**Workshop with Prospective System Integrators and Technology Partners for OIOS Project on 19th July 2019**

A one-day non-exclusive workshop was held on 19th July 2019 at ICISA, Noida for the prospective System Integrators and Technology Partners, Meity empanelled and STQC audited cloud Service Providers and other technology partners/OEMs for, amongst others, industry consultations only, for understanding industry offerings, technology trends and implementation approach for effective rollout of the envisioned OIOS system.

A total of 52 participants from 33 leading firms as shown below attended the workshop along with representatives of CAG office.

| Sr. No. | Organization | Participants |
|---|---|---|
| 1 | Object Technology Solutions India Private Limited | Rakesh Dubey |
| 2 | IBM | Gunjan Singh |
| | | Ashwani Tyagi |
| | | Dr. RK Gupta |
| 3 | Tata Consultancy Services | Sunil Kapoor |
| | | Priyank Govil |
| 4 | Click Labs, Chandigarh | Achin Sharma |
| | | Kriti Singh |
| 5 | Infosys | Aashita Dagar |
| 6 | HP India Sales Pvt. Limited | Ankur Pathak |
| 7 | Adobe | Vikram Singh |
| | | Abhishek Rastogi |
| 8 | HP | Vikrant Sharma |
| | | Rahul Wadhawan |
| 9 | Citrix Systems India Private Limited | Vivek Sheel |
| | | Ravi Singh |
| 10 | NIIT Technologies Ltd. | Prem Mohan |
| | | Balbir Singh |
| 11 | ESDS Software Solution Pvt Ltd | Ravi Shandilya |

| | | |
|---|---|---|
| | | Sanchit Taraiya |
| **12** | BMC Software | Kulbir Sohi |
| | | Deepak Singla |
| | | Rachna Chhokkra |
| **13** | Wipro Limited | Deeraj Goel |
| | | Mahit Gupta |
| | | Manish Asthana |
| **14** | Oracle India Pvt Ltd. | Anurag Dixit |
| | | Abhishek Bose |
| **15** | EDB | Rupesh Kumar |
| **16** | CtrlS Datacenters Ltd. | Padmanabh Nargunde |
| **17** | Infosys | Richa Gupta |
| **18** | | Subrat Kanungo |
| **19** | utise systems | Vivek Ruhil |
| **20** | TCS | Sharmila Sahai |
| **21** | Oracle India Pvt Ltd. | Angiah Santhanswamy |
| **22** | LTI | Sameer Khanna |
| | | Nishant Goyal |
| **23** | BSNL IDL/NXT GEN | Arjun Maurya |
| | Wipro Limited | Vireet Pathak |
| **24** | PALOALTO | Puneet Shuja |
| **25** | NET CREATINE MINA | Prashant Bansal |
| **26** | Tech Mahindra | Mahesh Srinivasan |
| **27** | Enterprise DB | Ashish Kumar Mehra |
| | | Swapan Gupta |
| | | Akhil Verma |
| **28** | Microsoft | Tarun Kalra |
| **29** | BSNL IDC/NXT GEN | Vikash Tyagi |
| **30** | Cyfuture | Santhosh Kumar Singh |
| **31** | SAS | Gaurav Sabti |
| **32** | Re HAT | Sarabjeet Singh |

| | | |
|---|---|---|
| **33** | AISPL | Pankaj |
| | | Gaurav |

The issues discussed during the workshop are uploaded in the website of CAG along with this.

Sd/-
Sreeraj Ashok
Dy. Director (IS)

# Indian Audit & Accounts Department

AN INTRODUCTION

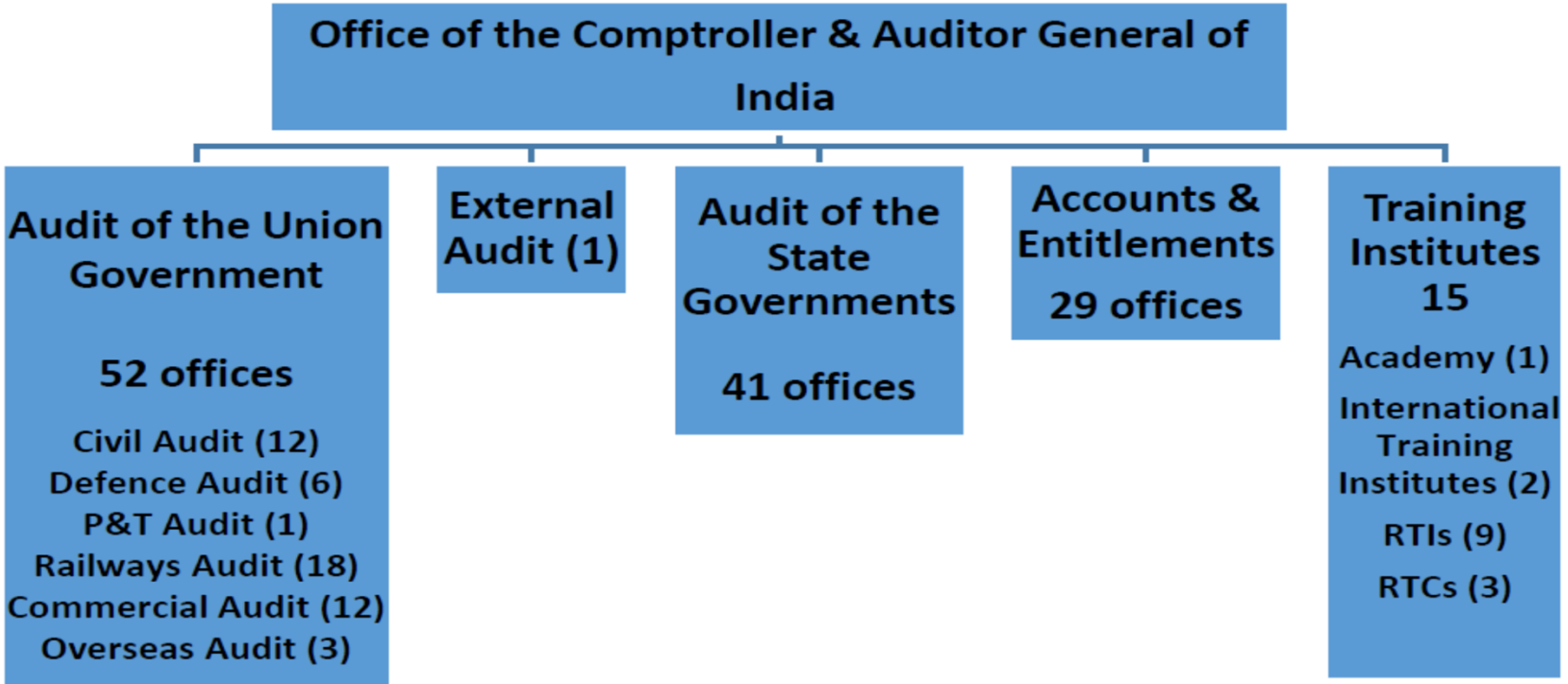
# CAG of India

- CAG of India is a Constitutional Authority
  - Article 148 to 151 of the Constitution
  - CAG's (Duties, Powers and Conditions of Service) Act, 1971
- Audit of:
  - Union Government Ministries, Departments and offices
  - State Government Departments and Offices
  - Government-owned Companies and Corporations
  - Autonomous Bodies substantially financed by Government and other bodies/ authorities whose audit is entrusted to CAG
  - Establishment Audits

# CAG of India (Contd.)

- Also responsible for
  - Compilation and presentation of accounts of State Governments
  - Handling entitlement functions (Pension, Provident Fund, and Gazetted Entitlements) of State Government employees on a selective basis
    - In many cases, these functions have been taken over by State Governments
- CAG discharges his duties through the Indian Audit and Accounts Department (IAAD)
  - Headquarters Office (New Delhi)
    - 138 field offices (134 in India)

# Organization



# We conduct different types of audit

- Compliance audit
  - Compliance with Constitution, Laws, Rules, Regulations, Instructions etc.
  - Legality, Propriety etc. of rules, regulations, orders etc. and expenditure incurred
- Financial audit
  - Expression of an audit opinion on financial statements
- Performance audit
  - Independent assessment of whether an organization, programme, scheme etc. operates economically, efficiently and effectively
- Combination of multiple types of audit

# Our Audit Process

# Key Results in Audit (2017-18)

- We audited 56,692 units and issued 48,106 Inspection Reports
- We prepared 98 Audit Reports, that included 116 performance audits
  - 32 for tabling in Parliament
  - 66 for tabling in State Legislatures
- We made 1235 recommendations to our audited entities at the Union and State level as part of our audits
- We examined 8260 accounts of Union and State Governments, Autonomous Bodies, Externally Aided Projects and Others

# Our Resources

- We spent Rs. 4306 crore during 2017-18
  - 88% on salaries and wages; 4% on travel
- We have a total of about 45,000 staff, of which about 29,000 are in our Field Audit Offices
  - Managerial Cadre – 560; Supervisory Cadre – 15,000; Audit and Accounts Staff – 25000
- We have
  - 3 Central Training Institutes
  - 10 Regional Training Institutes
  - 2 Regional Training Centres

# More Information

- Available at the CAG's website at https://cag.gov.in/
- In particular, detailed information is available in the Performance Report 2017-18 at https://cag.gov.in/sites/default/files/performance_activity_report/PA_2018_1.pdf

लोकहितार्थ सत्यनिष्ठा
Dedicated to Truth in Public Interest

# Workshop with Prospective System Integrators and Technology Partners for OIOS Project

**Presentation by NISG**

# Outline

1. OIOS Application
    a) Functional
    b) Technical
2. OIOS on Virtual Private Cloud
3. RFP – Key considerations
4. Indicative Bill of Material

## Scope of Work

**Scope of work for SI is to design, develop, implement and maintain the OIOS (One IA&AD One System) Project:**

- **OIOS Application & its Solution development and implementation**
- **Deployment of OIOS Application on MeitY empanelled Cloud service provider's Virtual Private Cloud**
- **O&M phase**
  - **Seven years after Go Live.**
  - **Provision for contract extension for additional three years on yearly basis.**

# OIOS Application

# Key considerations

# Functional Coverage

| | | | |
|---|---|---|---|
| Organization | Personnel | Auditee Universe | Audit Planning |
| Audit Guidelines | Audit Execution | Audit Reporting | Audit Follow Up |
| KMS / Data Repository | Business Intelligence | Audit Reporting | Audit Follow Up |

Phase-I

Phase-II

## Discussion Point: 1

**IA&AD offices**

- **Headquarters**
- **91 Field Audit Offices**
- **59 Branch Offices (sub-offices of Field Audit Offices).**

**Practices, information vary in details, though not in overall structure.**

## Discussion Point: 1

- **Configurability (as opposed to customizability) is of prime importance:**
  - Auditee universe module: fields must be configurable for different audit streams/ audit offices (or even for different wings within the same audit office).
  - Likewise, **workflow must be configurable for each office.**
- **Use of Workflow engine, Rule engine ????**

## Discussion Point: 2 – Supporting documents

# Biggest requirement is supporting documentation.

**Everything that is said in an audit product must be supported by audit documentation** (which can mean documents, photographs etc…) **Volume of supporting documentation is several times the volume of the audit product**

- **50-100 times or much more;** e.g. for 20-50 page performance audit report, one or two metal trunks or more – 3-5K pages or more).

– **So, document storage, and referencing/ linking is very important.**

– **Supporting documentation needs to be added at different stages of the review/ QA-QC process right up to its ultimate finalization**

# Discussion Point: 3 - DMS

- To store
  - Audit documentation prepared by Audit teams
  - Supporting documents
- Seamless Integration with OIOS: Application, KMS
- Access time: key performance parameter
- Encrypting few documents
- Need to know access

## Discussion Point: 4 - Offline/ online functionality

- Most of field audit is in field locations (often remote – at District/ Block/ Gram Panchayat Level) and moving from one field audit assignment to another. Hence, Internet connectivity is variable and inconsistent.
- So, offline functionality on laptops is essential, for audit activities such as preparation of audit requisitions, audit observations, Access to KMS, etc.
- Auto-sync when connected.

## Discussion Point: 5 - Mobile App

- **Minimum functionality**
  - **like Cam-Scanner with geo-tagging, date/ time stamp, user-id,**
  - **photographs (with geo-tagging, date-time stamp).**
- **Later expanded functionality (limited, not full)**
- **Instant messaging/ WhatsApp like functionality**

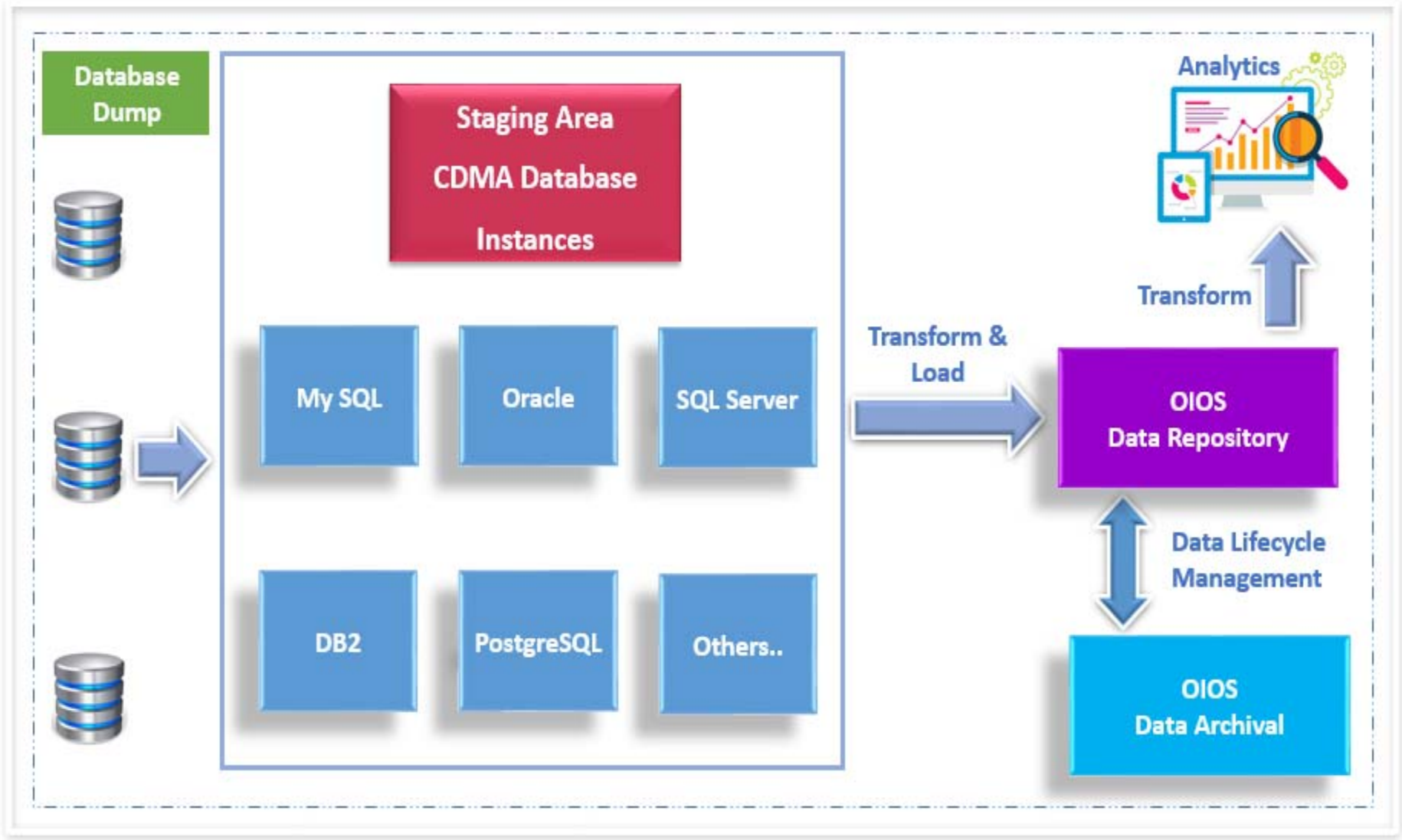
**<u>Mobile phones will not be office phones</u> (i.e. under corporate control).**

## Discussion Point: 6 - KMS

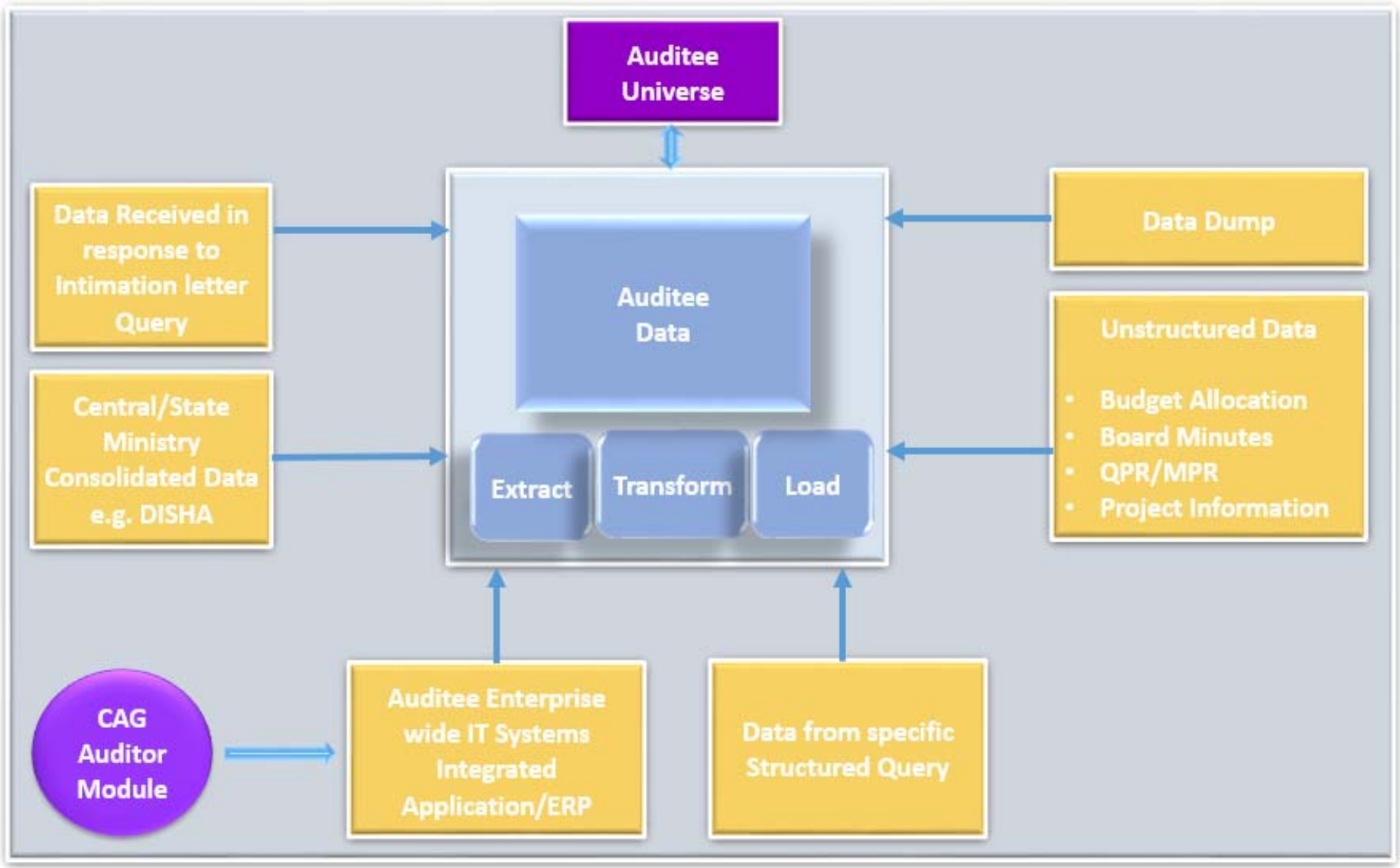
**OIOS = Audit Process Management System (APMS) + KMS** (internal Audit Guidance plus Auditee Information)

- **KMS will grow and expand in multiple directions and formats** (structured financial data, structured transactional and MIS data, semi/ unstructured info)**.**
- **Full contours of Audit KMS will evolve with time..**

# Discussion Point: 7 – KMS (Data Repository)



# Sources of Auditee Data



## Discussion Point: 7 – KMS (Data Repository)

- Database instances (Auditee data) procurement on PaaS model?
- Cost effective archival methodology?
- Feasibility of migrating Data from Native Database to OIOS Database for Analytics purpose?
- Feasibility of transferring Data from Native Database, OIOS Database to Archival mode and vice versa for selective data as per need

## Discussion Point: 8 – Analytics

**On PaaS model**

- **BI, Reporting tool** (for analysis of IA&AD generated data and auditee data)
- **Text analytics for experimentation**
- **Methodology to connect existing desktop based tools (Tableau, KNIME, IDEA) with IA&AD to OIOS, Native database** (Server editions on cloud, cloud-based OIOS solution should be compatible)

## Discussion Point: 9 – GIS

**On PaaS model**

- **Auditee location on map (India, State, District level) w.r.t Audit Plan: Schedule, Progress, etc.**
- **Map updating facility: Government offices, Block, Gram Panchayat, Village**

## Discussion Point: 10 – Collaboration tool

- Discussion forum for IA&AD
- Webinar/VC tool for OIOS Training, Roll out, Help desk

## Discussion Point: 11

# Open Source Software

- **Endeavour to adopt OSS as a preferred option**
- **Solution to be complaint to "Policy on adoption of open source solution" of GoI**
- **OEM/ equivalent support (Not from SI, Community)**

- **Applicability?:** Servers: Web, app, Database; BPM, DMS, BI/Reporting, etc.
- **Support ?**
- **Performance ?**
- **TCO: Reports from creditable source(s) ?**

## Discussion Point: 12

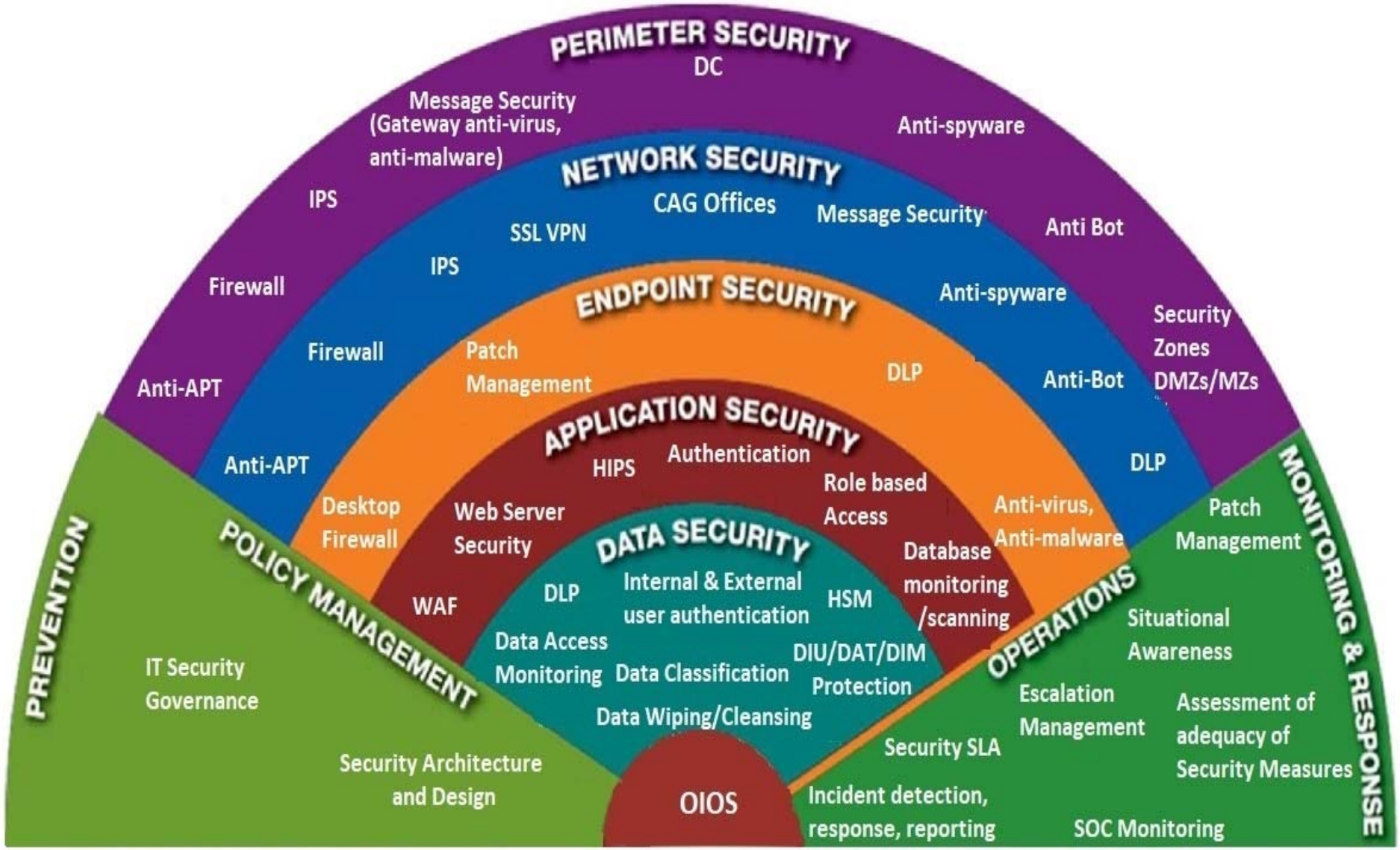
- **Open APIs**
  - **Application Architecture to use Open API to enable transparent integration with external and internal Applications/ OIOS Modules**
  - Specific OEM products can only be used when necessary to achieve scale, performance and reliability. Every such OEM component/service/product/framework/Managed Service Provider pre-existing product or work must be wrapped in a vendor neutral API so that at any time the OEM product can be replaced without affecting rest of the system.

# RDBMs - Open source Vs COTS

- **Capabilities ?**
  - DBA should not be able to view the Data
  - Support for Active-Active
  - Security

# OIOS on Virtual Private Cloud

# Discussion Point: 14 - Security Architecture



## Discussion Point: 15

# OIOS deployment on Virtual Private cloud

- Application access
  - IA&AD offices : NICNET
  - Audit party at field : Internet (VPN)
- MeitY empanelled and STQC certified Cloud services
- Indicative sizing being provided: Compute, Storage
  - SSD for RDBMs
  - SAS for DMS (Supporting documents)
  - NLSAS for Archival (Documents, RDBMs)

## Discussion Point: 16

# OIOS deployment on Virtual Private cloud

- DR Location in different seismic zone ?
- Compute:
  - ✓ X86 based
  - ✓ Upgradation time?
- Cost effective Archival storage: NLSAS or SAS or other?
- Boundaries of Security responsibility: SI, CSP ??

## Discussion Point: 17

# OIOS deployment on Virtual Private cloud

- Security tools as far as possible on PaaS model
- SIEM, EMS including APM - Perpetual License

- Cost effectiveness of Perpetual License procurement Vs PaaS option?
- In case a CSP does not have a PaaS, then available options within MeitY empanelled CSPs
- Bidding for 7 Years for cloud services when rates are falling/ likely to fall

# VM Vs Containers

- Deployment flexibility
- Micro services
- Use case?
- Cost effectiveness?

## Discussion Point: 19

- **Using both facilities simultaneously**
  - OIOS in Main Cloud DC
  - Data repository, Analytics in other/DR Cloud DC
- **BCP within same DC**
  - 99.9% SLA so need for buffer VMs for migration?
  - Extent of Data loss in case of VM migration
- **DR issues**
  - RTO : 4 hours
  - RPO : 15 minutes or Less

## Discussion Point: 20

- **Management & monitoring**
  - CSP : upto VM
  - SI : Rest of services?
  - ➢ Area of Overlapping responsibility???
  - ➢ Deployment of SIEM, EMS, APM: Cloud Vs on premise?

## Discussion Point: 21

# SLA Monitoring

- **Tools**
  - **CSP Tool**
  - **Separate SLA tool by SI**

➢ **Integration of Tools**

➢ **Direct visibility to IA&AD**

## Discussion Point: 22

- **Time of License/ Service provisioning??**
  - **No un-utilised period of Production License/ service**
  - **Development License**
- **Types of License/ Service**
  - **Dedicated Perpetual License**
  - **Service model**
    - **Core/ vCPU/ Transaction based?**

# RFP

# Key considerations

## Project Tracks

| Track # | Track Summary |
|---|---|
| **Track 1** | Development Environment Set Up at CAG premise located in CR |
| **Track 2** | OIOS Phase 1 Application Design, Development, Implementation and Rollout:<br>5 offices<br>27 offices<br>108 offices |
| **Track 3** | OIOS Phase 2 Application Design, Development, Implementation and Rollout: **All offices** |
| **Track 4** | Provisioning of VPC at Main DC and DRC at MeitY empaneled CSP |
| **Track 5** | Centralized Helpdesk Set Up and Operations |
| **Track 6** | Training and Capacity Building |
| **Track 7** | Operations and Maintenance |

## High Level Elicitation of Project Tracks and Implementation Timelines

| Track | | Develop, Implement, Roll Out & Maintain | | | | | | | | | | | | Operation an Maintenanc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Timelines in Years | Year 1 | | | | | | Year 1 | | Year 2 | | | | Yr3 |
| | Months / Quarters | M1 | M2 | M3 | M4 | M5 | M6 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | |
| **Track 1** | **Development Environment Set Up** | | | | | | | | | | | | | |
| **Track 2** | **OIOS Phase 1 Application Design, Development, Implementation and Rollout** | | | | | | | | | | | | | |
| | Development and implementation at 5 Offices | | | | | | | | | | | | | |
| | System Stabilization & Rollout at Remaining Offices | | | | | | | | | | | | | |
| | Knowledge Transfer for OIOS Phase 2 Development | | | | | | | | | | | | | |
| **Track 3** | **OIOS Phase 2 Application Design, Development, Implementation and Rollout** | | | | | | | | | | | | | |
| | OIOS Phase 2 Planning | | | | | | | | | | | | | |
| | OIOS Phase 2 Development | | | | | | | | | | | | | |
| | Rollout of OIOS Phase at IAAD Offices | | | | | | | | | | | | | |
| **Track 4** | **Provisioning of VPC at Main DC and DRC at MeitY empaneled CSP** | | | | | | | | | | | | | |
| | Cloud Resources Setup at Main DC-OIOS Phase1 | | | | | | | | | | | | | |
| | Cloud Resources Setup at Main DC-OIOS Phase2 | | | | | | | | | | | | | |
| | Cloud Resources Setup at DRC | | | | | | | | | | | | | |
| **Track 5** | **Centralized Helpdesk Set Up and Operations** | | | | | | | | | | | | | |
| **Track 6** | **Training and Capacity Building** | | | | | | | | | | | | | |
| | Master Training OIOS Phase 1 & Other training | | | | | | | | | | | | | |
| | Master Training OIOS | | | | | | | | | | | | | |
| **Track 7** | **Operations and Maintenance** | | | | | | | | | | | | | |
| | OIOS Phase 1 | | | | | | | | | | | | | |
| | OIOS | | | | | | | | | | | | | |

## Functional Coverage

# Phases of the Project

- **Phase-I (Fixed cost basis)**
  - **Development in two (2) parts: Q1, Q2 of Calendar Year 2020**
- **Roll out:** after each Quarter
  - 5 Pilot offices
  - 27 offices
  - 108 offices
- **Manpower**: Minimum number specified in BoM
- **Key resources**: Exclusive resources & non-shareable
- **Certification**: after 2nd quarter

- **Phase-II (T&M basis)**

  - Modules with advanced functionalities

  - Development for next one year
- **Manpower**: Team size smaller than Phase-I
- Key personnel shall remain same

## Discussion Point: 21

### Phase-I: fixed cost

where functional specifications are finalized

### Phase-II: time and material

where functional specifications have not yet been finalized.

- **using a matrix/ rate card and**
- **Indicative resource requirement shall be specified however not feasible to guaranty requirement for each resource type**

## Discussion Point: 22

- **Phased approach due to Timelines : need initial development, implementation by Q1/Q2 2020.**
- **LOI is planned to be issued by early December: <u>need initial team within 2 weeks</u>**
  - Project Head,
  - Solution and Technical Architect,
  - Business analysts

## Discussion Point: 23

**Agile development methodology**

**What are your expectations from IA&AD so as to meet Timeline?**

# Engagement Model

| # | Track | Track Items | Engagement Model | Remarks |
|---|---|---|---|---|
| 1. | **Track 1: Development & Test Environment Set Up** | | Fixed Cost | The dedicated development team shall be deployed onsite at CAG premises at Delhi-NCR. |
| 2. | **Track 2: OIOS Phase 1 Application Design, Development, Implementation and Rollout** | OIOS Phase 1 Application Design, Development, Implementation at 5 offices | Fixed Cost | This inter-alia also includes roll out of OIOS System at five selected IAAD offices. |
| | | Rollout Team | Time and Material | A separate and dedicated team shall be deployed for rollout of the OIOS System at remaining IAAD offices |
| | | Cloud Provisioning | On Actual Usage | For hosting and rollout of OIOS Phase 1 |
| 3. | **Track 3: OIOS Phase 2 Application Design, Development, Implementation and Rollout** | OIOS Phase 2 Application Design, Development, Implementation and Rollout | Time and Material | 1. Onsite Team for finalizing requirements for Phase 2 OIOS Development<br>2. The dedicated development team shall be deployed onsite at CAG premises at Delhi-NCR for developing Phase 2 Requirements. |
| | | Cloud Provisioning | On Actual Usage | For hosting and rollout of OIOS Phase 2 |

# Engagement Model

| Track | Track Items | Engagement Model | Remarks |
|---|---|---|---|
| **Track 4**: **Setting Up DC and DRC at MeitY empaneled CSP in Service Model** | a. Cloud Resources & Setup DC for OIOS Phase 1<br>b. Cloud Resources at DC for OIOS Phase 2<br>c. Cloud Resources & Set Up DRC for OIOS<br>Bill of Material provide details | On Actual Usage | Procure, Provide, Configure and Test the following cloud resources for DC and DRC<br>a) Infrastructure as a Service<br>b) Platform as a Service<br>c) Software as Service<br>d) Security as a Service<br>Procure, Provide, Configure Network Connectivity between DC and DRC as a service |
| **Track 5: Centralized Helpdesk Set Up and Operations** | | Time & Material for Resources | A separate and dedicated team shall be deployed for operating the Centralized CAG helpdesk |
| **Track 6: Training and Capacity Building** | | For each Training conducted | Amongst others, the Trainers team must have a Domain expert from Audit domain with at least 15 + years in Auditing Government entities |
| **Track 7: Operations & Maintenance** | Phase 1 OIOS | Fixed Cost | For Phase 1 OIOS System |
| | Phase 2 OIOS | Time and Material | After end of Phase 1 Operations and Maintenance |

## Discussion Point: 24 - Onsite Model for Project Delivery

# Development, Implementation location shall be at IA&AD provided Premises in Delhi NCR

- **Suggested Teams (All Onsite):**
  - Phase I Development Team
  - Phase II Development Team
  - Rollout Team
  - O&M Team
- **IA&AD shall provide**
  - Office Space
  - Furniture
  - Air-conditioning
  - Internet connectivity

## Discussion Point: 24 - Onsite Model for Project Delivery

**Development, Implementation location shall be at CAG Premises in Delhi NCR**

- **SI's responsibility shall be to provide:**
  - Full project team deployment
  - Desktop/ laptop for team
  - Development server: 32 Core, 128 GB RAM, 5TB Usable storage in 2 physical machines :2
  - Access switch: 16 Port :2
  - WAP : 4
  - Associated network cabling : 500 mtrs.appx.

## Discussion Point: 25- Manpower – Key Resources

- **Minimum number of manpower is specified in BoM**
- **Key resources**
  - Project Manager
  - Domain Expert
  - Enterprise Solution Architect
  - Security Architect
  - Business Function Lead
  - DBA
  - System Admin
  - QC Manager
  - User Interface Specialist

**# All the above resources shall be Exclusive & non-shareable resources**

# BoM: OIOS Application Team by SI [1 of 2]

| | Project Item Name | Unit | Quantity | DR | Phase |
|---|---|---|---|---|---|
| **7** | **OIOS Application Team by SI** | | **Phase-I** | **Phase-II** | |
| 7.1 | **Development Team** | | | | |
| | Project Manager | Number | 1 | 1 | |
| | Architect - Application | | 1 | 1 | |
| | Architect - Database | | 1 | 1 | |
| | Architect - Technology | | 1 | 1 | |
| | Business Analyst | | 4 | 2 | |
| | Development Team Leader | | 2 | 1 | |
| | Developers | | | | |
| | Appication | | 10 | 6 | |
| | Database | | 2 | 1 | |
| | UI | | 3 | 1 | |
| | GIS | | 2 | 1 | |
| | DBA | | 1 | 2 | |
| | Test Lead | | 1 | 1 | |
| | Tester | | 3 | 1 | |
| | Data preperation team | | 3 | 3 | |
| | Consultant for Process Documentation | | 2 | 1 | |

# BoM: OIOS Application Team by SI [2 of 2]

| | Project Item Name | Unit | Quantity | DR | Phase |
|---|---|---|---|---|---|
| **7** | **OIOS Application Team by SI** | | **Phase-I** | **Phase-II** | |
| 7.2 | **Training Team** | | 3 | 2 | |
| | | | | - | |
| 7.3 | **Roll out Team** | | 5 | 5 | |
| | | | | - | |
| 7.4 | **Helpdesk (Post Go-Live of each Phase)** | | | | |
| | Application Support Manager | No | 1 | 1 | |
| | Manager - L1 & L2 | No | 2 | 2 | |
| | Analyst - L1 | No | 6 | 8 | |
| | Analyst - L2 | No | 6 | 8 | |
| | Analyst - Analytics & Reporting | No | 2 | 4 | |
| | Analyst - GIS | No | 1 | 1 | |

## Discussion Point: 26- Helpdesk

- **Type**
  - Use of OIOS : by SI
  - Query on domain issues : supported by IA&AD.

    However FAQs may be developed to reduce dependence on IA&AD resources
- **Location: NCR from IA&AD provided premise??**
- **Helpdesk application: on PaaS model**
- **Feasibility of extending it to non OIOS requirement**

## Discussion Point: 27- Training

- Type of training
  - Change management : for senior management
  - Train the Trainers
  - System administration
- Location: NCR, few locations out of NCR

## Discussion Point: 28- RFP

- **Based on Model RFP Guidelines**
  - **QCBS based**
  - **Deemed acceptance**
  - **Delayed payments**
  - **Integrity pact**
- **Industry expectations???**
  - **Reasons for not bidding????**

## Discussion Point: 29- Payment

# Flat rate payment for all 7 Years

# Vs

# Incremental payment

# –Your inputs ……

# To meet Timelines

- Your inputs …….

# Bill of Material

# BoM

1. OIOS Application Software  Development & Training
2. System software
3. Supporting Platforms
4. Monitoring: OIOS, IT Infrastructure
5. Security
6. OIOS Application: On cloud
7. OIOS Application Team by SI
8. Infrastructure & Security Mgmt. Team

# BoM: OIOS Application Software Development & Training

| | Project Item Name | Unit | Quantity | DR | Phase |
|---|---|---|---|---|---|
| **1** | **OIOS Application Software Development & Training** | | | | |
| 1.1 | **Bespoke Software Development** | Job (person-month) | As reqd. | - | I, II |
| 1.2 | **Setting up development environment** | | | | I, II |
| 1.2.1 | Development server (HCI): Total 32 Core, 128 GB RAM, 5TB Usable storage in 2 physical machines | Number | 2 | - | I, II |
| 1.2.2 | Access switch: 16 Core | Number | 2 | - | I, II |
| 1.2.3 | WAP | Number | 4 | - | I, II |
| 1.2.4 | Associated network cabling | Mtrs | 500 | - | I, II |
| 1.3 | **Training** | | | | |
| 1.3.1 | Change management Training | Job | | - | I |
| 1.3.2 | Train the Master trainers | Batch | 5 | - | I, II |
| 1.3.3 | Training on System Administration | Job | 5 | - | I |
| 1.4 | **Software Development & Deployment Tools** | | | | |
| 1.4.1 | Software development Licenses for development Team including Application Server, Database, BPM, etc. | Licenses | As required | - | I |
| 1.4.2 | Operating system | As required | | | I, II |

# BoM: System software

| | Project Item Name | Unit | Quantity | DR | Phase |
|---|---|---|---|---|---|
| **2** | **System software** | | | | |
| 2.1 | BPM Software: Workflow, Business rules, Dashboards & Custom UI | Core | 8 | 4 | I |
| 2.2 | **Database - OIOS** | Core | 16 | 8 | I |
| 2.3 | **Database security - OIOS** | Core | 16 | 8 | I |
| 2.4 | **Application server, Web server** | Core | 16 | 8 | I |
| 2.5 | **Implementation effort** | Job | | - | I |

# BoM: Supporting Platforms [1 of 2]

| | Project Item Name | Unit | Quantity | DR | Phase |
|---|---|---|---|---|---|
| **3** | **Supporting Platforms** | | | | |
| 3.1 | **Help desk - OIOS** | Application | 1 | - | I |
| 3.2 | **Web conferencing tool (Helpdesk - multiple offices)** | Host | 10 | | I |
| 3.3 | **KMS Platform, discussion forum & Implementation** | Application | 1 | - | I |
| 3.4 | **Document management system** | Core | 8 | 4 | I |
| 3.5 | **File Mgmt. System** | Core | 8 | 4 | II |
| 3.6 | **Implementation effort** | Job | | - | I, II |
| 3.7 | **Data repository** | | | | |
| 3.7.1 | **RDBMs/ NoSQL instance** | | | | |
| 3.7.1.1 | MySQL | Core | 4 | - | I |
| 3.7.1.2 | PostgreSQL | Core | 4 | - | I |
| 3.7.1.3 | MS SQL server | Core | 4 | - | I |
| 3.7.1.4 | DB2 | Core | 4 | - | I |
| 3.7.1.5 | Oracle | Core | 4 | - | I |
| 3.7.1.6 | Hadoop | Core | 4 | - | II |
| 3.7.2 | **Database Administration Software Tool for DBA** | Lic | 2 | - | I |

# BoM: Supporting Platforms [2 of 2]

| | Project Item Name | Unit | Quantity | DR | Phase |
|---|---|---|---|---|---|
| 3.7.3 | **Implementation effort** | Job | | - | I, II |
| 3.8 | **Reporting, BI, Advanced analytics** | | | | |
| 3.8.1 | **Data Management** | | | | |
| 3.9.1.1 | ETL | Core | 4 | - | I |
| 3.9.1.2 | Data cleaning, Integration | Core | 4 | - | I |
| 3.9.1.3 | Implementation effort | | | | I |
| 3.8.2 | **Analytics** | | | | |
| 3.8.2.1 | Structured data modelling | Core | 8 | - | I |
| 3.8.2.2 | Un-Structured data modelling | Core | 4 | - | II |
| 3.8.2.3 | Run time engine: Structured, Un-Structured | Core | 8 | 4 | I |
| | Unstructured | | | | |
| 3.8.2.4 | BI Reporting, Visualisation | Core | 16 | 8 | I |
| 3.8.2.5 | Implementation effort | | | | I, II |
| 3.9 | **GIS** | | | | |
| 3.9.1 | GIS Sever (Active Passive) | Subscription | As reqd. | - | II |
| 3.9.2 | GIS Analyis Tool | Subscription | As reqd. | - | II |
| 3.9.3 | GIS desktop | Named user | 2 | - | II |
| 3.9.4 | GIS Development tool license | Subsription | 1 | - | II |
| 3.9.5 | GIS Maps updation | Subscription | 0 | - | II |
| 3.9.6 | Implementation effort | | | | II |

# BoM: Monitoring: OIOS, IT Infrastructure

| | Project Item Name | Unit | Quantity | DR | Phase |
|---|---|---|---|---|---|
| **4** | **Monitoring: OIOS, IT Infrastructure** | | | | |
| 4.1 | **EMS Software** | | | | |
| 4.1.1 | Monitoring: IT Infrastructure (device based - OS Instances: Server OS, Virtualisation, Firewall, IPS, Storage) | Subscription | As required | - | II |
| 4.1.2 | Monitoring: OIOS Application Performance (Real User Monitoring, Diagnostics) | Subscription | As required | - | II |
| 4.1.3 | Dashboard & Reporting (Events co-relation,Centralized Reporting) | Subscription | As required | - | II |
| 4.1.4 | Service Desk (SLA monitoring, Incident Mgmt) | Subscription | As required | - | II |
| 4.1.5 | OIOS, IT Infrastructure Operational Analytics (Log Correlation & Analysis) | Subscription | As required | - | II |
| 4.2 | **Implementation effort** | | | | II |

# BoM: Security

| | Project Item Name | Unit | Quantity | DR | Phase |
|---|---|---|---|---|---|
| **5** | **Security** | | | | |
| 5.1 | Firewall Next Generation with SSL VPN | Subscription | As per SLA | As per SLA | I |
| 5.2 | IPS | Subscription | As per SLA | As per SLA | I |
| 5.3 | URL filtering | Subscription | As per SLA | As per SLA | I |
| 5.4 | Web application firewall | Subscription | As per SLA | As per SLA | I |
| 5.5 | Anti APT Solution with sand-boxing | Subscription | As per SLA | - | I |
| 5.6 | SIEM | Subscription | As per SLA | - | I |
| 5.7 | Security complaince analytic tool | Subscription | As per Solution | | |
| 5.8 | DLP (System administrators console) | Lic | 20 | | I |
| 5.9 | HIPS | Lic | 40 | | I |
| 5.10 | Privilege Mgmt. of System Administrator (VMs, Physical Servers, Storage) | Lic/ VM | 40 | | I |
| 5.11 | Database activity monitoring | 0 | 0 | | |
| 5.12 | HSM | Subscription | 1 | 1 | I |
| 5.13 | Anti Virus malware (for Servers OS) | Subscription | As per Solution | | I |
| 5.14 | Implementation effort | Job | | | I |

# BoM: OIOS Application: On cloud [1 of 2]

| | Project Item Name | Unit | Quantity | DR | Phase |
|---|---|---|---|---|---|
| **6** | **OIOS Application: On cloud** | | | | |
| 6.1 | **Site Recovery Software** | Lic/ DC | 1 | - | II |
| 6.2 | **OS: for Application, Database & Mgmt. Server, etc. (Total of DC-1, DC-2 including DR and Management consoles)** | Lic/Support | 100 | | I |
| 6.2.1 | OS-1 (e.g. Linux) | Lic/Support | As required | | I |
| 6.2.2 | OS-2 (e.g. Windows DC Edition) | Lic/Support | As required | | I |
| 6.2.3 | OS-3 (e.g. Windows for Mgmt. consoles)) | Lic/Support | As required | | I |
| 6.2.4 | Containers | Lic/Support | As required | | I |
| 6.3 | **Servers** | | | | |
| 6.3.1 | DC-1: Servers for OIOS | Cores | 500 | | I, II |
| 6.3.2 | DC-1: Servers for DR to DC-2 | Cores | | 75 | III |
| 6.3.3 | DC-2: Servers for Future Applications | Cores | 150 | | After 24 months |
| 6.3.4 | DC-2: Servers for DR to DC-1 | Cores | | 250 | II |
| 6.3.5 | RAM: 4*Number of cores at each DC (minimum) | Gb | 2000 | | As required |

# BoM: OIOS Application: On cloud [2 of 2]

| | Project Item Name | Unit | Quantity | DR | Phase |
|---|---|---|---|---|---|
| **6** | **OIOS Application: On cloud** | | | | |
| 6.4 | **Storage (at each DC)** | | | | |
| 6.4.1 | SSD | TB | 1059 | | As required |
| 6.4.2 | SAS/NLSAS | TB | 1839 | | As required |
| 6.5 | **Data IO** | | | | |
| 6.5.1 | DC-1, Data upload | Tbps | 2 | | As required |
| 6.5.2 | DC-2, Data upload | Tbps | 2 | | As required |
| 6.5.3 | Leased line between DC-1, DC-2 of 50 Mbps | No | 1 | | II |
| 6.5.4 | Leased line from DC-1 to NICNET Delhi (by Department) | Number | 2 | | |
| 6.5.5 | Leased line from DC-2 to NICNET Delhi (by Department) | Number | 1 | | |

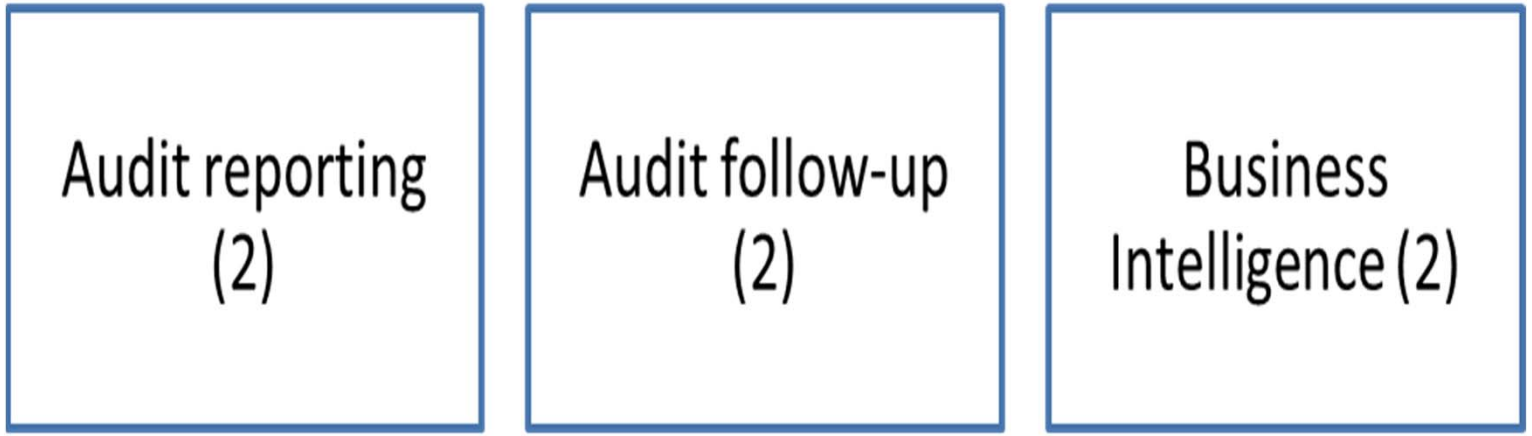
# BoM: Infrastructure & Security Mgmt. Team

| | Project Item Name | Unit | Quantity | DR | Phase |
|---|---|---|---|---|---|
| **8** | **Infrastructure & Security Mgmt. Team** | | | | |
| 8.1 | **Infrastructure, Network Monitoring & Technical Support** | | | - | |
| 8.1.1 | Infrastructure Manager | No | | 1 | |
| 8.1.2 | Analyst - BCP & Disaster Recovery | No | | 6 | |
| 8.2 | **Security Operations** | | | | |
| 8.2.1 | Security Manager | No | | 1 | |
| 8.2.2 | Analyst (Application & Database Security) | No | | 2 | |
| 8.2.3 | Analyst (Real Time Event Monitoring) | No | | 3 | |
| 8.2.4 | Analyst (Checking Security Configurations) | No | | 3 | |

# OIOS Phase 1 Application: Functional Coverage

| | | |
|---|---|---|
| Organization | Personnel | Auditee Universe |
| Audit Planning | Audit Guidelines | Audit Execution |
| Audit Reporting(1) | Audit Follow Up (1) | KMS / Data Reposiroty (1) |

# OIOS Phase 2 Application: Functional Coverage

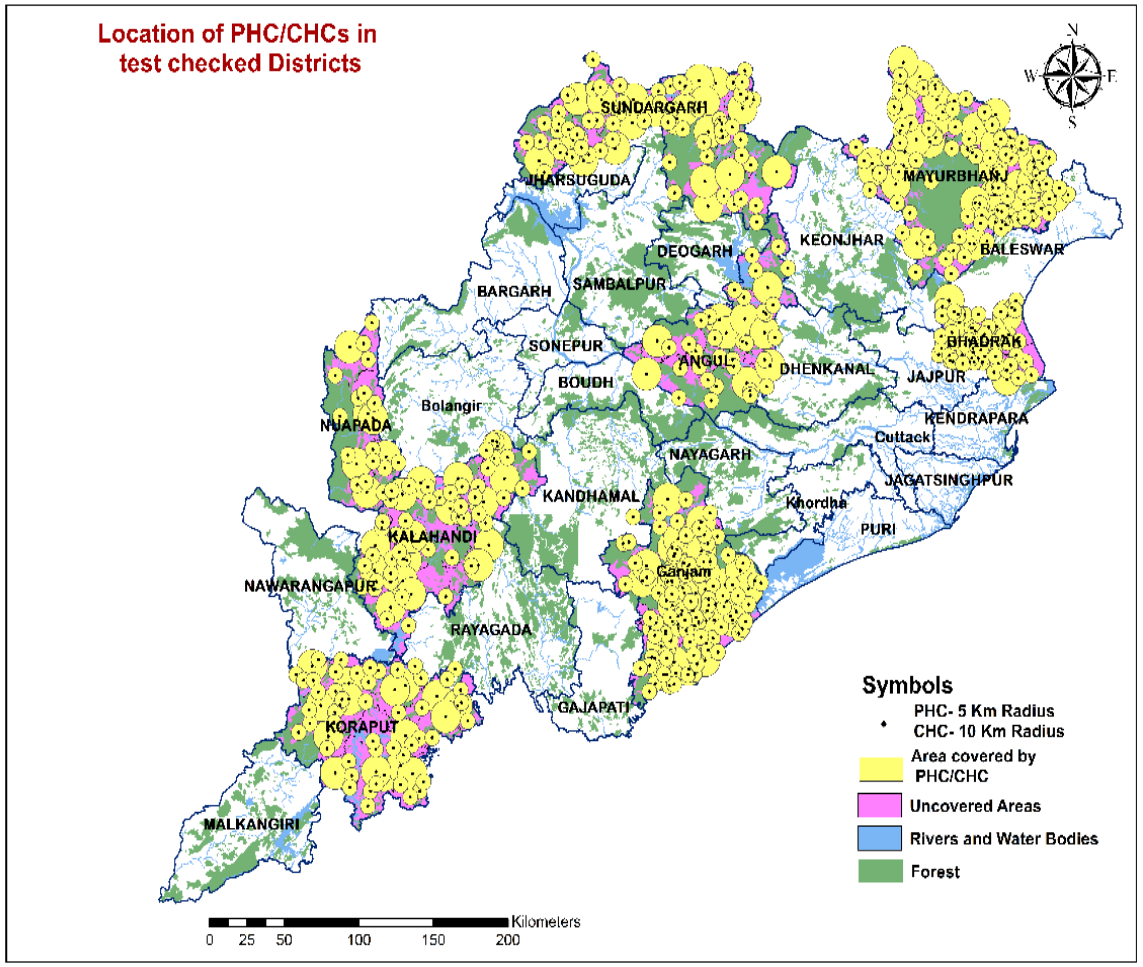


# Case Study on

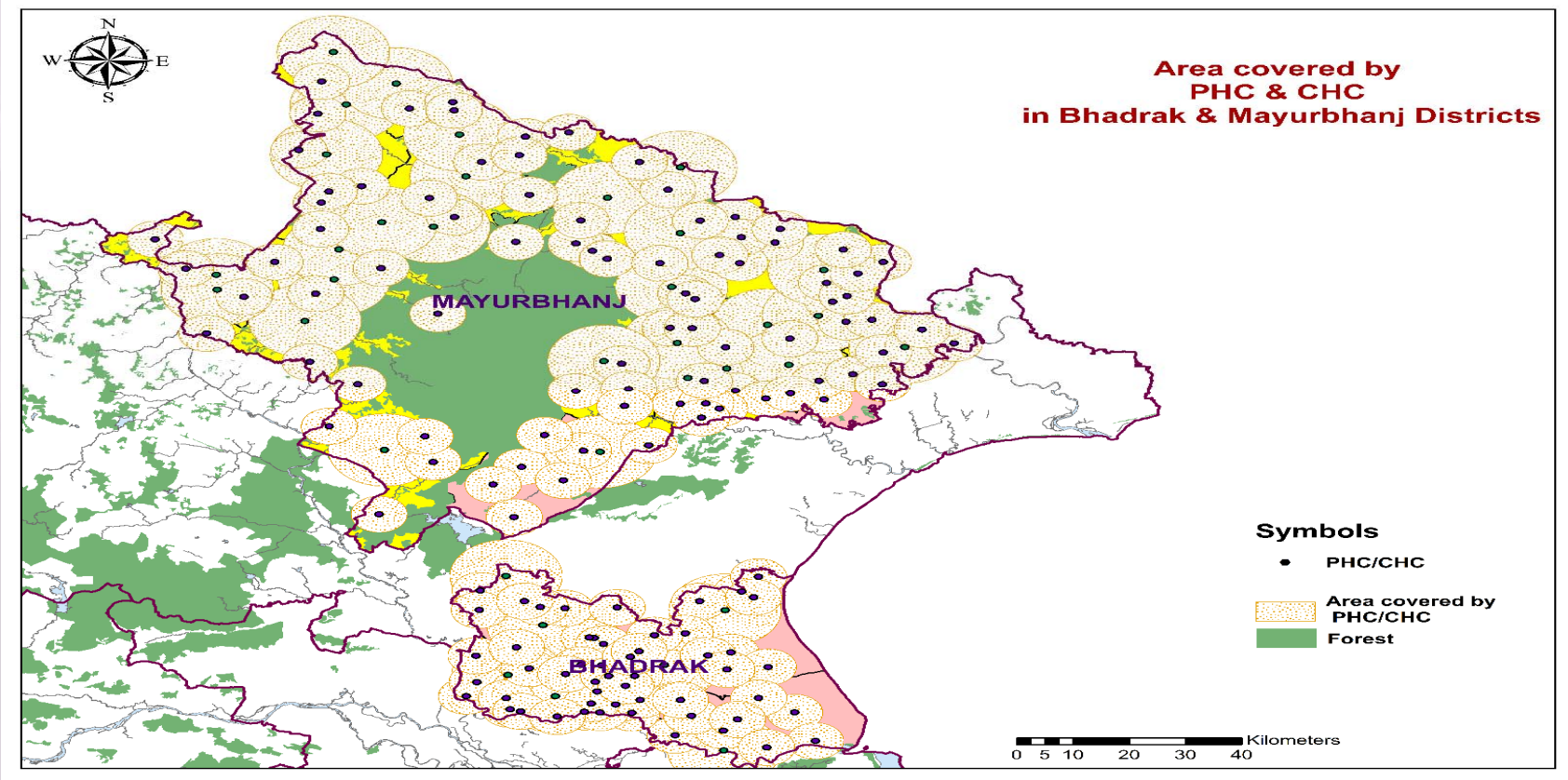
# PA on “Delivery of Health Care Services at District Headquarter Hospital”

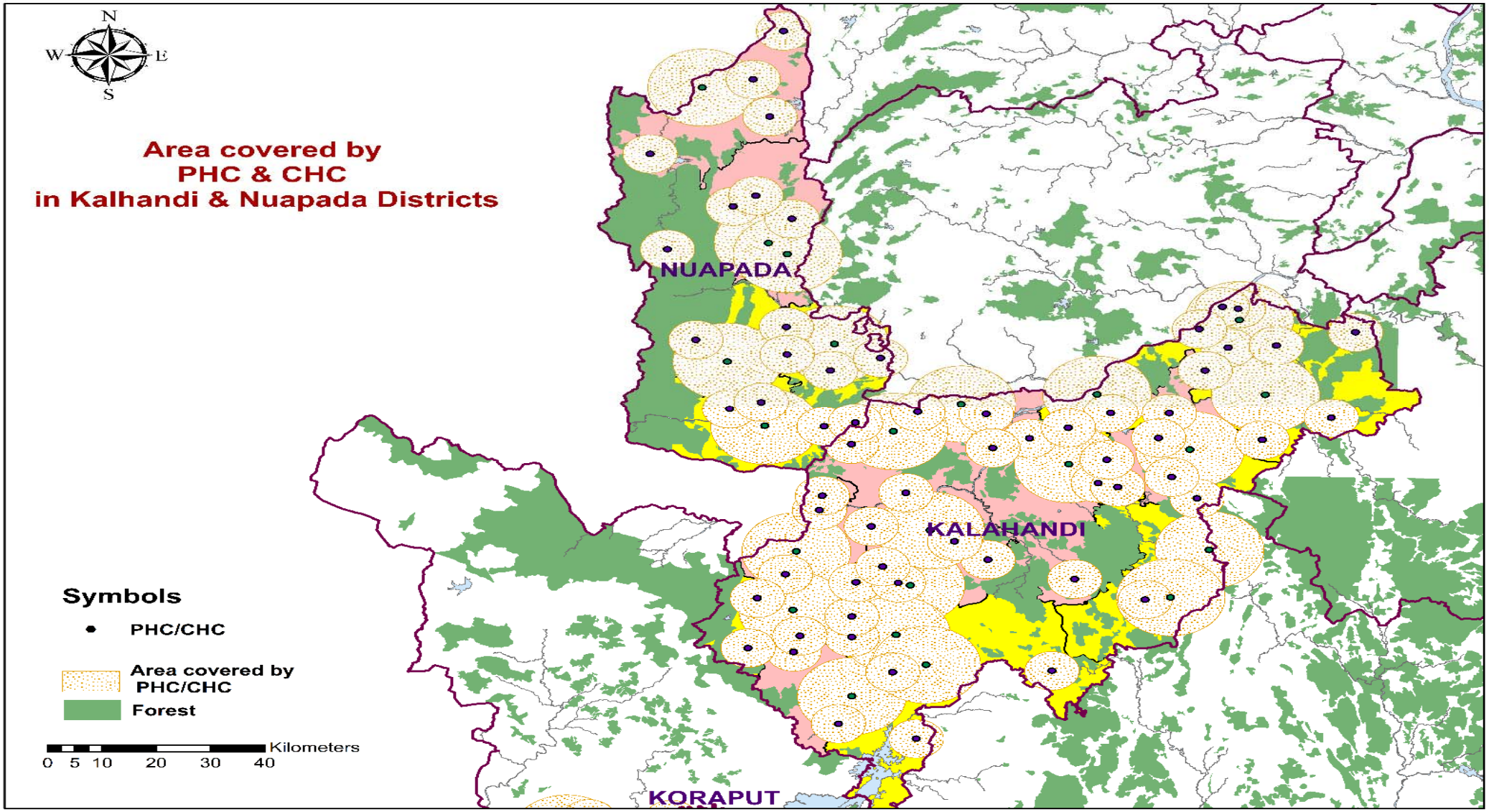
# Coverage of PHCs and CHCs:

- It is a new concept of analysis of Geo-spatial data in audit. The data so analysed is plotted in the Geographical Information System (GIS) in order to have a macro level view of regional imbalance or similarities.
- Besides, the GIS has its own parameters for analysis of geo-spatial data. For example, the map shows the availability of PHC and CHCs in the sampled districts of Odisha.



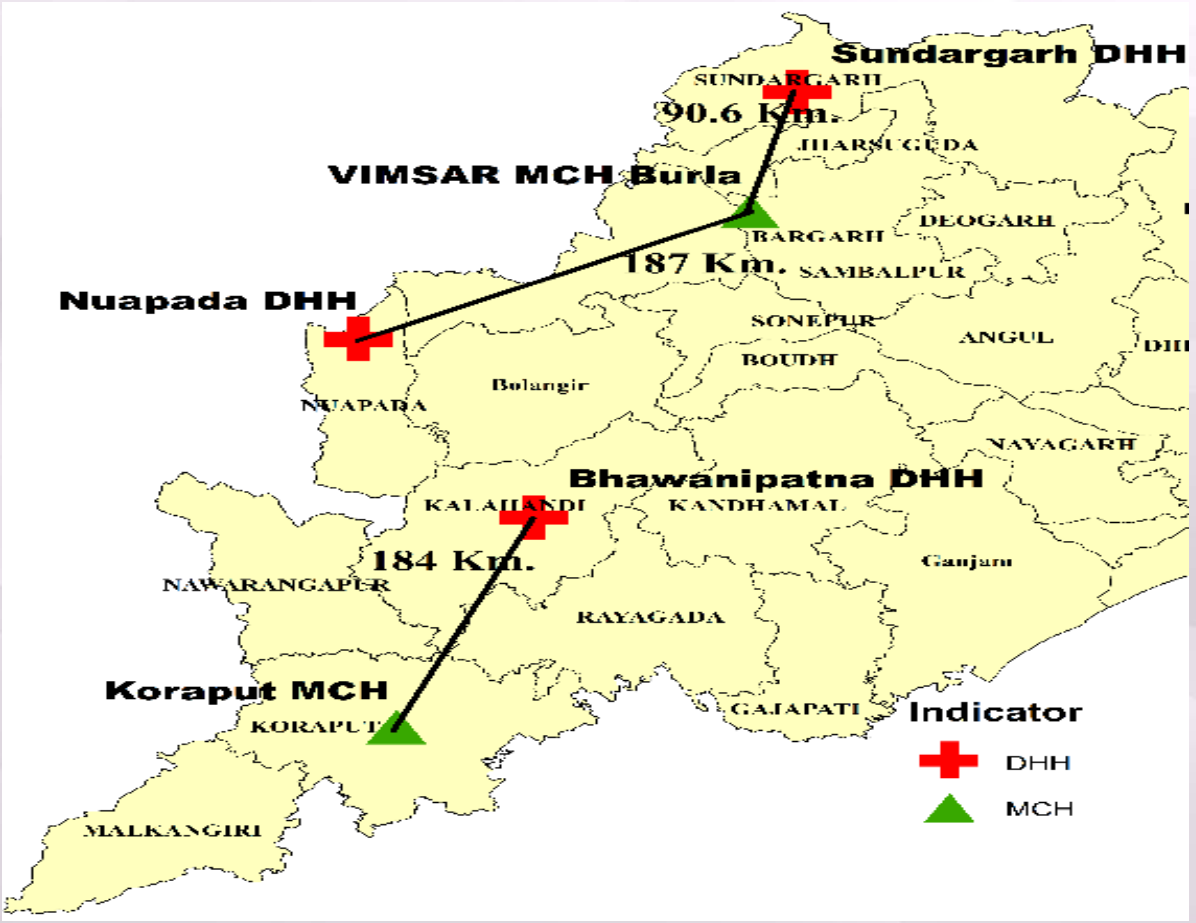
The map shows the coverage of CHCs within radius of 10 KM and PHCs within radius of 5 KM



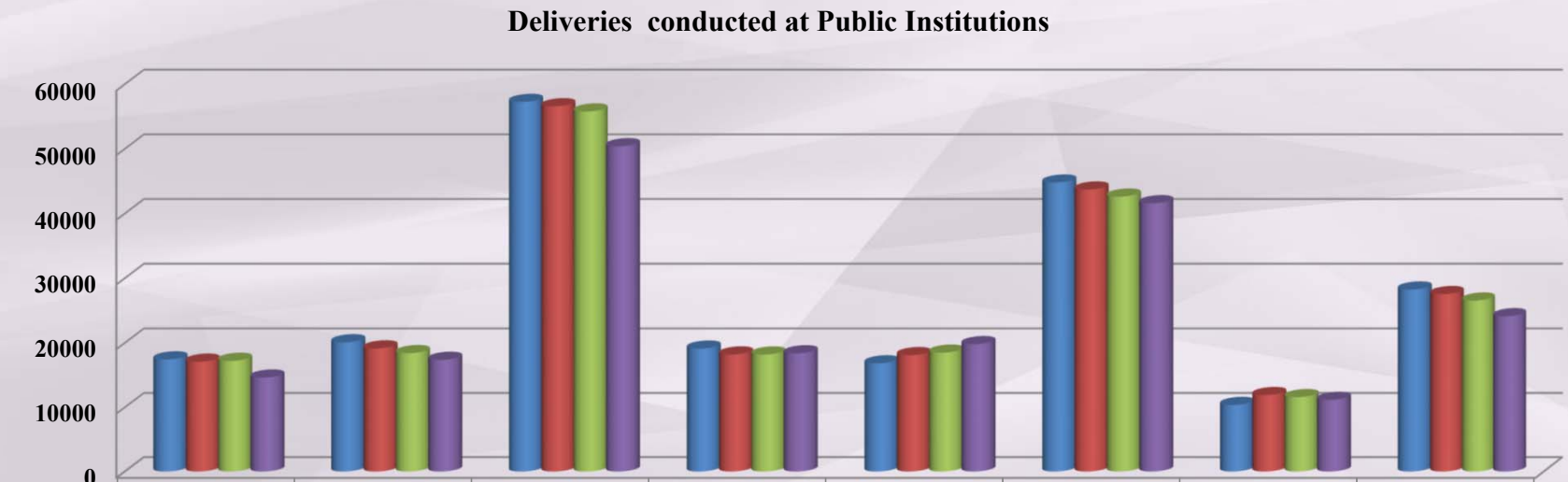

N
W
E
S
Area covered by
PHC & CHC
in Kalhandi & Nuapada Districts
NUAPADA
KALAHANDI
KORAPUT
Symbols
PHC/CHC
Area covered by
PHC/CHC
Forest
Kilometers
0 5 10 20 30 40

## Availability of Tertiary Care Hospitals and distance to be covered to reach there:

Nuapada, Sundergarh and Kalahandi are tribal dominated districts and have no tertiary care hospitals. The map illustrates how far the people of these districts have to travel to avail nearest tertiary healthcare services.



**Institutional delivery:** It is observed that institutional delivery is very high in Ganjam, Mayurbhanj and Sundargarh districts. But it is very low in Nuapada district, followed by Angul district. It is also low in Koraput and Kalahandi districts.




| | ANGUL | BHADRAK | GANJAM | KALAHANDI | KORAPUT | MAYURBHANJ | NUAPADA | SUNDARGARH |
|---|---|---|---|---|---|---|---|---|
| 2013-14 | 17447 | 20097 | 57259 | 19124 | 16842 | 44792 | 10382 | 28257 |
| 2014-15 | 17105 | 19150 | 56590 | 18216 | 18110 | 43714 | 11922 | 27549 |
| 2015-16 | 17227 | 18421 | 55779 | 18208 | 18493 | 42622 | 11601 | 26547 |
| 2016-17 | 14643 | 17383 | 50407 | 18390 | 19808 | 41595 | 11169 | 24128 |

# Case Study on
# Data Analysis relating to
# “Implementation of Indira Awaas Yojana & Pradhan Mantri Awaas Yojana-Gramin”

# Data Sources:

- For analysis of IAY & PMAY-G, the data sources are as below.

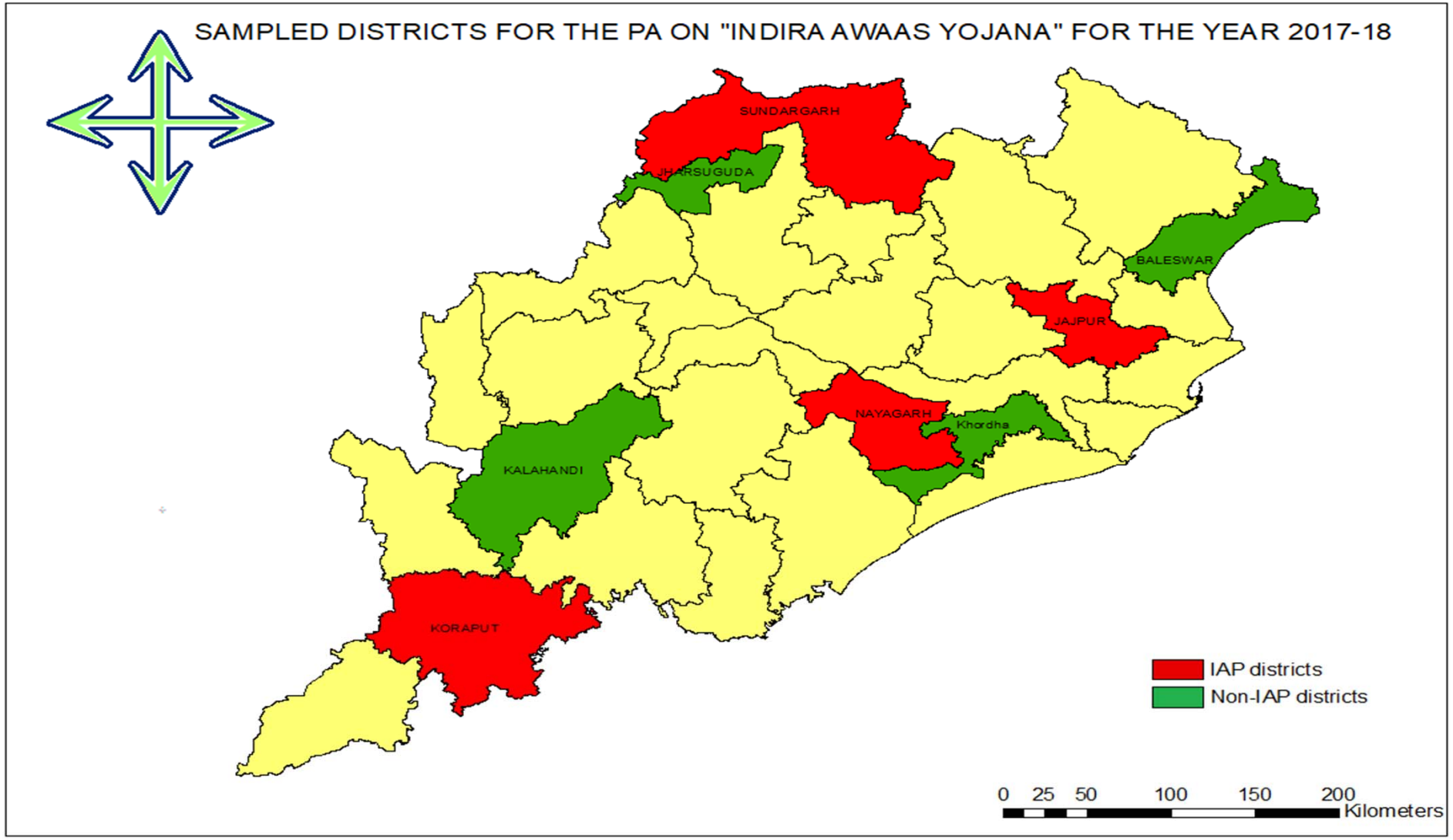
1. Data downloaded from Awaassoft portal.
2. Census 2011 data
3. SECC 2011 data
4. Priority list
5. Data downloaded from Rural Housing Portal.

# Data Analysis in Audit Planning:

- In audit planning process, the data is analysed and used for sampling of districts and blocks. On the basis of data analysis, parameters are fixed and sampling of districts and blocks are done.
- The parameters fixed for sampling are:

1. No. of houses completed
2. Utilization of fund
3. Houses sanctioned but not completed

- Though blocks are selected through sampling process, three more blocks are selected on the basis of outliers as these three blocks have shown certain abnormalities.


SAMPLED DISTRICTS FOR THE PA ON "INDIRA AWAAS YOJANA" FOR THE YEAR 2017-18
SUNDARGARH
JHARSUGUDA
BALESWAR
JAJPUR
NAYAGARH
Khordha
KALAHANDI
KORAPUT
IAP districts
Non-IAP districts
0 25 50 100 150 200
Kilometers

# Data Analysis for Risk Analysis

- Data analysis is done based on the data and insights gained therein is submitted to the audit party before conducting audit. These observations facilitate in identifying the risk areas where more thrust can be given. Some of the important insights are briefly discussed.

- 1. Shortfall in achievements of target set:

It is observed that there is shortfall in completion of houses targeted in the years.

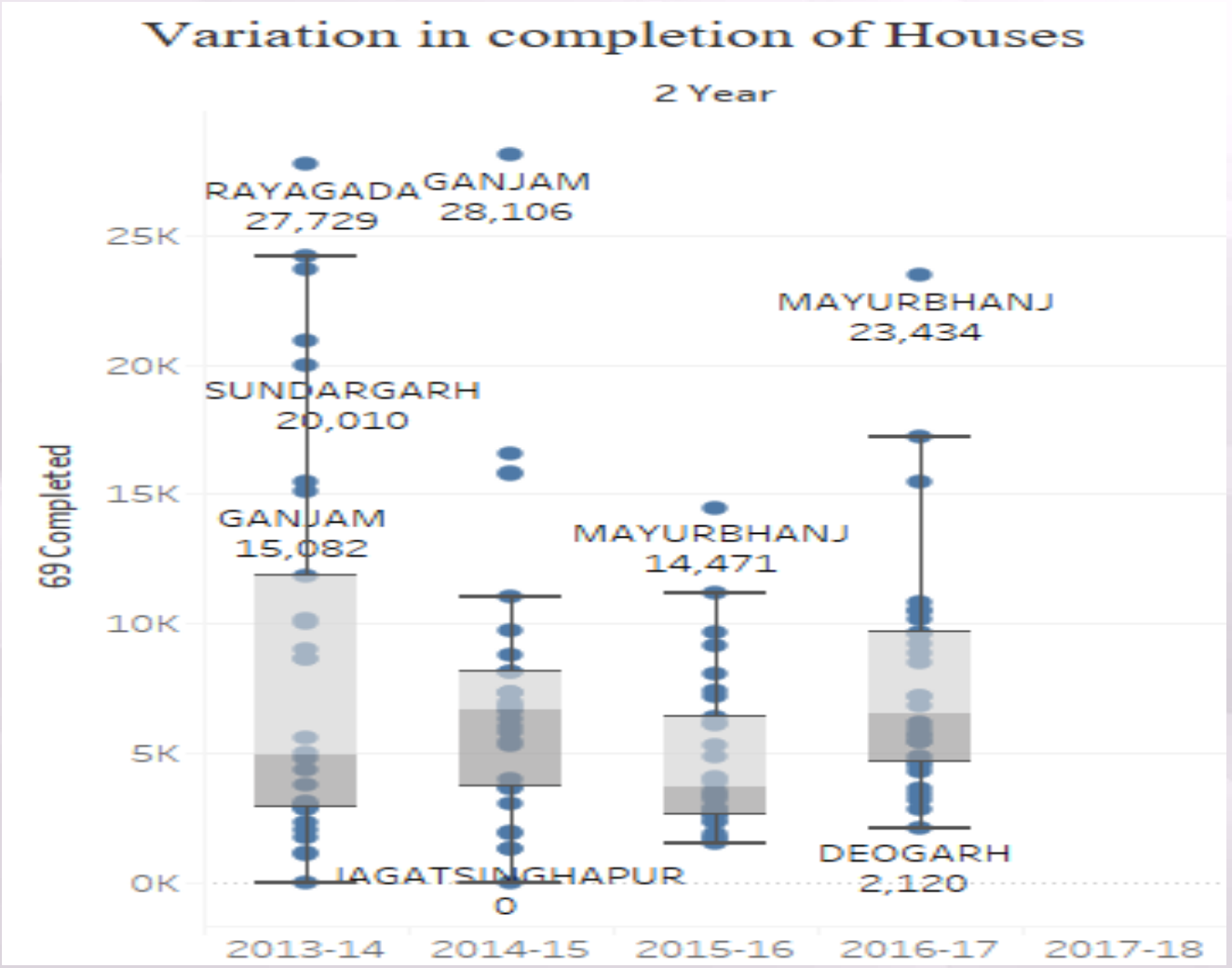
| Year | Target set by State | Completed | Shortfall |
|---|---|---|---|
| **2013-14** | 166184 | 152112 | 14072 |
| **2014-15** | 166985 | 156798 | 10187 |
| **2015-16** | 165110 | 146511 | 18599 |
| **2016-17** | 430426 | 233106 | 197320 |

- 2. **Wide variation in target vs Sanctions:** It is observed that there is wide variation of target set by the State and sanction made by the GoI during the period from 2013-14 and 2015-16 and in some cases sanctions made is more than the target set by the State

| Year | Target set by State | Sanctions made | Excess of sanction over Target |
|---|---|---|---|
| **2013-14** | 166184 | 283240 | 117056 |
| **2014-15** | 166985 | 245049 | 78064 |
| **2015-16** | 165110 | 164958 | Nil |
| **2016-17** | 430426 | 394252 | Nil |

- 3. **<u>Wide variation in completion of the houses under the scheme:</u>**

It is observed that there is a wide variation of completion of houses by the districts during the period 2013-14 to 2016-17.



- **Data Analysis in Audit Execution:**
- 4.**Convergence with other Schemes for constructions of toilets:** The total number of toilets constructed during the year are not equal to the total number of houses completed

| Years | Houses completed (Nos.) | Job card issued under MGNREGA (Nos.) | IHHL under NBA (Nos.) |
|---|---|---|---|
| **2013-14** | 152112 | 1230 | 3365 |
| **2014-15** | 156798 | 3529 | 163143 |
| **2015-16** | 146511 | 78808 | 152093 |
| **2016-17** | 233106 | 0 | 0 |

- **5. <u>Beneficiaries without any name:</u>**

Audit noticed from the database that there was no mention of names of 284 beneficiaries in the priority list. Out of these, 277 beneficiaries were sanctioned PMAY houses with payment of ₹ 3.11 crore.

- **6. <u>Names appearing more than once:</u>**

Audit noticed that in 4978 occasions, the name of the beneficiary with name of his father/husband was same in a village. This duplication ranged between two and 13 times in 1856 villages. Out of these, 1116 beneficiaries were sanctioned houses under PMAY in 999 villages.

- 7. **Shortage of inspections after release of instalments**: It is observed that there is huge shortage of inspections after release of instalments The short inspections after release of 1st instalment,2nd instalment and 3rd instalment were 225174, 138518 and 41235 respectively. However, the inspections after release of final instalment showing an improvement.

| Years | short Inspection w.r.t. 1st Instalment | short Inspection w.r.t. 2nd Instalment | short Inspection w.r.t. 3rd Instalment | short Inspection w.r.t. 4th Instalment |
|---|---|---|---|---|
| **2013-14** | 26109 | 7206 | -2397 | NA |
| **2014-15** | 21998 | 6171 | -7298 | NA |
| **2015-16** | 18135 | 10310 | -4841 | NA |
| **2016-17** | 158932 | 114831 | 55771 | -661215 |
| **Grand Total** | 225174 | 138518 | 41235 | -661215 |

# THANK YOU

# One IAAD One System

## Project Overview and Status

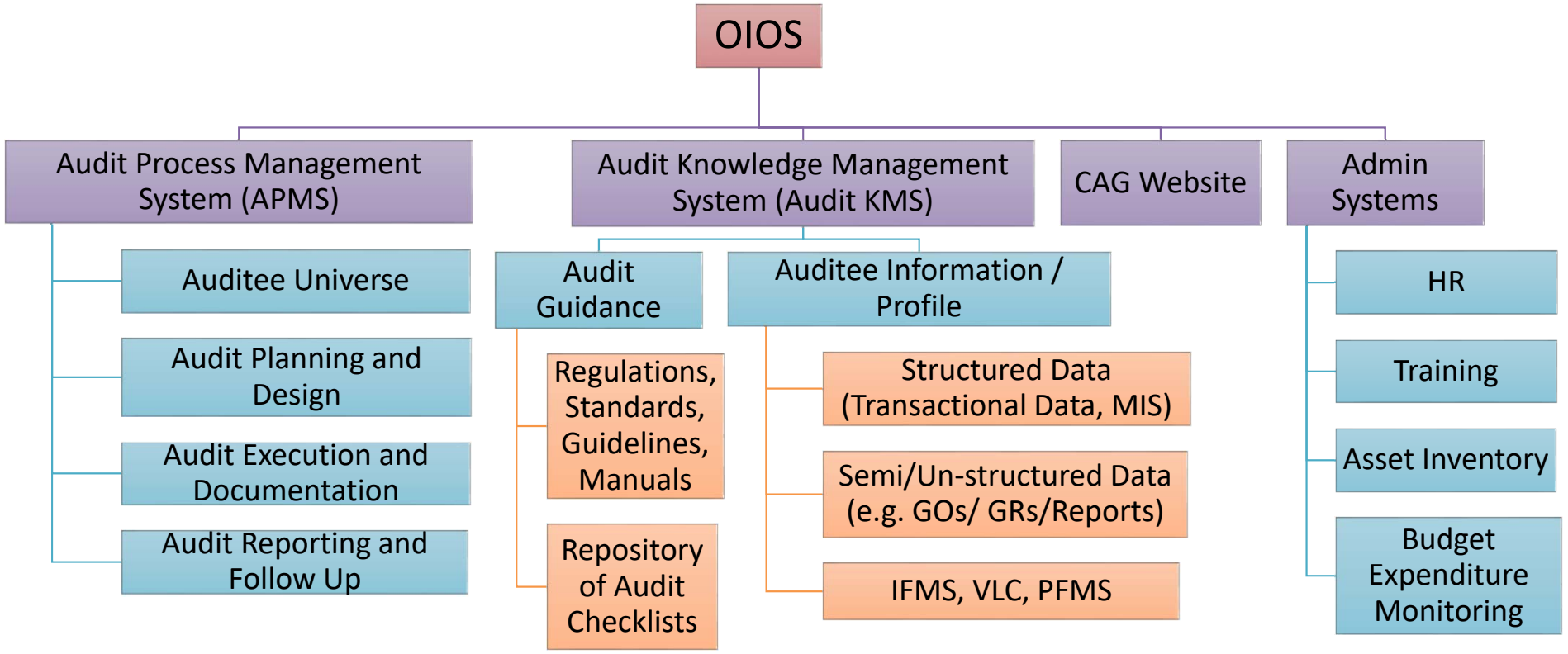
KR Sriram
Chief Technology Officer

# Recap

# Background

- Individual field audit offices in the past have taken the initiative to develop IT systems to assist in automating the audit process. These systems served the intended limited purposes, but being localized, in-house efforts, could not be scaled up.
- Auditee environment is changing, and for a better informed audit, we need IT systems to assist us at all stages of the audit process
- The idea of developing an enterprise-wide IT system across all our audit offices came up in this context

# One IAAD One System



# Audit Process Management System

- Primary system of record (Single Source of Truth) for the entire chain of audit activities
  - From audit planning and design through audit execution to issue and follow-up of Inspection Reports to processing and finalisation of Audit Reports and other Audit Products
  - Activities through the IT system, not post facto recording
- Will ensure consistent, reliable data in a uniform format across all Audit Offices
- Dispense with numerous monthly/ quarterly returns – internal to Field Audit Office (FAO) and to CAG's office
- Supports better and real-time monitoring of the audit process, especially audit execution
- Integration/ linkage with HR and Training systems
- Integrated with Audit KMS

# Audit Process Management System

- Workflow-based; primary system of record for all audit processes
  - Maintaining the Auditee Universe
  - Online preparation of Audit Requisitions and Audit Observations
  - Online preparation/ processing of Inspection Reports, Departmental Appreciation Notes, Draft Performance Audits
    - Uploading of supporting documentation
  - Processing and finalization of CAG's Audit Reports
  - Follow-up of Inspection Reports
  - Action Taken Notes processing
  - Will cover all types of audit – Compliance, Performance, Financial audit
  - RFP to include requirement of local language support
  - Interface with auditee IT systems

# Audit KMS

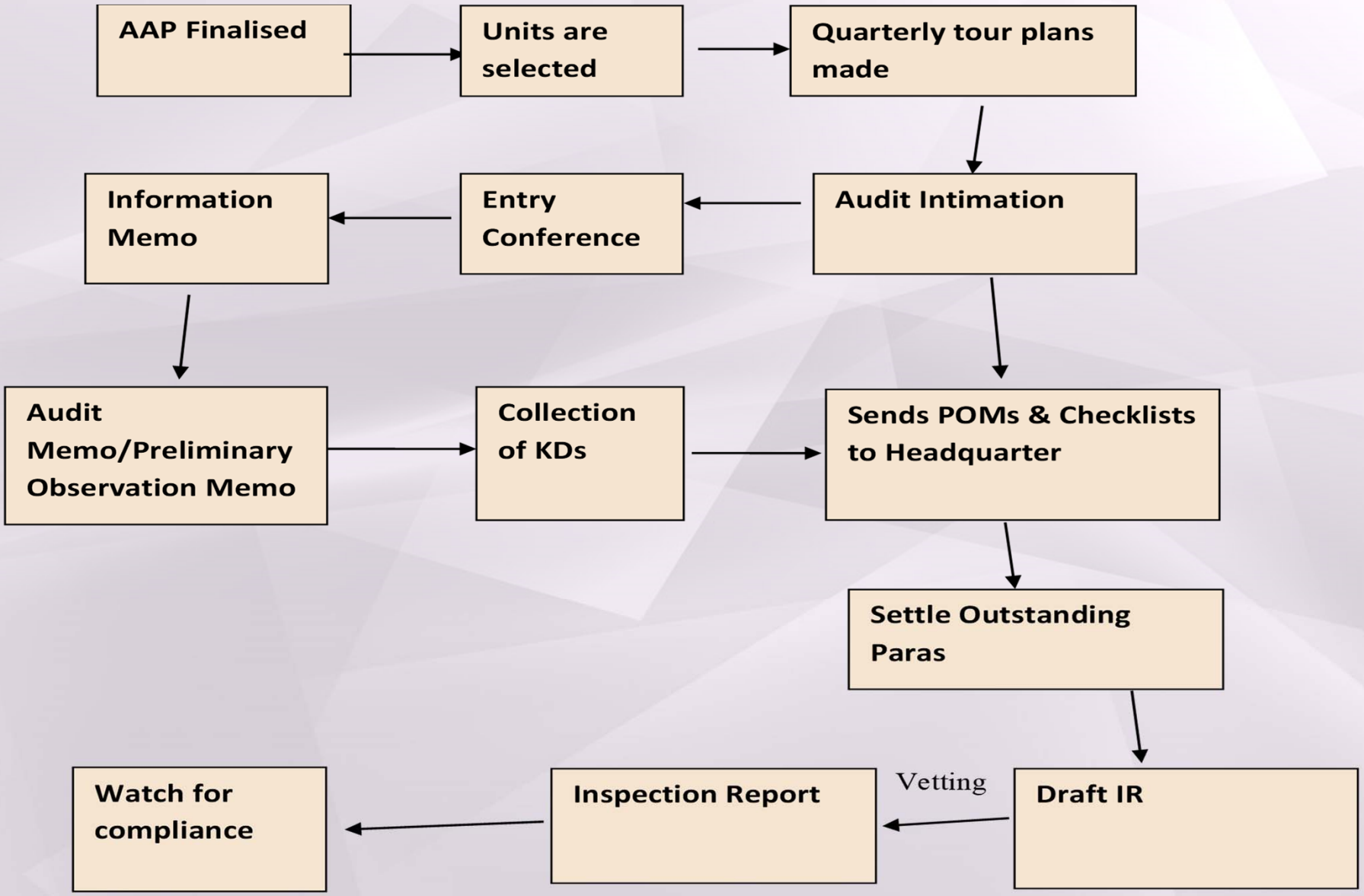
- **Audit Guidance**
  - Regulations; Auditing Standards
  - Auditing Guidelines; Guidance Notes; Practice Guides
  - Manuals and Subsidiary Instructions (CAG's Office and Field Offices)
  - Repository of audit checklists
    - For adapting and use, as appropriate, by different Field Audit Offices
- **Auditee Information**
  - Will not be uniform; will vary across audit offices/ audit streams
    - Unstructured information (e.g. GOs/ GRs; Budget papers; Annual/ longer term Plans; DPRs; Procurement Documentation; Evaluation Reports)
    - Transactional/ MIS Databases from auditee organisations, e.g. All-India/ Central databases like NREGASOFT; NSAP
    - Financial systems – State IFMS; VLC; Central PFMS
  - Continuously growing/ updating; will need strong moderating (centrally and locally) to maintain documentation relevance

# Technology and Sourcing

- Web enabled, Cloud based & open source (preferably)
  - Offline functionality where Internet connectivity is poor/ non-existent, with auto sync when connected to Internet
  - Mobile app
    - Scanning of supporting documentation; Physical inspection photographs (with geo-tagging and date/time stamp)
- Comprehensive IT system across Audit Offices
  - Common core structure and minimum required mandatory functionality
  - Configurable functionality ('desirable') across offices
- MIS with configurable dashboards and drill-down feature to required level of detail
  - Accessible from anywhere and across all types of devices
  - Accessible to staff members on need-to-know basis

# Thanks

# Audit Execution



# Execution of Audit

- As per approved audit plan, *quarterly tour programmes* [KD1] are prepared for each audit party considering different factors.
- Tour programs are suitably modified from time to time for various reasons
- Accordingly, *intimation* [KD2] are sent to the auditee units at least before 15days.
- The audit intimation, *interalia*, includes name of the party members, tentative date of commencement of audit, nature and scope of audit and list of records to be made ready for audit scrutiny.

# Execution of Audit

- Before moving to field, the audit party conducts desk review .
- It includes *analysis of VLC data* [KD3], Data available in BI Model of DA&R Cell, review of old IRs, study of guidelines of the schemes implemented by the unit.
- Further, paper clippings and complaint letter received, if any, are also handed over to the party for necessary scrutiny at field level.

# Execution of Audit

- On the first day, the party conducts *entry conference* [KD4] with the head of office explaining the scope and nature of audit, nature of cooperation required like prompt supply of records, information, supply of photocopy of required key documents.
- The party issues requisition for records to be checked and *informatory memos* [KD5] with details of information required for audit check.
- Further, some predesigned *check lists* [KD6] are also issued to collect information which are required for preparation of C&AG's (G&SSA) Audit Report and FAA Report and data base for audit for future planning.

# Execution of Audit

- On the basis of monthly expenditure received from Hd Qtrs/VLC data , selection of months are done for detailed audit.
- Only one month is selected for detailed audit in case the period of accounts of audit is one year.
- If it is two years or more, two months are selected for detailed audit.
- Generally, the months are selected from the latest two years if the period of account is more than two years.

# Execution of Audit

- On receipt of records, the required checks are made and *preliminary observation memos* [KD7] are prepared.
- These are sent to Hd Qtrs by email for guidance and further improvement.
- The POMs are verified at Hd Qtrs level and returned back to the field party with suggestion and modification.
- The POMs are then issued to the audit units and with request to submit reply and documents in support of reply.

# Execution of Audit

- Audit evidences (KDs) are gathered from the records either by photocopy or by scanning the documents.
- To supplement the primary evidence, physical verification and beneficiary interviews are conducted in presence of authorized officers of auditee with proper authentication.
- The KDs are attached with the POMs with reference to page marking.

# Execution of Audit

- Audit Party also calls for the compliance to the *outstanding paras KD8* of previous inspection report for on the spot settlement.
- Efforts are also made to settle old paras by updating those in the current Inspection Report ( IR).
- The party also conducts audit scrutiny on the basis of press clippings and complaint received.

# Execution of Audit

- In the last date of audit, an *exit conference* KD9 is conducted.
- All the observations of audit and the replies are discussed with the head of office.
- Auditee is given opportunity to point out all their practical difficulties and were considered by audit, where ever found applicable.
- The Draft IR and relevant annexures KD10 are submitted to the Hd Qtrs by the party within seven days of closure of audit.

# Execution of Audit

- The vetting section vet the IR by ensuring correctness of the observation, availability of key documents, correctness of arithmetical calculations with all the required certificates.
- The IR is issued with the approval of Group Officer within 30 days of closure of audit.
- The potential paragraphs fit for Draft Note are entered in the Potential Draft Para (PDP) Register.

# Execution of Audit

- These paras are scrutinized with reference to the Key Documents.
- For improvement and strengthening the observation, further information and key documents are collected.
- The Draft Note KD11 is demi officially sent by the Group Officer to the Department with a request to submit the reply within 6 weeks.

# Execution of Audit

- A copy of the Draft Note along with the key documents are sent to the Report Section.
- Report Section further scrutinise the Draft Note and ask for query and clarification to the Group.
- The Group submit the compliance to the query.
- On receipt of satisfactory clarification, Report Section issue the Draft Note to the Government with a copy to Finance Department.
- The reply to DN is considered while finalising the DP.

# Execution of Audit

- A bunch of DPs are sent to the Hd Qtrs office as batch material.
- Hd Qtrs verify the DP and seek for clarification in form of queries and commnets.
- *The DPs are modified as per the query and comments* [KD12] *of Headquarter*.
- Annotated copy is submitted to Hd Qtrs with modified report and specific compliance to the queries.

# Execution of Audit

- After satisfactory complaince to the query and verification of KDs, C&AG approves the bond copy.
- On receipt of the bond copy, local language translation is done and the report is sent for printing.
- After printing, the Five Bound Reports are sent to the Hd Qtrs for signature of C& AG.
- Hd Qtrs return backs three inked signed copies.

# Execution of Audit

- Two inked signed copies are sent to the Governor with a request to place in the state legislature.
- Required number of printed copies are kept ready for submission to the Assembly to be distributed to the members.
- On the date fixed by the Government, the Report is placed in the Assembly.
- On the date of placement of Audit report, a press brief on the report is made by PAG.