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Introduction of CCSA TR CSN

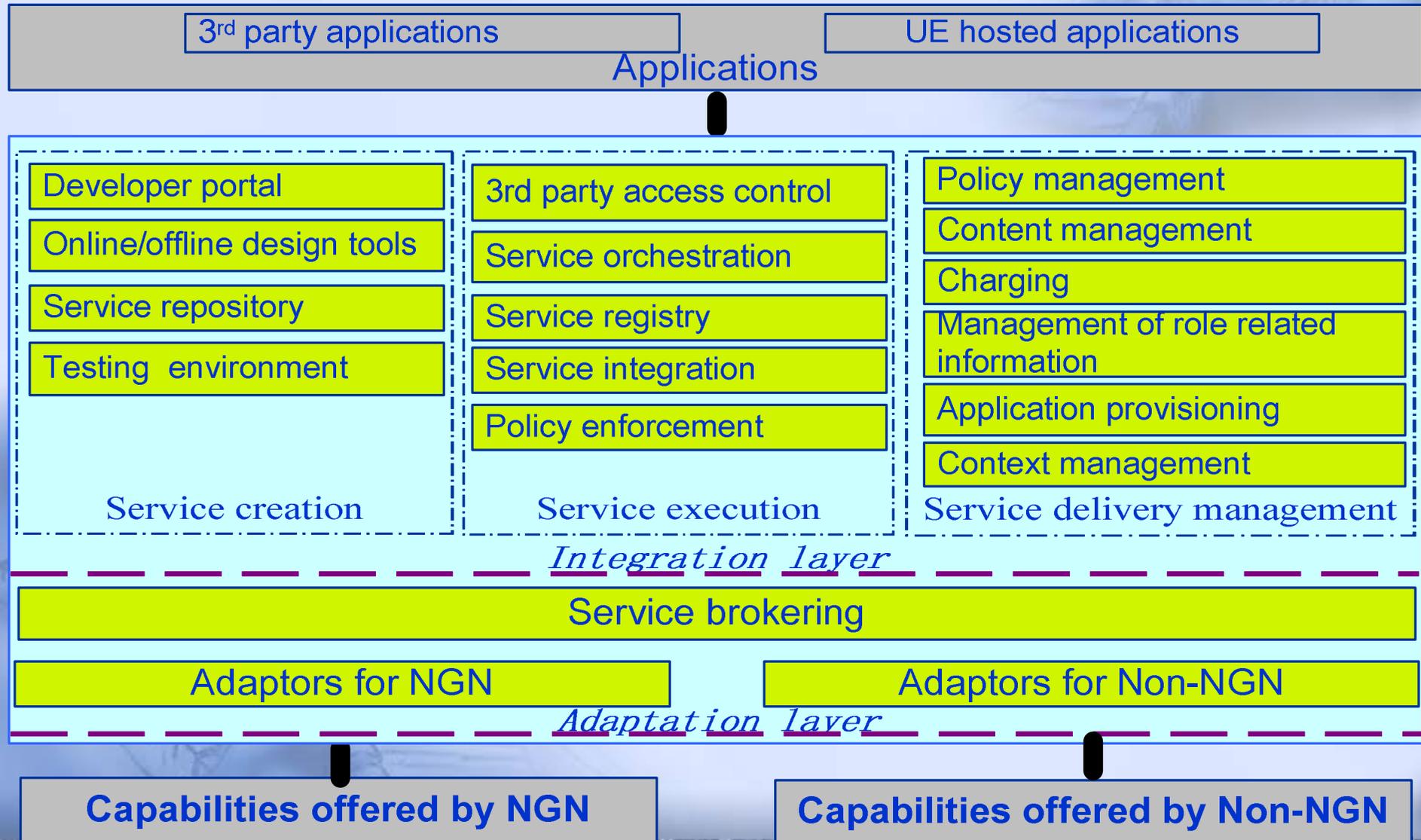
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**Global Standards Collaboration (GSC)
GSC-15**

What is CSN?

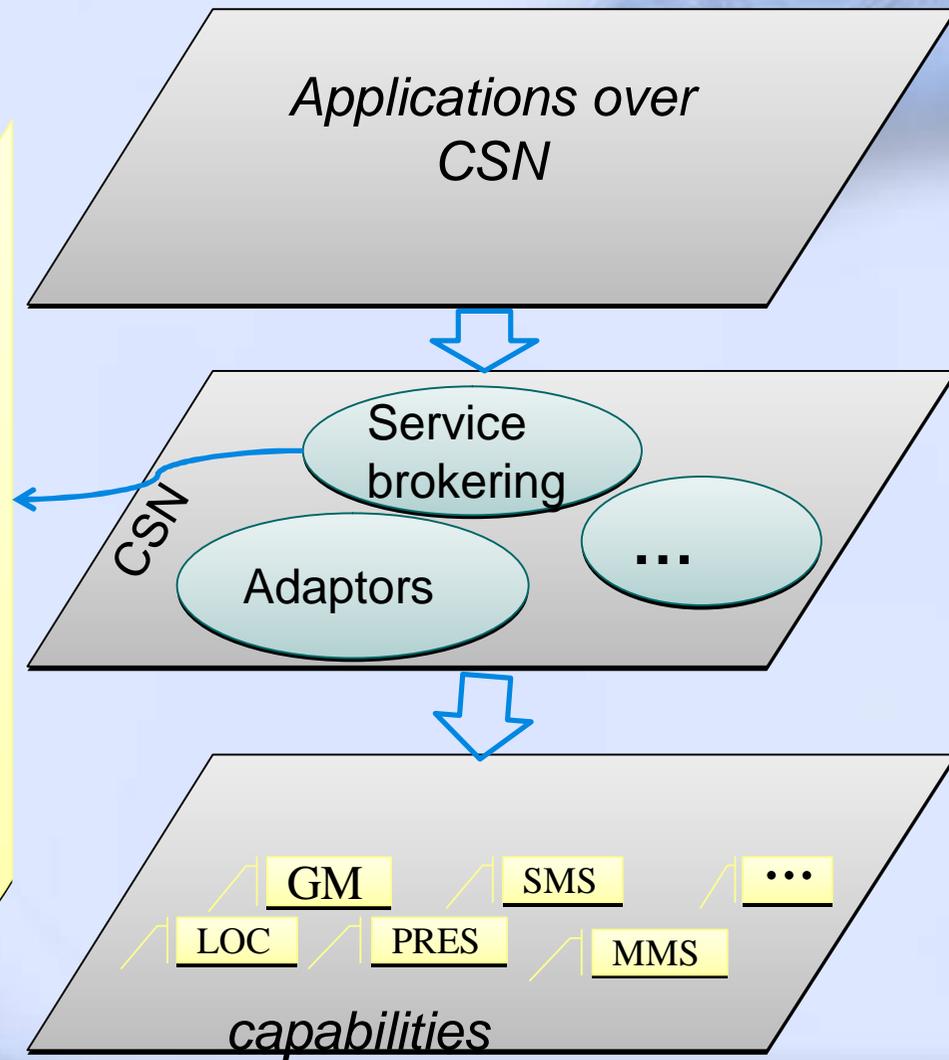
- n Converged Service Network (CSN) studies functional requirements to provide a guideline for telecom network operators, equipment providers, application providers, software developers, content providers to build a comprehensive echo-system for all the stakeholders in value chain.
- n CSN provides an open environment in NGN, which offers support for a **diverse group of application developers and service providers to integrate the capabilities from different domains** (e.g. Telecom (Fixed and Mobile Networks), Internet, Broadcasting etc.) over NGN.
- n NOTE: CCSA TR.CSN is aligned with NGN-SIDE being studied in ITU-T Q3/SG13.

CSN framework (ongoing)

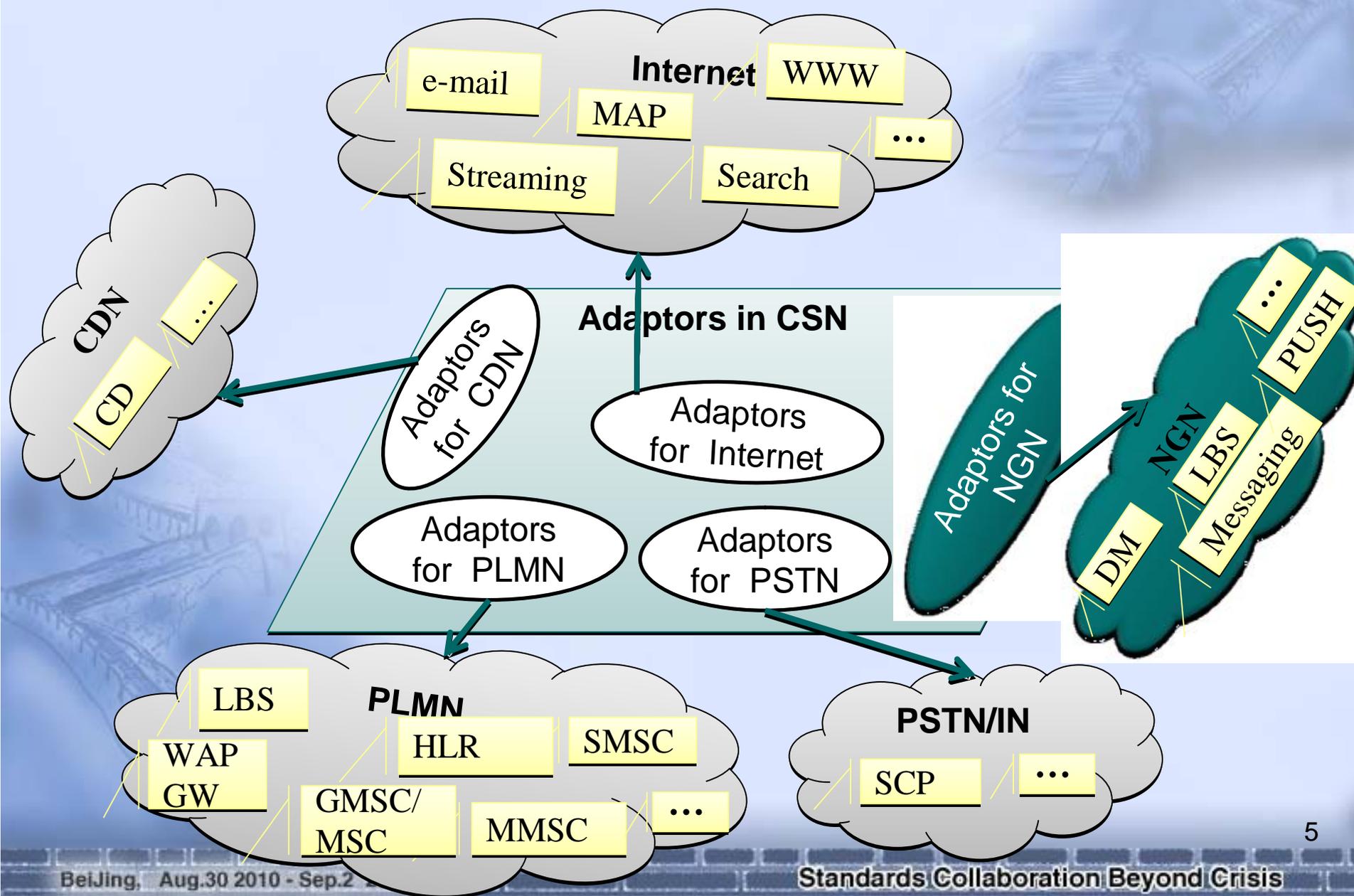


Service brokering in CSN

§service selection logic;
§invocation of applications & capabilities;
§state aware (i.e. session control);
§adjust signaling messages;
§inject additional service logic.



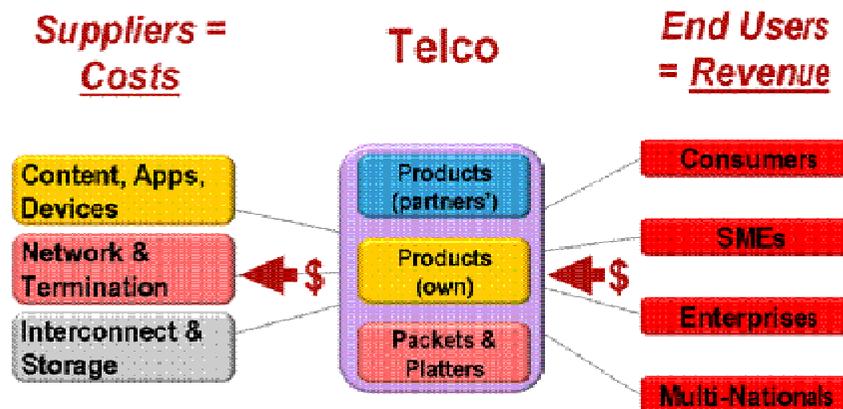
Adaptors for NGN & Non-NGN



Strategic Direction (1)

CSN puts operator in the center to control the whole value chain and opens numerous revenue opportunities for operator on connecting end-users with 3rd party services, and getting paid by the 3rd party for doing so.

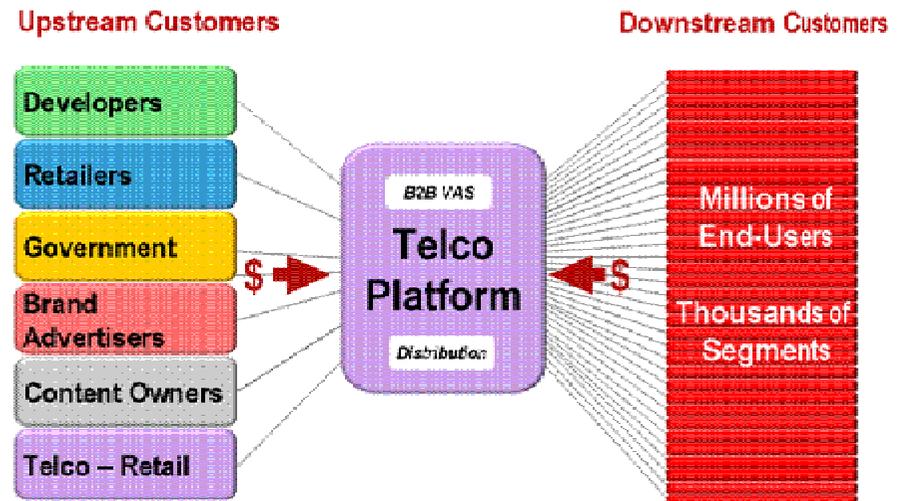
Today: Revenue only from 1 Side



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Tomorrow: revenue from 2 sides

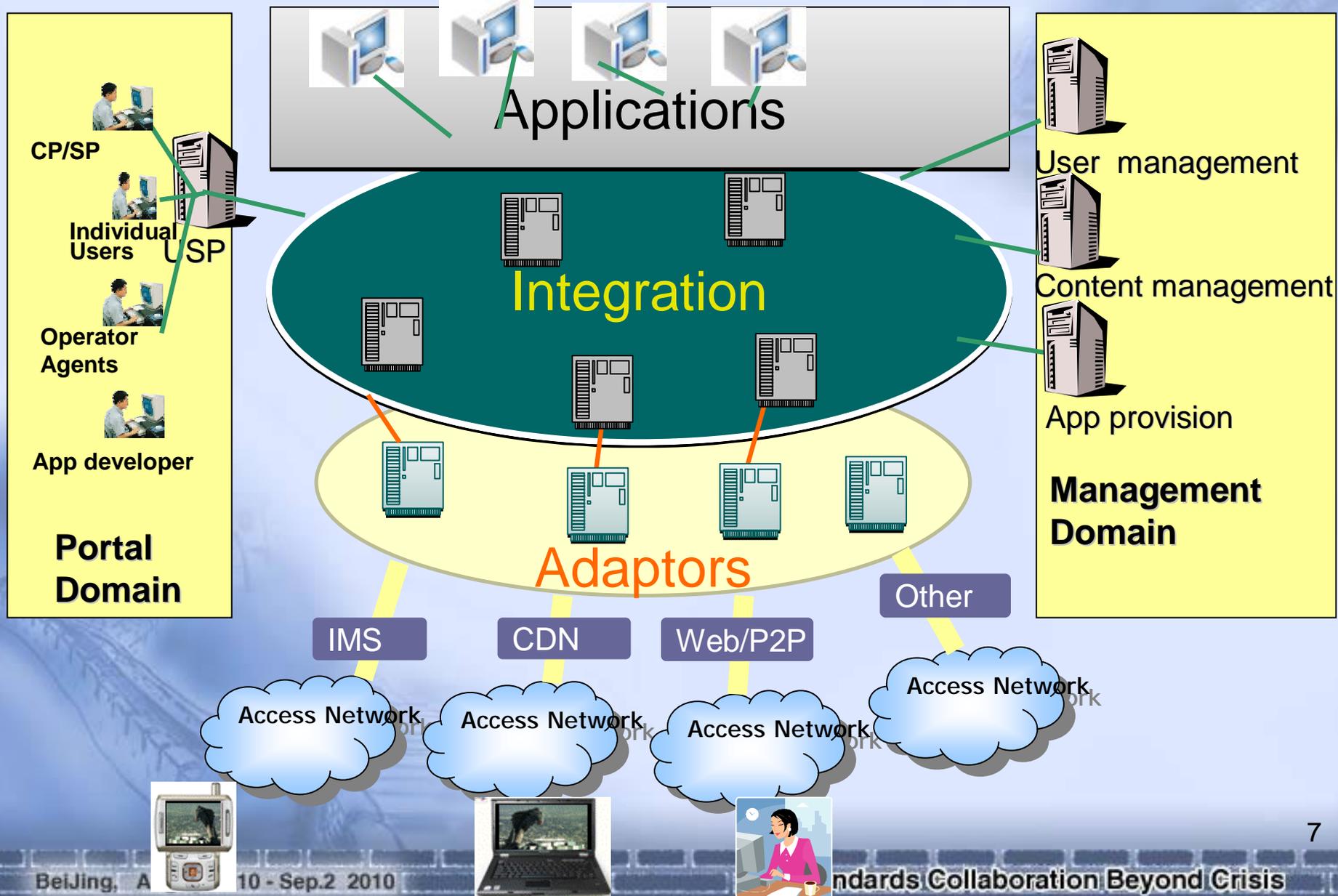


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http://www.telco2.net/blog/2008/03/post_12.html

Strategic Direction (2): CSN

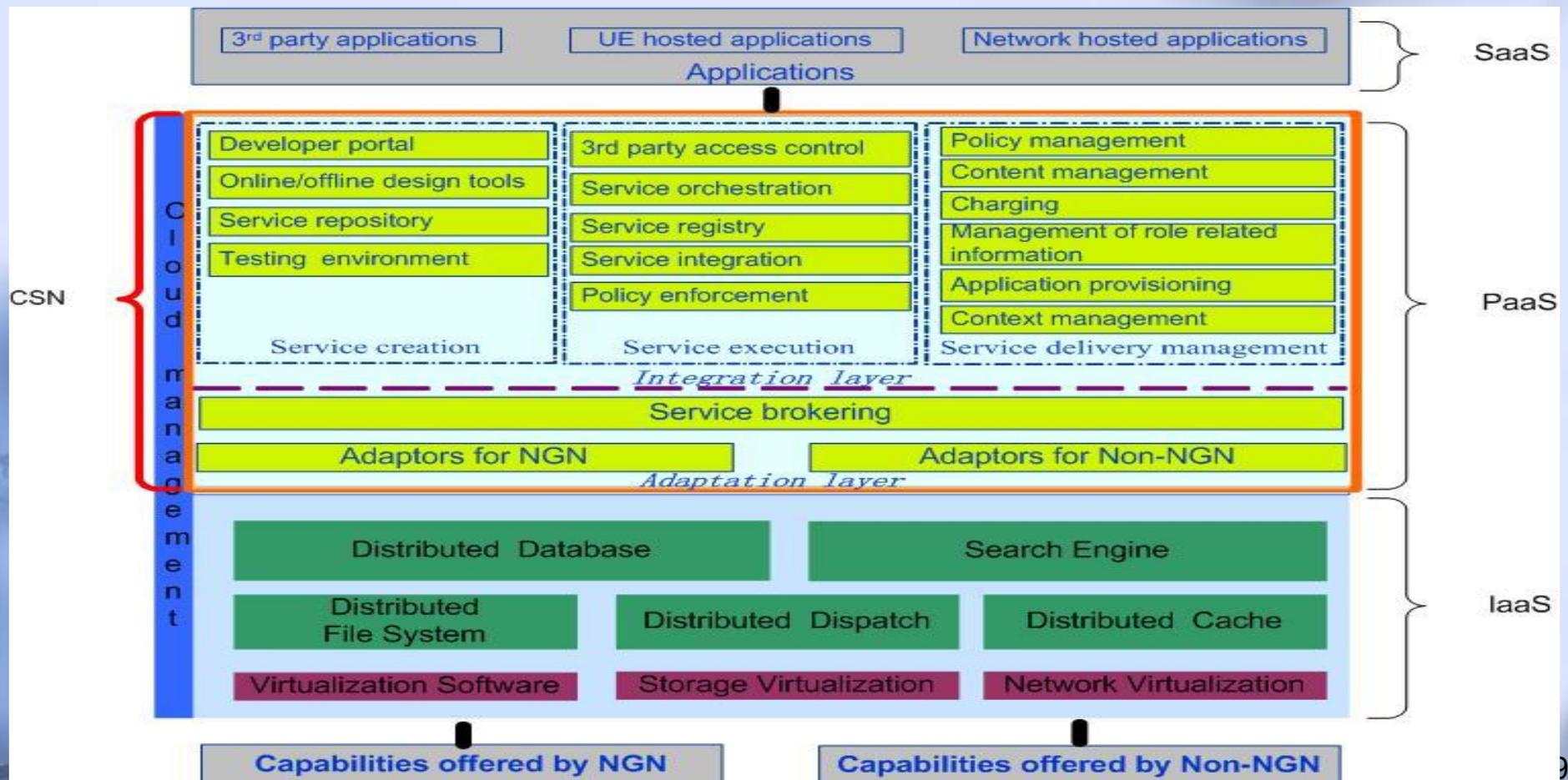


Challenges

- § Strong coordination is needed among SDOs involved in the development of different aspects of service delivery platform;
- § Collective effort is needed to identify the minimum set of standardized APIs to be adopted by a service delivery platform;
- § Interoperability among different service delivery platform implementations.

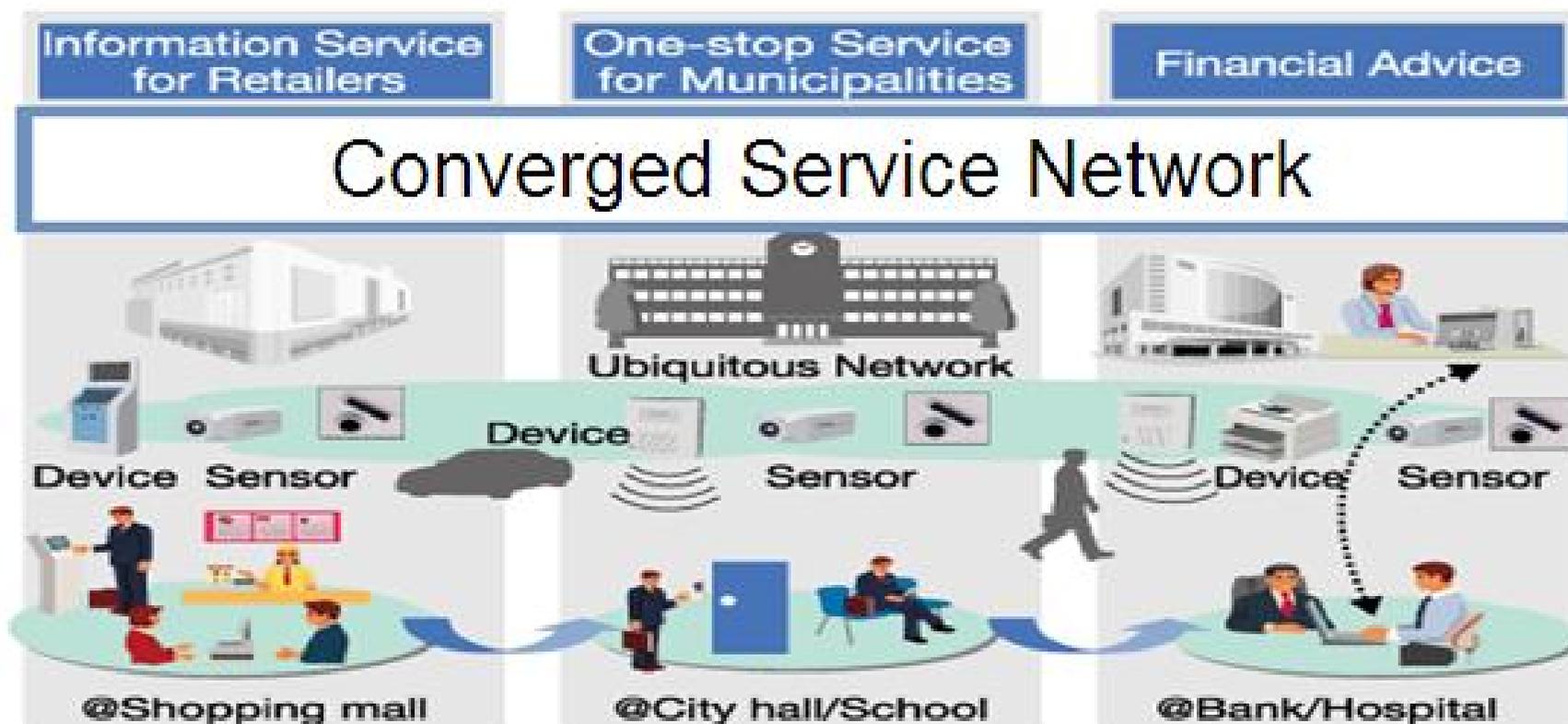
Next Step: Support for Cloud Computing(1)

CSN supports different cloud computing service provisioning models such as Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS).

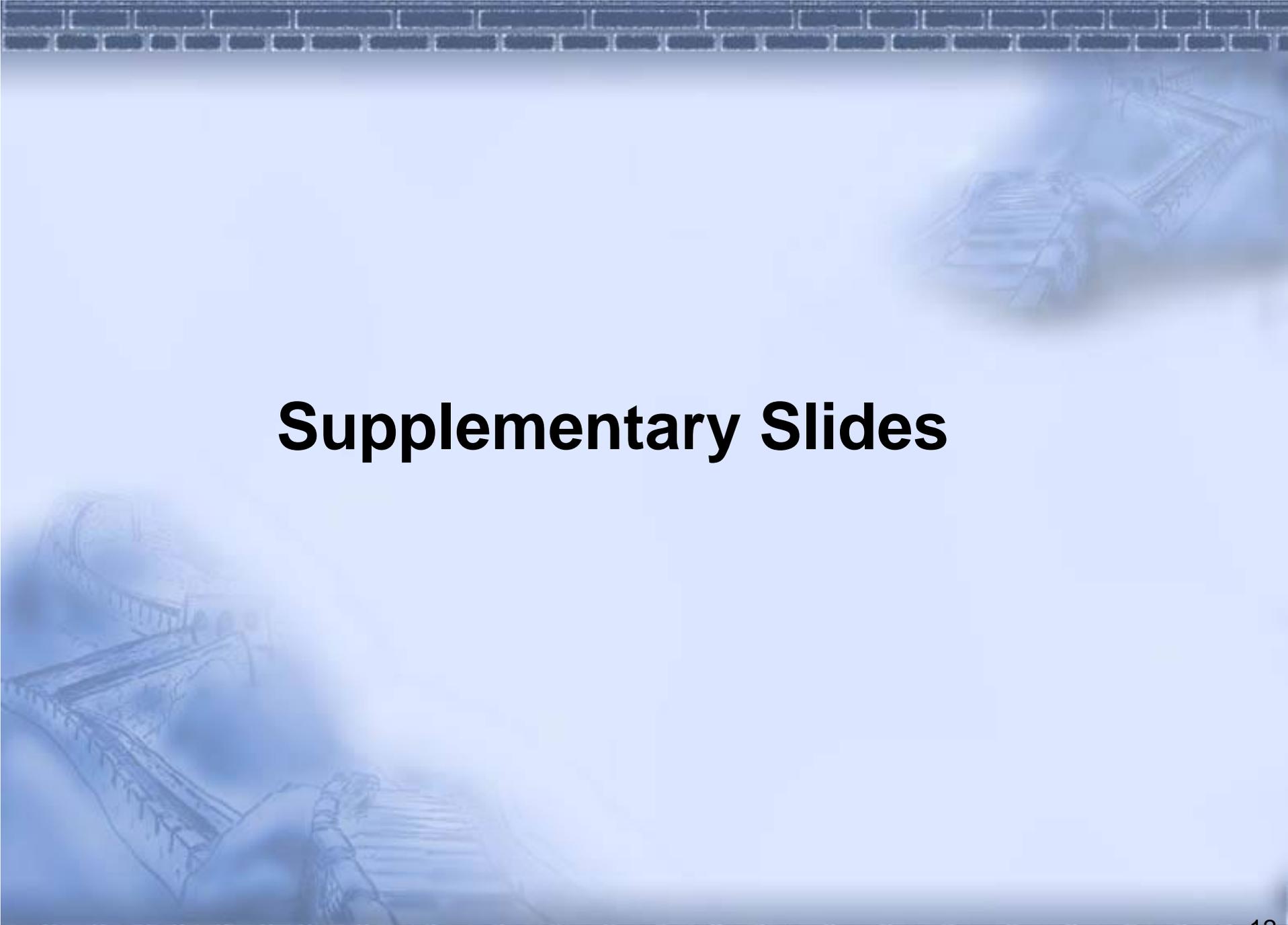


Next Steps: Support for UN (2)

CSN is currently investigating impacts of Ubiquitous Network (UN) applications such as M2M applications on service delivery platform. Major considerations are adaptors and integration aspects.







Supplementary Slides

TR.CSN Work Program

TR.CSN setup in CCSA TC3(WG4): 2009.12

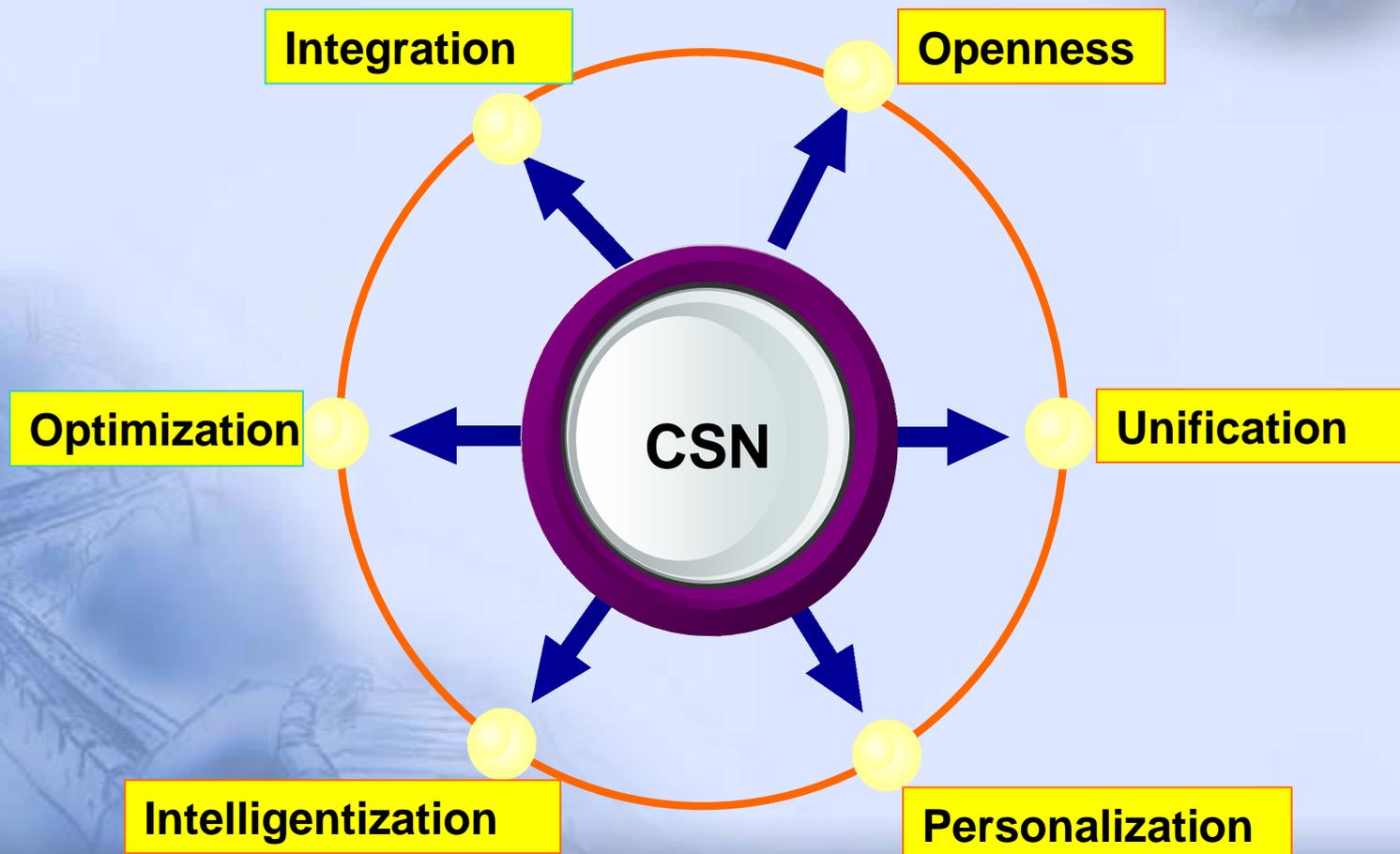
TR.CSN initial draft in CCSA TC3(WG4): 2010.05

TR.CSN candidate in CCSA TC3(WG4): 2010.08

TR.CSN consent in CCSA TC3(WG4): 2010.12

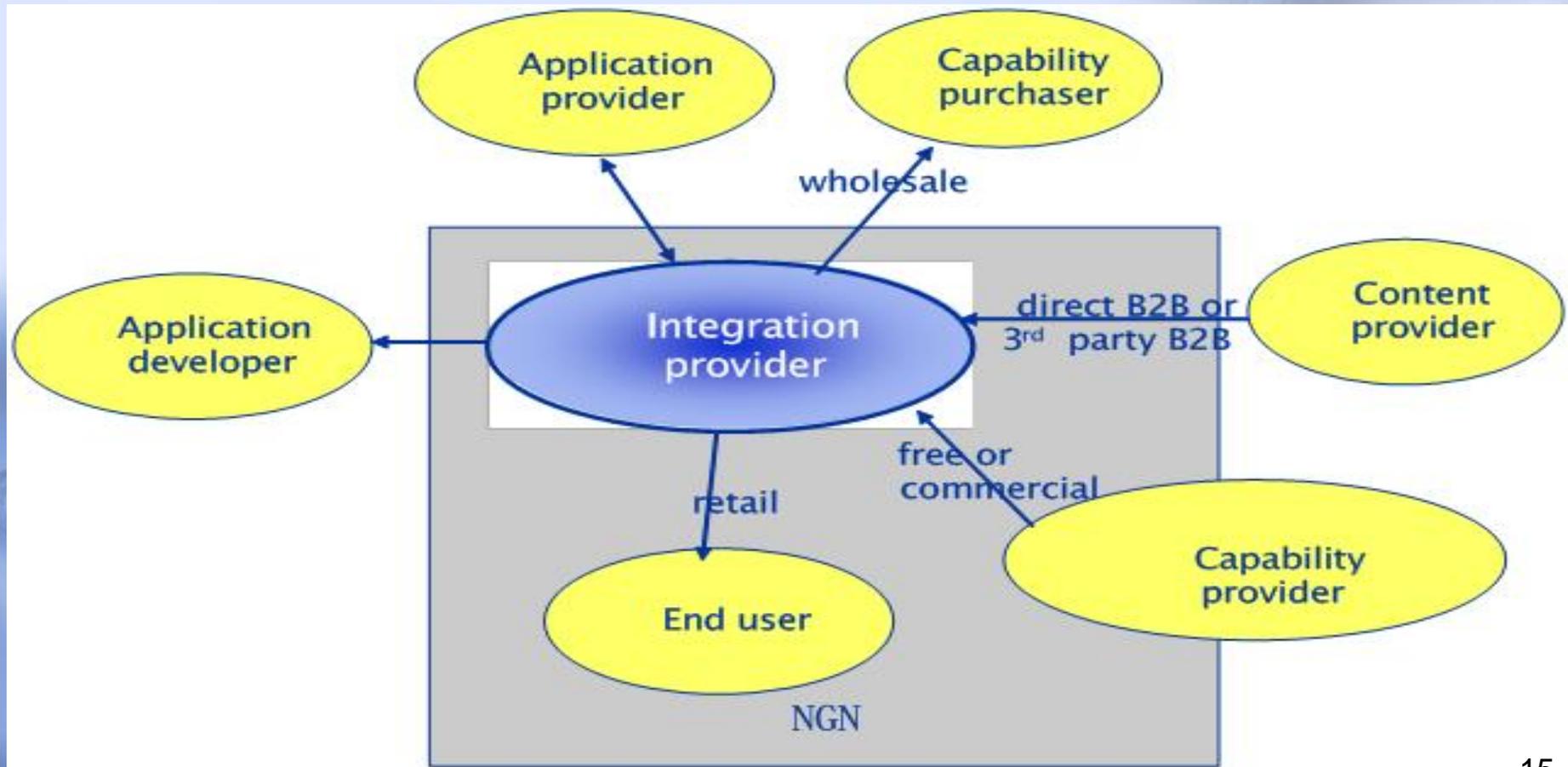
CSN:A multifold telecom business model (1)

CSN is to define capabilities for a service integration and delivery environment to support the integration of capabilities from different domains.



CSN: A multi-fold telecom business model (2)

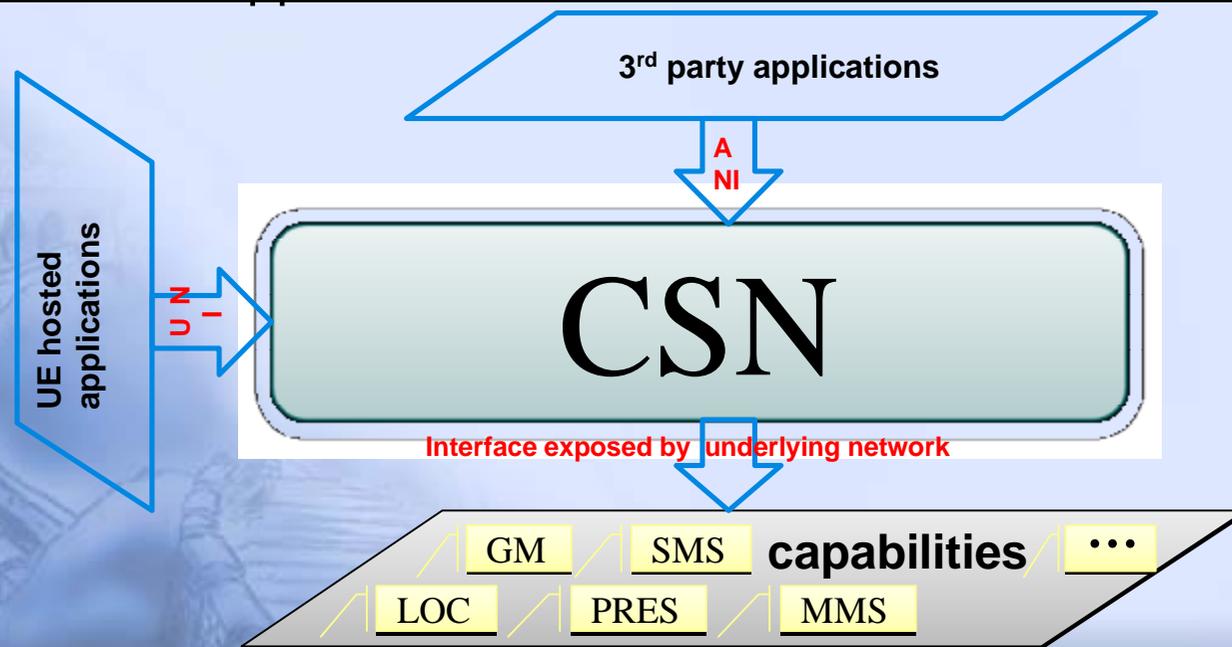
CSN aims to support a healthy ecosystem for all the stakeholders in the NGN value chain.



Applications over CSN

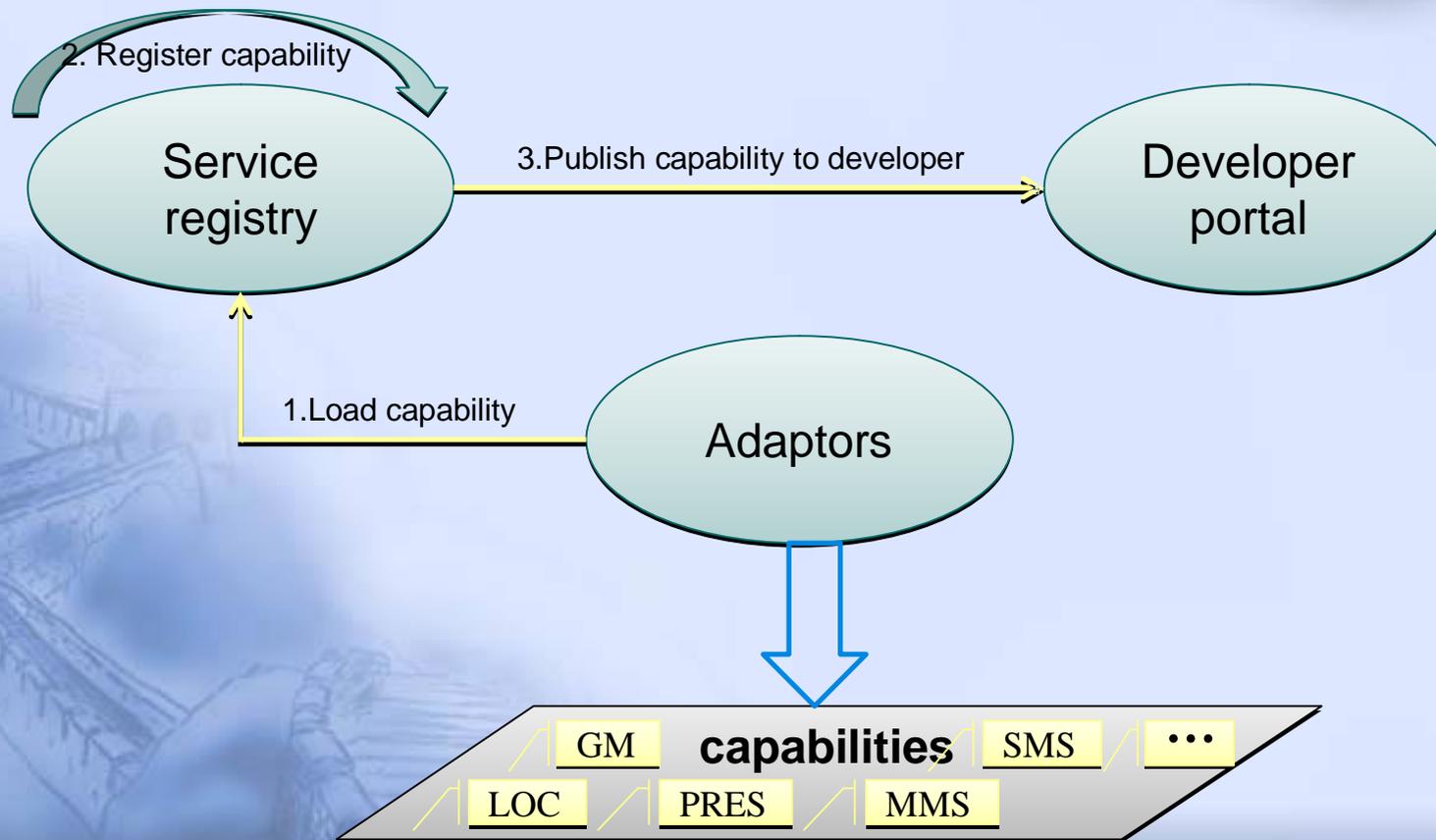
CSN is aimed to support a variety of applications to accommodate requirements from emerging business models, which includes:

- § 3rd party applications;
- § In-house application;
- § UE hosted applications.



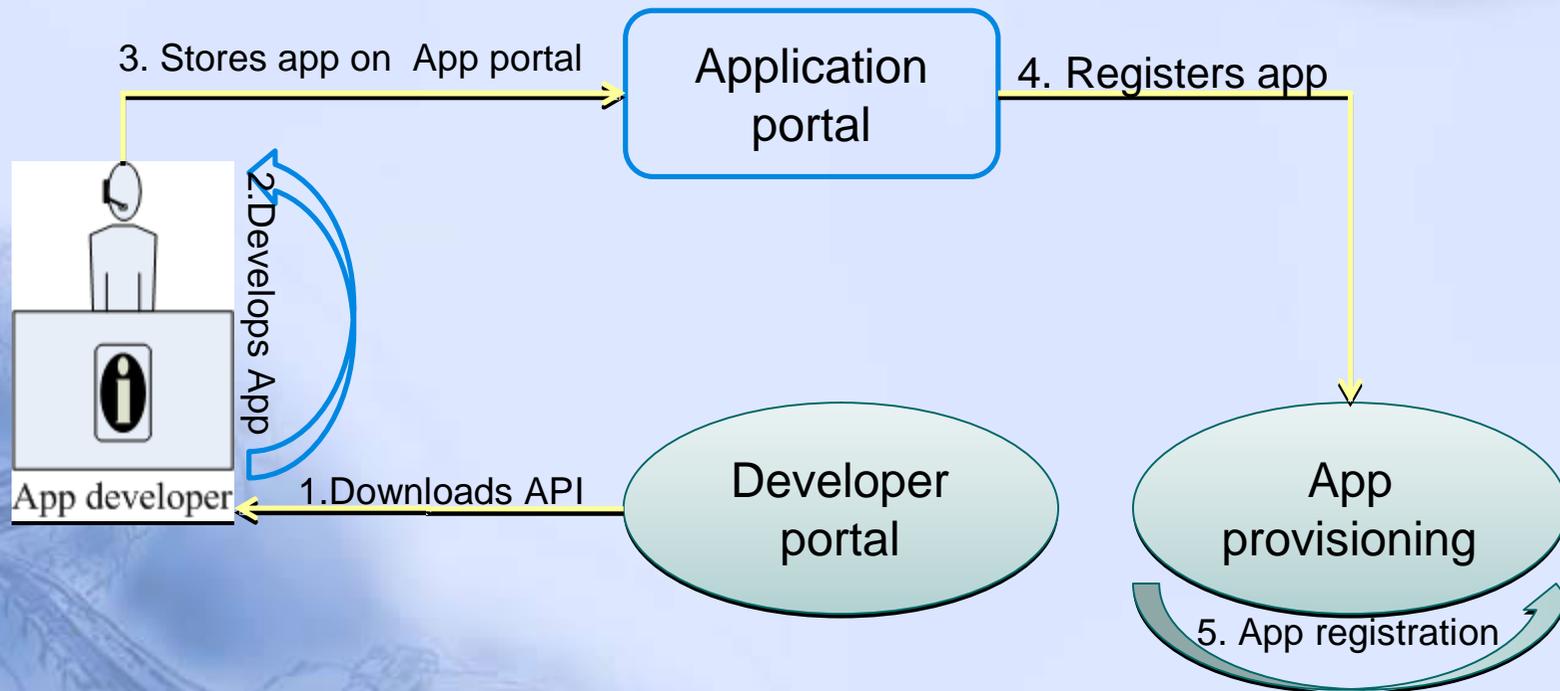
Capability registration in CSN

The following diagram describes the procedure about the registration of a capability to CSN.



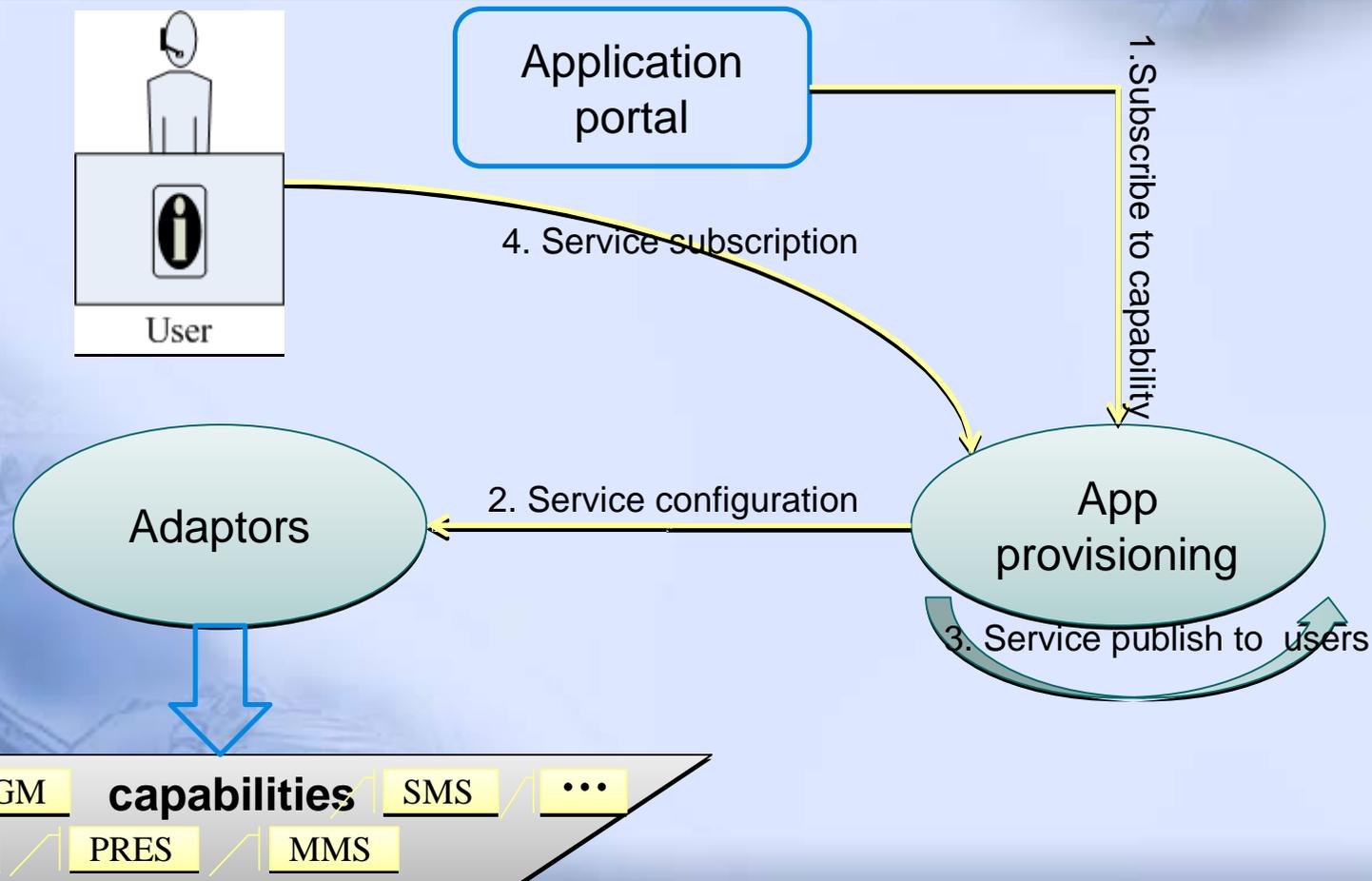
Support for application developers

CSN is aimed to support application developers to develop a variety of applications.



Service provisioning in CSN

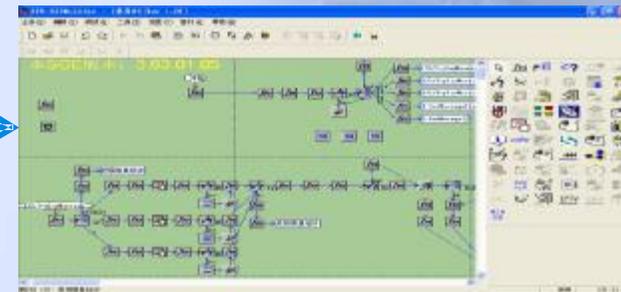
The following diagram describes the procedure about service provisioning in CSN.



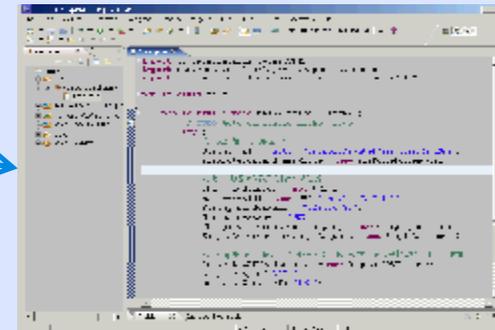
Service creation environment (SCE)

CSN supports multi-SCE to meet diverse market needs.

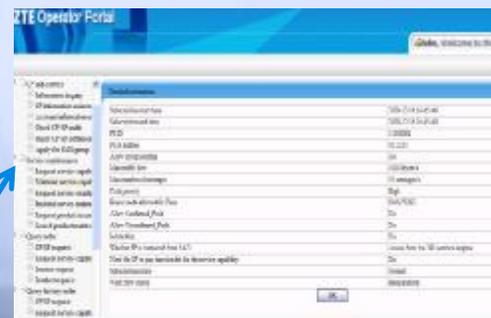
§ **Standard SCE:** suitable for the services which require complicated function, high capability and large scale application.



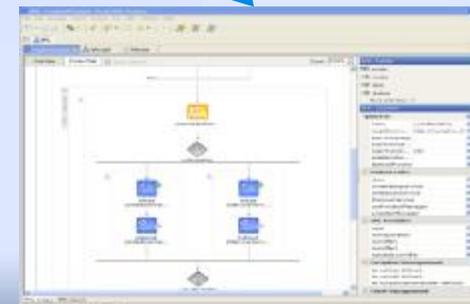
§ **WEB service SCE:** Suitable for the third parties who have normal developing team.



§ **GUI SCE:** GUI, drag-and-drop, suitable for the 3rd with small-scale developing team.

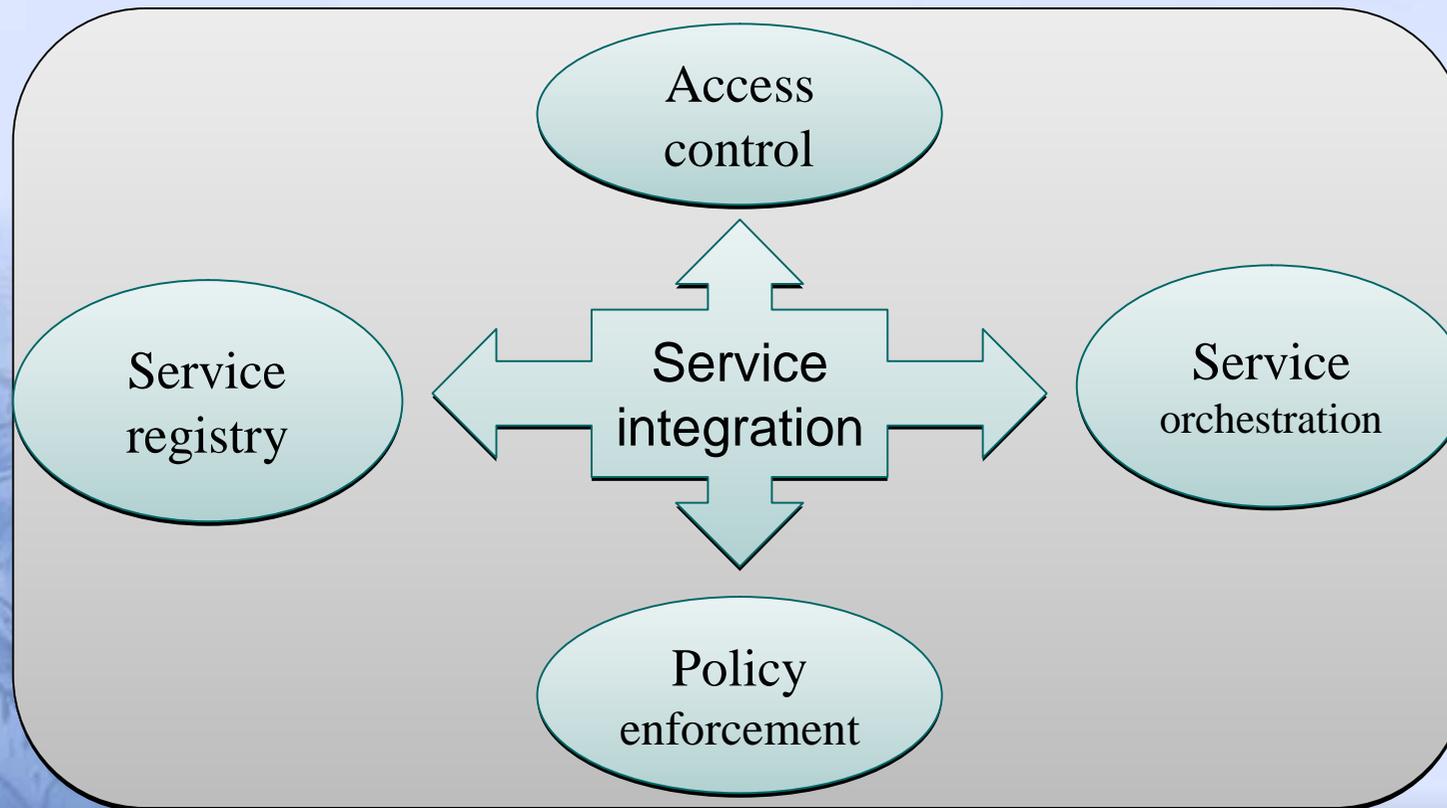


§ **“0” coding SCE:** To enable the ordinary users to utilize this tool to develop their own service.



Service execution environment

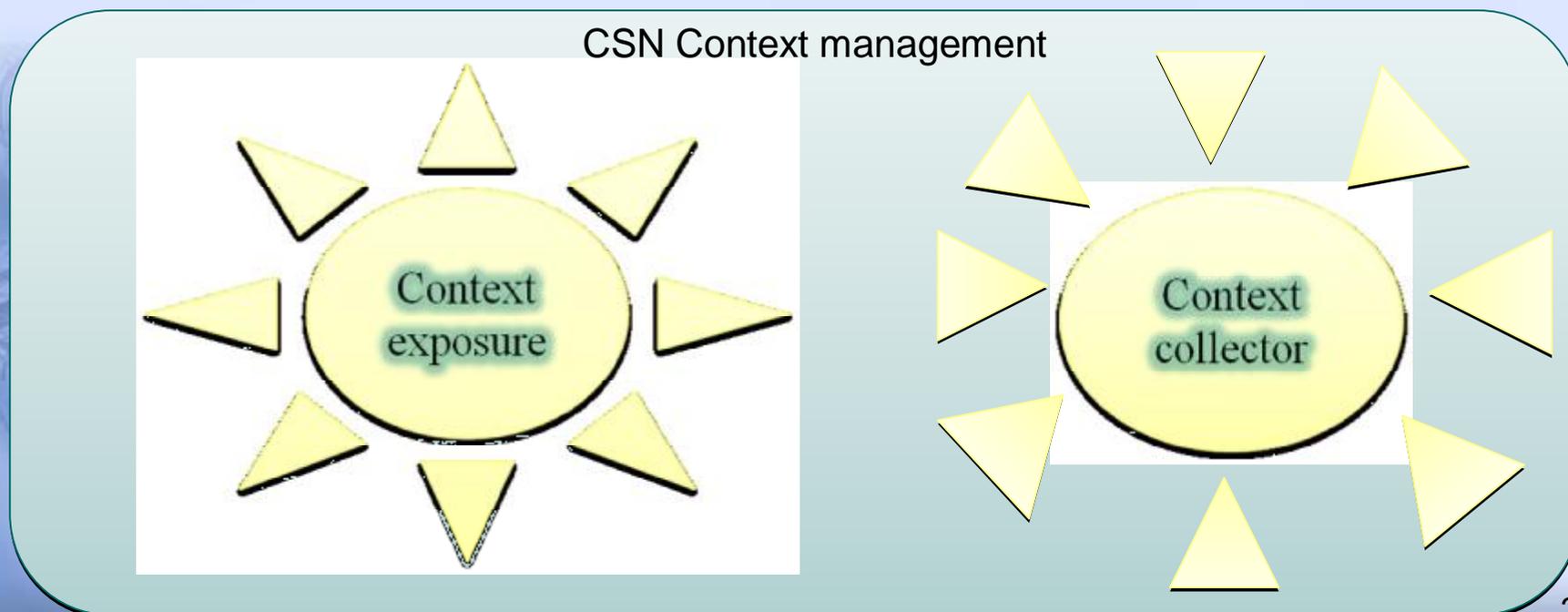
CSN is aimed to provide a configurable, manageable, scalable, reliable and virtualizable service execution environment.



Context handling in CSN

Supports mechanisms for context management from the following aspects:

- § context information such as QoS, connectivity, communication capabilities, location, presence, service type about context entities and context access such as register, query, subscribe, notify, update, etc.

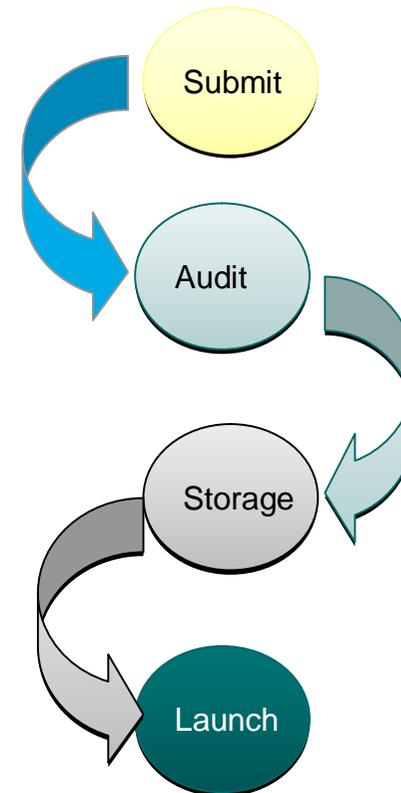


Content handling in CSN

To make content accessible for users, CSN supports the content management such as:

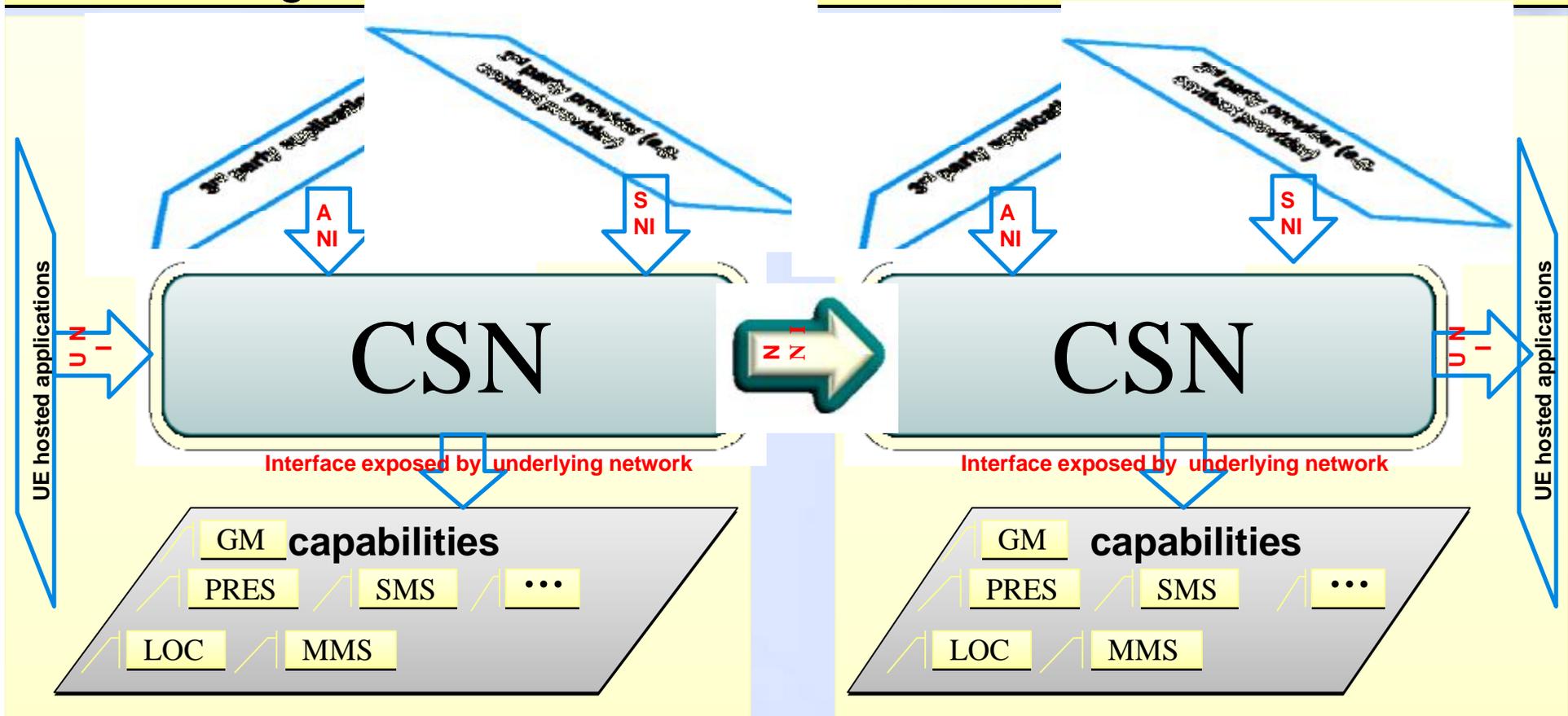
- § Content profiling (i.e. one content can be bound with multi-services);
- § Content information (e.g. content Name, Type, Format, serial number);
- § Content life cycle management, etc .

Content Lifecycle Management



CSN Reqt. for ANI, UNI, SNI, and NNI

CSN defines the requirements in terms of APIs, protocols and technologies. across NGN ANI, UNI, SNI, and NNI.



Adaptation concept in CSN

In CSN, adaptation consists of a) service brokering, and b) adaptors functions as follows:

n Service brokering function:

- § performs interaction between applications and capabilities for the downward invocation of capabilities;
- § handles triggering of events from NGN or Non-NGN towards applications.

n Adaptor function:

- § performs network exposition to access capabilities from underlying networks;
- § performs protocol conversion to shield the complexities of protocols and keep a horizontal service integration architecture.

Adaptors in CSN

In CSN, adaptors are categorized as a) adaptors for NGN, and b) adaptors for Non-NGN:

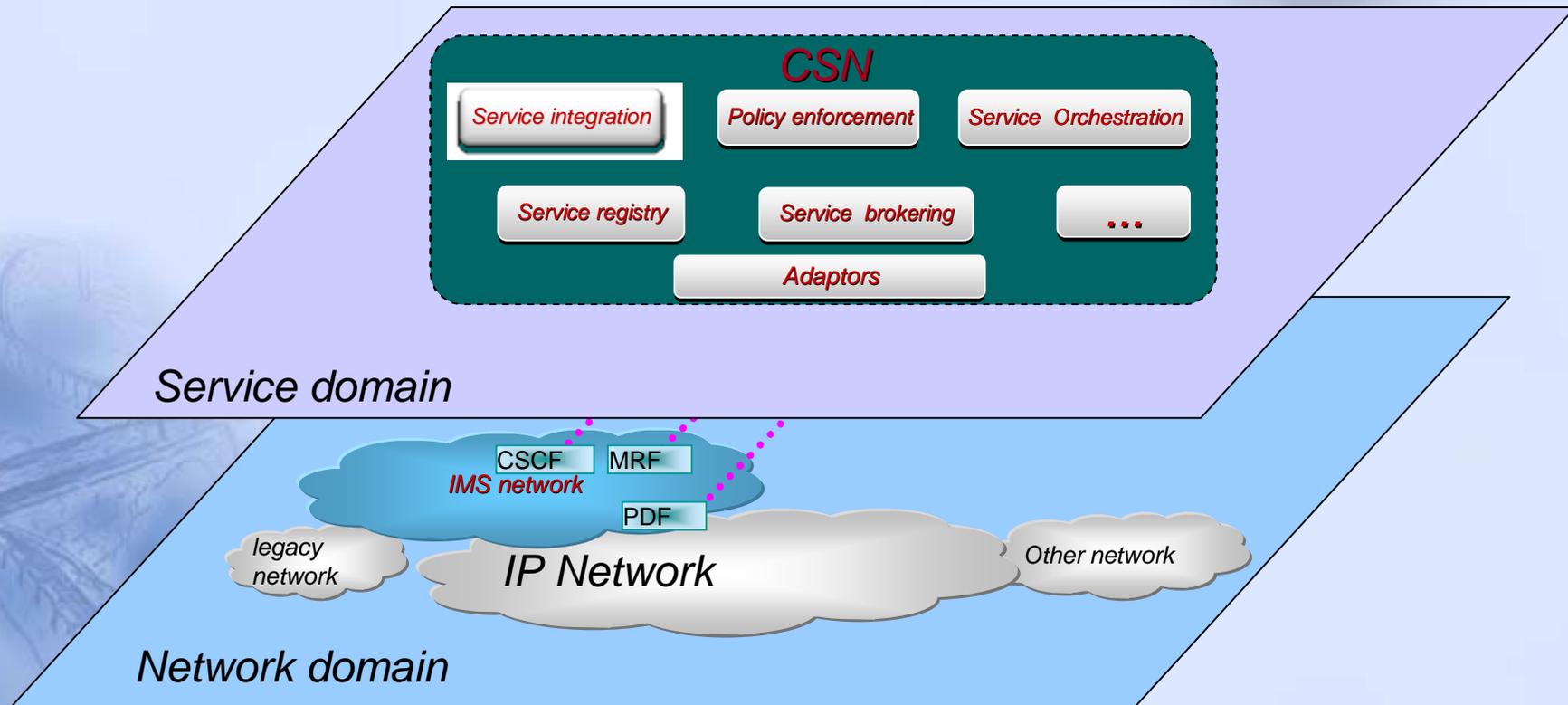
n Adaptors for NGN include:

- § Adaptors for NGN capabilities including service enablers;
- § Adaptors for NGN resource (i.e. connections, computing, storage).

n Adaptors for Non-NGN include:

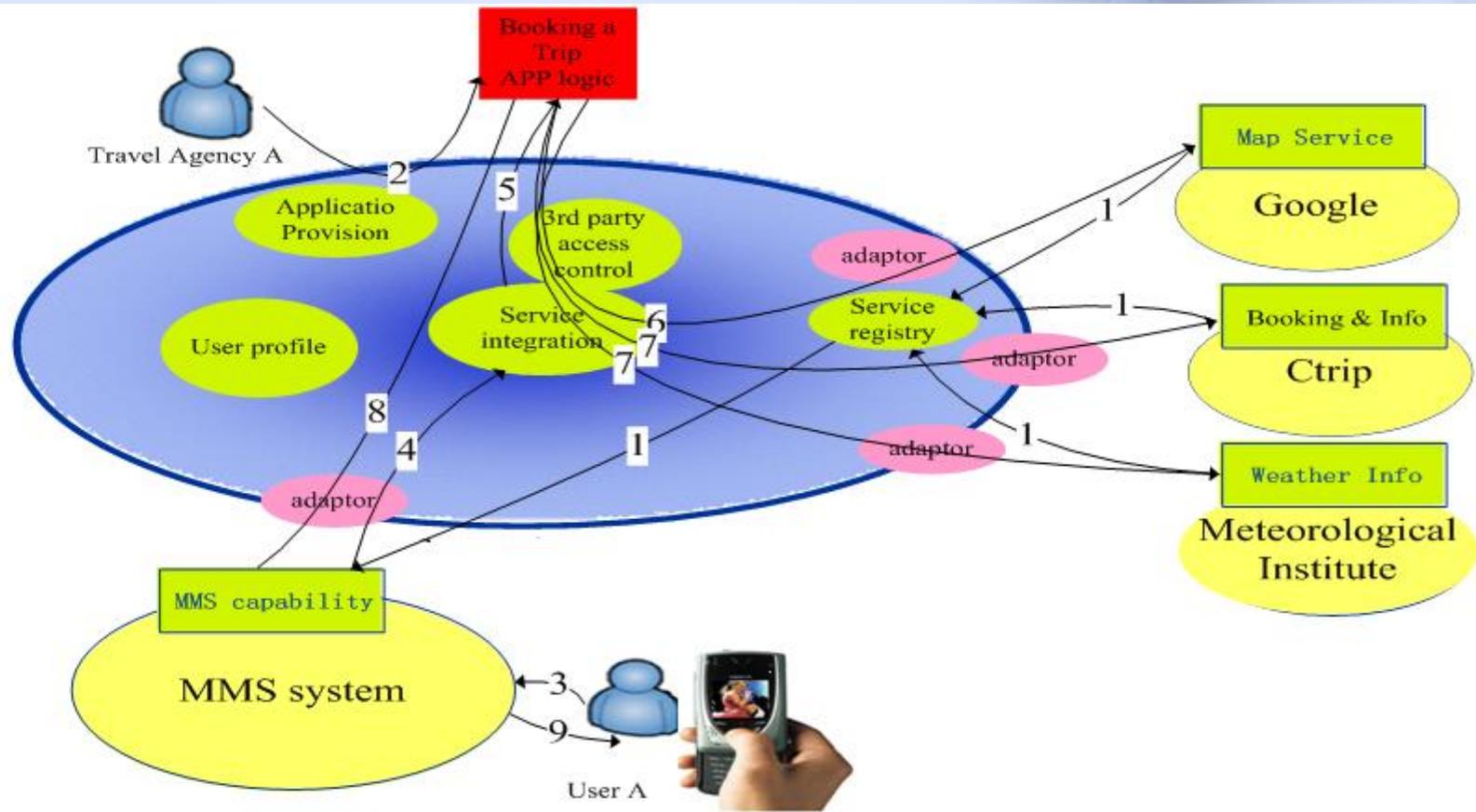
- § Adaptors for legacy network including PSTN & PLMN;
- § Adaptors for internet;
- § Adaptors for content delivery network (CDN);
- § Adaptors for Ubiquitous Networking (UN).

CSN over IMS



3rd party application scenario

This scenario describes how CSN facilitates 3rd party applications, for example “Book a trip” to access capabilities from other domains (i.e. Telecom and Internet).



In-house application scenario

This scenario describes how CSN facilitates SP hosted applications, for example, “Enhanced Conference” to access capabilities from other domains (i.e. Telecom and IPTV).

