3i Infotech
LIMITLESS EXCELLENCE

NuRe
Return on Digital
a 3i Infotech Company

Azadi Ka Amrit Mahotsav

# Data Governance

## Privacy and Security in the Digital Age

September 6, 2024

**27th National Conference on e-Governance**

# Agenda

- Data Governance Framework – Overview
- Our Approach Towards Data Governance
- Roadmap

# 3i Data Governance Framework - Overview

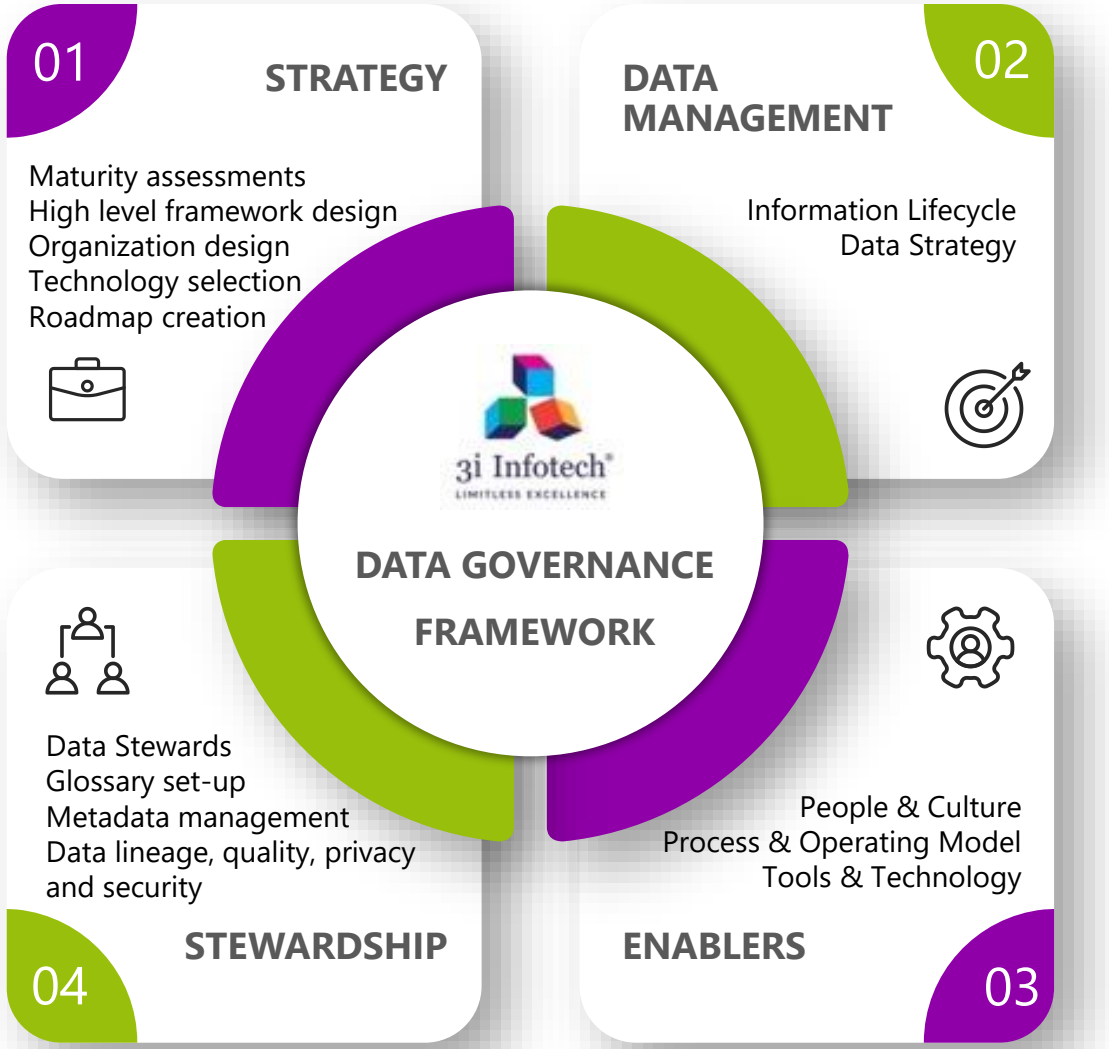
**Vision:** To enable Organization's vision of "Smart for All" through "Smart People & Smart Solutions" with a strong foundation of Data Governance.

**Goal:** Transform Data Governance through a robust Information Lifecycle Management - Acquisition to Archival

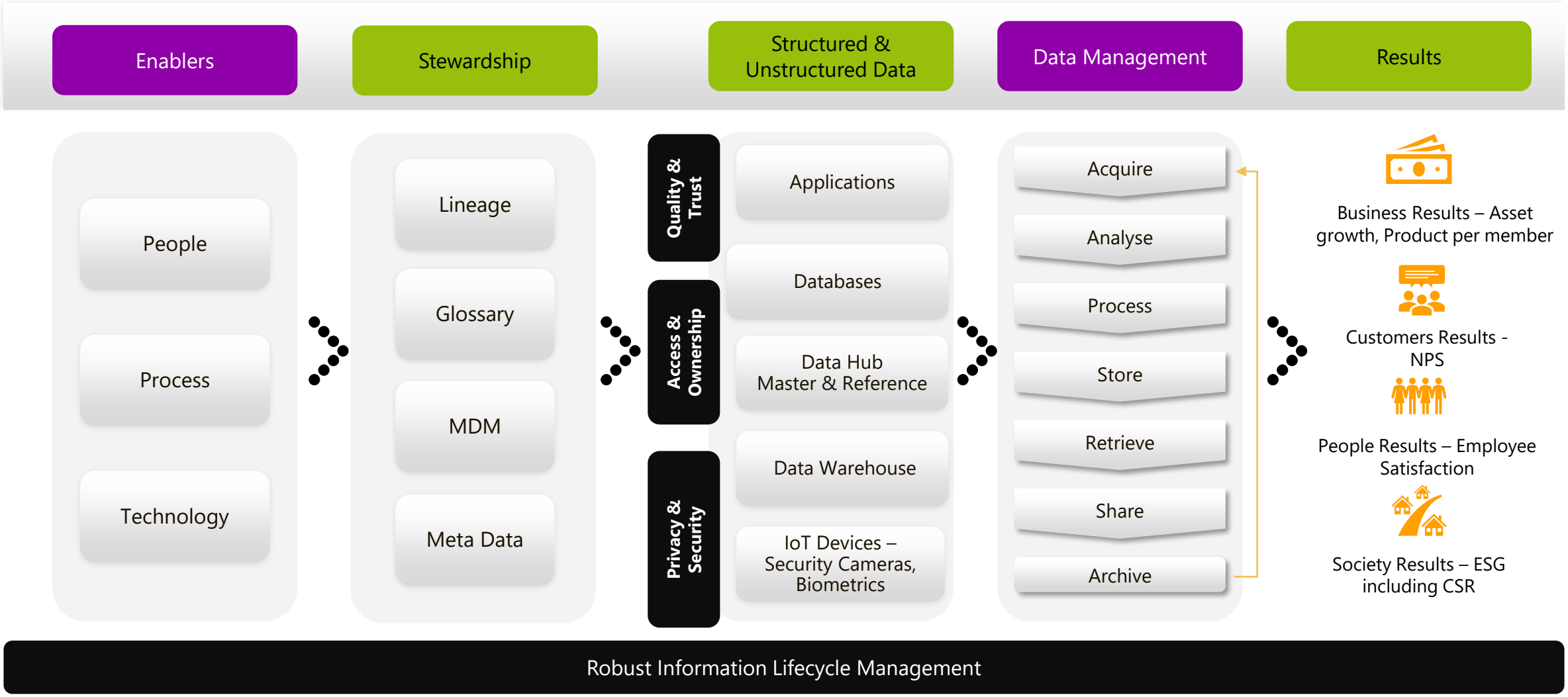
**Governance:** Clearly defined Responsibilities and Accountabilities across the Information Lifecycle Management, aided by Digital Solutions.

A robust **Data Governance** framework enables managing and maintaining Data Quality by ensuring data is:

- **COMPLETE**
- **CONSISTENT**
- **VALID**
- **ACCURATE**
- **INTEGRITY**
- **TIMELY**



# 3i's Proposed Data Governance Lifecycle

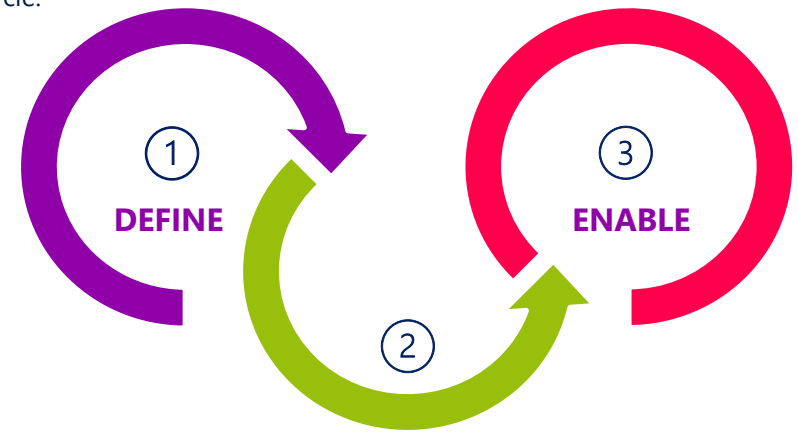


# Approach Towards Data Governance

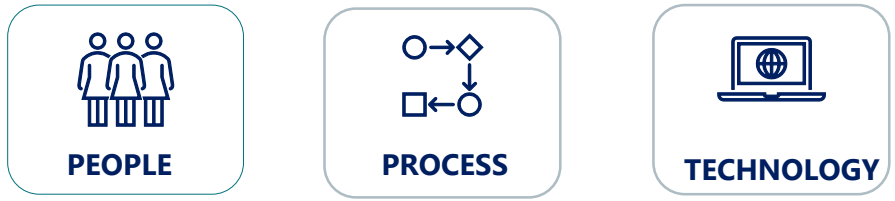
# Gain full understanding of your vision and design a relevant framework tailored to your requirements

**Define** and create automated Data Governance and Data Quality controls across the data life cycle.

**Enable** the organization with a robust Data Governance program to manage & maintain good quality data across all Lines of Businesses.



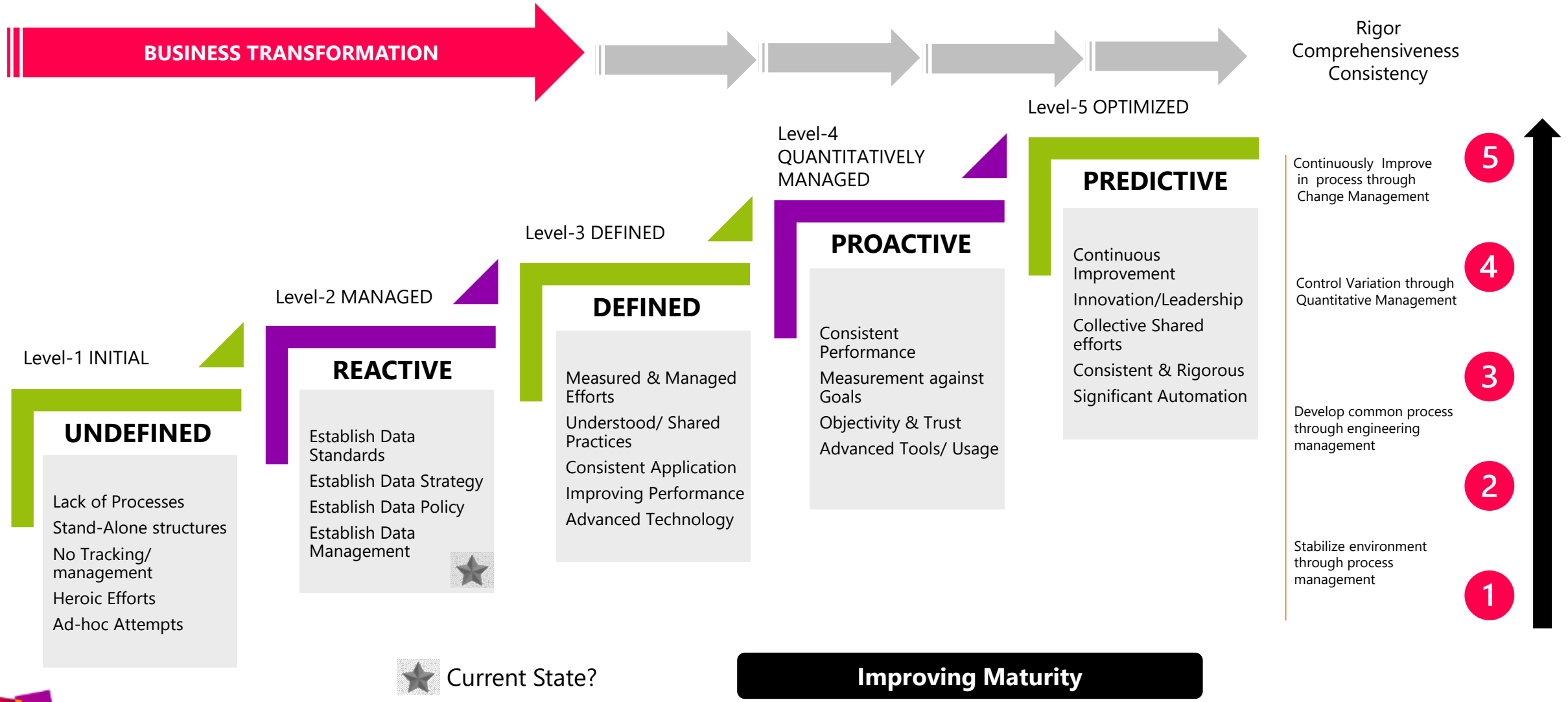

**Operationalize** processes, tools, and technology for Data Management, Profiling, and Investigation with a focus on early remediation of Data Quality issues and ongoing maintenance.



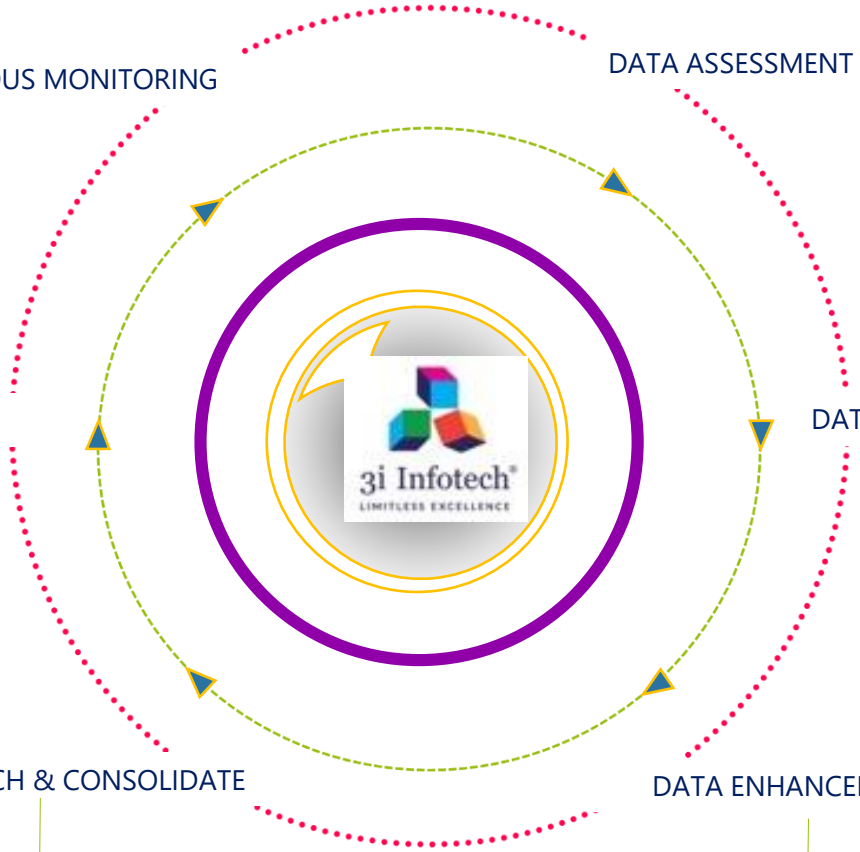

## Data Maturity Scorecard – Stated Outcomes Example

| Element | Current Maturity | Desired Maturity | KPI | Outcome |
|---|---|---|---|---|
| Organization | Traditional Structure | community based self-governance | New Ideas Implemented | % Employee Satisfaction Rate |
| Stewardship | Data Stewards only | Stewardship in every discipline | Stewardship communities | % of more Stewards |
| Policy | Ad-hoc Policy management | Structured Policy Management | None Specific | % increase in regulatory compliances |
| Data Quality | Spreadsheet-based DQ program | Process oriented DG program | • Data utility index<br>• Price of data | % reduction in fraud |
| Architecture | Stovepipes of data | Federated and integrated | • Data availability index<br>• Data supply ratio | % reduction in Data Mgmt. Cost |
| Metadata | No Metadata Management | End to End Metadata Management | • Business glossary<br>• Metadata elements | % reduction in Policy failure |
| Security | Enterprise Access Control | Context-based entitlements | No. of Incidents | % Member Satisfaction |
| Risk | Faith-based Risk Management | Faith-based Risk Forecasting | • Increase in Capital Reserves<br>• Reduction in Losses | % Net underwriting profit |
| Value | • Command Economy<br>• Labour Theory | Demand Economy Utility Theory | Efficiency of IT service pricing | % Net IT operating profit |
| ILM | Enterprise Backup | Policy-based backup | Retention/deletion ratio | Terabytes Saved |
| Audit | Quarterly Audits | Automated self-assessments | • Failures reported<br>• Audits passed | % reduction in IT Project failure |

# Enhance People, Process & Operating Model Moving towards a predictive future state



# Data Strategy & Information Lifecycle




**MONITORING** measures ongoing data quality and provide alerts

**MEASURE** and quantify the number of defects and **ANALYZE** the nature and cause of the defect

**SECURITY** by preventing loss of data through unauthorized access.

**PARSE** data elements into data structures, **STANDARDIZE** data values and formats as per rules, **CORRECT** by verifying, scrub, and append based on a set of sophisticated algorithms.

**MATCH** duplicate records within multiple tables or databases, **CONSOLIDATE** combine unique date elements into a single source

**ENHANCE** appends additional data increasing the value of the information

# Tools & Technology

## Tool 1

- Unified Platform with Complementary Modules
- Enterprise-Proven Usage
- Robust Data Processing Engine

DG Tools & Technologies

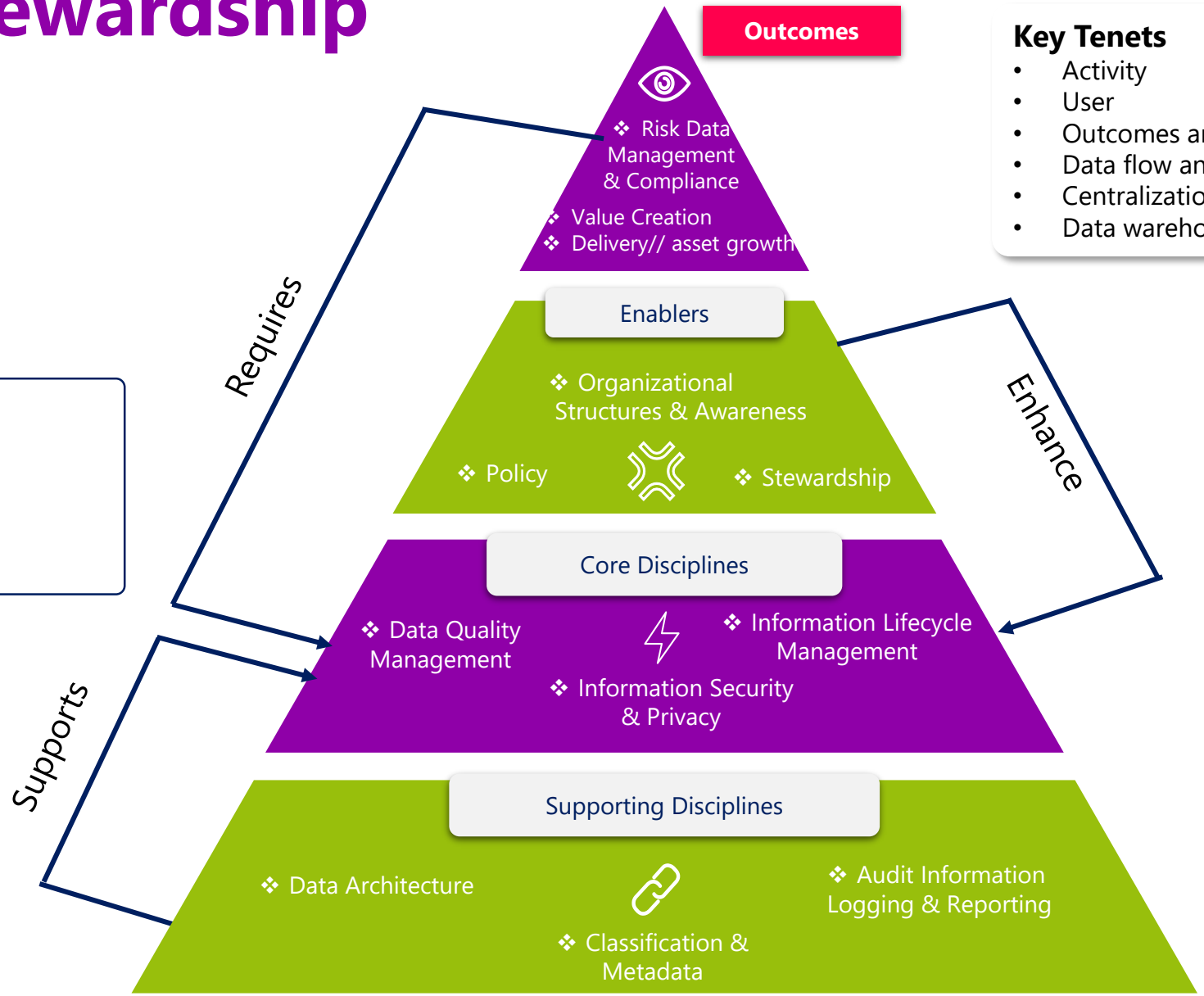
## Tool 2

- Proactiveness in Managed delivery
- Secure for data in transit and at rest
- Acceleration in cloud transformation cycle time

## Compliance Reporting

- Work in Progress

# Data Stewardship




**Key Tenets**

- Activity
- User
- Outcomes and Value management
- Data flow and Data architecture
- Centralization of data & Creation of Data lake
- Data warehouses and Data Masters

**Practices:**

- Compliance
- Information Governance
- Information Security
- Privacy
- Storage & Retention

# Meta Data and Key Decisions Sought

Most metadata support has been targeted at operational stewards though we do use subject areas to identify Executive stewards.

METADATA & DECISIONS

Executive level govern from simple tools

Metadata work primarily focused on operational stewardship level

**01** 

Strategic Steward

**Support:** Subject Areas, Key business data elements, Key outcomes, KPIs & CX
**Metadata:** Value Assessment, Health check Dashboards & RAG Status, Contract governance, vendor data governance & performance benchmarks

**02** 

Operational Steward

**Support:** Business Standards, Data lineage, Impact Analysis, Metrics
**Metadata:** Business Standards, Data Models, ETL, Retention Classes, Info classes

**03** 

Tactical Steward

**Support:** Where-is, What-is, Accountability for Database, Reports, Files, Programs
**Metadata:** Reports, Data Models, Information, Requirements

# Roadmap

# ROI and Next Steps 1 Year Roadmap

Q1 – Q2

**Hygiene**

- Data Landscape discovery
- Data source identification and data collection planning
- Data Quality assessment and Automation roadmap
- Product and platforms data scoping into data governance
- Define governance structure and target operating model
- Data Interactions management
- Security management
- Enable Data maturity life cycle
- Meta data transformation
- Risk, Value and ILM management
- Linking data pipelines to policy, procedure and tool workflow level
- Enable audit trails and logs as required

DEFINE

Q2 – Q3

**Confidence**

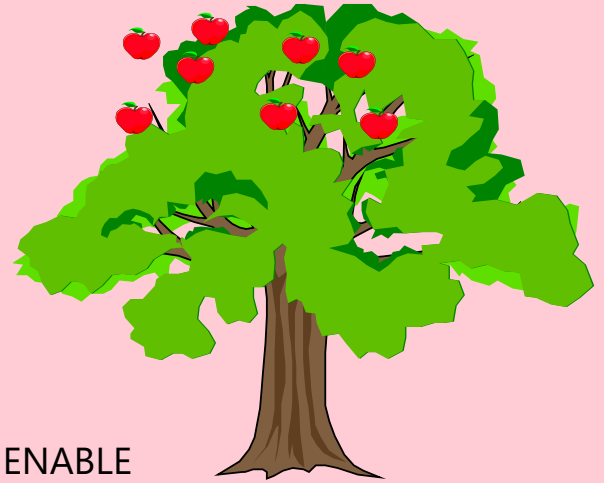
- Enable Data management
- Operationalize data strategy and automation roll outs in phases
- Enable Information life cycle – Assessment to monitoring
- Meta data decisions alignment
- Facilitate automated data quality scorecard
- Data value management and data synergy
- Log management and action
- Leak prevention, data classification and information management governance and reporting
- Third party data management and data assurance

OPERATIONALIZE

Q3-Q4

**Reliability**

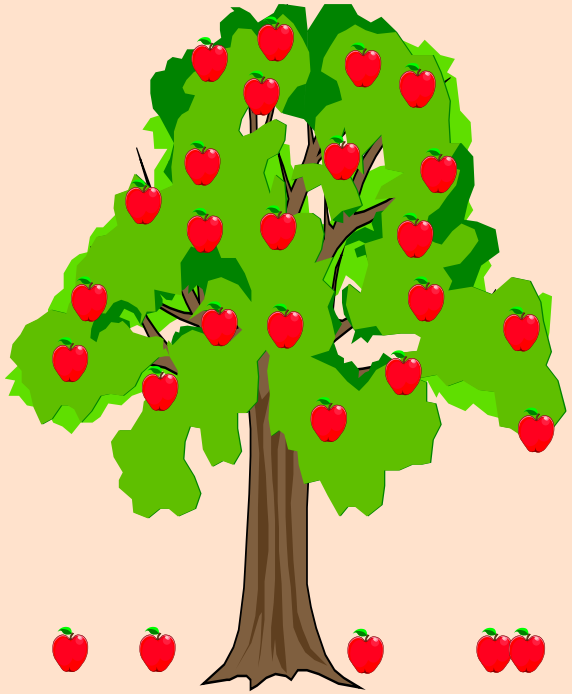
- Data Stewardship and Governance
- Enable data workflow and tooling for control self-assessment
- Manage CIA metrics and specifically enable
  - Corrective controls
  - Detective controls
  - Preventive controls
  - Input, Process and Output Controls
- Measure data quality and review the exceptions periodically
- Refine data architecture and scale the data automation to autonomation
- Data management, reports and automated refresh's



ENABLE

**Data Stewardship**

- Optimize cost of data management and maintenance
- Compliance management by design
- Vendor/Partner Governance
- Policy deployment through the system and audit trails through the system
- Continuous monitoring and control self-assessment



# Roadmap by Classification

## Hygiene

L6- Define the data automation and tooling roadmap
L7-Interactions
- i) Data cleansing
- ii) Data Quality
- iii) Stewardship and goal alignment

L8- Elements of data maturity scorecard

L2- Map the data collection planning and data governance parameters
L3- Map the data flow diagram and align the data strategy
L4- Measure the data maturity
L5- Map the KPI and Governance model

L1- Identify the sources of data as structured, unstructured and semi structured
L0-Identify and map the data landscape

## Confidence

M4 Setting up of PMO
M4a) Data quality team
M4b) Policy management
M4d) Security Management and Access controls

M3 Target operating model
M3a) Tool workflow standardization
M3b) Customization
M3c) Queue management- Escalations and Incident handling
M3d) Centralized reporting team-Automation
M3e) Enablement of lean driven decision support system

M2 Continuous monitoring
M2a) Control Self assessment
M2b) Coaching sessions the team members
M2c) Meta data decisions alignment

## Reliability

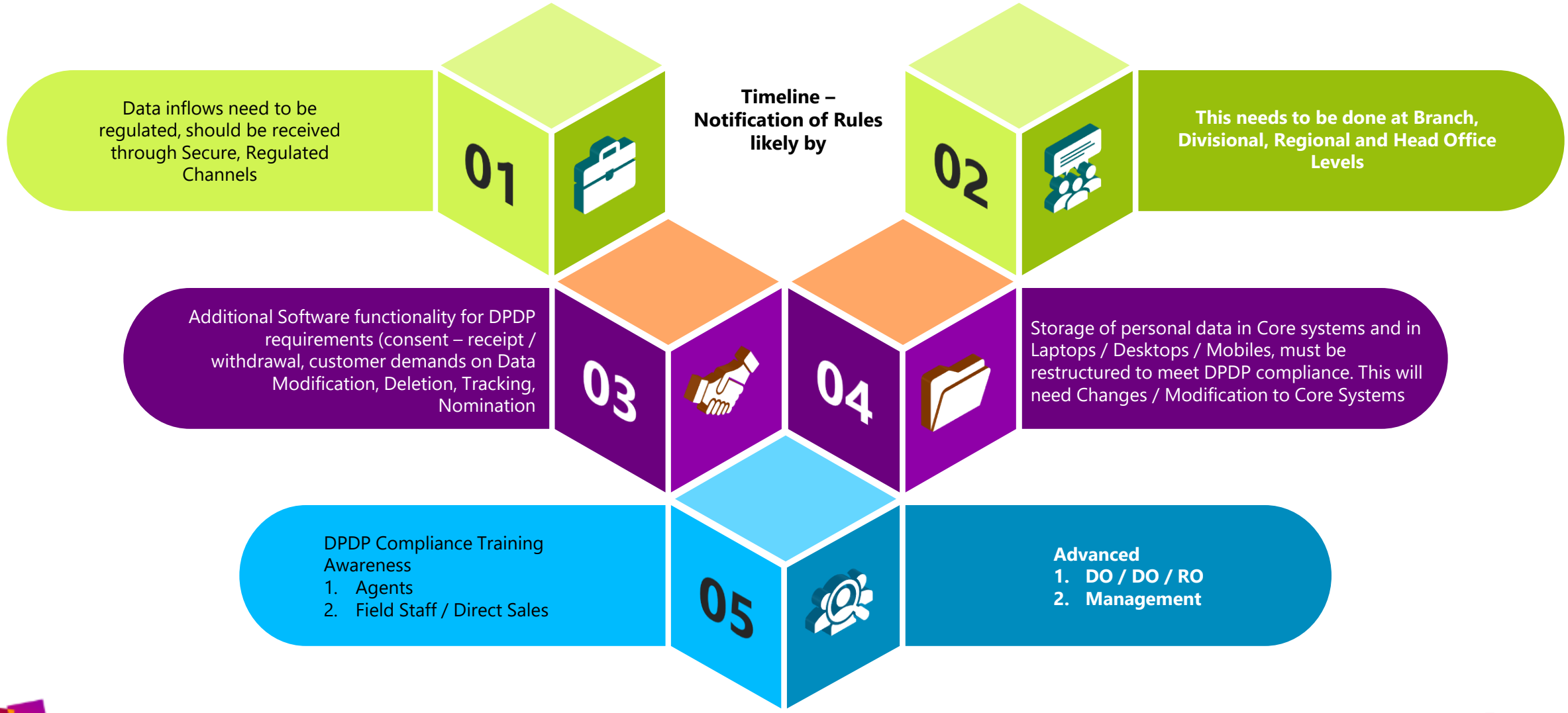
H9. Quality Controls for data governance and data utilization
H10. Structuring the data security by data layer level
H12. Predictive analytics as relevant

H4. Governance Workflow digitalization
H5. Risk management and profiling
H6. Data Value management
H7.Back up and recovery of data
H8.User experience management

H1. Manage the data lifecycle through automation
H2. Tools and Technology enablement
H3. Meta Data and Data Standardization

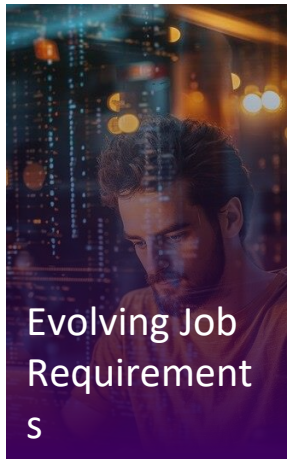
# Key 3i Initiatives

# DPDP Implementation - Immediate Action Plan



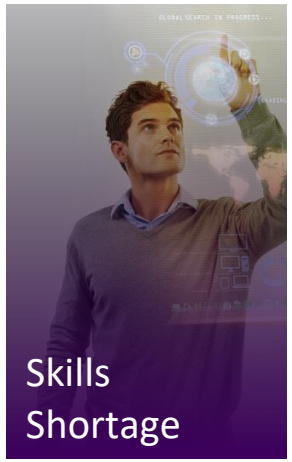
# Bridging the gap: Current Skills vs. Future AI-Driven Demands

*As AI technologies transform industries, the need for specialized skills in data governance becomes increasingly critical. Bridging the gap between current expertise and future demands is essential for effective data management in an AI-driven world*



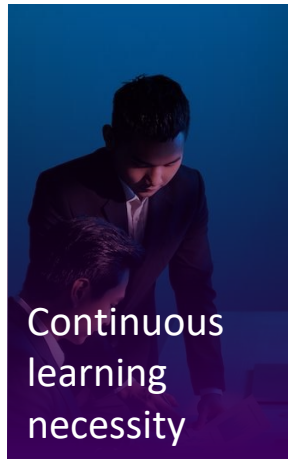
## Evolving Job Requirements

The rapid advancement in AI technology is creating new roles and responsibilities that require specialized skills not currently widespread in the workforce.



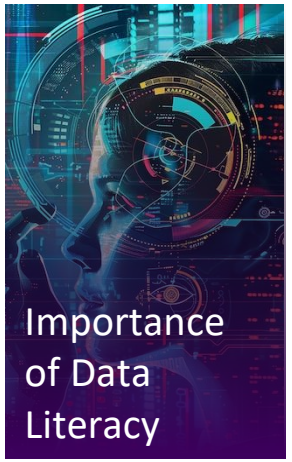
## Skills Shortage

There is a significant gap between the demand for AI, data science, and cybersecurity professionals and the supply of qualified candidates.



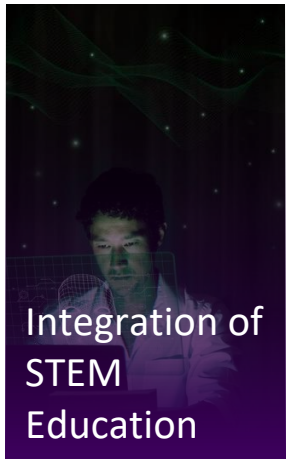
## Continuous learning necessity

To keep up with emerging technologies, individuals must engage in ongoing education and professional development to stay relevant in the AI-driven job market.



## Importance of Data Literacy

As data-driven decision-making becomes universal, data literacy is essential across all sectors, not just technology-focused roles.



## Integration of STEM Education

Early promotion of STEM education and skills is crucial for building a strong foundation for future careers in AI and related fields.

## 3i Infotech's Initiatives

- Comprehensive skilling programs in AI, data governance, and cybersecurity
- Collaborations with educational institutions and industry partners
- Success stories: Graduates driving innovation in data governance

3i Infotech
LIMITLESS EXCELLENCE

NuRe
Return on Digital
a 3i Infotech Company

# Thank you


Rishi Agrawal
CTO & Global Practice Head
Rishi.agrawal@3i-infotech.com



marketing@3i-infotech.com
www.3i-infotech.com

**Corporate Office:** 3i Infotech Limited, Tower # 2, Wing E, 6th floor, Nexus Grand Central, Navi Mumbai – 400706, Maharashtra, India

**US Office:** 3i Infotech Inc., 110 Field Crest Avenue, Suite #25, Edison, NJ 08837


asia pacific | south asia | north america | middle east | africa | europe