

# MeghRaj

Department of Electronics & Information Technology  
Ministry of Communications & IT  
Government of India

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# Agenda

- *Need and Key drivers of the GI Cloud*
- *Potential risks and issues of GI Cloud*
- *Demand Assessment Survey*
- *GI Cloud Task Force Constitution*
- *Vision, Policy, Strategy and Objective of GI Cloud*
- *Governance and Operations Model*
- *Standardization and Architecture of GI Cloud*
- *Accomplishments and Way forward*

## ***Need and Key drivers of the GI Cloud***

- Optimum utilization of Infrastructure
- Speeding up the IT procurement cycle and deployment
- Moving from Capex to Opex model
- Infrastructure elasticity – scale up & scale down
- Efficient Service Delivery and Agility
- Easy replicable productized applications at one place

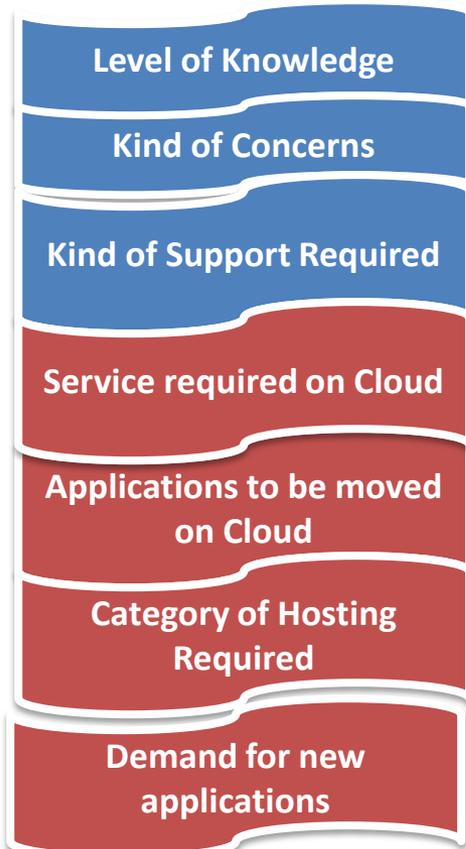
***Paradigm shift in the way Government procures the infrastructure and deploys the e-Gov applications***

# *Potential risks and issues of GI Cloud*

Cloud standards Adoption	Security and privacy
Application design	Integration with legacy environment
Licensing	Location of data
Vendor lock-in	Portability
Loss of control	Funding model
Performance and conformance	Skills requirement
Change management	

# Outcome of Demand Assessment Survey

## Outcome of the Survey



## Capacity Building and Handholding

- Awareness Sessions
- Technical Workshops
- Hands-on Training
- Supporting in designing Strategy

## Meeting Demand

- Expansion of Existing Cloud
- Setting up of new categories of Cloud
- Bringing new services on Cloud (DR, Test etc)
- Support in Migration
- Adding new applications on app store

# ***GI Cloud Task Force Constitution***

- Additional Secretary (e-Gov), DeitY, Chairman
- National Informatics Centre (NIC)
- Directorate of Information Technology, the Government of Maharashtra
- Centre for e-Governance, the Government of Karnataka
- National Institute for Smart Government (NISG)
- C-DAC, Mumbai
- C-DAC, Chennai
- National e-Governance Division (NeGD)
- Bharat Sanchar Nigam Limited (BSNL)
- Ministry of Law
- NASSCOM
- IIIT Bangalore
- Gartner
- CISCO
- Microsoft
- HP
- TCS

# MeghRaj (GI Cloud): Vision and Policy

## Vision

To accelerate delivery of e-services provided by the government and to optimise ICT spending of the government. Hence to support overall vision of NeGP (**improved government services to common man**)

## Policy

Government departments at the centre and states to first evaluate the option of using the GI Cloud for implementation of all new projects funded by the government. Existing applications, services and projects be evaluated to assess whether they should migrate to the GI Cloud.

## Policy Principles

- All Government clouds to follow the standards & guidelines set by Government of India.
- At the time of conceptualization of any new MMP or other government project the existing services (IaaS, PaaS, SaaS) of GI Cloud to be first evaluated for usage.
- All new applications to be cloud ready.

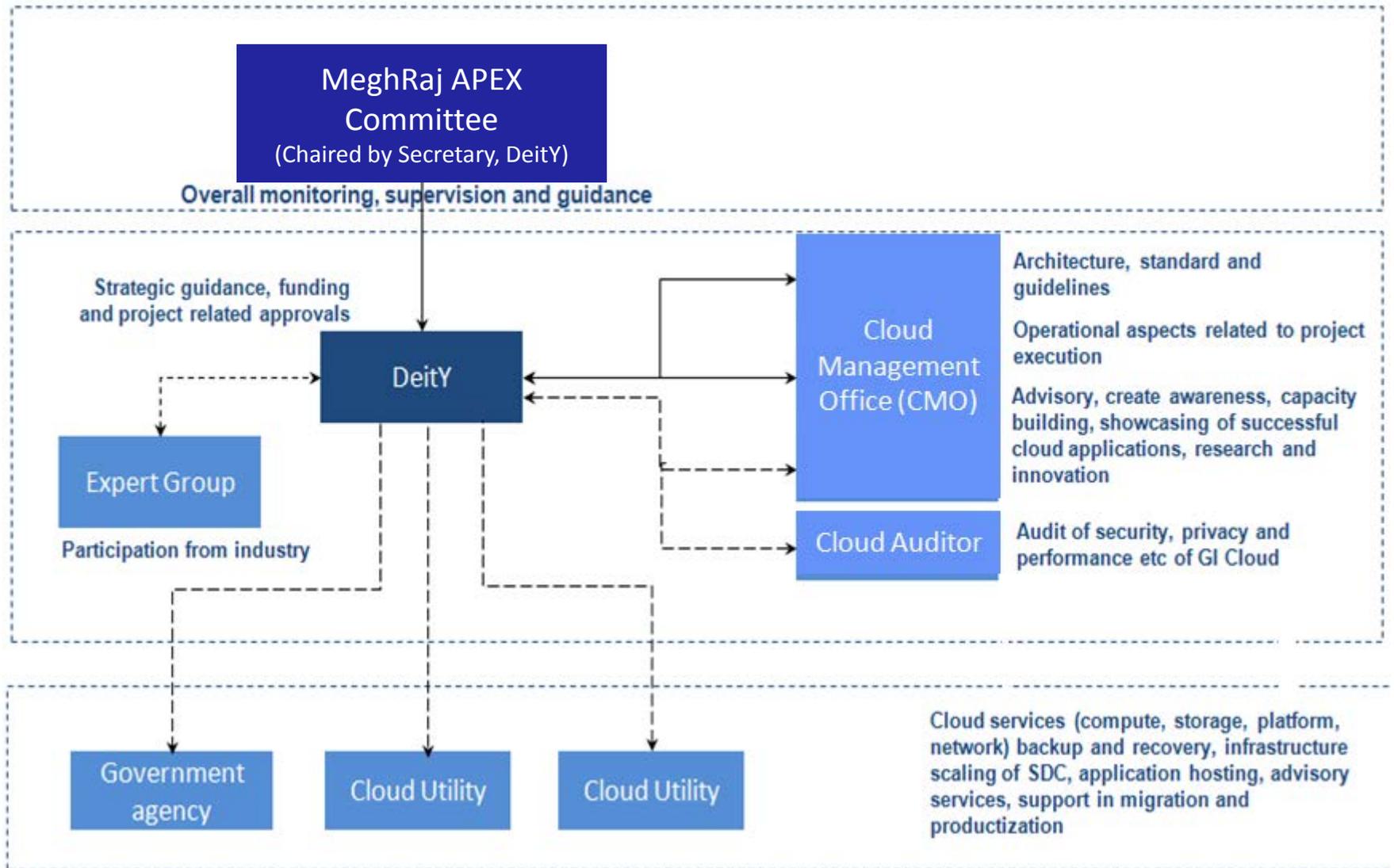
# GI Cloud – MeghRaj Objective

- Optimum utilization of infrastructure
- Speeding up the development and deployment of eGov applications
- Easy replication of successful applications across States to avoid duplication of effort and cost in development of similar applications
- Availability of certified applications following common standards at one place

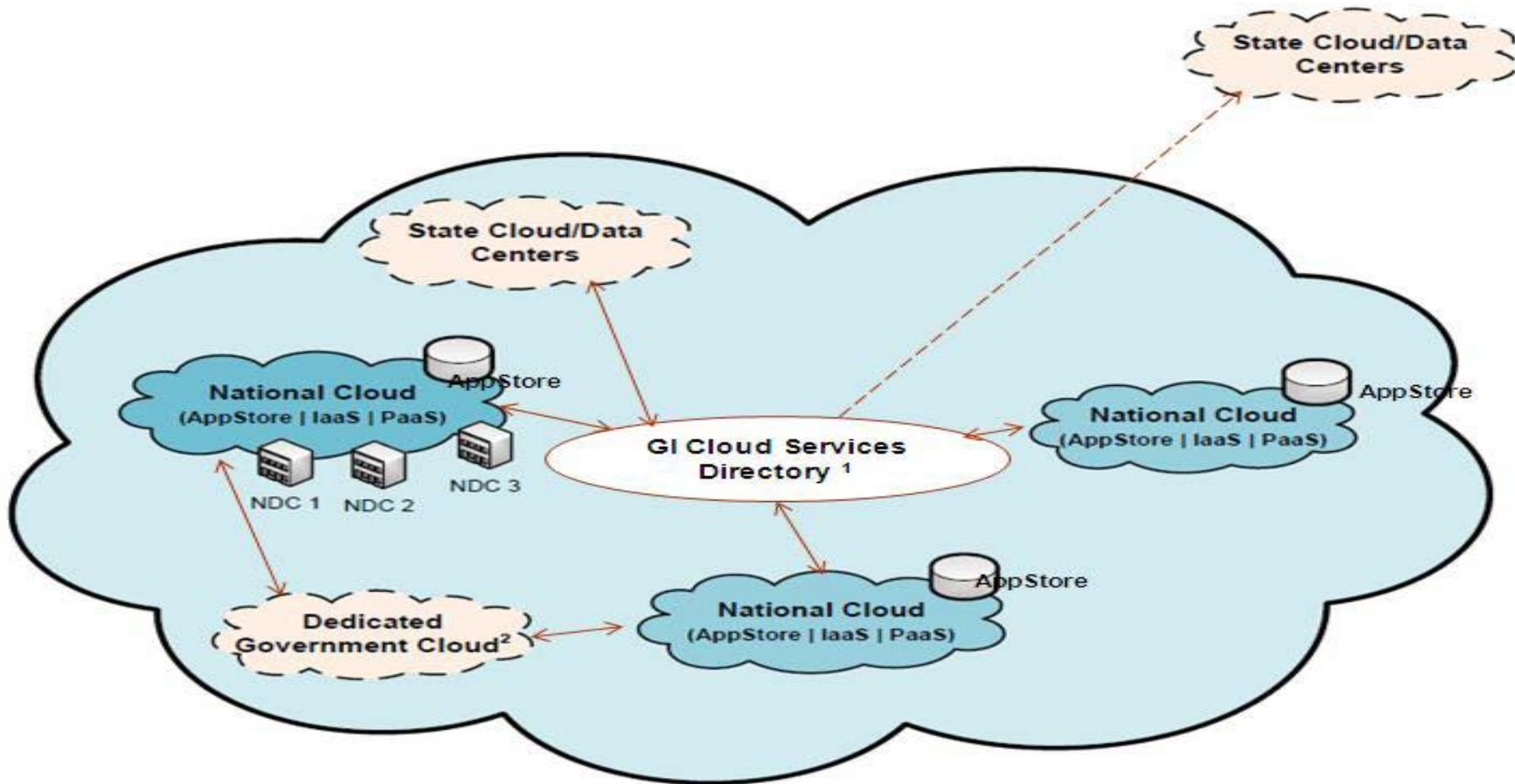
# ***GI Cloud Strategy and Vision***

- The vision is also focused on national and state level shared, reusable applications and services that will allow any government department or agency to accelerate its e-Governance progress by using applications which other agencies or departments have already developed and made available in the government cloud environment

# GI Cloud Governance Structure



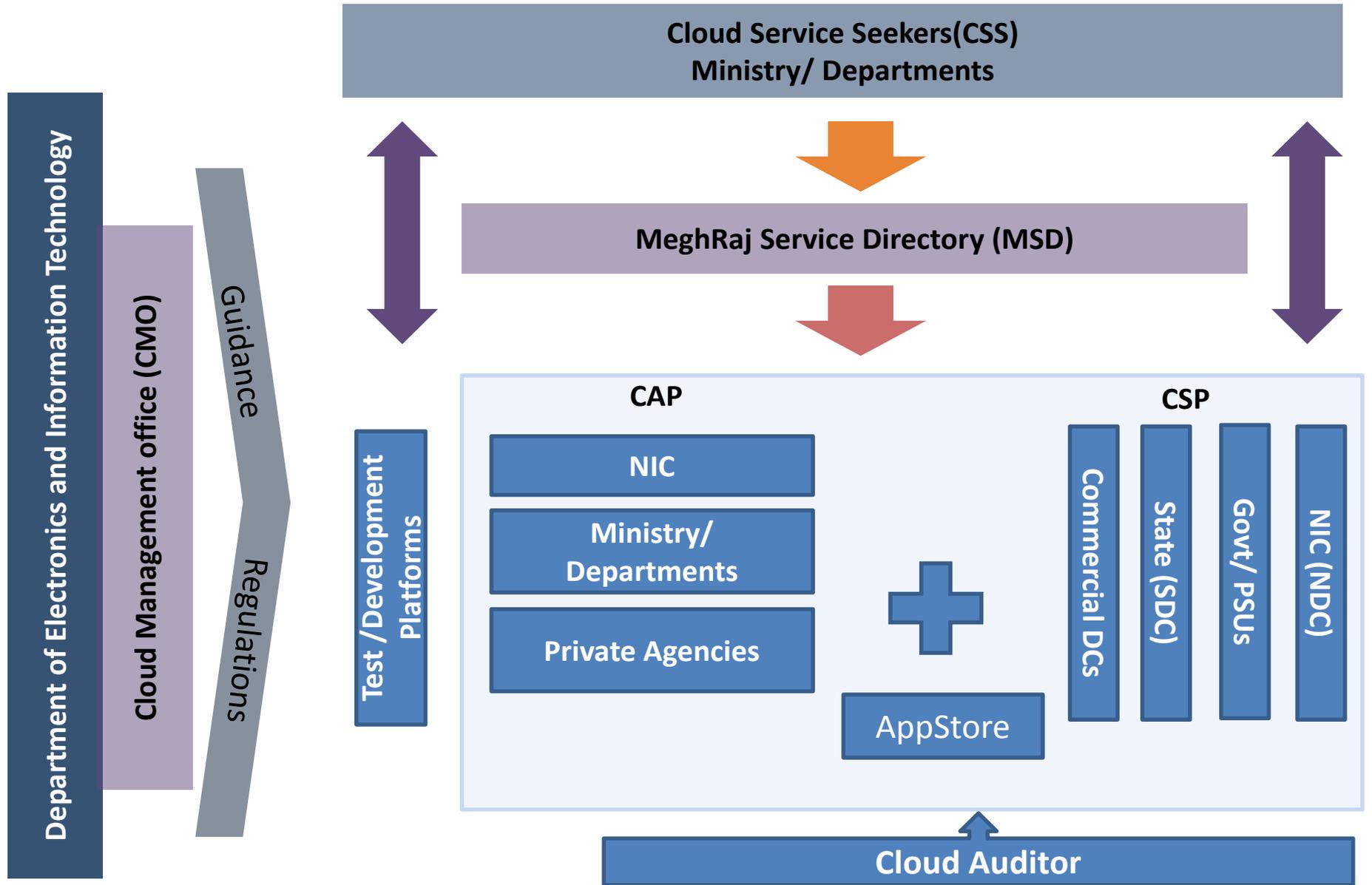
# MeghRaj (GI Cloud): Architecture



<sup>1</sup> Single Portal for Service Delivery

<sup>2</sup> Built by private cloud providers

# Components Under MeghRaj



# GI Cloud Eco-system

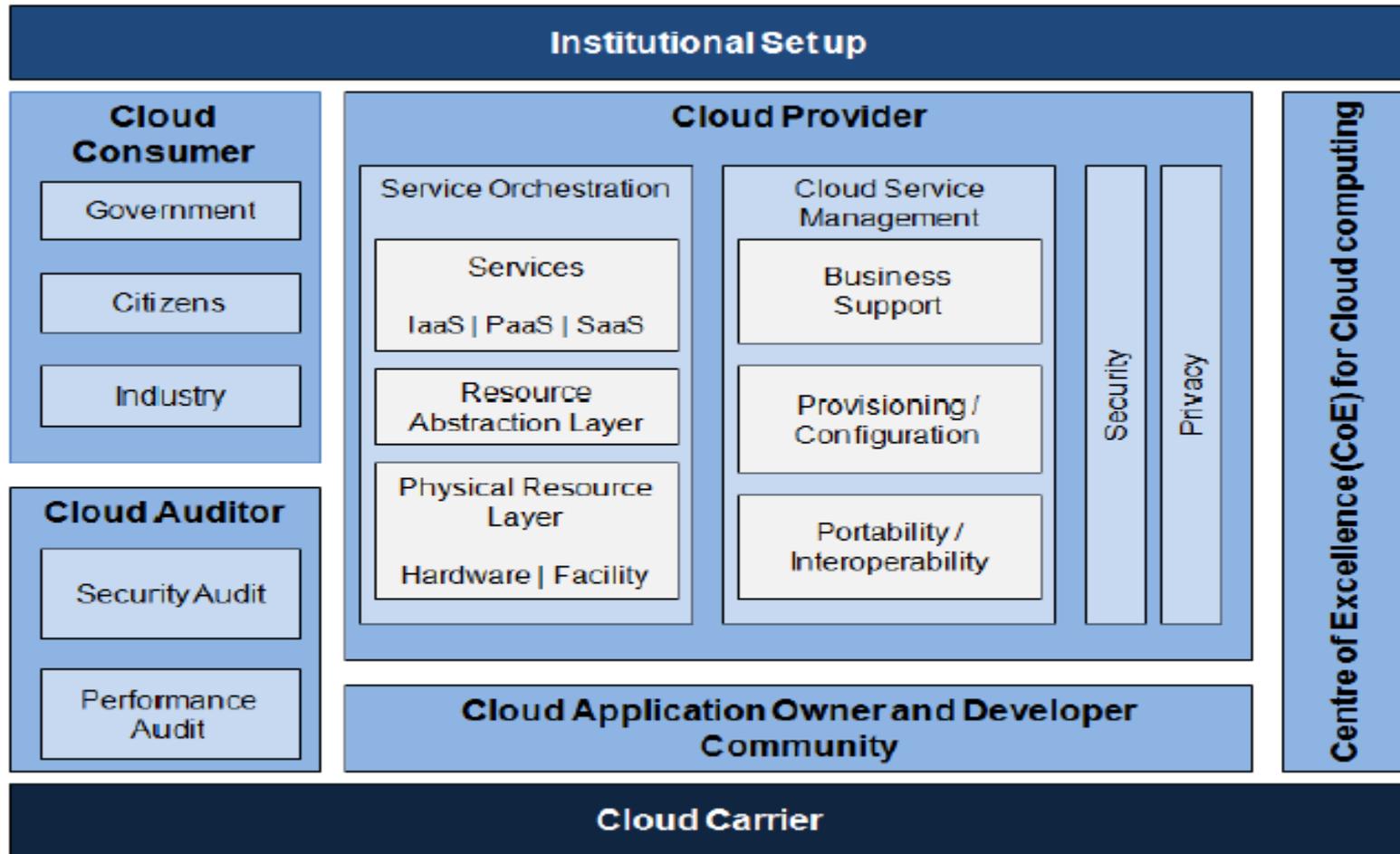
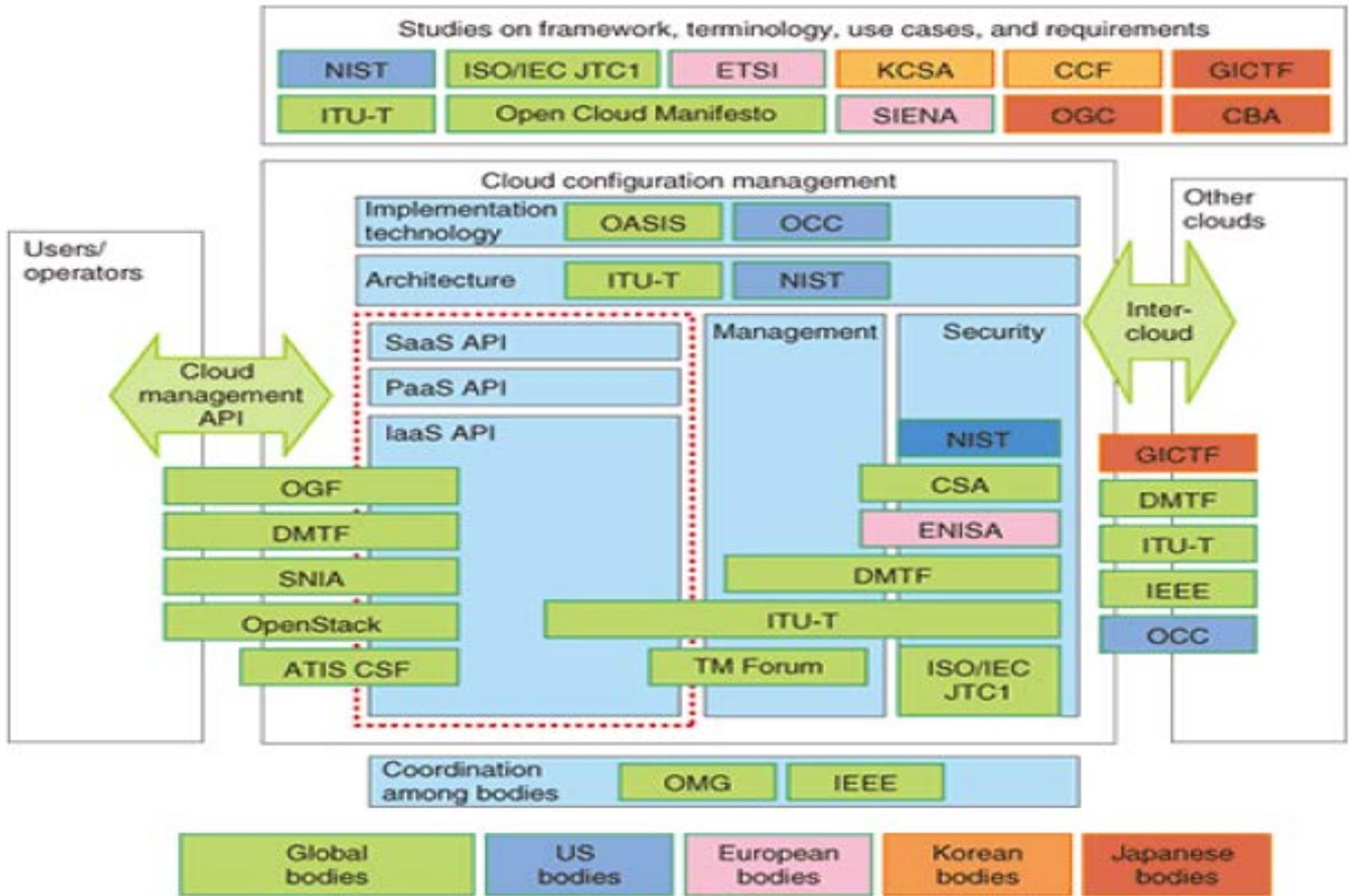


Figure 2: GI Cloud Eco-System



OGC: Open Government Cloud consortium

CBA: Cloud Business Alliance

SIENA: Standards and Interoperability for e-infrastructure Implementation initiative

KCSA: Korea Cloud Service Association

ATIS CSF: Alliance for Telecommunications Industry Solutions Cloud Services Forum

## Following are the Services support provided to application as part of the cloud hosting

- Server Vulnerability Assessment
- Server Anti-virus
- Server Monitoring
- Server Backup
- Network/Application Firewall
- Domain Name Services

## Features of National Cloud

**Multi-Location Cloud:** Multiple cloud nodes are being setup across India in National Data Centres of NIC. This will give Departments a choice of hosting their applications in any of the nodes.

**Self Service Portal:** Users can deploy and manage their cloud resources with ease.

**Secure Cloud:** Multi-layered secured infrastructure, setup in National Data Centres of NIC is being managed and monitored by highly skilled Cyber Security team of NIC.

**Secured Access:** Users can access cloud solutions using their own devices from anywhere at any time over the secured network using VPN.

# The Proposed Cloud Models under MeghRaj

1. *CAT-A Private Cloud*
2. *CAT-B Private Cloud- Off Premise (Dedicated)*
3. *CAT-C Private Cloud- Off Premise (Shared)*
4. *CAT-D Private- Public Cloud*

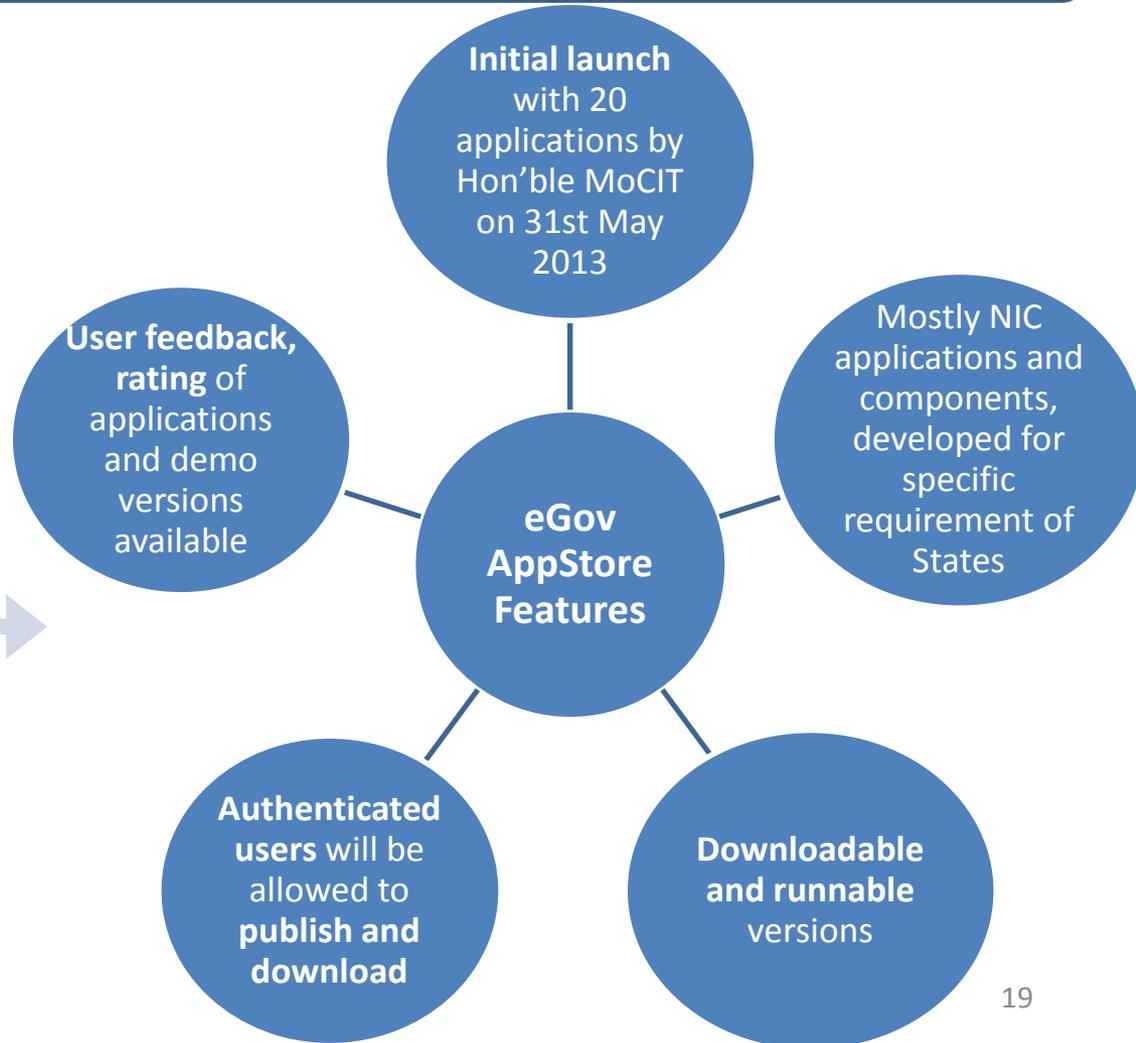
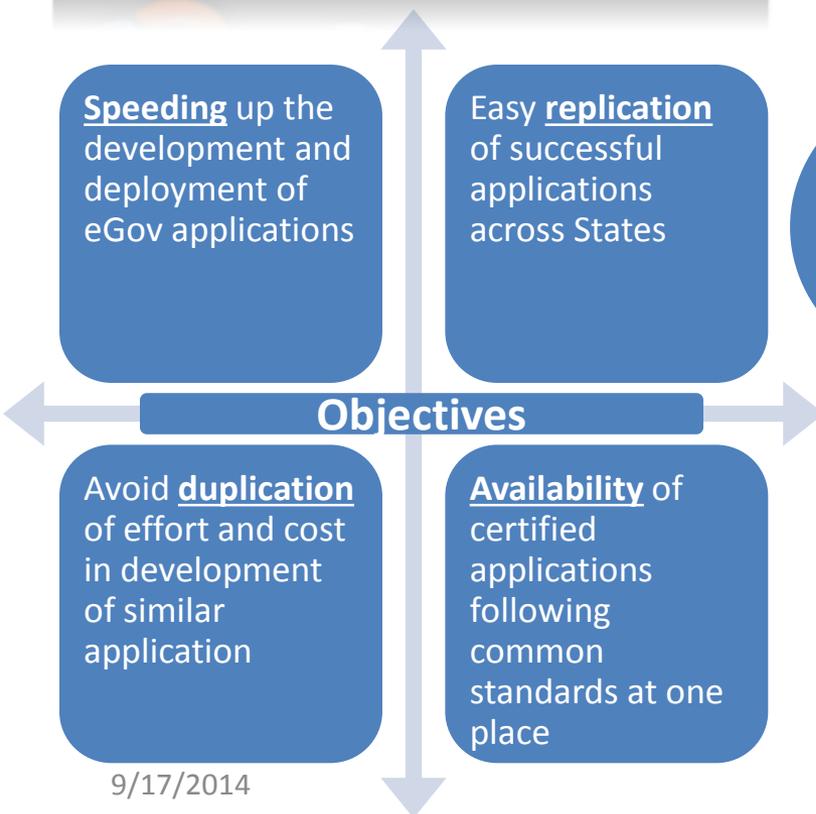
# Ministry to choose the most suitable model for their application

#	Factors	Cat- A	Cat-B	Cat-C	Cat-D
1.	<b>Common Factors</b>				
2.	Access Control and Management of the Application remains with the Government	Yes	Yes	Yes	Yes
3.	Data Remains in the India	Yes	Yes	Yes	Yes
4.	Meeting the Security Compliance of the Govt.	Yes	Yes	Yes	Yes
5.	Service Level Assurance and Contractual arrangement	Yes	Yes	Yes	Yes

#	Factors	Cat- A	Cat-B	Cat-C	Cat-D
6.	<b>Differentiating Factors</b>				
7.	Physical Premises (DC Site) of the Govt.	<b>Yes</b>	<b>No</b>	<b>No</b>	<b>No</b>
8.	IT Infrastructure dedicated for the Govt. Departments	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>
9.	IT Infrastructure dedicated for a specific Govt. Department (One Department)	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>No</b>
10.	Access to self monitoring of IT Infrastructure, backup, archiving etc	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>
11.	Dedicated Security Equipment (Firewall, IPS, SIEM, GRC etc)	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>
12.	Cost Effective Solution	<b>Low</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>
13.	MIS Reports	<b>Customized</b>	<b>Customized</b>	<b>Customized</b>	<b>Standard</b>
14.	Type of Data	<b>Personal Sensitive</b>	<b>NON Personal Sensitive</b>	<b>NON Personal Sensitive</b>	<b>Public</b>

# eGov AppStore

A common repository and market place of customizable & configurable applications at National Cloud which can be re-used by various government agencies /departments at Center and States without investing effort in development of such applications – **So far 54 Applications are developed and available**

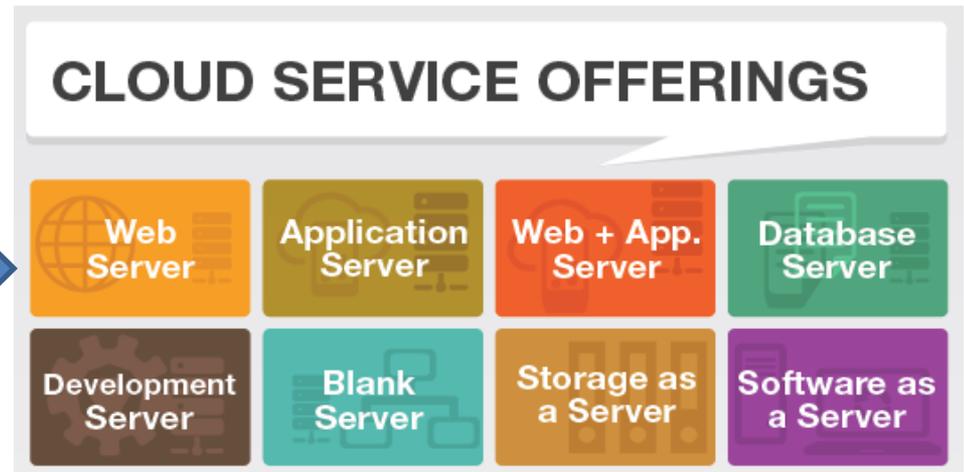
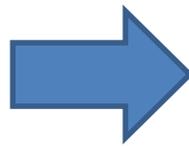


# First National Cloud under MeghRaj

- National Cloud is a start-of-the-art secured government Cloud set up by NIC providing services over the ICT Infrastructure spanning its National Data Centers
- The Cloud Services available are Infrastructure as a Service (IaaS), Platform as a Service (PaaS), Software as a Service (SaaS) and Storage as a Service (STaaS). NIC is providing Cloud services under the umbrella of MeghRaj



Secure Self Service Portal



- ✓ As on date, 181 Departments / Ministries have shown interest in availing cloud services
- ✓ 34 Departments/ Ministries are accessing the services from National Cloud

# Progress so far

## Achievements so far

- **Two Cloud reports published in June 2013**
  - *'GI Cloud Strategic Direction Paper'*
  - *'GI Cloud Adoption and Implementation Roadmap'*
- **National Cloud by NIC phase-I launched on 4<sup>th</sup> Feb'14**
- **National AppStore launched**
- **Demand Assessment for Cloud Services**
- **Developing Cloud Selection framework**
- **Categorization of Cloud Models for Govt. Of India**
- **SDCs being Cloud enabled – Template RFP shared**
- **Awareness Workshops for Departments and Ministries**
- **SFC approved the proposal for setting up of Cloud Management Office (CMO) under MeghRaj**
- **NDC and SDC Cloud usage guidelines for Government user departments**

# Activities Underway

- Working with NIC to define the service levels, contractual obligation and tariff plans
- Preparation of **Process, Policies, Guidelines, Framework, Templates** etc
- **Empanelment and Accreditation of Private Cloud Service Providers under MeghRaj**
- **Capacity building** programs and providing handholding to Govt Departments/ Ministries
- **Bringing up new National level cloud under MeghRaj**
- **Implementation on MeghRaj Service Directory**
- **Setting up of Development, Test and Training environment for Cloud**
- **Transforming applications into productized and Cloud ready form**
- **Augmentation to include applications and components developed by various players including private**
- **Policy for onboarding application developed by private players on eGov AppStore**
- **Business and Sustenance Model**

**THANK YOU**