TRIBAL PUBLIC HEALTH DATA ADVANCEMENT TOOLKIT

User Guide

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1 ACKNOWLEDGEMENT

This toolkit was made possible through a contract (Contract # 75D30122C15482) between Chickasaw Health Consulting and the Centers for Disease Control and Prevention (CDC).

Chickasaw Health Consulting led the effort to develop a comprehensive toolkit that tribes can use to assess current public health data system capacity and data system development planning, along with support from Guidehouse and Kaufmann and Associates, Inc.

The generous efforts and expertise of the tribes, tribal public health authorities, and Tribal Epidemiology Centers who participated in the toolkit's pilot program, and the Tribal Expert Working Group members, that provided their collective knowledge and dedication have helped shape its relevance and effectiveness.

Tribal Expert Working Group participants:

- Cherokee Nation
- Cow Creek Band of the Umpqua Tribe of Indians
- Great Lakes Inter-Tribal Epidemiology Center
- Phoenix Area Indian Health Service
- Rocky Mountain Tribal Leaders Council Tribal Epidemiology Center
- San Carlos Apache Tribe
- Santa Clara Pueblo

Pilot participants:

- Alaska Native Tribal Health Consortium
- Albuquerque Area Southwest Epidemiology Center
- Chickasaw Nation Department of Health
- Choctaw Nation of Oklahoma
- Muscogee (Creek) Nation
- Turtle Mountain Band of Chippewa Indians

INTRODUCTION

2.1 DATA MODERNIZATION OVERVIEW

Data modernization is a comprehensive strategy focused on modernizing data, technology, and workforce capabilities. Data modernization efforts facilitate moving from siloed and brittle public health data systems to a connected, resilient, adaptable, and sustainable "response ready" data ecosystem. The goal of data modernization is to provide better, faster, and more actionable insights for decision-making. For federally recognized tribes, data modernization will also support connection with federal agencies, national organizations, and state, local, and territorial health departments in a secure and effective way. This toolkit will allow tribes to assess their data systems and identify areas needing additional investment in order to ensure more timely and accurate data to inform public health action, while also respecting tribal sovereignty.

2.2 COMMITMENT TO TRIBAL SOVEREIGNTY

Federally recognized tribes have inherent authority to promote and engage in public health activities and functions to support their members. As such, federally recognized tribes determine if and how their data can be shared. The information captured in this toolkit will remain in the sole possession and control of the tribe.

2.3 TRIBAL PUBLIC HEALTH DATA ADVANCEMENT TOOLKIT OVERVIEW

Development of the toolkit was guided by the findings of a grey literature review, the input, recommendations, and review by a Tribal Expert Working Group and CDC, and the outcomes of tribal listening sessions. The toolkit is designed for teams within tribal public health authorities (PHAs) and may be used by other tribal public health service organizations, if applicable. Tribal public health authorities or tribally designated public health authorities are henceforth referred to as "tribes" for the remainder of this document. The Tribal Public Health Data Advancement Toolkit focuses on public health activities for which a tribe may collect data.

Tribes should complete the sections that best align with their organizational goals and objectives. This toolkit may be leveraged to:

- Break down silos.
- Communicate data sharing, infrastructure needs, and roadblocks with tribal leadership, tribal partners, and governments as determined by the tribe.
- Conduct strategic planning efforts.
- Determine software and hardware, training, professional development, and staffing needs.
- Develop position descriptions for IT roles.
- Facilitate collaboration between clinical and public health data teams.
- Identify activities for inclusion within responses to future funding opportunities and technical assistance needs.
- Strengthen Public Health Accreditation Board (PHAB) applications.
- Support Institutional Review Board (IRB) processes.
- Support tribal data modernization action plans.
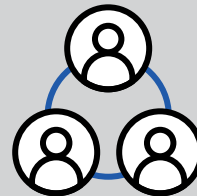
A tribal PHA's team is encouraged to use the toolkit to:

1. Identify and document roadblocks and opportunities related to data collection and usage within these activities.

2. Prioritize next steps for modernization.

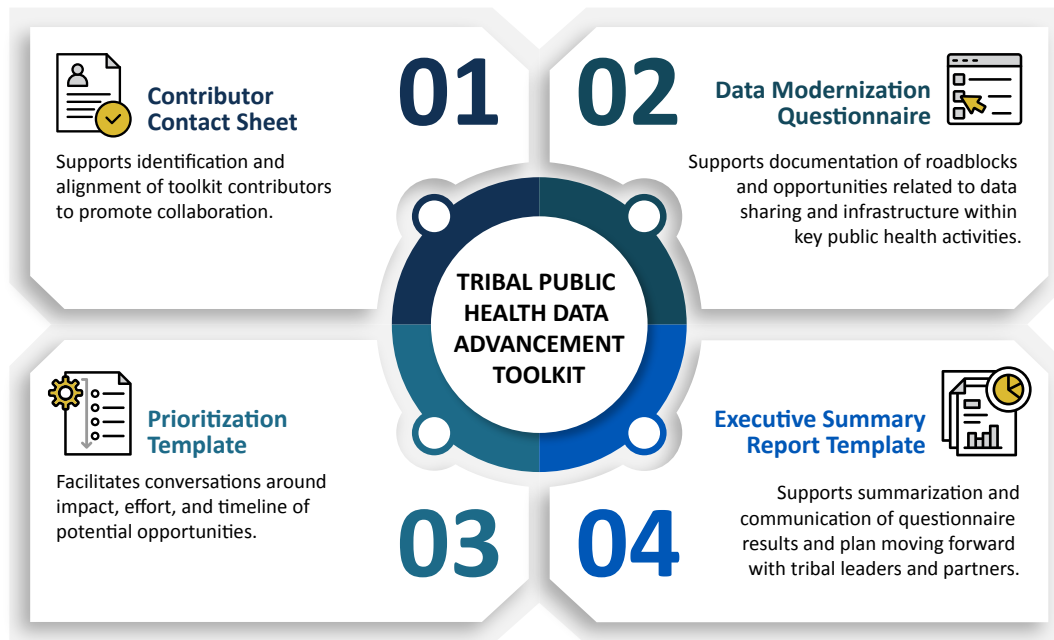3. Communicate key observations with a broader audience.

Tribes do NOT need to complete all toolkit component(s).

3 TRIBAL PUBLIC HEALTH DATA ADVANCEMENT TOOLKIT

The Tribal Public Health Data Advancement Toolkit consists of four tools and templates to support tribal data modernization activities. The following toolkit components will be outlined in greater detail throughout the user guide:

Figure 1: Tribal Public Health Data Advancement Toolkit Components

01 Contributor Contact Sheet
Supports identification and alignment of toolkit contributors to promote collaboration.

02 Data Modernization Questionnaire
Supports documentation of roadblocks and opportunities related to data sharing and infrastructure within key public health activities.

03 Prioritization Template
Facilitates conversations around impact, effort, and timeline of potential opportunities.

04 Executive Summary Report Template
Supports summarization and communication of questionnaire results and plan moving forward with tribal leaders and partners.

*TRIBAL PUBLIC HEALTH DATA ADVANCEMENT TOOLKIT*

Below is a recommended approach to completing the Tribal Public Health Data Advancement Toolkit. The toolkit is designed to encourage discussions within your organization and among partners. For best practices on how to complete the toolkit, please refer to the Leading Practices for Toolkit Completion section. Each toolkit component is aligned to a distinct phase of the approach and may be applied to:

1. **Mobilize** and align individuals identified by tribes to inform toolkit completion by leveraging the **Contributor Contact Sheet**. By involving collaborators with diverse perspectives, the toolkit may provide more comprehensive insights reflective of tribes' organizational data sharing and infrastructure.

2. **Assess** roadblocks and opportunities related to data sharing and infrastructure within key public health activities by completing the **Data Modernization Questionnaire**.

3. **Plan and prioritize** opportunities identified in the **Data Modernization Questionnaire** by categorizing and ranking them using the **Prioritization Template**. Discussing impact, effort, and timeline of each opportunity may be beneficial in gaining consensus on the most impactful activities.

4. **Communicate** summarized **Data Modernization Questionnaire** results to selected internal and/or external audience(s) and plan for the next steps using the **Executive Summary Report Template**.

Figure 2: Tribal Public Health Data Advancement Toolkit Approach
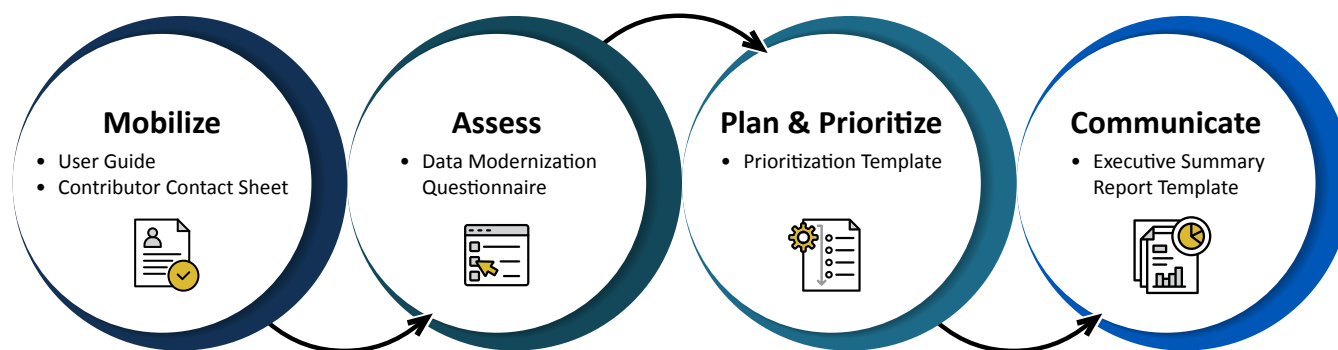
3.1   CONTRIBUTOR CONTACT SHEET

The first toolkit component is an Excel-based **Contributor Contact Sheet**. This resource supports tribes with the identification and alignment of toolkit contributors. Using this tool, tribes are encouraged to list each contributor and indicate the toolkit component(s) and/or public health activity(ies) where they align and may assist.

Table 1: Contributor Contact Sheet Sample Table

First Name ▼	Last Name ▼	Position/Tile ▼	Internal/External Partners ▼	Public Health Activity ▼	Public Health Activity - Please Specify Other ▼	Data Governance ▼
Joe	Sample	Data Exchange Manager	Internal	Chronic Disease Prevention	N/A	X
Joe	Sample	Data Exchange Manager	Internal	Other	Health Education	X

The **Contributor Contact Sheet** provides space to list each contributor and includes information on the following:

- **Contact Information:** Contributor information, i.e., name, position/title, email address, phone number, internal or external partner designation. The definitions of "internal" and "external" can vary between organizations and may be tailored to fit tribes' specific organizational context.

- **Public Health Activity:** Drop-down menu to indicate which public health activity(ies) each contributor supports. An additional column is provided to specify any other public health activity(ies) that may apply. Separate row(s) may be added for contacts who contribute to

more than one public health activity to allow for differentiation between unique contributions for each public health activity.

- **Key Topic Area(s):** Indicates where contributors align and may assist based on their subject matter expertise, i.e., data governance, IT governance, external policy, technology, and workforce.

- **Contributor Tracking Information:** Optional spaces to record contributor tracking information, i.e., date contacted, date follow-up scheduled, and a notes column to capture additional information, if applicable.

There is no "one size fits all" approach to selecting, contacting, or communicating with contributors. Contributors will likely vary from tribe to tribe based on size, organizational structure, and key roles and responsibilities, among other factors. To complete the toolkit most effectively, tribes should consider engaging contributors across each public health activity being assessed, as well as subject matter experts in the areas of Information Technology (IT), data and IT governance, external policy, and workforce development. Representative contributors may include:

- Chief Digital Officer
- Chief Information Officer
- Cloud Architects/Administrators
- Executive Leadership
- Health Information Exchange Partners
- Human Resources Representative
- Informatics Lead
- IT Lead/Leadership

- Lead Epidemiologist
- Learning and Development Lead
- Messaging System Manager/ Data Exchange Manager
- Program Leads
- Public Health Director
- System Managers or Administrators

3.2   DATA MODERNIZATION QUESTIONNAIRE

3.2.1   Questionnaire Content and Organization

The **Data Modernization Questionnaire** supports tribes with documenting roadblocks and opportunities related to data sharing and infrastructure within key public health activities. The data sharing and infrastructure key topic areas covered in the **Data Modernization Questionnaire** include data governance, IT governance, external policy, technology, and workforce. The roadblocks sections assist in identifying potential challenges that may impact data related to the public health activity. The opportunities sections assist in identifying ways to address roadblocks.
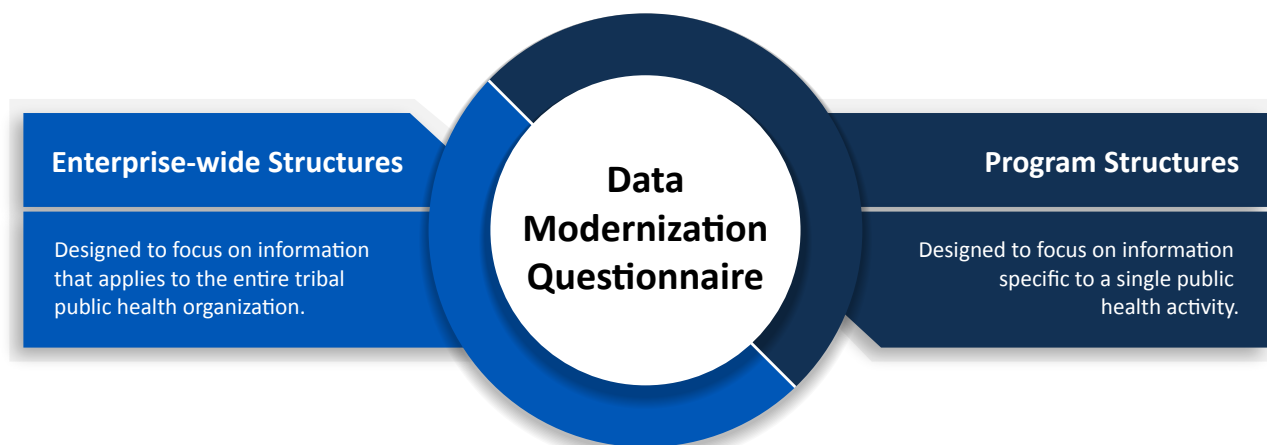

Quick Tip:
Use spaces provided in the Data Modernization Questionnaire to add detail or context for ratings/answers, as applicable.

The **Data Modernization Questionnaire** is split into two parts: **Enterprise-wide Structures** and **Program Structures**.

Figure 3: Data Modernization Questionnaire Structure

Enterprise-wide Structures

Designed to focus on information that applies to the entire tribal public health organization.

Data Modernization Questionnaire

Program Structures

Designed to focus on information specific to a single public health activity.

1 Enterprise-wide Structures

The **Enterprise-wide Structures** questionnaire is designed to focus on data modernization information that applies to the entire tribe and their public health activity(ies). It prompts tribes to reflect on roadblocks and opportunities within the following topic areas:

Data governance: the internal standards, roles, processes, and policies that dictate data management, storage, integrity, security, sharing, and usage.

- **Data governance processes:** processes to manage the availability, usability, integrity, and security of the data. This includes defining who within an organization has authority and control over data assets and how those data assets may be used.

- **Data standards:** documented agreements on the representation, format, definition, structuring, tagging, transmission, manipulation, use, and management of data.

- **Data architecture:** the overall structure of an organization's data and how the data flows to serve the organization's objectives. Particularly, data architecture addresses how data is managed from collection to transformation, distribution, and consumption.

- **Data quality:** characteristics and processes associated with measuring or improving the reliability and trustworthiness of data.

- **Data management:** the practice of collecting, keeping, and using data in a secure, efficient, and cost-effective manner.

- **Data sharing:** the process of making data resources available to multiple applications, users, or organizations.

- **Data privacy:** processes concerned with protecting sensitive health and individual data.

- **Data analytics:** the discovery, interpretation, and communication of meaningful patterns in public health data to support effective decision-making.

IT governance: the internal standards, roles, processes, and policies that dictate IT management, strategy, operations, and security.

- **IT governance processes:** processes and decision-making mechanisms to direct and control the use of IT within an organization.

- **IT standards:** guidelines and specifications for the acquisition, utilization, or implementation of IT. These standards support interoperability, compatibility, and consistency across different IT systems.

- **IT management:** the monitoring and administration of an organization's IT, including hardware, software, and networks.

- **Cybersecurity:** the practice of protecting electronic information systems and the information they contain from exposure or loss resulting from a cyber-attack or data breach. This may include preventing damage, unauthorized use, and exploitation of electronic information systems, as well as the restoration of these systems in the event of an attack.

- **Information security:** Protecting information and information systems from unauthorized access, use, disclosure, disruption, modification, or destruction in order to provide integrity, confidentiality, and availability.

External policy: guidelines adopted or proposed by external governments, parties, or organizations that may impact decision-making.

- **External legal or regulatory requirements:** laws or policies that govern data sharing and utilization between organizations.

- **External compliance requirements:** mandated reporting and/or programmatic guidelines to which organizations must adhere.

2 Program Structures

The **Program Structures** questionnaire is designed to focus on data modernization information specific to a single public health activity selected by the tribe, listed below:

- Disease and risk factor monitoring
- Community health assessment
- Chronic disease prevention
- Environmental hazard assessment
- Injury prevention
- Syndromic surveillance

- Social factors influencing health/fair health opportunities
- Emergency response (staffing, travel, deployment)
- Other (tribes may specify a public health activity not listed above and provide additional context, as needed)

Participating tribes are encouraged to identify public health activities for which 1) they actively collect and utilize data, 2) data modernization efforts are already in progress, and 3) data modernization efforts are not started but may be of interest.

The **Program Structures** questionnaire (see Figure 3) includes a Public Health Activity Data section, which is used to identify gaps in data quality and completeness for a given public health activity. Tribes are encouraged to complete the **Program Structures** questionnaire for each public health activity, repeating as needed for other relevant public health activities. Tribes will specify the extent to which gaps in data quality and completeness impact their ability to perform the activity.

This questionnaire prompts tribes to reflect on roadblocks and opportunities within the following key topic areas:

Quick Tip:
Save and complete a new version of the Program Structures questionnaire for each additional public health activity.

Technology: the platforms and mechanisms used to store, exchange, and analyze data.

- **IT infrastructure:** components required to operate and manage enterprise IT services and environments. This may include hardware, software, and service components that support the delivery of IT-enabled processes.

- **System development and improvement:** processes to define, design, test, and implement a new software application or program or enhance an existing one. This may include the internal development of customized systems, the creation of database systems or the acquisition of third-party developed software.

- **User interface (UI):** a user's interaction with computer systems, software, and applications.

- **User experience (UX):** a user's overall experience with a brand, product, or service.

- **System interoperability:** real-time data exchange between disparate systems.

- **Data repository:** a large database infrastructure consisting of several databases that collect, manage, and store data sets for data analysis, sharing, and reporting (e.g., data marts, data warehouses, or data lakes).

Workforce: the capacity and proficiency of staff to perform key data-related functions.

- **Workforce learning and development:** processes to train, develop, reinforce, and sustain essential career skills.

- **Workforce retention:** an organization's ability to retain current employees.

- **Workforce recruitment and employee onboarding:** processes to identify and hire candidates for a specific position and integrate the employee into the organization.

Tribes do NOT need to complete all questionnaire components. Instead, tribes may complete the questionnaire component(s) that best align with their organizational goals and objectives.

3.3 PRIORITIZATION TEMPLATE

Prioritization templates can be a helpful tool for categorizing and ranking potential opportunities. Given limited time and resources, making informed decisions about which opportunities to pursue is critical for success. Additionally, the proper sequencing of opportunities can optimize resource allocation and support the completion of larger initiatives with interdependencies.

The **Prioritization Template** included within the Tribal Public Health Data Advancement Toolkit is meant to facilitate dialogue around opportunities identified within the **Data Modernization Questionnaire**. Tribes are encouraged to complete the templates collaboratively, using their **Data Modernization Questionnaire** responses as a baseline for discussion.

The **Prioritization Template** includes three tools and associated guidance. Tools include 1) an impact-effort matrix, 2) action planning templates, and 3) a timeline template, which will be outlined in more detail in the following sections.

3.3.1 Impact-Effort Matrix

An impact-effort matrix is a decision-making tool tribes can use to prioritize opportunities based on their potential impact and the amount of effort required to implement them. The impact of an opportunity is typically measured in terms of its ability to achieve data advancement objectives. The effort required to implement an opportunity is measured in terms of time, money, or other resources. Based on the impact and effort, opportunities can be mapped to one of the following quadrants:

- **Quick Wins** *(high impact/low effort)*: These represent the best opportunities for tribes—low effort and high reward. Tribes should consider placing the highest priority on opportunities in this quadrant.

- **Incremental** *(low impact/low effort)*: While these opportunities take little effort, tribes should consider sequencing these after more rewarding opportunities are addressed.

- **Rethink** *(low impact/high effort)*: Opportunities that fall in this grid quadrant may not become priorities. Tribes may want to determine whether they are worth doing at all.

- **Major Projects** *(high impact/high effort)*: These are great opportunities, but they require a higher level of effort. Tribes may wish to consider these opportunities if the organization is fully committed to completing the hard work involved over the long haul.
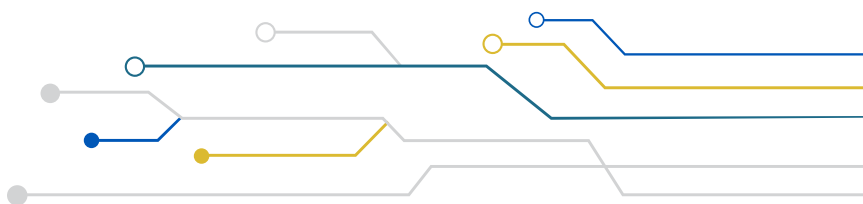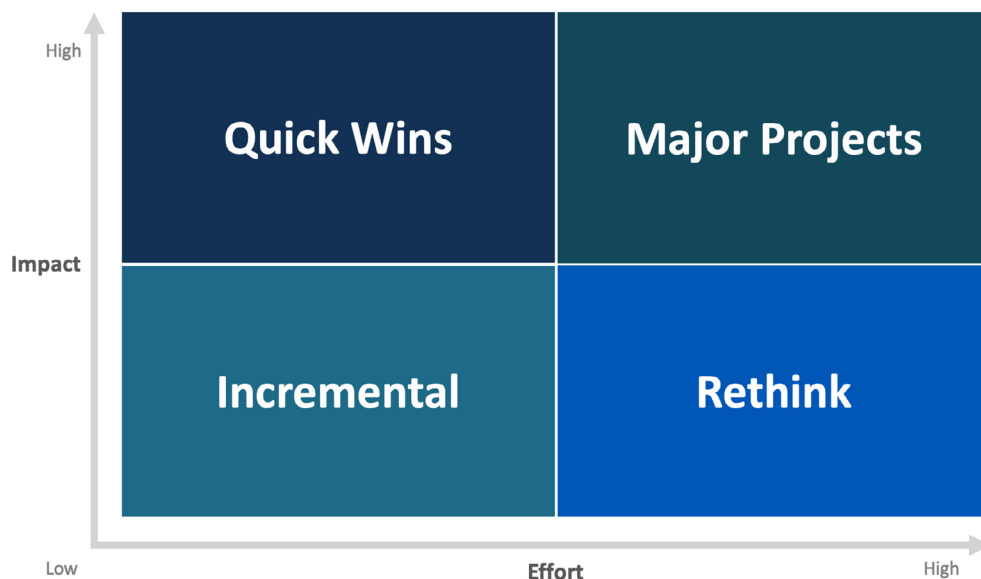
Figure 4: Impact-Effort Matrix

To complete the impact-effort matrix, tribes can use the template's pre-populated "post-its" that contain topic areas covered in the **Data Modernization Questionnaire** or tribes can create their own "post-it" pertaining to a unique topic area of their choosing. During a facilitated discussion, tribes can determine the impact and effort of implementing opportunities within each topic area and plot each "post-it" on the graph accordingly. Tribes are encouraged to move forward with **3–5 well-defined topic areas**.

3.3.2 Action Planning Templates

After completing the impact-effort matrix, tribes should have a better understanding of their high-level data modernization priorities. As a next step, tribes will identify specific actions for each prioritized topic area. The action planning templates included within the toolkit contain pre-populated "post-its," with opportunities pulled directly from the **Data Modernization Questionnaire**. Using these templates or creating their own opportunity "post-its," tribes will determine their most significant opportunities based on value, urgency, and feasibility, among other criteria determined by the tribe. Tribes are encouraged to move forward with **3–5 well-defined opportunities per topic area**.

Figure 5: Action Planning Templates for Data Governance Processes
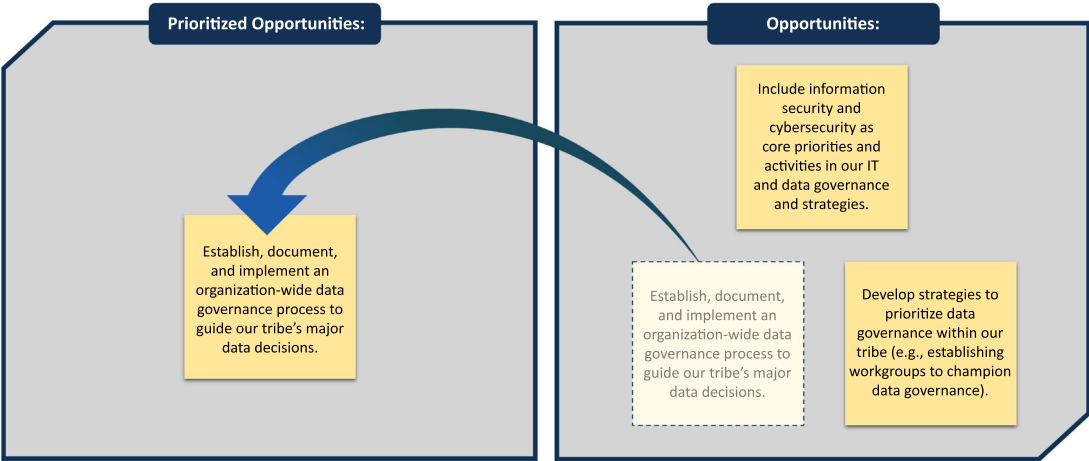
3.3.3 Timeline Template

The timeline template is another decision-making tool tribes can use to determine the start date of prioritized opportunities. After completing the action planning exercise, tribes are encouraged to discuss the start date of each opportunity and label it as either short-, intermediate-, or long-term. The template uses 0–1.5 years, 1.5–3 years, and 3+ years to define short-, intermediate-, and long-term opportunities. However, tribes are welcome to modify these definitions to better match their expected timelines.

Figure 6: Timeline Template
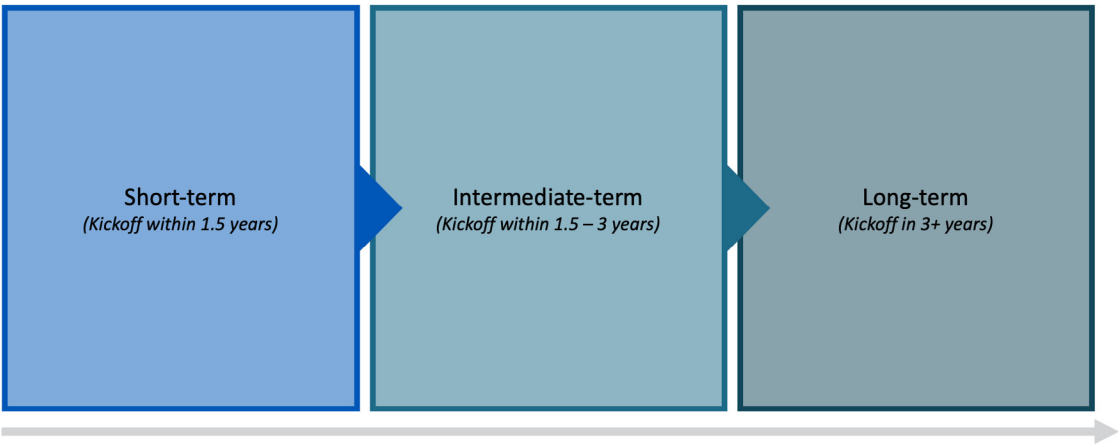
To use the timeline, tribes can copy–paste prioritized opportunities from the action planning templates. During a facilitated discussion, tribes are encouraged to determine the start date of each opportunity and plot it on the graph accordingly.

3.4   EXECUTIVE SUMMARY TEMPLATE

The final toolkit component is an **Executive Summary Template** to support tribes in summarizing and communicating the results of their questionnaire and plan moving forward with tribal leaders and partners. The **Executive Summary Report Template** includes the following high-level sections:

- **Background and Approach:** This section provides an overview of data modernization, the toolkit components, and the toolkit completion process.

- **Mobilization:** This section provides an overview of contributors engaged in the pilot test and collaboration processes.

- **Assessment:** This section provides a summary of results and key observations from **Data Modernization Questionnaire: Enterprise-wide Structures** and **Data Modernization Questionnaire: Program Structures**.

- **Plan and Prioritization:** This section provides an overview of how tribes prioritized opportunities identified in the **Data Modernization Questionnaire**.

- **Results:** This section highlights prioritized opportunities and immediate next steps to support data modernization efforts. It also outlines key metrics and lessons learned from the toolkit completion process.

Tribes are not required to utilize all parts of the template. Rather, tribes are welcome to tailor the template as they see fit. The PowerPoint speaker notes include more tactical instructions for completing the summary report.

Figure 7: Executive Summary Template
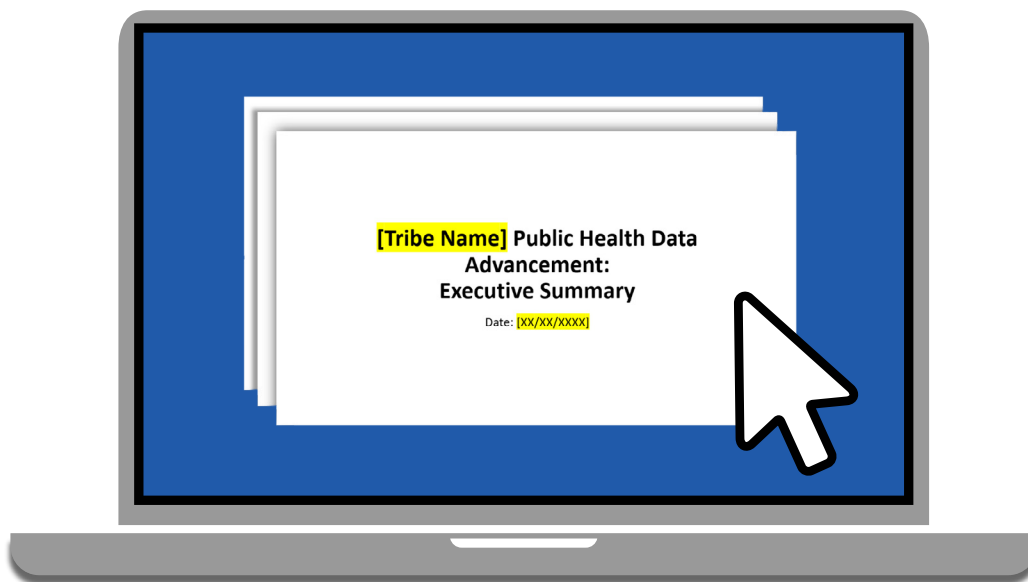
LEADING PRACTICES FOR TOOLKIT COMPLETION

4.1   IDENTIFY A KEY POINT OF CONTACT

Identify a key point of contact to ensure all contributors are engaged in the completion of the Tribal Public Health Data Advancement Toolkit. An ideal point of contact would be someone who has knowledge of public health programs and the development, maintenance, operation, enhancement, configuration, and governance of data systems and public health informatics. Roles and responsibilities may include:

- Developing a project workplan to maintain timely completion of the **Data Modernization Questionnaire** and other toolkit components.
- Collating information from previous efforts (e.g., assessments, evaluations, reviews) to inform **Data Modernization Questionnaire** responses.

- Planning and conducting progress check-in meetings and working sessions to support the completion of the **Data Modernization Questionnaire** and other toolkit components.
- Communicating and facilitating the resolution of all escalated challenges during the project period.

The key point of contact may find it helpful to identify a project coordinator to assist with communications, outreach, scheduling, and other administrative tasks.

4.2   MOBILIZE CONTRIBUTORS

Completion of the Tribal Public Health Data Advancement Toolkit will require multiple perspectives from across a tribe. This may include a tribe's Chief Information Officer, program/division directors, epidemiologists, informaticists, and information technology (IT) representatives, among others. The project key point of contact should review the toolkit templates to identify the most appropriate contributors before the project commences. Tribes may leverage the **Contributor Contact Sheet** to support the identification and alignment of contributors.

4.3   CONDUCT COLLABORATIVE MEETINGS

The Tribal Public Health Data Advancement Toolkit may be more effective when used collaboratively to build consensus for planning rather than to collect feedback from individuals. Thus, the project's key point of contact should consider scheduling collaborative meetings and working sessions to facilitate toolkit completion. Representative meetings may include:

- **Kickoff:** Meeting at the onset of the project period with the key point of contact, project coordinator, and identified contributors. This meeting may be used to review the **Data Modernization Questionnaire** and toolkit components in greater detail, highlight roles and responsibilities, discuss the timeline for completion, and initiate the project.

- **Progress Check-ins:** Meetings throughout the tribe's identified toolkit completion period with the key point of contact and the project coordinator. These meetings may be used to review toolkit progress, update workplans, and discuss any risks identified for mitigation.

- **Engagement Sessions:** Any meeting or working session with contributors to discuss an identified section of the questionnaire or collaborate on other toolkit components. Engagement sessions may be in the form of collaborative roundtable discussions, interviews, 1:1 discussions, etc.

Quick Tip:
For tribes who prefer an alternative approach to collaborative meetings, asynchronous completion of the toolkit provides greater flexibility and allows collaborators to review toolkit components at their own pace.

4.4 ENGAGE IN REGULAR COMMUNICATIONS

Communication is a key part of the toolkit completion process. Effective communication helps set expectations, increase transparency, and promote collaboration. At the start of the toolkit completion process, the project key point of contact may consider developing a communications plan to include the following:

- **Key Messages:** Core information that needs to be communicated.

- **Target Audiences:** Key contributors and other points of contact impacted by the Tribal Public Health Data Advancement Toolkit completion process.

- **Communication Channels:** Selected channels for different types of information, considering factors like urgency, confidentiality, and the target audience.

- **Communication Schedule:** Timeline outlining when and how often communications will occur.

- **Feedback Mechanisms:** Methods for contributors to provide feedback on key messages (e.g., surveys, meetings, open communications channels).
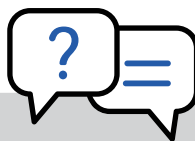
Need assistance with the toolkit? Team CHC offers technical assistance, including coordination, subject matter expertise and tailored support. Go to the Tribal Public Health Data Advancement Toolkit webpage to learn more or contact tribaldatatoolkit@chickasaw.com for more information.

5 ACRONYMS

ACRONYM	MEANING
API	Application Programming Interface
AWS	Amazon Web Services
BAA	Business Associate Agreement
CDA	Confidential Disclosure Agreement
CDC	Centers for Disease Control and Prevention
CDC PHIN	Centers for Disease Control and Prevention's Public Health Information Network
CM	Continuous Monitoring
CPT	Current Procedural Terminology
CVX	Code identifying the type of vaccine product used
DUA	Data Use Agreement
EDSS	Electronic Disease Surveillance Systems
FHIR	Fast Healthcare Interoperability Resources
GCP	Google Cloud Platform
HIT	Health Information Technology
HL7	Health Level 7
IaaS	Infrastructure as a Service
ICD	International Classification of Diseases
IHS	Indian Health Service
IIS	Immunizations Information Systems
IRB	Institutional Review Board
IT	Information Technology

ACRONYM	MEANING
ITIL	Information Technology Infrastructure Library
IV&V	Independent Verification & Validation
LIMS	Laboratory Information Management Systems
LOINC	Logical Observation Identifiers Names and Codes
MOU	Memorandum of Understanding
PaaS	Platform as a Service
PHAB	Public Health Accreditation Board
PHINMS	Public Health Information Network Messaging System
RPMS	Resource and Patient Management System
SaaS	Software as a Service
SLA	Service Level Agreement
SNOMED	Systematized Nomenclature of Medicine
SNOMED CT	Systematized Nomenclature of Medicine–Clinical Terms
SOPs	Standard Operating Procedures
STLT	State, Tribal, Local, or Territorial
UI	User Interface
UX	User Experience
VADS	Vocabulary Access and Distribution System

6 GLOSSARY

For further clarification, please email tribaldatatoolkit@chickasaw.com.

TERM	DEFINITION
Cybersecurity	The practice of protecting electronic information systems and the information they contain from exposure or loss resulting from a cyber-attack or data breach. This may include preventing damage, unauthorized use, and exploitation of electronic information systems, as well as the restoration of these systems in the event of an attack.
Data analytics	The discovery, interpretation, and communication of meaningful patterns in public health data to support effective decision-making (e.g., data dashboards, ArcGIS, Tableau).
Data architecture	The overall structure of an organization's data and how the data flows to serve the organization's objectives. Particularly, data architecture addresses how data is managed from collection to transformation, distribution, and consumption.
Data completeness	The extent to which data contain all relevant and necessary information to meet needs.
Data governance	The standards, roles, processes, and policies that dictate data management, storage, integrity, security, sharing, and usage.
Data governance processes	Processes to manage the availability, usability, integrity, and security of the data. This includes defining who within an organization has authority and control over data assets and how those data assets may be used.
Data lake	A centralized repository that allows storage of all structured and unstructured data at any scale.
Data management	The practice of collecting, keeping, and using data in a secure, efficient, and cost-effective manner.
Data mart	A centralized repository of data that is oriented to a specific team.
Data privacy	Processes concerned with protecting sensitive health and individual data.
Data privacy and security	The extent to which data are being used in accordance with the intended level of privacy and security.
Data quality	Characteristics and processes associated with measuring or improving the reliability and trustworthiness of data.
Data repository	A large database infrastructure consisting of several databases that collect, manage, and store data sets for data analysis, sharing, and reporting (e.g., data marts, data warehouses, or data lakes).
Data sharing	The process of making data resources available to multiple applications, users, or organizations.

TERM	DEFINITION
Data standards	Documented agreements on the representation, format, definition, structuring, tagging, transmission, manipulation, use, and management of data.
Data timelines	The extent to which data are up-to-date and available when needed.
Data transparency	The extent to which data contain measures, including social determinants of health (e.g., income, education level, homelessness) that promote fair health opportunities.
Data usability	The extent to which data is accurate and can be used to provide actionable insights.
Data warehouse	A centralized repository of data from one or more discrete sources.
External*	Relating to or occurring outside an organization. Examples may include but are not limited to state or hospital systems, IHS clinics, academic institutions, philanthropic foundations, or private sector businesses. Define "external" as it relates to your tribal organization.
External compliance requirements	Mandated reporting and/or programmatic guidelines to which organizations must adhere.
External legal or regulatory requirements	Laws or policies that govern data sharing and utilization between organizations.
External policy	Guidelines adopted or proposed by external governments, parties, or organizations that may impact decision-making.
Information security	Protecting information and information systems from unauthorized access, use, disclosure, disruption, modification, or destruction in order to provide integrity, confidentiality, and availability.
Internal*	Relating to or occurring inside your organization. Examples may include but are not limited to administration, leadership, teams, or individuals. Define "internal" as it relates to your tribal organization.
IT infrastructure	Components required to operate and manage enterprise IT services and environments. These may include hardware, software, and service components that support the delivery of IT-enabled processes.
IT governance	The standards, roles, processes, and policies that dictate IT management, strategy, operations, and security.
IT governance processes	Processes and decision-making mechanisms to direct and control the use of IT within an organization.
IT management	The monitoring and administration of an organization's IT, including hardware, software, and networks.

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* Users are encouraged to define and create their own unique definition for the purposes of this toolkit, as the composition and working environment of each tribe may vary.

GLOSSARY

TERM	DEFINITION
IT standards	Guidelines and specifications for the acquisition, utilization, or implementation of IT. These standards support interoperability, compatibility, and consistency across different IT systems.
Leadership*	Organizational, team, or project level management. Define "leadership" as it relates to your tribal organization.
Program level support*	Resources, tools, and structures that promote the successful operation of programs. Define "program level support" as it relates to your tribal organization.
System development and improvement	Processes to define, design, test, and implement a new software application or program or enhance an existing one. This may include the development of customized systems, the creation of database systems, or the acquisition of third-party developed software.
System interoperability	Real-time data exchange between disparate systems.
Technology	The platforms and mechanisms used to store, exchange, and analyze data.
Tribal sovereignty	The ultimate source of political power from which all specific political powers are derived.
User experience (UX)	A user's overall experience with a brand, product, or service.
User interface (UI)	A user's interaction with computer systems, software, and applications.
Workforce*	The capacity and proficiency of staff to perform key data-related functions. Define "workforce" as it relates to your tribal organization.
Workforce learning and development	Processes to train, develop, reinforce, and sustain essential career skills.
Workforce recruitment and employee onboarding	Processes to identify and hire candidates for a specific position and integrate the employee into the organization.
Workforce retention	An organization's ability to retain current employees.

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* Users are encouraged to define and create their own unique definition for the purposes of this toolkit, as the composition and working environment of each tribe may vary.

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