Evolving Federal Resources, Data, and Engagement Networks to Help the Nation Build Back Better

GeoGov Summit Panel Session

September 8, 2023

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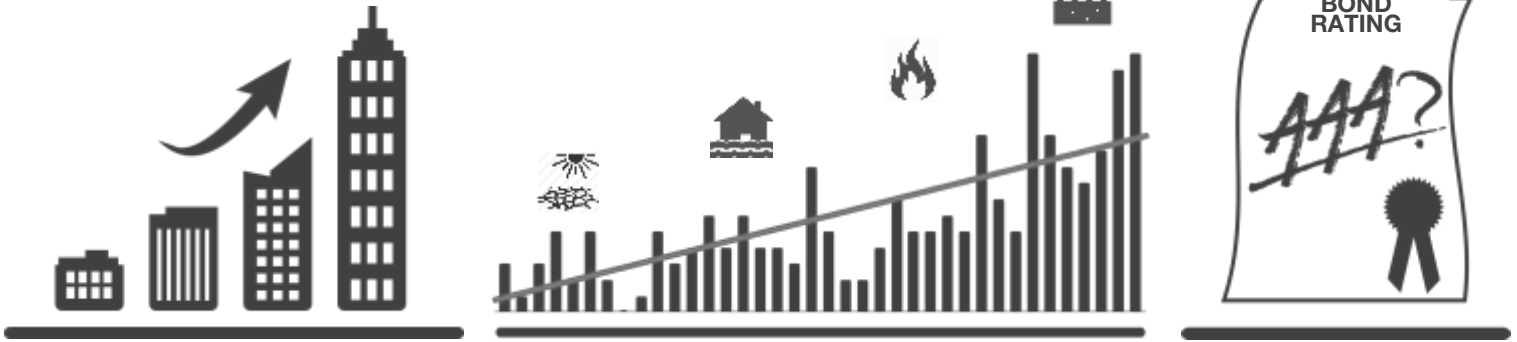
Summary of the Problems

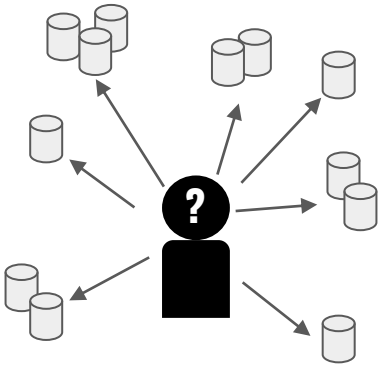


GROWING U.S. COMMUNITIES

CLIMATE-DRIVEN DISASTERS

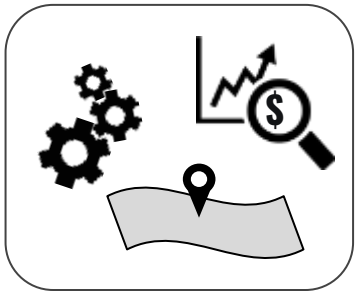
INCREASING RISK

Summary of the Problems (continued)



ACCESS, UNDERSTAND & USE FEDERAL DATA

INTEGRATE FEDERAL DATA WITH LOCAL DATA

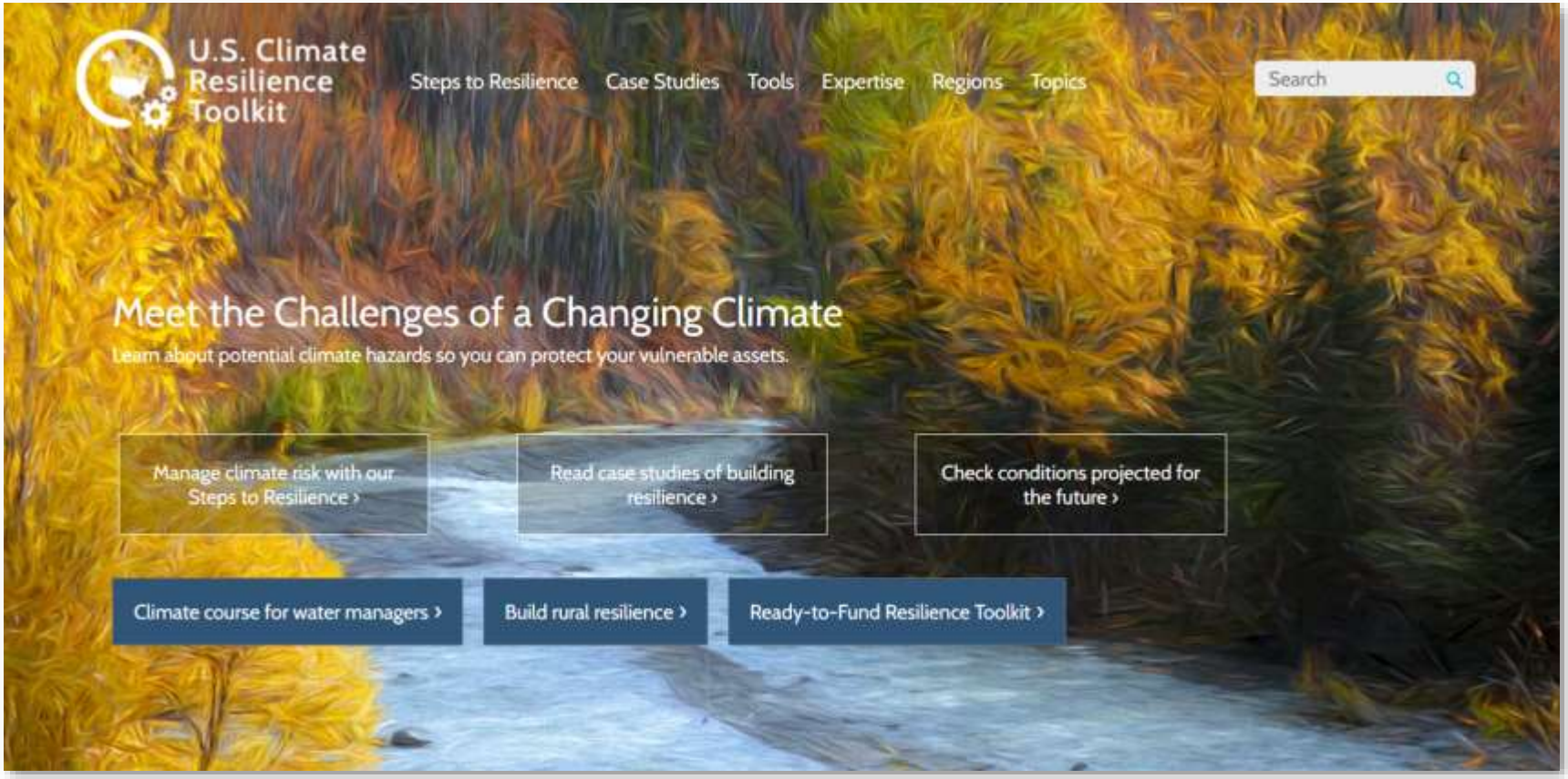


LOCAL INFO HUBS FOR KNOWLEDGE-SHARING

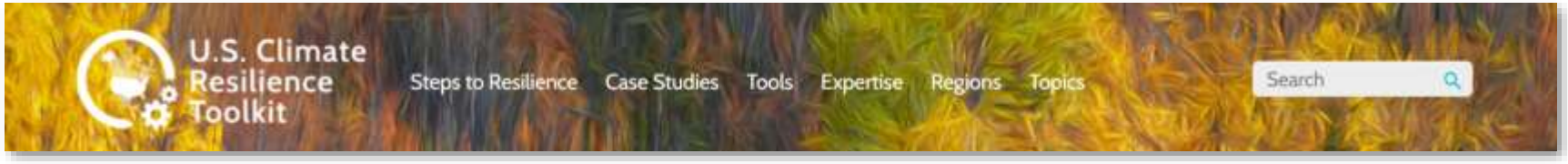
Source: 18F Task Force report to NASA & NOAA

U.S. Climate Resilience Toolkit launched in November 2014

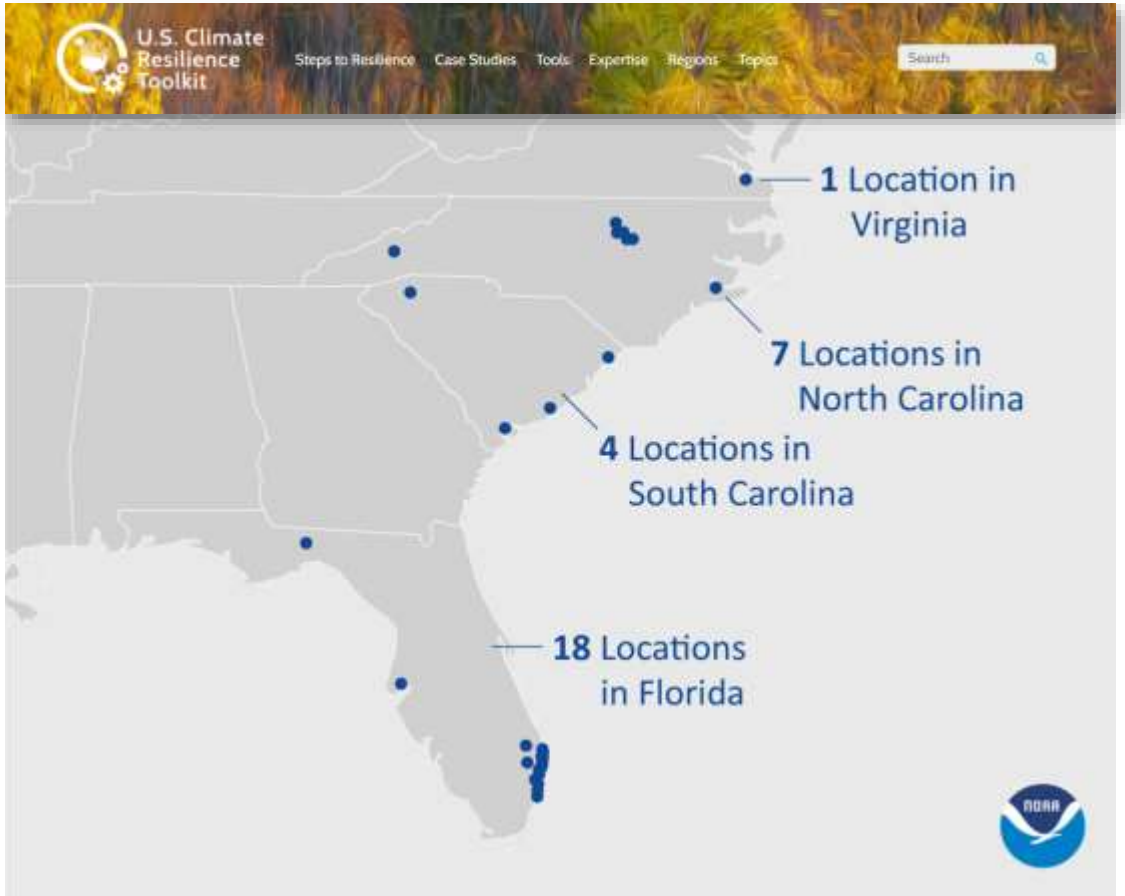
https://toolkit.climate.gov



Two key frameworks in the Toolkit



~8 years of supporting municipal planners



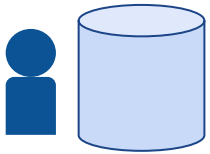
Public-private partnership to support local communities' resilience planning

30+ communities have used the planning framework over the last 6 years

5:1 benefits-to-cost ratio for communities using the StR that implement these resilience plans.*

*SOURCE: NEMAC at UNC-Asheville

Fostering collaboration in the ‘Resilience Ecosystem’



FEDERAL SCIENCE & DATA EXPERTS

Provide research, data, modeling, analys & impact assessments of past & future climate

CLOUD HOST SERVICES

Offer big data hosting, computation, & public browse, formatting, access services

DESIGNERS OF GIS & ANALYTIC TOOLS

Bring data & analysis tools from federal & local sources together in geospatial context

ADAPTATION PRACTITIONERS

Offer guidance and translation services to help communities & businesses plan & take action

DECISION MAKERS

In gov’t, business, & resources mgmnt — responsible for local planning & action to protect people and property

The USCRT's 5 'Steps to Resilience' (learn more»)

U.S. Climate Resilience Toolkit

A co-production of knowledge process that synthesizes information from multiple sources to...

1 EXPLORE HAZARDS

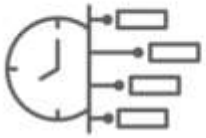
Identify & map exposure of all valued assets to climate-related hazards.

2 VULNERABILITY & RISK

Assess vulnerability & risk for all valued assets threatened by climate hazards. Rank most urgent threats to address.

3 OPTIONS

Brainstorm & list all options for reducing risks.

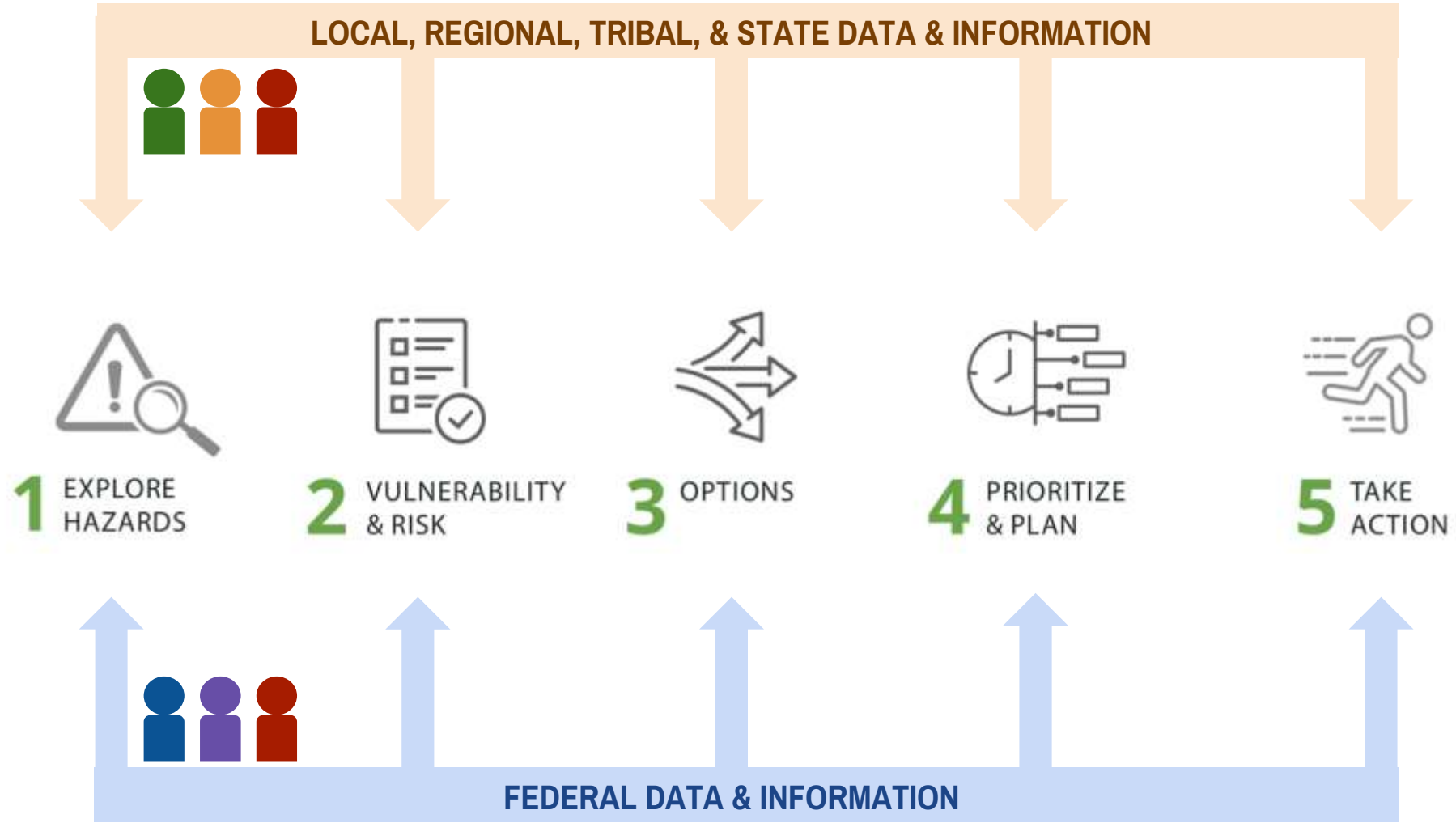


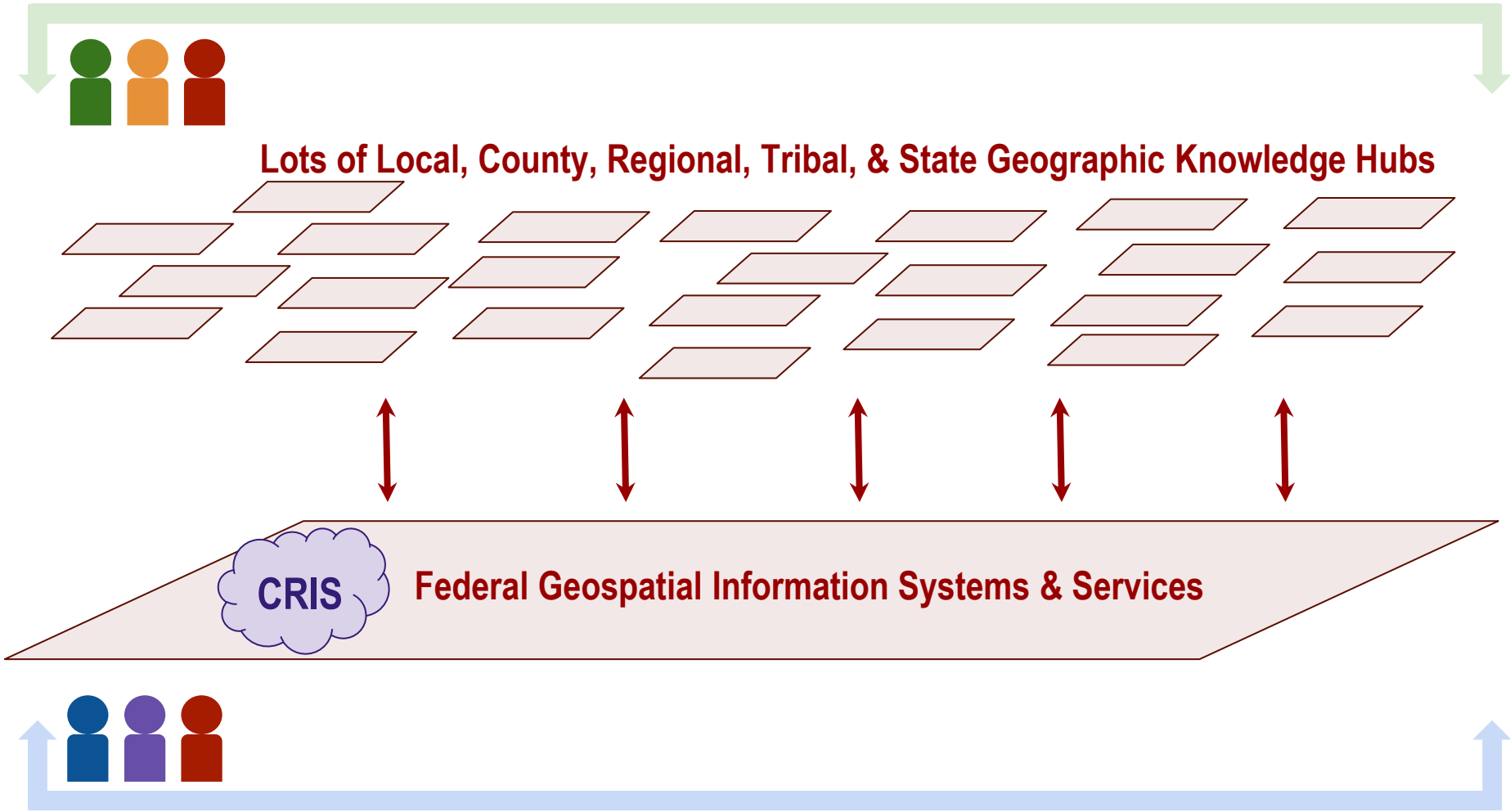
4 PRIORITIZE & PLAN

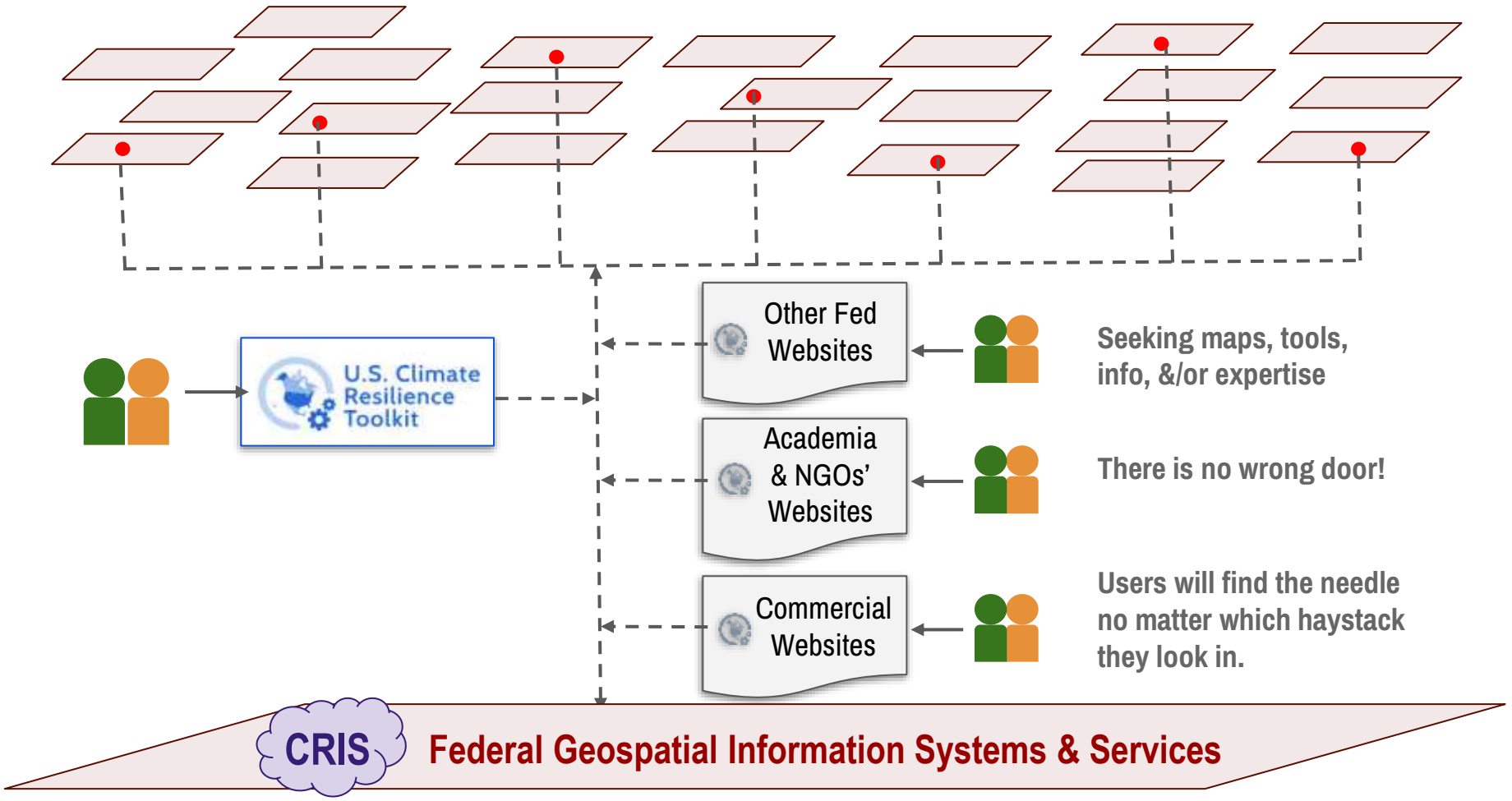
Rank options based on BCR assessment, select options to implement, define success metrics, & make an action plan.

5 TAKE ACTION

Obtain funds, implement plan, monitor results, iterate as needed, & report progress & outcomes.

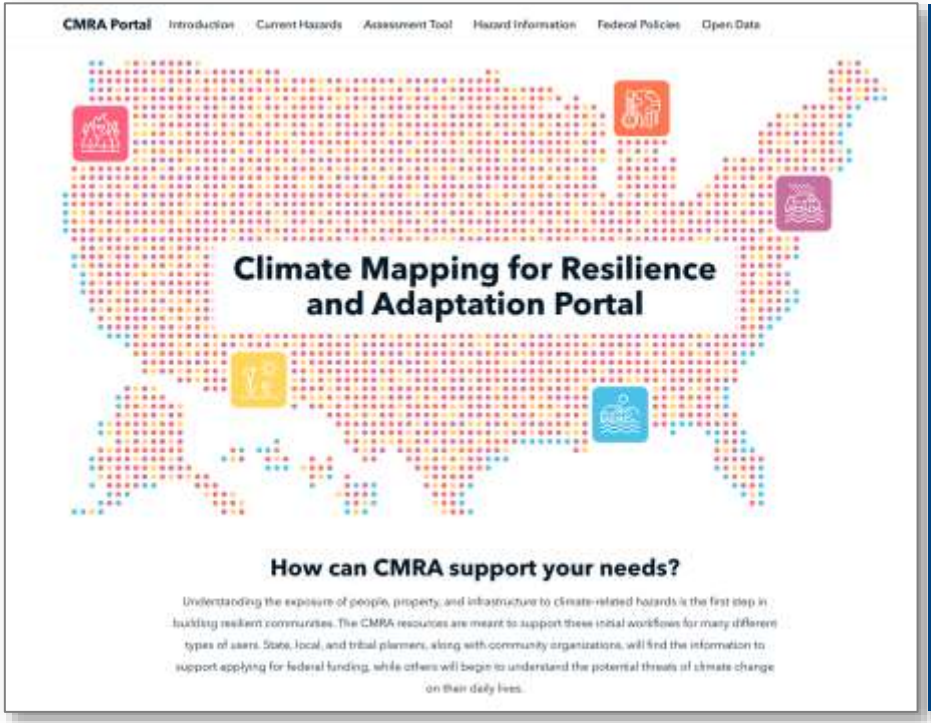

LOCAL, REGIONAL, TRIBAL, & STATE DATA & INFORMATION
1 EXPLORE HAZARDS
2 VULNERABILITY & RISK
3 OPTIONS
4 PRIORITIZE & PLAN
5 TAKE ACTION
FEDERAL DATA & INFORMATION

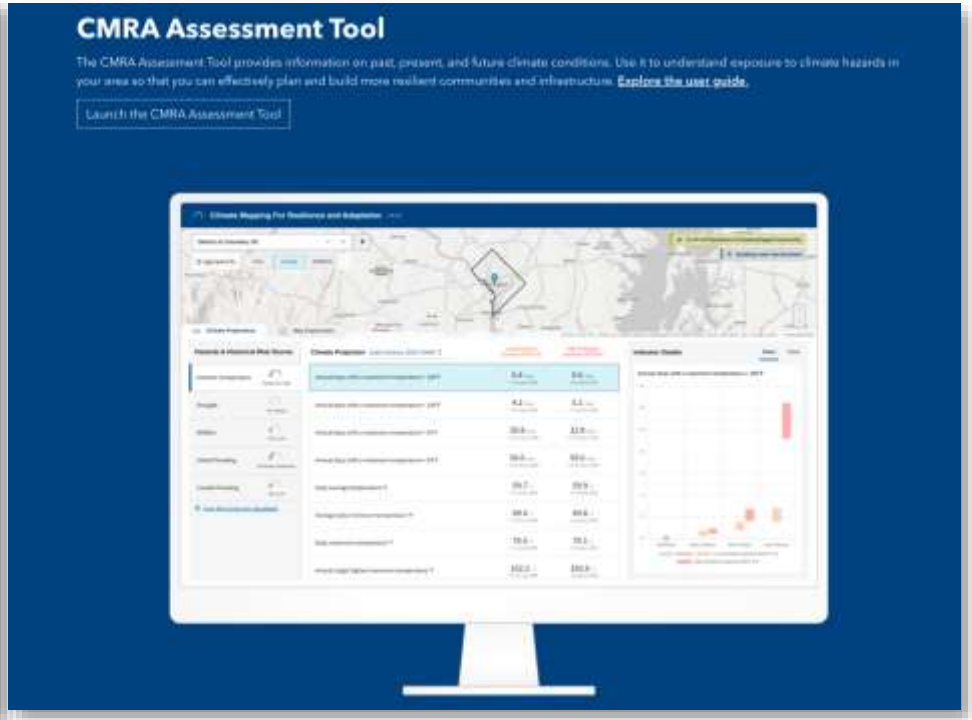

Lots of Local, County, Regional, Tribal, & State Geographic Knowledge Hubs
CRIS
Federal Geospatial Information Systems & Services


Lots of Local, County, Regional, Tribal, & State Geographic Mapping Services
U.S. Climate Resilience Toolkit
Other Fed Websites
Academia & NGOs' Websites
Commercial Websites
Seeking maps, tools, info, &/or expertise
There is no wrong door!
Users will find the needle no matter which haystack they look in.
CRIS
Federal Geospatial Information Systems & Services

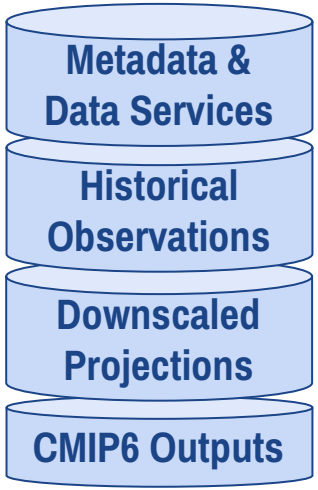
NOAA, WH, DOI and others published CMRA in Sept. 2022

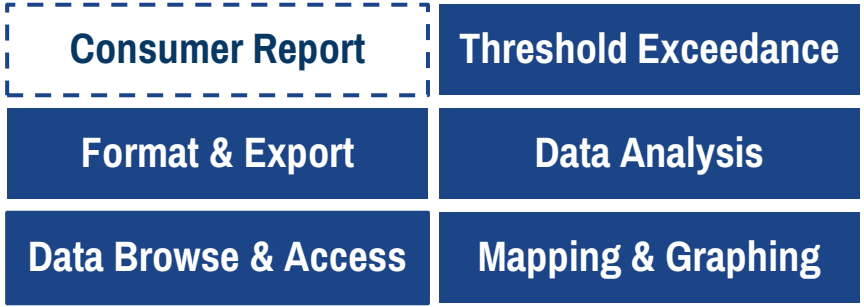
https://resilience.climate.gov





Climate Resilience Information System (CRIS) rollout planned for early 2024





CURATED COLLECTION OF DECISION-RELEVANT FEDERAL DATA

OPEN ACCESS / OPEN-SOURCE TOOL DEVELOPERS WORKBENCH (ANALYTICAL SERVICES)

FEDERAL GEOSPATIAL DATA & SERVICES

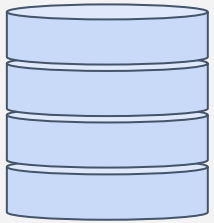
CRIS will provide foundational capabilities to ‘lift all boats’

Multiple public websites (storefronts) offering customized info, data, & tools

- CMRA Portal (Screening Tool)
- Climate Explorer (Open Source)
- NCA5 Interactive Atlas
- Custom Portals (e.g., Heat.gov)

For **Consumers** of Services

Climate Resilience Information System (CRIS)



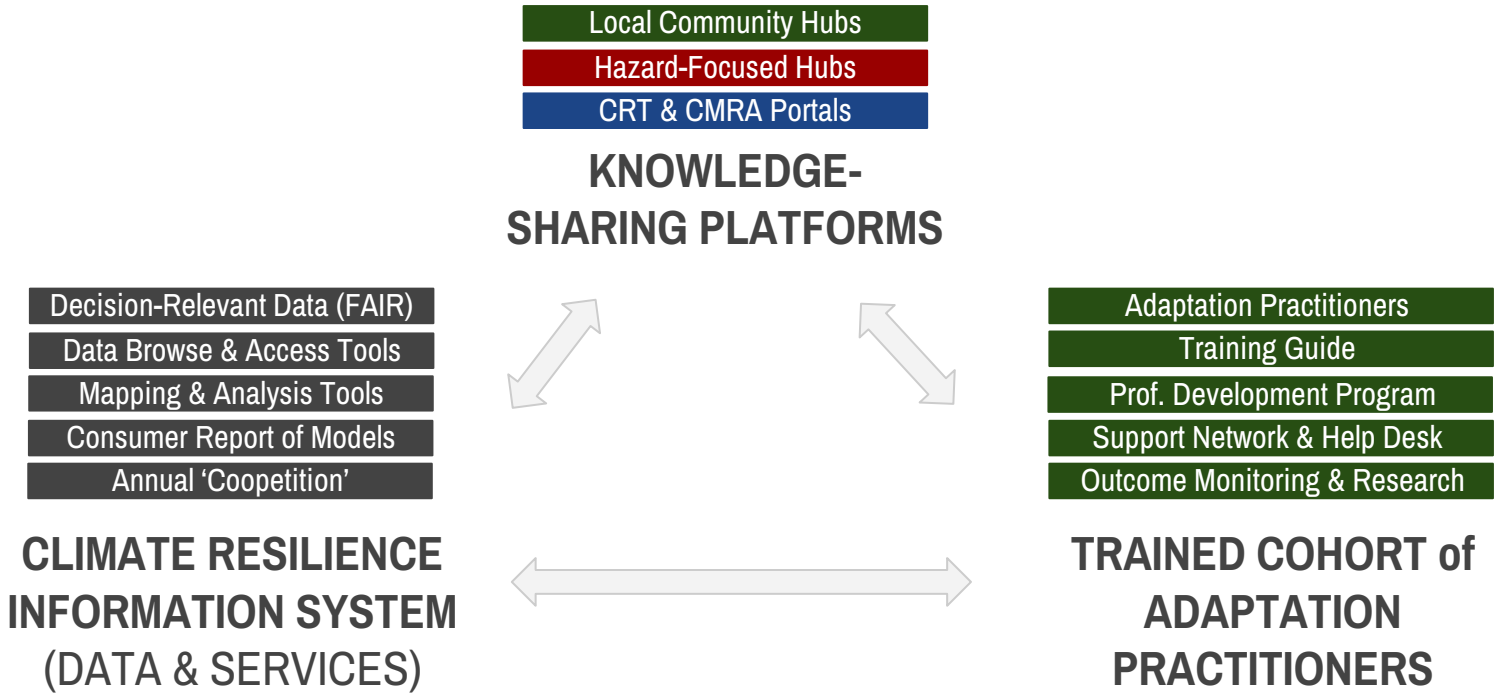
Decision-relevant Data

APIs, Analysis Tools, & Utilities

Federal Geospatial Standards & Services

For **Designers** of Services

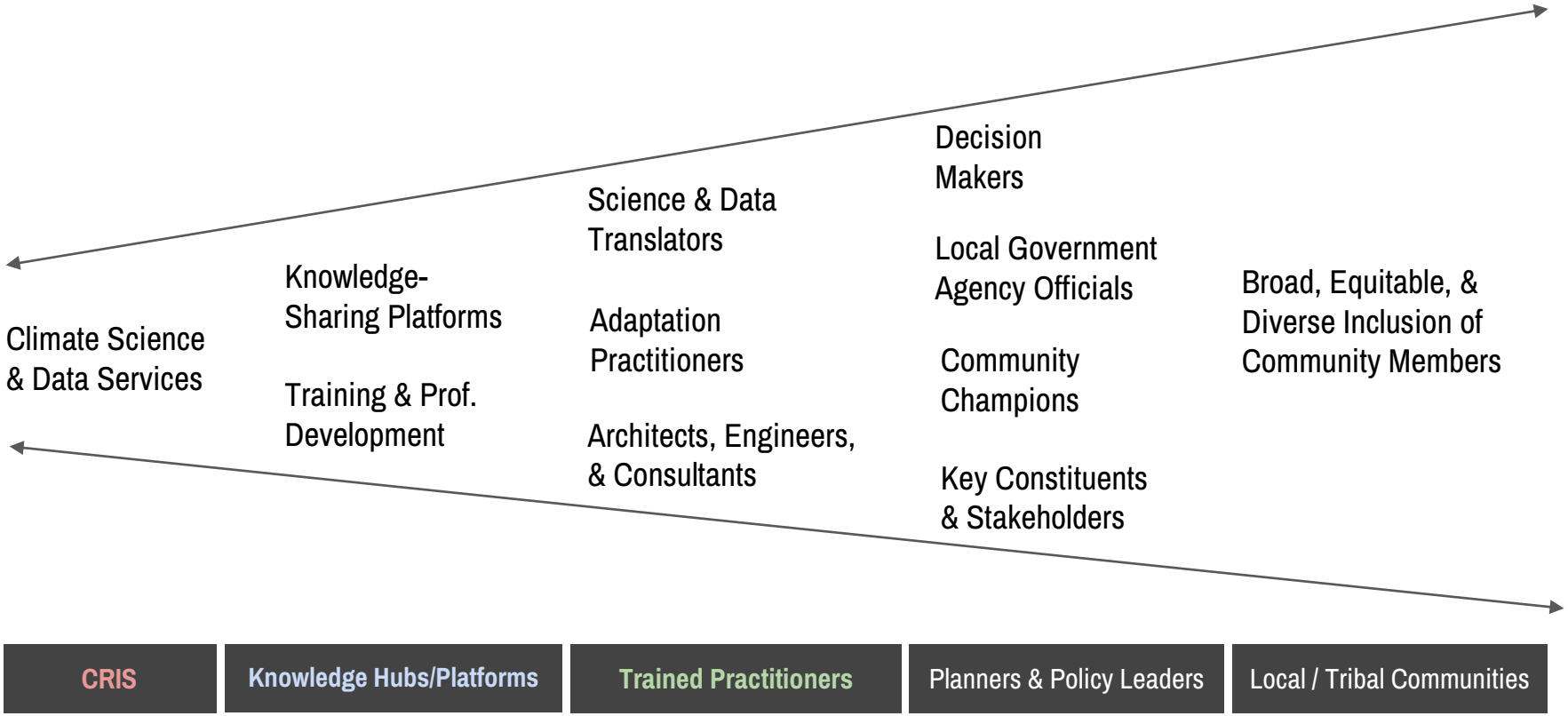
Toward a National Climate Resilience Framework



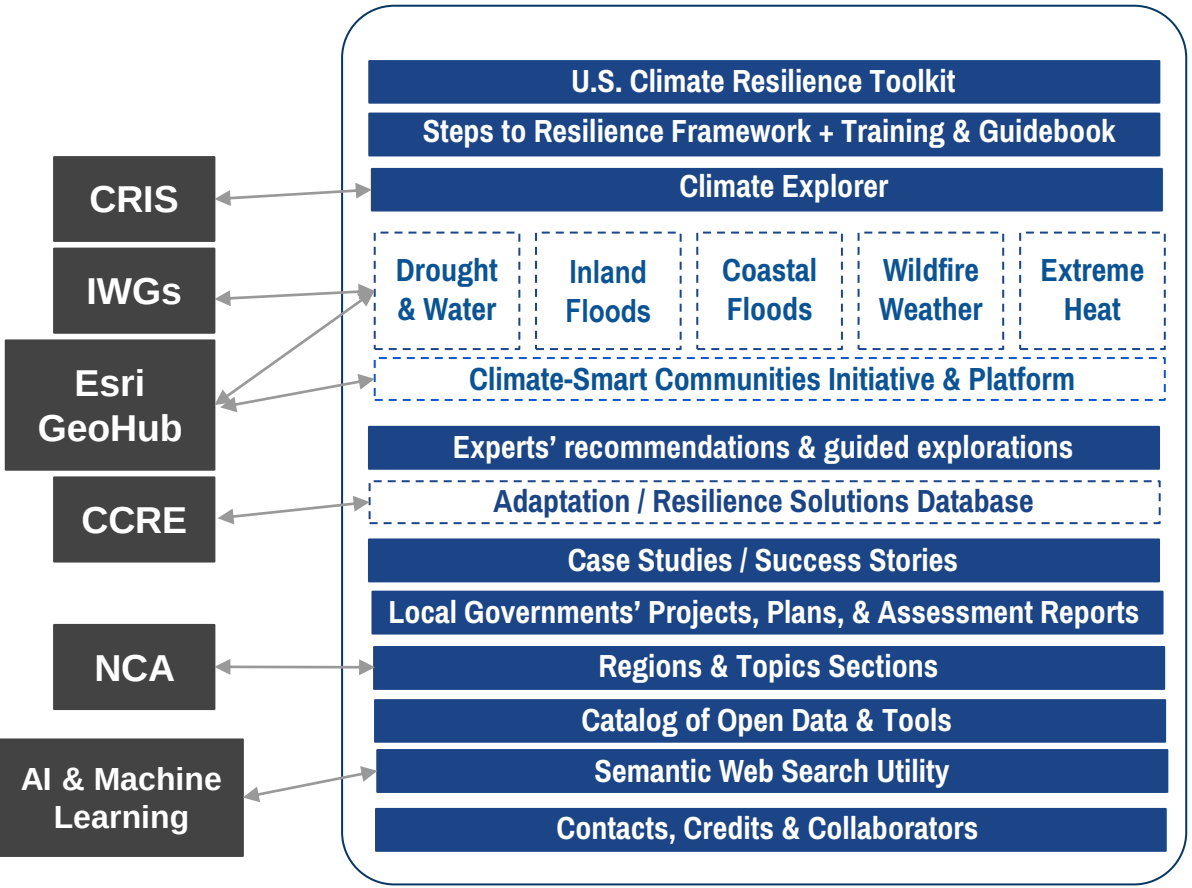
Thank you!

BACK UPS

Megaphone model of the climate services ecosystem



U.S. Climate Resilience Toolkit (USCRT)



Esri's (or like) Knowledge-Sharing Platform:

Dashboards, Community Hubs, Story Maps, ArcGIS Online

U.S. Climate Resilience Toolkit / CMRA

Steps to Resilience Framework + Training & Guidebook

Climate Explorer

Drought & Water | Inland Floods | Coastal Floods | Wildfire Weather | Extreme Heat

Climate-Smart Communities Initiative & Platform

Experts' recommendations & guided explorations

Adaptation / Resilience Solutions Database

Case Studies / Success Stories

Local Governments' Projects, Plans, & Assessment Reports

Regions & Topics Sections

Catalog of Open Data & Tools

Semantic Web Search Utility

Contacts, Credits & Collaborators

Heat.gov

Extreme Heat Hub / Portal

Current Conditions: Maps & Dashboards

Historical Data | Predictions & Projections

Tools & Apps for Planning & Response

Platform(s) for Stakeholder Participation

Grants & Funding Opportunities

Contacts, Credits & Collaborators

3-legged Stool =>

- Subject Experts
- Audience Experts
- Medium Experts

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Smalltown, LA

Local Resilience Hub / Portal

Current Conditions: Maps & Dashboards

Local Data | Federal Data

Tools & Apps for Planning & Response

Platform(s) for Stakeholder Participation

Other components…?

Contacts, Credits & Collaborators

3-legged Stool =>

- Local Champions
- Adapt. Practitioners
- Medium Experts