

Customer Centricity Program



- Customer Experience Management
- Big Data Analytics
- Metrics

Project and Workstream Leaders
December 8, 2015



Speakers



Rebecca Sendel
Senior director, Customer
Centricity Program
rsendel@tmforum.org



Jonathan Hopkinson
Senior director, CEM Solutions,
Huawei Technologies
jonathan.hopkinson@huawei.com



Anand Mohan
Infosys
Track lead, Omni Channel
Anand_mohan05@infosys.com



Tim Morgan
Principal Consultant
Digital Transformation
Huawei
tim.morgan@huawei.com



Rigas Parathyras
Principal Solution Architect,
Digital,
Liberty Global
rparathyras@libertyglobal.com



**Antonio Cuadra
-Sanchez**
Use Cases and
Implementation Guide
leader
Indra Sistemas
acuadra@indra.es



**Muhammad Yousuf
Khawaja**
Senior Marketing Manage
Huawei
yousuf.khawaja@huawei.com



Robert Bratulic
Lead, Business Architecture
for Telecom, CSPs, DSPs
IBM
bratulic@ca.ibm.com



Barak Alon
Business Analyst
cVidya
Barak.alon@cvidya.com



Applejuan LI
Senior engineer, Carrier
Software, Huawei
BDA Process workstream lead
applejuan.li@Huawei.com



Larry Chesal
Senior Systems Engineer
Spirent
larry.Chesal@spirent.com



Gadi Solotorevsky
CTO
cVidya
gadi.Solotorevsky@cvidya.com

Agenda



- Introduction to TM Forum's Customer Centricity Program
- Customer Experience Management
 - ROI Calculator
 - CEM Metrics
 - Omni Channel
 - 360 Degree View of the Customer
 - Use Cases and Implementation Guide
 - Business Process



Agenda

- Metrics
 - Metrics definitions
 - New metrics
- Data Analytics
 - Data Monetization
 - Business Process
 - Maturity Model
 - Use Cases
 - Analytics Big Data Repository



Customer Centricity Program



Customer Experience Management

Big Data Analytics

Metrics

Using Customer Experience as a differentiator

Propelling Business Success with Analytics

Customer Centricity in the Hyper Connected and Virtual World

Developing our Best Practices



Challenges



1. Omni/right channel experiences: How do I create an Amazon/Uber/Apple type of experience in B2B2X and virtual environments?
2. How do I know if my CEM program is working from the customer's perspective and from a business ROI perspective?
3. I know I should be using data analytics more broadly to get value out of my data but how do I do that faster, better, cheaper?
4. I want to create a metrics/data-driven driven culture, how do I do that?
5. I want to be more citizen centric in my smart city. How can I do that in a systematic fashion?

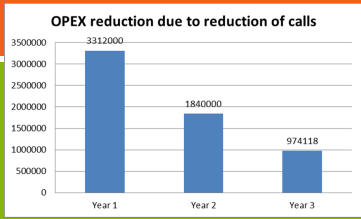
Customer Experience Management



Best Practices



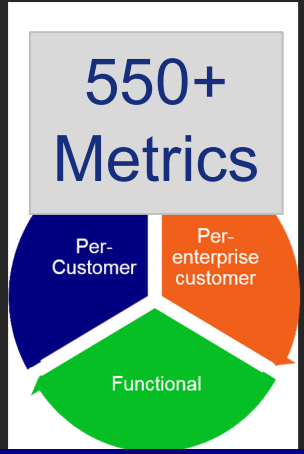
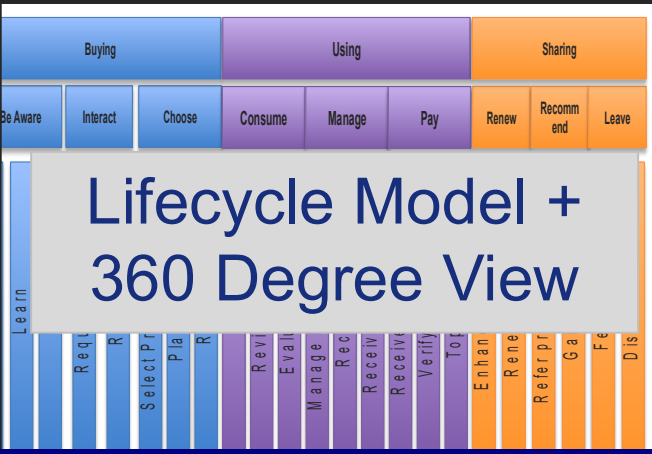
Guidebook



CEM Return on Investment Calculator

| Level | Level 1 Initial | Level 2 Repeatable | Level 3 Defined | Level 4 Managed | Level 5 Optimized |
|--|-------------------------------------|--|--|--|---|
| Strategy | No Strategy | Generic statement "Customer is King" | Objective CE statement with specific goals | Linkage of strategy to operations with specific goals | Forward looking approach based on industry benchmarks |
| Organization, Leadership and Influence | Ad Hoc, silo'd organizations | Common organizational CE objectives | X-organizational CE linked to Mgmt./Enterprise goals | CE as Mgmt. model including performance recognition and | C-level owners driving lean principles and process centric operations |
| People | Co | kn | no | me | al |
| Customer Insightfulness of Process | No | pr | | | |
| KPI's /Business Metrics | No | cc | kp | is | me |
| Tools and Systems | Silo'd software, data and processes | X-organizational data/interfaces implemented on ad hoc basis | End to end process and shared data requirements identified | End to end processes supported by major systems with shared data | Major systems implemented to support value stream with full access to enterprise data |

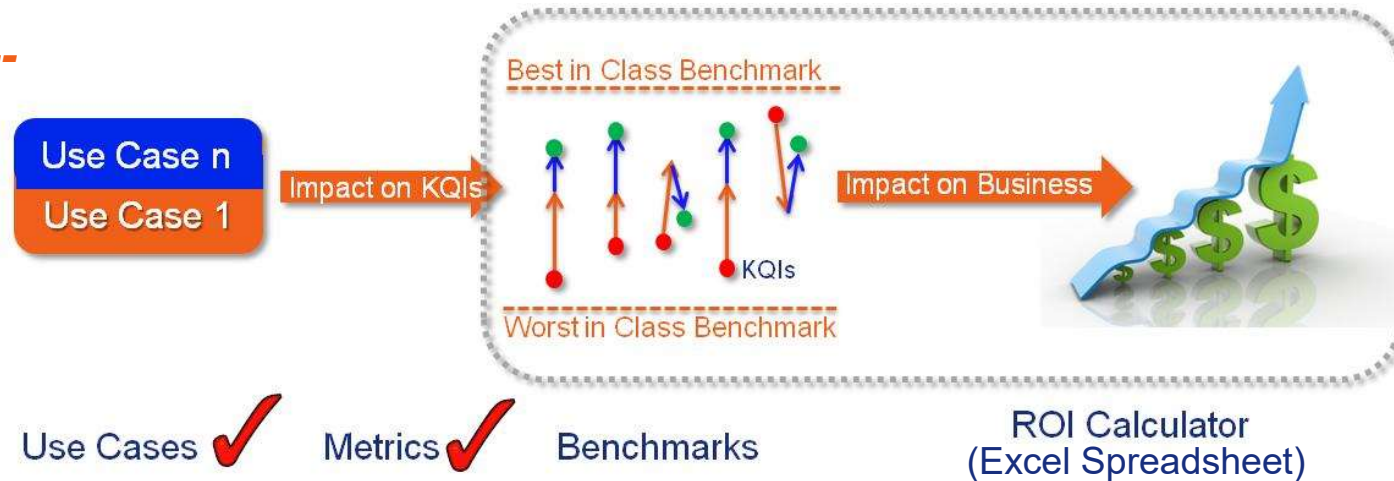
Maturity Model



Use Case Library

ROI Calculator

The Concept:--



Current Use Cases:--

- Propensity-to-Call Reduction
- 2G>3G>4G Migration
- eCommerce Conversion Rate
- Churn Reduction

Next Steps (Framework 16):--

- Critique and improve existing cases
- Add new use cases



CEM Metrics

A reference book of customer experience (outside-in) metrics

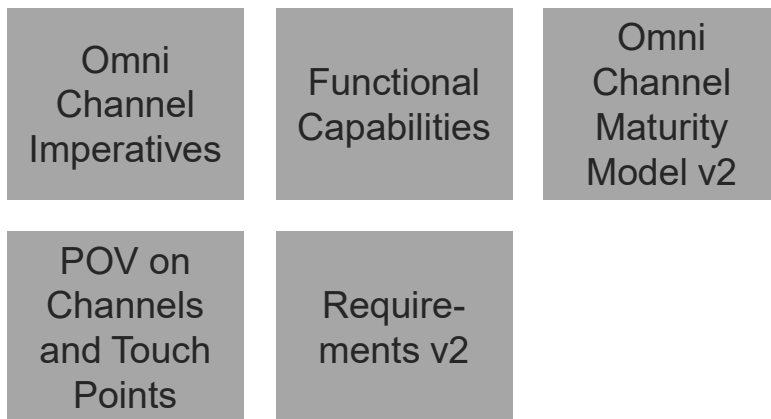
- Latest version has 572 metrics
- Covers the entire CE lifecycle
- Next Steps (Framework 16)
 - Add metrics to assess omni-channel performance
 - Leveraging Catalyst activity
 - Improve selected definitions to support inter-operator benchmarking



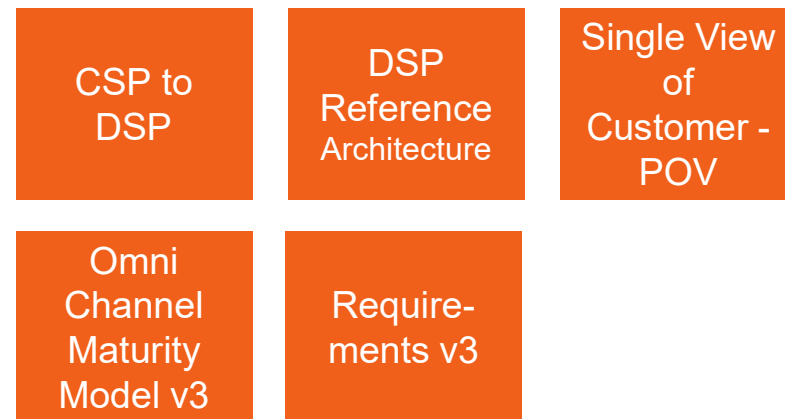
Omni Channel Best Practice



What have we accomplished?



What is Planned?



How can you help?

We meet on all Tuesdays 10 AM EST. Please join to understand and participate.

Anand Mohan

Participate – Collaborate – Learn - Contribute

Omni Channel Catalyst



- Omnichannel Catalyst team objectives
 - Innovation drives our activities to create an Omnichannel solution framework to enhance customer contact experience and create appropriate interventions towards customers in real time, consistently across channels.
 - Catalyst includes all aspects of the TM Forum customer journey lifecycle across traditional channels and digital channels, including social media and mobile.
 - Improve CSP business performance, services utilization and stickiness by making every contact positive. Put customers in control of a guided contact experience.



Tim Morgan

What problems does Omnichannel address?

1

Complexity

Existing and **new customer channels** create **complexity** and challenges for operators to provide a single face to the customer.

2

Reactive

Multiple authentications during internal handoffs, **dropped contacts** and **poor visibility** of the **customers experience** and **intentions** places operators into **reactive** mode during many customer contacts.

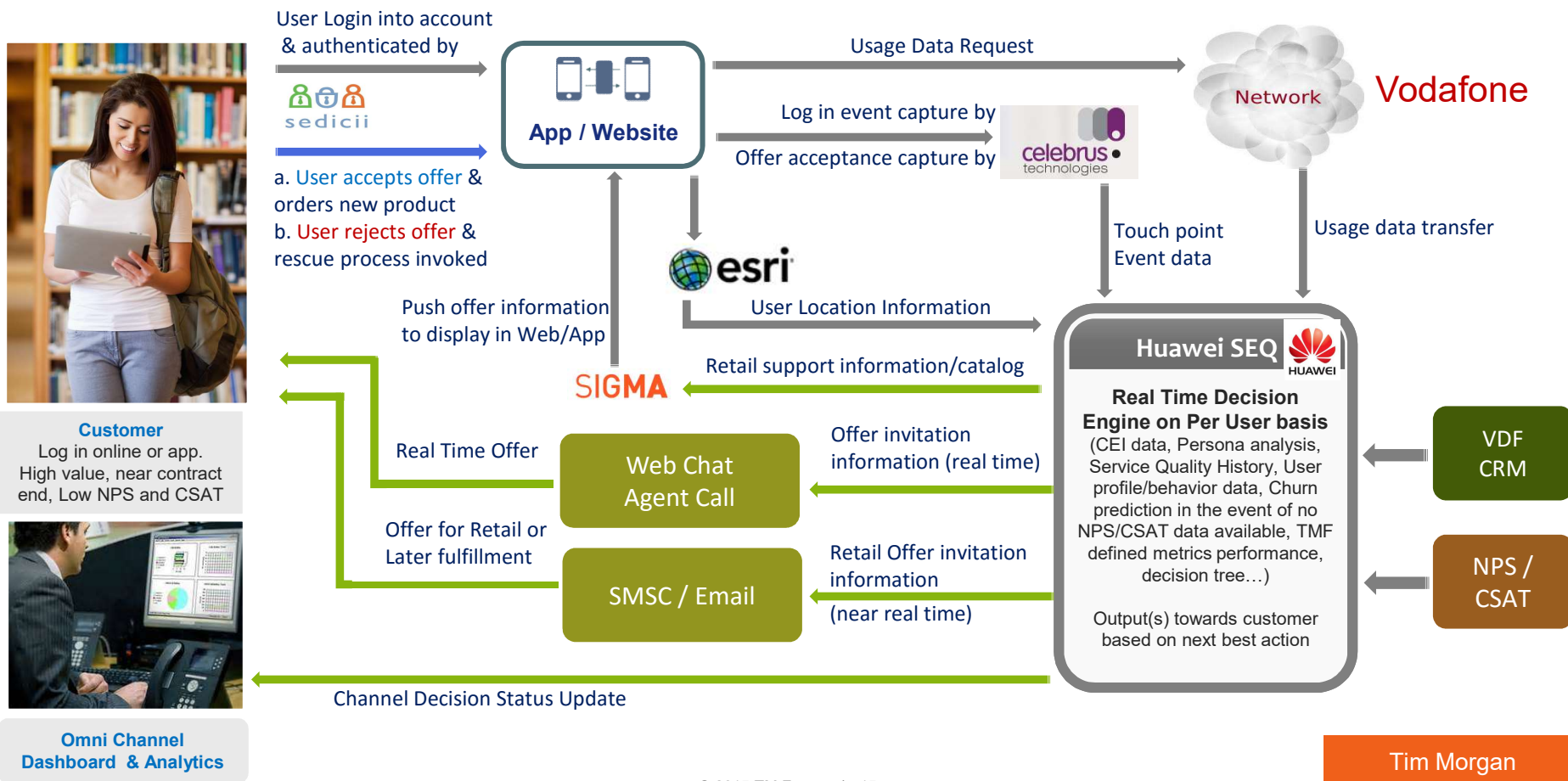
3

Churn

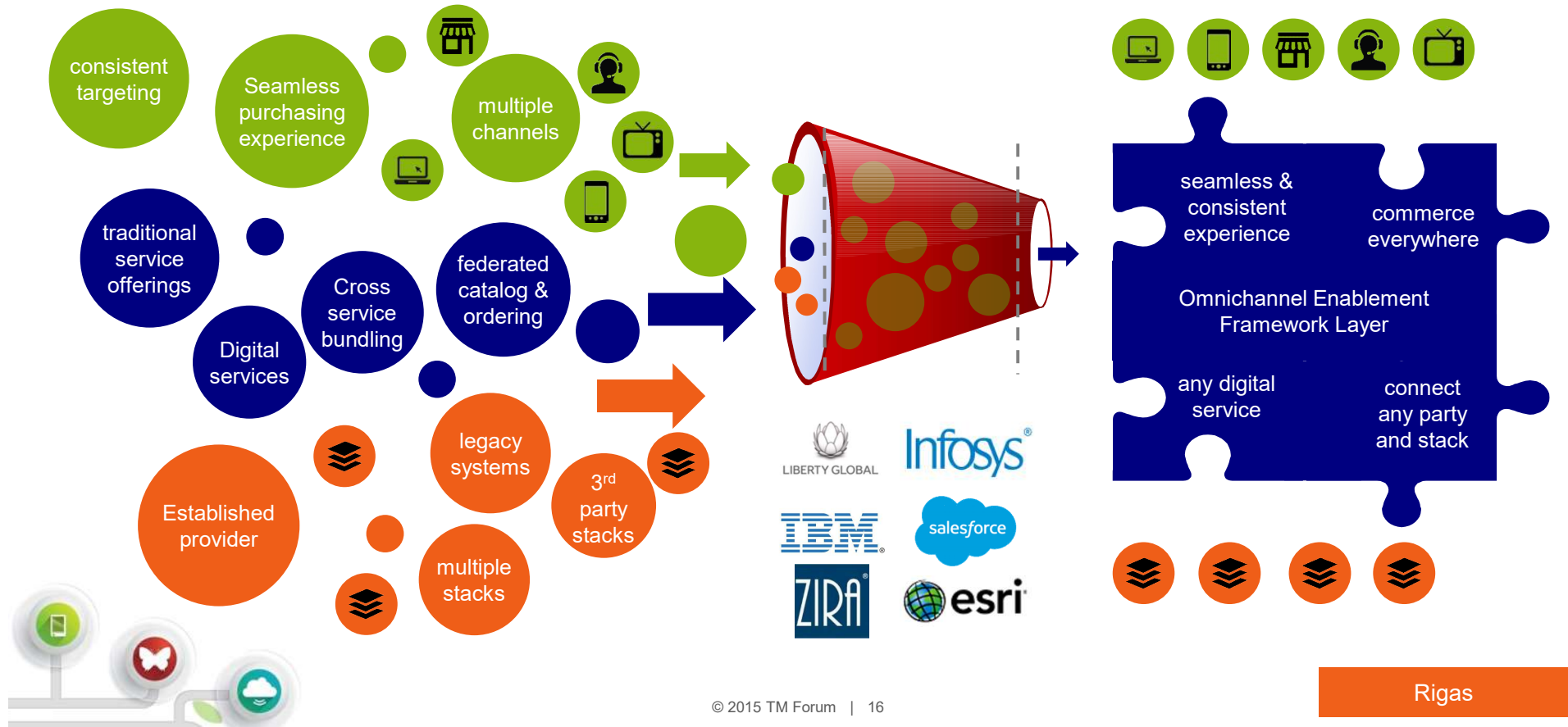
Inconsistent customer experience and frustrations leads to **preventable churn**, if the appropriate **intervention** had been made in time!

Tim Morgan

Use Case 2 (Churn to Return) – work flow



Omnishop Catalyst

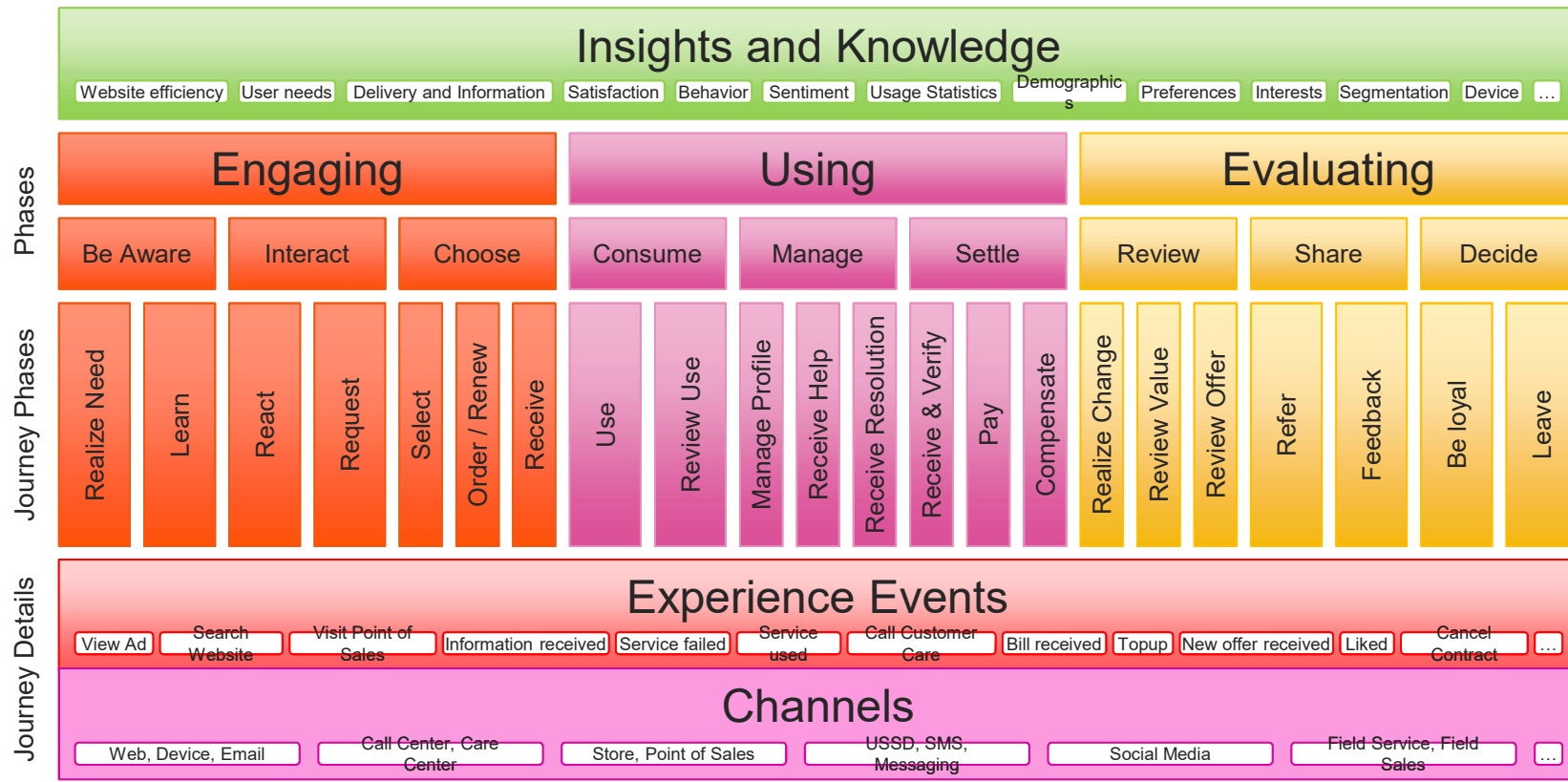


360 Degrees view of the Customer Achieved Results

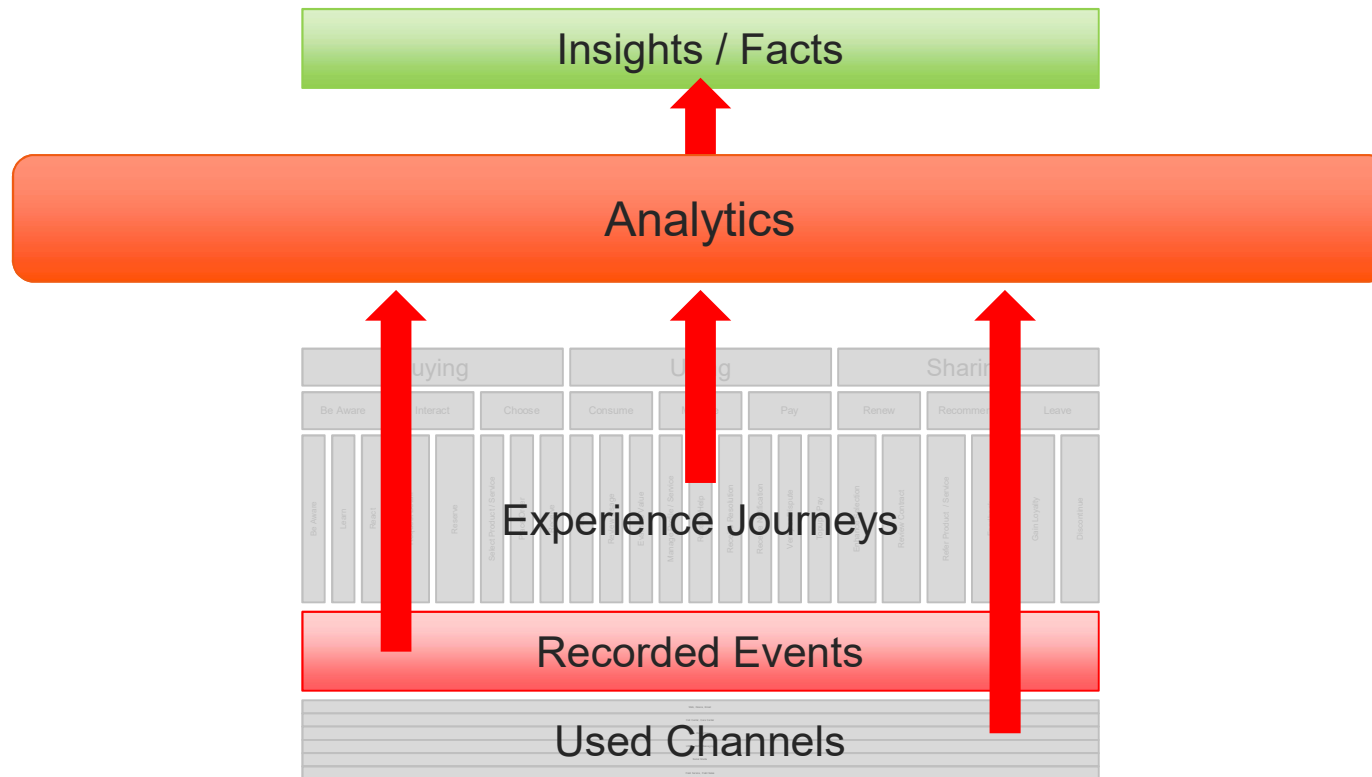
- Updated Experience Lifecycle Model
 - Expanding the experience journey concept to additional scenarios: Smart City, IoT, ...
 - Introduction of Events Layer and Insights/Knowledge layers
 - Fine tuning of terminology
- Journey Analytics
 - How to use analytics for transforming experience journey details into insights
 - Definition of the personas concept and how to use it
- Customer Sentiment
 - Motivation and Definition of the area

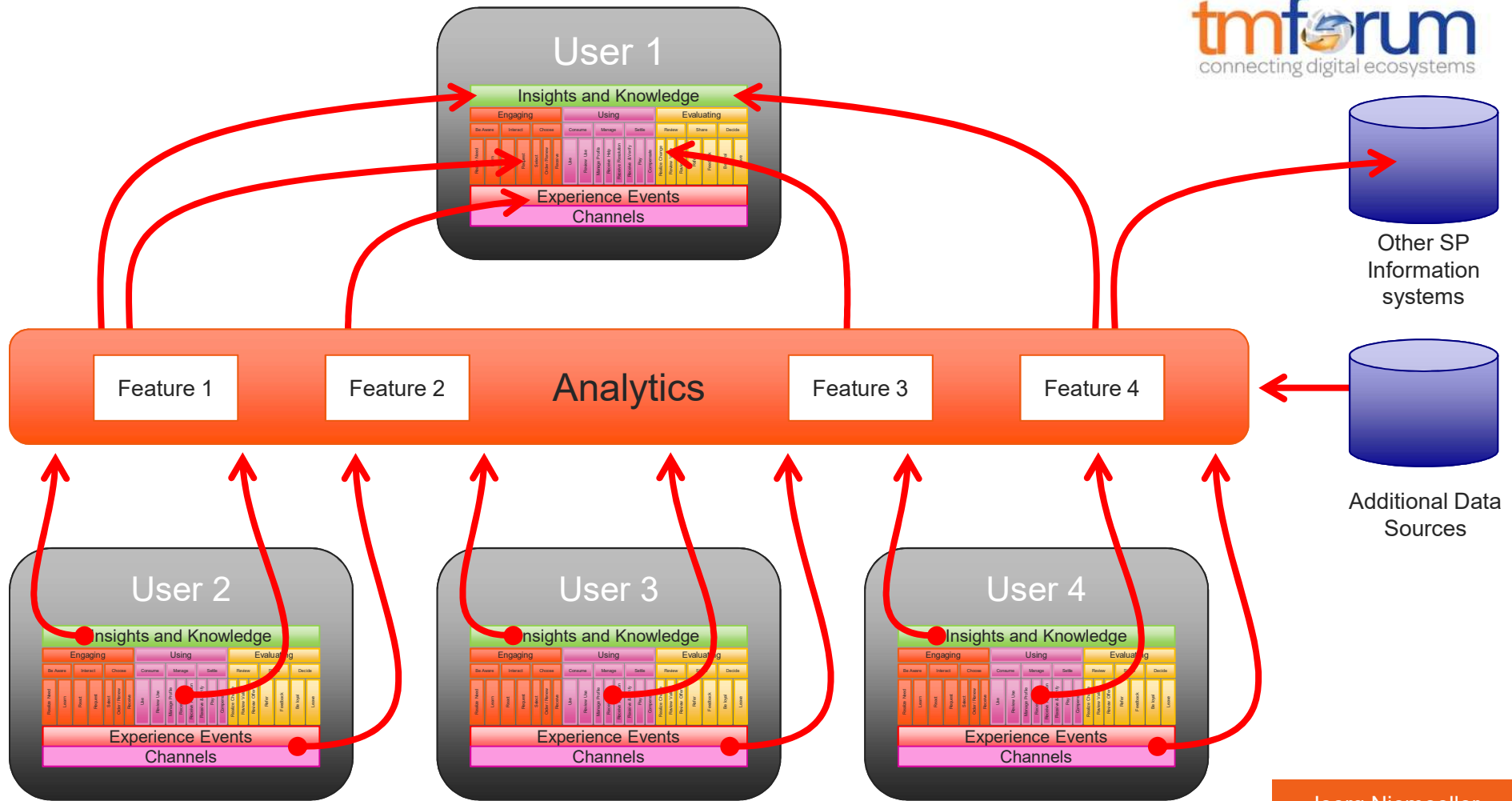


Experience Lifecycle Model



Journey Analytics





Plans for 2016

- Acceptance of the Experience Lifecycle Model
 - Broad partner review and discussion
 - Adding Detailed Examples: Telecommunication, Smart City, IoT, ...
 - Introduce Versioning
- Customer Sentiment
 - Demonstrate how customer sentiment type insights contribute to business improvements
- Experience Integrator
 - Define the concept of integrated experience management
- Experience Scores
 - Experience scores that capture important aspects of the user experience
 - Assessment of scores used in the industry
 - Define a consistent set of actionable scores



Use Cases and Implementation Guide

Fx 15.5: Unified Use Cases Template

- A single template for any Use Case (CEM, BDA and other projects)
- Available as a template resource @ confluence (Just click “create”)

Identification and Description

- ID
- Name
- Hierarchy
- Motivation
- CxLC Stage(s)
- Actors
- Entry conditions
- External References

Metrics and Datasources

- Customer Experience Metrics
- Other metrics
- Data Sources

Business Model

- Business Model of the Use case
- Based on Osterwalder Business Model Canvas

Particular Attributes

- Story
- Actions and processes
- Building Block(s)
- Privacy Risk Score
- Feasibility Parameters

Customer Experience Management...

Unified Use Case Template for Customer Ce...

tmforum Espacios - Foros - Personas - Calendarios - Crear

Customer Experience Management Project / Páginas / ... / Proposal of new use cases

New Use Case

Título 1

We have defined a Unified Use Cases template that can be applied to both Big Data Analytics (BDA) and Customer Experience Management (CEM) projects.

Use this link if you need to develop a Use Case offline
[Unified Use Case Template v1.0.docx](#)

PLEASE DELETE THIS SECTION UPON COMPLETION

Naming convention for Use Cases
 Proposal of standardization of use case naming, using the following descriptors:

- **Action** (verb): Improve, Reduce, Increase, etc.
- **Actor (s)** (persona/segment): User, Consumer, SMB, persona, etc.
- **Stage (s)** (CLC phase / sub phase): Buying, Using, Sharing, etc.
- **Channel (s) / Touchpoint (s)**: Web, franchise, social, etc.

For example:

| Action | Actor(s) | Stage(s) | Channel(s) |
|-----------------|-----------------------------|-----------------------|------------------------|
| Improving Trust | Of family persona consumers | At the time of top-up | through the franchisee |

Adjuntos - Etiquetas - Ubicación

Antonio Cuadra-Sanchez

Use Cases and Implementation Guide



Fx 15.5: Use Case library

- 33 CEM Use Cases from
 - Workstream activities and Catalysts
 - TAW Lisbon and Action days
 - 14 CEM and 5 CAM Use Cases from BDA workstream

- C-CAM-1: Personalized Collections Treatment Plan
- C-CAM-2: Personalization of Real-Time Interaction in Assisted Care
- C-CAM-3: Increase Effectiveness of Customer Self Service
- C-CAM-4: Personalized Offers for Customer Retention
- C-CAM-5: Usage Based Real-Time Notifications Based on Threshold Limits Defined by the Custome

- C-CEM-1: Increase Service Awareness
- C-CEM-2: How to encourage dialog with customer?
- C-CEM-3 - Create a single per-customer customer experience index
- C-CEM-4: SMB sales interaction
- C-CEM-5: Personalized offering across customer lifecycle
- C-CEM-6: Alignment of Customer Contact Center to CEM
- C-CEM-7: Innovative Customer Engagement
- C-CEM-8: Empowering Retail Customers through efficient Self Service
- C-CEM-9: Optimising the Customer Sales Experience across Omni-channel
- C-CEM-10: Putting a Business Value on B2B Customer Experience
- C-CEM-11: Differentiating on trust to provide a better customer experience
- C-CEM-12: Seamless customer experience during payments across channels
- C-CEM-13: Customer experience on bill shock
- C-CEM-14: Enhance Roaming ARPU through customer insights
- C-CEM-15: Reduce Network issues related Churn
- C-CEM-16: Improving Assisted Care with Network Experience Analytics
- C-CEM-17: Churn Risk Prediction for Customer Retention
- C-CEM-18: Churn Motivation Prediction for Customer Retention
- C-CEM-19: Retention Offer Acceptance Propensity Analytics
- C-CEM-20: Customer Retention through Proactive Offer Management
- C-CEM-21: Proactive Care
- C-CEM-22: Right Proactive Care Channel and Time
- C-CEM-23: Proactive Care Based on Poor Care Experience
- C-CEM-24: Proactive Care During or After Network Fault
- C-CEM-25: Proactive Care Based on Absence of Usage
- C-CEM-26: Proactive Care Based on Network Experience Analytics
- C-CEM-27: Roaming Customer Onboarding
- C-CEM-28: Proactive Reduction of Errors in the Billing Process From the Customer's Perspective

Use Cases and Implementation Guide

Framework 16: Tasks proposal



1) New Use Cases

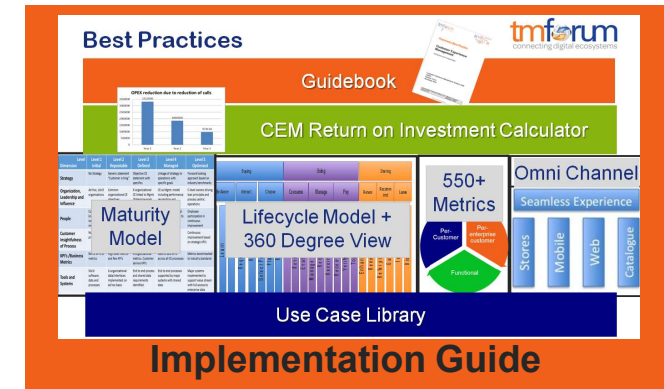
- Project meetings, Action Week Lisbon
- Action days / Local Workshops
- TM Forum initiatives: IoT, CEM Catalysts

2) CEM Guidebook

- A guidebook to gather all the existing CEM use cases
- It may include the feedback from the implementation of the use cases: Benchmark, Stories, Action and processes, etc.

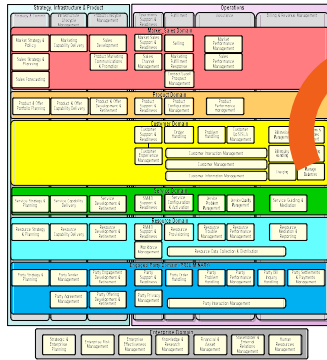
3) CEM Implementation guide

- This IG will assist newcomers in implementing best CEM practices
 - An entire CEM suite (Lifecycle model, Maturity model, CEM metrics, Use Journey mapping, 360°, ROI) and many Use cases available
 - The proposal is to help companies with a immature CEM profile to use the CEM tools to deepen be involved with CEM processes



Business Process

Current Work



Customer experience maturity assessment:

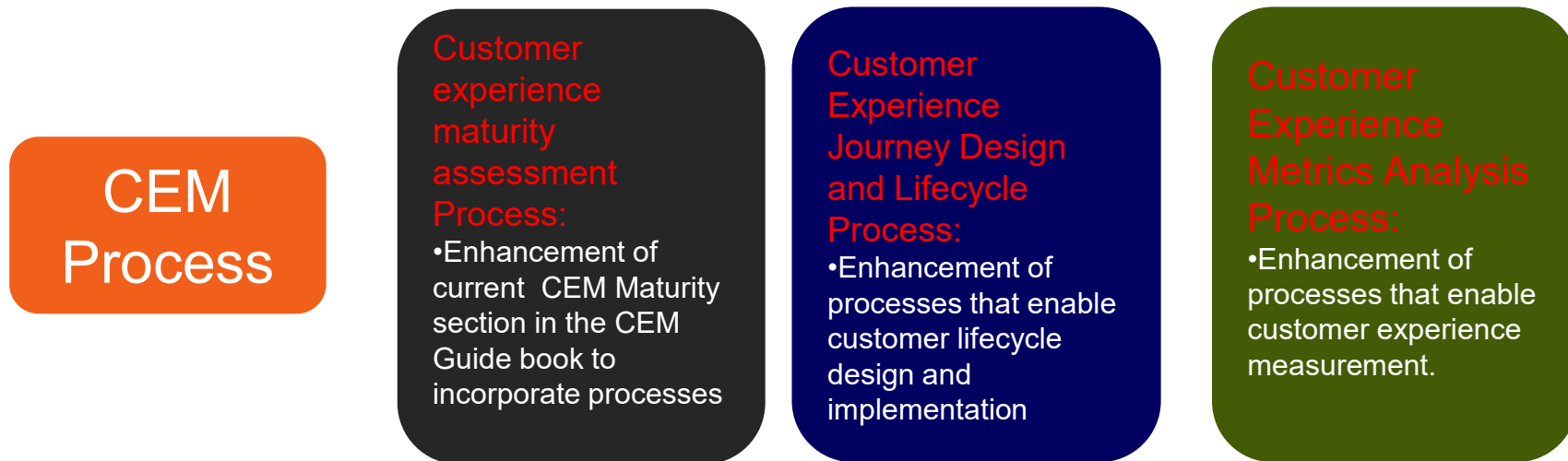
- What are the activities in assessing the maturity level of an organization
- Work to generalize CEM MLA process into generic MLA process and retaining CEM specific processes.

Objective: To develop/enhance all the processes in the eTOM that are related to CEM so that any organization can carry out these processes to become more customer centric.



Business Process

Future Planned Work



- Integration and alignment of CEM Processes with rest of CEM streams.
- Incorporation of CEM processes within the end to end CEM process in CEM Guidebook.



Metrics Team

Metrics Repository Now Contains 1700+ Metrics

- The Metrics Team manages the TM Forum Metrics Repository
- The metric definitions in the repository come from other TM Forum teams
- The highest-level metrics are published on The Business Metrics Scorecard

| Row Labels | Count of tid |
|--|--------------|
| BMS | 275 |
| Cable | 51 |
| CEM | 551 |
| Cyberops | 71 |
| NEW IBM - Craig Farrell Metrics Publication | 691 |
| Fraud | 22 |
| NEW SLAM | 78 |
| Grand Total | 1739 |

The screenshot shows the NetCracker Business Metrics Scorecard. It features a header with the tmforum logo and 'Business Metrics' text. Below the header is a navigation bar with tabs for 'CUSTOMER SERVICE' and 'OPERATIONAL EFFICIENCY'. The main content area is a grid of metrics, with 'BMS' highlighted in yellow. A green dashed line connects the 'BMS' row in the table on the left to the 'BMS' section in the dashboard.

769 Metrics Added Since June



80% Increase in Size of Metrics Repository

- IBM Analytics Publication (by Craig Farrell)
 - 691 metrics harvested from joint IBM–TMForum publications
- SLAM (SLA Management)
 - 78 metrics harvested from 3 GB TMForum documents

| | |
|--|-------------|
| IBM - Craig Farrell Metrics Publication | 691 |
| Corporate Management | 127 |
| Customer Management and Business Support Systems (BSS) Analytics | 61 |
| Information Technology Management | 49 |
| Network Management and Operations Analytics | 42 |
| Operations Support Systems (OSS) Analytics | 56 |
| Product, Vendor and Supplier Management | 44 |
| Sales and Marketing Analytics | 114 |
| Service Analytics | 198 |
| SLAM | 78 |
| SLA - General (GB917) | 11 |
| SLA - Video over IP (GB934) | 22 |
| SLA - VoIP (GB938) | 45 |
| Grand Total | 1739 |



Robert Bratulic

Sample New Metrics



| | A | C | D | E | F | H | I | J |
|------|------|----------|------------|-----|---|--|----------------------------|---------------------------|
| 1 | tid | egid | maturity | kpi | name | category1 | category2 | category3 |
| 1000 | 1014 | 2.2.2.6 | 1-Proposed | Y | Average revenue per user (ARPU) | Corporate Management | Financial | Cash Flow Analysis |
| 1001 | 1015 | 2.2.2.7 | 1-Proposed | Y | Average revenue per account (ARPA) | Corporate Management | Financial | Cash Flow Analysis |
| 1002 | 1016 | 2.2.2.8 | 1-Proposed | Y | Average minutes of use per subscriber (MOU) | Corporate Management | Financial | Cash Flow Analysis |
| 1032 | 1046 | 2.5.1.2 | 1-Proposed | Y | Average top up amount (prepaid wireless operators) | Corporate Management | Corporate Metrics for Wire | Financial Data |
| 1034 | 1048 | 2.5.1.4 | 1-Proposed | Y | Average revenue per cell site (wireless operators) | Corporate Management | Corporate Metrics for Wire | Financial Data |
| 1035 | 1049 | 2.5.1.5 | 1-Proposed | Y | Average cost per cell site (wireless operators only) | Corporate Management | Corporate Metrics for Wire | Financial Data |
| 1151 | 1165 | 3.4.2.5 | 1-Proposed | Y | Auto discovery percentage | Operations Support Systems (OSS) Analytics | Network Build out or the P | Effectiveness of PNI pro |
| 1159 | 1173 | 4.2.1.5 | 1-Proposed | Y | Average revenue per call center CSR | Customer Management and Business Support Sys | Customer Care and Call Ce | General |
| 1160 | 1174 | 4.2.1.6 | 1-Proposed | Y | Ratio of call center representatives to subscribers | Customer Management and Business Support Sys | Customer Care and Call Ce | General |
| 1195 | 1209 | 4.4.1.3 | 1-Proposed | Y | Three year retention rate for fixed line providers | Customer Management and Business Support Sys | Churn Analysis | General |
| 1216 | 1230 | 5.2.1.1 | 1-Proposed | Y | Product expenditure as a percentage of capital expenditure | Product, Vendor and Supplier Management | Product Management | General |
| 1220 | 1234 | 5.2.1.5 | 1-Proposed | Y | Percentage of product expenditure on new products | Product, Vendor and Supplier Management | Product Management | General |
| 1223 | 1237 | 5.2.1.8 | 1-Proposed | Y | Average time to deliver a new product or service offering | Product, Vendor and Supplier Management | Product Management | General |
| 1224 | 1238 | 5.2.1.9 | 1-Proposed | Y | Average time to deliver a new pricing plan | Product, Vendor and Supplier Management | Product Management | General |
| 1225 | 1239 | 5.2.1.10 | 1-Proposed | Y | Average time to deliver a new product promotion | Product, Vendor and Supplier Management | Product Management | General |
| 1260 | 1274 | 6.2.1.1 | 1-Proposed | Y | Sales budget as a percentage of revenue | Sales and Marketing Analytics | Sales Metrics | Cost of Sales Process |
| 1264 | 1278 | 6.2.2.3 | 1-Proposed | Y | Percentage of revenue from new subscribers | Sales and Marketing Analytics | Sales Metrics | Revenue Generated Fro |
| 1265 | 1279 | 6.2.2.4 | 1-Proposed | Y | Percentage of revenue from upgrades | Sales and Marketing Analytics | Sales Metrics | Revenue Generated Fro |
| 1266 | 1280 | 6.2.2.5 | 1-Proposed | Y | Percentage of incremental revenue | Sales and Marketing Analytics | Sales Metrics | Revenue Generated From |
| 1275 | 1289 | 6.3.1.2 | 1-Proposed | Y | Average revenue per store | Sales and Marketing Analytics | Store Front Metrics | Physical Stores |
| 1290 | 1304 | 6.3.3.7 | 1-Proposed | Y | Percentage of online shopping or browsing that turns into sales | Sales and Marketing Analytics | Store Front Metrics | Online Store (also called |
| 1307 | 1321 | 6.4.1.7 | 1-Proposed | Y | Average time to complete a top up activation | Sales and Marketing Analytics | Prepaid Sales | Top Up Analysis |
| 1319 | 1333 | 6.5.3.3 | 1-Proposed | Y | Cost per lead, conversion and sale | Sales and Marketing Analytics | Marketing and Campaign M | Market Management and |
| 1338 | 1352 | 6.6.2.4 | 1-Proposed | Y | Number of likes or dislikes (with our without comments) | Sales and Marketing Analytics | Social Media and Networki | Sentiment Analytics |
| 1346 | 1360 | 6.6.3.5 | 1-Proposed | Y | Total number of opinions solicited from social media platforms | Sales and Marketing Analytics | Social Media and Networki | Engagement Analytics |
| 1381 | 1395 | 7.2.1.8 | 1-Proposed | Y | Packet Loss | Network Management and Operations Analytics | Network Performance and | General |
| 1393 | 1407 | 7.3.1.1 | 1-Proposed | Y | Base Station handoff errors | Network Management and Operations Analytics | Wireless Networks | General |
| 1394 | 1408 | 7.3.1.2 | 1-Proposed | Y | Percentage of dropped calls and call attempts | Network Management and Operations Analytics | Wireless Networks | General |

Robert Bratulic

Coming Up In 2016 ... NFV



Original contribution From ZOOM Team

Table 1: Metric Name (Speed)

| Metric Category | Operations | Metric Type/Name: « Speed » (Definition) |
|-------------------------|--|---|
| Orchestration Metrics | Resource allocation, Configuration & Setup | 1- VM provisioning latency elapsed time between a VM provisioning request being presented and the corresponding provisioning response being returned |
| | Resource Release | |
| VM Operations Metrics | | 6- VM stall disruptions in prompt and continuous execution of VNFC software which impact the service latency and QoS enjoyed by end users |
| | | 7- VM scheduling latency characterizes how promptly VNFC software is executed, such as when processing isochronous bearer plane traffic, which impacts the service latency and QoS enjoyed by end users |
| Virtual Network Metrics | Establishment | 10- VN provisioning latency time needed to successfully establish infrastructure network connectivity, i.e., time from a request for connectivity to the time the success response is received at a measurement point |
| | Operation | 13- Packet delay elapsed time between a packet being presented to the NFV virtual network from one VNFC's guest OS instance to that same packet being presented to the destination VNFC's guest OS instance |

ICR012 – Input Reformatted as a Standardized Internal Change Request via Metrics Team

| group | maturity | gid | name | category1 | category2 | category3 | metricid |
|-------|------------|------------|--------------------------------|-----------------------------|-----------------------------------|--|--|
| ZOOM | 1-Proposed | 1 | VM provisioning latency | Speed | Orchestration | Resource allocation, Configuration & Setup | |
| ZOOM | 1-Proposed | 6 | VM stall | Speed | VM Operations | | |
| ZOOM | 1-Proposed | 7 | VM scheduling latency | Speed | VM Operations | | |
| ZOOM | 1-Proposed | 10 | VN provisioning latency | Speed | Virtual Network | Establishment | |
| ZOOM | 1-Proposed | 13 | Packet delay | Speed | Virtual Network | Operation | |
| | | 14 | Jitter | Speed | Virtual Network | Operation | |
| | | 14 | Delivered throughput | Speed | Virtual Network | Operation | |
| ZOOM | 1-Proposed | 18 | Latency | Speed | Technology Component as a Service | | |
| ZOOM | 1-Proposed | 2 | VM placement policy compliance | Accuracy | Orchestration | Resource allocation, Configuration & Setup | |
| ZOOM | 1-Proposed | 8 | VM clock error | Accuracy | VM Operations | | |
| ZOOM | 1-Proposed | 11 | VN diversity compliance | Accuracy | Virtual Network | Establishment | |
| add | ZOOM | 1-Proposed | 16 | Packet loss ratio | Accuracy | Virtual Network | Operation |
| add | ZOOM | 1-Proposed | 3 | VM provisioning reliability | Reliability | Orchestration | Resource allocation, Configuration & Setup |
| add | ZOOM | 1-Proposed | 4 | VM dead-on-arrival ratio | Reliability | Orchestration | Resource allocation, Configuration & Setup |

Robert Bratulic

Participate in the Metrics Process



Help Us Improve The Metrics Repository

- Ideally, all TM Forum teams should contribute metrics relevant to their teams or domains
- Most recently, we have started working with the ZOOM and ZOMP teams representing NFV
- Reach out to the metrics team, and we will support your metric definition elicitation, capture and standardization



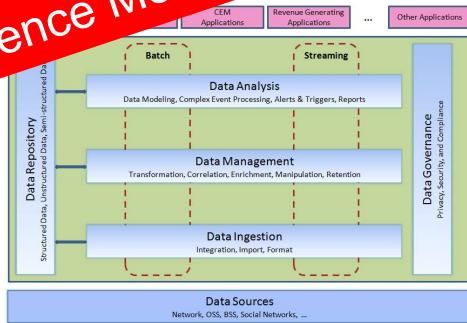
Robert Bratulic



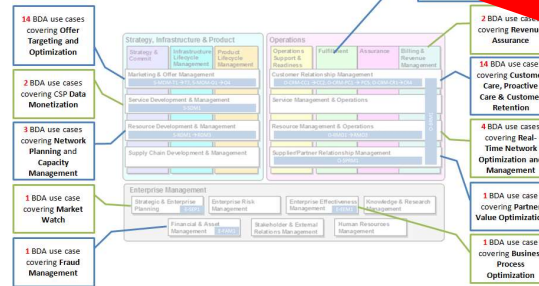
Data Analytics Guidebook Elements



Reference Model

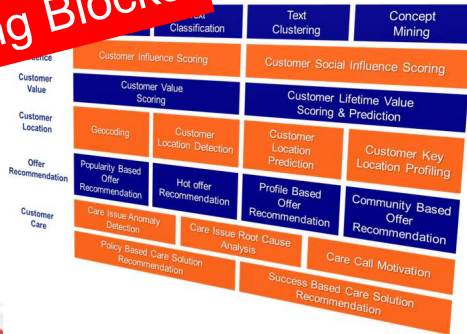


59 Use Cases

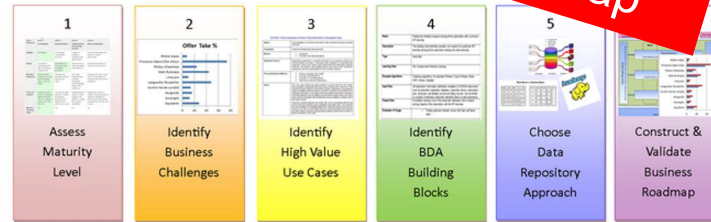


Analytics Big Data Repository

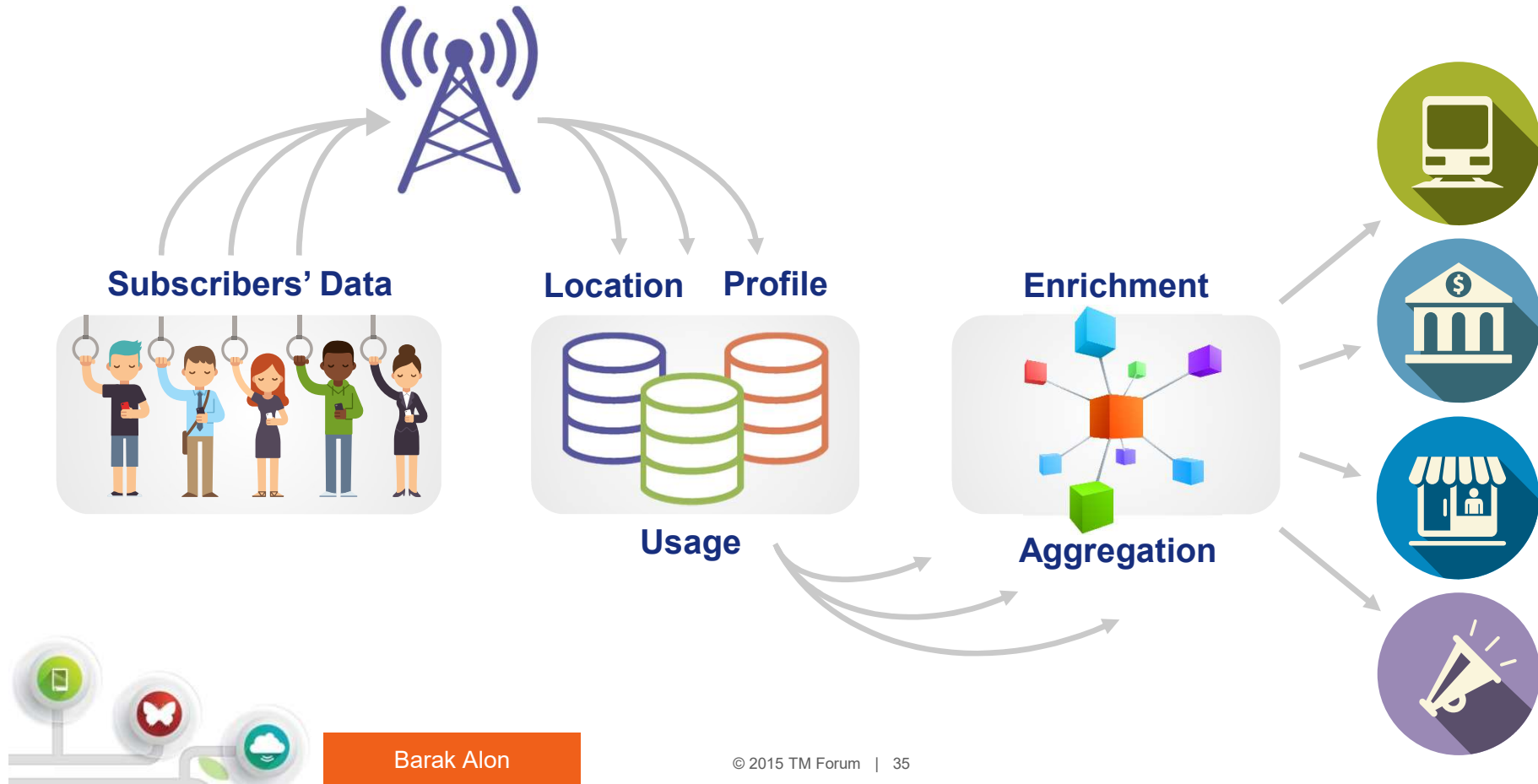
Building Blocks



Business Value Roadmap



Data Monetization – How it Works

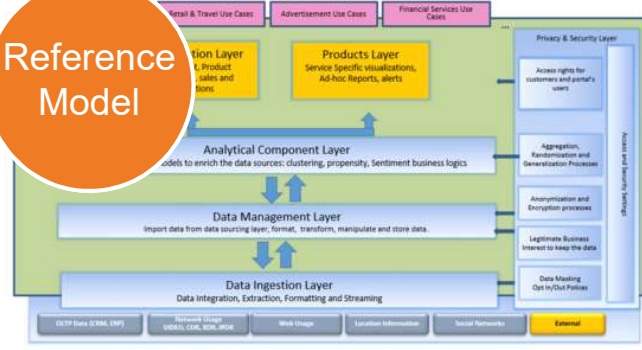


FX15.5

Introduction



Reference Model



Privacy and Security



Sectorial Based Best Practices



12 New Use Cases

| | |
|--|---|
| Public Transportation Services Optimization EN-DM-1 | Retail New Branches Planning Optimization EN-DM-7 |
| Location Based Real Time Credit Card Fraud Detection EN-DM-2 | Increase Footfalls and Improve Sales through Personalized Offers to Consumers EN-DM-8 |
| Data Monetization Applications for MVNOs EN-DM-3 | Customized Healthcare Checks EN-DM-9 |
| Real-time traffic information based on mobile device EN-DM-4 | Audience measurement for Pay TV - Advertising Scenario EN-DM-10 |
| Retail Branch Outdoor Analytics EN-DM-5 | Tourists Movement and Profile Analysis EN-DM-11 |
| Retail Branch Indoor Analytics EN-DM-6 | Targeted Offers and Coupons EN-DM-12 |

Moving Forward

Introductory Guidebook

Business Model

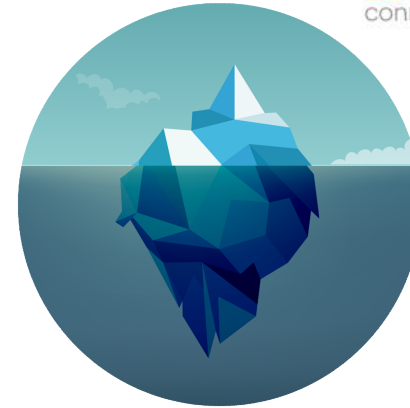
Technical best practices

The path from external to internal

New Initiatives

Data Monetization for New Digital Smart Cities, eHealth

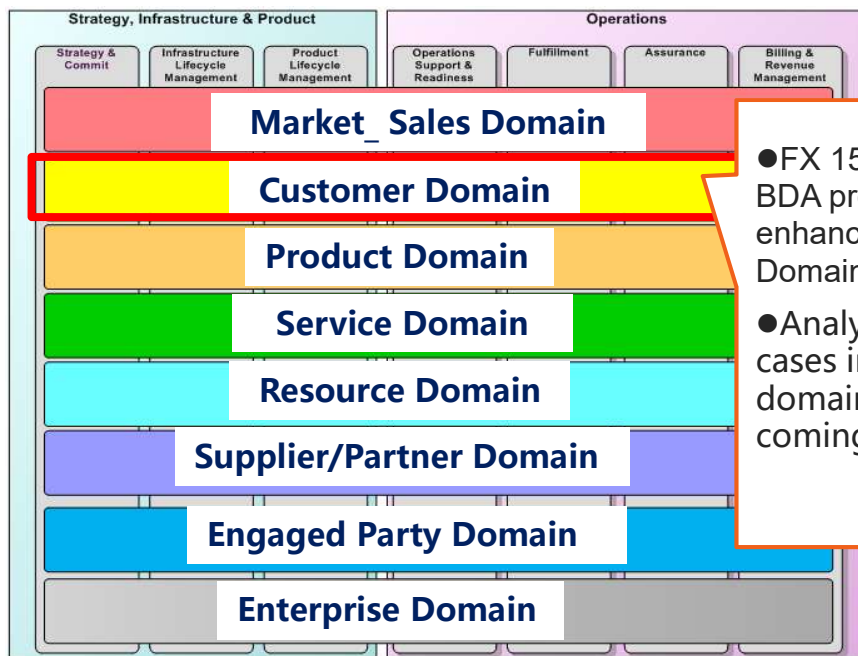
Monetization by Catchment Area



Barak Alon

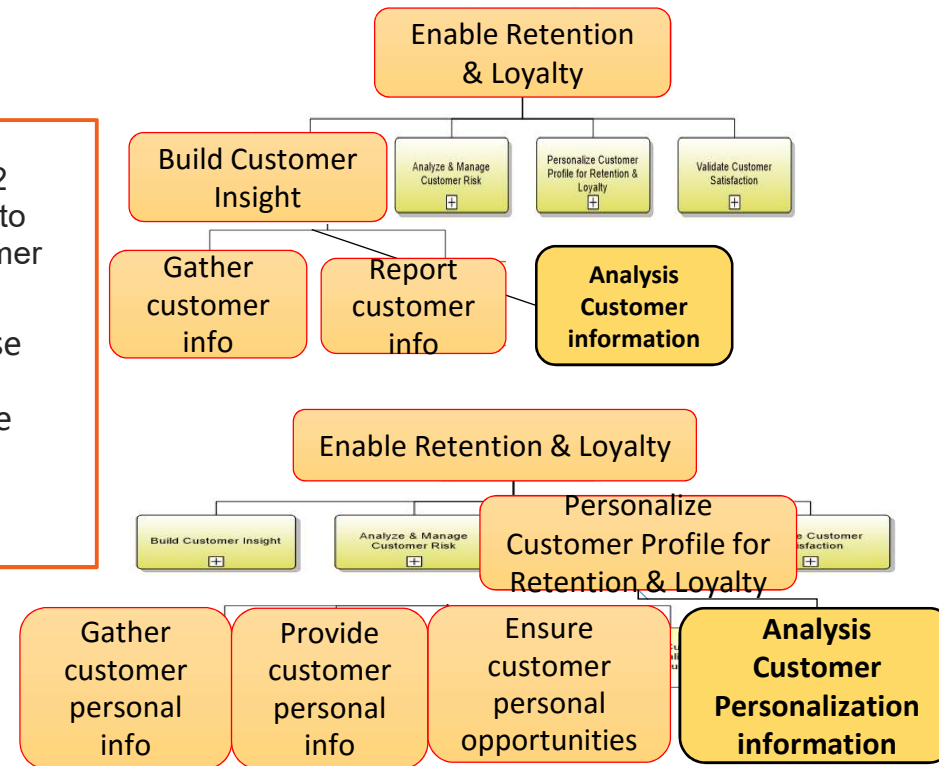
Business Process

Bottom-up Approach: Add BDA to enhance Business Process



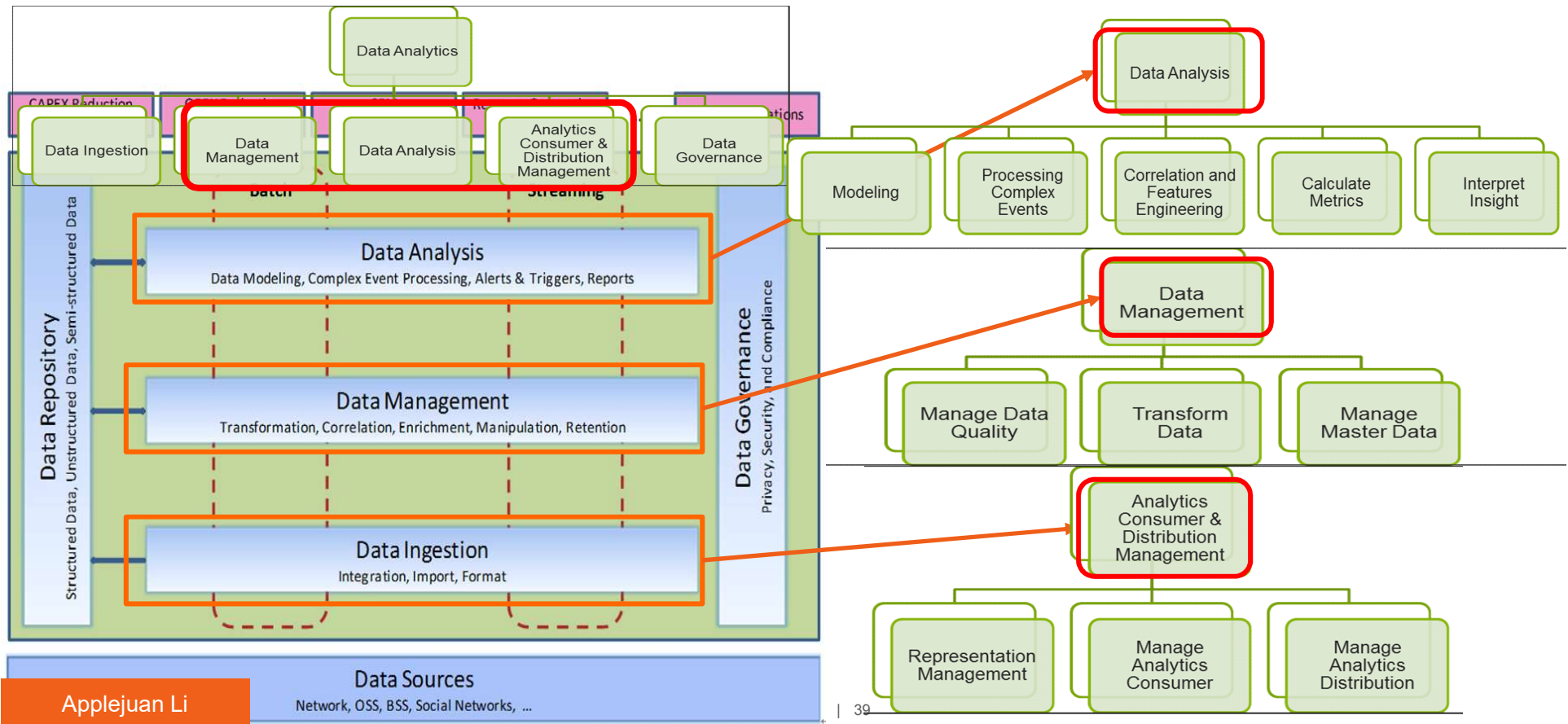
●FX 15.5: Add 2 BDA processes to enhance Customer Domain

●Analysis of use cases in other domains will be coming soon.



Business Process

Top-down Approach: Add Common BDA into enterprise-common process area



Applejuan Li

Business Process

Work items for Fx16.0

- **Continuation of previous work:**
 - Bottom-up approach: identify the gaps between business process and BDA capability
 - Top-down approach: complete data governance related work
- **Corporate work:**
 - Joint work with ZOOM, IoT, NFV, SDN, etc.
 - Apply BDA process to improve business performance and increase business revenue.
- **Best practices:**
 - Increase industry influence.



Maturity Model

Reached a new level of maturity with the Maturity Model

- Added and revised levels
 - Ad hoc → Tactical → Competitive → Differentiating → Innovative Leader

- Added and revised dimensions
 - Definition
 - Business Strategy
 - Business & Functional Capabilities
 - Technology Platform and Systems
 - Architecture
 - Data Management
 - Processes
 - Budget & Financial Tracking
 - Governance
 - Organizational Readiness & Management
 - KPIs/Business Metrics

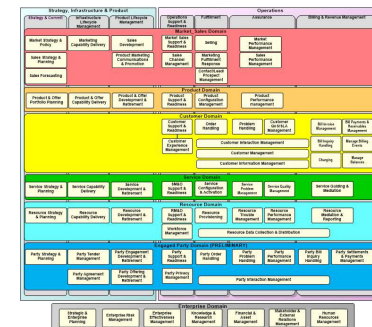


Use Cases



R15.5 Aligned, Augmented, Enhanced and Improved Search Capabilities

- Aligned to TM Forum Business Process Framework (eTOM)
 - Reflected in revised nomenclature
- Augmented with 14 New Use Cases
 - Mainly enterprise for multiple verticals
- Enhanced unified template
 - Coordinated with CEM and Data Monetization



Use Cases



R15.5 Aligned, Augmented, Enhanced and Improved Search Capabilities

- Improved Search
 - ❑ Read any use case by clicking on it
 - ❑ Search on any word or term using the search bar on the top right
 - ❑ Filter using the tag list
 - ❑ Find use cases by Business Process Framework (eTOM) Level 0 process groupings using the menu in the left navigation pane
 - ❑ Sort using the column headings



| Fx15.0 Nomenclature | Fx15.5 Nomenclature | Use Case | Customer Experience Management | Data Analytics | Data Monetization |
|---------------------|---------------------|---|--------------------------------|----------------|-------------------|
| E-EEM1 | EN-EAM-1 | Business Process Optimization | | x | |
| E-FAM1 | EN-EAM-2 | Fraud Management | | x | |
| E-FAM2 | EN-EAM-3 | Third Party Channel Fraud Management | | x | |
| E-KRM1 | EN-EAM-4 | Forecast and monitor impact of investment in network upgrades and marketing programs | | x | |
| E-SEP1 | MS-MAM-1 | Market Watch | | x | |
| New | C-CEM-16 | Reduce Network issues related Churn – Customer approaching CSP through various channels for Network related issues. | x | x | |
| New | EN-DM-1 | Public Transportation Services Optimization | | x | x |
| New | EN-DM-9 | Customized Healthcare Checks | | x | x |
| New | EN-DM-10 | Audience Measurement for Pay TV - Advertising Scenario | | x | x |
| New | FN-DM-11 | Tourists Movement and Profile Analysis | | x | x |

Analytics Big Data Repository Catalyst Goals

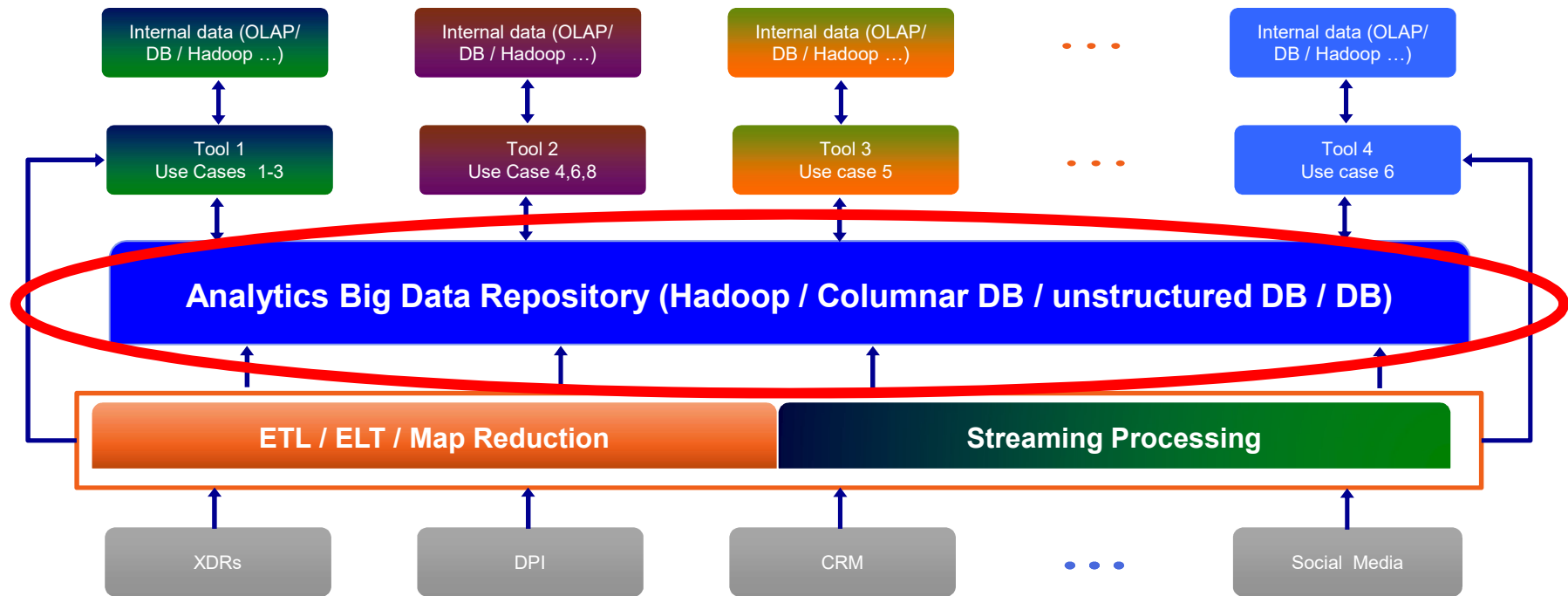


- Using Big Data Analytics to improve customer experience and achieve business growth
- Creating Analytics Big Data Repository (ABDR) - a unified big data layer and data dictionary
- Supporting multiple use cases and multiple analytics systems
- Avoiding data replication, reducing ETL costs and time, saving in hardware costs (storage and processing power), and shortening the time to implement new use cases

Project Champions and Participants



Analytics Big Data Repository (ABDR)



Next Steps



- Take the Customer Centricity online [training course](#)
- Join the projects and Catalysts:
 - [CEM](#)
 - [BDA](#)
 - [Metrics](#)
- Register for [Action Week](#), Lisbon, Feb 1-5, 2016
- Attend [TM Forum Live!](#) Nice, May 9-12, 2016



Thank you!



www.tmforum.org

