



## MEF Member Bulletin – February 2019

### Q1/19 Hong Kong Meeting Highlights

Dear MEF Members,

I am pleased to share highlights from the productive MEF Q1/19 Members Meeting in Hong Kong. A special thanks to PCCW Global and Tata Communications for sponsoring the event.



We have had a great start to the new year as we strive to accelerate development and worldwide adoption of MEF 3.0. In 2019, MEF is focused on enabling service providers to (1) **transform** their businesses, services, and networks, (2) **federate** on a global basis, and (3) **certify** that their service offerings comply with MEF 3.0 standards.

See [Member Bulletin - February \(ppt\)](#) for presentation material related to the bulletin.

We look forward to seeing many of you at the [MEF Q2/19 Members Meeting](#) in Dubrovnik, Croatia, Apr. 29 - May 2, the [MEF Annual Meeting](#) in Philadelphia, Pennsylvania, July 29 - Aug. 1, and [MEF19](#) in Los Angeles, Nov. 18-22. Contact Alysia Bennett at [alysia@mef.net](mailto:alysia@mef.net) for MEF19 sponsorship info and take advantage of a 15% Super Early Bird sponsorship savings by Feb. 15.

### **Summary – Accelerating MEF 3.0 Development & Implementation**

With the [MEF 3.0 transformational global services framework](#), MEF is focused on defining, delivering, and certifying assured services orchestrated across a global ecosystem of automated networks. MEF 3.0 services provide an on-demand, cloud-centric experience with unprecedented user- and application-directed control over network resources and service capabilities.

MEF has made significant strides across all key elements of the framework, including: standardized services; LSO APIs; services, technology, and professional certification; and community collaboration. We summarized key developments in 2018 in the [MEF 3.0 Momentum](#) press release issued at MEF18.

Below are summary highlights from the last few months. Read further in this Bulletin for additional details.

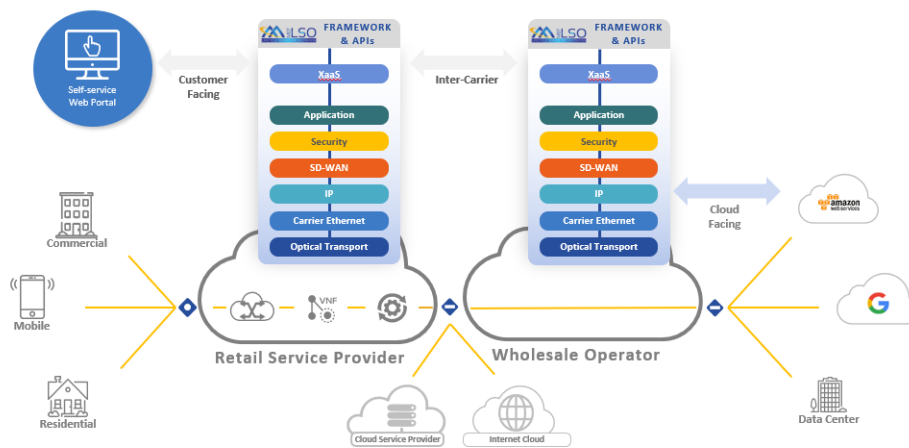
- Services Committee
  - MEF published updates to CE standards [MEF 10.4](#), [45.1](#), [51.1](#), including improvements to ensure services are orchestration-ready, support for virtualized UNIs, etc.
  - [IP Service Attributes update \(MEF 61.1\)](#) entered Letter Ballot
  - We currently are in the process of rolling out 7 Call for Comments (CfC) Ballots related to IP, CE, Optical Transport, and cloud services projects
- Applications Committee
  - Our groundbreaking Draft [SD-WAN Attributes and Service Definition Standard](#) is now in CfC Ballot 3, with the goal of Letter Ballot in Q2/19.
  - [SD-WAN Application Security project](#) is now launched with the goal of providing a draft SECaaS standard for Application Protection on SD-WAN by MEF19, along with a MEF 3.0 SECaaS PoC at MEF19.



## MEF 3.0 Global Services Framework



## Assured Services Across a Global Ecosystem of Automated Networks



- LSO Committee
  - MEF published 3 new LSO standards ([MEF 57.1](#), [74](#), [78](#))
  - [Business Requirements and Use Cases for Access E-Line Service Control \(MEF 76\)](#) entered Letter Ballot
  - Expect 8 LSO Sonata and LSO Presto projects to go to Letter Ballot Decision between Meetings (DbM) in Q2/19.
  - As announced at MEF18, LSO Sonata API technical specs and SDKs currently are available in a Developer Release for serviceability, product inventory, quoting, and ordering. This gives members a head-start in implementing LSO Sonata APIs for inter-provider service orchestration.



- Certification Committee
  - Professionals: Focused on marketing [MEF-SDN/NFV](#), evolving [MEF-CECP](#), and exploring options for professional certifications covering LSO and SD-WAN.
  - Services & Technologies: Planning to introduce LSO Sonata pilot certification in the first half of 2019 and SD-WAN pilot certification in mid-2019.
- Marketing and Education Committee
  - Mission: accelerate industry adoption of business-enabling MEF products to support the digital transformation journey.
  - Primary MEC function is the productization of MEF artifacts and the overall product portfolio management with support from PRM, leadership team, SMEs.
- Office of the CTO
  - The concept of MEF 3.0 Implementation Projects has been converged with that of the MEF Proofs of Concept at MEF19. We will be working with all the teams to develop MEF 3.0 PoCs, many of which will be showcased at MEF19.
  - [MEF 3.0 PoCs at MEF19](https://www.mef.net/2019_PoC_Submissions_Portal/) - submission of proposals is now available at [https://www.mef.net/2019\\_PoC\\_Submissions\\_Portal/](https://www.mef.net/2019_PoC_Submissions_Portal/).

## MEF 3.0-Related News, Videos & Research

[MEF in the News \(on MEF.net\)](#) - articles & videos across the community

[MEF YouTube](#) - 70+ recent MEF18 / MEF 3.0 videos - a gold mine of information

[Press Releases](#)

[Collaborative MEF/Analyst Research Reports](#)

- [Migration to MEF 3.0 Services Powered by LSO \(MEF & Vertical Systems Group, Nov 2018\)](#) - This survey-based report is a benefit of MEF membership and is not to be distributed beyond MEF members. You may use portions when citing MEF & Vertical Systems Group as the source.
- [SD-WAN Strategies Survey Report \(Heavy Reading/Light Reading, Oct/Nov 2018\)](#) - Produced in collaboration with MEF, this survey-based report is available for both MEF members and nonmembers. You may use portions when citing HR/LR as the source.
- [CSP Network Automation \(Futurion, Dec 2018\)](#) - Co-sponsored by MEF, this survey-based report is a benefit of MEF membership. You may use portions when citing Futurion as the source.

## Welcome! New Members

MEF is pleased to welcome the following new Members who have joined since early October: [NTT Communications](#), [EPB Fiber Optics](#), [Lyntia](#), [Telxius](#), [Comarch](#), [DCConnect](#), [Enea Software](#), [Inmanta](#), [Sedona Systems](#), and [VT iDirect](#).

## Congratulations MEF 3.0 Certified Companies!

MEF is pleased to recognize the growing list of companies who have achieved MEF 3.0 certification:

- Service Providers: Cable ONE Business, CMC Telecom, Fiberail, TIME
- Technology Providers: ADVA Optical, Ciena, Cisco, H3C, Huawei, Juniper



### Congratulations Editors!

MEF thanks the following editors for their diligent contributions related to newly published standards:

- [John Strassner](#), Huawei, [MEF 78 - MEF Core Model](#)
- [Shahar Steiff](#), PCCW Global, [MEF 74 - Commercial Affecting Attributes](#)
- [Dawn Kaplan](#), Ericsson, [MEF 57.1 - Ethernet Ordering Technical Specification – Business Requirements and Use Cases](#)
- [Bill Bjorkman](#), MEF, [MEF 51.1 - Operator Ethernet Service Definitions](#).
- [Steve Haddock](#), MEF, [MEF 45.1 - Layer 2 Control Protocols](#).
- [Bob Klessig](#), MEF, [MEF 10.4 - Subscriber Ethernet Service Attributes](#).

### Hong Kong Plenary & Birds of a Feather Presentations

- [President's Address](#) – [Nan Chen](#) President, MEF; CENX Advisor, Ericsson
- [Sponsor Keynote: A Digital Transformation Journey](#) - Kapil Kumar Jain, VP Product Management, Tata Communications
- [Sponsor Keynote: Connecting a Massive Digital Future with 5G](#) – Paul Berriman, Group CTO, PCCW & HKT
- [MEF 2019 Vision Update & Strategic Projects](#) – [Pascal Menezes](#), CTO, MEF
- [MEF 3.0 Certification Plans for 2019 & Ceremony, Editor Awards](#) - [Nan Chen](#), President, MEF; [Kevin Vachon](#), COO, MEF
- APAC Panel – The Journey to Network & Service Transformation - moderated by [Dan Pitt](#), SVP, MEF
  - [Dai Kashiwa](#), VP of SDN/NFV Technology Development, NTT Communications ([slides](#))
  - [Divesh Gupta](#), VP - Technology and Sales Operations, PCCW Global ([slides](#))
  - Song Toh, VP of Product Management, Tata Communications ([slides](#))
- Birds of Feather
  - [Data on-Demand Through a Federated Commercial and Operational Platform](#) - [Shahar Steiff](#), PCCW Global
  - [Network Slicing](#) - [Sibylle Schaller](#), NEC
  - [SOF to SOF in a Multi-service Ecosystem](#) - [Mark Gibson](#), Amdocs



## MEF 3.0 Workshops in HK

MEF 3.0 Workshop presentations cover important aspects of MEF work related to transformation, federation, and certification. Also see Committee summary slides for the up-to-date information on the status of projects.

- [Introduction](#)
- Transitioning to MEF 3.0 Services and Application-Aware Networking
  - [Latest Advancements in MEF 3.0 Carrier Ethernet, Optical Transport, IP Services Standardization](#) - [David Ball](#), [David Martin](#)
  - [Aligning the Industry on Standardized MEF 3.0 SD-WAN Managed Services](#) - [Rami Yaron](#)
  - [What Needs to be Standardized to Deliver Security-as-a-Service?](#) - [Pascal Menezes](#)
  - [MEF 3.0 & 5G: Transport, Network Slicing, Orchestration & Fixed-Mobile Convergence](#) - [Dan Pitt](#)
- [Automating Services with LSO](#)
  - LSO - [Chris Purdy](#)
    - LSO Reference Architecture
    - Standardizing Inter-Carrier Operations
    - Standardizing Intra-Carrier Operations
  - Intent-Based Networking - [John Strassner](#)
- MEF 3.0 Certification
  - [Professional Certification - MEF CECP, MEF-SDN/NFV, MEF-NF](#) - [Kevin Vachon](#), [Rami Yaron](#)
  - [Service & Technology Certification](#) - [Gregory Spear](#), [Bob Mandeville](#), [Isabelle Morency](#), [Larry Samberg](#)

## MEF Organizational Structure

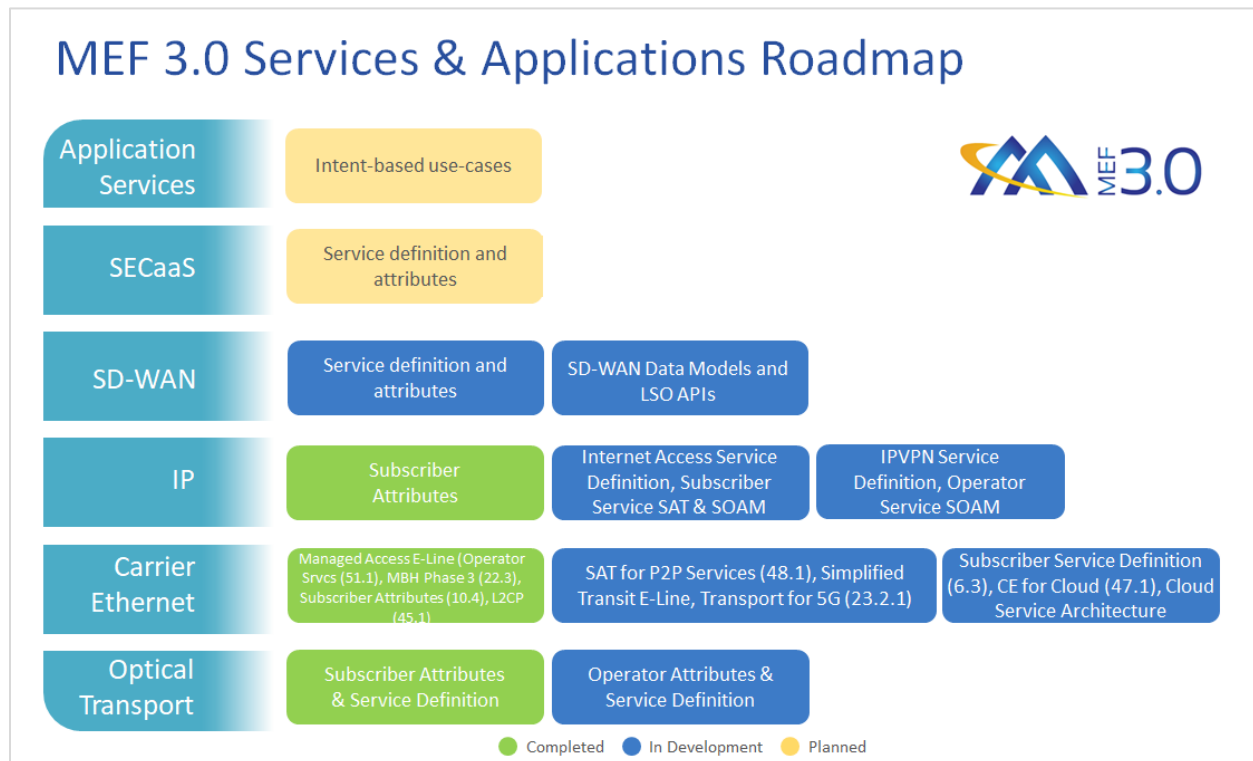
- [Board of Directors](#)
- [CTO Office / MEF 3.0 Community](#) - [Pascal Menezes](#)
- [Services Committee](#) - Co-Chairs [Jason Wolfe](#) (Bell Canada) & [David Ball](#) (Cisco)
- [LSO Committee](#) - Co-Chairs [Andy Mayer](#) (AT&T) & [Chris Purdy](#)
- [Applications Committee](#) - Co-Chairs [Charles Eckel](#) (Cisco) & [Mark Gibson](#) (Amdocs)
- [Marketing & Education Committee](#) - Co-Chairs [Rami Yaron](#) (InfoVista) & [Zeev Draer](#) (ADVA)
- [Certification Committee](#) - Co-Chair [Gregory Spear](#) (Accedian) & open position

## [Services Committee](#)

### *Highlights*

See the [Q1/2019 Services Committee Summary](#).

- 11 active projects
- 1 project entered Letter Ballot: [MEF 61.1 - IP Service Attributes](#) (now incorporating Operator IP service attributes)
- We are in the process of rolling out 7 CfC Ballots related to IP, CE, Optical Transport, and cloud services projects



MEF published the following updates to CE standards in 2H Dec 2018:

- [MEF 51.1 - Operator Ethernet Service Definitions](#). This update aligns the definition of Operator Ethernet services with the Service Attributes defined in MEF 26.2. It defines 3 general services: O-Line, O-LAN and O-Tree; and four specific services: Access E-Line, Access E-LAN, Transit E-Line and Transit E-LAN.
- [MEF 45.1 - Layer 2 Control Protocols](#). This update clarifies and improves the guidance on handling Layer 2 Control Protocols in Ethernet services and improves alignment with other MEF CE standards.
- [MEF 10.4 - Subscriber Ethernet Service Attributes](#). This update to the MEF 10.x series revises the definitions of Service Attributes for Ethernet Subscriber services with more rigorous and clearer definitions to ensure the services are orchestration-ready. It also adds support for virtualized UNIs, improves alignment with other MEF CE Standards (notably MEF 26.2), and simplifies or removes a number of Service Attributes that were overly complex or rarely used.

### 2019 Focus

The Service Committee's focus in 2019 particularly will be on expanding our IP Standards, including additional LBs expected on the following:

- Subscriber IP Service Definitions, for Internet Access services and IP-VPN services
- Service OAM for IP Services
- Service Activation Testing for IP Services



## Applications Committee

### Highlights

See the [Q1/19 Applications Committee Summary](#).

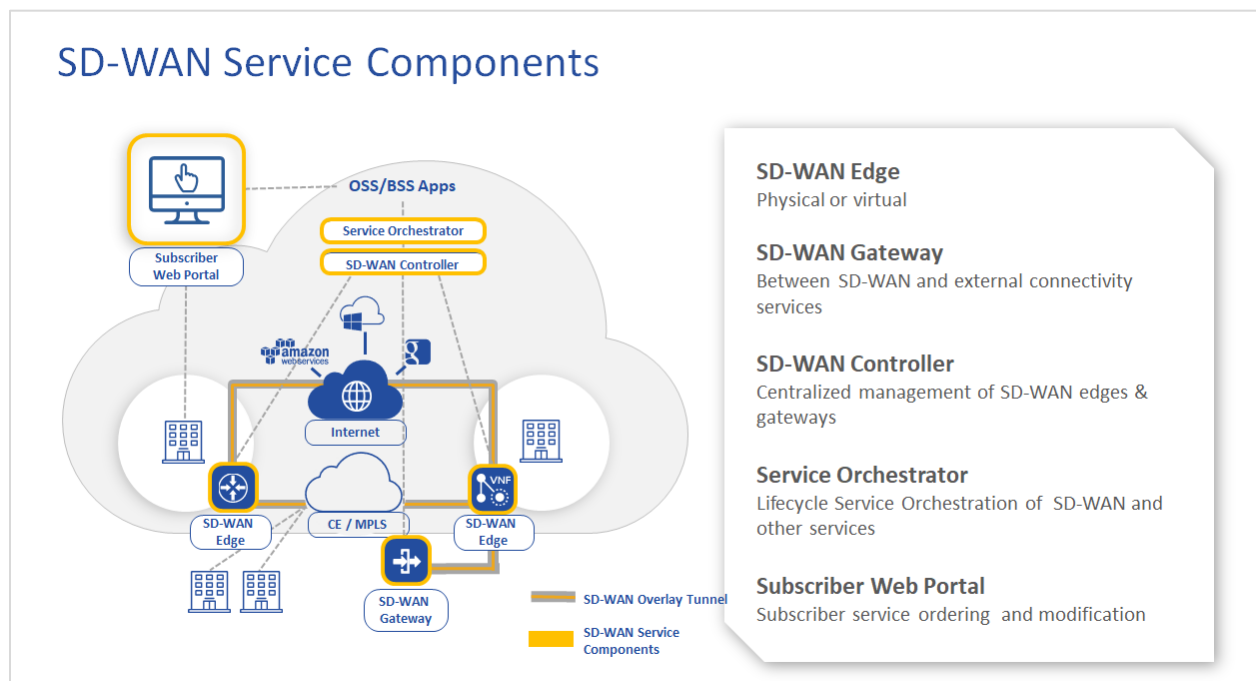
- Draft [SD-WAN Attributes and Service Definition Standard \(WD 0.33\)](#) entered CfC3 in early February, with the goal of Letter Ballot in 2Q/19. See [SD-WAN Service Definition - Standard Drafts and Contributions](#) for the latest developments.
- [SD-WAN Application Security project](#) - goal to provide a draft SECaaS standard for Application Protection on SD-WAN by MEF19, along with a MEF 3.0 SECaaS PoC at MEF19.
- Progressed Intent project
- Launched new SD-WAN Phase 2 adhoc

### 2019 Focus

The Applications Committee aims to begin a second version of the SD-WAN standard covering advanced topics deferred from the first version.

The Committee is working on a number of other items and seeks active contribution in:

- Intent-based networking, with experimental contributions expected throughout the year.
- uCPE management framework definition, providing a common foundation for several other Application Committee standards.







## LSO Committee

### Highlights

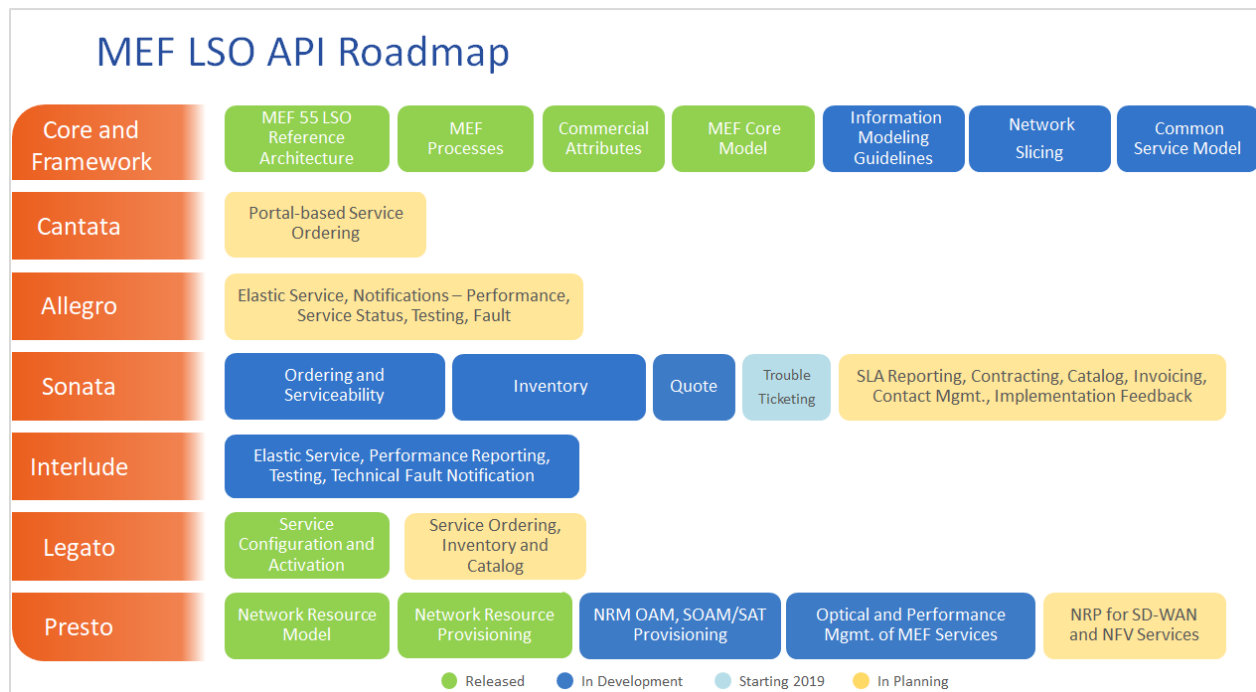
See the [Q1/19 LSO Committee Summary](#).

- 16 active projects
  - 1 project entered Letter Ballot: [Business Requirements and Use Cases for Access E-Line Service Control \(MEF 76\)](#)
  - 8 LSO Sonata and LSO Presto projects are poised to go to Letter Ballot DbM in 2Q/19.
  - 2 projects launched in HK: [MEF Common Resource Model](#) and MEF Core Model #2
- 3 new adhocs
  - [Federated Orchestration Framework](#)
  - [LSO Architecture for Cloud Services](#)
  - [API Mechanisms and Framework](#)

MEF has just published three new MEF 3.0 LSO standards:

- [MEF 78 - MEF Core Model](#)
- [MEF 74 - Commercial Affecting Attributes](#)
- [MEF 57.1 - Ethernet Ordering Technical Specification - Business Requirements and Use Cases](#)

As announced at MEF18, LSO Sonata API technical specs and SDKs currently are available in a Developer Release for serviceability, product inventory, quoting, and ordering. SDKs are on the [MEF public GitHub](#).







### 2019 Focus

- Completion of LSO Sonata work for Serviceability, Quotation, Ordering, and Inventory
- Completion of LSO Interlude work for elastic and configurable services
- Development of generalized models for Products and Services
- Update of LSO Legato work to support services catalog and align with ONAP
- New LSO Sonata work covering trouble ticketing and real-time service assurance
- Completion of LSO Presto work to cover OAM and Service Activation Testing

### Certification Committee

#### Highlights

See the [Q1/19 Certification Committee Summary](#).

- Professional Certification
  - [On-Demand Webinar - Addressing the SDN/NFV Skills Gap for Network & Service Transformation \(slides – pdf\)](#)
  - Reviewed market positioning of MEF's SDN/NFV exam versus the legacy ONF OCSA test and contemplated marketing requirements for 2019
  - Debated options and plans for the evolution of MEF-CECP to include additional connectivity services in the areas of Optical Transport and IP, in addition to new recent and pending Carrier Ethernet standards
  - Introduced options for the introduction of LSO topics to existing certifications and the opportunity for a new LSO certification
- Services and Technology Certification
  - Planning of the LSO Sonata certification pilot program
  - Planning of the SD-WAN Certification pilot/market assessment
  - Establishment of a new Services and Technology certification draft lifecycle

### 2019 Focus

- Professional Certification
  - Expanded marketing program in support of MEF-SDN/NFV exam adoption
  - LSO and SD-WAN certification planning
  - Evolution of MEF-CECP to include additional connectivity services in the areas of Optical Transport and IP and new Carrier Ethernet standards
- Services and Technology Certification
  - Introduce LSO Sonata certification, commencing with a pilot program, with first certified companies expected in the summer of 2019
  - Introduce SD-WAN certification, with first certified companies announced at MEF19
  - Commence blueprints, market assessments, and pilot planning for Optical Transport services and LSO Presto

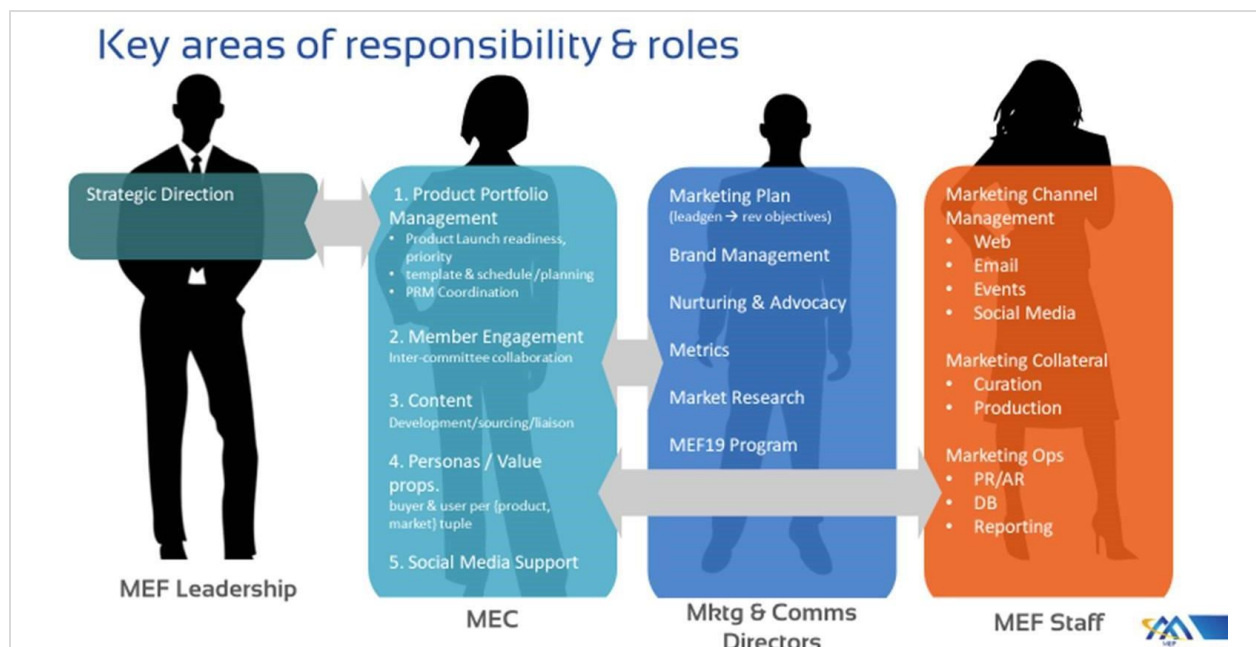


## Marketing & Education Committee

### Highlights

See the [Q1/19 Market & Education Committee Summary](#).

- New proposed **MEC mission: Accelerate the adoption of business-enabling MEF products by the industry to support digital transformation journey**
  - Primary MEC function is the **Productization of MEF artifacts** and the overall product portfolio management with support from PRM, leadership team, SMEs.
  - Looking for marketing volunteers interested in well-defined inbound and outbound tasks providing recognition to individuals and their employers
  - Sample jobs include 1) buyer persona development for particular products, 2) sketch video production working with 3<sup>rd</sup> party resources, 3) value proposition development and more.
- **Women in Telecoms** program be part of MEF19 – contact [Lori@mef.net](mailto:Lori@mef.net) for input, participation
- New project proposed on positioning **cloud and network orchestration** via white paper by [Jack Pugaczewski](#); accepted
- **MEF Webinars** re-launching this year; plan in development (schedule, proposed topics, etc.)
- **MEF Staff NEWS:**
  - Director of International Marketing – [Christopher Cullan](#) joined the team during the week in HK. Note 20% of Chris' role is MEF development in SE Asia.
  - Manager, Commercial Events Engagement - [Heather Hobbs](#) recently joined and will be prime managing our Webinar Program





## 2019 Focus

- [Mef.net](#) – following the prototype look & feel on recent [Sonata/SD-WAN](#) pages, MEF's web presence will be transformed beginning in 2019 to be the primary source of accurate, engaging, highly accessible information for MEF brand, mission and key products/value propositions.
- **Templating outbound promotions** to support product launches across product portfolio
- Refining **MEF 3.0 Workshop** content
- Amplification of MEF member **engagement**
- Productize & promote **MEF 3.0 services certification**
- Productize & promote **SD-WAN services** standard
- Productize & promote **LSO Sonata with Carrier Ethernet**, incl. certification.
- Productize & promote **LSO Presto**
- Calendar of [Upcoming Events](#) (click for full list)
  - [Capacity Middle East March 6-7, Dubai](#)
  - [Layer123 Zero Touch Automation Congress March 26-28, Madrid](#)
  - [MPLS + SDN + NFV World Congress & MEF 3.0 Workshop, April 9-12, Paris](#)
  - [Network Transformation Congress April 29-May 1 San Jose](#)

## Office of the CTO

### Highlights

See the [Q1/19 CTO Office Summary](#).

- **MEF 3.0 Proofs of Concept (PoC):** The concept of MEF 3.0 Implementation Projects has been converged with that of the MEF Proofs of Concept at the MEF19 event. From now on, we will be working with all the teams to develop **MEF 3.0 PoCs**, many of which will be showcased at MEF19. The MEF 3.0 PoCs will have a significant element of coordination and alignment with the MEF technical projects for the benefit of both the standardization work of MEF and the collaborative efforts of the MEF members in the MEF 3.0 PoCs. **Submission of proposals for MEF 3.0 PoCs is now available** at [https://www.mef.net/2019\\_PoC\\_Submissions\\_Portal/](https://www.mef.net/2019_PoC_Submissions_Portal/) with information for MEF members at <https://wiki.mef.net/display/POC>.
- **MEF 3.0 Products:** Different views of the status and roadmap of MEF 3.0 work in MEF are being defined for different constituencies including MEF members, the public, and the MEF technical leadership. This is based on a new productization approach being introduced where access to deliverables from MEF (e.g. standards, SDKs, White Papers) are 'packaged' as products to match the needs of key personas in service providers, vendors, and enterprises. Standard product lifecycle concepts are applied, including releases and features. Examples of such products are Carrier Ethernet services, Optical Transport services, IP services, SD-WAN services, LSO Sonata, and LSO Presto. The first product roadmap views will be presented at the MEF Dubrovnik mtg.
- **SD-WAN Program:** With progress towards approval of the SD-WAN attributes and service definition standard (currently Draft MEF 70), activities in the Applications Committee, the Office of the CTO (MEF 3.0 PoCs) and the Certification Committee (market assessment, pilot testing phase) are being coordinated to complete the SD-WAN service MEF product to include certification in the second half of 2019. More information is available from [Daniel Bar-Lev](mailto:daniel@mef.net) (daniel@mef.net)



- **LSO Sonata IT Developer Team:** A new effort to help service providers use LSO Sonata for automated federation of services spanning multiple domains has been introduced on GitHub. Aimed at IT departments in service providers that have been tasked with implementing standardized LSO Sonata API, MEF is reaching out to service provider members to include them in the team. Access is available on GitHub at <https://github.com/orgs/MEF-GIT/teams/lso-sonata-it-community>. More information is available from [Daniel Bar-Lev](mailto:daniel@mef.net) (daniel@mef.net) and [Joe Ruffles](mailto:joe@mef.net) (joe@mef.net).

*2019 Focus*

- The objectives of the second year of the program will be: increase participation in MEF 3.0 PoC collaborative projects; make SD-WAN service certification available; increase awareness in the MEF membership and in the industry as a whole of MEF Products and their releases; and accelerate adoption of LSO Sonata by IT departments in service providers.
- Activities will include supporting introduction of new strategic work on SD-WAN, SECaaS, automated access aggregation, Intent Based Networking, and Blockchain.
- **Key dates for MEF 3.0 PoCs at MEF19:**
  - Open for submissions: February 12
  - Detailed submissions due: May 10
  - Final Submission & Acceptance of Terms & Conditions: July 12
  - MEF 3.0 Proof of Concept Selections Announced: July 29

Sincerely,

[Stan Hubbard](#)

Communications & Research Director, MEF

MEF18 Program Director

[stan@mef.net](mailto:stan@mef.net)