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| ToR STF 602 (TC SmartM2M) |
| Version: 2.2 |
| Author: Enrico Scarrone – Date: 2020-08-05 |
| Last updated by: ETSI Secretariat – Date: 2020-10-08 |
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Terms of Reference –Specialist Task Force Proposal

STF 602 (TC SmartM2M)

SAREF: Industry adoption facilitation and oneM2M ontology alignment

Summary information

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| --- | --- | --- |
| Approval status | Approved by Ref. Body SmartM2M on 2020-09-02(doc ref: SmartM2M(20)000076r5)  | **YES** |
| Approved by Board#129 (22 September 2020) | **YES** |
| Reference Body | Ref. Body SmartM2M |
| ETSI Funding | **Maximum budget:  82 700 (71 000 + 11 700 travels)  EUR** |
| Minimum of 4 ETSI Members Support | **YES** |
| Time scale | **From** | 2021-01-04 |
| **To** | 2022-08-09 |
| Work Items  | *List and date of the WI creation** *D1: DTS/SmartM2M-103410-11SRF4LIFT “SAREF4LIFT (D1)”*
* *D2: DTR/SmartM2M-103783 “SAREF: SDT interoperability and oneM2M base ontology alignment (D2)”*
* *D3: DMI/SmartM2M-123162 “SAREF and SDT interoperability and oneM2M base ontology alignment (D3)”*
* *D4: DTS/SmartM2M-103780 “SAREF: oneM2M usage guidelines (D4)”*

*approved on* 2 *September 2020 and* *WI references modifications approved by SmartM2M#55 on 17 September 2020* |
| Board priority | [ETSI STF funding criteria](https://portal.etsi.org/STF/STFs/Funding/ETSIbudget.aspx)

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| --- | --- |
| **Priority Criteria** |  |
| Maintenance of standards in mature domains |  |
| Innovation in mature domains |  |
| Emerging domains for ETSI | X |
| Horizontal activities (quality, security, etc.) |   |
| Societal good / environmental |  |

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Part I – STF Technical Proposal

# Rationale & Objectives

## Rationale

The work of this STF is a compendium of a set of related activities that support the resolution of emerging needs in the area of ontology standardization in ETSI.

1. **Extend the SAREF application domains** including a new normative extension for the smart lift domain in a context the sector stakeholders are already developing a full standard suite (ETSI TS 103 735 in TC SmartM2M) leveraging on the oneM2M system. The support of the SAREF experts in the STF will allow to also leverage the SAREF work to assure cross-sector semantic interoperability. It will be also a form of field test for the SAREF Specification framework and workflow using the SAREF Portal.
2. **Support the synergic use of SAREF and oneM2M** by;

-assuring a full alignment between SAREF and the oneM2M semantic support (in particular the equivalence of core SAREF and the oneM2M base ontology) and

-providing normative guidelines for the usage of SAREF over the oneM2M system, including the guidelines to assure interoperability with the oneM2M SDT (Smart Device Template) and the SAREF devices.

## Objectives of the work to be executed

This STF will span for one and a half year targeting first the SAREF Smart Lift extension (target 1H 2021) and the SAREF and oneM2M SDT interoperability. The full list of deliverables is provided in section 4.2 of this proposal. The full list of deliverables is provided in section 4.2 of this proposal.

The STF expert work will be directly supported by TC SmartM2M members integrating the providers competences with oneM2M know-how, to assure proper integration and contribution oneM2M, and with Smart Lifts know-how to assure the alignment with this vertical sector.

## Previous funded activities in the same domain

ETSI TC SmartM2M benefited of STF support in the SAREF wide area resulting in the successful development of several extensions and of the SAREF Portal https://sref.etsi.org. These STFs activities were partially financed by ETSI and partially the EC.

TC SmartM2M did not benefit of support of STFs on the specific areas of this proposal, in particular no STF support was received on the area of Smart Lift extension.

## Market impact

SAREF expected impact is well known in terms of development of the digital market and engagement in the ETSI standards of stakeholders from the different business domains. Cross-sector semantic interoperability is a key to assure the evolution of the IoT and the related services to human markets. This STF will expand directly these opportunities to the Smart Lift sector and will amplify the SAREF impact of the standardized ontology (SAREF) within the oneM2M context.

## Consequences if not agreed

SAREF and more in general ontologies are still a knowledge domain for experts, on the border between industry and university expertise. Without this STF this work would likely not be developed in ETSI, especially in the SAREF Smart Lift domain, despite the stakeholders’ interest.

More relevantly, we are in a moment of consolidation of the SAREF framework and workflow: ETSI has just published a new version of the SAREF standard suite and has just published the first version of the SAREF Portal. It is crucial to continue to support the exploitation of SAREF to the stakeholder’s market to assure a proper adoption of the ETSI standard ontology via the SAREF Portal.

# Relation with ETSI strategy and priorities

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| --- | --- |
| **Priority Criteria** | **Rationale** |
| Maintenance of standards in mature domains |  |
| Innovation in mature domains |  |
| Emerging domains for ETSI | XOntologies is still an emerging domain where ETSI still works to consolidate its leadership. The Smart Lift SAREF integration is a completely new emerging domain for ETSI  |
| Horizontal activities (quality, security, etc.) |  |
| Societal good / environmental |  |

# ETSI Members Support

|  |  |  |
| --- | --- | --- |
| **#** | **ETSI Member** | **Supporting delegate** |
| 1 | TNO | Laura Daniele |
| 2 | Facultad de Informática, Universidad Politécnica de Madrid | Raúl García-Castro |
| 3 | Telecom Italia S.p.A. | Enrico Scarrone |
| 4 | Huawei technologies Sweden AB | Francisco Da Silva |
| 5 | Institut Mines-Telecom | Maxime Lefrançois, Marc Girod Genet |
| 6 | SBS aisbl | Marco Cogliati |
| 7 | BMWi | Markus Maass |
| 8 | FBConsulting S.A.R.L. | Michelle Wetterwald |

# Deliverables

## Base documents

|  |  |  |
| --- | --- | --- |
| **Document** | **Title** | **Status** |
| ETSI TR 103 546 | SmartM2M; Requirements & Feasibility study for Smart Lifts in IoT | Published |
| ETSI TS 103 735  | SmartM2M; Smart Lifts IoT System | DraftApproval is foreseen end 2020, with formal publication in early 1Q 2021 |
| ETSI TS 103 264 | SmartM2M; Smart Applications;Reference Ontology and oneM2M MappingSee also <https://saref.etsi.org>  | Published  |
| ETSI TS 103 410 parts 1-10 | The entire SmartM2M SAREF extension suite for smart IoT:Energy: SAREF4ENER, Environment: SAREF4ENVI, Building; SAREF4BLDG, City: SAREF4CITYIndustry & manufacturing: SAREF4INMA Agriculture: SAREF4AGRI, Automotive SAREF4AUTO, E-Health and Ageing Well: SAREF4EHAW, Wearable; SAREF4WEAR,Water: SAREF4WATR .See also <https://saref.etsi.org> | Published |
| ETSI TS 103 548 | Guidelines for consolidating SAREF with new reference ontology patterns, based on the experience from the ITEA SEAS project.See also <https://saref.etsi.org> | Published |
| oneM2M TR-0045 | Developer Guide: Implementing Semantics | Published |
| oneM2M TS-0012 | oneM2M Base Ontology | Published |
| oneM2M TS-0030 | Ontology based Interworking | Published |
| oneM2M TS-0002 | Requirements | Published |
| oneM2M TS-0034 | Semantic Support | Published |
| oneM2M TR-0001 | Use cases | Published |
| oneM2M TS-0023 | SDT based Information Model and Mapping for Vertical Industries | DraftApproval is foreseen end 2020, with formal publication in early 1Q 2021 |

## New deliverables

|  |  |  |  |
| --- | --- | --- | --- |
| **Deliv.** | **Work Item code****Standard number** | **Working title****Scope** | **Expected date for publication/completion** |
| D1 | DTS/SmartM2M-103410-11SRF4LIFT (TS 103 410-11) | **Working title:** SAREF4LIFT**Scope:** Provide a new SAREF extension in the context of Smart Lifts  | 2021/06/29 |
| D2 | DTR/SmartM2M-103783 (TR 103 783) | **Working title**: SAREF: SDT interoperability and oneM2M base ontology alignment (D2)**Scope:** Assure full alignment of SAREF and the oneM2M base ontology and provide guidelines about how devices adopting the oneM2M SDT (Smart Device Template) informational model can interoperate seamlessly with oneM2M devices and systems adopting SAREF and vice versa.The SDT SAREF interworking and a potential update of oneM2M base ontology will be contributed to oneM2M and documented in D3 (DMI/SMARTM2M-123162), the guidelines for the use of SAREF on oneM2M will be included in D4 (DTS/SMARTM2M-103780). | 2022/04/26 |
| D3 | DMI/SmartM2M-123162 | **Working title:** SAREF and SDT interoperability and oneM2M base ontology alignment (D3)**Scope:** This Miscellaneous Work Item will collect all the discussions held with oneM2M and all the oneM2M submitted contributions. | 2022/04/29**Completion** of miscellaneous work item |
| D4 | DTS/SmartM2M-103780 (TS 103 780) | **Working title:** SAREF: oneM2M usage guidelines (D4)***Scope:*** *provide guidelines for the usage of SAREF over oneM2M (also including the SDT interoperability) for vertical industry sectors.* | 2022/08/09 |

# Maximum budget

## Task summary/Manpower Budget

The estimate of the manpower includes the cost for travels which are necessary to attend the working session.

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| **Task short description** | Budget (EUR) |
|
| T1- Management | 6 000 |
| T2 -SAREF for Smart Lifts | 20 000 |
| T3- SAREF and oneM2M SDT interoperability | 45 000 |
| **TOTAL** |  71 000 |

## Travel budget

Travel cost for working sessions will be included in the contract compensation (manpower cost). Presentation of results to the reference TB and other TBs will be reimbursed as real cost from the travel budget.

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| **Expected travels** | **Cost estimate** |
| Reference TB meetings (4 travels) | 2 800 € |
| Other ETSI TB / stakeholders’ meetings (2 travels) | 1 400 € |
| OneM2M (STF results contribution) (4 travels) | 7 500 € |
| **Total cost** | **11 700 €** |

## Other budget line

Not applicable.

Part II – Details on STF Technical Proposal

# Tasks, Technical Bodies and other stakeholders

## Organization of the work

The work is developed in 2 main technical activities in corresponding technical tasks and one management task to coordinate the overall work:

* T1 - Management
* T2 - SAREF for Smart Lifts
* T3 - SAREF and oneM2M SDT interoperability

These activities will start sequentially with overlap as described in the schedule.

The work will benefit of the collaboration and voluntary contribution of the TC SmartM2M delegates expert in the Smart Lift and oneM2M domains, to integrate the SAREF and ontologies expertise of the providers.

It is anticipated that most of the work will be performed as drafting work remotely and electronically. Virtual meetings will be organized periodically for project management. Furthermore, additional face-to-face working sessions will be organized (Covid-19 permits), especially for clarification purposes about the alignment of the contributions and coordination of the technical results.

This STF should be performed under the guidance of TC SmartM2M, in liaison with oneM2M, and other groups as required. In particular frequent interaction and significative contribution to oneM2M are foreseen due to the nature of the work (primarily Task 3 and 2).

The STF will take benefit of a Steering Group that is composed by the TC SmartM2M attendees, with the exception of the STF experts, but including the STF leader, and will meet during the regular TC SmartM2M meetings.

The Steering Group will correspond to the regular TC SmartM2M meetings (4 per year)

## Tasks for which the STF support is necessary

SAREF and more in general ontologies are still a knowledge domain for experts, on the border between industry and university expertise. Without this STF this work would likely not be developed in ETSI, especially in the SAREF Smart Lift domain, despite the stakeholders’ interest. All the tasks will be impacted.

More relevantly, we are in a moment of consolidation of the SAREF framework and workflow: ETSI has just published a new version of the SAREF standard suite and has just published the first version of the SAREF Portal https://saref.etsi.org. It is crucial to continue to support the exploitation of SAREF to the stakeholder’s market to assure a proper adoption of the ETSI standard ontology via the SAREF Portal.

## Other interested ETSI Technical Bodies

oneM2M will be directly engaged with a close collaboration (liaisons, contributions, joint meetings). Potentially all the others ETSI groups impacted by SAREF may be engaged as needed ( e.g. TC SmartBAN, EP eHEALTH, ISG CIM, TC ATTM, TC ITS, etc).

## Other stakeholders

Smart Lift industry sector associations, CEN TC 10, AIOTI, ETSI/CEN/CENELEC coordination groups on Smart Metering, Smart Energy Grid and Smart Manufacturing.

Part III: Execution of Work

# Work plan, time scale and resources

## Task description

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| **Task #1** | **Project Management and coordination with other organizations** |
| **Objectives** | Provide appropriate development of the work in term of quality and timely delivery to ETSI TC SmartM2M. |
| **Input** | ETSI secretariat for STF management, TC SmartM2M to steer, review and approve the technical work, relations with other organizations inside / outside of ETSI, as described in section 6. |
| **Output** | STF progress reports, reports to TC SmartM2M (which is also the Steering Group), management of the STF activities and priorities, quality review. |
| **Interactions** | ETSI secretariat, TC SmartM2M, oneM2M, W3C, other relevant groups that may be engaged during the development of the work (TC SmartBAN, EP eHEALTH, ISG CIM). |
| **Resources required** | * STF management skills;
* Technical management skills and expertise in STF;
* Good knowledge of SAREF and oneM2M ontology related specifications.
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| **Task 2** | **SAREF for Smart Lifts** |
| **Objectives** | Develop a new SAREF extension for the Lift sector on the basis of the related TR finalized in spring 2020 and the corresponding TS whose finalization is currently foreseen at end 2020. It will also test the portal <https://saref.etsi.org> with respect to a new vertical sector presenting a consolidated IoT data model. |
| **Input** | See document listed in section 4.1, in particular:-ETSI TR 103 546: SmartM2M; Requirements & Feasibility study for Smart Lifts in IoT (published April 2020);-ETSI TS 103 735: (draft) SmartM2M; Smart Lifts IoT System (Approval is foreseen end -2020, with formal publication in early 1Q 2021);-oneM2M TS-0023: SDT based Information Model and Mapping for Vertical Industries. |
| **Output** | A new TS D1 (DTS/SmartM2M-103410-11SRF4LIFT) will be developed as part of the SAREF Suite to provide a new SAREF extension for the Smart Lifts sector. |
| **Interactions** | Smart Lift constructors and maintenance associations are already engaged in the SmartM2M Smart Lift works as rapporteur and contributors of the current specification which is under development. ETSI SmartM2M members will provide inputs and feedback to the SAREF experts to support the development of this new SAREF extension.Interactions with oneM2M are also foreseen to keep a full alignment with the corresponding Smart Lift work in oneM2M. Other relevant groups that may be engaged during the development of the work (CEN/TC 10, etc). |
| **Resources required** | 2 experts with skills on:* SAREF specification and SAREF portal;
* SAREF modelling.

The competence will be voluntary integrated by TC SmartM2M members skilled in the area of Smart Lifts to allow the STF expert to concentrate on the SAREF transposition of the input documents (the mentioned Smart Lift specifications). |

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| **Task 3** | **SAREF and oneM2M SDT interoperability** |
| **Objectives** | To assure full alignment of SAREF and the oneM2M base ontology and to provide guidelines about how devices adopting the oneM2M SDT (Smart Device Template) informational model can interoperate seamlessly with oneM2M devices and systems adopting SAREF and vice versa. Direct contribution and participation to oneM2M is foreseen to exploit the STF results, with the support of the SmartM2M members attending oneM2M. |
| **Input** | See document listed in section 4.1, in particular:-ETSI TS 103 264: SmartM2M; Smart Applications; Reference Ontology and oneM2M Mapping;-oneM2M TR-0045: Developer Guide: Implementing Semantics;-oneM2M TS-0012; oneM2M Base Ontology;-oneM2M TS-0030; Ontology based Interworking;-oneM2M TS-0002: Requirements;-oneM2M TS-0034: Semantic Support;-oneM2M TR-0001: Use cases;-oneM2M TS-0023: SDT based Information Model and Mapping for Vertical Industries. |
| **Output** | -**A new TR** D2 (DTR/SmartM2M-103783) providing analysis and proposals for :-SAREF and oneM2M Base ontology alignment with a potential update of the oneM2M base ontology (to be contributed in oneM2M and documented in D3 (DMI/SmartM2M-123162);-Guidelines for seamless interoperability between devices adopting SDT (Smart Device Template) and devices/systems adopting SAREF (input to D4 (DTS/SmartM2M-103780);-A Miscellaneous Work Item D3 (DMI/SmartM2M-123162) collecting all the discussions held with oneM2M and all the oneM2M submitted contributions;-**A new TS** D4 (DTS/SmartM2M-103780) providing guidelines for the usage of SAREF over oneM2M (also including the SDT interoperability) for vertical industry sectors. |
| **Interactions** | Interaction with oneM2M is foreseen to keep a full alignment of SAREF and oneM2M base ontology. Interaction with W3C in the context of the semantic web would be probably also required. |
| **Resources required** | 2-3 experts with skills in the areas of* SAREF specification;
* SAREF modelling;
* OneM2M base ontology;
* SDT;
* W3C semantic Web.

The experts’ competence will be voluntary integrated by TC SmartM2M members attending oneM2M to facilitate SDT (Smart Device Template) interoperability and Base ontology alignment. |

## Milestones

The **interim draft** status of work items used in Clauses 7.2 and 7.3 (Milestones and Task summary) corresponds to a draft status **between early draft (table of content) and stable draft.**

This status is not part of the ETSI official on-line work program work item schedule but is intended to be used in the STF related meeting minutes of the SmartM2M meetings to verify the progress of the STF deliverables:

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| --- | --- | --- |
| **1** | **Start of work** | Start of work |
| **2** | **Early draft** | Early draft |
|  | ***Interim*** | *Interim draft* |
| **4** | **Stable draft** | Stable draft |
| **6** | **Final draft for approval** | Final draft for approval |
| **8** | **TB approval** | TB approval |
| **8 A** | **Draft receipt by ETSI Secretariat** | Draft receipt by ETSI Secretariat |
| **12** | **Publication** | Publication |

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| Milestone | Description | Cut-Off Date |
| A | Tasks 1,2,3 started, D1 (DTS/SMARTM2M-103410-11SRF4LIFT) stable draft | 2021/03/15 |
| TC SmartM2M deliverables | D1 (DTS/SMARTM2M-103410-11SRF4LIFT) stable draft approved by TC SmartM2M |
| ETSI Deliverables | Initial Progress Report approved by TC SmartM2M |

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| Milestone | Description | Cut-Off Date |
| B | Task 1 ongoing, Task 2 completed, D1 (DTS/SMARTM2M-103410-11SRF4LIFT) Approved, D2 (DTR/SMARTM2M-103783) initial draft, D3 (DMI/SMARTM2M-123162) initial plan | 2021/05/15 |
| TC SmartM2M deliverables | Final D1 (DTS/SMARTM2M-103410-11SRF4LIFT) approved by TC SmartM2MD2 (DTR/SMARTM2M-103783) initial draft, D3 (DMI/SMARTM2M-123162) initial plan approved by TC SmartM2M |
| ETSI Deliverables | Interim Progress Report approved by TC SmartM2M |

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| Milestone | Description | Cut-Off Date |
| C | Task 1 ongoing, Tasks 3, in progress, D2 (DTR/SMARTM2M-103783) **Interim Draft,** D3 (DMI/SMARTM2M-123162) interim status | 2021/09/15 |
| TC SmartM2M deliverables | D2 (DTR/SMARTM2M-103783) **Interim Draft**, D3 (DMI/SMARTM2M-123162 interim status approved by TC SmartM2M |
| ETSI Deliverables | Interim Progress Report approved by TC SmartM2M |

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| --- | --- | --- |
| Milestone | Description | Cut-Off Date |
| D | Task 1 ongoing, Tasks 3 in progress, D4 (DTS/SMARTM2M-103780) initial draft, D2 (DTR/SMARTM2M-103783) stable draft, D3 (DMI/SMARTM2M-123162) stable status | 2021/12/15 |
| TC SmartM2M deliverables | D4 (DTS/SMARTM2M-103780) initial draft approved by TC SmartM2MD2 (DTR/SMARTM2M-103783) stable draft, D3 (DMI/SMARTM2M-123162) interim status  |
| ETSI Deliverables | Interim Progress Report approved by TC SmartM2M |

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| Milestone | Description | Cut-Off Date |
| E | Task 1 ongoing, Task 3 in progress, D4 (DTS/SMARTM2M-103780) stable draft, D2 (DTR/SMARTM2M-103783) final draft, D3 (DMI/SMARTM2M-123162) final status  | 2022/03/15 |
| TC SmartM2M deliverables | D4 (DTS/SMARTM2M-103780) stable draft accepted by TC SmartM2M,final draft D2 (DTR/SMARTM2M-103783) approved by TC SmartM2M, D3 (DMI/SMARTM2M-123162) final status (completion) approved by TC SmartM2M |
| ETSI Deliverables | Interim Progress Report approved by TC SmartM2M |

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| Milestone | Description | Cut-Off Date |
| F | Task 1 ongoing, Task 3 Completed. D4 (DTS/SMARTM2M-103780) final draft approved, final progress report approved by TC SmartM2M | 2022/06/30 |
| TC SmartM2M deliverables | Final draft D4 (DTS/SMARTM2M-103780) approved by TC SmartM2M |
| ETSI Deliverables | Final Progress Report approved by TC SmartM2M |

## Task summary

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| --- | --- | --- | --- |
| **Code** | **Task / Milestone**  | Target Date | Estimated Cost (EUR) |
| From | To |
| T1 | Management | 2021/01/04 | 2022/08/09 | 6 000 |
| T2 | SAREF for Smart Lifts | 2021/01/04 | 2021/05/15 | 20 000 |
| T3 | SAREF and oneM2M SDT interoperability | 2021/03/01 | 2022/06/30 | 45 000 |
|  | Start of work |  | 2021/01/04 |  |
| Milestone A | Tasks 1,2,3 started, D1 (DTS/SMARTM2M-103410-11SRF4LIFT) stable draft,Progress report #1 approved by TC SmartM2M by RC |  | 2021/03/15 |  |
| Milestone B | Task 1 ongoing, Task 2 completed startedD2 (DTR/SMARTM2M-103783) initial draft, D3 (DMI/SMARTM2M-123162) contribution available,D1 (DTS/SMARTM2M-103410-11SRF4LIFT) and Progress Report#2 approved by SmartM2M#58  |  | 2021/05/27 |  |
| Milestone C | Task 1 ongoing, Task 3 in progress,D1 (DTS/SMARTM2M-103410-11SRF4LIFT) publishedD2 (DTR/SMARTM2M-103783) interim draft, D3 (DMI/SMARTM2M-123162) contribution availableProgress Report#3 approved by SmartM2M#59  |  | 2021/09/15 |  |
| Milestone D | Task 1 ongoing, Task 3 in progress D2 (DTR/SMARTM2M-103783) stable draft, D3 (DMI/SMARTM2M-123162) contribution available D4 (DTS/SMARTM2M-103780) initial draft,Progress Report#4 approved by SmartM2M#60 |  | 2021/12/15 |  |
| Milestone E | Task 1 ongoing, Task 3 in progressD2 (DTR/SMARTM2M-103783) TC SmartM2M approved draft received by ETSI SecretariatD3 (DMI/SMARTM2M-123162) completed D4 (DTS/SMARTM2M-103780) stable draft,Progress Report#5 approved by SmartM2M#61 |  | 2022/03/15 |  |
| Milestone F | Task 1 ongoing, Task 3 completed, D2 (DTR/SMARTM2M-103783) published,D4 (DTS/SMARTM2M-103780) final draft and Final report approved by SmartM2M#62 |  | 2022/06/30 |  |
| Milestone G | Task1 completed, D4 (DTS/SMARTM2M-103780) publishedEnd of work, STF closed |  | 2022/08/09 |  |
|  | **71 000** |

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| **Task/ Mil.** | **J** | **F** | **M** | **A** | **M** | **J** | **J** | **A** | **S** | **O** | **N** | **D** |  | **J** | **F** | **M** | **A** | **M** | **J** | **J** | **A** |
| T1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| T3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MA |  |  | **A** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MB |  |  |  |  | **B** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MC |  |  |  |  |  |  |  |  | **C** |  |  |  |  |  |  |  |  |  |  |  |  |
| MD |  |  |  |  |  |  |  |  |  |  |  | **D** |  |  |  |  |  |  |  |  |  |
| ME |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | **E** |  |  |  |  |  |
| MF |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | **F** |  |  |
| MG |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | **G** |
| Draft SmartM2M meeting plan (only related to this STF) |  | Ad-hoc | Ord. |  | Ad-hoc | Ord. |  |  | Ord. |  | Ad-hoc | Ord. |  |  | Ad-hoc | Ord. |  | Ad-hoc | Ord. |  | End of work |

# Expertise required

## Team structure

The STF will consist of experts, which must be prepared to work in close cooperation to share the tasks under the guidance of the Steering Group (which is composed by the TC SmartM2M members).

One of the providers will act as STF Leader and will be responsible for the consolidation of the documentation, coordination of the STF activities and the provision of the required progress reports to TC SmartM2M that is also the Steering Group of this STF

The STF Leader as well as other providers must be able to perform the specific tasks defined in section 7.1.

The participation of a maximum of 3 providers is envisaged to ensure the following mix of competences:

|  |  |
| --- | --- |
| **Priority** | **Qualifications and competences** |
| High | SAREF, ontologies and related tools and specifications |
| medium | oneM2M Base ontology and SDT (Smart Device Template) models (it is foreseen help from members in this area to integrate the experts’ knowledge on ontologies and SAREF) |
| medium | Smart Lift industry and data models (it is foreseen voluntary contribution from members in this area to integrate the experts’ knowledge on ontologies and SAREF) |
| medium | W3C work on ontologies and semantic web |

Part IV: STF performance evaluation criteria

# Performance Indicators

In the course of the activity, the STF Leader will collect the relevant information, as necessary to measure the performance indicators. The result will be presented in the Final Report.

After the conclusion of the STF, the Reference Body Chairman shall report to the OCG/Board on the actual achievement of the performance indicators set in these ToRs.

The performance indicators must include qualitative and quantitative assessment of the following elements, as applicable:

|  |
| --- |
| **Select relevant Performance indicators applicable for these ToR (X)** |
| Contribution from ETSI Members to STF work |
| Direct financial contribution (co-funding) |  |
| Support to the STF work (e.g., provision of test–beds, organization of workshops, events) | X At least 2 events support in the Smart Lift Area |
| Steering Group meetings (number of meetings / participants / duration) | XAt least 5 |
| Number of delegates directly involved in the review of the deliverables | X at least 10 |
| Contributions/comments received from the Reference Bodies | X |
| Contributions/comments received from other Reference Bodies | X |
|  |  |
| **Contribution from the STF to ETSI work** |
| Contributions to Reference Body meetings (number of documents / meetings / participants) | XAt least 6 ordinary meetings plus ad-hoc ones as needed |
| Contributions to other Reference Bodies | XoneM2M and W3C |
| Presentations in workshops, conferences, stakeholder meetings | XSeveral in the area of IoT, Semantic & ontologies, Smart Lifts |
|  |  |
| **Liaison with other stakeholders** |
| Stakeholder participation in the project (category, business area) | XVertical elevator industry and standards |
| Cooperation with other standardization bodies | X oneM2M and W3C at least  |
| Potential interest of new members to join ETSI |  |
| Liaison to identify requirements and raise awareness on ETSI deliverables  |  |
| Comments received on drafts (e.g. on web site, mailing lists, etc.) | X |
|  |  |
| **Quality of deliverables** |
| Approval of deliverables according to schedule | X |
| Respect of time scale, with reference to start/end dates in the approved ToR | X |
| Comments from Quality review by Reference Body | X |
| Comments from Quality review by ETSI Secretariat |  |
|  |  |

Time recording

For reporting purposes, the STF experts shall fill in the time sheet provided by ETSI with the days spent for the performance of the services.

During the activity, the STF Leader shall collect the relevant information, as necessary to measure the performance indicators. The result will be presented in the Final Report.

# Document history

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Date** | **Author** | **Status** | **Comments** |
| 0.0 | 2020-08-05 | Enrico Scarrone | Draft | Initial version developed on the basis of the input from ad hoc calls and emails  |
| 0.1 | 2020-08-24 | Enrico Scarrone | Draft | Version submitted to the STF management  |
| 0.2 | 2020-08-27 | Enrico Scarrone | draft | Further Chairman revision after the meeting of the 25th of August 2020 |
| 0.3 | 2020-08-28 | Raul Garcia/UPM and Patrick Guillemin/ETSI | Draft | Comments and edits from RaulFirst review from Patrick  |
| 0.4 | 2020-08-27 | Enrico Scarrone | draft | Chairman completing the content and implementing the proposals and the comments suggested by Raul and Marc |
| 0.5 | 2020-09-02 | Enrico Scarrone | Approved | Version including comments edited during SmartM2M dedicated meeting held on 2nd September 2020 |
| 0.6 | 2020-09-03 |  Patrick Guillemin | Approved |  Added final NWI references + edits |
| 0.7 | 2020-09-03 | Enrico ScarronePatrick Guillemin | Approved | Merged of 2 parallel NWI references addition + editorial fixing |
| 0.8 | 2020-09-09 | ETSI Secretariat | Stable draft | Update before submission to Board |
| 0.9 | 2020-09-24 | Enrico Scarrone | Stable draft | Task 4 and 5 removed according to Board indications. Budget request reduced accordingly. Modifications reviewed by Technical Officer. |
| 1.0 | 2020-09-28 | ETSI Secretariat | Stable draft | Update before CL publication |
| 2.0 | 2020-10-05 | ETSI Technical Officer | Stable Draft | Update of WI references as decided in SmartM2M#55 and editorial corrections |
| 2.1 | 2020-10-07 | ETSI Secretariat | Board Approved | Update during IKOM |
| 2.2 | 2020-10-08 | ETSI Secretariat | Board Approved | Update before CL publication |