Lean Data Governance
Need & Approach

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Today’s Agenda

- Introduction
- Current State
- Data Lifecycle
- Data Governance Framework
- How do We Get There?
- Conclusion
Gresham Smith

From interstates and intersections to bridges and bike paths, transportation systems connect us to the people and places we care about most—and this idea drives the work we do at Gresham Smith.

Full-Service Firm

Aviation  Industrial
Building Engineering  Land Planning
Corporate + Urban Design  Transportation
Healthcare  Water + Environment

91% repeat business
51+ years in business
950+ professionals
OST Background

WHO WE SERVE
80% Federal Government
20% State and Local Government

TOP SECRET
Facility Clearance

CERTIFICATIONS & APPRAISALS
CMMI DEV Level 5 | CMMI Service Level 3
ITIL V3-1 | SAFe/Agile/DevSecOps | AWS Cloud
ISO:9001:2008 | ISO standards 27001, 20000, 10002

OUR KEY POINTS
- 550+ Employees, 2000+ Total Staff
- Incorporated in 1999
- Supporting Federal, State, Local
- Transformational and innovative solutions

AI/Machine Learning
Data Fusion, Correlation
Anomaly Detection
Cyber Security
Asset/Resource Management
Current State

- Economic and Technical Challenges
  - Road Usage – \(0.04\%\) (12.2 Billion Vehicle Miles) 2018
  - Existing Assets
    - Roads, Bridges, Signals, Signs, People, Data
  - Aging Infrastructure – Roads, Bridges
  - Workforce Reduction from Retirement
    - Loss of Institutional Knowledge
  - Need to do More with Less
Current State

- Big Data
- Predictive Decision Making
  - Trust the Data
  - Preparing for the Future
- Delivery of Information
DATA is EVERYTHING & EVERYTHING is DATA
Too Much Data…

- 224 billion emails are sent/day
- 50 billion messages/day
- 23 billion SMS/day
- 5 billion searches/day
- 1.5 billion people on Facebook daily

90% of all data has been created in the last two years…
Too Many Data Issues…

Data-related problems cost the majority of companies more than $5 million annually…

Typical annual cost of Data related Issues

Source: https://www.forbes.com
HOW DO WE CONVERT DATA INTO ACTIONABLE INSIGHTS
Data Lifecycle

- Acquisition
- Discovery
- Governance
- Optimization
- Analytics
- Visualization
An effective data governance can be the difference between SUCCESS and FAILURE.
The Lean Way

✔ Start with defining the Business Impact
✔ Acquire the data you really need – Actively reduce data volumes
✔ Implement right data and analytics governance
✔ Flexible architecture for greater consistency, reuse, and adaptability
✔ Automation and embedded rules to ease data governance
✔ Promote self-organizing and self-governing teams
✔ Ongoing learning and refinement based on real data
The famous (well, geek famous) infographic depicting Napoleon’s disastrous campaign into (and out of) Russia in the War of 1812, created by Charles Joseph Minard.
Data is our most valuable asset

To avoid the cost of inaccurate decisions and drive successful business outcomes, organizations need to implement the right data governance, analytics and visualization…

“In God we trust. All others must bring data.”

– W. Edwards Deming
How do We Get There?

- Planning and Design
- Building
- Implementing
- Maintaining
Planning and Design

• Enterprise Data Study
  • What do You Have?
• Data Governance Maturity Assessment
  • People, Policies, Capabilities
• Develop
  • Strategic Plan
  • Implementation Plans
  • Data Standards
Building and Implementing

• Assess Agency Organizational Structure and Skillsets
  • Strategies to Restructure/Augment to Address New Skillsets
• Assess IT’s Strategic Plan
• Assess Business Intelligence Capabilities
• Develop and Integrate Data Warehouse
• Standardize Data for New System
Maintaining

- Change Management Plan
  - Resistance Management Strategies
  - Reinforcement Mechanisms
  - Communications Plans
  - Feedback/Metrics
- Executive Level Approved Data Governance Policy
  - Define and Refine Policies and Procedures
  - Effective Rollout Implementation
  - On-going Operations
  - Enforcement
  - Address Data Governance Structure, Data Access, Usage, Quality and Integration
Thank You

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