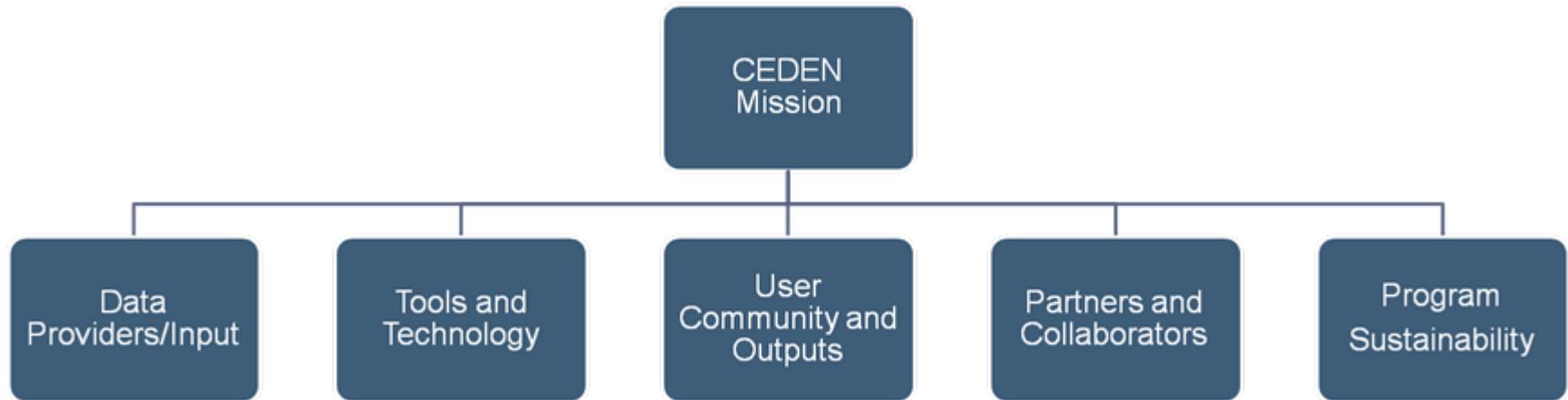# An overview of CEDEN

Steve Steinberg, CEDEN Program Manager

Presented to the California Water Quality Monitoring Council
Data Management Workgroup, September 16, 2011
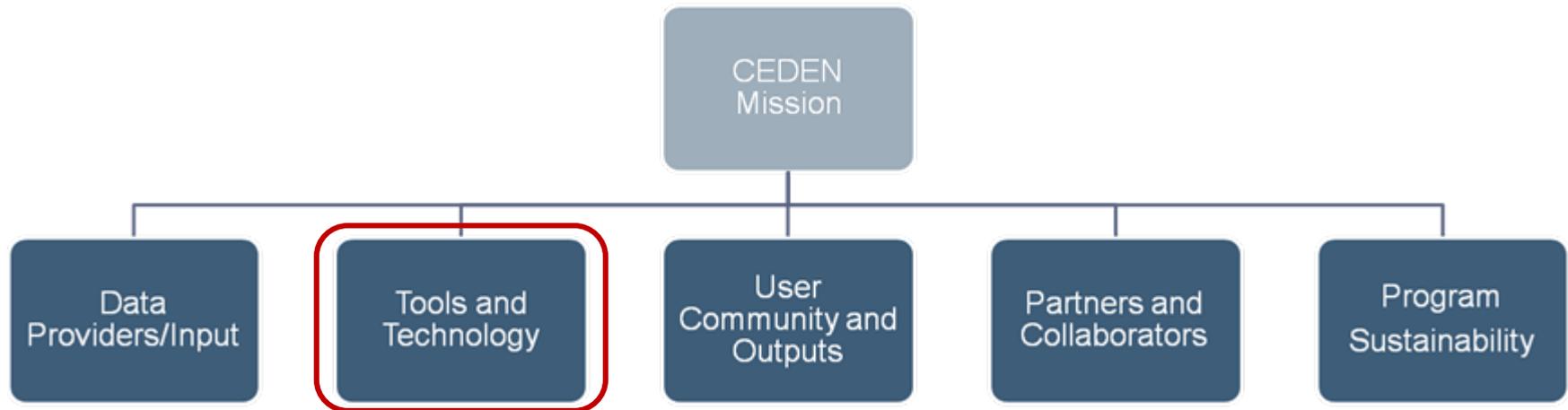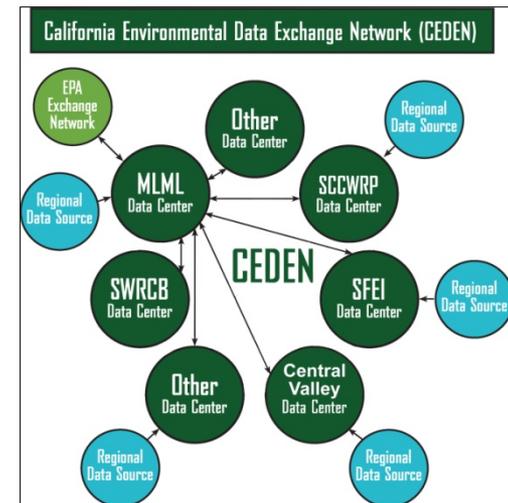
How I break down CEDEN

‣ From a management perspective …
CEDEN has five major components
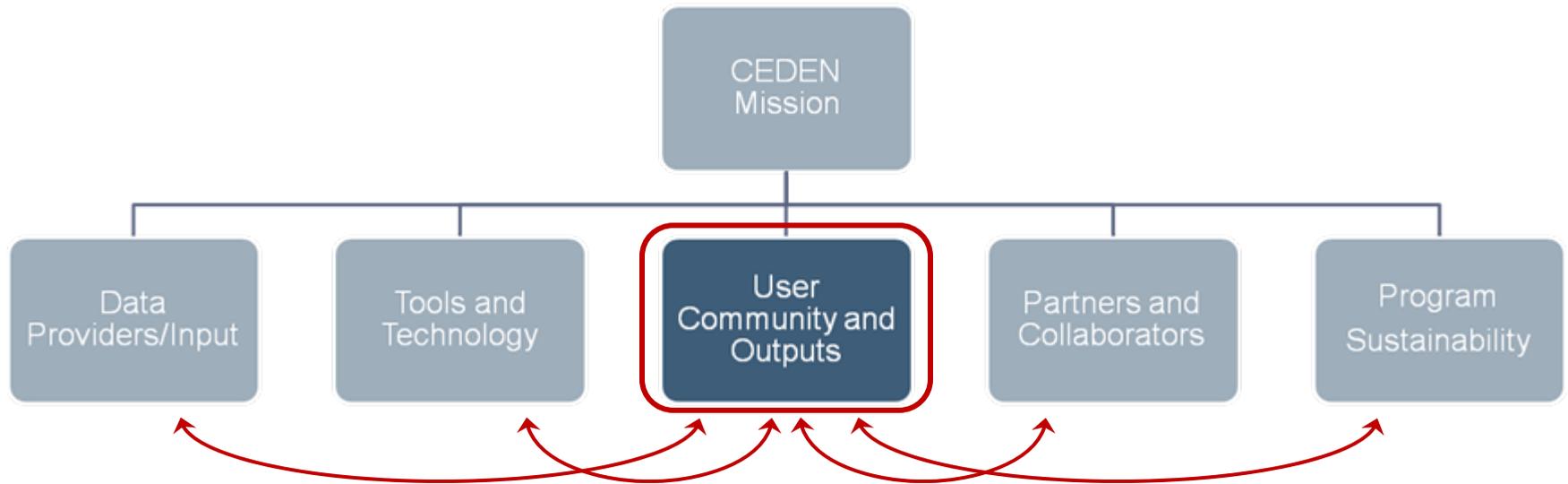
Where CEDEN has focused

California Environmental Data Exchange Network (CEDEN)

- Thus far CEDEN has focused on developing its' infrastructure
- This is also where I believe we're in the best overall shape
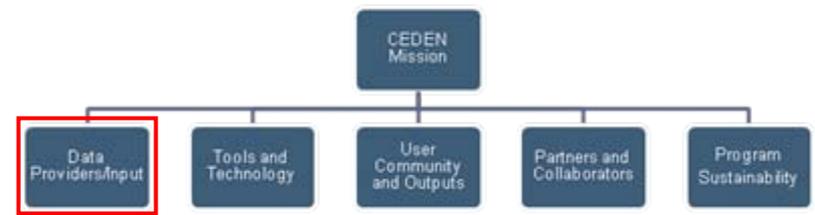
3

Our user community is the **primary** focus
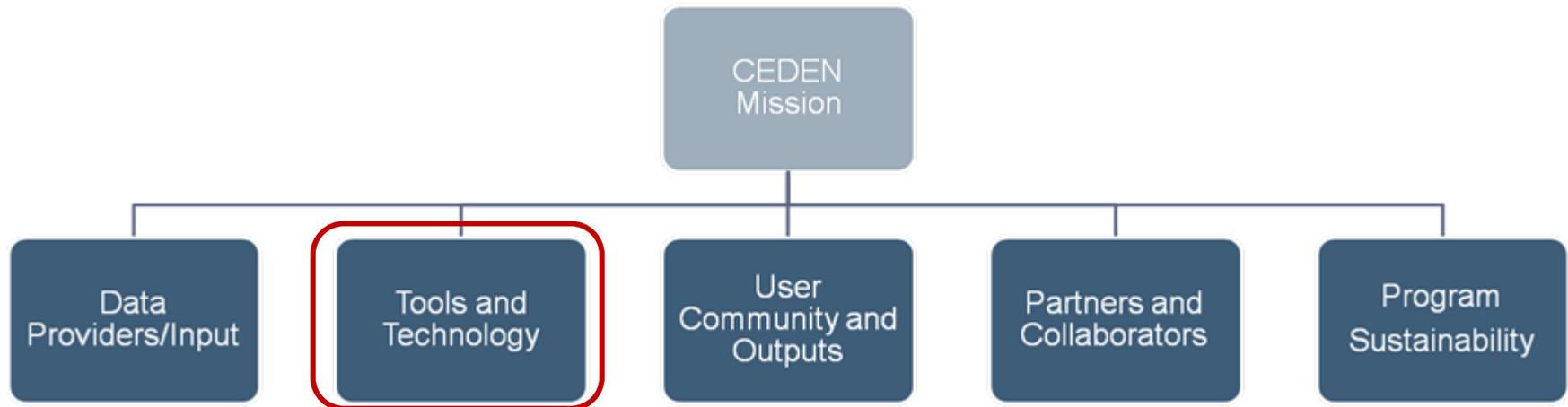

▸ My perspective:

Everything *we do in CEDEN must be informed by, and serve the needs of, our users.*

Understand what data are needed

- A large amount of the SWAMP data is in the system
- A number of additional data sets from other sources are coming online over the next several months
- However…
  - CEDEN contains a limited subset of currently available data
  - Lack full range of relevant data types (emerging contaminants, invasives, other biota, beach, intertidal, photos, etc.)
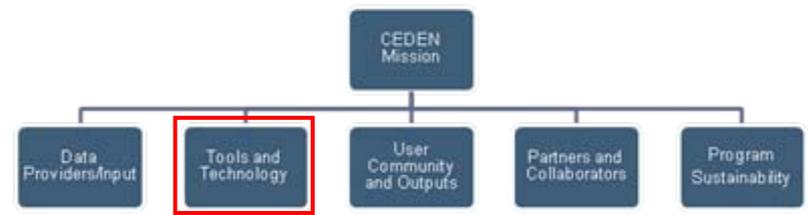
Powered by CEDEN

Data Input and
Data Infrastructure

Everything *we do in CEDEN must be informed by, and serve the needs of, our users.*

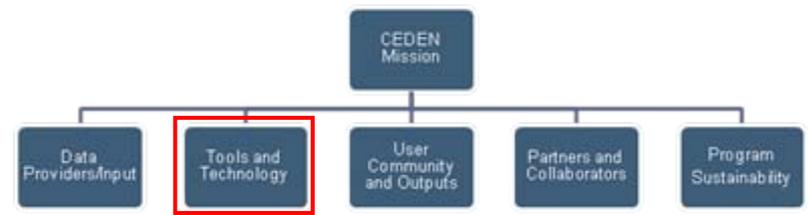▸ Understanding user needs will provide a clear prioritization of the tools CEDEN develops

Powered by CEDEN

Assessment of Tools and Technology
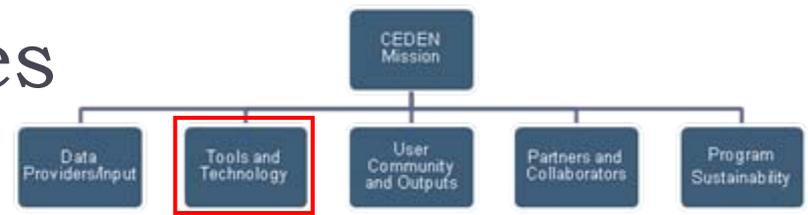

▸ Internally CEDEN has a working system that handles SWAMP and SWAMP comparable data well

▸ However data has not become available quickly

▸ CEDEN is missing data structures for other data types (must evolve to handle non-SWAMP data)

▸ The system presents opportunities for **efficiency**

Powered by CEDEN

Missing Data Structures

CEDEN Mission

Data Providers/Input | Tools and Technology | User Community and Outputs | Partners and Collaborators | Program Sustainability

- ▶ Database does NOT currently contain all data types needed by users
    - ▶ The Council Data Management Workgroup will be an important partner in accomplishing this
        - ▶ Examples of additional data types:
            - ☐ Emerging contaminants
            - ☐ New variants of existing categories
            - ☐ Other biotic communities (focus has been freshwater)
            - ☐ New methods (gear, QA protocols)
            - ☐ New categories (marine debris, invasive species, etc.)

Assessing Opportunities

▸ Coordination

　　▸ Use our time and resources effectively

　　▸ CEDEN is working to determine the best way to structure its work, decisions and external interactions

▸ Automation

　　▸ Data input tools/checkers

　　▸ Data management tools

　　　　▸ Internal – movement of data into/out of RDC's to CEDEN

　　　　▸ External – interaction with other systems (Council Portals, WQX, CIWQS, etc.)
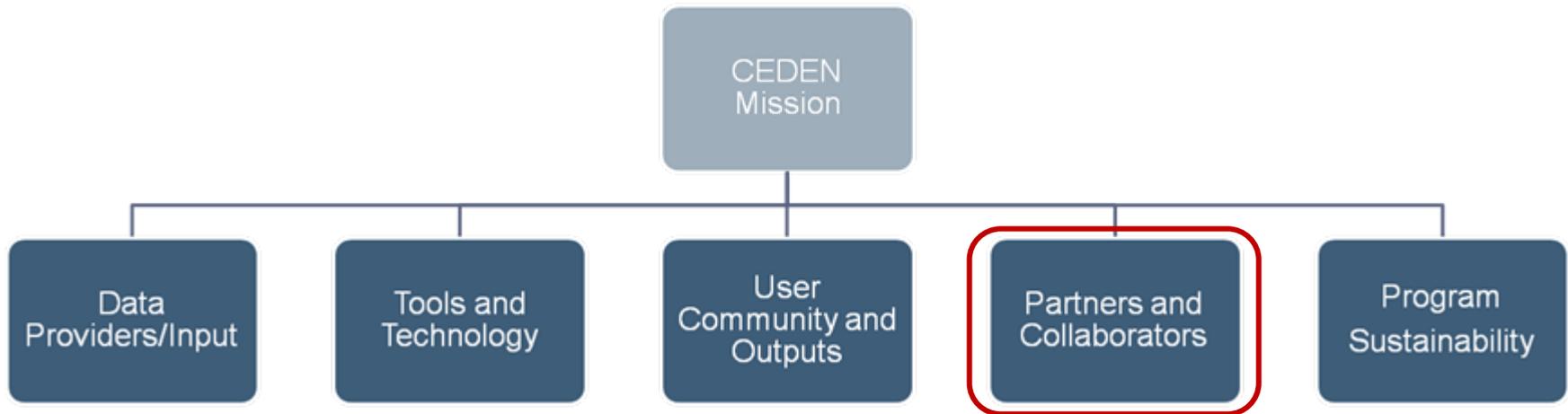
　　▸ Data output and applications

User Interactions Assessment

▸ **User needs require clear definition**

  ▸ CEDEN serves SWAMP reasonably well

  ▸ As CEDEN evolves, needs to serve a wider range of clients (public, agencies, scientists and other systems)

  ▸ 'Powered by CEDEN'

▸ **Where CEDEN needs to develop:**

  ▸ QA screening tools

  ▸ Data Interpretation Tools

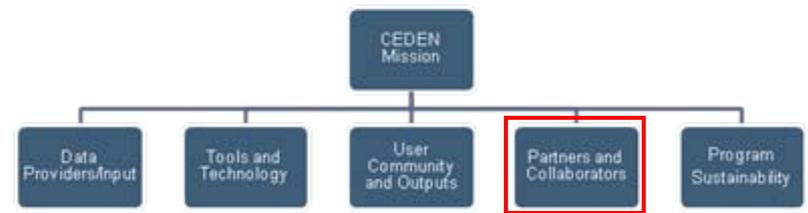 ▸ Intuitive Interface design

Partners and Collaborators

Everything we do in CEDEN must be informed by, and serve the needs of, our users.

▸ If CEDEN serves our primary users it will simultaneously serve and encourage additional
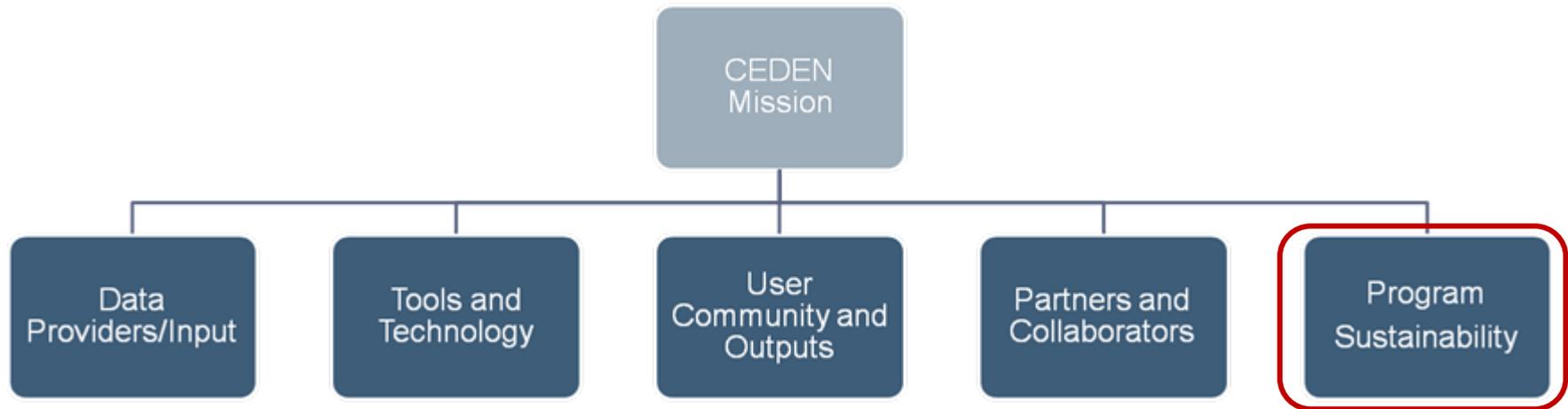▸ partnerships

1

Assessment of Partnerships

▸ **Other entities have similar missions (data collators)**

▸ **We are working to determine who our potential partners and collaborators are**

  ▸ Identify and prioritize where CEDEN will collaborate

▸ **EPA Exchange Network / WQX**
▸ **34 North / Bay Delta Live**
▸ CERES
▸ **OST Monitoring Enterprise**
▸ **Marine Monitoring Enterprise**
▸ SCCOOS, **CeNCOOS**
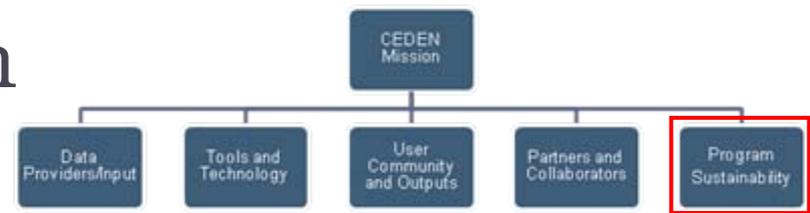▸ DWR Water Data Library
▸ USGS NWIS
▸ Others…

Program Sustainability

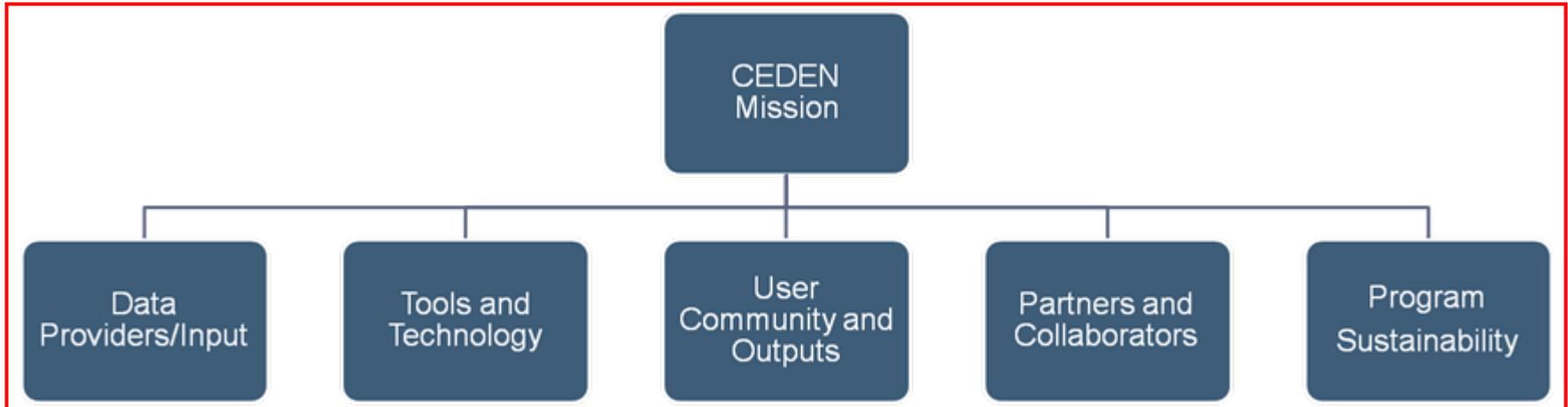***Everything** we do in CEDEN must be informed by, and serve the needs of, our users.*

▸ CEDEN must be viewed as **essential** to multiple client communities for it to be
▸ ₁₃sustainable
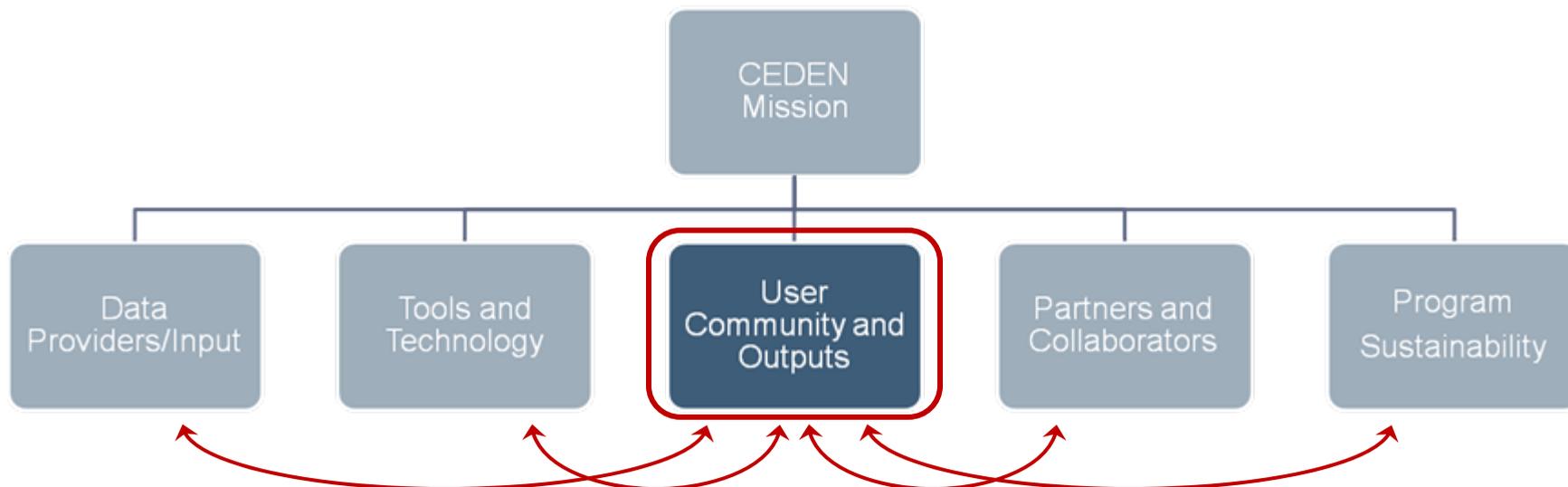
Assessment of Program Sustainability

▶ We must create a user community around CEDEN

  ▶ Provide **value** to justify CEDEN's continuance

    ▶ Value to data providers

    ▶ Value to collaborators

    ▶ Value to end users of the system and data

  ▶ Leverage resources with others

    ▶ Facilitate and encourage others to build cool tools and visualizations that are "Powered by CEDEN"

      ☐ Council portals are one example of this

What's next for CEDEN?

- Focus on integrating more data types into CEDEN
- Continued communications (internal and external)
- Identify focus/user groups to obtain input on prioritization and β-testing

Powered by CEDEN

Summary

▸ Many things about CEDEN are going well

▸ Success will necessitate addressing **all** components of the system to serve the users