Indigenous Data Governance Strategy for Tribal Governments: Highlighting Dimensions, Objectives, and Key Results

Troy Wiipongwii, PhD, MPP

Most Common uses of Tribal Data

1. Federal grant reporting
2. Communicating with the tribal community
3. Service delivery
4. Set tribal strategic plans
5. Develop a budget
6. Communicate with others outside of the tribe

Different Types of Governance

- Governance
- National Enterprise Architecture Governance
- Information Technology (IT) Governance
- Data Governance

What is Governance?

"Governance is the way rules, norms, and actions are structured, sustained, regulated, and held accountable."
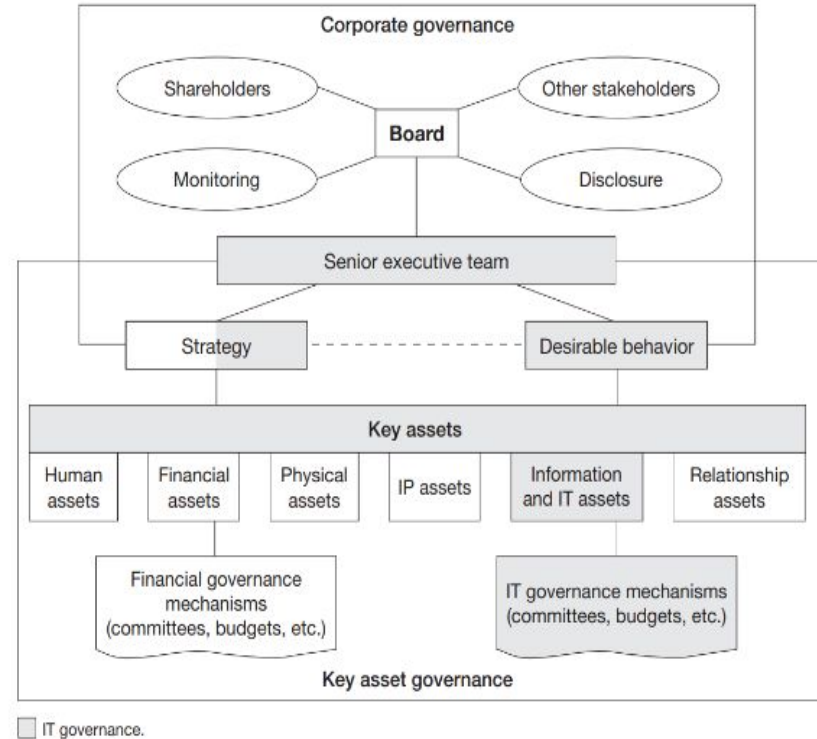
National Enterprise Architecture (NEA) Governance

- The exercise of economic, political, and administrative authority to manage the development and implementation of the EA Initiative
- NEA can be thought of as the organizational structure connecting people, departments, branches, technologies, values, culture, goals to align business/tribal strategy with its Information Technology (IT) strategy.
- Usually studied as a way of building interoperability between government agencies to deliver optimal services to constituents.

Application/ Integration
- Enterprise Application Integration Components
- Custom Application Development
- Services Definition
- Process Alignment
- Services/Event Architectures

Information/Data
- Data Integration
- Data Architecture
- Master Data Mgmt
- Metadata Mgmt
- Data Delivery Architecture
- Dashboards & Analytics
- Business Intelligence
- Enterprise Reporting
- Corporate Performance Mgmt
- Data Modeling
- Data Quality
- Content Mgmt

Technical/ Infrastructure
- Servers
- Networks
- Telecom
- Operating Systems
- Desktop
- Middleware
- Database Infrastructure
- Security
- Storage
- Other hardware

Business Architecture
- Business Requirements
- Business Rules
- Organization Structure
- Critical Success Factors
- Business Process Design & Modeling
- Mission /Vision

Information Technology Governance

- "Specifying the decision rights and accountability framework to encourage desirable behavior in the use of IT." - Weill and Ross
- IT governance is about managing the key information and IT assets. They guide the strategy that helps IT deliver value to the organization.
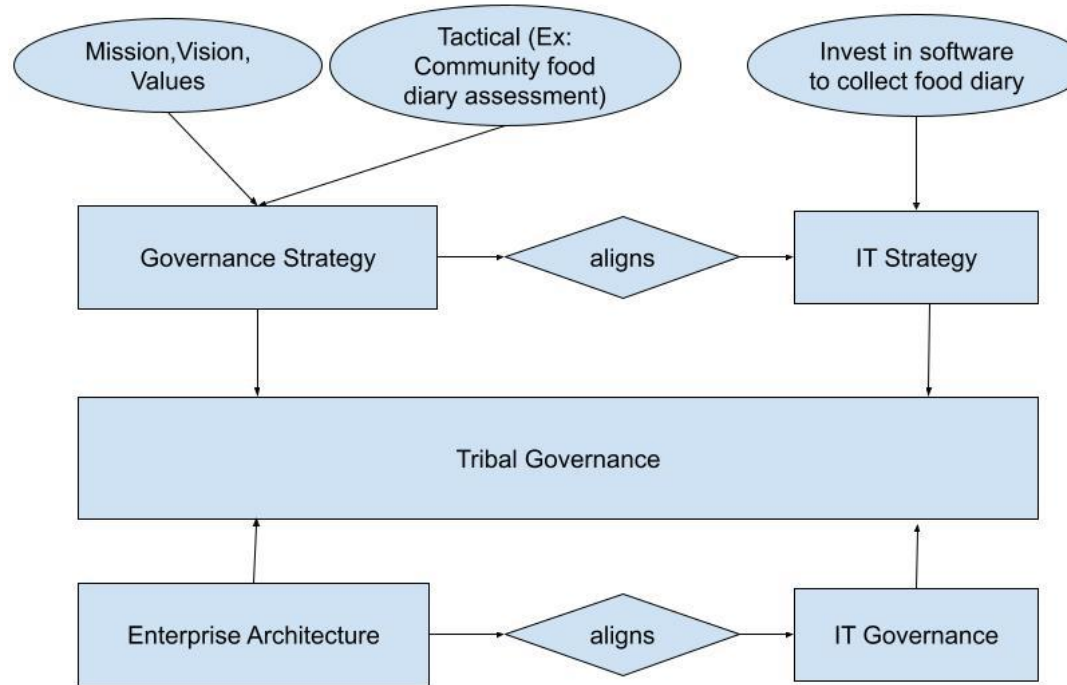
Data Governance

"Specifying the decision rights and accountability framework to encourage desirable behavior in the use of Data." - Khatri and Brown

Data Domains	Considerations
Data Principals	**What data? Sharing? Regulation? Value?**
Data Quality	**Standards? Evaluation?**
Metadata	**How are you documenting? Evaluating interpretability? Maintaining up-to-date?**
Data Access	**Compliance? Access? Security? Audit?**
Data Lifecycle	**Inventory of data. Protocol for creation, storing, retention, retrieval, retirement?**

Governance and Strategy connection to Tribal Governance

DAMA - Data Management Body of Knowledge Version 2 (DAMA-DMBOK2) (Aligns with the Māori 8 Data Governance Principles)

1. Data Governance – planning, oversight, and control over data
2. Data Architecture – the overall structure of data and data-related resources
3. Data Modeling & Design – illustration of the data system
4. Data Storage & Operations – infrastructure and management of infrastructure
5. Data Security – ensuring privacy, confidentiality and appropriate access
6. Data Integration & Interoperability – interconnected systems
7. Documents & Content – connected unstructured data with structured database information
8. Reference & Master Data – standardization of data
9. Data Warehousing & Business Intelligence – managing analytical data processing and enabling access to decision support data for reporting and analysis
10. Metadata – managing data about data
11. Data Quality – defining, monitoring, maintaining data integrity, and improving data quality

The Data Assessment Scorecard

Six Dimensions to Assess

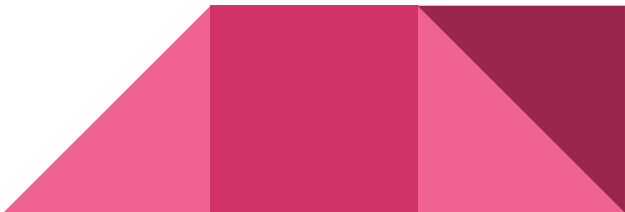# Data Governance

Category: Data Governance

Category Description: Identifies and measures the data currently collected and the data still needed to effectively deliver resources for the collective benefit of the tribal community

Objectives:

- Identify data uses of the tribe
- Identify existing data collected
- Define what Indigenous data means to the tribes
- Identify where data is lacking
- Identify current data storage infrastructure
- Identify human capital in data management
- Identify current costs of collection and management
- Identify and explore the current value of data assets

Key Performance Indicators:

- Data Governance Maturity Model

Organization

Category: Organization
Category Description: Measures current skills, training needed, and builds an understanding of data governance.
Objectives:
- Increase human capital
- Increase training on critical areas of data
- Increase data governance awareness across the tribal entity and partners

Key Performance Indicators:
- # of tribal leaders and employees who have taken data governance training
- # of employees certified in critical areas of the data management/governance lifecycle
- Data governance maturity assessment score
- Assessment of tribal leaders' competence with core concepts
- # of knowledge areas managed by qualified data owners/stewards
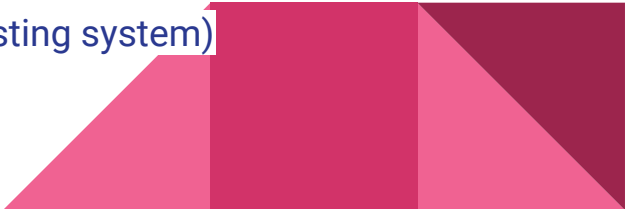
Data Infrastructure

Category: Data Infrastructure

Category Description: Measures improvements in data architecture, data modeling, data storage & operations, data integration & interoperability, and data warehousing & business intelligence

Objectives:
- Improve digitization
- Reduce data redundancy
- Improve the interoperability of systems
- Reduce costs associated with managing, storing, and retrieving data

Key Performance Indicators:
- % of data digitized
- % of departments who can seamlessly share information
- % reduction in the cost of managing the system (if there was an existing system)
- % improvement in the speed at which decisions can be made
- % improvement in the speed at which data can be shared

Data Controls

Category: Data Controls
Category Description: Assesses an organization's stage of maturity with data security and metadata.
Objectives:
- Increase compliance with data standards
- Increase metadata completeness and usage
- Decrease ambiguity and multiple definitions for the same data and tribal term
- Track resolution of high-impact data issues
- Automate data controls and audits

Key Performance Indicators:
- Compliance test results
- % of complete metadata
- % of critical data in metadata repository
- % decrease in policy failure
- # of approved and published business terms and definitions
- # of resolved security data issues
- # of resolved operational data incidents
- # of automated data audits & controls

Data Quality

Category: Data Quality

Category Description: Measures improvements in data quality and reference & Master data

Objectives:
- Improved data quality dimensions
- Improved data sharing
- Reduction in redundancy

Key Performance Indicators:
- % reduction in data entry errors
- % improvement in data completeness, timeliness, accuracy, etc.

Financial

Category: Financial

Category Description: Track the return on investment of the overall data governance program

Objectives:

- Ensure costs are in line with the budget
- Ensure expenses are in line with the committed return on investments

Key Performance Indicators:

- Total budget to actuals (at project and program level)
- Total ROI to actuals
- % of savings from the operating budget