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Accion INNOVATION SUMMIT 2023

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Determining the Optimal Operating Model for Enterprise Test Data Management

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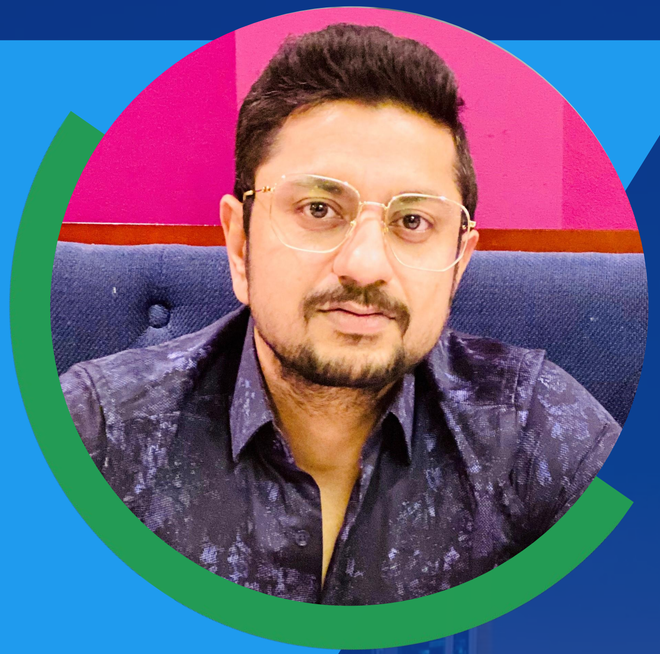

Abhijit Banerjee

Director, Digital Assurance Solutions

Rich experience in Quality Assurance and Engineering practice across Insurance & Banking organizations in North America. Spearheaded end-to-end QA delivery for many mission critical large scale initiatives such as Centralized QA practice, Digital Transformation, Enterprise Test Data Management, Automation Factory Model, Enterprise Innovation to name a few. A great contributor to organization maturity with regards to Risk, Quality, Efficiency and Cost optimization through Transformation.

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Summary

- **Regulatory/Security Risk : Risk of data exposure from unmasked data**
- **Quality, Quantity, and Standardization : Inconsistency & Lack of standard process**
- **Time to Market : Lack of automation and Disconnected environments**
- **Project life-cycle bottlenecks in providing data on demand Source Data, Provisioning, Generation**
- **Lack of accelerated delivery via self-sufficiency**
- **Capital/Operational Costs : Manual efforts and E2E environment management**

A Hybrid-Centralized Enterprise TDM Target Operating Model where TDM team implements masking, provisionable gold copy, generation, Find & Reserve, and self-service & LOB teams execute generation and Find & Reserve (F&R).

Risk Mitigation, Optimized infrastructure, Improved quality, Reduction in time and effort, Optimize project life-cycle & empower end-users. A continuous success measures through industry standard KPIs to assess TDM maturity.

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Problem Definition

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Innovation Approach

Case Study

Demo

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Word Cloud : Test Data Management

What word(s) comes to your mind when you hear Test Data Management?

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Enterprise Root Cause

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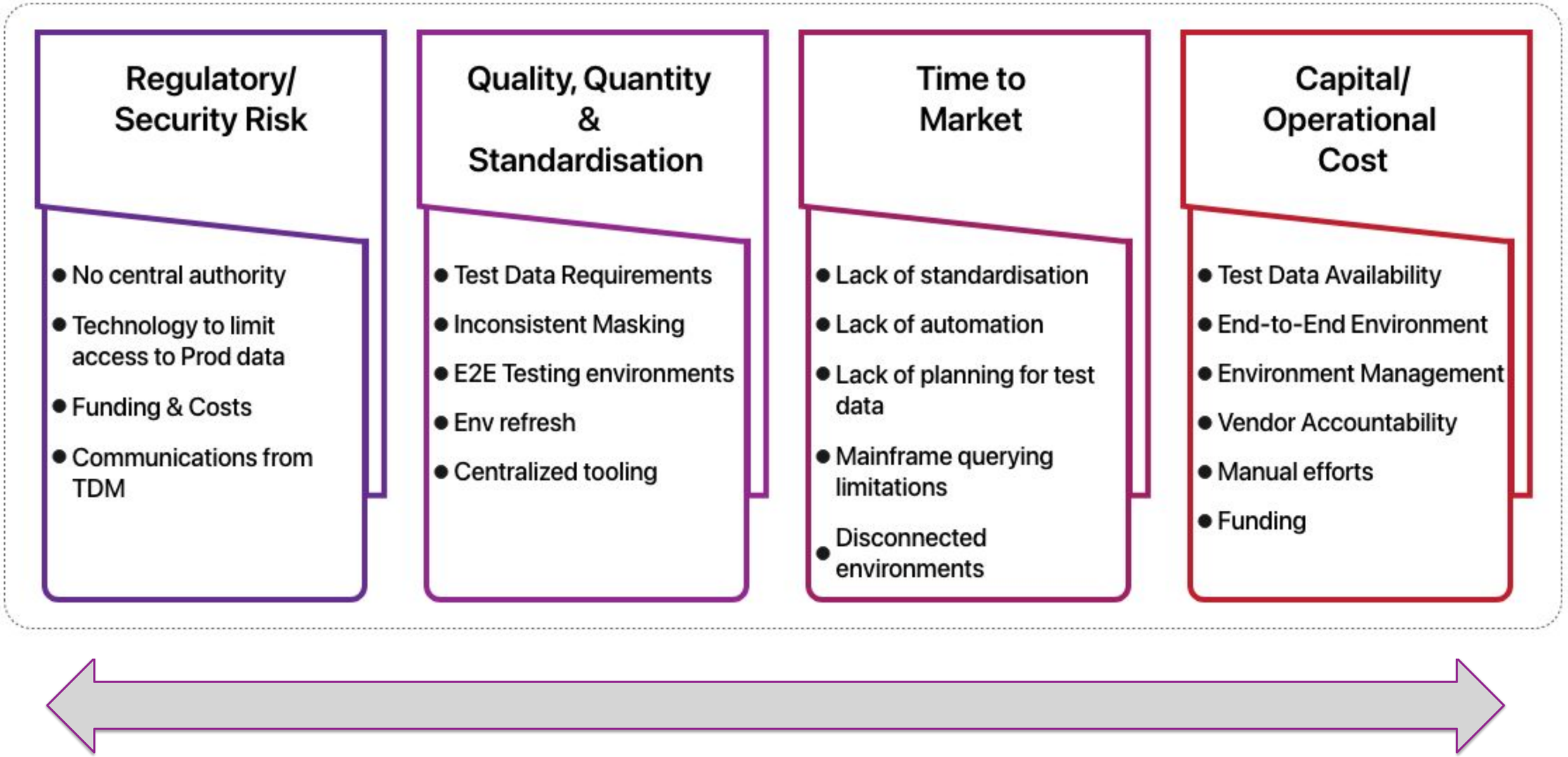

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Success Criteria

- **Restrict** the use of production data for testing and development through **Gold copy**
- Change the **mindset** from localized data strategy to Enterprise data approach
- Establish enterprise TDM **target operating model** to be adopted across business units
- Optimize time to **procure** test data through Self-serve capability
- Improve **quality** of test data through exhaustive data permutations resulting in test cycle optimization
- Provide End-to-End environment populated with **connected** test data

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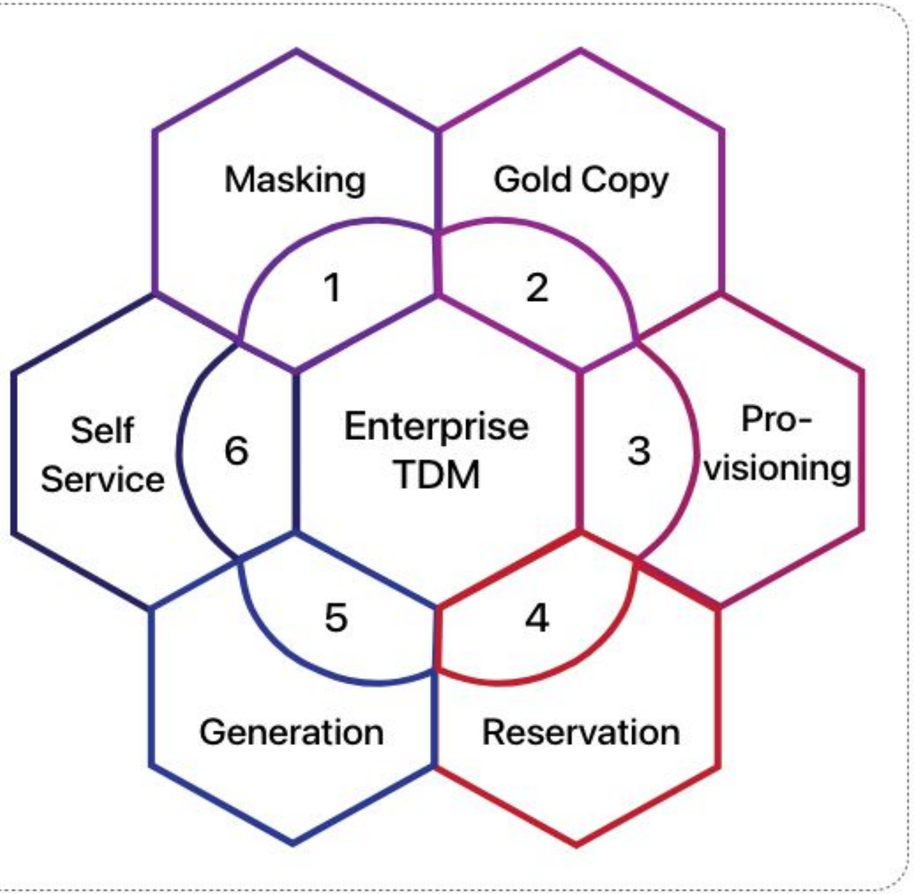
TDM Capabilities : Target State



Masking

- **Mitigate risk** by restricting the use of production data for testing/development

Gold Copy

- **Eliminate excess data storage** by have a single repository of test data
- **Optimize infrastructure** by migrating to the cloud
- **Repeatable refresh** approach on a fixed cadence

Provisioning

- **Reduce time** to procure masked test data
- **Reduce effort** to move data into lower environments

Reservation

- **Reduce false defects** by preventing data collisions
- **Reduce time & effort** to finding the correct data to test with

Generation

- **Improve quality** of gold copy by generating for missing scenarios and edge-cases
- **Reduce effort** to generate large volumes of data
- **Lower storage costs** by generating on demand

Self-Service

- **Reduce time to market** by on demand capabilities
- **Optimize project** lifecycle / test cycle
- **Empower** end-users

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Guiding Principles

Risk

Testing and development using masked test data

Modernization

Incorporate data in test strategy

Standardization

Obfuscation rules across the enterprise and access to production data

Predictability

Incorporate data in test strategy

Shift-Left

Synthetic generation to test more functional scenarios

Time To Market

On-demand self-service capabilities for data consumers

Efficiency

Improve efficiency through automation

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Prioritization Criteria

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Critical Projects/ Applications/ Data Sources

Books of Record

Usage Volume

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Key Outcomes

01 Institute Enterprise TDM Organization to mitigate data risk and attain maturity in TDM space

02 Enterprise Oversight on Data Governance including:
Definition of PII fields and Tracking & Approving Production Data Waivers as an exception process

03 MVP Implementation of Data Masking, Gold Copy, and Provisioning for masked data on-demand as well as interconnected systems masked data provisions

04 Enhance Agility in E2E testing resulting in reduced time-to-market and project life-cycle

05 TDM Toolset Migration to Cloud (Azure, AWS, GCP) to scale up at an enterprise level

06 Necessary Change Management & Communications

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Thank You for giving me this opportunity to present and I appreciate all your questions/feedback.

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