

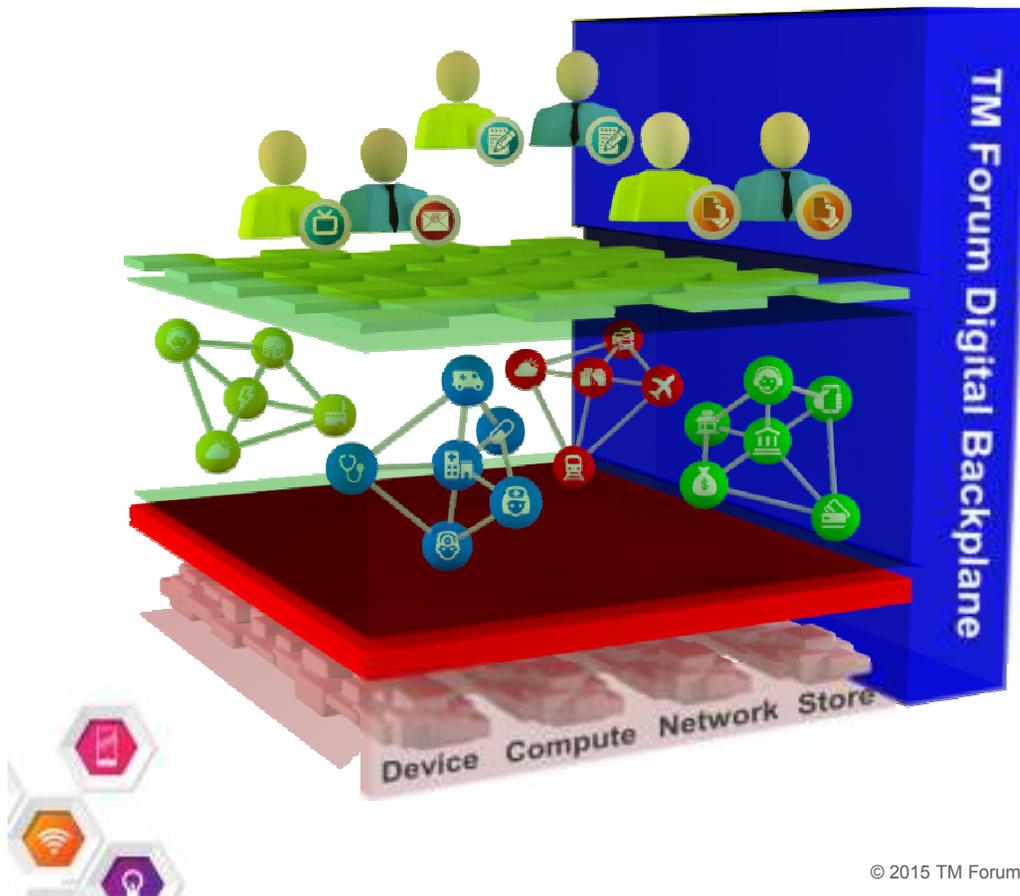


# Program Overview



Peter Dunmore, VP, Program & Portfolio  
Management, Program & Portfolio Management

# Digital Dynamics



Customers want to buy high quality digital services delivered and managed seamlessly.

The value chain has become the value fabric.

To compete, ecosystem partners must interact efficiently, assembling service components from many partners.

... So TM Forum is going to ...

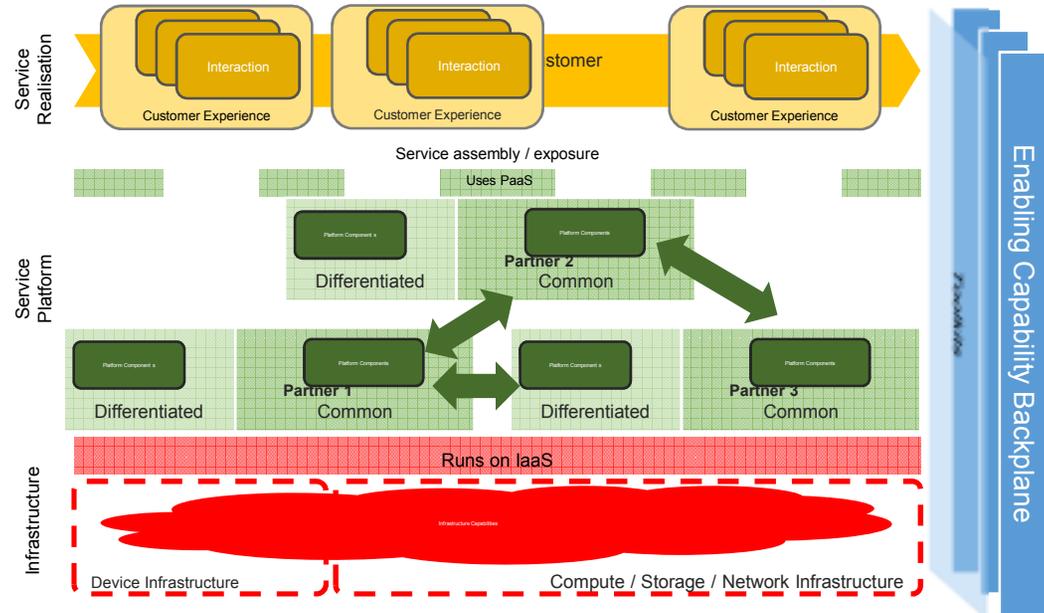
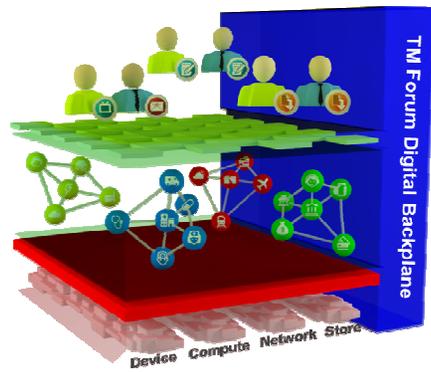
# Delivering practical tools to optimize your digital business



Concrete,  
implementable,  
proven, practical  
tools and  
frameworks



# Digital Ecosystem Reference Architecture



Creating a common language and structure for better co-operation

- ✓ White paper to bootstrap the Digital Ecosystem Reference Architecture Project Team
- ✓ Project work stream within Open Digital initially
- ✓ SaS discussion during AW
- ✓ Workshop early September / DERA V.1 for Fx 15.5



# Digital Process

## The Collaboration Lifecycle



### Ingest

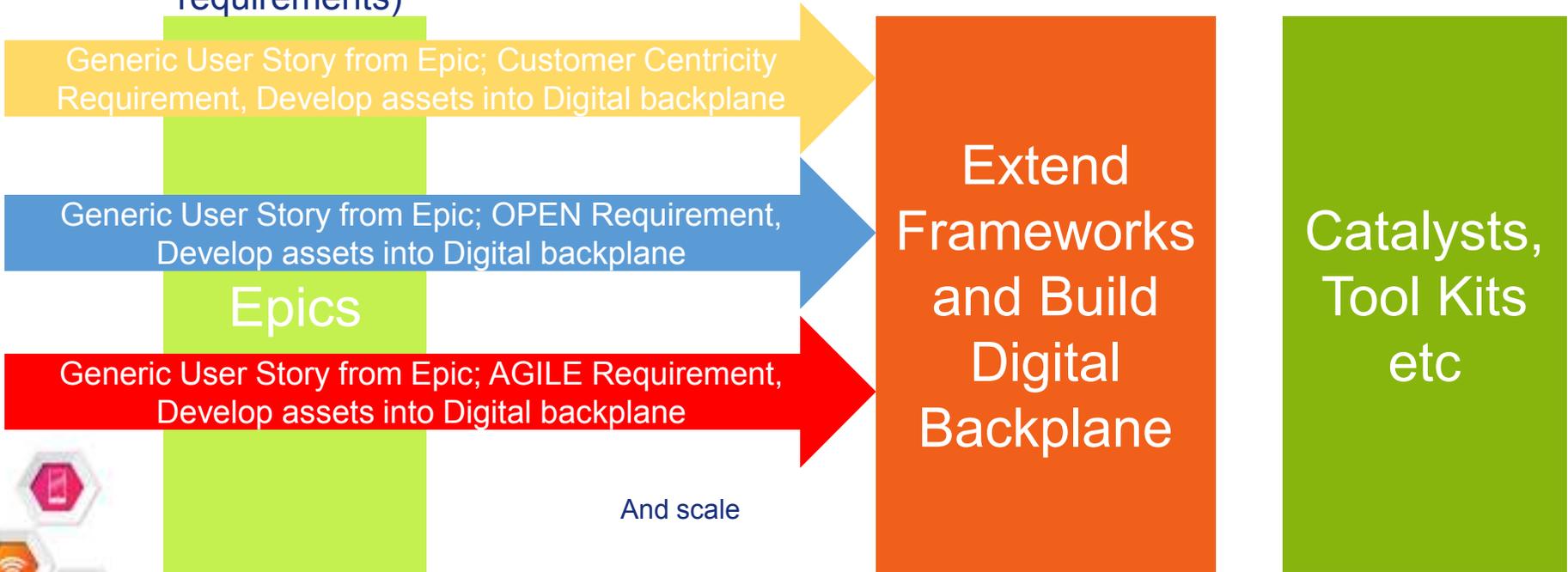
(business problems and requirements)

### Collaborate

(architecture and assets)

### Consume

(solutions)

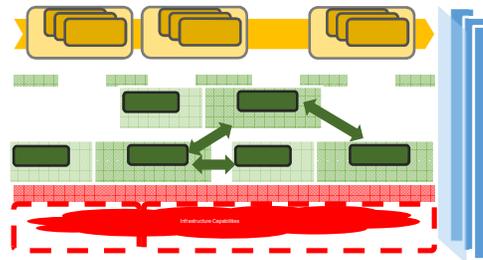
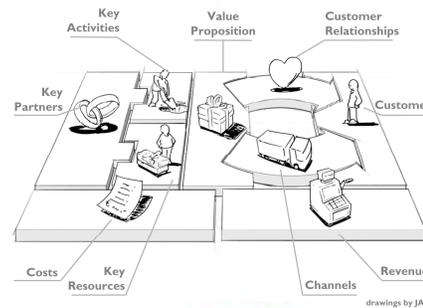


# Delivering practical tools to optimize your digital business

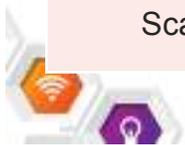
**Frameworkx 15.5 to 16**



	15.5
INGEST (business problems and requirements)	10's
CONSUME (solutions)	Toolkits (Digital Services, Digital Ops, Cust Centricity V.1) CATALYSTS X 20 Services (NFV training etc)
COLLABORATE (architecture and assets)	DERA V.1 – asset coverage 60% (Forum assets, 3 <sup>rd</sup> party and SDO) Backplane – V.1
Scaling	Manual



	16
	100's
	Toolkits V1 versions CATALYSTS X 50 Services
	DERA V1 - asset coverage 80% (Forum assets, 3 <sup>rd</sup> party and SDO) Backplane – V1
	Automated – ingest, mapping and assembly



# 2015 Catalyst roadmap



# The Big Stuff for 15.5



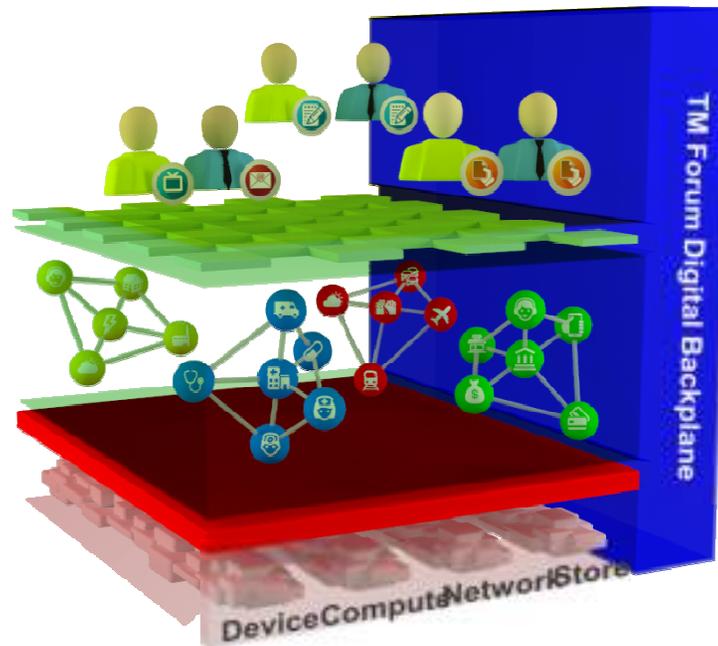
*Delivering practical tools to optimize your digital business*

## CUSTOMER CENTRICITY

Customer Centricity tool kits -  
packaging of CEM, Metrics  
and Analytics

## OPEN DIGITAL

Scenario driven  
tool kits to support  
industry business  
models and  
scenarios



## AGILE

Digital Operations Center of the  
Future – blueprint people, process  
and systems

Frameworks – DSRA mapping  
CEM and Analytics - Updates to  
Business Process Framework

Agile –

Agile PLM

Catalyst driven changes

Security and Privacy

Information framework updates



# Customer Centricity



Rebecca Sendel, Senior Director, Customer Centric Programs, Program & Product Management



# Customer Centricity Program



Customer Experience Management

Big Data Analytics

Metrics

Companies in Leadership Roles Include:



# 3 Key Themes



**Using Customer Experience as a differentiator**

**Propelling Business Success with Analytics**

**Customer centricity in the hyper connected and virtual world**



# Customer Experience Management Best Practices



## Guidebook: Approach and Tools Overview

- Guidance for Customer Experience Management in a Service Provider

## Maturity Model

- 6 Dimensions across the enterprise

## Lifecycle Model

- Definitions of stages in customer lifecycle

## 525+ Metrics

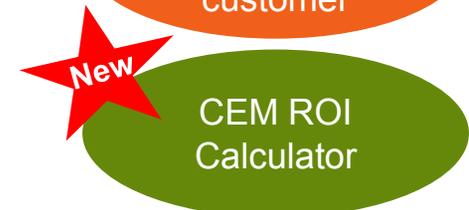
- Measure every stage of the customer lifecycle

## Implementation Guide

- Use Cases for CEM implementation

## Omni Channel Best Practice

- Definitions and requirements



# Data Analytics Guidebook Elements



**Reference Model**



**59 Use Cases**



**Building Blocks**



**Business Value Roadmap**



# 900+ Pre-defined Metrics



Excel window: GB988\_TM\_Forum\_Metrics\_Definitions\_R15.0.0 (1) - Excel

Rebecca Sendel

tid	group	egid	maturity	acti	kpi	name	xlsname	category1	category2	category3	metric	txtformula	xlsformula	ntid	dtid	description	cor
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# Customer Centricity at AW



	CEM	Data Analytics	Metrics
Monday	Plenary, Kickoff, Newcomers, Customer Lifecycle in the digital world, Catalyst Overviews		
Tuesday	IoT Overview → CEM, Analytics and Metrics for IoT Metrics/Analytics for NFV/SDN/ZOOM		
Wednesday	360 degree view CEM Processes Omni channel CEM ROI	Focus on "How" for data analytics Repository; Privacy Smart City Use Cases	Cross SDO Meeting on Metrics for Virtualization
Thursday	Smart City Use Cases NFV/SDN Use Cases Security/Privacy Catalysts	Data Monetization Repository NFV/SDN Use Cases Analytics Processes	Support for: Use Case Development Open Digital & ZOOM projects



# Customer Experience Management



## Objectives

- Extend our best practices to meet the challenges of digital transformation
- Define CEM in an Internet of Things World
- Launch 3 omni channel Catalysts

## Why?

- We need to be asking ourselves at every juncture, “How does what I am doing affect the customer?”
- Action Week is the place to ask that question

## Help Needed?

- We have IoT and NFV sessions – come to us or we will come to you!



# Data Analytics



## Objectives

- Enabling a culture of analytics across TM Forum projects
- Extending and expanding our successful best practices

## Why?

- Analytics touches everything – network, customer, service, money.....it is the way business is being done

## Help Needed?

- Invite us to your sessions. We will come!
- We have specific IoT and NFV sessions – come to us or we will come to you!



# Metrics



## Objectives

- Create a metrics culture in TM Forum
- Get any and all projects using and defining metrics

## Why?

- If you don't measure it you can't manage it
- TM Forum needs to be a thought leader in data-driven decision making in the digital era

## Help Needed?

- Actually, we want to help you. We have concepts and tools that can help you add metrics into your project





Craig Bachmann, Senior Director, Open Digital  
Program, Program & Product Management



# Introducing the Open Digital Program



## Objective:

The TM Forum provides the global reach, business, technology, and market value required by the Digital Services opportunity by engaging targeted Industry verticals and application areas with an open digital economy set of assets that provides existing members and new members with a competitive advantage in scalable best management practices, APIs, and standards.

## Over 200 participating companies, including:



## 3 Key Themes – 2015/6



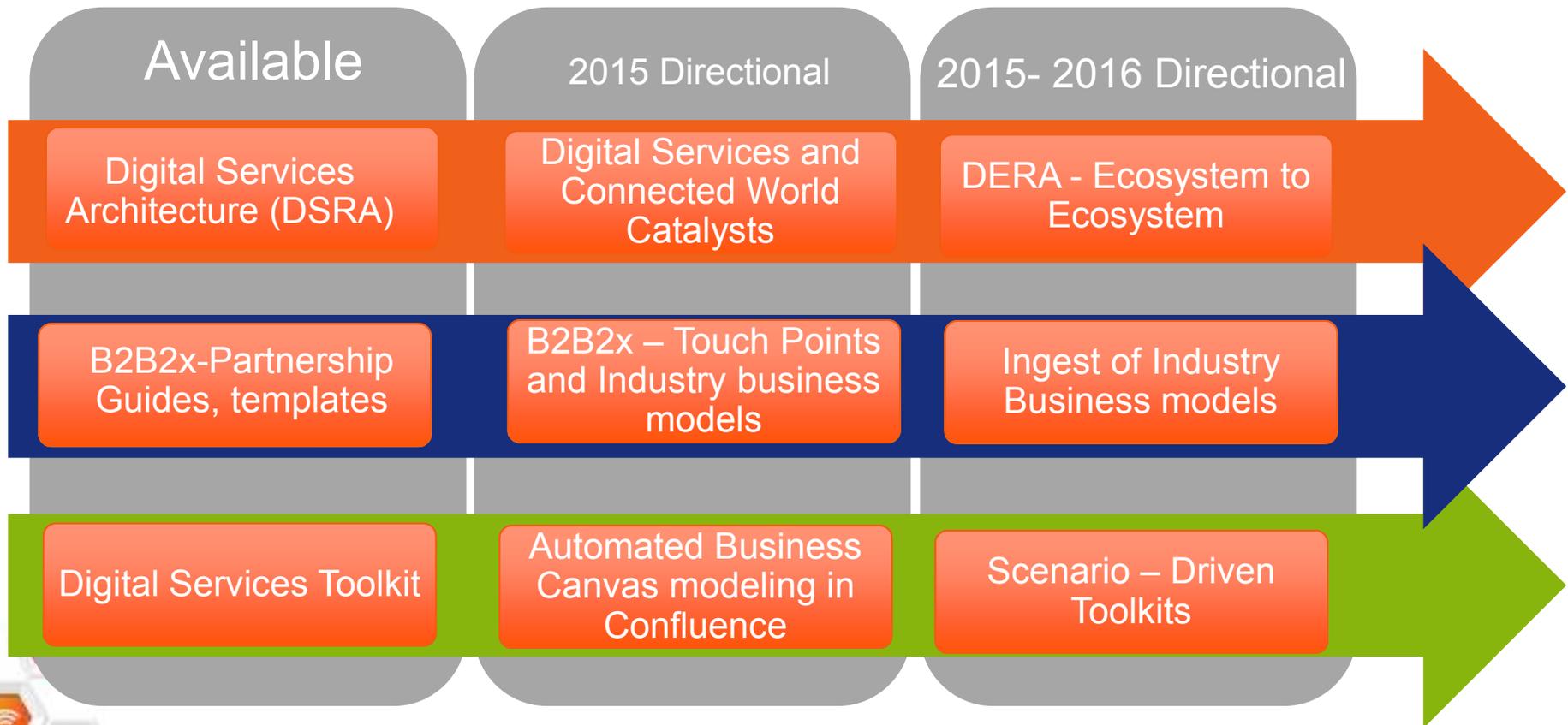
Enabling Technology - Digital Ecosystem Reference Architecture (DERA) , Digital Services Reference Architecture, Partnership/B2B2x)

Real user stories - Industry Verticals and Application Areas (Internet of Things, Digital Health, Smart Grid, Smart City (Internet of Public Things), Connected Home)

Toolkits for Open Digital Services (Efficient, standardized, easily consumable, to enable the creation, evolution, and management of Digital Services) and support Ingest, Collaboration, and Consume of TM Forum Assets based on B2B2X templates



# Open Digital Roadmap Deliverables



# Open Digital/IoT at AW



	Enabling Tech	Industry	Toolkits
Monday	Plenary, Kickoff, Newcomers, Open Digital/IoT Overview, Catalyst Overviews		
Tuesday	Business Scenario review For Open Digital/IoT (Smart City, Mobile Banking, Smart Energy, Digital Health) (with CEM/Big Data)		
Wednesday	Impact on DSRA/Architecture,(with Zoom, API)	B2B2x/IoT Common Patterns	Digital Services Toolkit iterative development
Thursday	Architecture Go Forward	Cross Team Feedback (CEM, Big Data)	Toolkit Outputs, Catalyst Go forward



# Open Digital



## Objectives

- Review 6-12 Business Scenarios including Smart City contributions
- Analyze common patterns, gaps, and opportunities
- Extend, prototype, and generate road map for next 6 months

Why? – validate real world scenarios based on enabling technology and toolkits for Digital Services; Create Toolkits for end users

## Help Needed?

- Industry SME's
- Framework SME's





Barry Graham, Senior Director, Agile Program,  
Program & Product Management



# Introducing the ZOOM Project



## Objective:

Bringing together the best in business, TM Forum has created ZOOM (Zero-touch Orchestration, Operations and Management project) to create a living blueprint for a new generation of service provider support systems to deliver true business agility, and expert guidance on how to navigate the complex journey to get there.

## Over 100 participating companies, including:



# 3 Key Themes



**End-to-end virtualization management:**  
Operational support for the hybrid management challenge

**Operations transformation for the digital ecosystem:**  
Transformation of organization, people, processes and systems to achieve agility

**Operational readiness and procurement:**  
Evolution of Procurement and packaging of Virtualized Network Functions



# Transforming to 4 Key Themes



## Strategy:

*Establish the vision requirements*

## Design:

*Plan the transformation*

## Operate

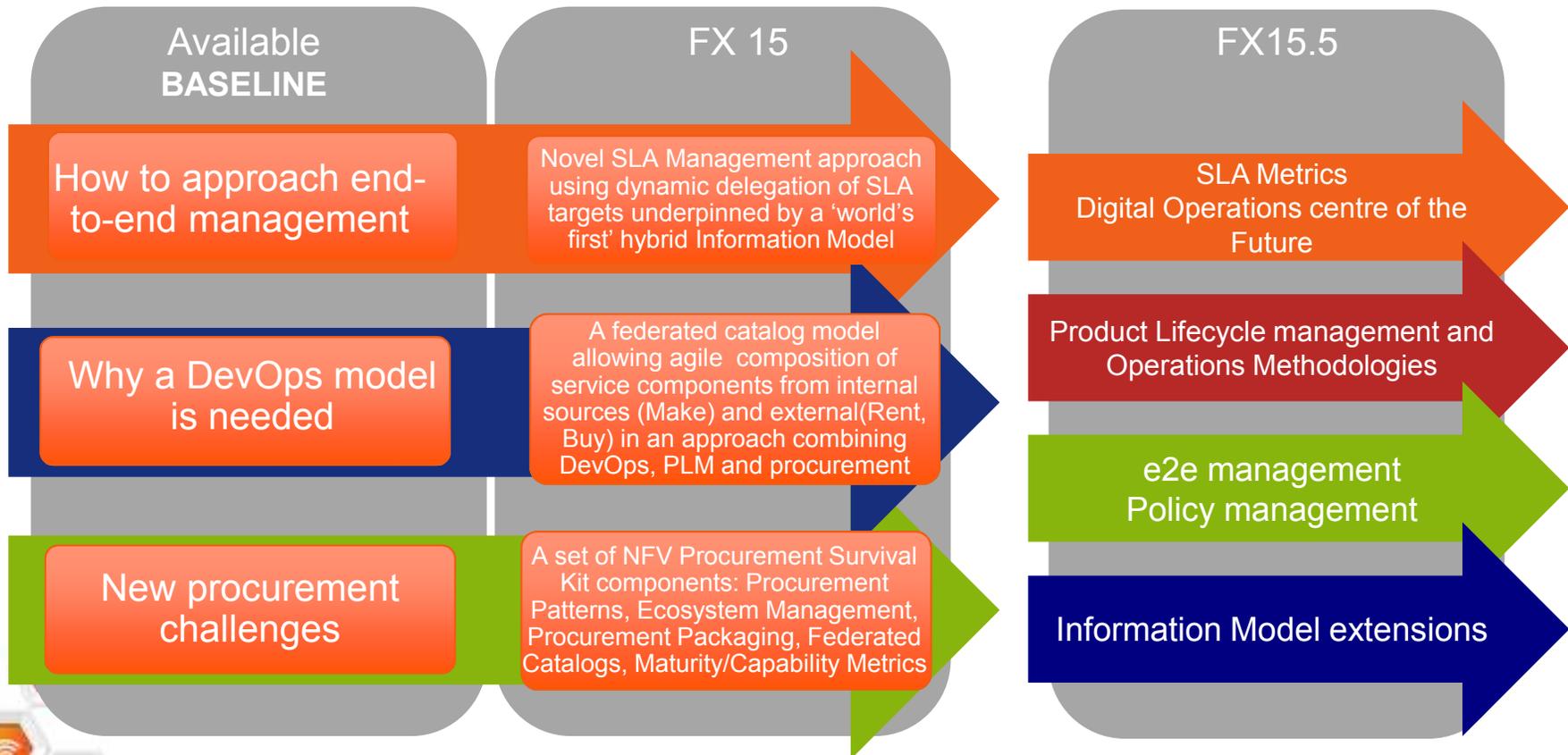
Make e2e Service operations work

## Foundations:

*Being prepared – make things simple by sorting the complicated stuff*



# ZOOM Roadmap Deliverables



# 'Big Goal' for Fx15.5/16



## Digital Operations Center of the Future

1<sup>st</sup> iteration of a complete blueprint for how people & skills, organisations, processes and systems need to evolve to support the agile service orchestration and management requirements of the digital economy.

Organisation

Skills

Processes

Systems

Security



# Agile at AW



	Strategy	Design	Operate	Foundation
Monday	Plenary, Kickoff, Newcomers,			
	Revenue & Charging		Dyn Control	ETSI 2&3
Tuesday	Catalog solution for operations and procurement			
	SLA Metrics	TAM	SLA Metrics (With CEM)	
Wednesday	Procurement KPIS	DSRA Joint	Dyn Control	DSRA Joint
		PLM	Catalyst Debrief	
Thursday	Architecture refinement, Operations centre of the future, SDO liaison and Comms	VCPE Impact on eTOM, Knowledge Management DevOps impact		TR244
			Dyn Control	Joint Strategy



# API Program

## FX 14.5 / 15.0

- Core set of APIs developed
- Reference Implementations and test bed created

## FX 15.5

Developer Portal to drive adoption

CTKs to allow self certification

Ongoing API development



# APIs at AW



	API Program	Cross Team
	Plenary, Kickoff, Newcomers, Planning	
Monday	API Charter Review	
Tuesday	SQM, Service Test, Change Mgmt API	Charging and Billing
	Pre Ordering API API Conformance and CTK	Zoom Catalog Design
Wednesday	Adoption, Dev Portal, Conformance	
	Performance Mgmt API      NFV Smart City API	
Thursday	Adoption and Developer Portal	DSRA
	Service Activation API Catalog API Evolution	Charging and Billing
Friday	On Boarding API	

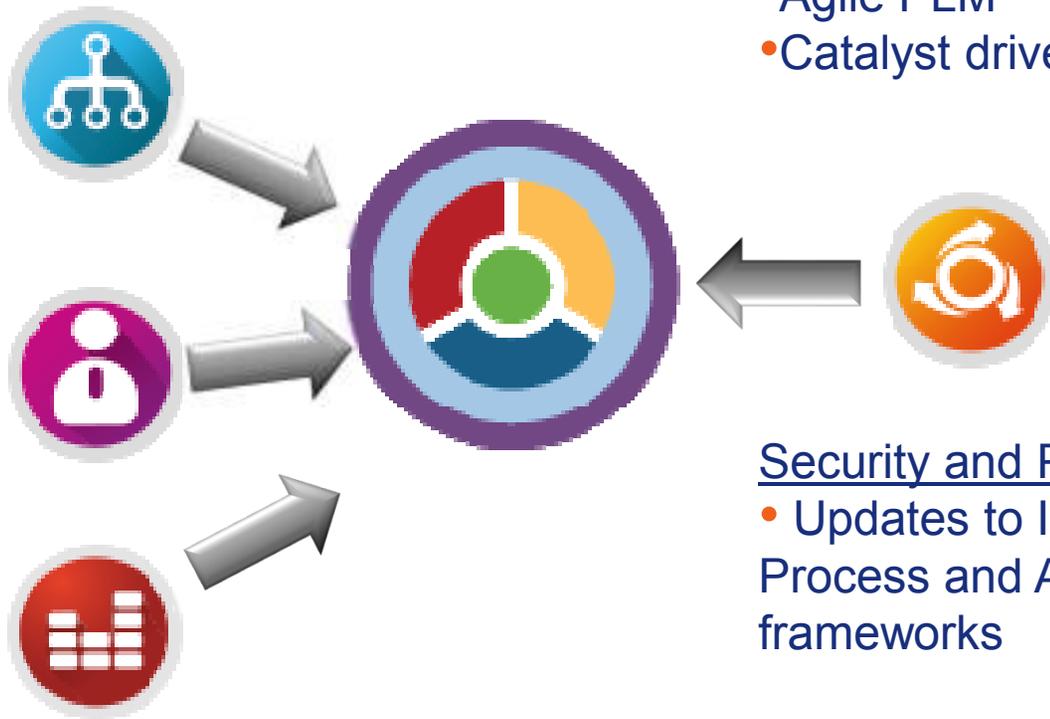


# Frameworks 15.5



Open Digital  
•DSRA Mapping

CEM and Analytics  
•Updates to Business Process and Information Frameworks



Agile  
•Agile PLM  
•Catalyst driven changes

Security and Privacy  
• Updates to Information, Process and Application frameworks

# Frameworkx at AW



	Frameworkx	Cross Team
<b>Monday</b>	Plenary, Kickoff, Newcomers, Planning Information and Process Frameworks working sessions	
<b>Tuesday</b>	Charging and Billing	Zoom Privacy
<b>Wednesday</b>		CEM Zoom
<b>Thursday</b>	Incoming Contribution – Idea / Concept to Market	Data Analytics
<b>Friday</b>	Frameworkx Development	



# ZOOM



## Objectives

- Incorporating ZOOM requirements into Fx, DSRA and Catalogs
- Review Catalyst learning points
- Procurement Metrics
- SDO liaisons
- Communications and outreach

## Why?

- Unification of activities
- Support SP automated procurement IG 1133C use cases
- Address Go to Market outreach and adoption

## Help Needed?

- SME attend the joint meetings: DSRA, API, Catalog and Fx
- Procurement metrics experts



# API



## Objectives

- API Ecosystem Development Onboarding and pre-Ordering
- API Portal
- API Conformance
- Zoom Requirements
- Smart City API Architecture

## Why?

- TMF APIs are being adopted because they are part of an Ecosystem
- Interoperability of adopted APIs must be testable
- Ecosystem Dynamic Partnership is an essential part of the Open Digital Ecosystem

## Help Needed?

We appreciate joiners who would add requirements or provide reviews for

- New API profiles
- Conformance / CTK
- Developer Portal



# Framework



## Objectives

- Transform Strategic Programs needs into Core Framework specification
- Enhance Framework via contributions
- Support work sessions

## Why?

- Core Framework stands at the center of all work. Keeping it current is job one!

## Help Needed

- Business Analysts
- Modellers
- Enterprise Architects
- We do accept all, please join us to help shape Framework





# Security, Privacy, Fraud, Revenue Assurance, Charging & Billing and Asset Management



Chris Stock, Director, Security & Privacy Programs, Program & Product Management

# Security, Privacy, Fraud, Revenue Assurance, Charging & Billing and Asset management



## Objective:

To ensure that in providing existing members and new members with a competitive advantage in scalable best management practices, APIs, and standards - the risks from key underpinning activities of Security, Privacy, Fraud, Revenue Assurance, Charging & Billing and Asset management have also been considered and corresponding best practices, APIs and standards delivered.

## Many participating companies, including:



# 3 Key Themes



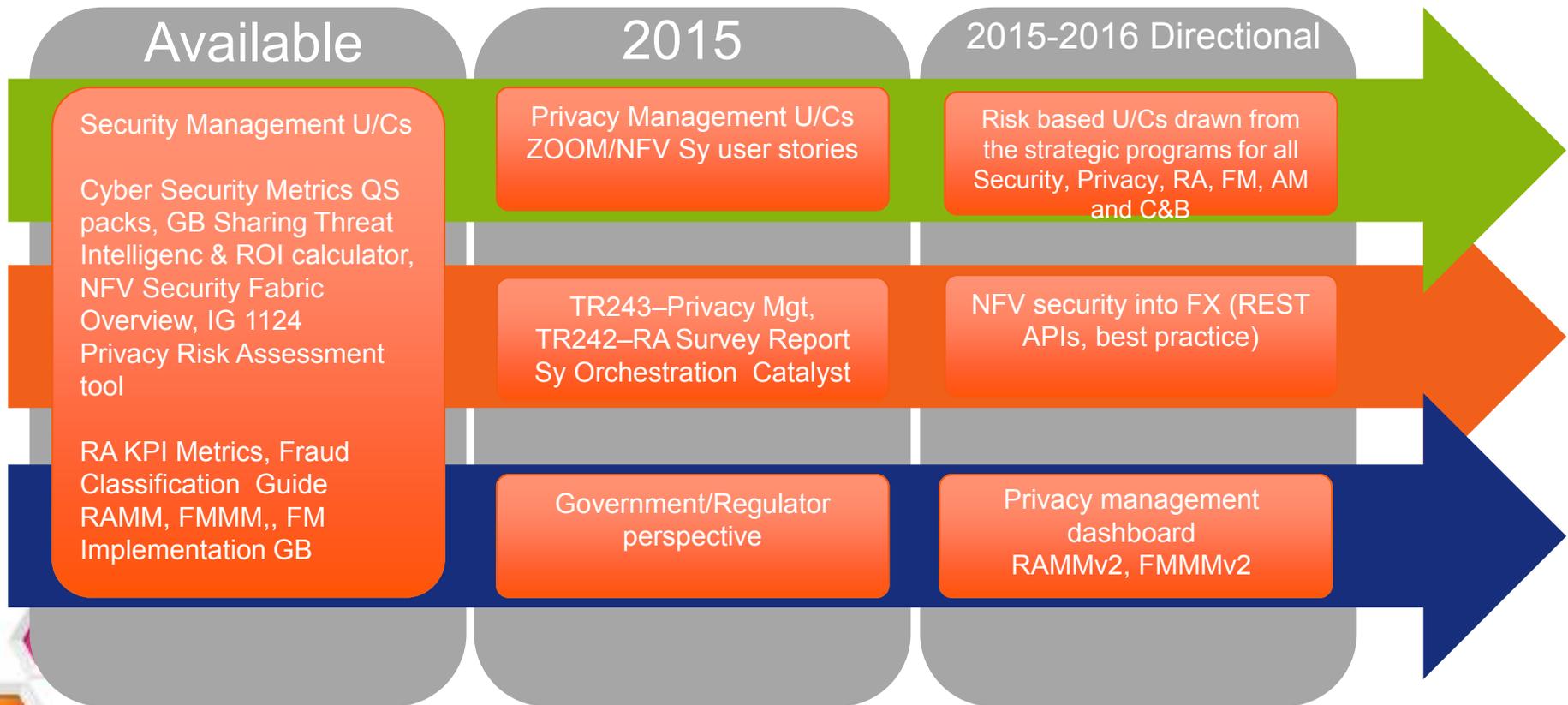
User stories drawn from the 3 Strategic Programs  
*Keeping pace & relevant*

Enabling Technology

Expectations and compliance – Customer, service provider and the regulator.



# Roadmap Deliverables



# Security & Privacy at AW



## Security

## Privacy

Monday

Plenary, Kickoff, Newcomers, Set Scene for week: Orchestration catalyst into core. IOT Security? Review Privacy work & confirm approach

Tuesday

X-Team with IoT  
NFV Security – catalyst to core. New NFV project.

X-Team with IoT,  
Value proposition – customers, industry & government

Wednesday

Security/IOT Security: Develop user stories/use-cases  
NFV/ZOOM: Security Fabric - next steps and new project – catalyst?

U/C review, Data lifecycle, data processor model, interface requirements Refine catalyst proposal,

Thursday

Wrap up / consolidation

Catalyst, API, x-team CEM(tbc). Summarize requirements and next steps



# Revenue Assurance, Fraud Management, Asset Management, Charging & Billing at AW



	RA & FM	AM	C&B
Monday	Plenary, Kickoff, Newcomers, X-Team session with ZOOM/NFV		
Tuesday	RA SP Challenges, RA survey, inside Concept, metrics	Identifying and Defining use cases	Wholesale & Business Party Settlement Charging & Billing for NFV GB921
Wednesday	RA 'inside concept' - impact on existing RA assets X-team with C&B	U/C development Best practices framework	X-team with RA and FM GB921 PWB Fx eTOM Review
Thursday	<b>FRAUD MANAGEMENT:</b> FM-FMMM v2 FM Survey	-	Improve Rest Billing API , Learnings / shortcomings from Catalyst



# Privacy



## Objectives

- Identify Value proposition for all parties
- Define Data-Lifecycle Management Architecture to support CEM, IoT, and Zoom programs.
- Create a list of actions to be done for Framework 15.5

## Why?

- Demonstrate Privacy Management as one of the critical areas of the transformation & monetization toolkit
- Serve as the central hub for all Privacy Management opportunities to reduce rework and duplication

## Help Needed?

- Coordination of domain of responsibility with projects in other programs
- Mechanism to synchup development with other projects (e.g. utilizing Framework updates)
- Catalyst participants

# Security



## Objectives

- Security Orchestration Catalyst into core
- New ZOOM/NFV Security project / catalyst?
- IoT Security project

## Why?

- Security critical to all strategic programs
- Raised in all sessions
- Opportunity goes both ways

## Help Needed?

- Sponsors
- Participants

# Revenue Management



## Objectives

- Greater engagement with strategic programs ('Inside' concept)
- Update existing material (MM, KPIs etc)
- Develop Charter (AM)

## Why?

- Critical underpinning activities – must keep pace with innovation
- Scope is changing
- Broaden understanding of the value of each area

## Help Needed?

- Participation,
- Inputs, collaboration from other teams
- Catalyst collaboration?



## Closing Remarks



Joann O'Brien, VP, Collaborative R&D,  
Value Creation & Strategy



Agenda: <https://www.tmforum.org/events/action-week-morristown-july-2015>



[Download Detailed Agenda](#)

**Monday**  
**July 20**  
8:00 am – 7:00 pm

- Introduction to programs
- Onboard new participants
- Review Catalyst projects
- Set goals for the week
- Establish the vision requirements for ZOOM strategy
- Set the scene for the ZOOM/NFV security fabric
- Meet Up & Networking (offsite)

[Show More](#)

**Tuesday**  
**July 21**  
9:00 am – 7:00 pm

- Determine the impact on customers and analytics, as devices become part of the virtual network
- Examine new business scenarios from IoT segments; assess impact on Framework,

[Show More](#)



# Intellectual Property Policy



**TM Forum IPR Policy provides a framework for members to collaborate while protecting all Forum members' IP rights**

## IPR Operations in Collaborative Projects

- In order to participate in a collaboration project, you must join that project's online project area and your organization's IP contact must approve your participation
- When you request to join a project, you will accept the IPR licensing mode of the project. The majority of projects operate under the RAND (Reasonable and Non Discriminatory) mode
- TM Forum IPR Policy is NOT an NDA - there is no expectation of privacy on material submitted to the TM Forum
- Written contributions to a project must be submitted as project contributions. This is done on the contributions tab of the project area. If you are aware that there is any intellectual property included in your contribution, you must note this on the contribution form.
- The IPR mode of any meeting is announced at the start of each meeting – both virtual and face to face. At Action Week, the language to announce this is provided in your meeting room.

## I have further questions

- Visit [tmforum.org/ipr](http://tmforum.org/ipr) to see answers to Frequently Asked Questions and descriptions of all IPR modes





Make Lasting Connections. Impact Real Changes.  
Move the Industry Forward.

Register Today

Join a Project

Project List

**Event Location:**

The Hyatt Morristown

3 Speedwell Avenue

Morristown, NJ 07960

+1 973 647 1234

ABOUT

WHY ATTEND

AGENDA

REGISTER

TRAVEL

USEFUL INFO

CONTRIBUTIONS

Action Week is not a conference. As a TM Forum member, it's an exclusive opportunity for you to **connect** with peers from across verticals, **collaborate** to discuss critical industry challenges, **create** innovative solutions, and establish new best practices. It all happens here during a five-day series of workshops as you work hand-in-hand with teams of professionals committed to driving digital business design, development, and adoption.



- ✔ **Embrace a User Experience mindset**
- ✔ **Be business driven**
- ✔ **Respect the roles!**
- ✔ **Validate continuously**
- ✔ **Love the iterations!**
- ✔ **Demonstrate your achievements**
- ✔ **Have fun, be creative, be supportive and dive right in!**

