



# SI/OEMs Meet

A prelude to the  
Centralised Pension Processing  
System(CPP)

**Conducted by: IA&AD**

March 11<sup>th</sup>, 2021



# The Outline

Project Vision  
where to go?

सत्यमेव जयते

Proposed Solution

Biz process  
Reengineering  
Ideas for the new  
system

Proposed Project Implementation Guidelines

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# Project Vision where to go?



सत्यमेव जयते





# The Vision

Single web-application for efficient Pension application Processing for employees in 19 States



## Benefits of the CPP System:

### For the State Departments and IA&AD

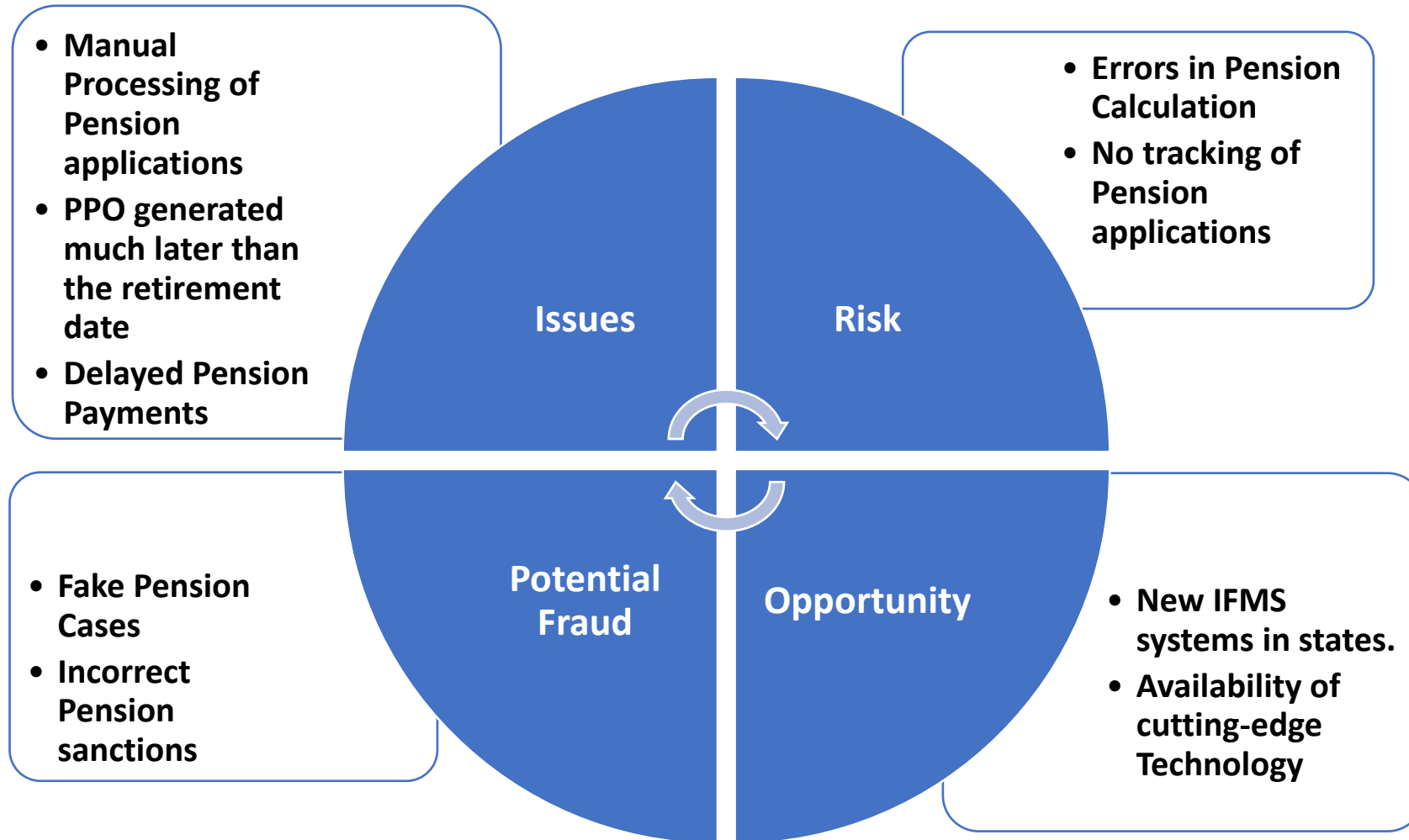
- Streamline Pension approval process
- Single Platform for all stakeholders
- Calculator for Sanctioning authorities
- Dashboards & MIS Reports
- Online verification of Pensioner data

### For the Pensioner:

- Minimal hassle
- Efficient pension processing
- Timely PPO generation
- Enhanced trust through transparency
- Online Service & Grievance helpdesks



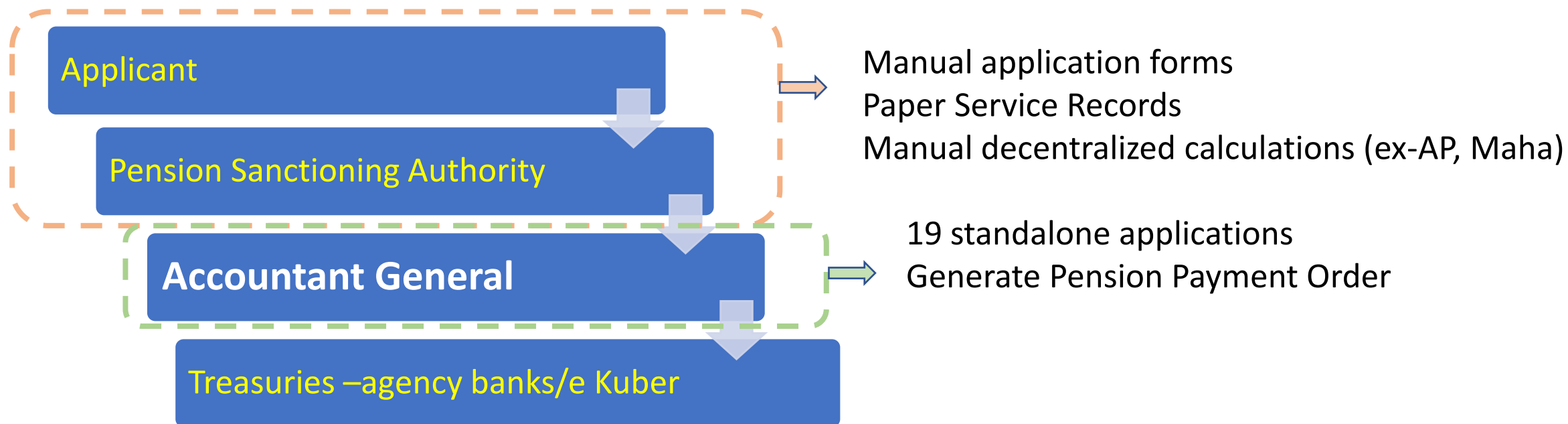
# Why this Project ?





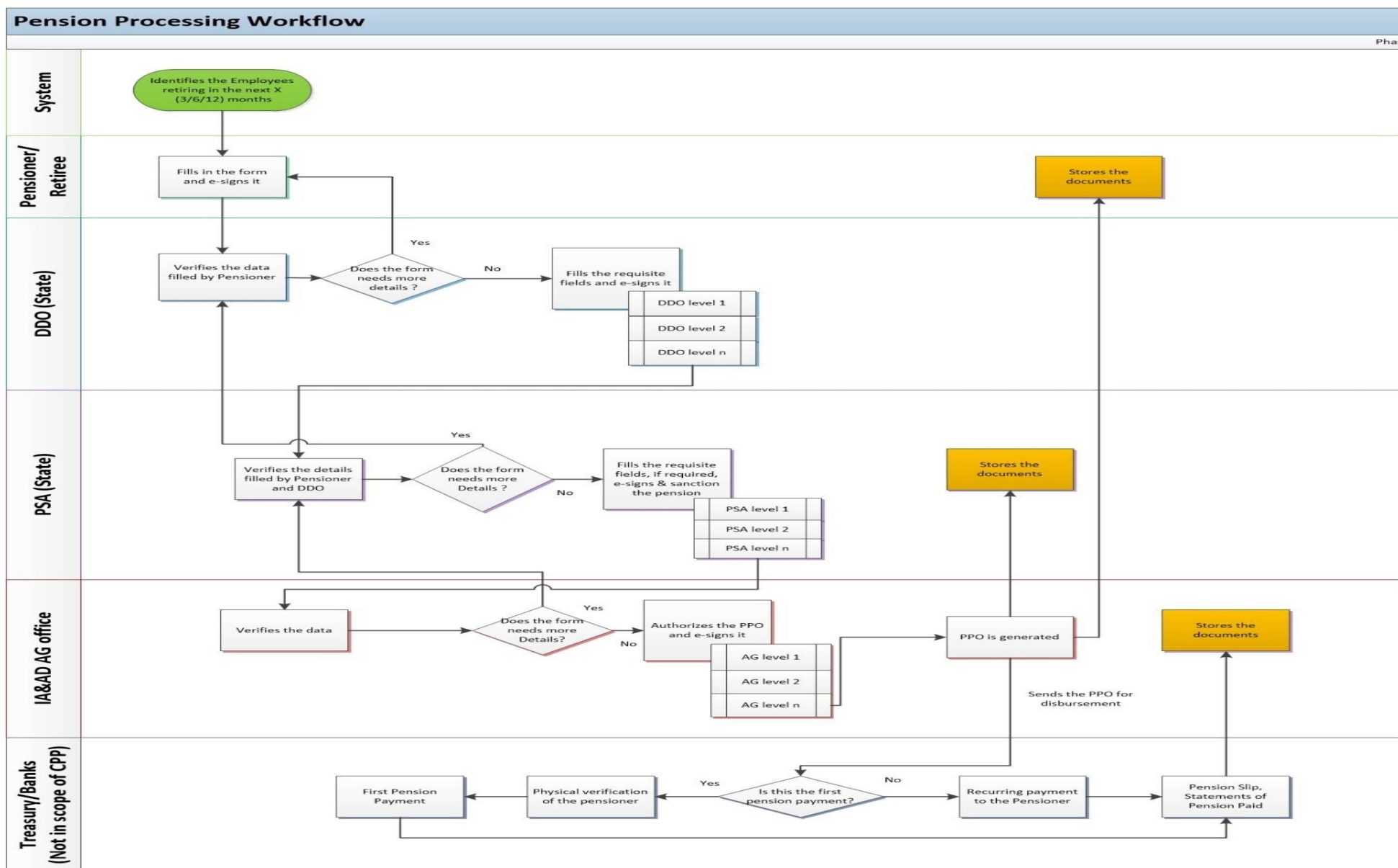
# As-is Process

- AG -Pension Issuing Authority in 19 states
- Key Stakeholders





# As-Is Pension Processing Workflow



# As-Is Scenario

## Employee

- Employee/FP Beneficiary applies through the department.
- Furnishes details for Part I of the application manually.
- Part I is attested by the HOD.
- Annexures include the Descriptive Roll (photo identity) and Nomination form.

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### ANNEXURE –II NOMINATIONS

The Government servant may use separate forms, if he wishes to make different nominations for each type of payment mentioned below)  
I hereby nominate the person/persons mentioned below and confer on him/her/them them the right to receive Life Time Arrears of Pension, Retirement Gratuity that may be sanctioned by Government in the event of my death while in service and right to receive on my

death Life Time Arrears of Pension Retirement Gratuity, commuted value of pension, Death relief which having become admissible to me on retirement which may remain unpaid at my death.

1	2	3	4	5	6	7
Name and address of Nominee (s)	Relationship with Govt. Servant	Age	Amount of share payable to each in Col.1	Contingencies on the happening of which the nomination shall become invalid (Death need not be mentioned)	Name and address relationship and age of the alternative nominee (s) to whom the right conferred on the nominee(s) in Col. 1 shall pass in the event of the nomination to him/her/them becoming ineffective.	Amount of share payable to each in Col.6
L.Ramanamma W/o L.GARIKIVADU, H.No.2-79, S.C.Colony, Narsapuram,(Village) Ponduru Mandal, Srikakulam District..	Wife	01/07/1966	IN FULL	Nominee predeceasing	L.Srinivasa Prasannakumar (full)	

This nomination supersedes the nomination made by me earlier on \_\_\_\_\_  
N.B :- The Government Servant shall draw lines across the black space below the last entry to prevent the insertions of any name after he/she has signed.  
Dated this \_\_\_\_\_ day of \_\_\_\_\_ 2019 at \_\_\_\_\_

Witness :

1. Signature, Name : *[Signature]*  
Address : *[Address]*

2. Signature, Name : *[Signature]*  
Address : *[Address]*

Signature of the Government Servant : *[Signature]*  
Name & Designation : **L. GARIKIVADU**  
Office : **Special Deputy Collector (L.A.)**  
**T. B. P. Unit - III**  
**PARVATIPURAM**

**Counter signed**

Signature of Head of Office/ Department : \_\_\_\_\_  
Date : \_\_\_\_\_  
Name and Designation : \_\_\_\_\_  
Office Seal : \_\_\_\_\_

**COUNTER SIGNED**

*[Signature]*  
**COLLECTOR**  
**VIZIANAGARAM**

*[Handwritten notes]*  
25/10/19  
27/10/19  
sup D



Proforma very carefully as the date may note that alterations of the data

band" as the case may be "sons" and for family Pension) and Rule 46(5)

nt, the answer" Married" in case of ready married as on the date of death

F pension, Gratuity and Commutation, amount to which I was entitled under the

n Part-I at Item 7 are correct and true, I am liable for suitable action as

the best of my knowledge. If found to be taken by the Government.

### OFFICE OF THE OFFICE

Signature of the Government Servant/Applicant

on - - 2019

government servant/applicant in item 7 gratuity.

sary)

e deceased Government servant Late ip of Sri/Smt

of Birth

Signature of the Head of Office

Seal:



# As-Is Scenario

## DDO / PSA

- PSA fills in the Part II (A) of the form and also attests it.
- Part II (B) has the quantum of pensionary benefits which are calculated and checked manually at multiple levels.
- PSA forwards the sanctioned proposals along with the Service Book and the various clearances to the AG Office.

(A) Information to be filled up by the Pension Sanctioning Authority	
1	Name of the Government Servant
2	Father/Husband's Name
3	Name of the Government Servant at the date of death of the Pensioner
4	Date of death of the Pensioner
5	Date of retirement of the Pensioner
6	Date of death of the Pensioner
7	Designation held by the Pensioner at the date of retirement
8	TAN of the Pensioner
9	Signature of the Pensioner
10	The Rules applicable to the Pensioner at the date of retirement
b)	Whether the Pensioner is entitled to any special benefits under the rules
c)	Whether the Pensioner is entitled to any special benefits under the rules
d)	Any other particulars relating to the Pensioner
11	Total Service Periods of the Pensioner
12	Periods of absence from service
	a) EOL
	b) Suspended
	c) Dies-Natural
	d) Boy Scout
	e) Any other
	Total No. of days
13	Net Qualifying Service for Pension
14	Weightage to be given to the Pensioner's service
15	Total qualifying service for Pension

**Part - II (B)**  
**SANCTION OF PENSION**

a). Certificate of competency to accord sanction ( applicable in case of sanction of pension to non-Gazetted officers including Class – IV Employees )

i). I am declared by the Head of the Department to be the Head of an Office to accord sanction in this case under the powers delegated vide G.O.Ms. No. 262, Finance & Planning ( FW – PSC ) Department, dated 23-11-98.

**OR**

ii). I am the next Gazetted Authority in the hierarchy to the Head of the office in this case who is a non-gazetted officer and hence, I am competent to accord sanction under the powers delegated modified orders issued by G.O.Ms.No.n132, F&P (FW.PSC) Department dt:18/9/2000 and read with G.O.Ms.No.262, Finance & Planning ( FW – PSC ) Department dated 23- 11-98. & GOMS No.208 Finance (PSC) Dept. Dt:4-6-2010  
*( strike off which ever is not applicable )*

b). **Sanction Order :**

Pension benefits including commutation found admissible under the rules may be authorized. It is verified from the records in my custody and certify that no disciplinary or judicial proceedings are pending / contemplated against retiring / retired government servant to whom I am the authority for sanction of pension.

i). Service Pension : Rs. 44645/-

ii). Retiring gratuity : 116620\*16.5= 1924230/- (limited to 12,000,00)  
\*Twelve Lakhs only

iii). Commutation 44645\*40/100\*12\*8.194 = Rs.1755941/-

iv). Family Pension :  
a). Enhanced Family Pension : 44645/-  
b). Normal Family Pension : 26787/-

(v) Under Revised Pay Scales:

Office Seal

Signature and Designation of Pension Sanctioning Authority  
**COLLECTOR VIZIANAGARAM**

Special Deputy Collector (L.A.)  
T. B. P. Unit - III  
PARVATIPURAM

Note 1 : This is to be prepared in duplicate by the Pension Sanctioning Authority, one for the record of Pension Sanctioning Authority and the other one to be send to Accountant General / Local Fund audit Officer.

Note 2 : The Pension Sanctioning Authority should satisfy about the correctness of the particulars of family furnished by the Government servant / applicant in Part - I.

Note 3 : If the Pensionary benefits are not to be released Part - II B (b) shall be struck off.

Note 4 : If there is nay likelihood of delay, anticipatory Pension / anticipatory Gratuity as per Rule 51 of A.P. Revised pension Rules 1980 shall be drawn and paid by the Head of Office to the beneficiary without any delay.

Note 5 : Heads of Department are those listed in appendix - I mentioned in Article 6 of A.P. financial Code volume - 1 / subsidiary Rule 32 (II) of F.R. 9.

Secretary  
to The Chief Commissioner of  
Land Administration & Pension  
Sanctioning Authority  
A.P. Vijayawada

Special Deputy Collector (L.A.)  
T. B. P. Unit - III  
PARVATIPURAM

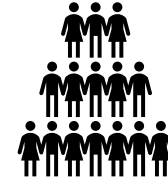




# Data Summary



19 States



55 Lacs+ existing Pensioners



2.5 Lacs+ new Pensioners per year



30k revision pension cases per year



4 Lacs+ Pension approving authorities (DDO & PSA)



6000+ Pension Authorization personnel (AG office)

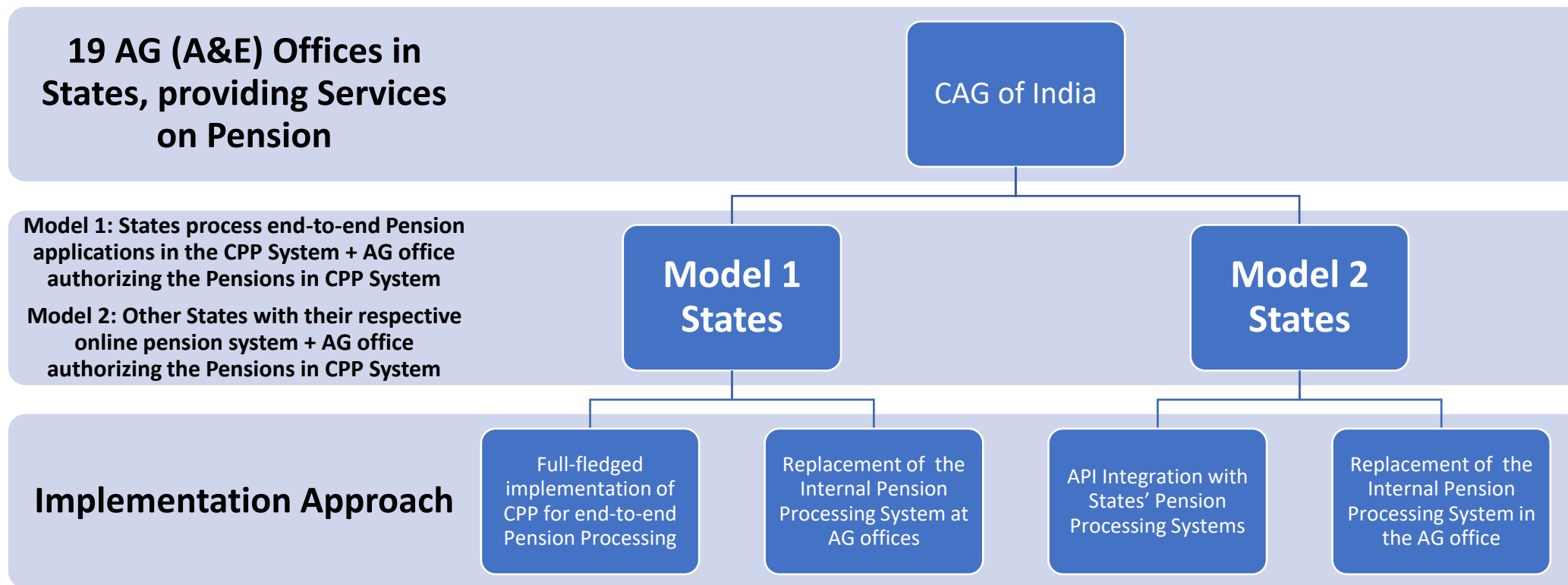
# Proposed Solution



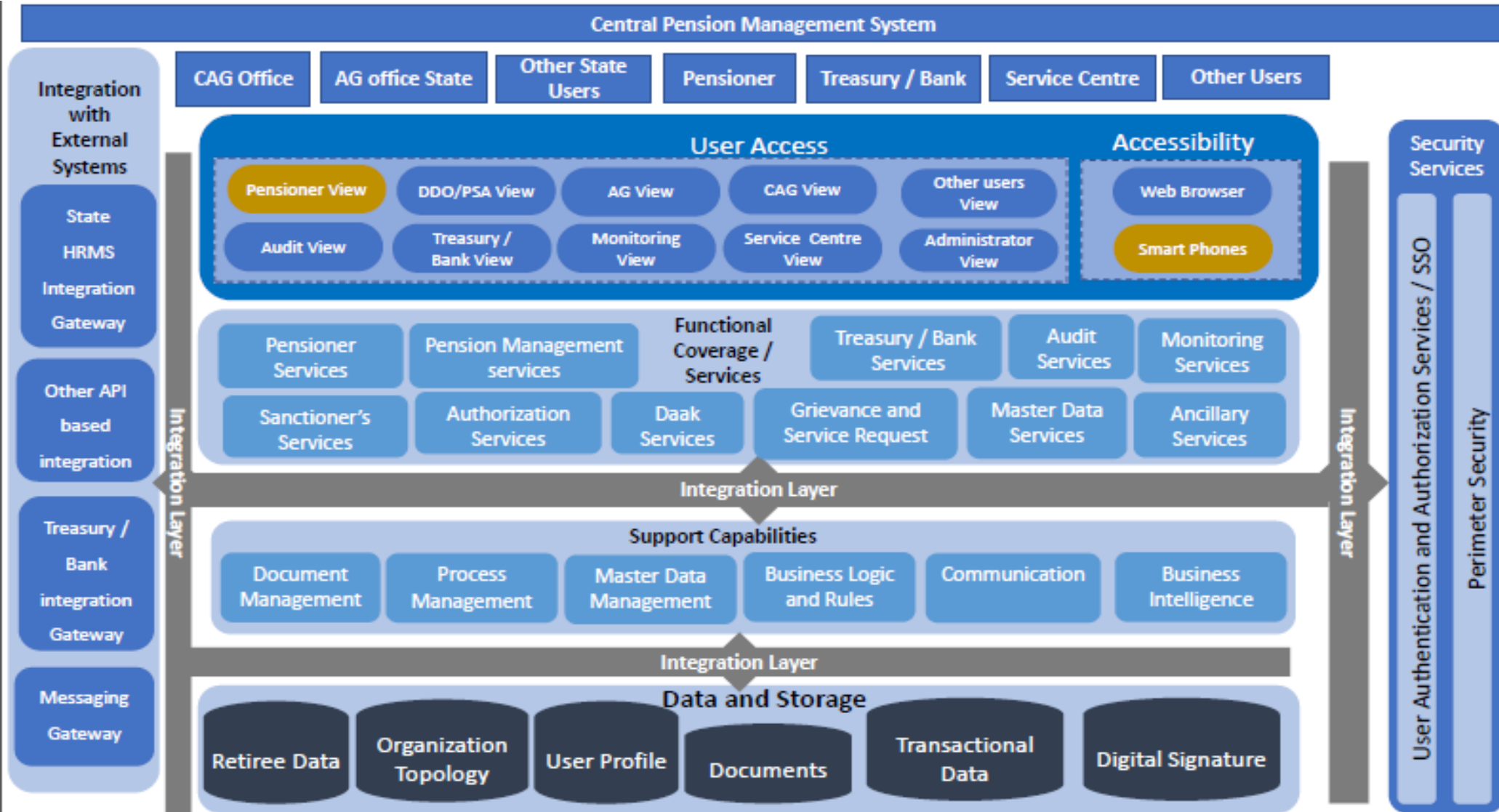


# On-boarding of States on Pension System

Based on the States' current maturity of IT processes and plan of implementing their respective Pension processing systems:



# Functional Architecture





# Technical Components

- BPM capability for digitizing business processes with capabilities for user interventions
  - Capabilities to store pension case related documents (Optional DMS)
  - Reporting capabilities on case generation, process and disposal (Optional reporting)
- BRE that interacts with BPM to determine eligibility and quantity of financial entitlements.
- Integration with external systems via API gateway and MFT based transfer with ETL capabilities
- User access management/authentication
  - Internal users – IA&AD users, state government users
  - External users – Pensioners

# Application Hosting Platform



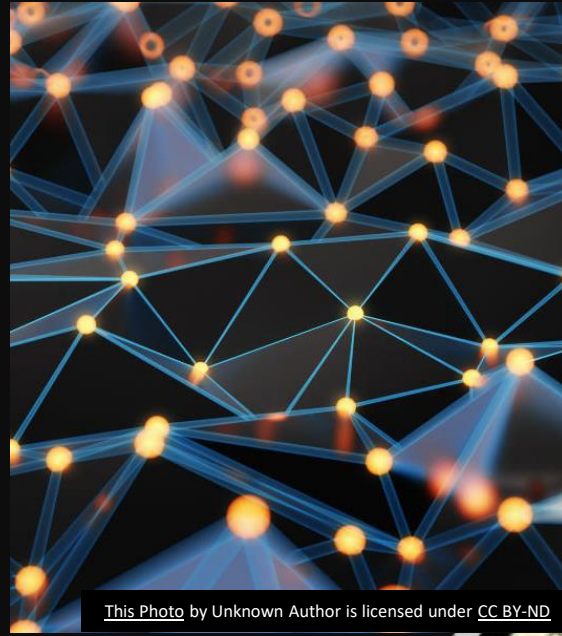
## Options:

- Virtual Private Cloud (MeiTY empanelled)
- Colo DC-DR

## Deciding Factors:

- Total Cost of Ownership
- Long-term Manageability
- Security
- Integration capabilities
- Pay-as-use Licenses for Infra components.
- Flexibility towards phase-wise implementation

# Biz process Reengineering **Ideas for the new system**



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# Areas for BPR



## Process Trigger

- Begins with a **pre-filled application** from HRMS data.
- Photo and Aadhar/ID to be captured
- Applicant records & verifies information



## Digital workflows

- Real-time tracking
- **Need Digitized SRs**
- Communication and **doc exchange**
- Online no dues by departments
- E-PPOs as e-Sanctions in IFMS
- Grievance redressal
- Central Help Desk



## Beneficiary authentication

- Applicant login
- **Beneficiary check**
- Life certificates
- empID as PenID



## Pension Calculator

- Rules and admissibility formula embedded
- PSAs have access to and use it
- Re-run at AG's only if needed
- Use by **non-AG PIA**



## Dashboards

- Tracking of lifetime payments
- Live Pensioners' data
- - Impact of Pay Revisions
- -Pay fixation on PRC to be done on e-SRs
- - Develop a mobile app



# Integration with Other Systems

The proposed system shall be integrated with various internal and external systems for exchanging data. The indicative list of key internal and external IT systems is as below:

- **External Systems (for all 19 States):**
  - State IFMS systems (for all 19 States in Model 2)
  - State HRMS systems (for 6 States in Model 1)
  - State AD/LDAP systems (wherever applicable)
- **3rd party Applications and Services**
  - Treasury / Banks as Disbursement Agencies
  - Aadhar
  - NSDL / Income Tax (for PAN validation)
  - IT systems of other ministries/ State Government departments



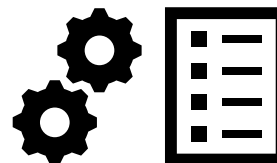
# Proposed Project Implementation Guidelines



# Scope of Work



CPP Application –  
Design, Development,  
Data Migration, Testing  
and Rollout of CPP  
Application



Procurement, Configuration,  
Deployment of Network,  
Infrastructure and Security  
components in Cloud/Colo DC-  
DR



Deployment of Resources  
at Onsite @ Hyderabad.  
Mandatory for Phase 1



Training to the Users,  
Operating Helpdesk



Performance and third  
party security audit

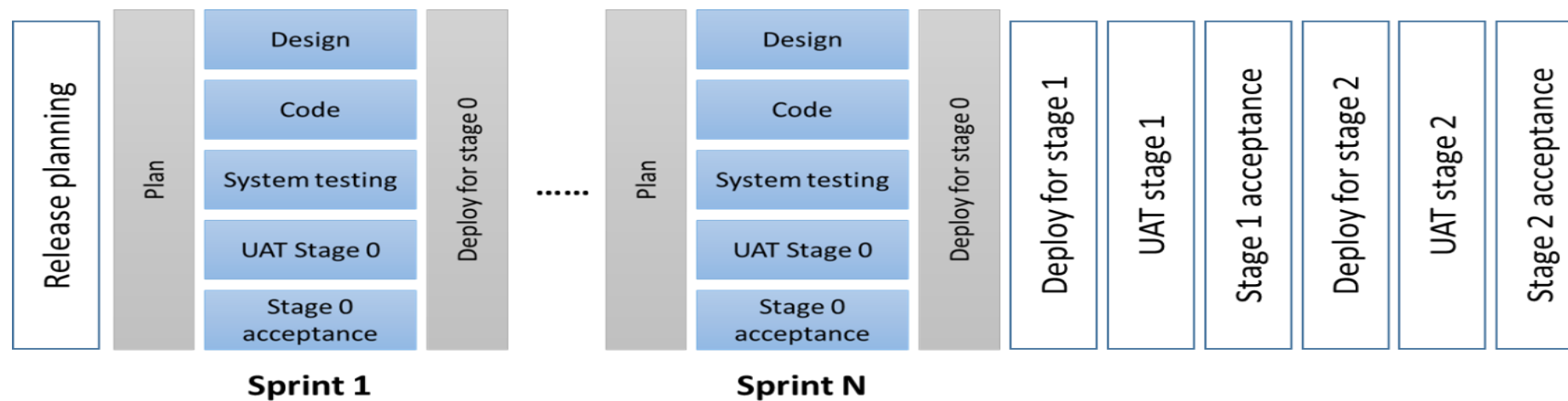


Operation and Maintenance  
for 7 years post Go-live of  
complete CPP Application of  
Phase 1.



# Proposed Implementation Methodology

- The CPP IT solution is proposed to be implemented in two phases:
  - ❖ **Phase 1 – Model 2 implementation**
    - Stage 1 – Design, Development and Implementation in 5 “Pilot” States. (8 months)
    - Stage 2 – Roll-out in remaining 14 states (12 months)
  - ❖ **Phase 2 – Model 1 features to be added in CPP Application and roll-out in 6 States**
- Agile Based Iterative Development (For Phase-1 and Phase-2)



# Proposed Engagement / Payment Model



#	Track	Track Items	Engagement Model	Remarks
1	Setting Up of Development & UAT environment	Setting up development & UAT in cloud for three months	Fixed Cost	Three months or until the Cloud / Tier-3 co-located DC/DR environment is ready and migration is complete
		Migration of development & UAT environment to Tier-3 co-located DC/DR (if necessary)	Fixed Cost	Only required if DC-DR is setup. Not required if DC-DR is setup on Cloud.
2	CPP Application Development, Implementation & Roll Out	CPP Application Phase 1	Fixed Cost	RQA, Design, Dev, Data migration/setup, Testing, UAT, Rollout
		CPP Application Phase 2	T & M	Upon completion of Phase 1, the same team shall continue to the maximum possible extent.
3	Setting Up of PDC and DRC at Tier-3 co-located DC/DR or MeITY empaneled Cloud	Cloud / Tier-3 co-located DC/DR for CPP Application Phase 1	Phase 1: Fixed Cost	Procure, Provide, Configure and Test the following for Cloud / PDC and DRC: CPP Application, System software, Hardware, Security Components, Disaster Recovery Software, Network, etc.
		Cloud / Tier-3 co-located DC/DR for CPP Application Phase 2	Phase 2: Fixed cost	
		Set Up for DRC for CPP	Fixed cost	
		Backup Sites	Fixed cost	At 2 IA&AD offices To be identified if need be. Maybe, one can be a Pilot office and the other an entity like iCISA.



# Proposed Engagement / Payment Model

#	Track	Track Items	Engagement Model	Remarks
4	Track 4: Centralized Helpdesk Set Up and Operations	Helpdesk Tool Helpdesk Resources	Time & Material for Resources	A separate and dedicated team shall be deployed for operating the Centralized IA&AD helpdesk. The first level of support will be provided by functional help desk of IAAD
5	Track 5: Training and Capacity Building	Training the Master Trainers End-users Training OEM Product Trainings	Time & Material for each Training conducted	
6	Track 6: Operations & Maintenance	CPP Application Phase 1 and Phase 2	Time & Material for Resources	IA&AD to approve the count and profile of resources before onboarding



# Proposed BoM Components

1. **Centralized Pension Processing Application** – Implementation efforts for Software Development, Testing, Deployment and Roll-out
2. **Training** – Application, All OEM Tools and Products
3. **System software (COTS products)** – 3<sup>rd</sup> party applications and services, BPM, BRM, DB, Reporting/BI, ETL, Web Servers, Application Servers, Storage, Help Desk, etc.
4. **Supporting Platforms for Dev, QA, UAT, Training, Pre-Prod and Prod environments** – Virtualization, OS
5. **IT Infrastructure** – Racks, Servers, Routers, Switches, NextGen Firewalls, WAF, Load balancers,
6. **Monitoring & Managing Network, IT Infrastructure and Security** – Anti-virus, SIEM, Anti-APT, DLP, HIPS, HoneyPot, IDAM/PAM, HSM, DB Activity Monitoring, Site recovery software, etc.
7. **Application Hosting:** Cloud / Colo, Network Connectivity
8. **Team for Application Maintenance, Infrastructure & Security Mgmt** – O&M efforts
9. **3<sup>rd</sup> party / External BoM, Security and VAPT Audits**





# Commercial Bids - Guidelines for SI

Deviation “observed” on any of the following factors may impact the marking during evaluation stage of Commercial bids:

1. Costs should not include upfront warranty / ATS – Costs should be spread across the life of the project.
2. Unit Costs (for all components) :
  - Should not include excessive margins
  - Should not overload / Underload margins of some components.
  - Should enable department for repeat purchases
3. If hosting is proposed on Cloud, perpetual / one-time installation licenses should not be proposed - User/usage-based licenses shall be preferred.
4. SI – OEM partnership:
  - Should propose OEM/partners with whom they have collaborated on minimum 2 successful implementations
  - SI should propose Risk mitigation plan in case of challenges in getting requisite support during / post implementation from OEM.
5. Being in Consonance with RFP (indicative) BoM
  - SI should not give BoQ less than the BoQ mentioned in the RFP BoM
  - Still, in case the BoQ proposed by SI is less than the RFP BoM, detailed design justifications need to be provided.



# Current Status

- NISG has been appointed as Consultant for RFP preparation and Bid management.
- Drafting of RFP is in advance stage.
- Discussions with States for on-boarding in advance stages



# Q&A

1. Hosting Model – Cloud v/s Colo DC/DR
2. BPM and BRE – Probable Solutions meeting IA&AD Expectations
3. Master Data management, User access control, Integration with multiple HRMS systems
4. User provisioning & authentication of large volume of users
5. Incremental Delivery of BoM Infra components – Augmentation based on need
6. Continuity, Longevity and Support commitments from OEMs
7. BoQ should include DMS and portal as CoTS?



THANK YOU

# Technical Architecture Stack



**Integration with External Systems**

- API Gateway Platform to explore SOAP/ REST APIs
- MFT based secured for Data Transfer
- ETL for data mapping and integration

**Presentation Layer**

**Process Layer**

BPM Capability for Long running Processes with more user interventions

Business Rules to interact with BPM/BPEL layer

**Service Layer**

SOA suite and Service Bus to provide faster development and provisioning of services, better management and flexible integration

**Integration Layer**

**Business Logic Layer**

Analytics Tool with reporting and Self Service features

**Data Access Layer**

**Data Storage Layer**

Documents User Profile Organization Topology Retiree Data Transactional Data RDBMS

(Internal / Power and Super users )  
LDAP / AD directory-based user management  
Roles based authentication and authorization

Authentication of Large Volume of Pensioners on Portal

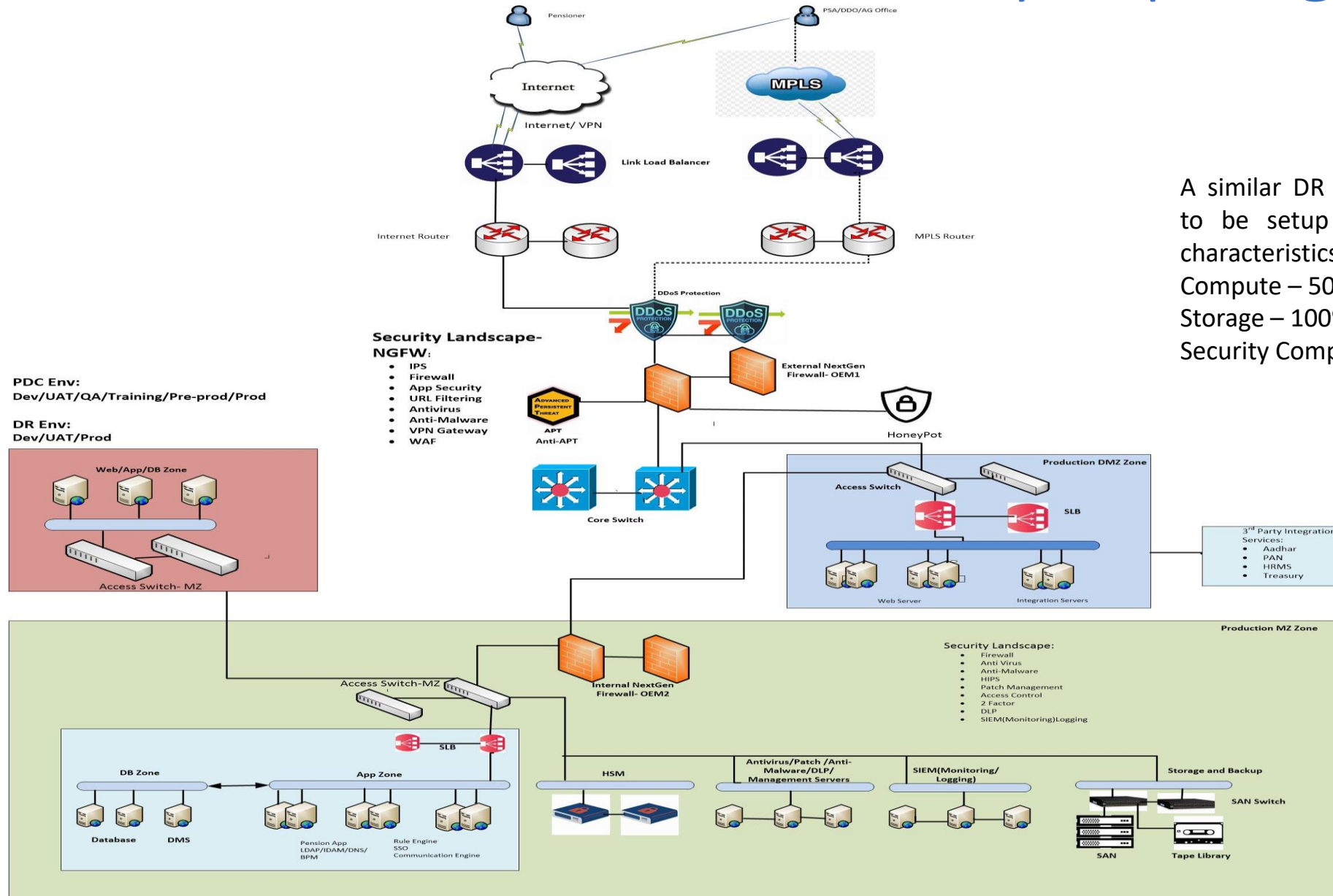
# Guidelines for Technology Platforms



The various components of Technical Stack should have following characteristics:

- Must support High Availability mode for all components
- Should be inter-operable with other platforms for integration
- Should be horizontally and vertically scalable
- Should not be tied to any proprietary hardware and operating system
- Should be supported on different virtualization platforms
- Should be operable on Cloud Infrastructure
- Should have DR and Back-up support wherever applicable
- Should have high degree of configurability, Easy to learn & implement (BPM, BRM)
- Hardware/Software/Application Upgrades should be seamless and backward compatible
- Should publish a benchmark figures on Throughput
- Self service features wherever applicable (in case of BPM, BRE and Analytics) should be supported
- Should support role-based authorization of services / APIs
- Should be in accordance with various IT Acts, MeITY and other Govt. guidelines
- Should not be blacklisted by any regulatory / statutory body in the e-Gov space in the last 5 years

# Network & Infrastructure Security Topology



A similar DR is also required to be setup with following characteristics:  
 Compute – 50%  
 Storage – 100%  
 Security Components – 100%







# Proposed Team Structure

Onsite Development Team comprising of following Profiles:

Sl. No.	Resource Type
1	Project Manager
2.	Scrum Master
3.	Enterprise Solution Architect
4.	Infrastructure and Security Architect
5.	Enterprise Application Architect
6.	(Sr.) Business Analyst

Sl. No.	Resource Type
7.	(Sr.) Developers
8.	QC Expert
9.	Test Lead
10.	Testers
11.	Data Preparation / Migration Expert
12.	Database Administrator
13.	System / Cloud Administrator
14.	UX/ UI Designer