers on an even larger scale, up to the smart city level
- Simple users, like “just us”
- But also, users with special needs, e.g.,
 - impaired people
 - fire fighters (both in case of emergency and as controllers)
 - railway station managers (who must ensure everything is operating correctly before allowing people into the premises)

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Scope of ETSI TS 103 735

- Smart Lifts IoT devices at the EDGE
- Integration of administrative data management and alarm management systems
- Scalable cloud service with oneM2M:
from local company cloud, to consortia and association clouds, to cloud services providers (oneM2M compliant)
- Integration of non-standard solutions and platforms via gateway interworking
- Adding novel features and capabilities by augmentation of sensors
(e.g. addition of earthquake detectors)
- (ETSI deliverables are freely downloadable at ETSI website: www.etsi.org)

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Why is this important, or even interesting?

Because it shows that:

- Useful standards, under proper circumstances, can be developed quickly.
This is particularly true in the case of (I)IoT, as we shall see.
- SMEs can take the lead in developing modern standards, (and big companies can even appreciate and follow)
- There is a recipe for obtaining these results.
Of course, this recipe calls for the right ingredients, and we are going to disclose some of them right now

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Key Ingredients, Generally Speaking

- People that know well:
 - the requirements of their business sector ("vertical")
 - the best practices that are in use
 - the technical aspects of their trade
 - it is NOT necessary that they are big experts in other areas, like data communications or IoT:
this knowledge is more horizontal and can be contributed
- A standardisation context that is open to rapid development is needed to drive the process to success
- "Something" that can be leveraged,
 - so that the team can focus on the specific aspects of the vertical business under consideration,
 - while still keeping the standard able to follow the evolution of technology without impacting directly the specific document

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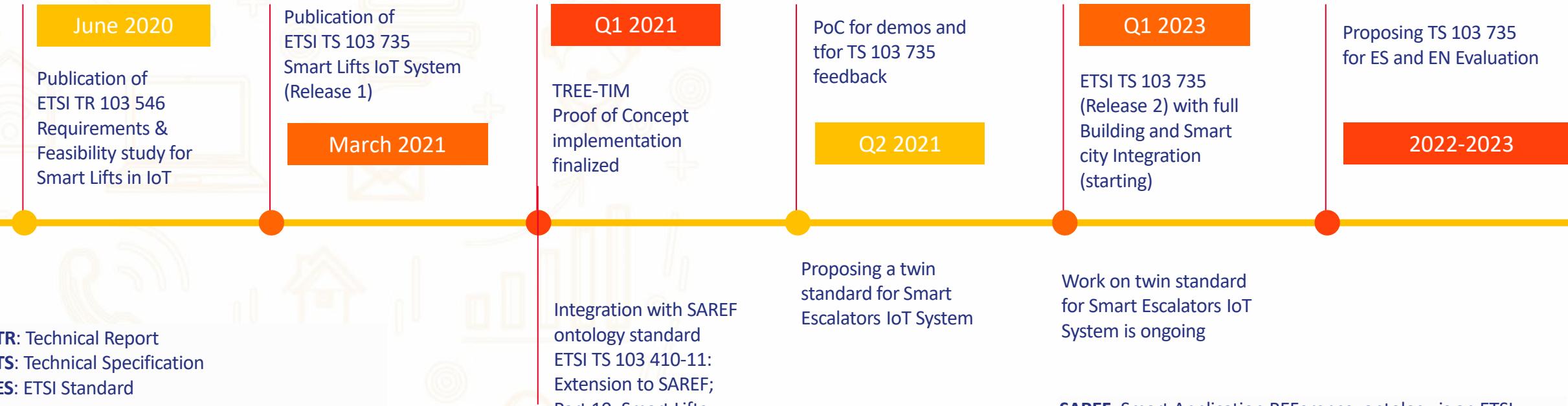
Key Ingredients, in the Case at Hand (ETSI TS 103 735)

- Experts from **EFESME** (European Federation for Elevator Small and Medium-sized Enterprises) and federated associations, including **TRE-ENGINE**
- ETSI TC **SmartM2M**, the TC at ETSI where historically most IoT standardization has been done
- **oneM2M** the global partnership project for IoT standardization
- Plus, a pinch of luck (happened at **SBS**)

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Standardization and Normative Timeline

- Fast standardization by leveraging oneM2M as the foundation allows focalizing the development on the lift specific aspects!!!



ETSI deliverables are freely downloadable at
ETSI website: www.etsi.org

SAREF: Smart Application REference ontology is an ETSI Standard developed to support the EU DG Connect initiative for semantic interoperability in IoT
website: saref.etsi.org

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Standardization and Normative Timeline

Recent update:

- In 2024-10-10, SAREF has become an EN (European Norm)
- The title is:
SmartM2M; SAREF Guidelines for IoT Semantic Interoperability; Develop, apply and evolve Smart Applications ontologies
- Available as ETSI EN 303 760
- The EN provides guidance on making IoT smart applications and products interoperable in compliance to the SAREF framework.
- This includes all extensions of SAREF, so it applies also to SAREF4LIFTS extension

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WHY use oneM2M For Smart Lifts?

oneM2M is a global Standard
- It is open and not controlled by a single private company!

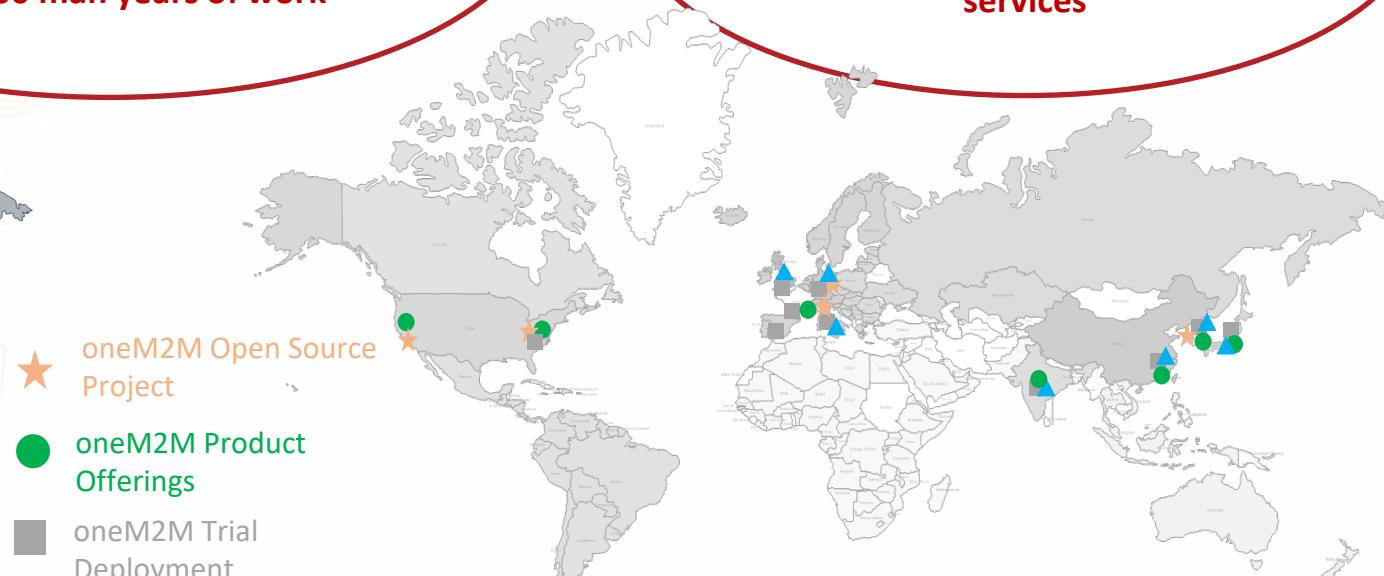
oneM2M is hugely stable and complete
It shares the innovation effort of hundreds of companies with more than 500 man years of work

Full Ecosystem:
open “de jure” specs – opensource-interoperability – certification-products and services



www.oneM2M.org

All documents and specifications are publicly available



<http://onem2m.org/membership/list-of-deployments>

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WHY use oneM2M For Smart Lifts?

- THE ONLY IOT STANDARD “DE JURE” dedicated to Ecosystems integration
- SECURE: MULTIPLE SECURITY LEVELS
- DYNAMIC PRIVACY AND ACCESS CONTROL
- EASY DB AND CLOUD INTEGRATION
- DATA MANAGEMENT - DATA HISTORIZATION - INFORMATION SHARING
- STORAGE AND EXPOSURE FOR
 - Historical data
 - Data search and aggregation
 - Context information
 - Dynamic data
 - Real time control and actuation
 - Field device management
 - Network technologies independence
- NATIVE DEVICE MANAGEMENT
- FLEXIBLE DEPLOYMENT adapting to the requirements of the different domains
- SCALABLE
- INTER-PROVIDER NATIVE SUPPORT
- AN INTERWORKING FRAMEWORK FOR
 - Legacy field and core server technologies
 - Other technologies
 - Proprietary solution

-> Not an additional solution, but a standard to integrate the different solutions

- SEMANTIC ENABLED TO SHARE INFORMATION, NOT ONLY DATA!!!
- INTERNET FRIENDLY FOR HUMAN INTERACTION
- SIMPLE



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The PoC Project, now being developed



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TL; DR

- IoT is NOT
about selecting a protocol... nor a platform... nor a cloud....
- IoT is
**sharing the information and its meaning
among
different systems,
different applications,
different business sectors !**

Thank You
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