OCAF
a focus group
of ITU-T
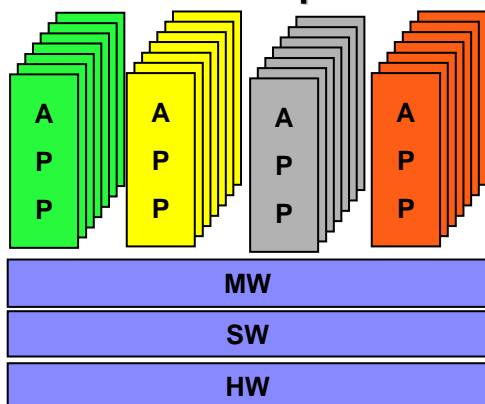
Open Communication Architecture Forum

Open Standards to Accelerate NGN

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Topics

- **What is OCAF and Why is it Important?**

- **What has OCAF Accomplished so far?**

- **Where is OCAF Going?**

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Open Communication Architecture Forum (OCAF) – ITU-T SG 13 Focus Group

NGN Telecom Solution Development Model

The Open Communications Architecture Forum consists of industry leaders working to accelerate the cost benefits derived from adopting COTS technologies by Defining an NGN Application Platform

Founding Members: Avaya, Cisco, Comcast, Deutsche Telekom, France Telecom, IBM, Lucent, Nortel Networks, NTT, Siemens, and Telecom Italia

Why is OCAF important?
- OCAF is working to establish an agreed-upon list of standards for carrier grade open platforms. The Carrier Grade Open Environment (CGOE) is accelerating the adoption of NGN platforms and services.

http://www.itu.int/ITU-T/ocaf/

How will OCAF benefit me?
- Enables COTS component ecosystem
- Reduces cost and time to market
- Enables NEPs and SPs to quickly launch new products for both wireless and wireline
- Enables mixing and matching of solutions from different solution providers

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Value to Industry

- OCAF advances use of open publicly available standards

- OCAF accelerates the composition of new services

- OCAF increases entry point opportunities for new participants

- OCAF eases the integration of multiple solutions

- OCAF improves and clarifies market segmentation

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Key Milestones

Open Communication Architecture Forum

- OCAF established as industry consortium: March 2004

- OCAF announced as ITU-T focus group: July 2004

- OCAF published CGOE reference model: May 2005

- ITU-T Question Q.16/13 approved: July 2006

- ITU-T Recommendations approved: March 2007
    - Y.2901 CGOE Framework
    - Y.2902 CGOE Components

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Accomplishments

The CGOE reference model promotes the use of a set of standards, which form the framework
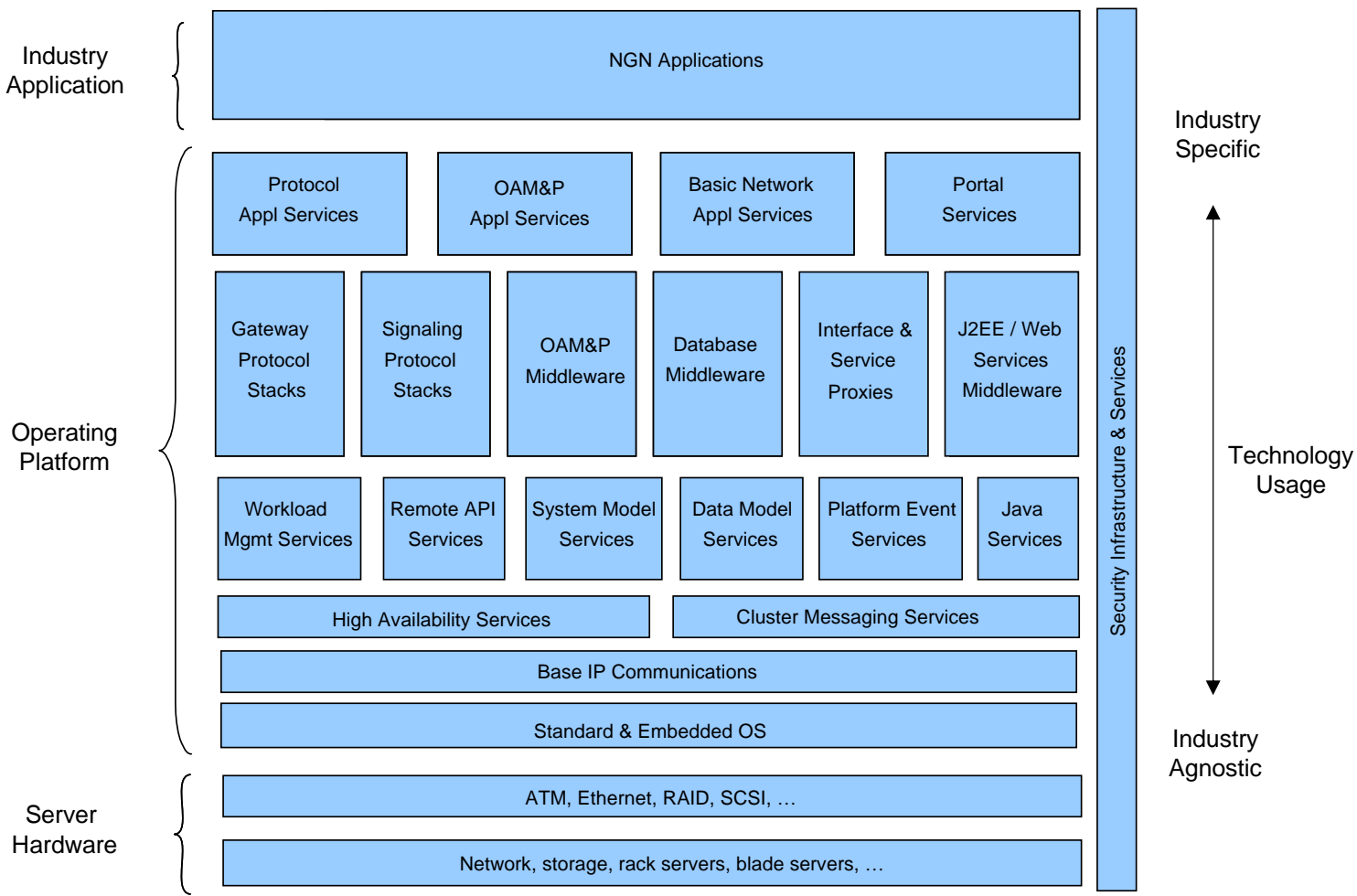 - on top of which new applications, e.g. NGN applications can be built
  - which can be populated with "real" products.

In order to achieve this, it is necessary to define

   a) what are the required functions

   b) what are the identified standards (or missing standards)

and "CGOE categories" organize the functions and standards within the model in respect to one another.

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Carrier Grade Open Environment (CGOE) Reference Model

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Industry Application
{
NGN Applications

Industry Specific

Operating Platform
{

| Protocol Appl Services | OAM&P Appl Services | Basic Network Appl Services | Portal Services |

| Gateway Protocol Stacks | Signaling Protocol Stacks | OAM&P Middleware | Database Middleware | Interface & Service Proxies | J2EE / Web Services Middleware |

| Workload Mgmt Services | Remote API Services | System Model Services | Data Model Services | Platform Event Services | Java Services |

| High Availability Services | Cluster Messaging Services |

Base IP Communications

Standard & Embedded OS

Security Infrastructure & Services

Technology Usage

Server Hardware
{

ATM, Ethernet, RAID, SCSI, …

Network, storage, rack servers, blade servers, …

Industry Agnostic

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CGOE components

A CGOE component is a unit of measure,
  - which provides a well defined function
  - with standardized interface and/or behavior

Examples:
+) SQL Database: - database would be the function,
                  - SQL the interface,   => is a CGOE component
                  - "SQL" the standard

-) HA middleware: - HA is not a function
                  - SAF would be the standard   => not a CGOE component
                  - many different interfaces

Note: A CGOE component is not necessarily the unit of a realized COTS
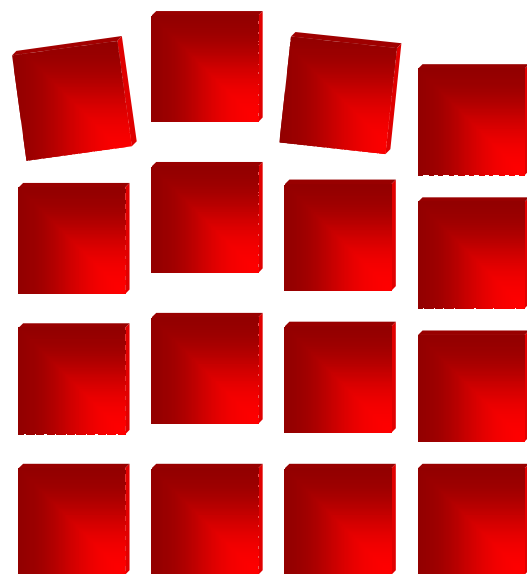   product. Such a product may contain more than one "CGOE component".

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Carrier Grade Open Environment	
Component Category	CGOE Component
Protocol Services	Diameter
Protocol Services	GUP Protocol
Protocol Services	GUP Server
Protocol Services	I-CSCF
Protocol Services	P-CSCF
Protocol Services	S-CSCF
Signaling Protocol Stacks	SIP
Signaling Protocol Stacks	SIP Proxy
Protocol Services	COPS
Base IP Communications	SNMP
Base IP Communication	http
Base IP Communication	NTP
Base IP Communication	FTP
Base IP Communication	TLS
Base IP Communication	IPSec
OAM&P Middleware	OAM&P Middleware
Database Middleware	Database Middleware
Data Model Services	Data Model
System Model Services	Configuration Manager
System Model Services	System Model
Availability Middleware	Availability Manager

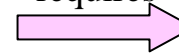| Carrier Grade Open Environment (ctd.)	
Component Category	CGOE Component
Availability Middleware	Start up/Recovery
Availability Middleware	Alarm Management
System Model Services	SW Upgrade
System Model Services	Patching
System Model Services	Life Cycle Manager
Availability Middleware	HW Resource Manager
Availability Middleware	SW Resource Manager
Availability Middleware	Diagnosis
Platform Event Services	Trace
Workload Management	Overload Control
Workload Management	Load Balancer
Workload Management	Performance Monitoring
Platform Event Services	Event Management
Platform Event Services	Log Management
Basic Network Application Services	Subscriber Profile Management
System Model Services	Policy Manager
Security	"Security"
to be determined	Accounting Data Collector
Basic Network Application Services	Legal Interception/ CALEA
to be determined	License Management
to be determined	Application Server (J2EE)

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Future Goals

Driving OCAF Forward

- Ensuring consistency of framework

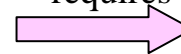- Aligning independent investigation paths

requires → **Formalization of the OCAF results**

- Achieving acceptance of model
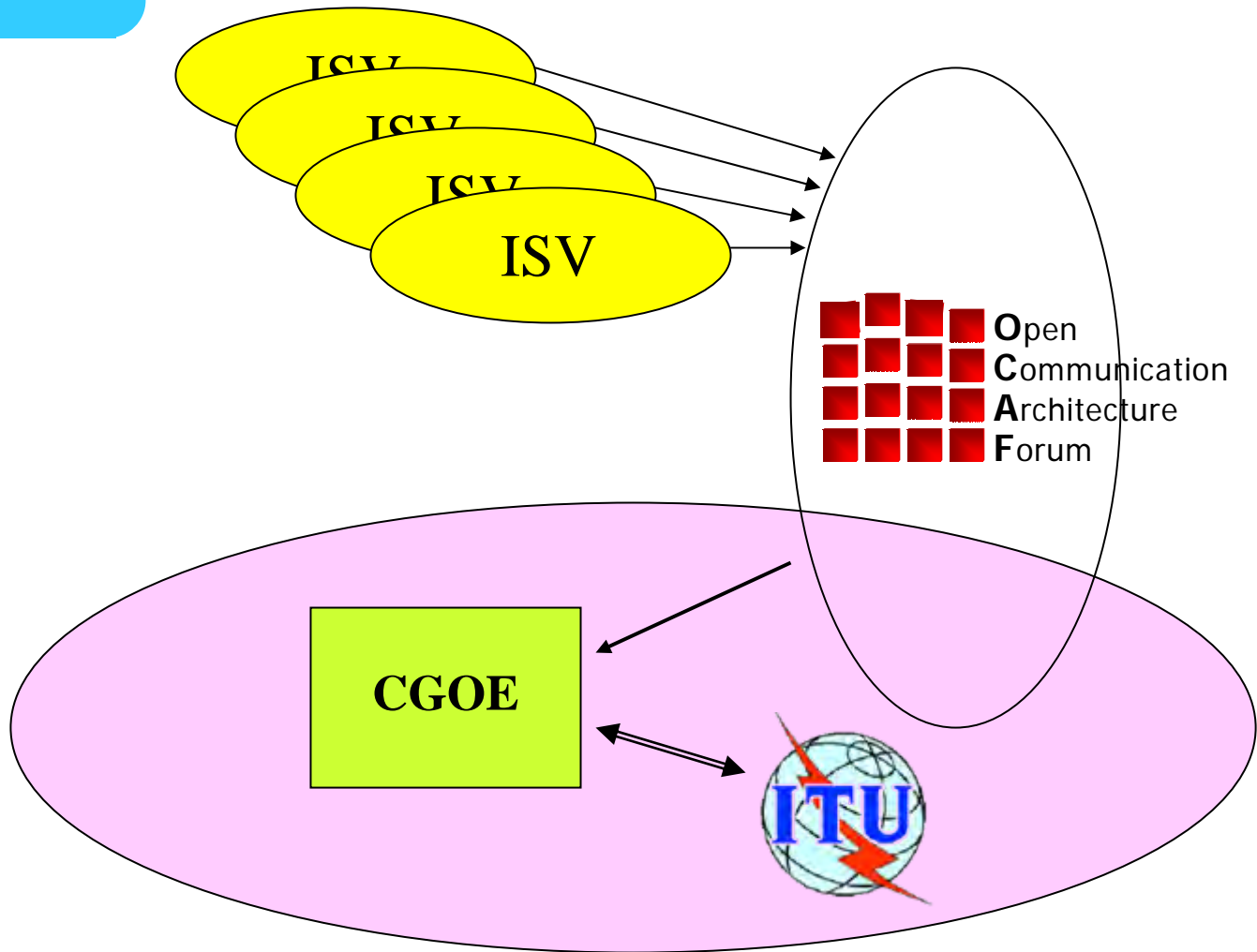
- Promoting interfaces and standards

requires → **Involvement of SW technology providers**

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Formalization of the OCAF results

OCAF will:

- continue to focus on new items, e.g.:
  - new components
  - conformance
- work with external parties to add value to the documents it produces and documents produced in other fora
- continue to submit its outputs, in the form of new draft Recommendations into ITU-T SG 13
- continue to use its focus group status to gain the benefit of knowledge and experience from non-ITU-T members

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Involvement of SW technology providers

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Call for **I**SV participation

- **Proactive role in reducing TTM for your products**

- **Influence component definitions for your area of expertise**

- **Focus on issues important to your business**

- **Work with your customers and your customer's customer**

- **Industry recognition as thought-leader**

- **Drive standards without getting buried in them**

- **Early access to all work of OCAF and SG-13**

- **Head start on being OCAF compliant for your components**

- **Short duration of effort (up to 3 months)**

- **Minimal investment (no membership fees)**

OCAF positioned to make a difference for your business

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Summary

Open Communication Architecture Forum

- **OCAF is making great progress and has significant participation**
- **OCAF is Open and Platform Neutral – all can participate**
- **OCAF is a rallying point for NGN COTS Suppliers and Consumers**
- **OCAF Future Work Needed:**
  - **Extension of set of CGOE components**
  - **Look towards addressing conformance**

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Thank You