tmforum
connecting digital ecosystems

Team Action Week

6th-10th February 2017

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Action Week Breaks Records with New Innovations

- Over 250 industry professionals from 95 different companies from around the world attended Action Week in Lisbon, making this our largest ever European Action Week.
- In addition to key workstreams for the Frameworx & Open API, Agile Business & IT, Customer Centricity and Internet of Everything programs, Action Week included several new features including:
    - Keynote case studies from BT, Deutsche Telekom, Telefónica, Vodafone and many others showcased how TM Forum standards are underpinning digital transformation.
    - Smart Life Ecosystem Catalyst Think Tank - Using an approach inspired by Design Thinking, an innovative Think Tank session provided a new approach to expanding a mature "ecosystem" catalyst to better understanding of use cases that drive concrete, high value market opportunities. The approach brought together a facilitation team with 8 invited Smart Cities and the Smart Life Catalyst team for 2 days of co-creation, co-design, and quick prototyping of Smart City use cases. This approach created innovative and high value results.
    - Our first Enterprise Hack for Enterprise developers using TM Forum Open APIs.
    - Action Week workstreams connected New Business Models, Trust, and Monetization. Based on the Roadmap of Challenges and Roadmap of Options, intra-workstream teams "connected the dots" in developing new ways of modelling and managing a range of new IoE business models, management of Ecosystem Trust and how to manage risk and reward across ecosystems for end to end IoE use cases.
    - 29 of the 35 expected Catalyst projects for TM Forum Live! in Nice met and pitched their project ideas to the membership, with great reception and feedback.

OPEN APIs

There is a massive shift towards an open digital ecosystem, underpinned by open source platforms and APIs. TM Forum Open APIs provide the critical enablers to build an ecosystem or marketplace for partner onboarding, monitoring and management of digital services across business boundaries, including revenue sharing, monetization and settlement. These APIs are taking off in the industry. Since launching the developer portal in December 2015, we have over 100k users of the APIs and 9 CSPs and 10 leading technology partners have committed to using the APIs in their product development.

If you are not already a project member, you may join the project here: www.tmforum.org/join-API
Members wishing to get involved in the **API** project may access the working area on the project Wiki, Confluence, here: https://projects.tmforum.org/wiki/display/AP/Work+In+Progress
They may see the meeting notes from the Lisbon TAW and working calls here: https://projects.tmforum.org/wiki/display/AP/Meeting+notes

OPEN HACK

For developers and new comers there was an Open Hack held Monday & Tuesday. The range of applications the teams came up with show the flexibility and rapid development that open APIs offer. A total of 45 people from 23 companies formed eight teams to compete in the Open Hack. What was their task? To leverage Huawei's Business Enabling System (BES) platform, using open APIs, to create potential new products and services for Internet of Things and smart cities, 5G virtualized services and digital payments. The APIs were provided by TM Forum, FIWARE and Huawei, which was the event's executive sponsor.

At the end of the hack, each team had five minutes to present its solution. Unlike the Forum's previous Open Hacks, the participants were, in the main, employees of enterprises, rather than independent entrants. Many of the teams were made up of people who didn't know each other.

The teams had access to the City of Lisbon's open data and were allowed to bring components with them, but had to demonstrate how they combined them with the assets provided. Participants were encouraged to use publicly available resources and were judged by a panel of Dr Lester Thomas, Chief Systems Architect, Vodafone; Helen Zhang, Director of Marketing Execution, Software Product Line, Huawei; and Pierre Gauthier, Chief API Architect, TM Forum, plus votes from non-participants in the audience.

The judging criteria were: the teams' use of APIs; feedback on the APIs; innovation and creativity; value to industry and society; and level of completeness. All the members of the winning team were given a Google Home device and are invited to compete at the Open Hack at TM Forum Live!, in May, in Nice, where they will be able to pitch their idea to top executives at our flagship event. All the participants were given a certificate to mark their achievement.

Summary of API Sessions at Team Action Week:

Monday

Presentation on Open API Roadmap, covering topics such as CTKs & API Governance status.

Scope and agree changes to API Design Guidelines.

Updates and Re-Design of APIs in Billing, Customer and Account Management areas, continuing from ongoing series of calls.

Tuesday

To review the end to end tooling ambitions for the scaling up of new Open APIs and in particular to support the crowd sourcing effort. This will include data model alignment as part of that tooling effort.

Looking at impact of Engaged Party between Frameworx and API and the need to either create a new API or otherwise augment capabilities of existing ones (e.g. Customer).

Clarify process of process of creating CTK from API specification and conformance profile. Currently Telefonica have developed and contributed 3 new CTKs. The CTKs are key to automating the self-validation of member implementation of Forum APIs.

Review the series of new APIs that have been contributed using the Crowd Sourcing template. Current APIs targeted for this session: Privacy Enforcement API, Location API, Usage Consumption API.

Wednesday

Define and build the next iteration of the Entity Catalog API.

Review the series of new APIs that have been contributed using the Crowd Sourcing template. Current APIs targeted for this session: Promotion API & Event Management API & Topology API.

Review latest updates to the Shopping Cart API specification.

To define and agree the mapping of TM Forum Open APIs to the NFV teams Hybrid Platform Management capabilities and to finalize plans for how the ZOOM & API team will work through-out R17 with particular attention to any face to face meetings.

Analyse Hybrid Infrastructure Platform Assurance requirements on APIs (SLAM, Resource Alarm Management, Performance Management and Event Management).

Thursday

Open API Project and DPRA - To produce a technical recommendation in 17.0 and provide explanation on how this works with Forum Open APIs.

Review and agree which components from contributions in the space of Hypermedia support in APIs should be taken forward into future TM forum Open APIs. Hypermedia APIs: Concerned with the evolution of the REST API Design Guidelines towards hypermedia.

Review and agree specification of Loyalty API.

Review and update the latest plans to the Open API design guidelines ensuring that detailed direction is provided to our members to ensure their development of new APIs is consistent.

Friday

Further development of provisioning (TR255) and connectivity model (IG1147) and the associated entity provisioning API. Review and address the Open API project backlog.

DATA ANALYTICS

Telcos struggle today to easily identify, extract and analyze meaningful data from the massive cache they own. TM Forum's Data Analytics Program is working to help organizations make the best use out of business intelligence and data analytics tools in the enterprise-wide activities of revenue management and customer experience management. The focus of the work is on bridging the gap between 'raw' Data Analytics technology and the specific business needs of your company.

If you are not already a project member, you may join the project here: www.tmforum.org/join-Data
Members wishing to get involved in the **DATA ANALYTICS** project may access the working area on the project Wiki, Confluence, here: https://projects.tmforum.org/wiki/display/DATA/Work+In+Progress
They may see the meeting notes from the Lisbon TAW and working calls here: https://projects.tmforum.org/wiki/display/DATA/Meeting+notes

Summary of DATA ANALYTICS Sessions at Team Action Week:

Monday

Data Analytics, ABDR - Working session to define fields and attributes of new entities: Purpose and description of what ABDR represents, and who will use it, discussion on volatile fields, taxonomy coverage next steps, representation of many-to-one relations.

Data Analytics, ABDR - Ironed out terminology differences, built mapping with Orange contributed entities, reviewed SID mapping approach, progress SID mapping to ABDR entities. Working session to define fields and attributes of new entities - created new entities.

Wednesday

Data Analytics, Trust, Data Portability - Ensuring the portability of personal information. Based on taxonomy and existing APIs, we defined what could be used to answer to data portability requirements, in line with the Guidelines to Data Portability published by G29 in December. Identified tools existing/to be developed to support data portability.

Thursday

Data Analytics, Trust, Data watermarking and Data fingerprinting - How to track leakage of data or ensure your ecosystem can still be trusted. Watermarking is a method that attaches origin of a piece of information into this piece of information: extended to data management, watermarking is a way to ensure traceability of personally identifiable information.

Data Analytics, Fraud Analytics, Cross-Team with Fraud Management - Determined data sources and types of analytics needed to fill gaps in various fraud scenarios.

CUSTOMER CENTRICITY

Over the past several years work stream collaboration has resulted in a robust, reusable set of Customer Centricity assets and tools. Historically the Customer Centricity program has been focused on Customer Experience Management (CEM), Data Analytics and Metrics.

We increased our focus on those deliverables which will accelerate CSP digital transformation, enhance Internet of Everything (IoE) services, and enable critical Trust processes.

If you are not already a project member, you may join the project here: www.tmforum.org/join-CEM
Members wishing to get involved in the **CUSTOMER CENTRICITY** project may access the working area on the project Wiki, Confluence, here: https://projects.tmforum.org/wiki/display/CEM/Work+In+Progress
They may see the meeting notes from the Lisbon TAW and working calls here: https://projects.tmforum.org/wiki/display/CEM/Meeting+Notes

Summary of CUSTOMER CENTRICITY Sessions at Team Action Week:

Monday

Joint session with IOE - Roadmap Alignment including 360-degree view of customer - Aligned goals of the selected program topics for action week using the IoE roadmap of Challenges as well as Applied Innovation areas. Particular focus given to the challenge of managing risk and reward across ecosystems from business partnerships and customer perspectives.

CEM/Customer Analytics – Monetization. Each Lead presented their goals for the week in developing monetization models for digital ecosystems and the Internet of Everything (IoE), and 360-degree view of Customer Journey & IOE, Omnichannel for IOE, CEI Use Case & IOE (X-Team CEM & DA & C&B Team). Aligned on a common understanding of the people, processes and systems using real world business scenarios to enable monetization.

CEM/Customer Analytics. Customer Journey & IoE. Identified a classification scheme and defined journeys of things - 360-degree view of customer "things" - Journey definition of "things" – Classification / taxonomy of "things".

Tuesday

Customer Analytics, Monetization - Presentation of Monetization Models and Concepts: Presented Monetization Models and concepts to align common understanding, developed additional models, as well as refined and defined examples for the models. Teams documented the common reusable business patterns for monetization.

Customer Analytics, Omni Channel for IoT - Defined and scoped the partnership models in the omni channel context that can scale. Identified processes that are repeatable and consistent to enable

building of the highest value foundational models, tools, metrics and reference architectures. Omni channel for IoE. Identified omnichannel definitions in the IoE value fabric.

Customer Analytics, CEM Use Case & IoT Monetization - Analyzed EM Use cases in IoE context. Worked to understand CEM Use case template and customize. Identified common CEM use cases in the IoT context. Developed new Use cases for CEM in the IoT context - Modified CEM Use case template to incorporate IoT concepts. Using the current library of CEM use cases, identified candidates which should be extended to the IoE context. Identified new CEM use cases for IoE & prioritized them.

Wednesday

Customer Analytics. CEM in the context of IOT - Worked on CEM proposed areas, explored possible ways of working for R17.0 as input for discussion with partner teams. Journey definition of "things". Classification/taxonomy of "things" with capability/maturity & metrics. Use Cases way forward, Omni channel in IoT context.

Thursday

IOE Monetization - Consolidation of Materials Collected in Weds Q1. Organized discussions on monetization models and templates from Weds Q1. Summarized essential and optional elements identified into key principles. Summarized discussion on monetization model components from various sources: business scenarios, charging models, etc. - Collected, consolidated, organization monetization discussions to align on a definition of the Monetization and its components.

Joint session with IOE - Customer Analytics. Customer Experience Integrator Use Cases for IoT - Reviewed CEI Health use case and developed new CEI/IOE use cases. Explored the Experience Integrator concept and the opportunity it provides to CSPs for monetization. Reviewed Health Use Case from CEM plus B2B2X perspective. Identified new Customer Experience Integrator Use case areas. Developed new CEI Use cases.

Integration of the CEM / 360 Customer Journey / Omni Channel and CEI contributions with work done during the week on monetization models. Integrated and summarized TAW joint team activities and next steps for Read-out. Building monetize model palette attributes. Co-creation with cross-teams. Achieved some of the goals of fully synching up and aligning models but great discussion for moving forward and aligning with cross teams.

DIGITAL MATURITY MODEL

Many communication services providers, and other traditional service providers, are on a journey to transform themselves into a "digital" businesses to take advantage of the opportunities provided by the latest technology and market conditions. As with any journey some form of map or guide is essential to plan the route and to know how far you have to go; and even when you have arrived. The TM Forum Digital Maturity Model project is following the successful pattern used in other TM Forum maturity models to provide just such a map.

If you are not already a project member, you may join the project here: www.tmforum.org/join-DMM
Members wishing to get involved in the **DIGITAL MATURITY MODEL** project may access the working area on the project Wiki, Confluence, here: https://projects.tmforum.org/wiki/display/DMMP/Workshop+Materials
They may see the meeting notes from the Lisbon TAW and working calls here: https://projects.tmforum.org/wiki/display/DMMP/Meeting+Notes

Summary of DIGITAL MATURITY MODEL Sessions at Team Action Week:

Wednesday

All day workshop; Digital Maturity Model & Metrics Overview & Approach - Introduced the DMMM work to date, explained the objectives of the project, presented the business value of having an agreed standard Digital Maturity Model.

Explained the Strategy and Technology dimensions of the model, the sub-dimensions identified and the start of the metrics for those sub-dimensions discussed the intended use of those metrics and the expected business value. More work on the positioning of the model was identified in context of where the model is used relating to overall business strategy.

Similarly, explained the Customer and Operations dimensions of the model, the sub-dimensions, the start of the metrics for those sub-dimensions, their intended use and expected business value.

Also, explained the Culture/People/Organization dimensions of the model, the sub-dimensions, the start of the metrics for those sub-dimensions, their intended use and expected business value.

FRAMEWORX

The digital service industry has moved beyond the point of planning for transformation and is now taking the first steps on the journey. Although different businesses are following different paths, for CSPs at least it is clear that deployment of virtualized and software defined network technology is well underway. They must now start to maximize the benefits of this technology, over and above simple substitution of existing functionality. The Frameworx project is continuing to evolve the core frameworks to support both the latest technology such as virtualised network functionality, but also the latest business processes such as DevOps approaches.

If you are not already a project member, you may join the project here: www.tmforum.org/join-Fx
Members wishing to get involved in the **FRAMEWORX** project may access the working area on the project Wiki, Confluence, here: https://projects.tmforum.org/wiki/display/FP/Current
They may see the meeting notes from the Lisbon TAW here: https://projects.tmforum.org/wiki/display/FP/TAW+Lisbon+17+Minutes
And working call meeting notes here: https://projects.tmforum.org/wiki/display/FP/Meeting+notes

Summary of FRAMEWORX Sessions at Team Action Week:

The week was almost exclusively focussed on meeting with other project teams from across the strategic programs to ensure that the latest

Monday

Joint session with ZOOM - Operations Centre of the Future - Service Providers' Vision

Joint session with ZOOM - Impact of Onboarding Processes on eTOM and TAM

Joint Meeting with ABDR - Mapping Data Dictionary to SID

Tuesday

Joint session with Security/Privacy - Privacy-Model Improvements - Worked on evolving the Privacy Model.

Joint session with ZOOM - Operations Centre of the Future Impacting Frameworx – Review of Operations Centre of the Future work with respect to Impact on Frameworx to derive planned work for R17. Analysis of Dynamic/Adaptive Processes and impact on eTOM.

Joint session with ZOOM - Shared Network Resource & Service Modelling, alignment with ONF Core Model, showed progress on SID R16.5 CR and its implementation in R17.0.

Joint session with ZOOM - NFV Support in the Information / Data Model - Defined & scoped the methodology for modelling NFV artefacts in TM Forum & the impact on NFV artefacts.

Wednesday

Joint session with ZOOM - License Impact on Onboarding of VNFs - Outlined the process and API requirements covering the impact of Licenses on Onboarding of VNFs and scope work for R17.

Thursday

Demo of Digital Services Toolkit beta to Frameworx – Showcased the new tool that will enable improved interaction with the Frameworx model.

Session to process incoming contributions.

Joint session with API - Work session on X to Cash and Trouble to Resolve eTOM Contribution - completed and approved the X to Cash and Trouble to Resolve eTOM Contribution.

Friday

Data governance and intake & processed the week's activity and action items.

INTERNET OF EVERYTHING

The Internet of Everything (IOE) opportunity is a massive change in how technology enables bringing together people, process, data and things. It makes networked connections more relevant by turning information into actions. This has resulted in predictions of new revenue in the trillions of dollars and the availability of billions of additional connected devices.

The impact on business, technology, and marketplaces is significant, so TM Forum's IoE/Open Digital Program has produced an IOE Roadmap of Challenges which is focused on designing, developing, and implementing collaborative solutions to address these challenges.

If you are not already a project member, you may join the project here: www.tmforum.org/join-ODP
Members wishing to get involved in the **INTERNET OF EVERYTHING** project may access the project Wiki, Confluence, here: https://projects.tmforum.org/wiki/display/ODEP/Internet+of+Everything+IOE+Project+Home
They may see the meeting notes from the Lisbon TAW & working meetings here: https://projects.tmforum.org/wiki/display/ODEP/Meeting+notes

Summary of INTERNET OF EVERYTHING Sessions at Team Action Week:

Monday

IOE Monetization – Aligned goals of the selected program topics for action week using the IoE roadmap of Challenges as well as Applied Innovation areas (such as Blockchain/Smart Contracts). Particular focus on the challenge of managing risk and reward across ecosystems from business partnerships and customer perspectives.

Aligned on a common understanding of the people, processes and systems using real worlds business scenarios to enable monetization. Joint team representation aligning Monetization terminology and concepts and active participation toward setting out goals and plan set out for the week.

Worked to understand key blockchain and smart contract use cases in security, identity, settlement, asset management, and more (repeated each day to give maximum opportunity for those interested in this breaking topic).

Tuesday

Presented Monetization Models and concepts to align common understanding, developed additional models, as well as refined and defined examples for the models. Joint team representation defining concept of use case template and Monetization pattern template. Active participation toward alignment on monetization goals for the week.

Defined, scoped and prioritized the 10 candidate monetization models (topics) for definition in R17.0. End of presentation of monetization concepts, patterns and examples.

Integrated the CEM Use Cases with IOE concepts. Updated the Use Case template and assessed candidate use cases that should be extended using the current library of CEM Use Cases. Identified new CEM Use Cases for IOE & prioritized for R17.0 work items. Different joint sessions between CEM UC & IoT Monetization were planned. Will proceed with a weekly Thursday call with the B2B2X team to create a use case template which is extensible to the IoT team. Will focus on reviewing the 50 existing CEM UC, and its potential applicability to Monetization/IoT. Finally, the proposal is to develop new joint CEM/IoT/Monetization Use cases.

Wednesday

Team aligned on a definition of the Monetization and its components. Agreement on main concepts and definition.

IOE Catalogue Working Team: Worked through R17.0 Deliverables. Presented proposed a set of deliverables to FX SID team. Work to be continued.

DSRA/DPRA Working Team. API Management Proposal - NTT Group Proposal to update the relevant TAM sections, and DSRA Guide, specifically in the Identity Management Support Service, Integration Services and API Management Services. NTT to confirm scope and impacts of their contribution. Provided a contribution describing the wholesale scenarios for inclusion in the DSRA Guide. Used the API Management description in TAM as the basis for the API Management Support Service Description.

Thursday

IOE Monetization - Consolidation of Materials Collected in Weds Q1. Organized discussions on monetization models and templates from Weds Q1. Summarized essential and optional elements identified into key principles. Summarized discussion on monetization model components from various sources: business scenarios, charging models, etc. - Collected, consolidated, organization monetization discussions to align on a definition of the Monetization and its components.

Joint session with IOE - Customer Analytics. Customer Experience Integrator Use Cases for IoT - Review CEI Health use case and developed new CEI/IOE use cases. Explored the Experience Integrator concept and the opportunity it provides to CSPs for monetization. Reviewed Health Use Case from CEM plus B2B2X perspective. Identified new Customer Experience Integrator Use case areas. Developed new CEI Use cases.

Integration of the CEM / 360 Customer Journey / Omni Channel and CEI contributions with work done during the week on monetization models. Integrated and summarized TAW joint team activities and next steps for Read-out. Building monetize model palette attributes. Co-creation with cross-teams. Achieved some of the goals of fully synching up and aligning models but great discussion for moving forward and aligning with cross teams.

REVENUE MANAGEMENT

The TM Forum Revenue Assurance Program has an extensible framework that enables the deployment of effective Revenue Assurance processes across various activities, processes, systems and network technologies.

This Program embraces Revenue Assurance, Fraud Management, Charging and Billing, and Asset Management with the intent of underpinning all the strategic programs, but specifically focused on the challenges identified in the IOE Roadmap of Challenges, notably monetization and trust. The documents produced by these teams represent the state of the art in Revenue Management – help the teams keep them there!

If you are not already a project member, you may join the project here: www.tmforum.org/join-Revenue
Members wishing to get involved in the **REVENUE MANAGEMENT** project may access the working area on the project Wiki, Confluence, here: https://projects.tmforum.org/wiki/display/RM/Revenue+Management+Project+Home
They may see the meeting notes from the Lisbon TAW and working calls here: https://projects.tmforum.org/wiki/display/RM/Revenue+Assurance+Meeting+notes

Summary of REVENUE MANAGEMENT Sessions at Team Action Week:

Session in which a preliminary draft of a "Statement of Direction" was discussed and amended to ensure that the experience and expertise of the RA function can best be deployed/further developed to support the aspirations of evolving organizations as they come to terms with doing 'digital business. The discussions and deliverables will provide the participants with a cookbook on how to strategically develop their functions and to prioritize actions to better benefit their companies.

Revenue Loss – How susceptible are you to revenue leakage? What factors contribute to revenue leakage? Can they be identified, and if so, who 'owns' them, and can the contribution of each be modelled sufficiently well to determine where to focus on organizations' mitigation efforts?

RA Balanced Score card. A session to present the final model of the RA KPIs and Balanced scorecard and continue work on the supporting documents for describing the model, preparing a promotion strategy for the CSPs and RA vendors to ensure they integrate the KPIs model as a standard.

Improving the Risk Coverage Model. Aim to share the enhanced risk coverage model and the updates we applied at TMF Action Week; not only to update the existing GB941-E documents, but also for creating helpful synergy effects for all TMF contributing Telcos.

RA survey. Session which reviewed and discussed the proposed changes to the questionnaire, agree what will be covered, and set out the plan for the survey.

NFV impact on RA. Session to hold an overview of NFV and the changes it brings, brain storm their impact on RA and FM related risks, and create recommendations on how to best mitigate them.

Joint IOE session - IOE Monetization. We know that the IoE opportunity includes a "Roadmap of Challenges" that is faced by every organization trying to monetize the Open Digital Ecosystem. What does this mean for Revenue Management – Revenue Assurance and Fraud management in particular? Are there specific challenges that fall from IOE Monetization – identifying those challenges, whether or not we can meet them, and if not, what needs to be done?

Fraud Survey'17 results- Analysis/review results produce draft report.

Is there a need to develop a 'Lightweight' Fraud Classification Model that is more suitable for use by CSPs in sharing information? Discussion indicated a fraud case (event) template based on a subset of GB954 would be a better approach.

Fraud analytics session to determine how best to use analytics to identify certain complex fraud types. Joint session with Data Analytics team.

TRUST - SECURITY & PRIVACY

If you can't monetize it, why do it? This approach makes monetization the obvious number 1 priority for CSPs and vendors, but it is evident that the issue of trust comes a close 2nd. Trust is a fundamental enabler, both explicitly and implicitly, of digital business. In the IoE ecosystem, established methods of creating trust (long term relationships and experience) will have to evolve, or be replaced by, some form of instant or dynamic trust recognition if the expected synergies from the IoE are to be realized.

If you are not already a project member, you may join the project here: www.tmforum.org/join-Security
Members wishing to get involved in the **TRUST - SECURITY & PRIVACY** project may access the working area on the project Wiki, Confluence, here: https://projects.tmforum.org/wiki/display/SPP/Work+in+Progress
They may see the meeting notes from the Lisbon TAW and project calls here: https://projects.tmforum.org/wiki/display/SPP/Privacy+Meeting+Notes

Summary of TRUST - SECURITY & PRIVACY Sessions at Team Action Week:

Detailed Overview of Trust/Privacy Project Goals for the Week. Presentation of work done. GDPR update. Plan for week.

Joint session with Frameworx - Defined the data formats required for portability (GDPR requirement) that could utilise TMF SID. (Review SID business entities, taxonomy, classification & analysis.) Good review of how personal data portability is addressed in the Information Framework (SID).

Worked to understand Data governance/management and relationship to Security/Privacy Management & Trust. Identified a way forward for respective teams, work packages and leads.

Aligned on a common understanding of the Trust 'Roadmap of Challenges'. Defined and Scoped discrete components of trust. Worked on how to achieve instantly recognizable trust ('transient trust') between participants in a complex digital ecosystem. What should be in a maturity model/underpin a 'trust index'/. Establish requirements of 'trust team'.

How to track leakage of data or ensure your ecosystem can still be trusted. Watermarking is a method that attaches origin of a piece of information into this piece of information: extended to data management, watermarking is a way to ensure traceability of personally identifiable information.

AGILE IT / ZOOM

The digital services industry has moved from planning for transformation to taking the first steps on the journey. Although different businesses are following different paths, for CSPs it is clear that deployment of virtualized and software defined network technology is well underway. CSPs must now start to maximize the benefits of this technology, over and above simple substitution of existing functionality. For the ZOOM project, this means a move from artefacts that enable transformation, to assets that can be used in the design and realization of systems, and enable the procurement, deployment and operation of them as part of a profitable business.

If you are not already a project member, you may join the project here: www.tmforum.org/join-Zoom
Members wishing to get involved in the **AGILE IT / ZOOM** project may access the working area on the project Wiki, Confluence, here: https://projects.tmforum.org/wiki/pages/viewpage.action?pageId=71741712
They may see the meeting notes from the Lisbon TAW here: https://projects.tmforum.org/wiki/display/ZOOM/Lisbon+TAW+2017+Meeting+Notes
And working call meeting notes here: https://projects.tmforum.org/wiki/display/ZOOM/Meeting+notes

Summary of AGILE IT / ZOOM Sessions at Team Action Week:

Monday

Aligned the team on ZOOM AW Scope, Charter intent and Document Roadmap. Resolved common goals and aims and understanding - especially about creating output that can be adopted &/or consumed in an impactful way. Document Roadmap presentation provided a useful overview and basis for discussion.

Alignment with DPRA document - expand to entities in general, i.e., Hybrid Infrastructure Management Platform (HIP). Reviewed scope of proposed changes and agreed.

Operations Centre of the Future - Service Providers' Vision - Define & Scope: Explored Service Providers' vision - Compared elements from DPRA and FMO & how they map into it – separated the business and operational view of the architecture from the technical implementation view and related the two to each other. A lively discussion covering a wide range of topics, resulting in an action plan for R17.0.

Joint session with Frameworx - Impact of Onboarding Processes on eTOM and TAM - Derived methodologies and additional skills/resource required to produce the following in R17: Onboarding scope and taxonomy definition; Mapping and gap analysis of onboarding processes and APIs in the scope of eTOM and TAM. Useful joint / cross-team meeting that led to plans for a weekly call to take the analysis forward.

Tuesday

Introduced team to new-comers & new-comers to team & the project stream. Specifically regarding Onboarding; examined the role for onboarding automation. e.g. infrastructure (fixed, manual) vs. add-on Platform and SaaS (Software as a Service) elements (full automation); need to abstract to support a variety of licensing business models; The team need to further look into change management automation; Metrics: Agreed need to look into two classes of metrics: Platform vs. application/sw.

Joint session with Frameworx - Shared Network Resource & Service Modelling based on ONF Core Model - Show progress on SID R16.5 CR and its implementation in R17.0.

Joint session with Frameworx - Reviewed Operations Centre of the Future work with respect to Impact on Frameworx to derive planned work for R17. Deliverable TAM/SQA: IG1130B – Achieved the objective of the meeting was to get approval on the orchestration application. Analysis of Dynamic/Adaptive Processes and impacts on eTOM (IG1145)

Onboarding and Lifecycle Management - reviewed and processed inputs for incorporation in R17.0 - Working session to progress the new TR for packaging metamodel and metadata specifications.

(All day workshop) DPRA Session: 5G Management - OSS/BSS for 5G, The Hybrid Management Platform solution. The aim was to learn and understand the latest developments in Next Generation Network Management (NGNM). Identify need for 5G enabled CFS as a main priority. Agreed Outline liaison activities/timeline with NGNM and MEF.

Wednesday

Joint session with Frameworx - License Impact on Onboarding of VNFs. Outlined the process and API requirements covering the impact of Licenses on Onboarding of VNFs and scopeed work for R17. Very good participation and outcome met the objective of the session.

Joint session with API - Mapping of APIs to Hybrid Platform Management capabilities - scoping and planning session towards a face to face meeting to be held at a future date. Agreed list of joint work items to support HIP Minimum Viable Product(s). Set up joint meeting schedule and standing agenda.

Onboarding and Lifecycle Management – The aim was to review and process inputs for incorporation in R17.0 - Working session to progress the new TR for packaging metamodel and metadata specifications. Agreed need working calls for deeper discussion re OLM metamodel and the VNFD and NSD work that the OCF & HIIM teams are doing to derive coherent and consumable TMF message and artefacts. Discussed Instantiation Options for Composite Entities. Decided that intent and detailed based approaches to resource function instantiation are needed. Agreed not to directly support a flavour-based approach but rather try to map the flavour-based approach to the intent-based approach.

Operations Centre of the Future - DevOps practical Guide (IG1151) – the aim was to review, edit and expand a practical guide to DevOps implementation, referencing IG1137 and other documents

as required. Well-attended and balanced review of the draft document that identified several volunteers to review, edit and contribute to the guide.

Joint session with API - Analyse Hybrid Infrastructure Platform Assurance requirements on APIs (SLAM, Resource Alarm Mgt, Performance Mgt and Event Mgt). Identified and agreed changes to SLAM, Resource Alarm Mgt, Performance Mgt and Event Mgt API based on ZOOM analysis and liaison discussions with ETSI NFV.

Thursday

Model Driven Service Orchestration- Findings on Information Model and TOSCA. Presented findings on Information Model and TOSCA from experience gained during the Model Driven Service Orchestration Catalyst.

Orchestration Choreography and Policy - Detailed review of IG1140 work so far and agreed scope & ownership of remaining sections to complete - in anticipation of the workshop, Q2-Q4, following on. Reviewed the contents of TR262 with those present.

NFV Orchestration - Security & Policy Management (IG1140) - Workshop to perform further review and development of IG1140 with a view to completing outstanding work. Agreed an approach which recognises we are moving to Software Defined Parameters from box based security. Specific deliverables are to document setting out; Security threats, principles and best practices for scope of HIP. Use subset of the Sloman Domain and security model as a tool to show how a security analysis of HIP and the supporting Open APIs can be modelled for multiple scenarios (with a worked example). Set of normative check list for evaluation of HIP deployments and guidelines.

User Story Session (TR229A updates) - Introduced contributions relating to network slicing and micro-services. Need to state the problem to be solved first and then mention microservices as a possible solution. Good presentation concerning 5G network slicing.

Review and resolve issues relating to open JIRA Contributions and ensure that they are planned into the work.

Friday

Joint Session with API - Hybrid Infrastructure Platform Fulfilment - Further development of provisioning (TR255) and connectivity model (IG1147) and the associated entity provisioning API. The focus on fulfilment issues (required updates to several APIs in support of ZOOM requirements). Agreed to have follow-up calls between the two projects.

Retrospective on TAW - Derive any implications on scope and Charter, agree plans for ongoing work, formulate meeting plan for R17. Review Zoom document map.

CATALYSTS

TM Forum's Catalyst Program launched a brand new set of collaborative proof-of-concept projects at Action Week, to be demonstrated at TM Forum Live! 2017. The Forum received 40 Catalyst proposals, 29 of which were pitched this week and 35 teams are expected to demonstrate their projects in Nice. Each of the Catalysts focuses on challenges being addressed in the Forum's three strategic programs – Agile Business & IT, Customer Centricity, and Internet of Everything (IoE) – or specific challenges related to security and privacy, smart cities or application program interfaces.

Agility is the goal

Many of the Catalysts are ongoing projects, including the largest project, Enabling Digital Marketplaces, which features six service provider champions – AT&T, China Mobile, Orange, Verizon, Vodafone and Telstra. The Catalyst, which has won multiple awards at TM Forum events, is building a platform prototype to help network operators automate the full lifecycle of virtual functions.

A new platform-focused Catalyst called 5G Service Operations, will deliver network as a service with a wide range of service level agreement characteristics based on multiple 5G and legacy network technologies including open source technology. This project will further the Forum's work on the Digital Platform Reference Architecture (DPRA) and the Hybrid Infrastructure Platform.

All about the customer

Several of the Customer Centricity Catalysts are addressing challenges related to customer journeys. An ongoing project called APPEX Omnichannel, will identify friction points and vulnerabilities within the customer journey, create mitigation and optimization responses, and apply these in real time across all channels. Another called Experience Journey Shaping with Data Analytics, will introduce an automated decision-taking platform across the functional units of a digital service providers' organization so that it can optimize agile action-taking across the entire organization.

Internet of Everything

The IoE Catalysts are exploring opportunities to monetize the IoE, from analytics for digital health to smart industrial manufacturing and smart cities. The ongoing Smart Life Catalyst is particularly exciting; it is working towards commercializing the platform co-created by the team, deliver innovative and secure smart city services. They ran phase one of its incubator process in Lisbon.

Tackling privacy

An exciting new Catalyst called GDPR Compliancy through the QiY Scheme is working to simplify compliance with the European Union's General Data Protection Regulation (GDPR) by giving people control over their own data while providing value to organizations by creating the opportunity to offer similarly compliant new services. The Qiy Foundation has been developing a scheme to give individuals control of their data by making them the center of their own network.

Highlighting APIs

Several projects, most of them new, are focusing on opportunities and challenges related to APIs. A new project called Data Anonymizing API is working to provide a set of Open APIs to anonymize data coming to and from private cloud to public cloud, while a continuing project called API Sandpit Simulator is planning to demonstrate implementation of MEF services using the Forum's Open APIs.