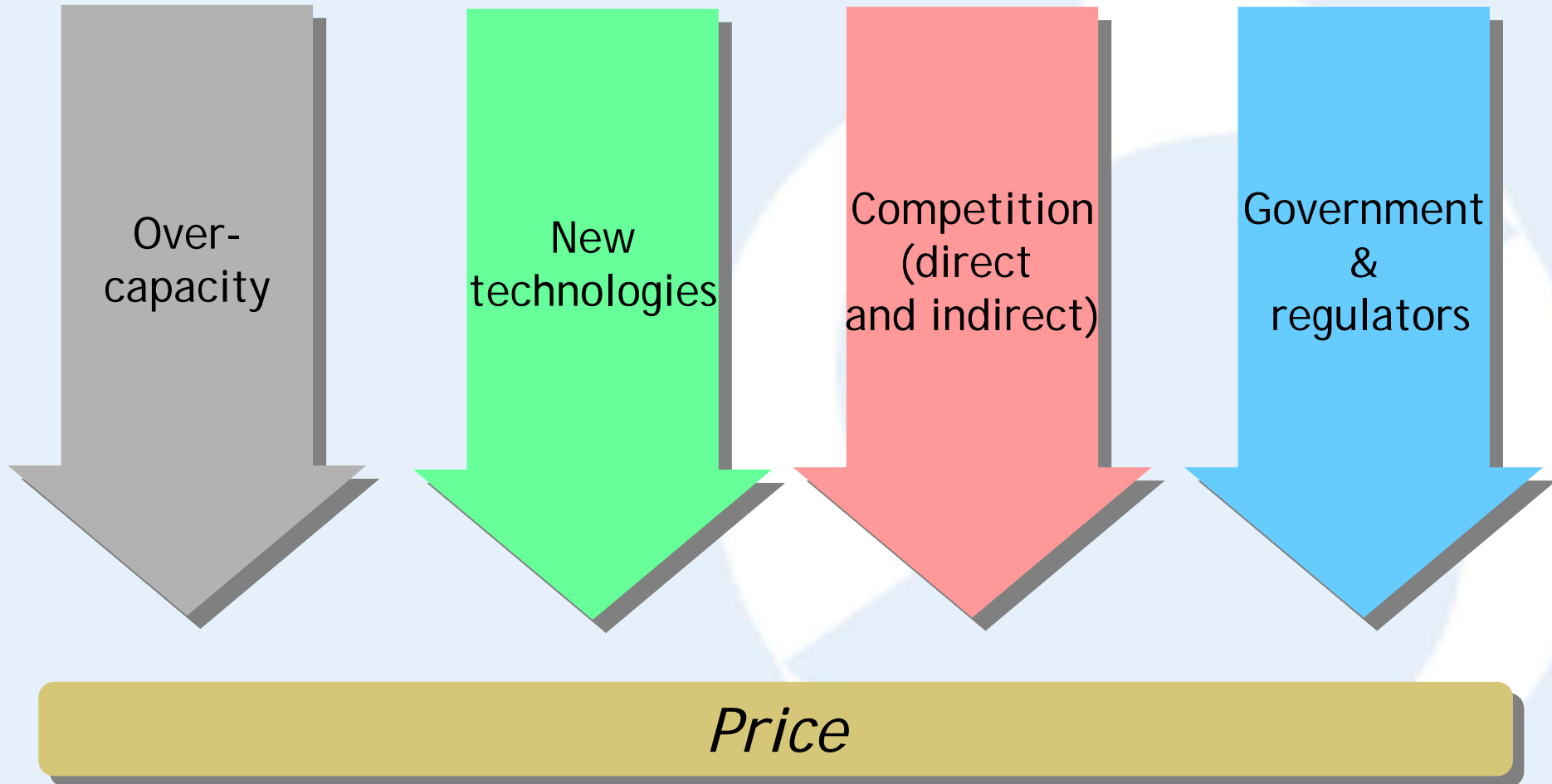


# TeleManagement Forum Overview

*The Driving Force Behind the  
New Generation Operations Systems  
and Software*

**NEC** Hisashi Tada  
TM Forum - Advisory Director

# With multiple downward pressures on price ....



# Telecom must learn from other lean industries

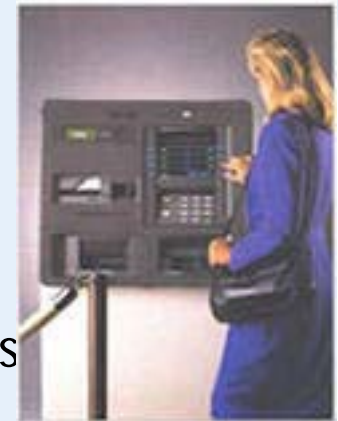


## Low-cost airlines -

- Heavy use of IT and customer self-service
- Demand based pricing
- High occupancy levels
- Heavy use of outsourcing

## Banking -

- Highly automated capital flows
- Customer self-service
- Elimination of manual back-offices
- Fast-changing financial product life-cycles

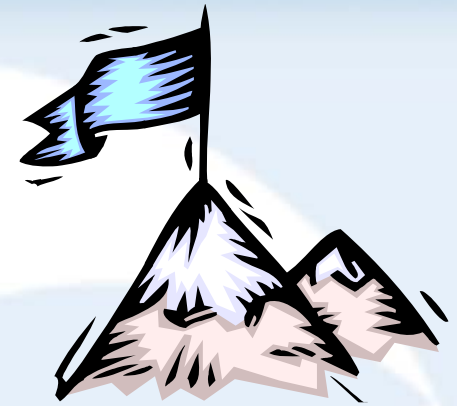


## Retailing -

- Highly automated flow-through
- Just-in time stock control
- Management of cost-base end-end
- Flexible product life-cycles

# 'Lean' operator goals

- Ultra low cost operations
  - High levels of automation & integration
  - Information integrity
  - Customer self management
  - Low cost of change
  - Commercially available, off-the-shelf, software
  
- Highly flexible infrastructure
  - Service development at Internet speed
  - Fast time-to-revenue
  - Rapid response to business changes and competition
  - Real-time flow-through service delivery
  - QoS guarantees



# What is the TM Forum?

The TMF is the world's trade association for telecom operations and systems. It has around 500 member companies in 60 countries encompassing the most important players in the whole telecom value chain. It has 3 primary roles:

## Guidance/ Leadership -

Providing the telecom industry with a common language and ways of seeing things to reduce fragmentation to a minimum

- Best practices
- Frameworks
- Information
- Training
- Education
- Benchmarks

## Standards -

providing the telecom industry with a minimum number of 'cardinal' standards to drive least cost of development and deployment

- Interfaces
- Contracts
- Data models
- Test specs and tools

## Ecosystem -

providing the telecom industry with a capability for networking, enabling business flow and ideas exchange through conferences, webinars and online information exchange

# TMForum's vision

*To lead the emergence of continuously profitable, lean and agile providers delivering excellent services to their customers*

*TMForum's vision is of a transformed communications services market where:*

Operators achieve radically improved levels of service innovation, customer service and operational efficiency

By implementing high levels of flexible business process automation

Through easily integrated, open standard software provided by strong and profitable supply chain

# Our key functions

*be the focal point and “voice” of the telecom operations sector worldwide*

*stimulate a vibrant, open marketplace for operations systems*

***To lead the emergence of continuously profitable, lean and agile providers delivering excellent services to their customers***

*lead, educate and inform the marketplace*

*serve as an open and legal forum for industry collaboration*

*drive the timely development of open frameworks & standards*

*promote and enable experimentation*

# What are NGN management challenges?

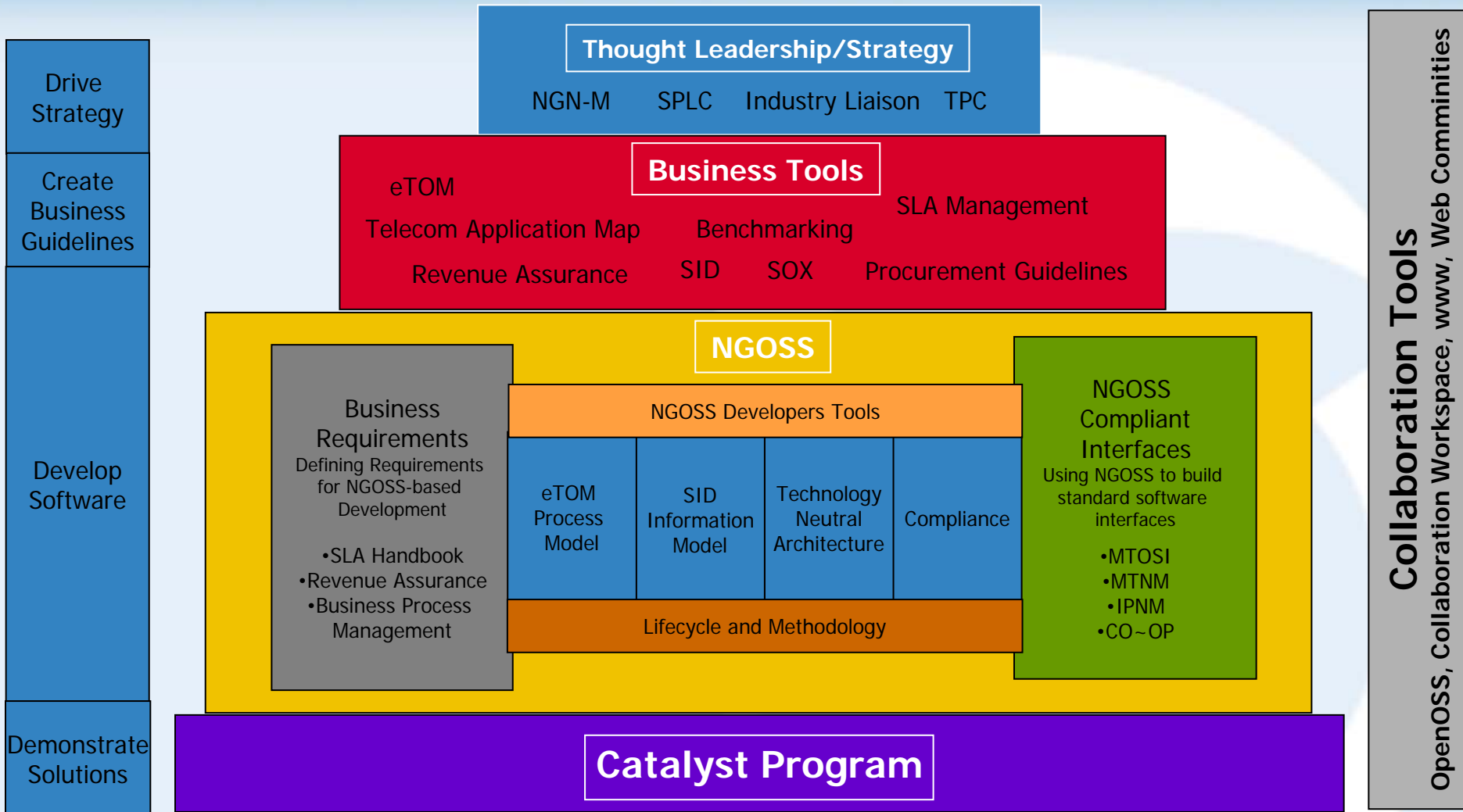
- Personalization and Generalized Mobility with role-based access
- Markets
  - Fragmentation of service market
  - Niche products
  - Shortened Product/Service Lifecycles
- Multiple Trading Partners
- Complex Value Chains & Business Models
- Separation of
  - NGN Services and Applications
  - NGN Transport (mainly packet-based and partly control plane driven)
- Management Agility
  - Mass customisation in a componentized environment
  - Mgmt componentisation has to follow trading infrastructure changes
- New Business Models require new business functions



# NGN management relationships

- NGN management solutions requires the integration of business and networking concerns
  - How the organization does business (the eTOM)
  - How the solution is architected (the NGOSS TNA)
    - ◆ functional, information and physical architectures
  - How the solution is developed, managed and used (the NGOSS Lifecycle and Methodology with view-centric and model-driven approach)
  - How the solution is modeled, and its behavior orchestrated (SID, MTNM, MTOSI, etc)
- Thus, possible collaborations include
  - Business – a new track in ITU-T, already in 3GPP
  - Architecture – OMG MDA, ITU-T, 3GPP, ETSI, ATIS
  - Lifecycle – OMG MDA, 3GPP, ITU-T
  - Modeling – ITU-T, 3GPP, ETSI, ATIS

# TM Forum Collaboration Program



# Technical Program

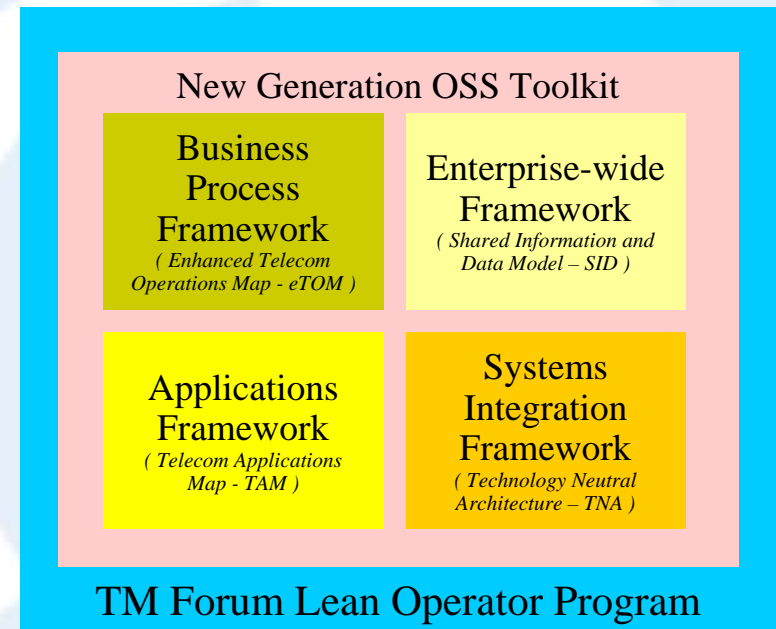
The program behind the “Technology Leadership”  
Creating de facto industry standards for OSS/BSS

- **NGOSS**
  - Driving the future of service provider business process automation
- **Market Collaboration Projects**
  - Solving specific problems in specific industries
- **Catalyst Program**
  - The living lab of NGOSS
- **Industry Liaisons**
  - Cross-pollination of ideas with other industry organizations

# ...built around four key frameworks

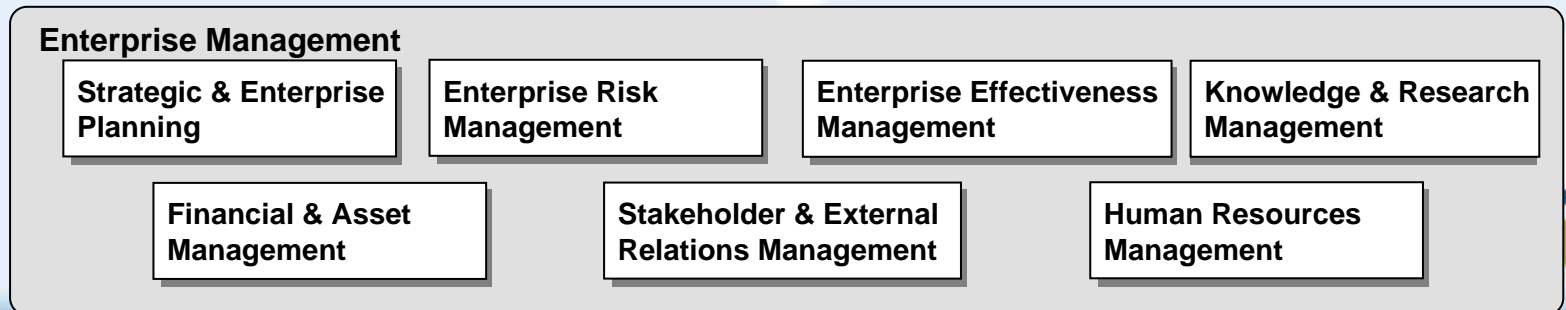
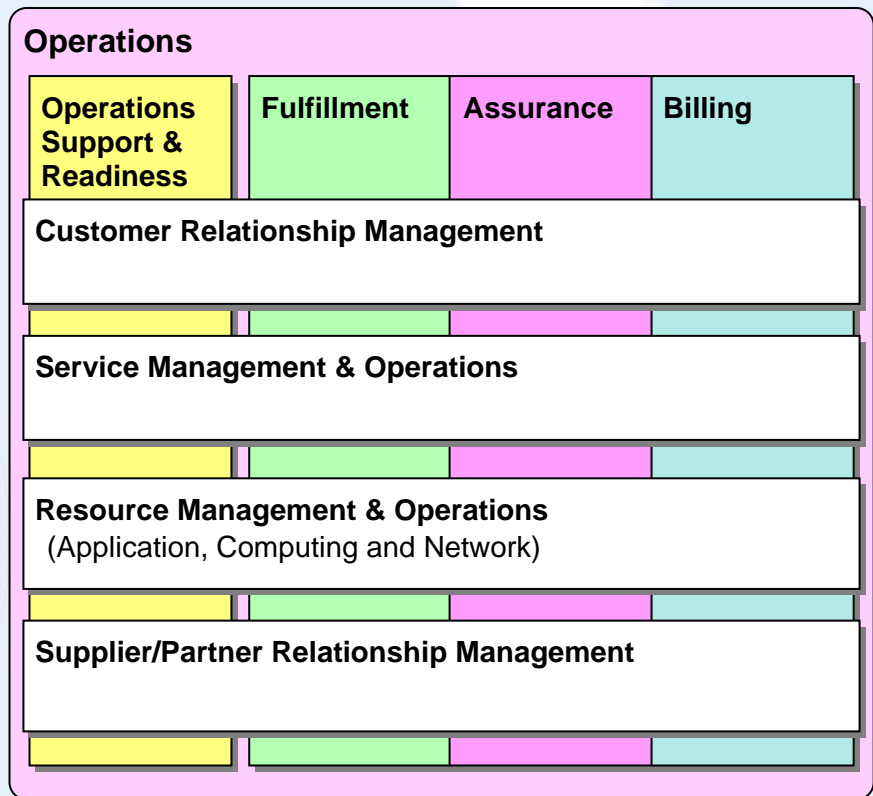
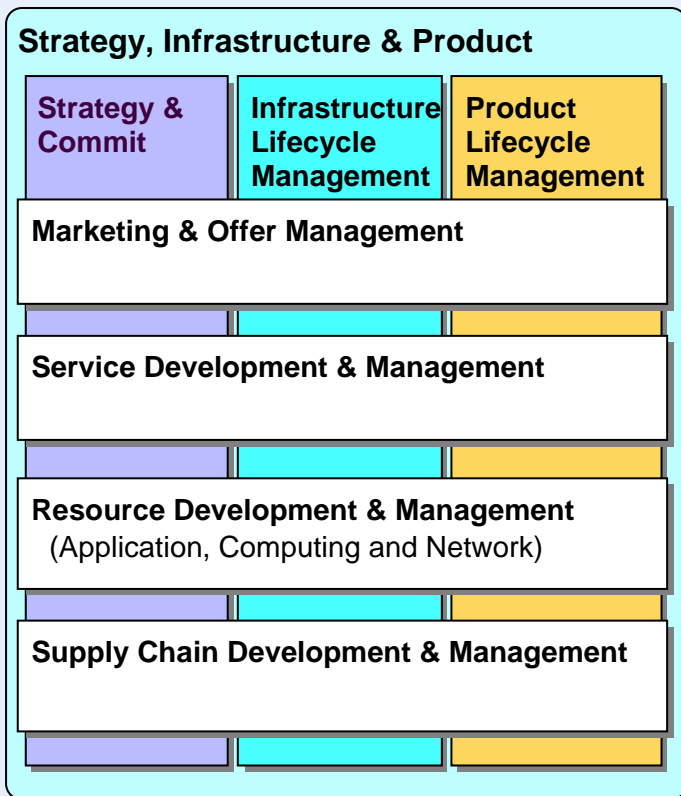
NGOSS is based on 4 key toolsets that form the NGOSS Toolkit

- Business Process Framework – **the eTOM**
- Enterprise wide information framework – **the SID**
- Systems integration framework – **the Architecture**
- Applications Framework – **the Application Map**

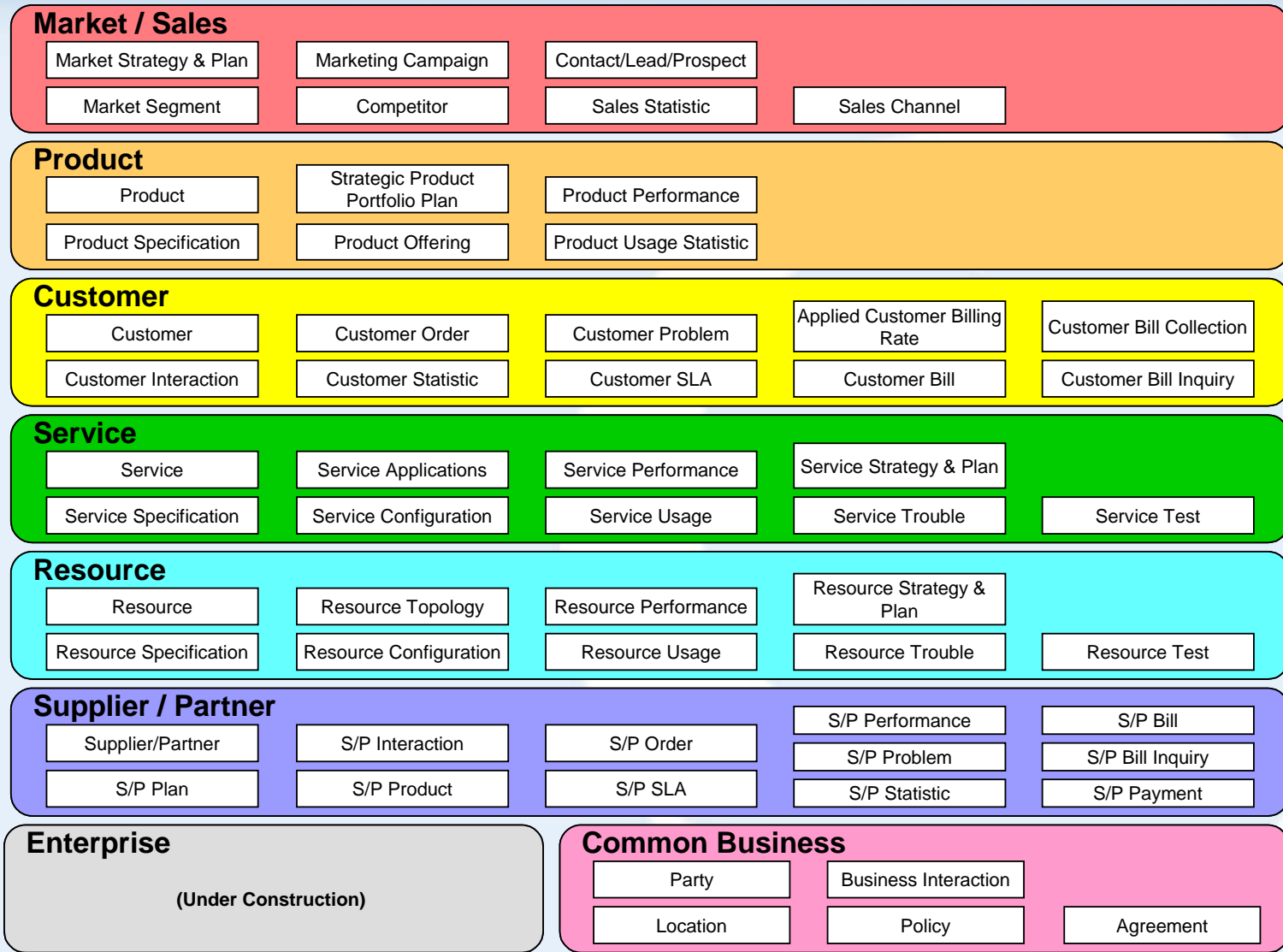
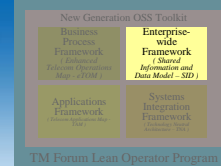


# eTOM: the Big Picture

## Customer



# The SID Business Framework (GB922)



# Market / Sales

Campaign Management

Channel Sales Management

Product / service catalogue

Product Life Cycle Management

# Product

## Fulfilment

Customer contact, retention & loyalty

Customer self management

Order management

# Customer Management

## Assurance

Customer QOS/ SLA management

Customer service / account problem resolution

## Billing

Fraud management

Customer billing management

Invoicing and receivables management

# Service Management

Service design / assign

Service Configuration management

Service performance management

Service quality monitoring & impact analysis

Service problem management

Revenue assurance management

Service rating / discounting management

# Resource Management

Resource inventory man'ement

Workforce man'ement

Resource design / assign

Resource provisioning / configuration

Correlation & root cause analysis

Resource performance monitoring/ management

Resource data mediation

Billing data mediation

Resource logistics

Resource planning/ optimisation

Resource activation

Resource status monitoring

Resource testing Man'ement

Resource problem man'ement

Arbitrage man'ement

Real-time billing man'ement

# Supplier / Partner Management

Partner management

supply chain management

Wholesale / interconnect billing

# Enterprise Management

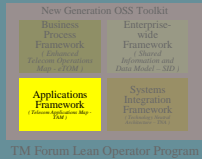
HR Management

Financial Management

Asset Management

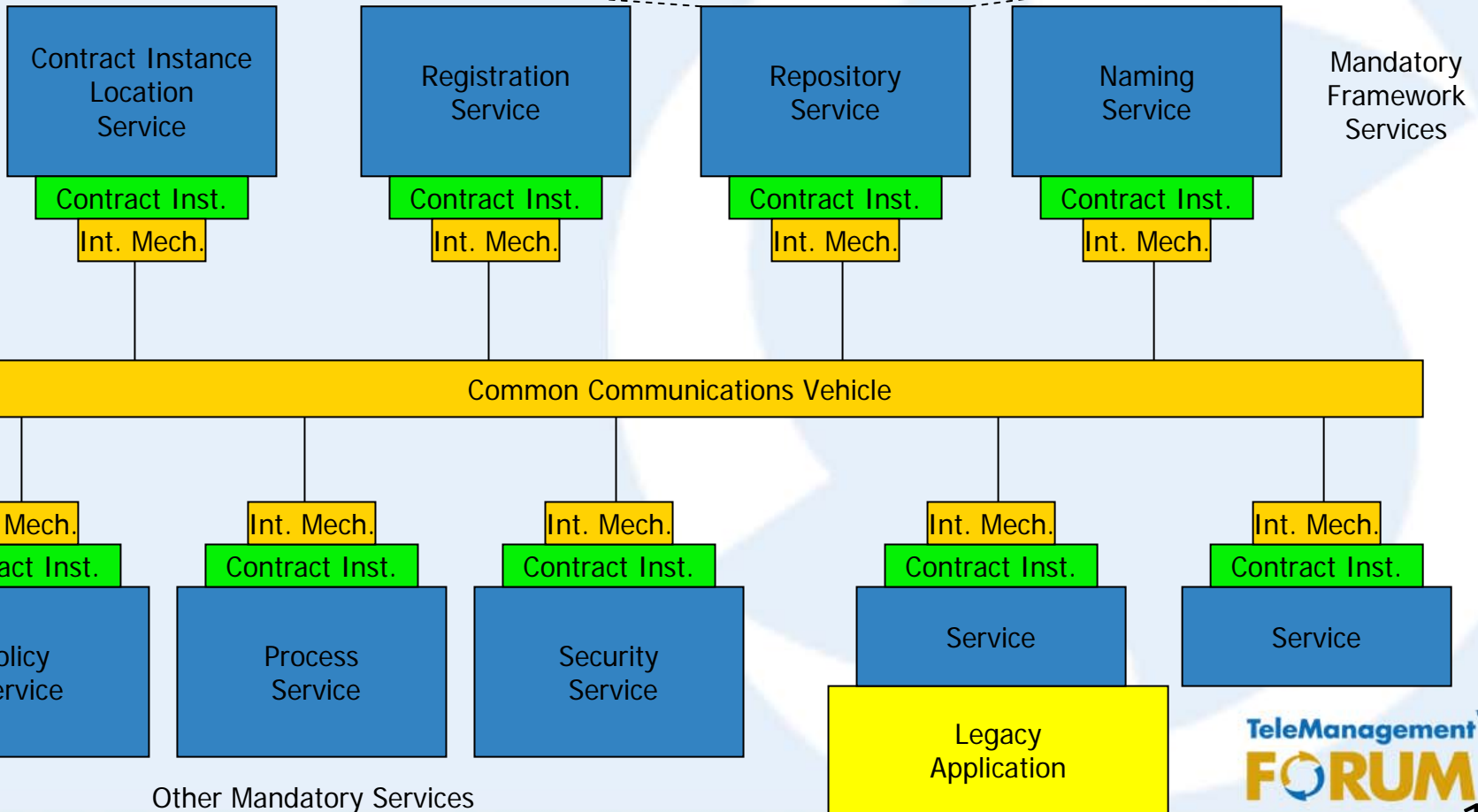
Security Management

Knowledge management



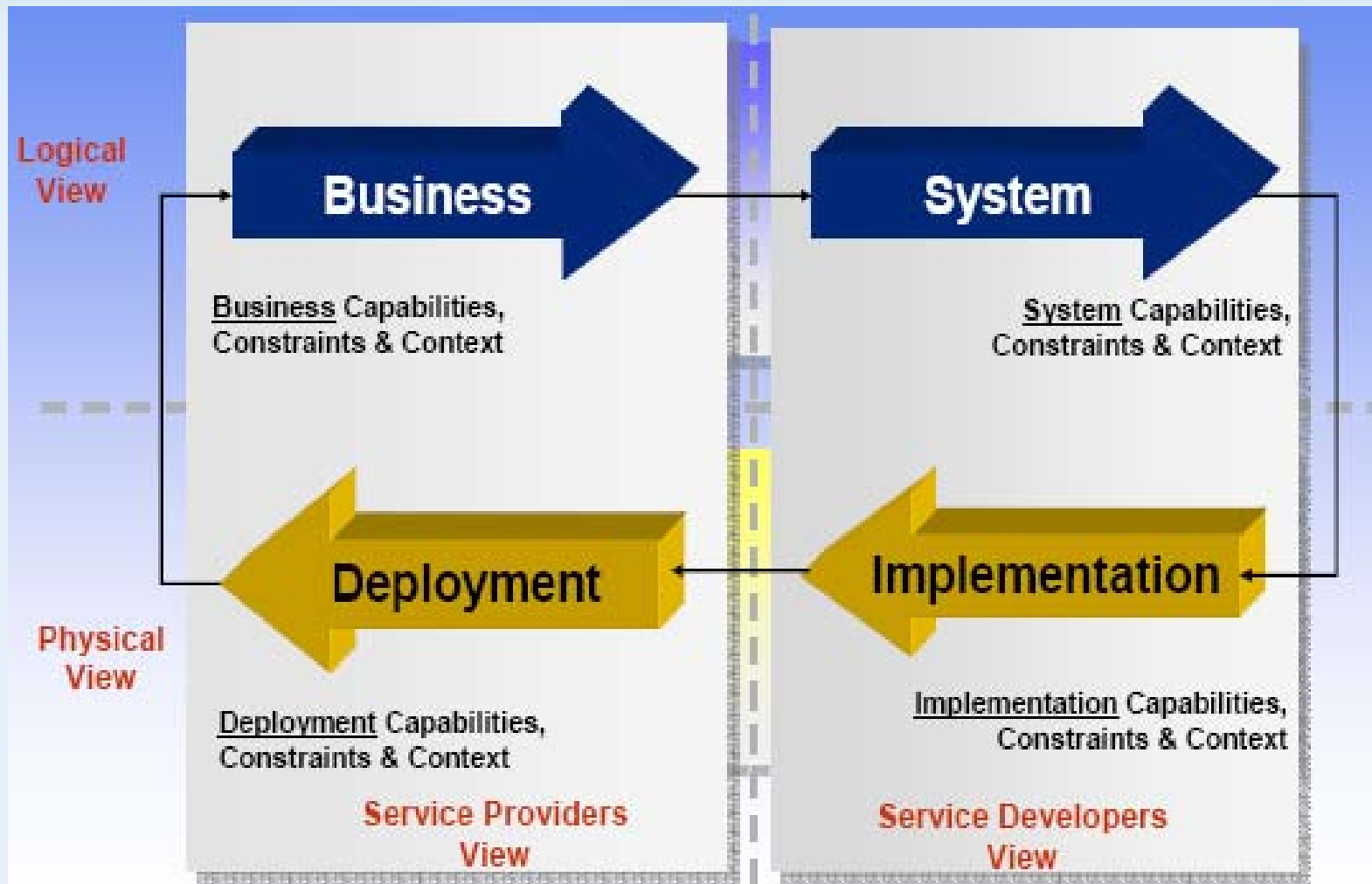
Integration infrastructure:  
bus technology / middleware / business process management

# Technology Neutral Architecture





# NGOSS Lifecycle



# NGOSS Release 6.0 – Now Available

Business Process Map eTOM	Shared Information and Data Model SID	Integration Framework - TNA, Contract Interface	Service Framework	Conformance/ Compliance Tests	Lifecycle	Application Map	CIM/SID
GB921V 6.0 GB921B v4.0 GB921C v4.0 GB921D v6.0 GB921F v4.5 GB921N v5.0 GB921P v4.5 GB921T v4.5	GB922 v6.0 GB926 v1.0 GB922 0 v1.0 GB922 1A v6.0 GB922 1BI v6.0 GB922 1BT v3.0 GB922 C v1.0 GB922 1J v1.0 GB922 1L v3.0 GB922 1P v3.0 GB922 1POL v1.0 GB922 1R v2.0 GB022 1T v1.0 GB922 1U v6.0 GB922 2 v6.0 GB922 3 v6.0 GB922 4S-O v2.0 GB922 4S-QoS v1.0 GB922 5LR v1.0 GB922 5PR v3.0 GB922 6 v6.0	TMF 053 v6 TMF 053A v3.0 TMF 053B v4.0 TMF 053C v1.0 TMF 053D v1.0 TMF 053F v1.0 TMF 053S v1.0	GB924 v2.0	TMF 050 v4.1 TMF 050A v4.1 GB940 v1.0	GB927 v1.2 GB927 A v1.2 GB930 v1.0	GB929 v1.0	GB932 V0.2.7 GB933 V0.1.13

# Industry Group Liaison – Why?

- Principal focus of TM Forum work = OSSs for Comms. Industry.
  - But this has very wide scope:
  - Business Processes, Systems Framework, Info. Modelling,
  - Network Technology Integration, etc, etc.
- Increased Convergence with the work of other Industry Groups
- TM Forum wants:
  - Cost-effective solutions that receive wide industry support
  - Reduced industry duplication and confusion
- Hence TM Forum must:
  - Build upon work of other Industry Groups – where applicable
  - Influence the work of other Industry groups – where necessary
- Objectives achieved through **Liaison Program**

# TM Forum - Liaison Program

- Organisation:
  - Business Relationship – **Liaison Agreement**
  - Technical Detail – **Work Register**
  
- Example Liaison Areas:
  - Management (DMTF, ATIS / TMOC)
  - Network Technology (MSF, MEF, OIF)
  - Internet (IPDR.org, IETF)
  - System (OSS/J, The Open Group)
  - eBusiness (RosettaNet, UN/CFACT)
  - Mobility (3GPP, OMA)
  - “Standards Bodies” (ITU-T, ATIS, ETSI, TTC)

# Other Industry Group Liaisons

- **OSS/J** (OSS through Java)
- **DMTF** (Distributed Management Task Force)
- **3GPP** (3rd Generation Partnership Program)
- **ETSI** (European Telecommunications Standards Institute)
- **ITU-T** International Telecommunications Union
- **ATIS** (Alliance of Telecommunications Industry Solutions)
- **TTC** (The Telecommunication Technology Committee)
- **OIF** (Optical Internetworking Forum)
- **MEF** (Metro Ethernet Forum)
- **MSF** (Multi-service Forum)
- **OMG** (Object Management Group)
- **RosettaNet** (eBusiness)
- **QuEST** (**Q**uality **E**xcellence for **S**uppliers of **T**elecommunications)
- **TOG** (The Open Group)
- **IPDR** (IP Detailed Record organization)
- **OMA** (Open Mobile Alliance)

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