


Open API Program Charter (R19.0) - A Core Project Area Charter

* indicates that this field is required

Project Name*	Open API Program
IPR Mode*	RAND <div style="border: 1px solid #ccc; padding: 5px; display: inline-block;">  Explanations of each mode is available at http://www.tmforum.org/IPRPolicy/11525/home.html </div>
Project Start Date*	December 2018
Project End Date*	September 2019
Type of Project*	Development Project
Strategic Program	Agile Business & IT
Previous Project Charter	Open API Program Charter (R18.5) - A Core Project Area Charter
Project Workspace Link	Open API Project Home
Project Sponsor*	Laurent Leboucher
Project Team Lead*	Andreas Polz , Stephen Harrop
TM Forum Staff Support	Pierre Gauthier , George Glass , Derek Flexer , Henrique Rodrigues

1. Table of Contents

- 1. Table of Contents
- 2. Project Overview
 - Migration of machine readable artifacts to Apache 2.0 license mode in R18.0
- 3. User Stories
- 4. Dependencies
- 5. Participants
 - Role Descriptions & Responsibilities given in section 11
- 6. Project Workstreams and Deliverables
 - 6.01: API Design Guidelines
 - 6.02: Road mapped APIs - R19.0 P1s
 - 6.03: Road mapped APIs - R19.0 P2s
 - 6.04: Open API components
 - 6.05: API/SID mapping Task Force
 - 6.06: Driving API Adoption
 - 6.07: API Tooling and Automation Support
 - 6.08: SDO Collaborations
 - 6.09: Crowd-Sourced APIs
 - 6.10: API Mapping
 - 6.11: Joint work with the Digital Ecosystems Project
- 7. Member Validation and Feedback Approach
- 8. Project Tooling
- 9. Liaison Relationships
- 10. Charter History
- 11. Role Definition & Responsibilities
- 12. Legal Notice

2. Project Overview

Developing best practices and standards in certain fields greatly benefits from frequent joint work or exchange of live collaboration materials with other TM Forum projects.

To facilitate low-friction collaboration between such projects, this RAND Project Charter is a member of a larger "Core Project Area" which holds the RAND Project Charters; Framework (Fx), Open APIs (APIs) & Open Digital Architecture (ODA).

One of the most important sets of assets that the Forum provides to the industry is a set of standard interfaces that enable rapid, repeatable, and flexible integration among operations and management systems.

- Reduce full lifecycle costs of networks and services through use of well documented, consistent interfaces
- Integrate management systems with each other while minimizing cost and risk
- Reduce cycle time for deploying new network equipment with shorter management system integration and test cycles
- Reduce cycle time for getting new services to market with repeatable management systems integration
- Reduce development costs for adding new management capabilities with developer kits and reusable designs and code
- Easily share management information across departments, subsidiaries or with partners
- Creating an agile flexible architecture that is capable of responding rapidly to the needs of the business

The work of the Open API Project is to provide APIs that allow simple and coherent management of any given service and provide developers key design patterns to enable rapid implementation across both the members of the Forum as well as the larger digital ecosystems outside of TM Forum.

Migration of machine readable artifacts to Apache 2.0 license mode in R18.0

It is the TM Forum's intent to re-issue the existing TM Forum Open APIs under Apache 2.0, many of which were completed in R18 and to release the swagger code for new APIs under the Apache 2.0 license. For clarification purposes, the API specification will continue to be released under the RAND license mode. Per the TM Forum Bylaws, we have created a new project and ask all software contributors to existing APIs to join this area with the knowledge that the resulting API swagger files will be published with Apache 2.0 license. The API swaggers will be up versioned and new notice and licensing statements added.

The human readable artifacts (Open API Specifications, Conformance Profiles and SID mapping documents) will continue to be published under the RAND license mode from work carried out under this charter.

Computer readable artifacts (Swagger files) will henceforth be published under the Apache 2.0 license mode under a related but different charter, see: [API Apache 2.0 Project \(R18.5\) - DRAFT](#)

RI's & CTKs will for the time being be released under the RAND license mode.

Given significant advancements in the CTK development, Postman files are being considered to be phased out as part of R18.5.

All artifacts will be consumable from one place, in the Open API portal, here: [Open API Table](#)

3. User Stories

Provide a high-level description of how an end-user might use the output of the project.

If desired, copy and paste the table below to create multiple instances of the table and complete it for each user story.

As a..	
I need to...	
So that I can...	
To do this I need...	

As a..	TMF member
I need to...	have a standard means to monitor performance, bill and settle accounts, on-board new partners, order and provision services, and so on
So that I can...	move quickly in the market and work with the broadest set of vendors, partners and channels
To do this I need...	a complete set of easily adoptable APIs that are common across both the TMF community and the broader IT ecosystem

As a..	Other industry developer
I need to...	extend and integrate my solutions with telco providers
So that I can...	bring existing and new products and services to a broad market
To do this I need...	a rich set of APIs that provide a standard and reasonable means to integrate the various business systems

As a..	TMF member
I need to...	be able to work with all the APIs provided by TM Forum in a consistent and expected manner
So that I can...	contain costs and deliver solutions in the shortest time possible
To do this I need...	the APIs from TM Forum to be consistent and follow common patterns that are generally adopted across the wider developer community

4. Dependencies

Add in other projects and Framework dependencies this project will have. Please enter if your project will require INPUT FROM, produce OUTPUT TO or require JOINT WORKING with the named projects/Framework. In the COMMENTS column describe the nature of the input, output or joint working.

Project Name	INPUT FROM / OUTPUT TO / JOINT WITH	COMMENTS (describe nature of Input / Output / Joint)	API Contact	Other Project Contact
API-Apache 2.0	O	API specifications team approved and published to the API-Apache 2.0 project where the Swagger will be constructed	Derek Flexer	Derek Flexer
API-Apache 2.0	I	Once the API-Apache files have been uploaded or edited in the tmforum-apis GitHub organization and been "promoted" to a public copy, this is then ready for review.	Derek Flexer	Derek Flexer
Customer Centricity	I & O	Ensure consistency between the Customer Care type Component Suites and the Customer Centricity program	George Glass	Cecilia Ortega Lagos
Security & Privacy	I & O	Ensure consistency between the activities and challenges identified by the security and privacy programs and the relevant future APIs, plus the capture of the application of security & privacy as part of component suite definition	George Glass	
IOE & Digital Ecosystems	I & O	Jointly Develop the IoT Device management Component Suite Jointly Develop the Open Digital Lab	George Glass	Joann O'Brien
DMM	I & O	A review of the technology area of the DMM is required to ensure that it meets the needs of the ODA & API programs.	George Glass	Robert Walker
AI & ML	I & O	Review the advancements by the AI Program for implications to the API program	George Glass	Aaron Boasman-Patel
Framework	Joint	API / SID mapping.	Stephen Harrop	Cecile Ludwichowski
Open Digital Arch	Joint	ONAP product suite NaaS product suite	Ludovic Robert Stephen Harrop	
Smart City	I & O	Merging Open Digital APIs with FiWARE APIs - API specification work	Pierre Gauthier	Joann O'Brien

5. Participants

This section identifies the human resources and skills required by the project to successfully deliver the items listed in this charter. Unless otherwise noted, the level of commitment of all project participants is Best Effort.

At the time the charter is written, the individuals listed below are considered tentative participants. When the charter is approved, the tentative participants will be notified and they can "join" the project in the online community. From that point forward the project resources will be maintained and viewable in real time.

* indicates that this is a required field or role.

Role	Name*	Company*	Confluence "@" mention	Comments
Project Co-Team Lead	Andreas Polz	Infonova	Andreas Polz	
Project Co-Team Lead	Steve Harrop	Vodafone	Stephen Harrop	

Mentor	Pierre Gauthier	TM Forum	Pierre Gauthier	
Sponsor*	Laurent Leboucher	Orange	Laurent Leboucher	
Subject Matter Expert	Pierre Gauthier	TM Forum	Pierre Gauthier	
Staff	George Glass	TM Forum	George Glass	
	Henrique Rodrigues	TM Forum	Henrique Rodrigues	

Role Descriptions & Responsibilities given in section 11

6. Project Workstreams and Deliverables

The project workstreams and deliverables for this project are introduced in the sections below.

6.01: API Design Guidelines

Workstream Leader: [Pierre Gauthier](#), [Stephen Harrop](#)

The API design guidelines capture the REST base patterns to be deployed across all TM Forum Open APIs. Consistent application of these guidelines is key to the successful development and application of a consistent suite of APIs. This includes also the extension capabilities to the APIs.

Ref #	Deliverable short name	Deliverable type/number	Description	A u d i e n c e	In t e n d e d u s e	Pl a n for 1st 90 days	Pl a n for end of cycle	Spon sor / consu mer support	N otes
6.01.1	Prepare API Design Guidelines 3.1	TMF630 Confluence Guidance notes & Swagger generator tool updates 22 Oct 2018 Confluence has been updated & the generation tool is being updated: Design Guidelines FAQ and 3.1 Updates	<ul style="list-style-type: none"> DG3.1 - minimum spec for swagger file Support polymorphism Event Support <ul style="list-style-type: none"> Event support (minor) - notification description in the swagger of the API - needs a convention Entity RefofValue <ul style="list-style-type: none"> Ref or Value: more explicit Characteristic Value <Validation> <Swagger Template> Version support - DG change to put the major version (mandatory) & minor version (optionally) in the URL and to show this in the examples 			Core			
6.01.2	Prepare & publish API Design Guidelines 3.2 (<i>maybe now refer to as DG 4.0 to align with R18.5 & R19.0 API versions of 4.0?</i>)	TMF630	Updates to reflect any implications to address "schemification" work done in R18.5 - DG must be agnostic to tooling (vendors must be able to create compliant APIs without access to the tooling) - but in order to support the tooling, we may have introduced conventions which should be reflected here.			Core			
6.01.3	Scope & roadmap for API Design Guidelines 4.0 (<i>maybe now refer to as DG 5.0 as per above?</i>)	TMF630 roadmap	See 2019-02-12 TAW Tuesday Q2 - API architecture update & input document <ul style="list-style-type: none"> Specific Data model supports (ITIL Firewalls) Open API component suite principals & patterns The notion of a schema registry Component Suite concept & principal (initially developed stand-alone, then merge into DG) Polymorphic pattern - improve explanation, more precise, more explicit examples Separation of concern - definition and JSON-schema (imported) Events (schema) (bigger & more disruptive work) Support for reactive based design - Evolution of Transport / Protocols (currently use http - may need more modern messaging protocol with lower latency) OS migration - Support for swagger 3.0 <ul style="list-style-type: none"> Moving to swagger 3.0? Swagger template Including events & notifications Decoupling JSON schema from swagger (DGx.0) <ul style="list-style-type: none"> In this mode, you import the data model, essentially there are now two files, rather than one Component Suite Concept & Principals (that will become absorbed into DG4.0) 				Stretch		

6.01.4	Update Crowdsourcing template	TMF425	Move to new TM Forum branding & update to reflect "schemification" and remove references to Orange Enterprise datamodel						Core	Stephen Harrop
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6.02: Road mapped APIs - R19.0 P1s

Workstream Leader: [Ludovic Robert](#)

"Schemification of APIs" - Scope agreed at Lisbon Action Week, as per [2019-02-13 TAW Wednesday Q3 - R19.0 API Roadmap & beyond](#) and the results posted back to Confluence here: [Open API Catalog](#) - plus there are some new APIs in this list

R ef #	Deliverable short name	Deliverable type / number	Description	A u d i e n c e	In t e n d e d u s e	P I a n n o t a t i o n s	P I a n n o t a t i o n s	Sponsor / consumer support	N o t e s
6.02.01	Account Management API	TM F666	Provides standardized mechanism for the management of billing and settlement accounts, as well as for financial accounting (account receivable) either in B2B or B2B2C contexts		Dom ain: E n g a g e d P a r t y	Core		Lisbon Team Action Week Feb-2019: Mariano to regenerate for R19.0 L: mariano.belaunde@orange.com M: Cecile.ludwichowski@orange.com	
6.02.02	Agreement Management API	TM F651	The Agreement API provides a standardized mechanism for managing agreements, especially in the context of partnerships between partners.		Dom ain: E n g a g e d P a r t y	Core		Lisbon Team Action Week Feb-2019: Mariano to regenerate for R19.0 L: mariano.belaunde@orange.com C: karthik.balakrishnan@amdcs.com	
6.02.03	Appointment API	TM F646	The appointment API provides a standardized mechanism to book an appointment with all the necessary appointment characteristics. The API allows searching of free slots based on parameters, as for example a party, then creating the appointment. The appointment has characteristics such as nature of appointment, place of appointment.		Dom ain: C u s t o m e r	Core		Lisbon Team Action Week Feb-2019: Gregore to regenerate for R19.0 L: sophie.bouleau@orange.com , M: yanivgi@amdocs.com	
6.02.04	Customer Management API	TM F629	Provides a standardized mechanism for customer and customer account management, such as creation, update, retrieval, deletion and notification of events.		Dom ain: C u s t o m e r	Core		Lisbon Team Action Week Feb-2019: Mariano to regenerate for R19.0 L: mariano.belaunde@orange.com M: patricia.szita@accenture.com	

6.05	Trouble Ticket API	TMF621	Provides a standardized client interface to Trouble Ticket Management Systems for creating, tracking and managing trouble tickets among partners as a result of an issue or problem identified by a customer or another system. Examples of Trouble Ticket API clients include CRM applications, network management or fault management systems, or other trouble ticket management systems (e.g. B2B).	Documentation	Core	Lisbon Team Action Week Feb-2019: Jacob to regenerate for R19.0 L: Jacob C: Luis C: Ludovic M: yanivgi@amdocs.com
6.06	Loyalty Management API	TMF658	Supports the management of loyalty program specifications, loyalty program members, their associated products and loyalty accounts with loyalty balances	Documentation	Core	Lisbon Team Action Week Feb-2019: Clara to regenerate for R19.0 L: clara.vstaden@globetom.co.za M: narayanan_k@infosys.com
6.07	Partnership Type Management API	TMF668	Standardized mechanisms for creating partnership types. It is one of the APIs involved in an onboarding process. Identifies a type of a partnership between parties, including the list of role types that are permitted (i.e Buyer, Seller, Developer). Role types may refer to agreement specifications to be signed by parties playing the role. The API allows the retrieval, creation, update and deletion of partnership type and its owned sub-resources.	Documentation	Core	Lisbon Team Action Week Feb-2019: Mariano to regenerate for R19.0 L: mariano.o.belaunde@orange.com, M: mbesson@tforum.org
6.08	Party Management API	TMF632	Provides standardized mechanism for party management such as creation, update, retrieval, deletion and notification of events. Party can be an individual or an organization that has any kind of relation with the enterprise.	Documentation	Core	Lisbon Team Action Week Feb-2019: Sophie to support during R19.0 L: sophie.bouleau@orange.com M: calogero.cascio@accenture.com
6.09	Party Role Management API	TMF669	A standardized mechanism for general party roles and includes operations such as creation, update, retrieval, deletion and notification of events. Notice that for the management of customers there is a specific Customer Management API. Party Role management API manages the following data resources: PartyRole	Documentation	Core	Lisbon Team Action Week Feb-2019: Mariano to regenerate for R19.0 L: mariano.o.belaunde@orange.com, M: cecile.ludwichowski@orange.com
6.10	Performance Thresholding API	TMF649	This covers the Threshold aspects of Performance Management, also named Performance Threshold Management or PM Threshold. Provides a standardized mechanism for performance management such as creation, partial or full update and retrieval of the resources involved in performance management (Measurement Production Job, Measurement Collection Job, and Ad hoc Collection). It allows also notification of events related to performance	Documentation	Core	Lisbon Team Action Week Feb-2019: Need to confirm ownership with Yuval to regenerate for R19.0 JIRA issues : AP-323 L: Yuval Stein?, C: pgauthier@tforum.org
6.11	Product Catalog Management API	TMF620	Provides a standardized solution for rapidly adding partners' products to an existing Catalog. It brings the capability for Service Providers to directly feed partners systems with the technical description of the products they propose to them.	Documentation	Core	Lisbon Team Action Week Feb-2019: Jonathan to regenerate for R19.0 L: kamal.maghsoudlou@ericsson.com M: kamal.maghsoudlou@ericsson.com

6.02.12	Product Inventory Management API	TMF637	A standardized mechanism for product inventory management such as creation, partial or full update and retrieval of the representation of a product in the inventory. It also allows the notification of events related to the product lifecycle	Domain: Product	Core	Lisbon Team Action Week Feb-2019: Ludovic to regenerate for R19.0 L: ludovic.robert@orange.com M: Jonathan.Goldberg@amdocs.com
6.02.13	Product Offering Qualification API	TMF679	Product Offering Qualification API is one of Pre-Ordering Management API Family. Product Offering Qualification API goal is to provide Product Offering commercial eligibility	Domain: Customer	Core	Lisbon Team Action Week Feb-2019: Ludovic to regenerate for R19.0 L: ludovic.robert@orange.com
6.02.14	Product Ordering Management API	TMF622	API provides a standardized mechanism for placing a product order with all of the necessary order parameters	Domain: Customer Engagement Party	Core	Lisbon Team Action Week Feb-2019: Ludovic to regenerate for R19.0 L: ludovic.robert@orange.com , M: calogero.cascio@accenture.com
6.02.15	Quote Management API	TMF648	The Quote API is one of the Pre-Ordering Management APIs. The customer Quote API provides a standardized mechanism for placing a customer quote with all of the necessary quote parameters.	Domain: Customer	Core	Lisbon Team Action Week Feb-2019: Ludovic to regenerate for R19.0 L: ludovic.robert@orange.com
6.02.16	Shopping Cart API	TMF663	Standardized mechanism for the management of shopping carts. Including creation, update, retrieval, deletion and notification of event. Shopping Cart entity is used for the temporarily selection and reservation of product offerings in e-commerce and retail purchase. Shopping cart supports purchase of both tangible and intangible goods and service (e.g. handset, telecom network service). The charge includes the one-off fee such as the fee for handset and the recurring fee such as the fee of a network service. Shopping Cart contains list of cart items, a reference to party or party role (e.g. customer) or contact medium in case of unknown customer, In addition the calculated total items price including promotions.	Domain: Customer	Core	Lisbon Team Action Week Feb-2019: Jacob to regenerate for R19.0 L: jacob@amdocs.com , C: Huawei C: Orange M: Jonathan.Goldberg@amdocs.com

6.03: Road mapped APIs - R19.0 P2s

Workstream Leader: [Ludovic Robert](#)

"Schemification of APIs" - Scope agreed at Lisbon Action Week, as per [2019-02-13 TAW Wednesday Q3 - R19.0 API Roadmap & beyond](#) and the results posted back to Confluence here: [Open API Catalog](#)

Ref #	Deliverable short name	Deliverable type /number	Description	Audience	Intended use	Plan for 1st 90 days	Plan for end of cycle	Sponsor / consumer support	Notes
6.03.01	Customer Bill Management API	TMF678	This API allows operations to find and retrieve one or several customer bills (also called invoices) produced for a customer also allows operations to find and retrieve the details of applied customer billing rates presented on a customer bill.	Domain: Customer	Customer	Stretch	Lisbon Team Action Week Feb-2019: Could Orange or Amdocs sponsor this? L: sophie.bouleau@orange.com M: Cecile.ludwichowski@orange.com		

6.03.02	Geographic Address Management API	TMF 673	Provides a standardized client interface to an Address management system. It allows looking for worldwide addresses. It can also be used to validate geographic address data, to be sure that it corresponds to a real geographic address. Finally, it can be used to look for a geographic address by: searching an area as a start (city, town ...), then zooming on the streets of this area, and finally listing all the street segments (numbers) in a street.	Domain: Common	Stretch	Need to align with GeoJSON and Schema.org for SmartCity work with FIWARE L: sophie.bouleau@orange.com , C: ludovic.robert@orange.com , C: Jonathan.Goldberg@amdocs.com M: luis.velardetazon@telefonica.com
6.03.03	Geographic Location Management API	TMF 675	Provides the information of geographic region of the entity (customer, equipment, address).	Domain: Common	Stretch	Need to align with GeoJSON and Schema.org for SmartCity work with FIWARE L: sophie.bouleau@orange.com , C: ludovic.robert@orange.com , C: Jonathan.Goldberg@amdocs.com M: luis.velardetazon@telefonica.com Is Patrick Hils - ESRI engaged?
6.03.04	Geographic Site API	TMF 674	Covers the operations to manage (create, read, delete) sites that can be associated to a customer, account, service delivery or other entities. This API defines a Site as a convenience class that allows to easily refer to places important to other entities, where a geographic place is the entity that can answer the question "where?"	Domain: Common	Stretch	Need to align with GeoJSON and Schema.org for SmartCity work with FIWARE L: sophie.bouleau@orange.com , C: ludovic.robert@orange.com , C: ludovic.robert@orange.com , C: Jonathan.Goldberg@amdocs.com M: luis.velardetazon@telefonica.com Is Patrick Hils - ESRI engaged?
6.03.05	Performance Management API	TMF 628	Provides a standardized mechanism for performance management such as the creation, partial or full update and retrieval of resources involved in performance management (Measurement Production Job, Measurement Collection Job, and Ad hoc Collection). It also allows notification of events related to performance.	Domain: Common	Stretch	Lisbon Team Action Week Feb-2019: Pierre /Yuval to regenerate for R19.0 L: pgauthier@tmforum.org
6.03.06	Privacy Management API	TMF 644	The Privacy Management API provides standardized mechanism for privacy profile types, privacy profiles and privacy agreements such as creation, update, retrieval, deletion and notification of events.	Domain: Engaged Party	Stretch	Lisbon Team Action Week Feb-2019: Amdocs to regenerate for R19.0 L: Orange?
6.03.07	Promotion API	TMF 671	Used to provide the additional discount, voucher, bonus or gift to the customer who meets the pre-defined criteria. Using promotion, the enterprise is able to attract the users and encourage more consumption, especially continuous purchases. Normally Promotion is not regarded as one type of product or product offering. It is often applied when the customer buys the product offerings with the price or amount surpassing the certain limit	Domain: Product	Stretch	Lisbon Team Action Week Feb-2019: Priority 2 (stretch), but needs ownership L: maxu@huawei.com
6.03.08	Recommendation API	TMF 680	Recommendation API is used to recommend offering quickly based on the history and real-time context of customer. It is a real-time and personalized recommendation API. It is usually provided by e-commerce or BSS, CRM system in omni-channel.	Domain: Product	Stretch	Lisbon Team Action Week Feb-2019: Priority 2 (stretch), but needs ownership L: haohongxia@huawei.com
6.03.09	SLA Management API	TMF 623	Provides a standardized interface for Service Level Agreement (SLA) life-cycle Management (SLA Negotiation, SLA configuration SLA Activation/enforcement, SLA Operations, SLA violation / consequence handling, SLA reporting) between a Customer and a Service Provider which provides offers (product with attached SLA in its catalogue) the customer can discover, browse, trigger and order.	Domain: Customer Engaged Party	Stretch	Lisbon Team Action Week Feb-2019: Priority 2 (stretch), but needs ownership L: Orange? - Tayeb

6.04: Open API components

Workstream Leader: [Pierre Gauthier](#), [Stephen Harrop](#)

How do we build up TM Forum Open API suites, based on use case and requirements analysis, to support specific industry challenges?

Ref #	Deliverable short name	Deliverable type /number	Description	Audience	Intended use	Plan for 1st 90 days	Plan for end of cycle	Sponsor / consumer support	Notes
6.0 4.1	What is a C & P for a component suite? - TR280 - API Component Suite concepts & principals	TR280 TMF426 - template	TR280: Develop further definition for API component suite TMF426: Evolve the API component suite template for consistent application when crowd sourcing component suite definitions				Stretch		Pierre Gauthier
6.0 4.2	TMF909: NaaS component suite	TMF909	Network as a Service (fka End-to-End NFV Management APIs)			Deliver once R18.5 NaaS related APIs fully released			Johanne Mayer
6.0 4.3	See Joint working with Digital Ecosystems (6.11) for IoT Component Suite								
6.0 4.4	TMF911: MEF product suite	TMF911	Possible future component suite				Not for R19.0		Ludovic Robert
6.0 4.5	TMF912: ONAP product suite	TMF912	Possible future component suite				Not for R19.0		Ludovic Robert
6.0 4.6	Service test to Test API	TMF653	Make DG3.0 and service test becomes a component of test JAD Catalyst APIs				Stretch		22 Oct 2018 Frank Massoudian presented at TAW, Dallas and is working with the team to progress.

6.05: API/SID mapping Task Force

Workstream Leader: [Cecile Ludwichowski](#), [Michel Besson](#)

How do we ensure that the TM Forum Open APIs, developed by a wide collaboration community and crowd sourced, have a consistent information model and data model view - with each other and with SID?

Ref #	Deliverable short name	Deliverable type/number	Description	Audience	Intended use	Plan for 1st 90 days	Plan for end of cycle	Sponsor / consumer support	Notes
6.0 5.1			White Paper: New overall document - the generalities of how mapped - eg 15 pages for ALL the APIs.				Stretch		
6.0 5.2	API / SID mapping plan		Need to reassess how to do API / SID mapping in the light of the new "schemified" API situation				Core		

6.06: Driving API Adoption

Workstream Leader: [George Glass](#)

Ref #	Deliverable short name	Deliverable type/number	Description	Audience	Intended use	Plan for 1st 90 days	Plan for end of cycle	Sponsor / consumer support	Notes
6.0 6.1	API steering committee	<Punch list: No formal R19.0 publishable item>	API steering committee						
6.0 6.2	CSP driven Vendor API adoption assessment	<Punch list: No formal R19.0 publishable item>	CSP driven Vendor API adoption assessment						
6.0 6.3	API Conformance	<Punch list: No formal R19.0 publishable item>	Deploy API Conformance product						

6.07: API Tooling and Automation Support

Workstream Leader: [Stephen Harrop](#), [Mariano Belaunde](#), [Knut Johannessen](#), [Henrique Rodrigues](#)

How do we create a low friction and repeatable way for our collaboration community to create consistent and low effort swagger files, RI & CTX?

Ref #	Deliverable short name	Deliverable type/number	Description	Audience	Intended use	Plan for 1st 90 days	Plan for end of cycle	Sponsor / consumer support	Notes
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6.0 7.1	Tool Chain improvements	<Punch list: No formal R19.0 publishable item>	Need to continue the development of the toolchain established in R18.5						
6.0 7.2	RI/CTK tooling improvements	<Punch list: No formal R19.0 publishable item>	Develop the initial RI/CTK tooling						
6.0 7.3	RI/CTK structure	<Punch list: No formal R19.0 publishable item>	Create RAND GitHub structures						
6.0 7.4	CTK tooling	<Punch list: No formal R19.0 publishable item>							
6.0 7.5	RI tooling	<Punch list: No formal R19.0 publishable item>							
6.0 7.6	Populate CTKs	<Punch list: No formal R19.0 publishable item>							
6.0 7.7	Populate RIs	<Punch list: No formal R19.0 publishable item>							

6.08: SDO Collaborations

Workstream Leader: [George Glass](#); [Pierre Gauthier](#);

How do we collaborate with other SDOs build up TM Forum Open API suites to support specific industry challenges?

R ef #	Deliverable short name	Deliverable type /number	Description	Au die nce	Inten ded use	Plan for 1st 90 days	Plan for end of cycle	Sponsor / consumer support	Notes
6.0 8.1	MEF support	<Punch list: No formal R19.0 publishable item>	Finalize Part Completed APIs (CTK) New APIs for MEF support - eg trouble ticket						Ludovic Robert
6.0 8.2	ONAP TMF API Technical Architecture	TRnnn	TR ONAP TMF API Technical Architecture - Technical paper exploring the technical architecture requirements to support an ONAP service enablement				Stretch		Ludovic Robert

6.09: Crowd-Sourced APIs

Workstream Leader: [Stephen Harrop](#), [Andreas Polz](#)

This area of the charter is reserved for new APIs that are crowd sourced from members during the year. Members can start the process to submit a new API by submitting a JIRA record with the suggested new API. They will be expected to lead the effort to develop and contribute this API through the defined API Governance process. **Any new API work conducted from R19.0 onwards should be consistent with the API schema approach established in R18.5.**

R ef #	Delive rable short name	Delive rable type /number	Description	A u die nce	Inten ded use	Plan for 1st 90 days	Plan for end of cycle	Sponsor / consumer support	Notes
6.0 9.01	Policy API	TMF693	Need to be able to create & retrieve policies			Design /SID mapping complete	Stretch		MEF has an interest in Policy (from Fred/Verizon)
6.0 9.02	SLA API	TMF623	SLA api updates - Innova / Turk telecom				Stretch		
6.0 9.03	PM /Usage mgt API	TMF628 / TMF635					Stretch		Yuval Stein?
The following, as discussed at Lisbon TAW 2019-02-13 TAW Wednesday Q1 - New API Developments (1 of 2) and 2019-02-14 TAW Thursday Q2 - New API Developments (2 of 2)									
6.0 9.04	Custo mer Risk API	TMF696	<p>PiGa, need to make the UML consistent with product offering qualification, or even merge / enhance it with that? - It is the same structure, don't re-invent.</p> <p>AnPo: Would be good to process through SID first and then build the API on the modified SID?</p> <p>PiGa: complete crowd sourcing template - proceed with the submission into the crowd sourcing.</p>				Stretch	Moshe Zolotov (Amdocs)	

6.09.05	Number Portability API	TMF698	Number Portability (Jacob Avraham) <input type="checkbox"/> AP-1161 - TMF698 Number Portability REGISTERED			Stretch		
6.09.06	Sales Management API	TMF699	Sales Lead API (Ludovic Robert / Grégoire LAURENT) <input type="checkbox"/> AP-1164 - New API: saleLead API REGISTERED			Stretch		
6.09.07	Distributed Ledger API	TMF695	Distributed Ledger API (Clara van Staden / Pieter Janse van Rensburg) <input type="checkbox"/> AP-1040 - Proposal of the Distributed Ledger API REGISTERED			Stretch		Pieter Janse van Rensburg Philip Stander <input type="button" value="AP-1040 - Getting issue details..."/> <input type="button" value="STATUS"/>
6.09.08	The process flow API	TMF701	The process API (Ludovic Robert) <input type="checkbox"/> AP-1165 - New API:Process API REGISTERED			Stretch		
6.09.09	Shipping Order API	TMF700	Shipping Order (Jacob Avraham) <input type="checkbox"/> AP-1168 - TMFxxx Shipping Management REGISTERED In time, this will come to replace TMF684, Shipment tracking, as it will subsume all 684s functionality			Stretch		
6.09.10	Event management API	TMF688	Event is any of the action triggered by the human or the system which requires the notification to the other system.	Domain:	Core		Lisbon Team Action Week Feb-2019: Pierre to regenerate for R19.0 L: levente.janovszki@ncia.nato.int	
6.09.11	Stock Management API	TMF687	Provides the capability for consumers to search for the stock levels and configuration of one or various Product Offering within Retail Premises (Store) or Storage Premises (Warehouse or Depot).	Domain:	Stretch		Confluence page setup Next Steps: Create a crowdsourcing template L: stephen.harrop@vodafone.com , C: jacoba@amdocs.com C: muhammad.alaa@ericsson.com	Vodafone has an <input type="button" value="AP-1059 - Getting issue details..."/> <input type="button" value="STATUS"/> contribution to this

6.10: API Mapping

Workstream Leader: [George Glass](#)

Ref #	Deliverable short name	Deliverable type /number	Description	Audience	Intended use	Plan for 1st 90 days	Plan for end of cycle	Sponsor / consumer support	Notes
6.10.01	API Map	GB992	Summary paper showing all the current and planned APIs, updated periodically as API releases develop				Stretch		Author for most recent R18.0 update: Hongxia Hao Note, may be no new APIs delivered in R19.0, as there were none in R18.5, so an update may be redundant
6.10.02	API functional mapping to eTOM & TAM	tba	Mapping functional capabilities of APIs to functions in eTOM & TAM				Stretch		Led by Avi Talmor

6.11: Joint work with the Digital Ecosystems Project

Workstream Leader: [Pierre Gauthier](#)

Ref #	Deliverable short name	Deliverable type /number	Description	Audience	Intended use	Plan for 1st 90 days	Plan for end of cycle	Sponsor / consumer support	Notes
6.11.01	TMF908: IoT Device Management Suite	TMF908 Stretch	X-team work to support identification and packaging of the IOT Device Management API Suite Specification: TMF908 Swagger: TBD	CSP, Suppliers & Digital Ecosystem Innovator, ecosystem actors and ecosystem platform developers	Jump start IOT use of TM Forum assets;	Draft published for Team review and approval	Publication of Device Mgt Suite - R19.0 Asset	CSP & Suppliers	Namal Prassana Jayathilake & Pierre Gauthier

6.1.02	IOT Service Management Suite	TMFX XX Stretch	X-team work to support the management of IOT service Draft of Specification Swagger (future deliverable)	CSP, Suppliers & Digital Ecosystem Innovator, ecosystem actors and ecosystem platform developers	Jump start IOT use of TM Forum assets;	TBD	Draft of the IOT Service Management Suite - not for publication/ or member review only	Suppliers & CSPs	Need resources to confirm resources: TBD & Pierre Gauthier
6.1.03	IOT Data Model	TBD - White paper Stretch	White Paper to describe the Generic IOT Data Model specifications; • identify principles with examples; Compatible with TM Forum Data Model (TBD) Potential dependency on FIWARE Liason (Smart city)	CSP, Suppliers & Digital Ecosystem Innovator, ecosystem actors and ecosystem platform developers	Jump start IOT use of TM Forum assets;	TBD	White Paper (exploratory report)	Suppliers & smart city industry organizations	Resources to be staffed. Pierre Gauthier
6.1.04	Open Digital Lab	Stretch	Implementation/deployment of the IOT Device Management Suite of deliverables with the Open Digital Lab for use by Catalyst	Catalyst Users	Jump start IOT use of TM Forum assets;	TBD	Deployment in the Open Digital Lab [Microservice]	Suppliers & Catalyst participants	IBM, Sigma, Sigscale Henrique Rodrigues Pierre Gauthier

7. Member Validation and Feedback Approach

Deliverables require validation and feedback. If the development team has a broad range of Members and Service Providers, validation may be within the team, however if the range of Members and Service Providers is weak, after Team Approval, deliverables must be validated beyond the team. Teams must state their Member & Validation approach here:

Validation Activity Approach	Spec Jams
Validation Activity Description	Face-to-face meetings to resolve & clarify requirements and implementation design, as appropriate to the audience
Dependencies	
Comments	

8. Project Tooling

Indicate the tooling required for project success.

Product	Key Functions	Needed for Project?
Confluence Space	Document creation and publishing	Provided by default
JIRA Space	Contribution and feedback management	Provided by default
GitHub	Code repository (if applicable)	YES
Other	Public website API Portal	YES

9. Liaison Relationships

Please indicate if this project has or plans to have a relationship with other External Standards Organizations (SDOs).

Name of Organization	Is this a New or Existing relationship?	Linkages and/or Scope of work	Contact person	Comments
MEF	existing	Sharing API standards		
FIWARE	existing	Sharing API standards		
Eclipse/Papyrus	existing	use of Tooling		
Open NFV	Tentative			

10. Charter History

Version	Date	Comment
Current Version (v. 21)	Mar 22, 2019 11:00	Derek Flexer
v. 20	Mar 21, 2019 06:28	Derek Flexer
v. 19	Mar 20, 2019 10:22	Derek Flexer
v. 18	Mar 20, 2019 10:04	Derek Flexer
v. 17	Mar 08, 2019 13:15	Nancy Lyness
v. 16	Mar 04, 2019 08:33	Derek Flexer
v. 15	Mar 01, 2019 08:13	Derek Flexer
v. 14	Mar 01, 2019 06:05	Derek Flexer
v. 13	Mar 01, 2019 05:37	Derek Flexer
v. 12	Feb 28, 2019 11:05	Derek Flexer
v. 11	Feb 28, 2019 11:02	Derek Flexer
v. 10	Feb 27, 2019 19:16	Derek Flexer
v. 9	Feb 27, 2019 19:04	Derek Flexer
v. 8	Feb 27, 2019 18:43	Derek Flexer
v. 7	Feb 27, 2019 17:01	Derek Flexer
v. 6	Feb 25, 2019 07:08	Derek Flexer
v. 5	Jan 15, 2019 05:04	Derek Flexer
v. 4	Jan 15, 2019 04:41	Derek Flexer
v. 3	Jan 15, 2019 03:35	Derek Flexer
v. 2	Jan 15, 2019 03:07	Derek Flexer
v. 1	Jan 15, 2019 03:06	Derek Flexer

11. Role Definition & Responsibilities



Project Team Lead:

- Ensure project is developed in line with TM Forum IPR policy
- Encourage all participants to take an active role in the project
- Ensure participants have a clear understanding of what they need to complete and when
- Drive the project team for on time delivery
- Lead the design, planning and execution validation activities
- Identify key companies required to position for industry adoption

Mentor:

- Aid the team to maintain focus on delivery
- Act as a source of expertise for the team
- Join project calls to assist with blockages
- Seek out expert resource to help as required
- Be a guide and link to the wider Program

Sponsor:

- Articulate the Industry User Story
- Act as a Champion for the team
- Review progress at six weekly intervals to ensure relevance
- Champion final deliverables at Nice/San Jose
- Drive Adoption in own organization by championing deliverables as beta versions of solutions to be developed

Participant:

- Develop collaborative solutions as in accordance with the developed charter and inline with Collaboration process
- Participate actively in team working meetings / sessions
- Complete tasks as agreed with the team or workstream leader

Observer:

- Choose to observe and monitor the progress of a project team
- Use the insights gained to share observed advancements within your organization
- Ensure planned deliveries are aligned with product roadmap in your organization to gain maximum R&D acceleration value
- Align training and education within your organization to gain maximum value of cost & risk reduction and future proofing your organization

Reviewer:

- All activities of observer plus...
- Review all outputs from team and provide quality timely feedback ensuring output aligns with business and technology requirements of your organization
- Participate in validation activities, these may be online or face to face.
- Monitor Collaboration Events & Activities page for all latest review activities

Subject Matter Expert:

- Provide support and guidance to a project team in your particular area of expertise

Workstream Lead:

- For your agreed workstream;
- Ensure project is developed in line with TM Forum IPR policy
- Encourage all participants to take an active role in the project
- Ensure participants have a clear understanding of what they need to complete and when
- Drive the project team for on time delivery
- Lead the design, planning and execution validation activities
- Identify key companies required to position for industry adoption

12. Legal Notice

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