

The Impact of Data Sovereignty on  
American Indian Self-Determination:  
A Framework Proof of Concept Using Data Science



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The Data Sovereignty Initiative  
**Key Indicators & Descriptors**

**Concepts**

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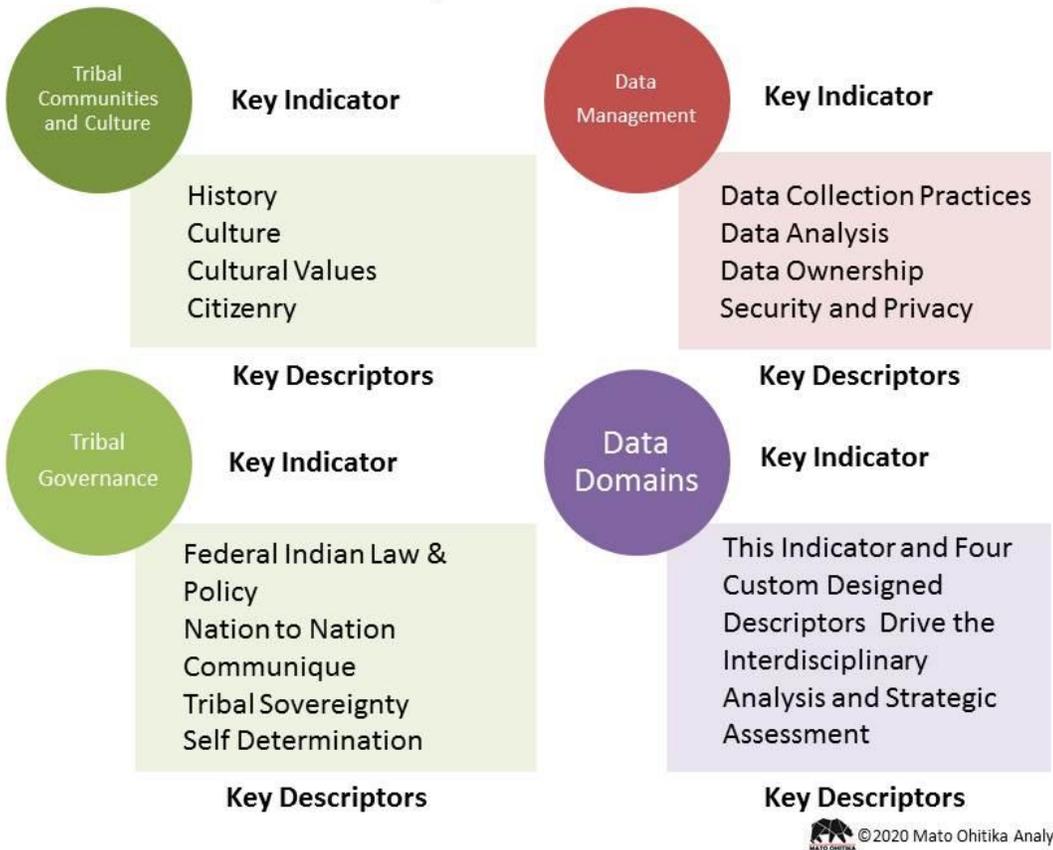
## Data Sovereignty Initiative Key Indicators



### **Summary**

The DSI Key Indicators help to organize cultural and scientific ideas that govern strategic assessments. Induction is the process by which we make generalizations about a particular problem needed to be solved. The key indicators allow for an inductive approach to begin discussion on how to properly bridge the cultural and scientific metrics and to rank these indicators in order of priorities.

**The Data Sovereignty Initiative  
SMART Solution Key Indicator Blueprints**



# DSI Key Indicator 1: *Tribal Community and Culture*

## Key Descriptors:

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History	Culture	Cultural Values	Citizenry
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### **Why is it important? Culture Does Matter**

Cultural values play an important in decision making. The importance of consulting elders, stakeholders, and citizens is to be Native. The history of excluding voices that speak for local clans, districts, or inter-tribal groups is a product of assimilation and acculturation. To understand the voices of the community requires a commitment to knowing each tribe as unique entities with a set of cultural values and citizenry that when given a proper voice would contribute to a betterment of their community if given the opportunity. Each unique history provides context to decision making.

Communities still face issues of historical trauma, lack of stable governments, poverty, and lack of representation. This framework provides a well-developed process of data collection and practice aimed at collecting information from tribal citizens that do the work of the community in addition to providing input to tribal officials.

### **DSI Key Descriptors:**

#### **History**

What particular tribal history is important to understand when developing a data domain?

How do non-Indian stakeholders hold themselves accountable to understanding cultural history and context in working with tribes?

How do tribes maintain the context of relevant historical record when making planning decisions?

## **DSI Key Indicator 1: *Tribal Community and Culture***

### Key Descriptors:

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History	Culture	Cultural Values	Citizenry
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### **DSI Key Descriptors:**

#### **Current Culture**

What cultural beliefs should be understood when making decisions?

What is current state of community culture and perceptions?

How can we support these stakeholders through data-driven initiatives using cultural capital?

#### **Cultural Values**

Who are the elders you think can contribute most effectively injecting additional cultural values in decision making?

#### **Citizenry**

How is the citizenry divided (i.e. groups, clans, or districts)?

What is the relative size of the citizenry?

When it comes to local stakeholders, who are these stakeholders (i.e. GIS analyst, tribal law enforcement, or local citizens)?

What are potential challenges local stakeholders have in tribal administrative involvement?

## DSI Key Indicator 2: *Tribal Governance*

### Key Descriptors:

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Federal Indian Law & Policy	Nation to Nation Communique	Tribal Sovereignty	Self- Determination
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#### **Why is it Important? Sovereignty Matters.**

Tribal governments who assert sovereignty through self-determination face innumerable challenges that can strengthen or weaken their position in negotiations. Tribes do have inherent rights to manage their affairs as they see fit, but in the era of forced federalism, the need for equitable interaction and political capital is an absolute necessity when making agreements with non-Indian stakeholders.

In the modern era, sovereignty and self-determination are tools tribes utilize to maintain their unique nationhood directly from the body of Federal Indian Law established from two centuries of negotiation, sacrifice, and cultural identity. This historical precedence is why tribal governments fight so hard for their nationhood.

Tribes who assert sovereignty in nation to nation communications by forming compacts, memoranda of understanding, or informal agreements must fully understand there are policy tools non-Indian policymakers use that have a direct effect on not only policy, but political capital as well. The two types of policy tools that have a direct effect on negotiations are regulatory and capacity-building.

Regulatory policies are used when policymakers view emerging contenders as a threat to economic or political well-being; while in contrast capacity-building tools are intended to strengthen communities by enhancing tribal powers of self-determination. Capacity-building tools are the cornerstone of the data sovereignty framework because it comes the closest to describing Indigenous nation building strategies.

## DSI Key Indicator 2: *Tribal Governance*

### Key Descriptors:

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Federal Indian Law & Policy	Nation to Nation Communique	Tribal Sovereignty	Self-Determination
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### DSI Key Descriptors:

#### **Federal Indian Law and Policy**

Is there appropriate Federal Indian Law precedence in exploring the current data domain?

What is the position the tribal government takes in data-driven policy initiatives?

Does the state the tribe is in have any public laws preventing economic development?

#### **Nation to Nation Communique**

Are their existing MOA/MOU/Compact agreements that the tribe has used in the past?

#### **Sovereignty**

What is the governance structure of the Tribal government?

How can data sovereignty assist tribes with a stronger position in data driven decision making?

#### **Self-Determination**

What types of sovereignty are easier to assert than others?

Are there cases where a policy victory can be guaranteed using self-determination?

Are there specific concerns tribes can be assisted with in asserting self-determination from positions of Federal Indian Law and Policy, established compacts, or Memoranda of Understanding (MOU)?

## DSI Key Indicator 3: *Data Management*

### Key Descriptors:

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Data Collection Practices	Data Analysis	Data Ownership	Security and Privacy
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#### **Why is it Important? Unifying Data in Indian Country is Paramount**

Data management is crucial in organizing information so meaningful outcomes can be achieved. The DSI framework was designed with the intent of creating a structured look at data in developmental stages of capacity.

The key descriptors can be divided into two groups: quality of data practices as it relates to the data domain and management of the data as for security purposes. In addition, this indicator also attempts to identify the types of technologies that are used in a tribe's data collection process which could be data storage systems or software related to analysis.

The importance of these baseline metrics provides informational capacity so when an exploratory process is designed, it aligns to the best possible outcome for the not only the project, but governance strategies as well.

At every level tribes are collecting data. Some of the data is structured, some of it is unstructured. This framework seeks to understand a tribe's operational capacity of data collection, practice, as well as security and privacy.

In addition, all tribes have some sort of technological infrastructures in place, and so the purpose of this indicator is to understand the strengths and weaknesses as it relates to the data domain. Thus, much of data management revolves around structuring data based on a tribe's current infrastructure to investigate which stage of development is appropriate for the analysis processes. Data sovereignty conceptually is creating platforms to utilize data as an Indigenous nation building tool for equitable interaction.

## DSI Key Indicator 3: *Data Management*

### Key Descriptors:

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Data Collection Practices	Data Analysis	Data Ownership	Security and Privacy
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#### **DSI Key Descriptors:**

##### **Data Collection Practices**

What are the current data collection practices (i.e. manual or digital data collection)?

Who collects the data? Where is the data stored?

##### **Data Analysis**

What is the quality of tribal data analyses?

Do tribes rely on consultants or in-house personnel for analyzing data?

Does the tribe have any software platforms for data collection, analysis, or reporting?

##### **Data Ownership**

Do tribes have a policies governing data ownership, whether it is with existing or future data collection?

Is there Federal Indian Law precedence that prevents tribes from taking full ownership of data when engaged in federal, state or local jurisdictional agreements?

Who uses and reports specific data to the tribe?

##### **Security and Privacy**

Are there privacy policies in place? Are their data sharing policies in place?

Are there data encryption protocols in place?

Are there protocols in place in regard to theft of data through cyber-attacks?

## DSI Key Indicator 4: *Specified Data Domain*

### Key Descriptors: Custom Designed by Topic

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Descriptor 1	Descriptor 2	Descriptor 3	Descriptor 4
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#### **Why is it Important? Data Ownership and Management Matters**

Data domains are defined as any data collection process that occurs in Tribal communities that can be understood to have specific meaning in the context of governance, economic development, or operational capacity. Domains such as health care, transportation, education, enrollment, historic preservation, and census are all considered data domains.

Since data domains can represent any project a tribe is interested in, it is implied that the four key descriptors will change depending on the choice of data domain. The dimensionalities of these domains are vast and can encompass any level of analysis from descriptive to analytical. The choice of descriptors is then a matter of assessing each indicator as it pertains to the domain.

Data domains in this framework have key indicators designed specifically to address feasibility from two key points of view.

1. Any data domain developed is mutually exclusive from the data collected for each unique tribe using that particular data domain. However, once a data domain is created the nation building component from the framework assures the use of that data domain as a model for other tribal groups to use to collect similar information.

## DSI Key Indicator 4: *Specified Data Domain*

### Key Descriptors: Custom Designed by Topic

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Descriptor 1	Descriptor 2	Descriptor 3	Descriptor 4
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For example, if a data domain is created in order to provide a data collection process for census, then this digital infrastructure becomes available to other groups to utilize should they want to pursue their own census. The goal is to eventually host data domains as an open source digital infrastructure for anyone to access and utilize in their own capacity should they desire.

2. Cultural key indicators represent one way to address data originating from an individual tribe; however it is up to the tribal group to decide what information is shared or kept private. The data management key indicators have two specific key descriptors that address data ownership, security, and privacy. Through equitable interaction, these key indicators pave the way for meaningful policy on how data is shared in nation building context.

Thus, the potential impact is unified digital infrastructure that can be used by anyone to advance data collection and practice with a particular statistical design structure so the data can be compared across any organization that utilizes a given data domain.