

TM Forum Introduction

Introducing TM Forum: The Global Association for Digital Business

TM Forum is the member-led global industry association transforming business agility through expert-led collaboration and co-innovation

- 30 years accelerating transformation through worldwide collaboration
- Neutral, not-for-profit, led by the world's leading service providers

90,000+
member
professionals

850+
member
companies

**Global
Presence**

Mission: To enable the service provider businesses of tomorrow

**Core
Themes**



Cloud Native IT
& Agility



AI, Data &
Analytics



Autonomous Networks
& the Edge



Beyond
Connectivity



Digital Experience &
Trust



Human Factor

**Digital Business
Transformation**

**Unlock Growth and
Societal Impact**

North America	Europe, Middle East & Africa	Latin America	Asia Pacific	China

10/10 of the world's largest CSPs are TM Forum members



Board of Directors (Trustees) 2019-21



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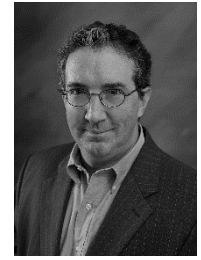
Michael Lawrey
Independent
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Rachel Higham
MD, IT
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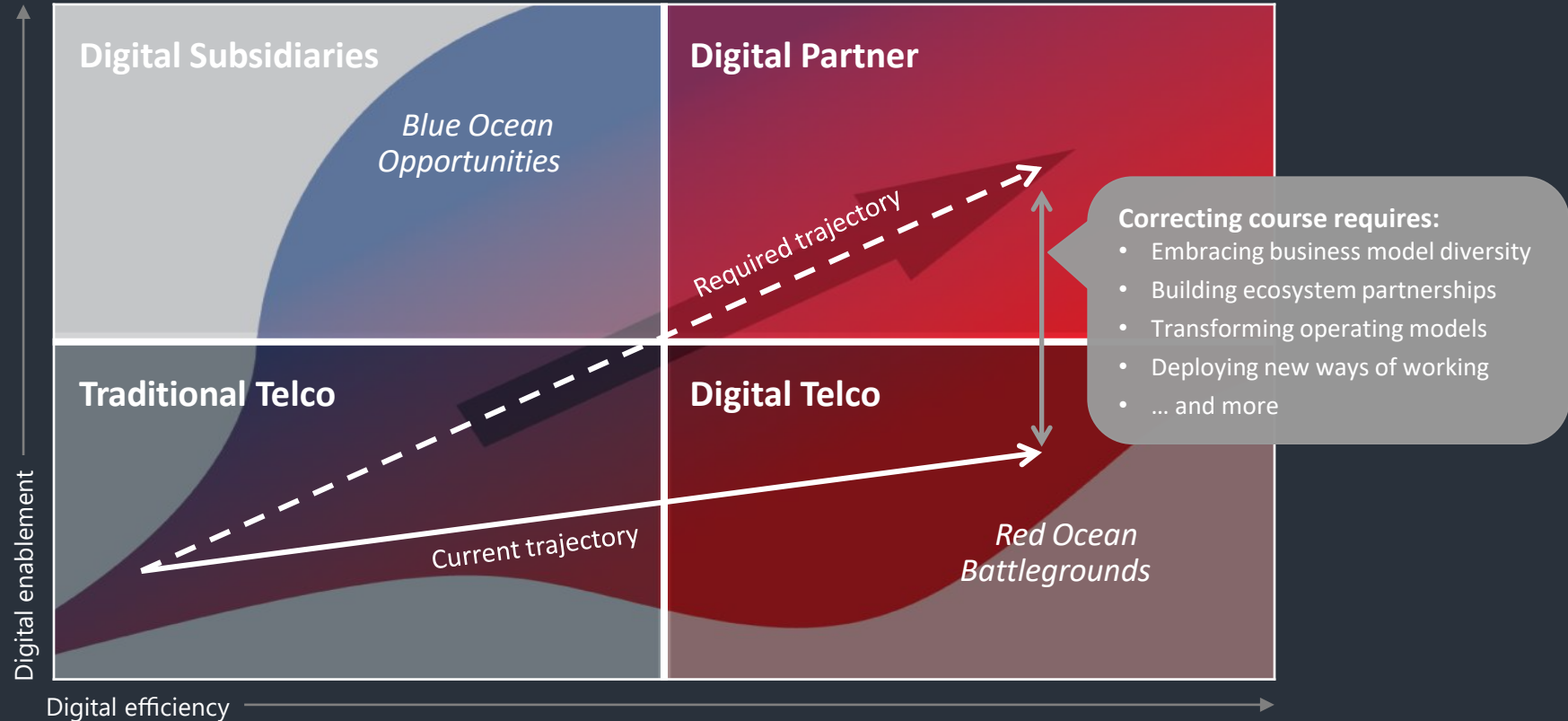
Jason Rutherford
SVP Communications
Applications



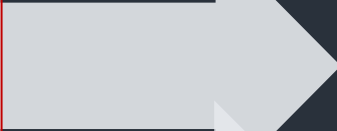




Craig Wigginton
Global Telecoms
Lead



The industry wants to go 'beyond connectivity', but most transformation efforts fall short of the change required



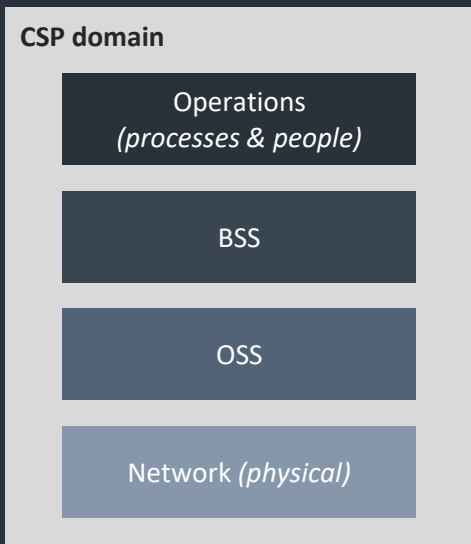
Addressing the challenge requires a clear ambition at industry level

Industry Challenges	Market Requirements/Ambition	
1. E2E Business Agility <i>How fast? (Concept-to-Cash cycle time)</i>	<ul style="list-style-type: none">▪ <i>Launch new products in days (MVP)</i>▪ <i>Deliver new features in minutes</i>	
2. Cost Optimization <i>At what cost?</i>	<ul style="list-style-type: none">▪ <i>Double OpEx Efficiency</i>▪ <i>Dramatically improve CapEx efficiency</i>	
3. Digital Experience & Trust <i>With what experience?</i>	<ul style="list-style-type: none">▪ <i>100% of interactions through digital</i>▪ <i>Build on reputation for Trust</i>	
4. B2B Growth <i>With what growth from B2B?</i>	<ul style="list-style-type: none">▪ <i>40% growth in wholesale (B2B2x)</i>▪ <i>10% growth in 'pure' B2B</i>	
5. B2C Growth <i>And what growth from B2C?</i>	<ul style="list-style-type: none">▪ <i>3-5% growth in B2C</i>▪ <i>Ability to self-disrupt ('Engine 2.0')</i>	

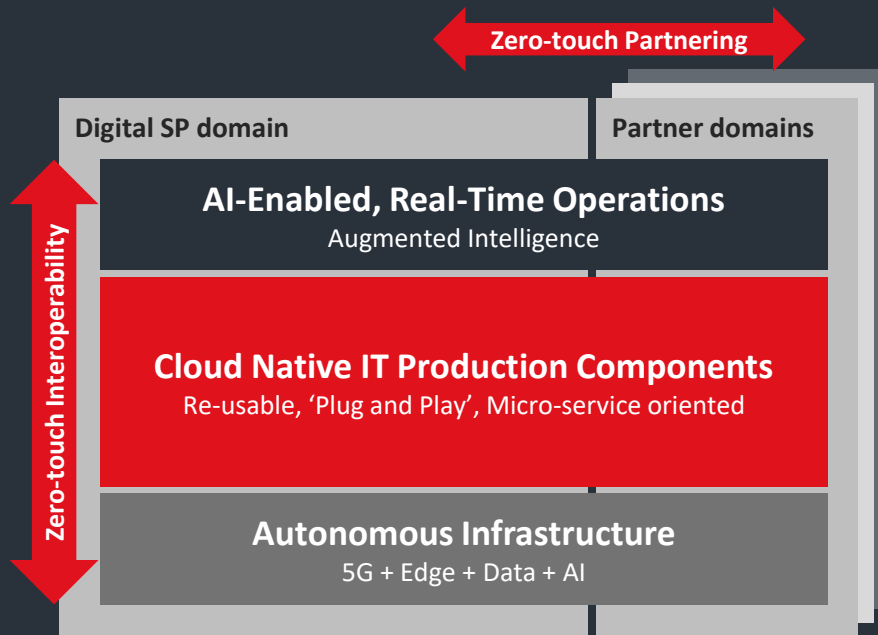
Delivering on the ambition requires change in mindset, end-to-end

Simplification, automation and intelligence are key principles driving the change

Traditional CSP

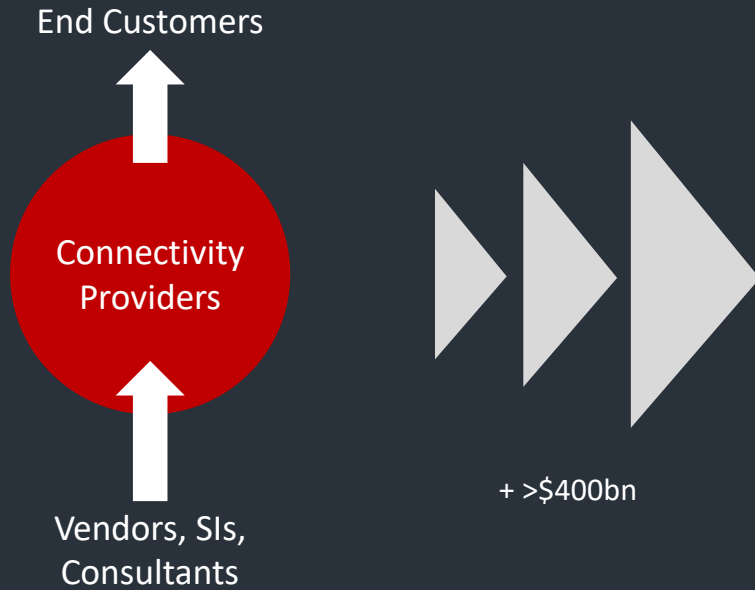


Digital Service Provider

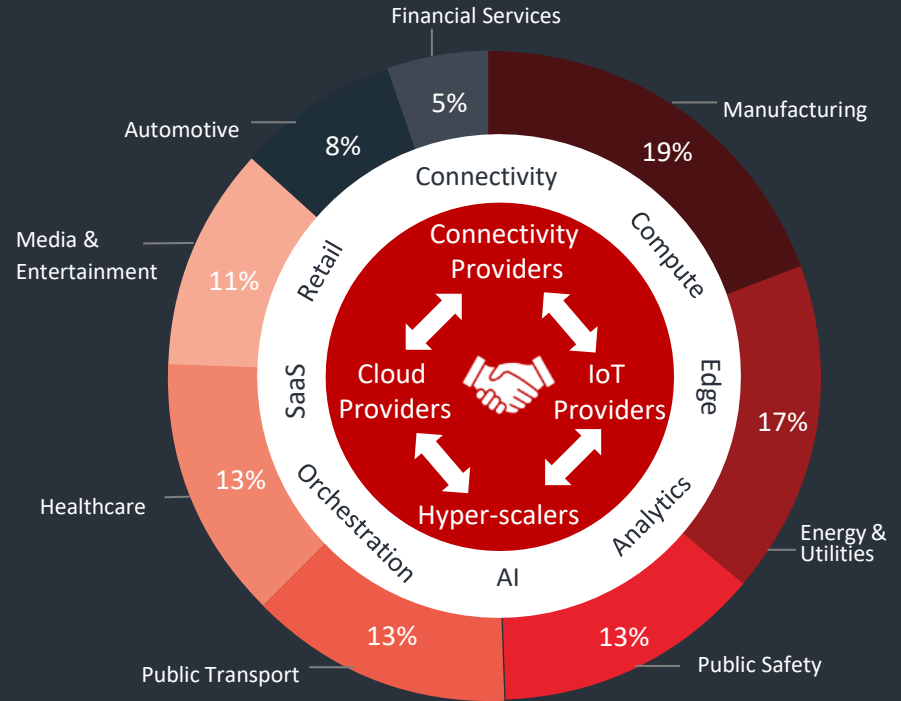


Monetizing 5G means **co-creating** value with ecosystem partners

Traditional Value Chain



5G Ecosystems: Co-creation with Platform & B2B2x Business Models





Cloud Native IT
& Agility



AI, Data &
Analytics



Autonomous Networks
& the Edge



Beyond
Connectivity



Digital Experience
& Trust



Human Factor

FY20-21 Objective

Transforming the telecoms software market and operating models for the 2020s

Establishing standards to manage and monetize the opportunities offered by AI at scale

Unlocking the possibilities of 5G by enabling the industry to build self-sustaining networks

Enabling zero-touch partnering and interoperability for connectivity, IoT and enterprise services

Delivering deeply rewarding customer experiences across the new landscape of 5G

Driving cultural change, diversity and talent development in our industry

Digital **Business**
Transformation

Unlock **Growth** and
Societal **Impact**

How TM Forum delivers value to our members

Consume TM Forum to solve your business challenges

- Accelerate your IT transformation using industry-agreed blueprints

Transformation Tools & Standards

- Open Digital Framework
- Transformation tools & data

- Acquire knowledge and skills to thrive in the digital age

Unique Knowledge & Insights

- Digital Knowledge Center
- Research & case studies
- Formal training

- Draw on the collective genius of the industry

Global Industry Expertise

- Guilds & Communities
- Webinars, "Tribe events" & conferences
- Expert-led coaching

- Gain deep understanding of industry solutions

Rapid Problem Solving

- Collaborative projects
- Manifestos

- Fast-track R&D and test new ideas in a non-commercial environment

Continuous Co-innovation

- Catalyst proof-of-concept projects
- Open Digital Lab
- tmf.codes

Contribute to TM Forum to shape the industry

- Drive positive momentum for practical change

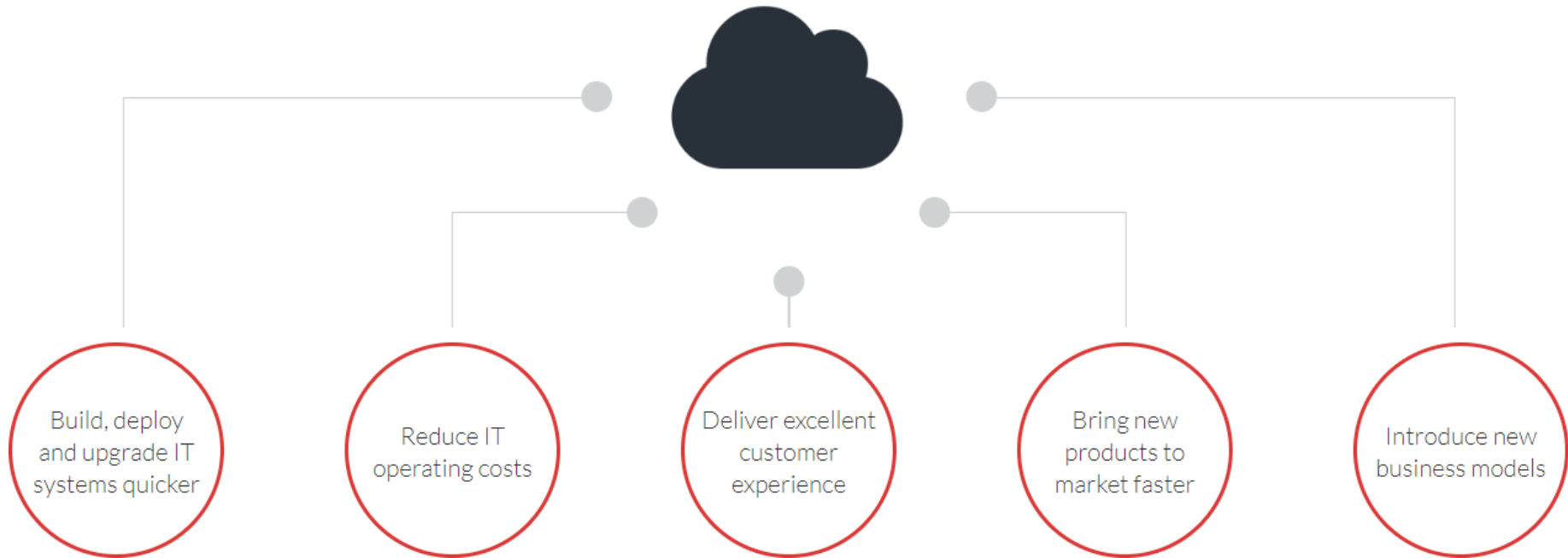
- Demonstrate your thought leadership

- Shape the industry's thinking with your peers, customers & partners

- Create consensus; influence standards; 'give back' to the industry

- Showcase your company's innovation to the world

Cloud Native IT & Agility



Transforming the telecoms software market and operating models for the 2020s

Transforming the telecoms software market and operating models for the 2020s

To meet the operational agility, cost base and digital experience needed for service providers to remain competitive and seize new growth opportunities, we need to rethink our industry's approach to software, systems and ways of working. TM Forum is building the blueprint architecture, tools, APIs and marketplace to make that happen.

Challenge	Causes	TM Forum Solutions	TM Forum Membership Value
Lack of business agility	<ul style="list-style-type: none"> Inflexible systems and processes can't be adapted quickly to support new products and business models 	<p>Use the Open Digital Architecture as a transformation blueprint</p> <ul style="list-style-type: none"> Create agility with modular, reusable software components Go cloud-native to save operational costs Eliminate the maintenance burden of customized software 	<p>Transformation Tools & Standards</p> <p>Accelerate your IT transformation using industry-agreed blueprints</p>
Escalating IT costs	<ul style="list-style-type: none"> Too much legacy spaghetti Heavily customized IT systems Manual processes 	<ul style="list-style-type: none"> Simplify and automate business processes Get business & technical teams talking the same language <p>Adopt industry-standard Open APIs</p>	<p>Unique Knowledge & Insights</p> <p>Acquire knowledge and skills to thrive in the digital age</p> <p>Global Industry Expertise</p> <p>Draw on the collective genius of the industry</p>
Poor customer experience	<ul style="list-style-type: none"> Disconnected customer-facing systems No 'single source of truth' 	<ul style="list-style-type: none"> Decouple systems to support agile, pace-layered change Slash integration costs Establish a single source of truth on a common data model Expose services externally to drive new revenue streams 	<p>Rapid Problem Solving</p> <p>Gain deep understanding of industry solutions</p> <p>Continuous Co-innovation</p> <p>Fast-track R&D and test new ideas in a non-commercial environment</p>

Solve key business challenges

- Build, deploy and upgrade IT systems quicker
- Reduce IT operating costs
- Deliver excellent customer experience
- Bring new products to market faster
- Introduce new business models

READ

Whitepaper: [A future vision for the software market that the telecom industry needs](#)

JOIN

[Global Architecture Forum webinars](#)

UPSKILL

New [Open Digital Architecture training](#) available now

DOWNLOAD

[Open APIs](#) | [Agile OSS/BSS Toolkit](#)

Benefits of TM Forum membership

Transformation Tools & Standards

Download blueprints & standards for transformation

- [Open Digital Architecture](#) (ODA)
- Suite of 50+ [Open APIs](#)
- [Business Process](#) & [Information](#) frameworks

Unique Knowledge & Insights

Learn implementation skills & best practice

- Explore [case studies](#)
- Read our hard-hitting [research reports](#) and [insights](#)
- Take self-directed [training in our core standards](#), or [upskill your team](#)

Global Industry Expertise

Find your Tribe

- Participate in our [Global Architecture Forum](#) and [online communities](#)
- Attend our upcoming [webinars](#) & [events](#)
- Get [coaching](#) from TM Forum experts

Rapid Problem Solving

Access our global collaboration platform

- Co-create standards & best practice: [ODA](#) | [Open APIs](#) | [Framework](#)
- Join industry leaders [committing to TM Forum Open APIs](#)
- Sign the [Open API manifesto](#) and [ODA manifesto](#)

Continuous Co-innovation

Build practical real-world solutions

- Build reference implementations in our [Open Digital Lab](#) and [test product compliance](#)
- Join or start a [Catalyst proof-of-concept](#)

AI, Data & Analytics



Establishing standards to manage and monetize the opportunities offered by AI at scale



Establishing standards to manage and monetize the opportunities offered by AI at scale

We provide our members with tools to manage their data and deploy AI to achieve actionable insights and real-time operational efficiencies through optimization of their IT and network infrastructure. By standardizing AI operations lifecycles and adapting business processes for zero-touch operations, we enable members to reduce costs, improve efficiencies and maximize profit.

Challenge	Causes	TM Forum Solutions	TM Forum Membership Value
Inconsistent & fragmented data	<ul style="list-style-type: none"> Data silos, incomplete data sets with different formats... No consistent data strategy 	<ul style="list-style-type: none"> Assess your organization’s data maturity and AI readiness using TM Forum maturity models & assessment services; identify steps to increase maturity to ensure successful AI deployments Formulate a coherent data strategy based on TM Forum standards and best practices using the AI-ready TM Forum Data Model Manage AI at scale with TM Forum’s AI Management Standards suite – a set of tools and best practices, AI Operating models, check-lists and model cards Upskill your team with TM Forum AI training courses Gain hands-on experience with AI Operations in our AI collaboration project and Catalysts Get started with our ‘how-to guides’ 	<p>Transformation Tools & Standards</p> <p>Accelerate your IT transformation using industry-agreed blueprints</p>
Inability to deploy AI at scale	<ul style="list-style-type: none"> Lack of common standards enabling AI to be managed and monitored centrally Lack of skills in data science and modeling 		<p>Unique Knowledge & Insights</p> <p>Acquire knowledge and skills to thrive in the digital age</p>
Inability to seize new 5G opportunities	<ul style="list-style-type: none"> Manual processes can’t handle 5G complexity or process the huge volumes of data for real-time decision making 		<p>Global Industry Expertise</p> <p>Draw on the collective genius of the industry</p>
			<p>Rapid Problem Solving</p> <p>Gain deep understanding of industry solutions</p>
			<p>Continuous Co-innovation</p> <p>Fast-track R&D and test new ideas in a non-commercial environment.</p>

Solve key business challenges

- Deal with inconsistent & fragmented data
- Establish your organization's AI readiness
- Deploy & govern AI operations at scale
- Redesign your processes to support AI
- Upskill your team in managing AI

READ

Briefings: [About AI](#) | [AI Management](#) | [AI Operations](#)

JOIN

[AI & Data Analytics Project](#)

UPSKILL

New [AI in Telecoms](#) & [AI Fundamentals](#) training

DOWNLOAD

Beta test our [AI Checklists](#)

Benefits of TM Forum membership

Transformation Tools & Standards

Download blueprints & standards for transformation

- Beta test our [AI Checklists](#)
- [AI readiness poster](#) and [maturity model](#)
- [Route map to redesigning AIOps operational processes](#)
- [Guide to AI-Driven 360 Degree Customer Profiles](#)
- [AI user stories](#) and [AI Toolkit](#)

Unique Knowledge & Insights

Learn implementation skills & best practice

- Explore [AI case studies](#)
- Read our hard-hitting [research reports](#) and [insights](#)
- Take [AI training for managers](#) & [developers](#) or [upskill your team](#)

Global Industry Expertise

Find your Tribe

- Attend our upcoming [webinars](#) & [events](#)
- Join our [online community discussing AI](#)
- Get [coaching](#) from TM Forum experts

Rapid Problem Solving

Access our global collaboration platform

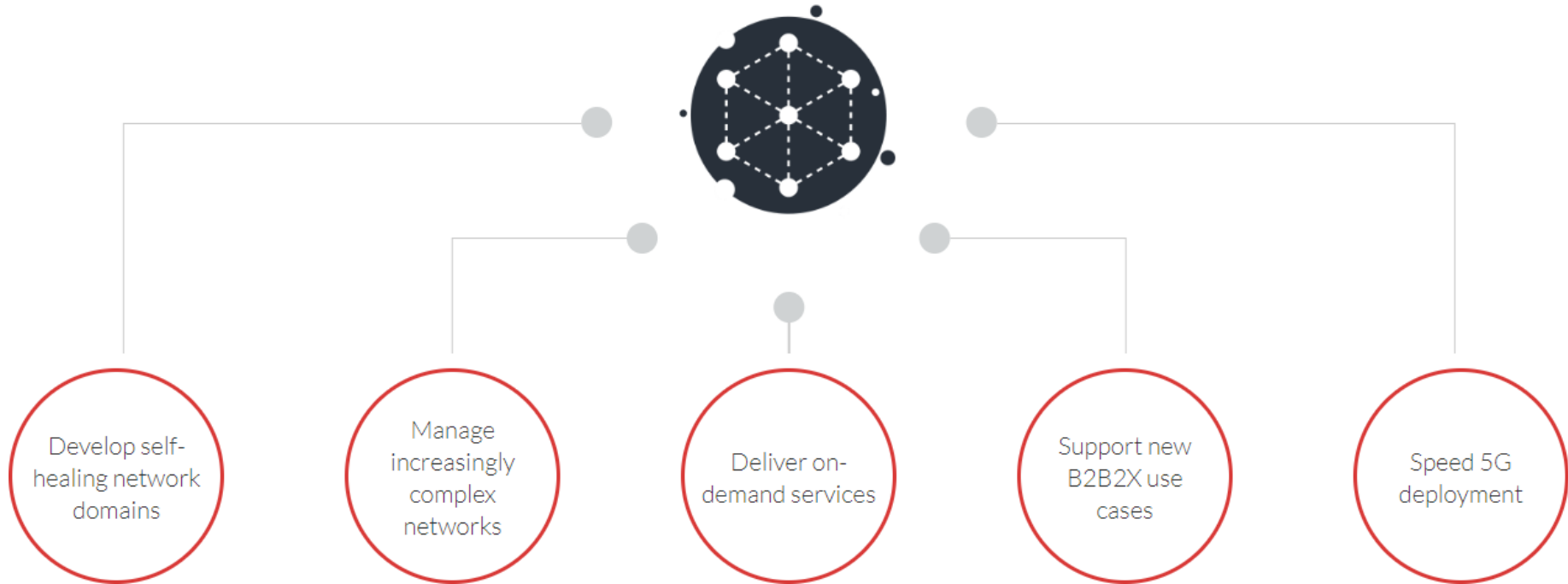
- Develop AI management standards in the [AI & Data Analytics project](#)
- Apply AI & data analytics to [Customer Experience](#)
- Apply AI & data analytics to [Autonomous Networks](#)

Continuous Co-innovation

Build practical real-world solutions

- Join or start [AI Catalyst proof-of-concept](#)
- Help build an [AI training data repository](#)

Autonomous Networks & the Edge



Unlocking the possibilities of 5G by enabling the industry to build self-sustaining networks



Unlocking the possibilities of 5G by enabling the industry to build self-sustaining networks

Deploying scalable and sliceable autonomous networks is key to unlocking the power of 5G and edge computing. We help the industry to navigate the hybrid challenge of operating legacy and new environments: providing best practice guidance for business operations and enabling our members to build the architecture to manage the networks of the future.

Solve key business challenges

- Develop self-healing network domains
- Manage increasingly complex networks
- Deliver on-demand services
- Support new B2B2X use cases
- Speed 5G deployment

READ

Latest research: [Network automation using machine learning and AI](#)

JOIN

[Autonomous Networks project](#)

UPSKILL

[Autonomous Networks - enabling cross industry digital transformation](#) webinar

DOWNLOAD

[AN vision & roadmap](#)

Benefits of TM Forum membership

Transformation Tools & Standards

Download blueprints & standards for transformation

- [Cross-industry Autonomous Networks vision & roadmap](#)
- [Agile Operations Toolkit](#)
- [Autonomous Networks: empowering digital transformation](#)

Unique Knowledge & Insights

Learn implementation skills & best practice

- Explore [AN case studies](#) from [China](#) and [Australasia](#)
- Take [self-directed](#) training or [upskill your team](#)
- Read our hard-hitting [research reports](#) and [insights](#)

Global Industry Expertise

Find your Tribe

- Watch [on-demand AN webinars](#); attend [upcoming webinars & events](#)
- Get [coaching](#) from TM Forum experts
- Join our [online community discussing zero-touch automation](#)

Rapid Problem Solving

Access our global collaboration platform

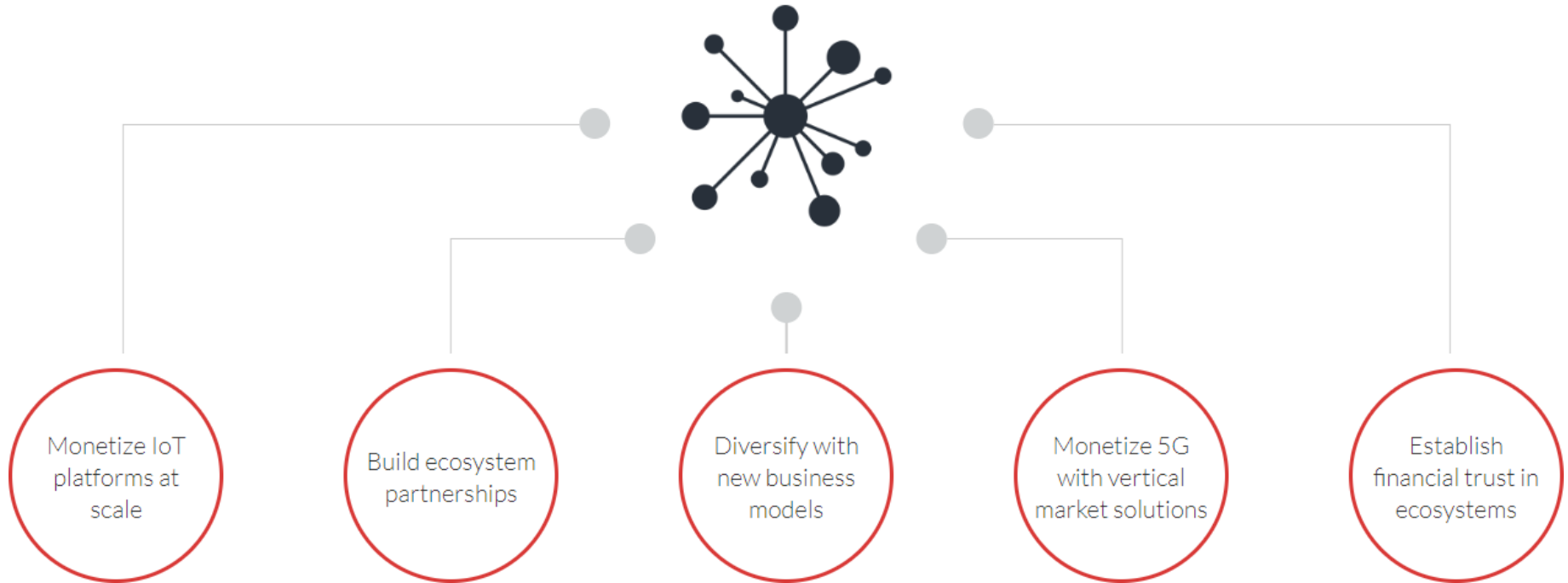
- Build the business & technical architecture for AN in the [Autonomous Networks project](#)

Continuous Co-innovation

Build practical real-world solutions

- Join or start an [AN Catalyst proof-of-concept](#)

Beyond Connectivity



Enabling zero-touch partnering and interoperability for connectivity, IoT and enterprise services



Enabling zero-touch partnering and interoperability for connectivity, IoT and enterprise services

The arrival of 5G and AI-enabled IoT systems is creating new B2B2x opportunities. We provide our members with open standards, co-innovation opportunities and a trusted cross-industry platform to innovate for their future, enabling them to grow and deliver new profitable services in the connected ecosystem of the future. By empowering them to build digital businesses upon existing core capabilities of connectivity and 5G, we support our members as they explore new opportunities for revenue and growth.

Solve key business challenges

- Monetize IoT platforms at scale
- Build ecosystem partnerships
- Diversify with new business models
- Monetize 5G with vertical market solutions
- Establish financial trust in ecosystems

READ

Research report: [5G future: Targeting the enterprise](#)

JOIN

Collaboration initiative to [build IoT architecture and APIs](#)

UPSKILL

[Digital Ecosystem Management](#) training

DOWNLOAD

New [Business Capability Reference Map](#)

Benefits of TM Forum membership

Transformation Tools & Standards

Download blueprints & standards for transformation

- Enable a capability-driven diversification strategy with our [Business Architecture](#)
- Build your IoT stack reusing existing [Open APIs](#)
- Assess the [impact of 5G on Revenue Management](#)

Unique Knowledge & Insights

Learn implementation skills & best practice

- Take self-directed training in [Digital Ecosystem Management](#) or [upskill your team](#)
- Explore [ecosystem case studies](#)
- Read our hard-hitting [research reports](#) and [insights](#)

Global Industry Expertise

Find your Tribe

- Watch [the Impact of Covid-19 on Telecoms](#) and other on-demand [webinars](#)
- Attend our upcoming [events](#)
- Join our online communities discussing [digital ecosystems and IoT](#)
- Get [coaching](#) from TM Forum experts

Rapid Problem Solving

Access our global collaboration platform

- Influence global standards in our [IoT Management](#) and [Open API](#) projects
- Develop the [Business Architecture for digital ecosystems](#)
- Develop the new [Business Assurance framework](#) for ecosystems

Continuous Co-innovation

Build practical real-world solutions

- Join or start an [Ecosystem Catalyst proof-of-concept](#)
- Apply our standards to [Smart City](#) challenges

Digital Experience & Trust



Delivering deeply rewarding customer experiences across the new landscape of 5G

Solve key business challenges

- Create “5G” digital customer experiences
- Use AI to drive 360-degree customer profiles
- Deliver omni-channel service
- Assure customer experience across ecosystems
- Understand your Customer Experience maturity

READ

Case study: [Axiata leads in digital customer experience](#)

JOIN

[Customer Experience Management collaboration project](#)

UPSKILL

[Customer Experience Management Practitioners' training](#)

DOWNLOAD

[Customer Centricity Toolkit](#)

Benefits of TM Forum membership

Transformation Tools & Standards

Download blueprints & standards for transformation

- [Customer Experience Management 2025 Guidebook](#)
- [Customer Centricity Toolkit](#)
- [Guide to AI-Driven 360 Degree Customer Profiles](#)

Unique Knowledge & Insights

Learn implementation skills & best practice

- Explore [CX case studies](#)
- Read our hard-hitting [research reports](#) and [insights](#)
- Take training in [customer centricity](#) and [CEM](#) or [upskill your team](#)

Global Industry Expertise

Find your Tribe

- Join our [online community discussing customer experience](#)
- Attend our upcoming [webinars](#) & [events](#)
- Get [coaching](#) from TM Forum experts

Rapid Problem Solving

Access our global collaboration platform

- Define state of the art CX in our [Digital Maturity Model project](#)
- Drive “5G” digital experiences in our [CEM project](#)

Continuous Co-innovation

Build practical real-world solutions

- Join or start a [CX Catalyst proof-of-concept](#)

The Human Factor



Driving cultural change, diversity and talent development in our industry

Solve key business challenges

- Transform your organization's culture
- Build a workforce for the future
- Establish diversity & inclusivity
- Attract and retain talent
- Accelerate change

READ

Research: [The culture wars of transformation](#)

JOIN

[Digital Organizational Transformation project](#)

TAKE PART

[Talent Radar Skills and Diversity Survey](#)

DOWNLOAD

Benefits of TM Forum membership

Transformation Tools & Standards

Download blueprints & standards for transformation

- [Digital Organizational Transformation Toolkit](#)

Unique Knowledge & Insights

Learn implementation skills & best practice

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- Read our hard-hitting [research reports](#) and [insights](#)
- Take [self-directed](#) training or [upskill your team](#)

Global Industry Expertise

Find your Tribe

- Attend our upcoming [webinars](#) & [events](#)
- Join our [online community](#)
- Get [coaching](#) from TM Forum experts

Rapid Problem Solving

Access our global collaboration platform

- Join the [Digital Organizational Transformation project](#)

Continuous Co-innovation

Introducing...

A blueprint for intelligent operations fit for the 5G era

- Provides a migration path from legacy systems and processes to modular, cloud native software orchestrated using AI

Practical tools

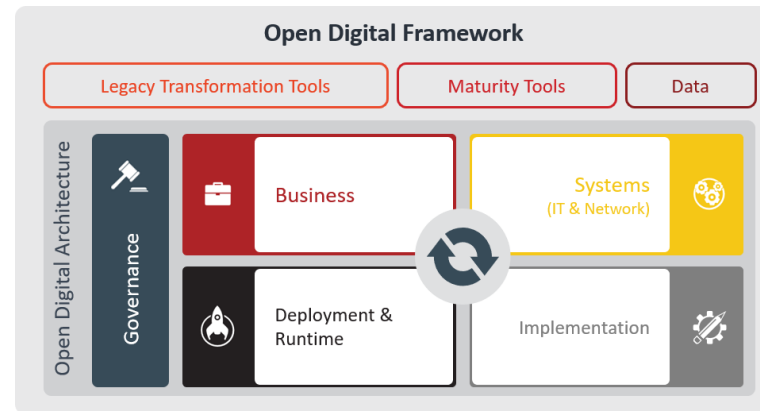
- ODF comprises tools, code, knowledge and standards (machine-readable assets, not just documents)

Delivering business value for TM Forum members today

- Accelerating concept-to-cash, eliminating IT & network costs, enhancing digital customer experience

Developed through TM Forum's collaboration programs

- Created and used by leading service providers and software companies, building on TM Forum's established standards



Goals of the Open Digital Framework

- Transform business agility (accelerate concept-to-cash from **18 months to 18 days**)
- Enable simpler IT solutions that are easier and cheaper to deploy, integrate & upgrade
- Establish a standardized software model and market which benefits all parties (service providers, vendors & SIs)

Transformation Tools

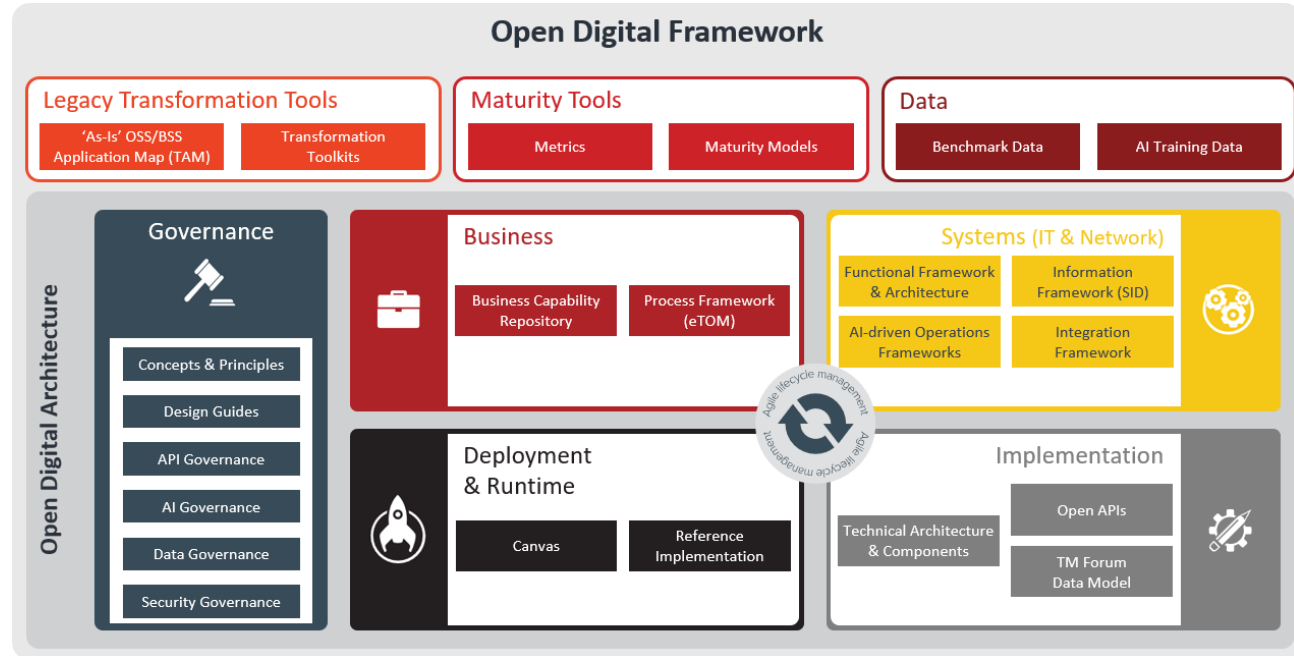
- Guides to navigate digital transformation
- Tools to support the migration from legacy architecture to ODA

Open Digital Architecture

- Architecture framework, common language, design principles
- Open APIs exposing business services
- Software components
- Reference implementation and test environment

Maturity Tools & Data

- Maturity models and readiness checks to baseline digital capabilities
- Data for benchmarking progress and training AI



Open Digital Framework

Legacy Transformation Tools

'As-Is' OSS/BSS
Application Map (TAM)

Transformation
Toolkits

Maturity Tools

Metrics

Maturity Models

Data

Benchmark Data

AI Training Data

Open Digital Architecture

Governance



Concepts & Principles

Design Guides

API Governance

AI Governance

Data Governance

Security Governance

Business



Business Capability
Repository

Process Framework
(eTOM)

Systems (IT & Network)

Functional Framework
& Architecture

Information
Framework (SID)

AI-driven Operations
Frameworks

Integration
Framework



Deployment & Runtime



Canvas

Reference
Implementation

Implementation

Technical Architecture
& Components

Open APIs

TM Forum
Data Model



Open Digital Architecture (ODA)

- ODA is a complete enterprise architecture blueprint for open digital platforms, replacing traditional operational and business support systems
- Comprises standardized, reusable, cloud native software components organized into loosely coupled domains
- Components connect via standardized Open APIs which:
 - Provide zero-touch interoperability (plug-&-play components)
 - Expose business capabilities for zero-touch partnering
- ODA transforms business agility with simpler IT solutions that are easier and cheaper to deploy, integrate & upgrade
- Built by industry agreement
 - TM Forum members are actively developing the ODA standards, leveraging mature, proven TM Forum assets

"Open Digital Architecture is a catalyst to cultural change."

Thierry Souche

Group CIO, Orange



Ambition	Today's Challenges	ODA Solutions
<p>Accelerate Concept-to-Cash Launch new products in days</p>	<ul style="list-style-type: none"> Lack of business agility 	<ul style="list-style-type: none"> Modular, reusable software components Designed for rapid experimentation and agile ways of working
<p>Monetize 5G in the enterprise 40% growth in B2B2X</p>	<ul style="list-style-type: none"> Lack of business / technical alignment Systems & processes designed for traditional telco business 	<ul style="list-style-type: none"> Common language for business & technology domains Supports any product via catalog-based data and rules Zero-Touch Partnering via Open APIs
<p>Eliminate costs Double OpEx efficiency</p>	<ul style="list-style-type: none"> High IT procurement & integration costs High maintenance cost of customized IT High operational cost of complex, manual processes 	<ul style="list-style-type: none"> Enables a marketplace for standardized software components Open standards to minimize software customization Zero-Touch Interoperability via Open APIs Optimized for cloud native deployment Zero-Touch Operations via AI-enabled automation
<p>Delight Customers 100% digital interactions</p>	<ul style="list-style-type: none"> Poor customer experience due to disconnected systems No single view of the customer 	<ul style="list-style-type: none"> Pace-layering for rapid evolution of customer-facing systems 360° customer view built on a common data model AI-ready for optimizing personalized customer experiences



“Concepts like open-APIs, artificial intelligence, platform business models, and digital ecosystems will help drive agility and innovation. The TM Forum Open Digital Architecture provides a pragmatic way to bring these concepts together and sets the blueprint for digital transformation.”

Lester Thomas, Chief IT Systems Architect, Vodafone



Business Architecture

- Business capability map & value stream mappings
- Multi-layered model of the key business processes for efficient, agile operations (eTOM)

Systems Architecture

- Functional architecture (a set of structured and simplified implementation independent views enforcing decoupling)
- Data architecture, with standard definitions for the information that flows through the enterprise and between service providers & their partners (SID)

Implementation Architecture

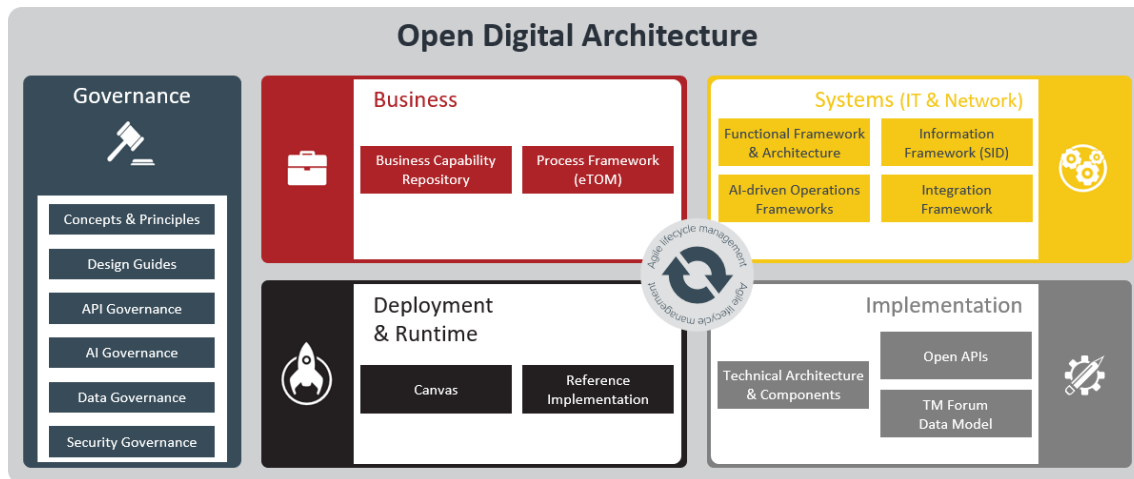
- Suite of 50+ REST-based Open APIs for standardized interoperability of IT systems and partner integration
- Definition of the ODA Components for reuse and simple integration
- Standardized data model, enhanced for AI operations

Deployment & Runtime Environment

- Canvas – a standard technical framework and DevOps environment for plug-and-play ODA components
- Lab-deployed reference implementation and test environment

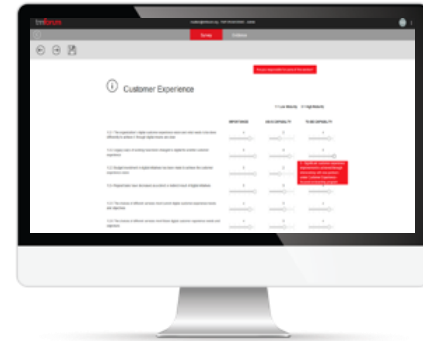
Governance

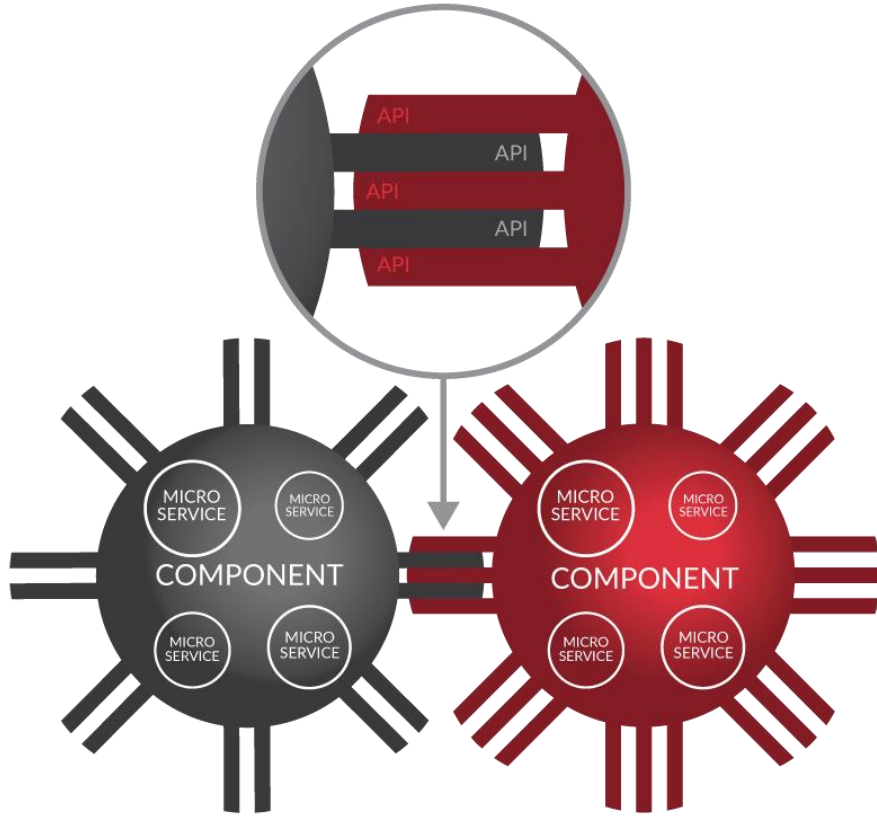
- Principles, design guides, metamodels
- Tools for agile management of the architecture lifecycle



Digital Maturity Model

To help enterprises measure and navigate their complex digital transformation journeys by providing actionable insights, benchmarking and clear understanding of industry best practice, in order to prioritize investment and accelerate transformation

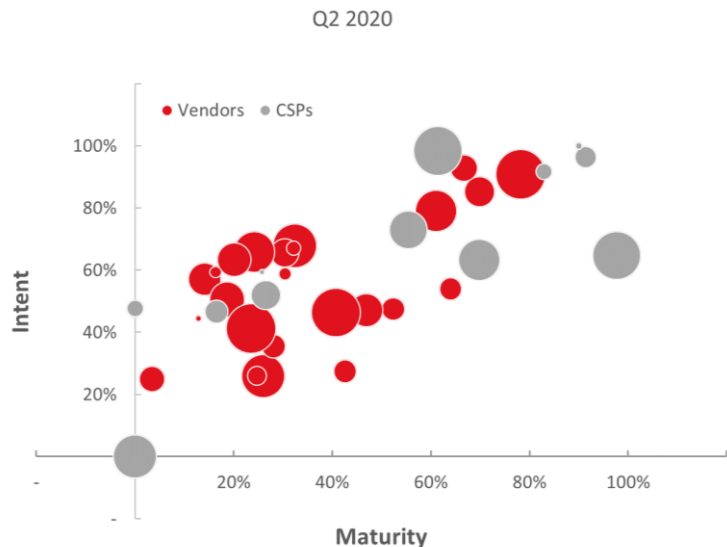




- A global initiative to build a standardized set of REST-based Open APIs to enable end-to-end connectivity and interoperability & across complex ecosystem based services
 - Suite of 50+ collaboratively developed REST-based Open APIs
 - designed to achieve Open Digital Architectures
 - for enterprise grade end to end management of services across any sector or industry
- 45 leading service providers and technology companies have signed TM Forum's [Open API Manifesto](#)

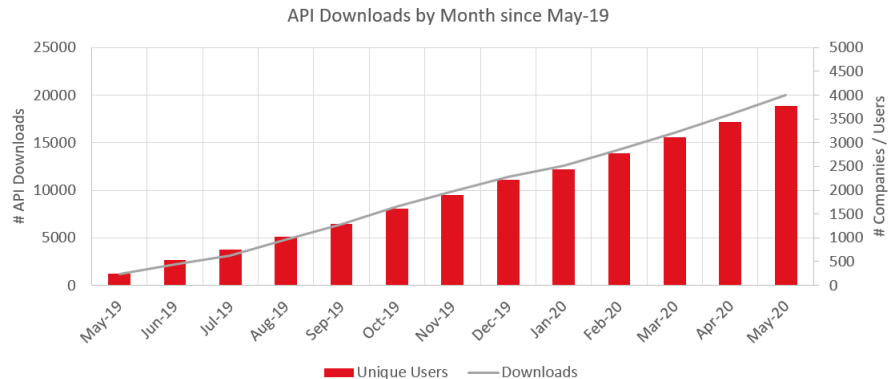
2.8X increase

in reported Open API adoption from 2Q19 to 2Q20



20,000 API downloads

by 3,750 users from 185 companies in 12 months to May-20



Open API Manifesto signatories



Standardization of APIs will lead to faster and smoother integrations across disparate systems, leading to greater efficiencies in the industry.”

Eugene Yeo,
Chief Information Officer, MyRepublic

Framework: A blueprint for best practice business operations

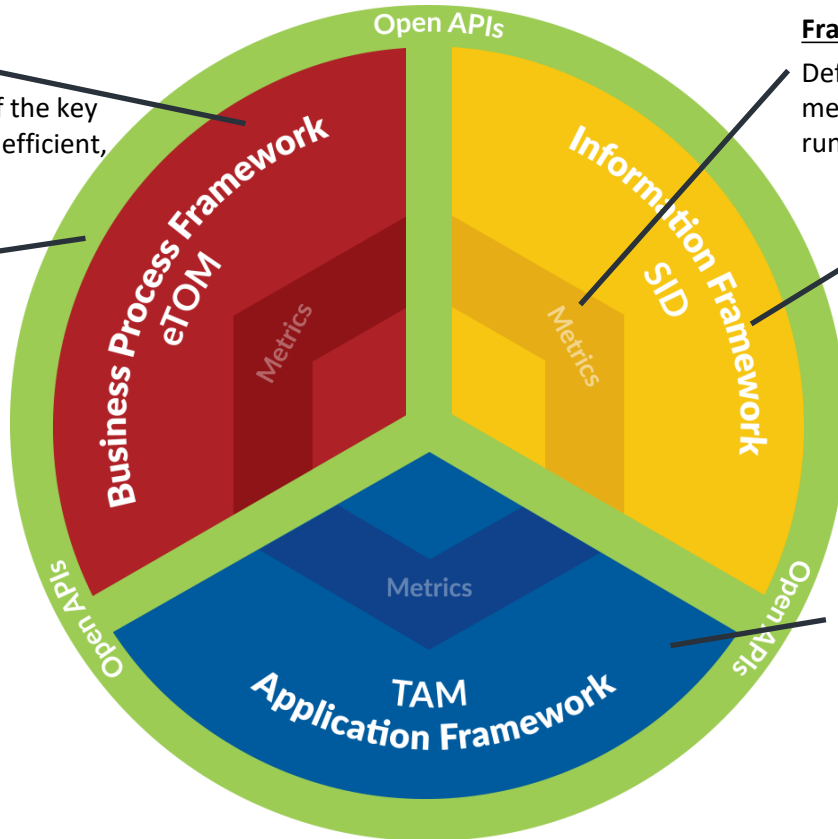
tmforum Framework

Business Process Framework (eTOM)

Multi-layered model of the key business processes for efficient, agile operations

Open APIs

TM Forum's suite of more than 50 REST based Open APIs are key enablers of the Open Digital Architecture driving digital transformation.



Frameworkx Metrics

Definitions for over 2900 measures and KPIs to help run your business

Information Framework (SID)

Standard definitions for all the information that flows through the enterprise and between service providers and their business partners

Application Framework (TAM)

A systems map showing how business capabilities are implemented in software applications

A comprehensive suite of standards and best practices to accelerate and de-risk transformation projects and enable any service provider's business to run with maximum agility and efficiency

Key Reference Assets

- [Frameworkx homepage](#)
- [Frameworkx Project & Work](#)
- [Metrics Project & Work](#)
- [Frameworkx Community](#)
- [Introductory video](#)

Training & Services

- [Frameworkx Training](#)
- [Conformance Certification](#)
- [Coaching](#)

Collaboration

- Agile development of standards, reference implementations & shared code
- Solving key industry challenges that require a collaborative approach
- Member-driven projects shaping the digital future



ODF Sprint 3 2020 (Apr 6th to May 29th 2020) / Rich Filter Controller

Open Digital Architecture Project (A3) - Priority - Epic/Theme - CTO OKRs - Deliverable Type - Companies - Contributors

ODF Sprint 3 2020 (Apr 6th to May 29th 2020) / Rich Filter Results

No description	All columns	T	Key	Epic/Theme	CTO OKRs	Summary	P	Deliverable Type	Status	Contributors	Reporter	Assignee
Parent Link		Ai-241	AiOps	AI/Data_& Analytics	AI/Operations	Create a new document IG1202 describing the analysis of the production stage of the software lifecycle management	🔴	IN PROGRESS		Alan Pope	Lucia Franco Venetis	
AI-183 Industry Standard AI Maturity Model		AI-213		AI/Data_& Analytics		Sign AIMM Questionnaire - Contribute to EMM	🔴	OPEN		Cecilia Ortega Lopez	Emmanuel A. Clotiere	
AI-181 Define standards to enable the safe and effective operation of AI and Machine Learning solutions deployed at SCALE		AI-119		AI/Checklists	AI/Data_& Analytics	Develop & Test AI Checklists with 5-7 Test Partners & Share Results at Copenhagen	🔴	IN PROGRESS		Cecilia Ortega Lopez	Rob Claxton	

2 filtered issues @1 problem

ODF Sprint 4 2020 (Jun 1st to Jul 31st 2020) / Rich Filter Controller

Open Digital Architecture Project - Priority - Epic/Theme - Deliverable Type - Companies - Contributors

ODF Sprint 4 2020 (Jun 1st to Jul 31st 2020) / ODF Sprint 4 2020

No description	All columns	T	Key	Epic/Theme	CTO OKRs	Summary	P	Deliverable Type	Status	Contributors	Reporter	Assignee
Parent Link		ODA-183	Static Architecture	ODA-435	Cloud_Native T	Studies of alignment issues (Technical Deficit) across ODA, Tx, and APIs	🔴	IN PROGRESS		Dave Milburn	Dave Milburn	
ODA-180 Dynamic Architecture		ODA-334		Cloud_Native T		Specify Resource Inventory for SG N/TM Service Assurance	🔴	IN PROGRESS		Alan Pope	Vance Shipley	

2 filtered issues @1 problem

ODF Sprint 5 (Aug 3rd to Oct 2nd 2020) / Rich Filter Controller

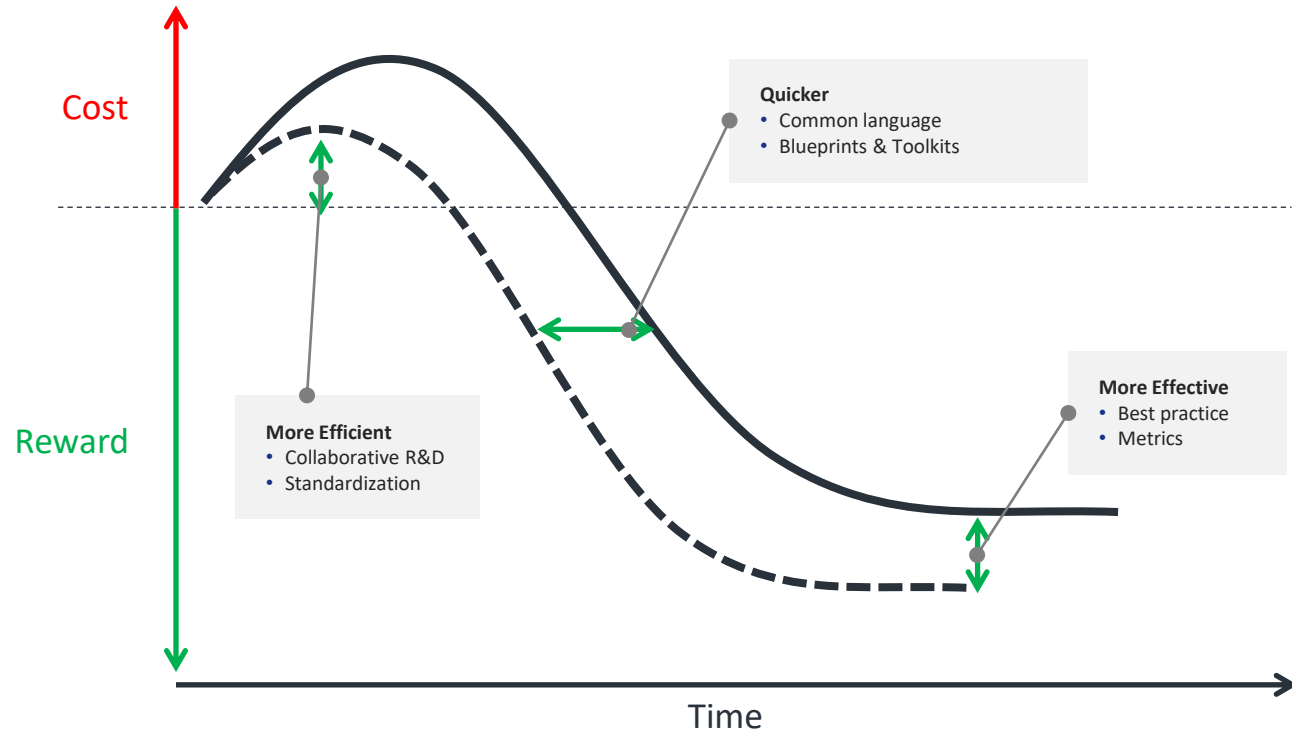
Project - Priority - Epic/Theme - Deliverable Type - Companies - Contributors

ODF Sprint 5 (Aug 3rd to Oct 2nd 2020) / Rich Filter Results

No description	All columns	T	Key	Parent Link	Epic/Theme	Summary	P	Deliverable Type	Status	Contributors	Reporter	Assignee
ODF-180		🔴	🔴	🔴	Beyond Connectivity	Verify Network Accession Platform Connected Links	🔴	Other	OPEN		Nancy	

Benefits of collaboration...

- Collaborative R&D makes digital transformation faster, more efficient, effective and lower risk
- Creates quality assets that are fit-for-purpose and ready for use, now!



“Sharing in areas that are non-differentiating areas for us is mandatory in an industry ecosystem environment. We believe that participation in collaboration accelerates our R&D and enables us to work with key business stakeholders. We also consider participation in catalyst projects a very efficient way to showcase new initiatives”

Laurent Leboucher, Vice President, APIs and Digital Ecosystems, Orange

Open Digital Framework

Collaborative R&D & Catalysts

Competences	Projects
Culture & Talent Transformation	Digital Organizational Transformation
Business Architecture	Digital Ecosystem Management
Ecosystem Management & Monetization	
IoT Management & monetization	IoT Management
Smart City enablement & monetization	Smart City
Business Assurance	Business Assurance
Digital Maturity Measurement & Monitoring	DMM
Digital Customer Experience & Trust	CEM
AI Implementation & Management	AI
Open APIs	Open APIs
Information Modeling & Process Implementation	Framework
Enterprise Architecture & Cloud Native IT Transformation	Open Digital Architecture
Network Automation	Autonomous Networks

Catalyst Program

Catalyst projects

- Rapid fire, member-driven, proof-of-concept projects
- Create innovative solutions to industry challenges in multiple vertical markets
- Connect ecosystems (CSPs, integrators, vendors, enterprises)
- Validate, and contribute back to, TM Forum best practices & standards
- Present showcase demonstrations at TM Forum events

How Catalyst projects work:

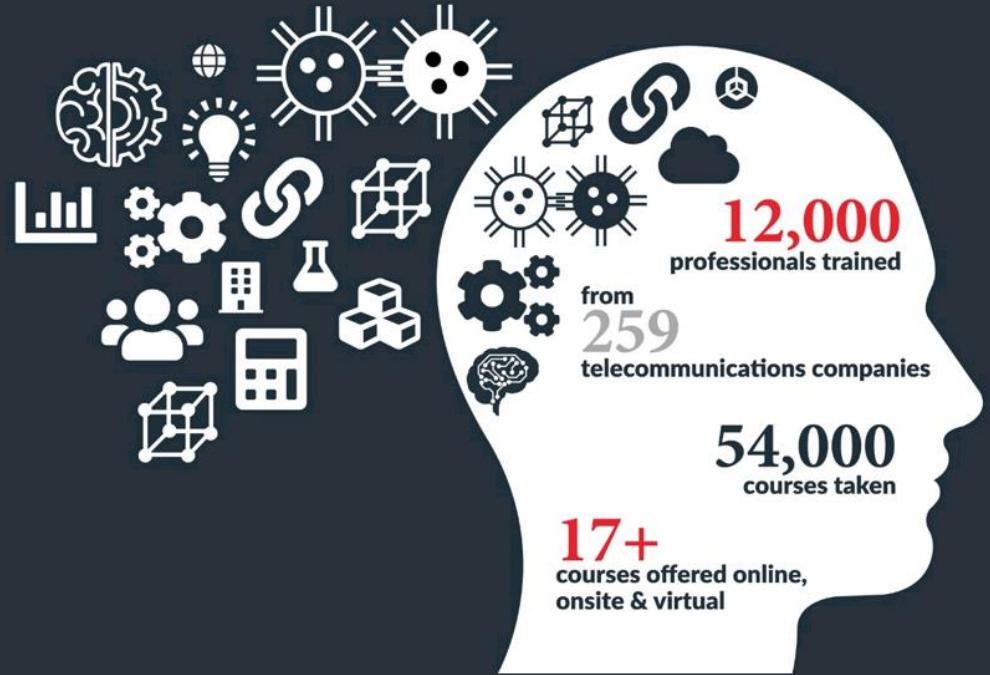
1. Multiplication of resources
2. Acceleration of R&D
3. Multi-company creativity
4. Personal development
5. A safe place to innovate



150+ companies
participating every year
in 40+ Catalyst projects

Education & Coaching

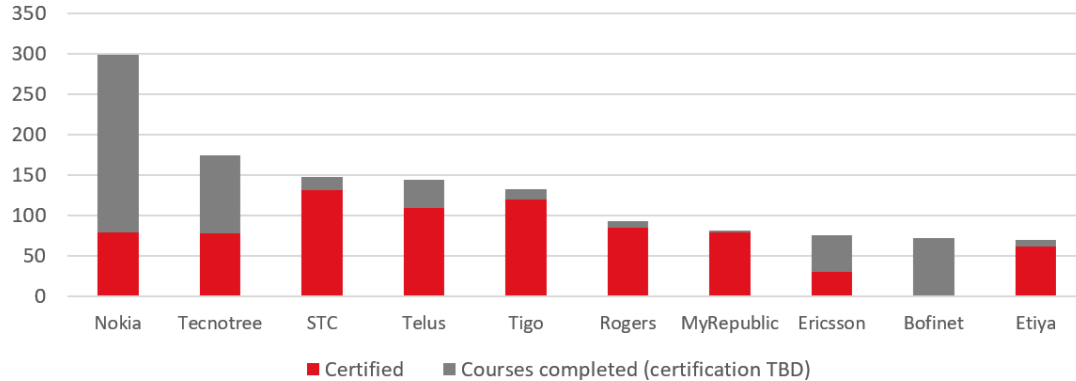
- Our training and coaching provides **Essential Skills** for the future of our industry
- We offer interactive learning approaches and career certification to maximize **Impact** for your business and employees
- We offer **Flexible** delivery, including expert-led on-site or virtual classrooms, self-directed online and blended options



A '70:20:10' holistic approach to upskilling your workforce

2,500+ trained & certified in 12 months to May-20

Top 10 Companies (last 12 months)



"TM Forum training is helping our R&D, services and pre-sales teams communicate in a more unified way with our customers."

Bhaskar Gorti

President & Chief Digital Officer, **NOKIA**

Education

2,500+ courses completed by 1,100+ students from 165+ companies

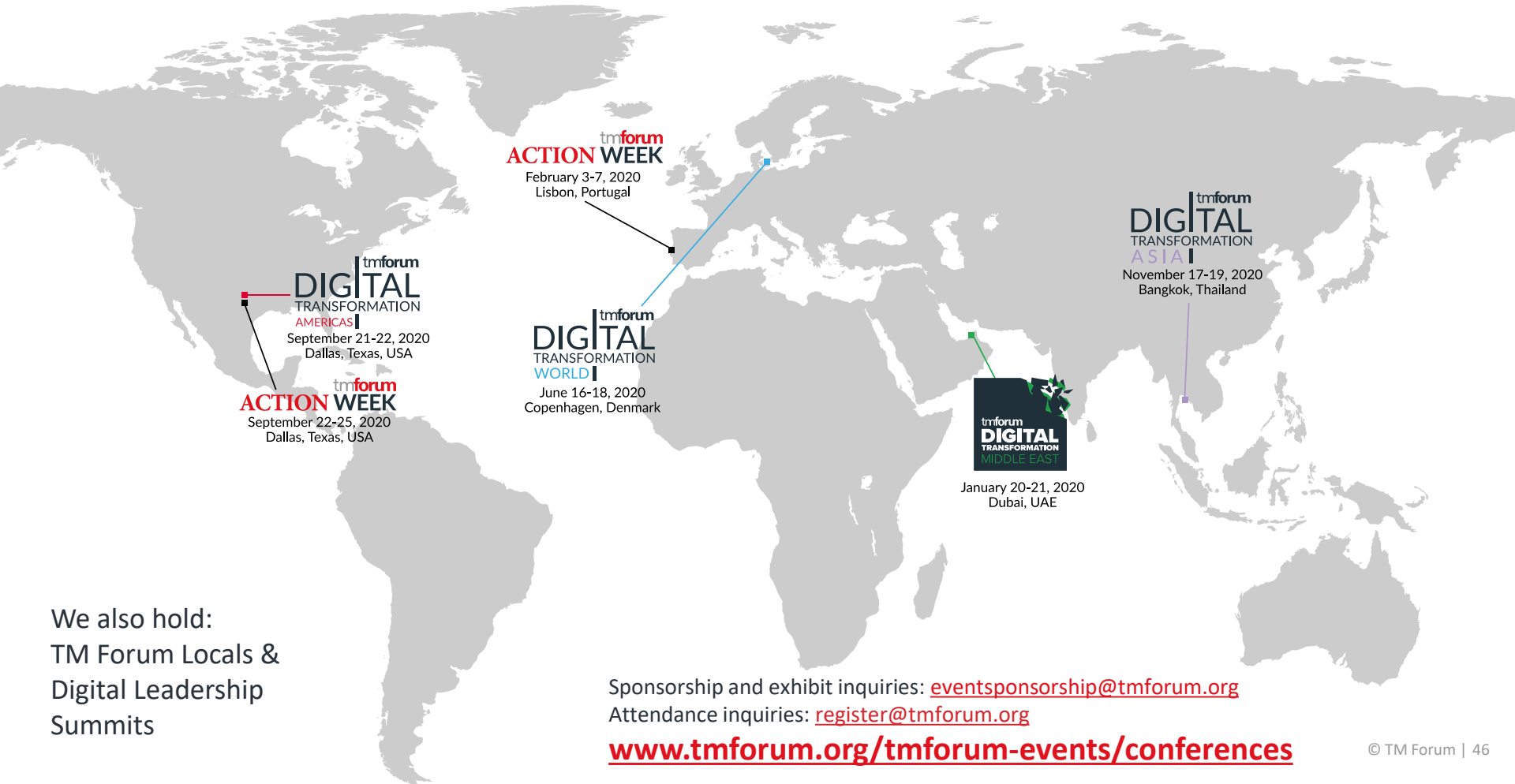
Certifications

478 professionals certified from 79 companies

Coaching & Career Development



Global event series in 2020



tmforum
DIGITAL
TRANSFORMATION
AMERICAS
September 21-22, 2020
Dallas, Texas, USA

tmforum
ACTION WEEK
September 22-25, 2020
Dallas, Texas, USA

tmforum
ACTION WEEK
February 3-7, 2020
Lisbon, Portugal

tmforum
DIGITAL
TRANSFORMATION
WORLD
June 16-18, 2020
Copenhagen, Denmark

tmforum
DIGITAL
TRANSFORMATION
MIDDLE EAST
January 20-21, 2020
Dubai, UAE

tmforum
DIGITAL
TRANSFORMATION
ASIA
November 17-19, 2020
Bangkok, Thailand

We also hold:
TM Forum Locals &
Digital Leadership
Summits

Sponsorship and exhibit inquiries: eventsponsorship@tmforum.org
Attendance inquiries: register@tmforum.org

www.tmforum.org/tmforum-events/conferences

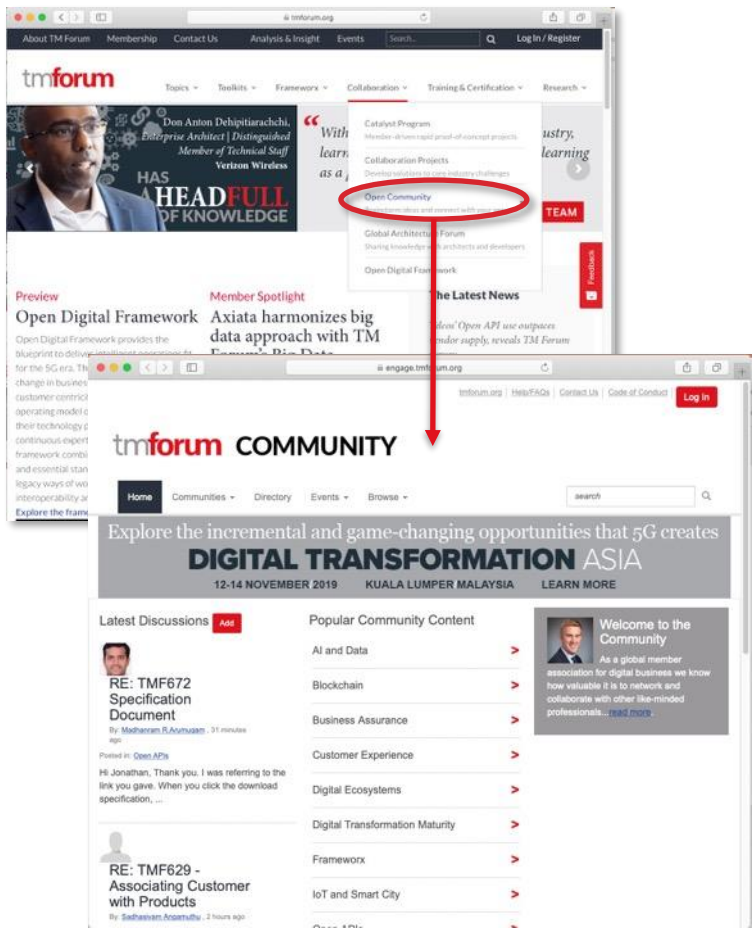
STAY INFORMED

You have access to free research reports, webinars, video interviews, thought provoking articles and more on the hottest trends in telecoms.



VISIT INFORM





71,211

Unique community members



472

Regular contributors



1,464

Public contributions in 2018

JOIN THE COMMUNITY



We deliver collaboration in 9 ways to give our members more **TIME** **tmforum**

Think

INFORM

Insight, research and analysis
12,000+ subscribers



Events and webinars
6,500+ attendees



On-line community collaboration
50,000+ participants

NON-MEMBERS

Innovate & Make



Catalyst program
150+ companies engaged
A digital innovation and R&D marketplace



Collaboration programs
Tackling current business challenges
in 6-month sprints



Open labs
Emerging virtual test-beds

850+ MEMBERS WORLDWIDE

Execute



Open Digital Framework
150,000+ downloads annually. Helps businesses
improve their agility by migrating IT and
operations into cloud-native environments



Training, conformance and certification
12,000 trained from 300+ companies
towards 5G readiness



Benchmarking, leadership and awards
Guiding and benchmarking
digital transformation journeys

NON-MEMBERS

In these tough times, TM Forum helps our members do several vital things:

1. Save costs
2. Continue developing new business
3. Reduce risk
4. Invest in their people

Investing in people

- TM Forum provides training & coaching in the essential skills for the digital future of our industry
- Our training is proven to have a positive impact on our members' businesses and on employee career development
- With employees at home, now is a perfect time for them to upskill via self-directed and expert-led virtual training
- We offer flexible delivery options and commercial terms to help members take advantage of this opportunity

Saving costs

- One of the key outcomes of our work is to save costs for all our members (CSPs & vendors)
 - Eliminating the maintenance burden of customized software
 - Simplifying and automating business processes
 - Slashing integration costs with open standards and APIs
 - Going cloud-native to save operational costs

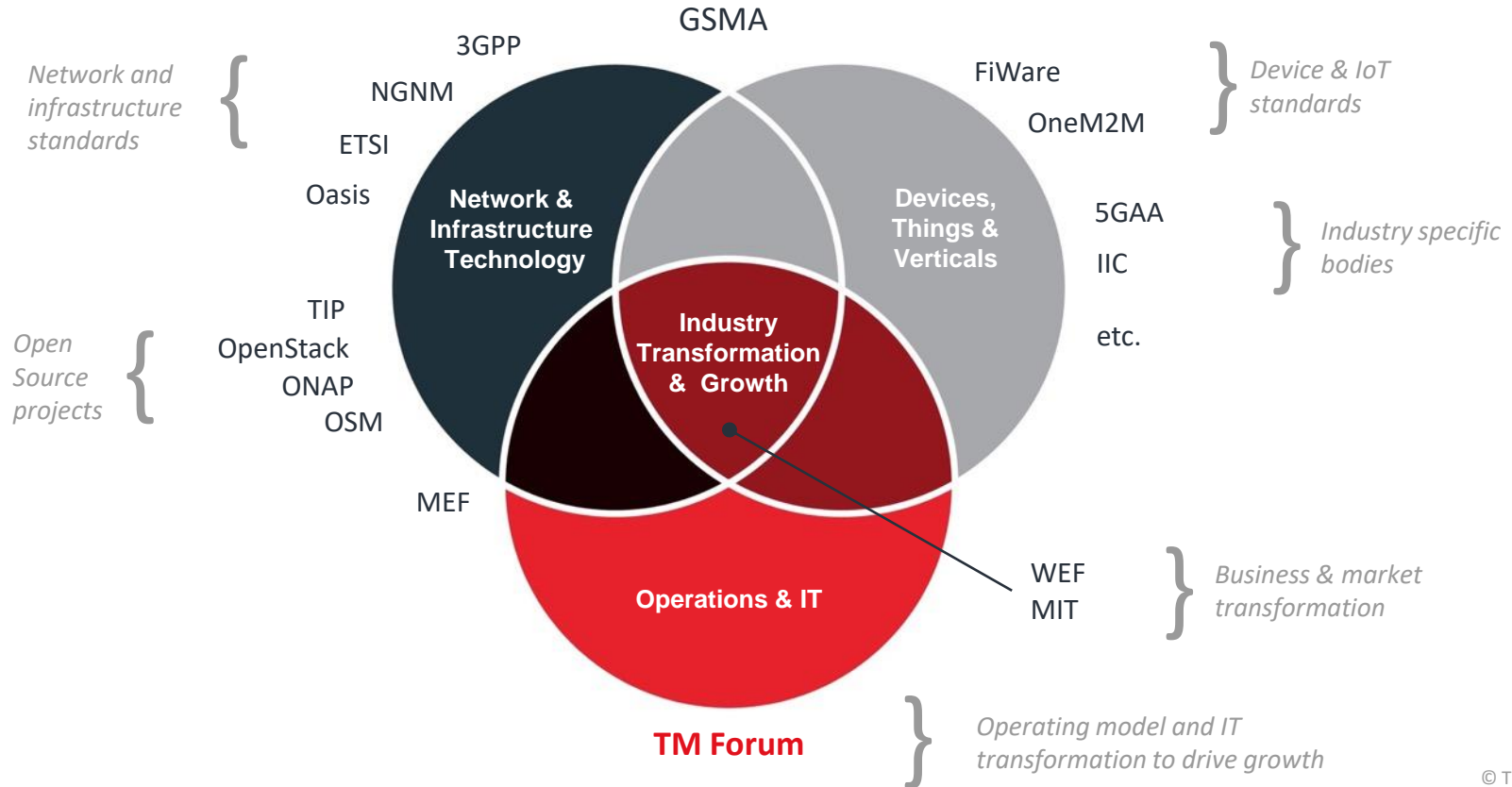
Developing new business opportunity

- Our work gives CSPs the agility to develop new business models and revenue streams
 - Getting business & technical teams talking the same language
 - Decoupling systems to support agile, pace-layered change
 - Accelerating Concept-to-Cash for new products by rearchitecting IT with modular, reusable software components
 - Exposing services externally via Open APIs to drive new revenue streams
- Vendors can also use TM Forum as a highly effective platform to generate new business by...
 - Showcasing their thought leadership & product innovation (e.g. Catalysts, SpEx, conferences, webinars...)
 - Developing closer working relationships with existing and new customers (e.g. collaboration, Catalysts, events...)
 - Demonstrating commitment to meet their customers' future needs (e.g. manifestos, conformance, collaboration...)

Reducing risk

- Our members share the risk (and cost) of innovation through our collaboration projects and Catalysts
- We provide a safe environment for this co-innovation work (e.g. IPR boundaries)
- Our standard blueprints and best practices are well proven (no need to reinvent the wheel)
- We provide access to the collective wisdom of the industry (helps avoid mistakes and 'do it right first time')

TM Forum is focused on end-to-end transformation of telco operations & IT to drive growth



Marketplace

Microservices
Marketplace

Co-innovation

Catalyst
Proofs of Concept

Studios

Education, Coaching & Conformance

Training / Upskilling

Coaching

Readiness Checks

Conformance
Certification

Knowledge Base

Guides & Tribes

Think Tanks

Playbooks

Guides &
Best Practice

Business Use Cases

Case Studies

Research

Open Digital Framework

Legacy Transformation Tools

'As-Is' OSS/BSS Application
Map (TAM)

Transformation
Toolkits

Maturity Tools

Metrics

Maturity Models

Data

Benchmark Data

AI Training Data

Open Digital Architecture

Governance



Concepts & Principles

Design Guides

API Governance

AI Governance

Data Governance

Security Governance

Business



Business Capability
Repository

Process Framework
(eTOM)

Systems (IT & Network)

Functional Framework
& Architecture

Information
Framework (SID)

AI-driven Operations
Frameworks

Integration
Framework



Deployment & Runtime



Canvas

Reference
Implementation

Implementation

Technical Architecture
& Components

Open APIs

TM Forum
Data Model



Digital Knowledge
Center
*Peer-to-peer
knowledge sharing*

Agile Collaboration
Environment
*Co-creation of
standards*

tmf.codes
*Code-sharing, test
& validation
environment*

Collaboration Platforms