IFMIS strives to bring together all the HoDs on a single platform
Challenges

❖ Finance Department (FD), Government of Telangana has spearheaded several IT initiatives however, these systems have been developed in different operating environments and platforms, resulting in several pockets of information within the State, leading to non-availability of a real time State wide (enterprise) view.

❖ Some of the major challenges
❖ No single source of truth available in the State that could facilitate collation, presentation and utilization of key financial information on a real time basis, for pro-active decision making.
❖ Current applications do not comprehensively fulfil the functional requirements.
❖ Large scale reconciliation requirements leading to wastage of substantial time and efforts
❖ Archaic processes still being adopted within the Government due to limited Government process reengineering
❖ Interface amongst key stakeholders still not established
HODs Under Finance Department

❖ Director of Treasuries and Accounts (DTA)
  ▪ Deals with the Receipts and Expenditure of the State, Except Twin Cities and Works Payments
  ▪ Using the Impact Application Developed by in house Programmers with PHP frontend and PostgreSQL as backend.
  ▪ No Integration with FD and other Payment Systems.

❖ Pay and Accounts Officer, Hyderabad
  ▪ Deals with the Expenditure of HoDs present in and around of Twin Cities, i.e. Hyderabad and Secunderabad.
  ▪ Using the Impact Application Developed by in house Programmers with PHP frontend and PostgreSQL as backend.
  ▪ No Integration with FD and other Payment Systems.
HODs Under Finance Department contd..

❖ **Director of Works and Accounts (DWA)**
  - Deals with the all Public Works Departments Work Bills of the State. i.e. Irrigation, Road and Buildings and Panchayat Raj Eng. Dept. etc.
  - Using the Impact Application Developed by in Centre for Good Governance (CGG) with .NET frontend and **Oracle** as backend.
  - No Integration with FD and other Payment Systems.
THE DIFFERENCE IFMIS MAKES

1. IFMIS is a Cloud-enabled application thereby making it scalable and thus makes it more reliable compared to age-old solutions that use massive hardware that face the danger of crashing when traffic increases with usage.

2. The implementation of advanced data security and data encryption.

3. M-Payslips Service adds another notch on the belt for IFMIS. Monthly payslips are sent to the Govt. employees after they receive their salaries that serve as proof for various benefits that they can redeem in platforms like public transport, bank loans, etc.

4. OTP based authentication from high-level officers or authorized users.
Technology Used

**Autoscaling Cloud**
This is a method used in cloud computing, whereby as the amount of data and users increase or decrease, servers calibrate themselves automatically based on the load on the cloud infrastructure. This ensures that the servers can handle the heavy volume of data at any point in time.

**Data Integrity**
This is the maintenance and the assurance of the accuracy and consistency of data over its entire life-cycle. It is a critical aspect to the design, implementation and usage of any system which stores, processes, or retrieves data. There are various validations and checkpoints that the data goes through before it is stored as it is checked for consistency.

**Quick Tip**
Try right clicking on a photo and using “Replace Image” to show your own photo.
Advantages of leveraging AI for financial administration

- Continuous and automated surveillance to flag anomalies
- Information driven specific investigations with valid proofs
- Proactive identification of loopholes in process and data systems

AI can help in financial governance and monitoring by quickly detecting patterns & anomalies in millions of transactions spread across discrete systems leading to:
✔ Ensuring that process & system compliance is being achieved in real-time
MOBILE APPLICATIONS

- Mobile applications are developed for the sole purpose of being updated and notified on the go without the need of a computer system for access.
- IFMIS provides advanced mobile applications for user roles such as DDO, Finance Secretary, etc.
- It is made easy to contact customer support regarding any queries and any and all conversations can be made via the user’s mobile phone.
- Users can track the status of any process they wish to follow up on as the mobile application due to the remote access enabled.
- Data security and encryption ensures a high level of security and full protection from data theft or hacking.
Case study:
AI based anomaly detection in salary payments

AI can help in creating scrutiny mechanisms that enable administrators to gain insights that are usually revealed through a thorough audit, with minimal effort.

For e.g., AI can mine the salary disbursements transaction data to:

- Identify anomalies w.r.t. employee pay scale, flag the nature of anomaly, quantify impact & identify transactions that do not reconcile across systems.
- Let's investigate the top anomalies.

<table>
<thead>
<tr>
<th>Employee ID</th>
<th>Scale</th>
<th>Normal value (INR)</th>
<th>Deviation from normal (INR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>E57289</td>
<td>013</td>
<td>30,051</td>
<td>6,74,86,046</td>
</tr>
<tr>
<td>E28759</td>
<td>008</td>
<td>18,738</td>
<td>32,82,058</td>
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<tr>
<td>E43618</td>
<td>009</td>
<td>21,173</td>
<td>12,10,323</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>
Sample report 1: Scale-wise distribution of anomalies

Notes:

• Each dot in this graph represents SUM of amounts paid to an employee in FY17-18.

• X-axis is the scale code.

• Red dots represent abnormal values, for a given pay scale.

• Note that Y-axis has logarithmic scale and hence, abnormal values are really high compared to normal values.

Abnormally high earnings are on the lower end of the scales.
Sample report 2: Average EL encashment per year in service varies widely between employees at some scales.

Legend

- x Employees of DDO with top anomalies
- o Employees of other DDOs

Notes:
Y-axis is set to logarithmic scale and hence, abnormal values are really high compared to normal values.
Improving State Effectiveness and Expenditure Efficiencies
Project to improve State Effectiveness

- A special unit created within GoTS along with Centre for Effective Governance of Indian States (CEGIS)
  - Staff deputed from Finance and Planning Departments and CEGIS
  - Build-Operate-Transfer Model to improve state capacity

- Key objectives are to improve
  - Quality of public expenditure
  - Socio-economic outcomes

- Four-pronged approach-
  - Outcome measurement
  - Personnel management
  - Strategic budgeting
  - Evidence based policy roadmaps

Tripartite MoU signed between Departments of Planning and Finance, Government of Telangana and CEGIS on 16 October
Phone Based Survey as a Good Way to Generate Real-Time, Representative, and Economical Beneficiary Feedback

- A centralized call-centre to conduct phone-based high-frequency monitoring (HFM). The centre would have two features:
  - Ability to place outbound calls to beneficiaries and conduct surveys, and receive inbound calls for grievance reporting
  - Effective Monitoring Information Systems: Automatic data collation in an accessible format

Proactively calling a representative sample of beneficiaries can generate (i) quick, (ii) unfiltered, and (iii) unbiased feedback
Why Use Phone Surveys?

Phone survey allows governments to:

• Collect **high-frequency** programme delivery data (especially regarding last-mile delivery) across programmes and geographies
  - E.g. asking beneficiaries if they have received their entitlements

• Use **representative** data to understand general beneficiary experience and grievances
  - E.g. asking beneficiaries about instances of corruption

• Hold frontline workers and other officials **accountable**
  - E.g. using programme delivery data for performance pay

Phone Surveys can be used to **implement existing programmes better** and **test out new programmes** before taking them to scale
Phone Survey System in Rythu Bandhu Scheme

- GoTS – input subsidy scheme (Rs. 4000/acre twice a year) via physical cheques distributed by the Mandal level Agriculture Officer (MAO)
- Phone based monitoring significantly improved implementation quality
  - Extra Rs. 25 Crore delivered on time
  - Estimated cost per additional rupee delivered was 36 paise
  - Conservative assumptions yield a benefit/cost ratio of 4x

- Informed that there will be data collection, before the implementation
- Report cards (two wave)
Thank you