Northwest Power and Conservation Council

July 2, 2009

MEMORANDUM

TO: Fish and Wildlife Committee

FROM: Nancy Leonard, Wildlife and Ecosystem Monitoring and Evaluation Manager

SUBJECT: Regional Data Collection, Sharing, and Exchange White Paper

Bruce Schmidt (StreamNet) will present an overview of the Regional Data Collection, Sharing, and Exchange white paper. The steps outlined in this white paper provide important guidance to furthering the Pacific Northwest Aquatic Monitoring Partnership's and others' goals for consistent data management and sharing practices. Bruce will highlight the necessary steps, as identified in this white paper, to facilitate efficient regional-scale data sharing and combining data from multiple sources to derive high level indicators and serve other data needs. The presentation will briefly outline important roles for various entities, including the Council, in assuring that data sharing and exchange succeeds in the Northwest. Copies of the white paper will be available at the meeting.

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White Paper:

Considerations for Regional Data Collection, Sharing and Exchange

Bruce Schmidt
StreamNet Program Manager
Pacific States Marine Fisheries Commission

Presentation to

Northwest Power and Conservation Council

July14, 2009

StreamNet
FISH DATA FOR THE NORTHWEST

www.streamnet.org

There's been talk of a **regional** data delivery system…

2000 BiOp
RPA 198

2002
Council Contract
with SAIC

So why isn't there one?

NOAA
Guidance

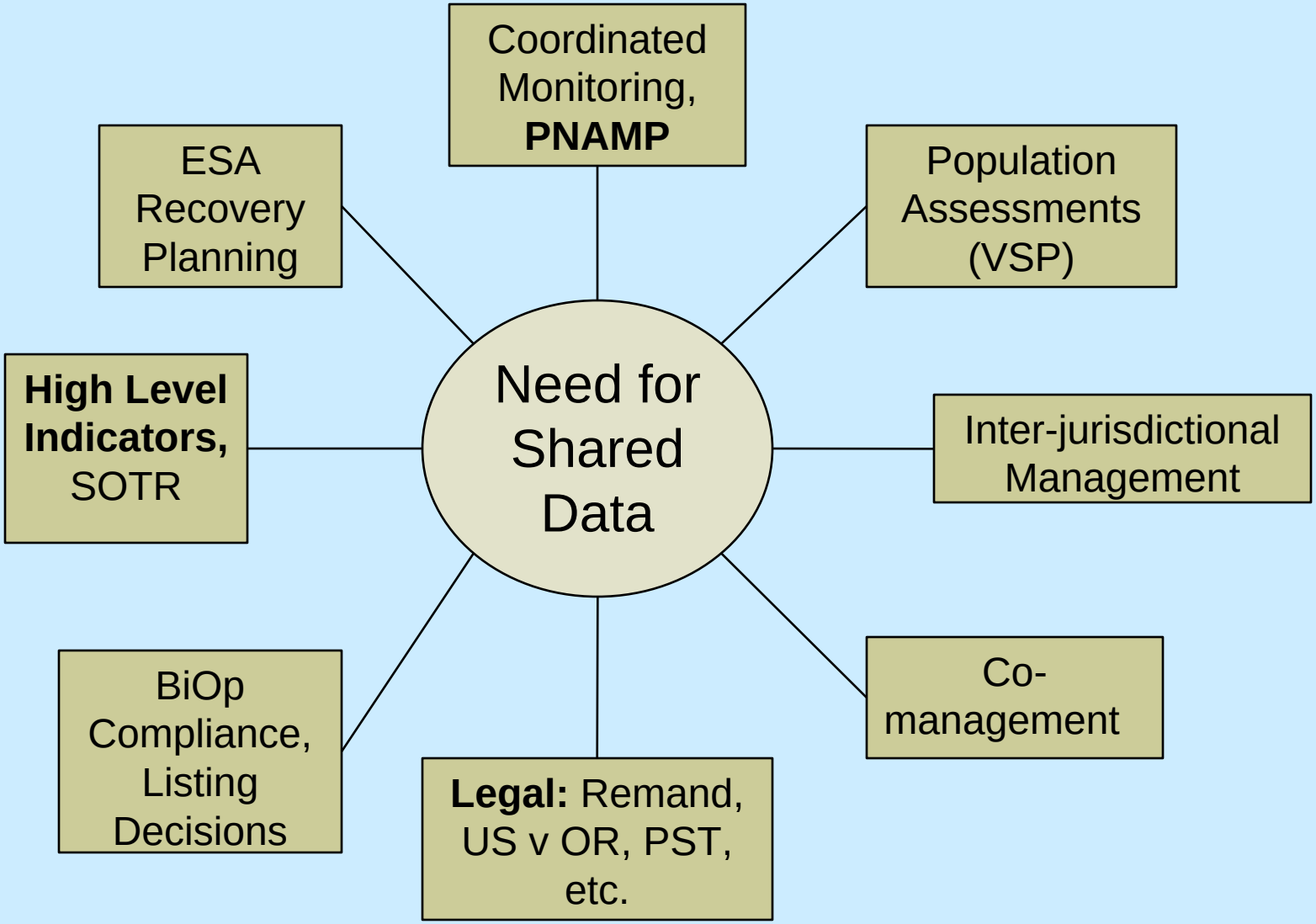
2008 BiOp
RPA 72

CBCIS
/ NED

2006
Col. Basin
Data Center

Fish and Wildlife
Program

Many Programs Cross Jurisdictions

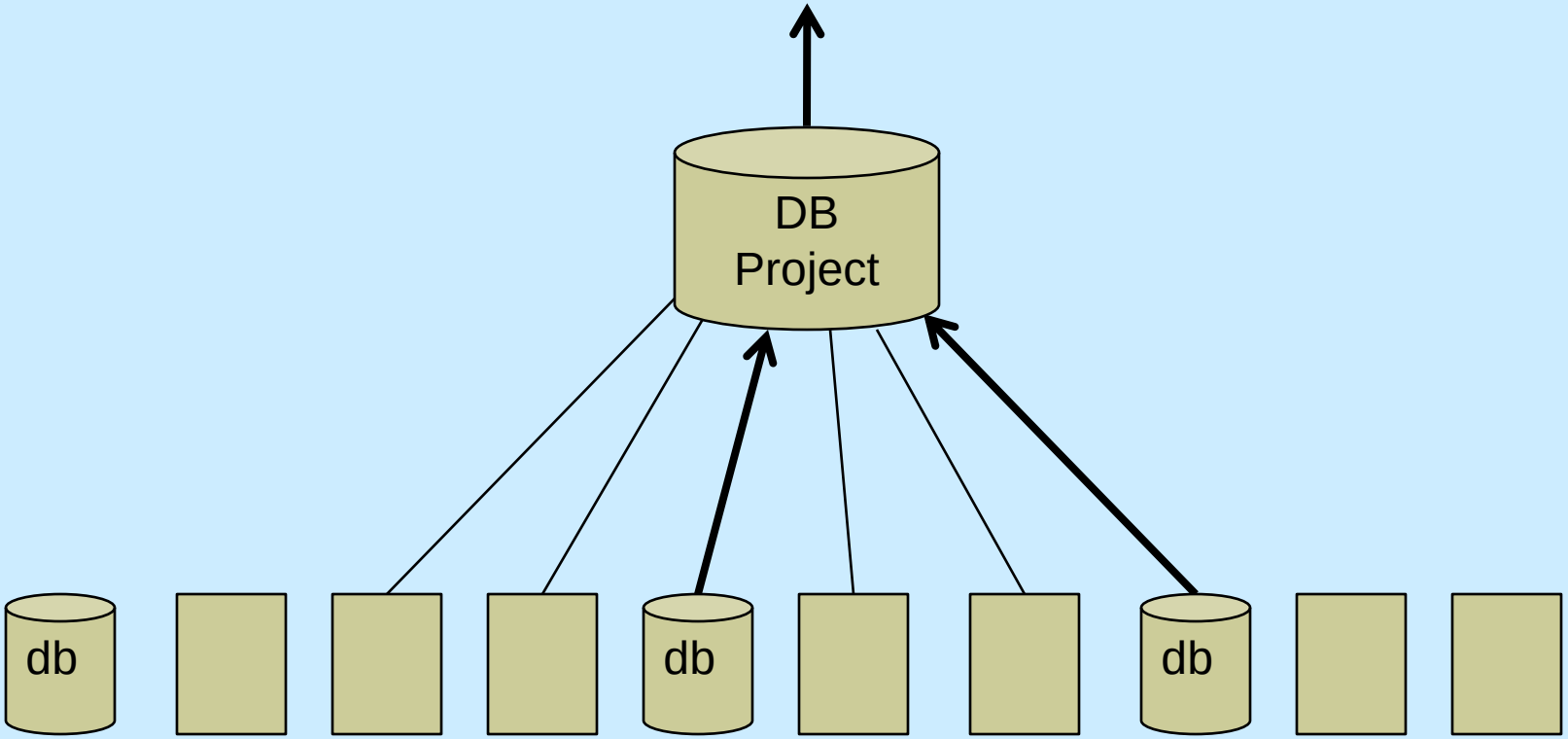


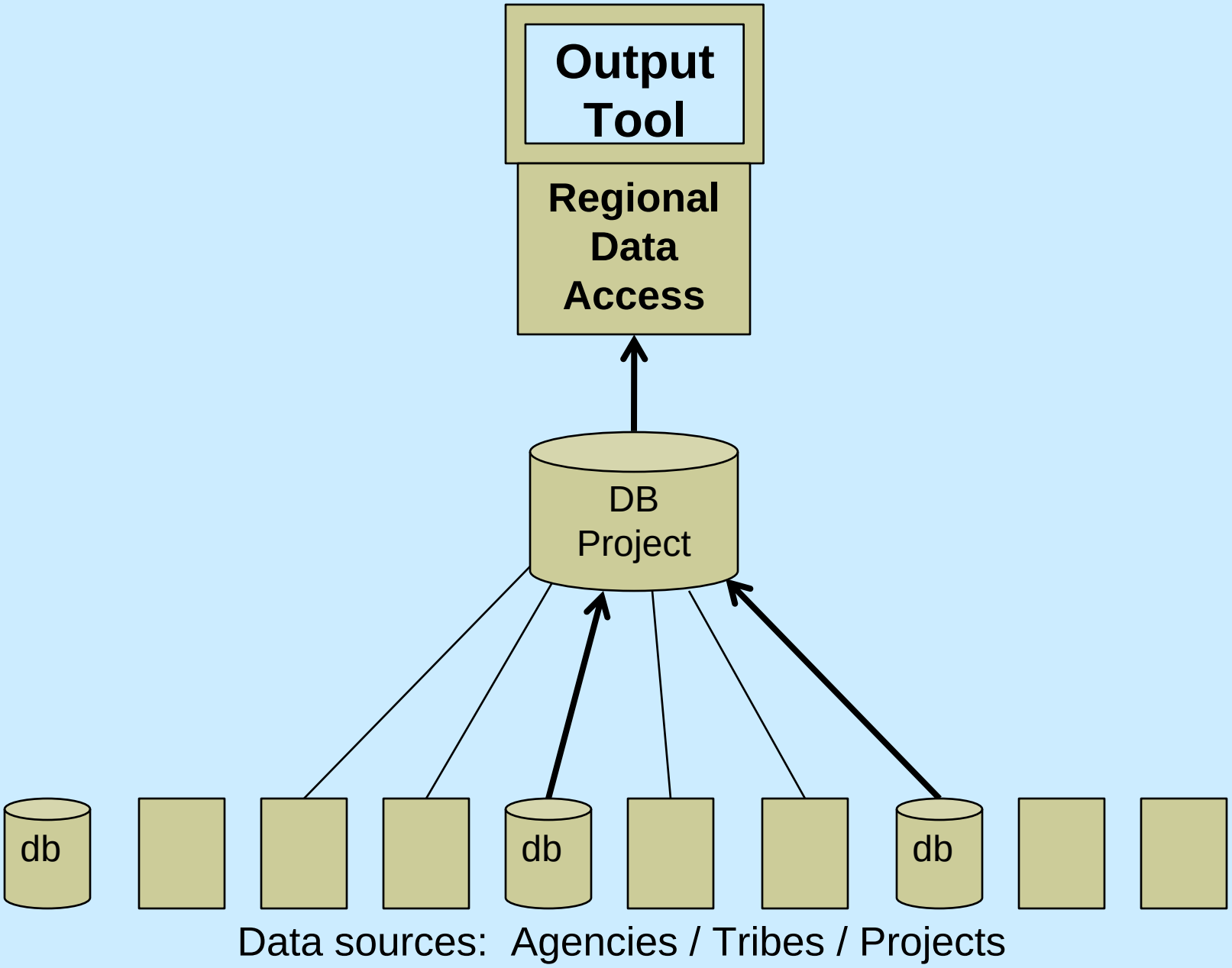
Current data delivery status:

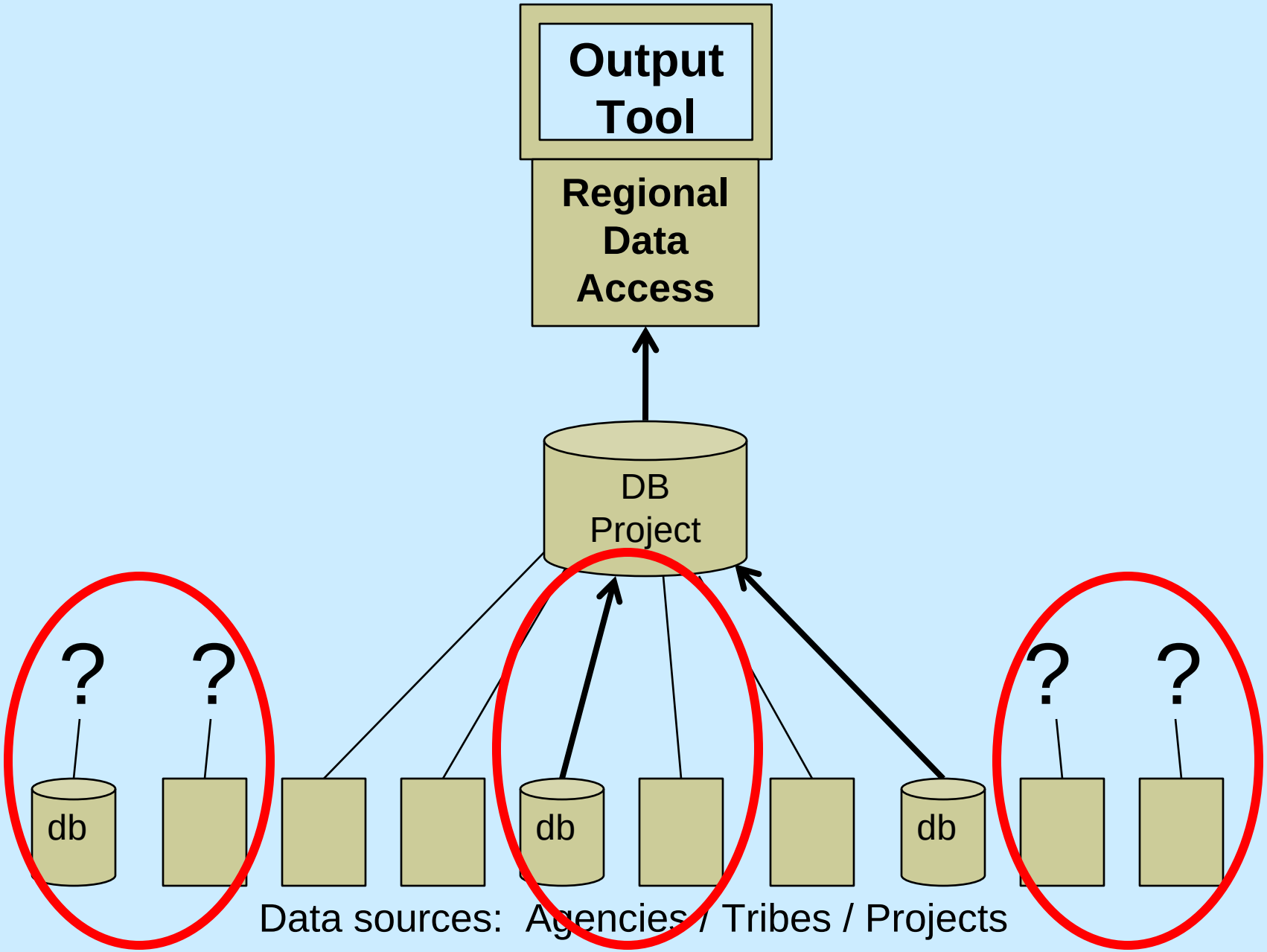
- Existing database projects – Focused
  - StreamNet
  - Pacific Northwest Water Quality Data Exchange
  - Fish Passage Center
  - PTAGIS, RMIS, PACFIN, RECFIN
  - IBIS (wildlife data)
- Proposals – Comprehensive, but not built
  - SAIC / CBCIS
  - 2000 BiOp RPA 198
  - Columbia Basin Data Center
- Efforts started – Not complete
  - NED / PNAMP (NED Portal, ISTM)
  - Columbia Basin Center of Knowledge (Canadian & US data)

Existing database projects

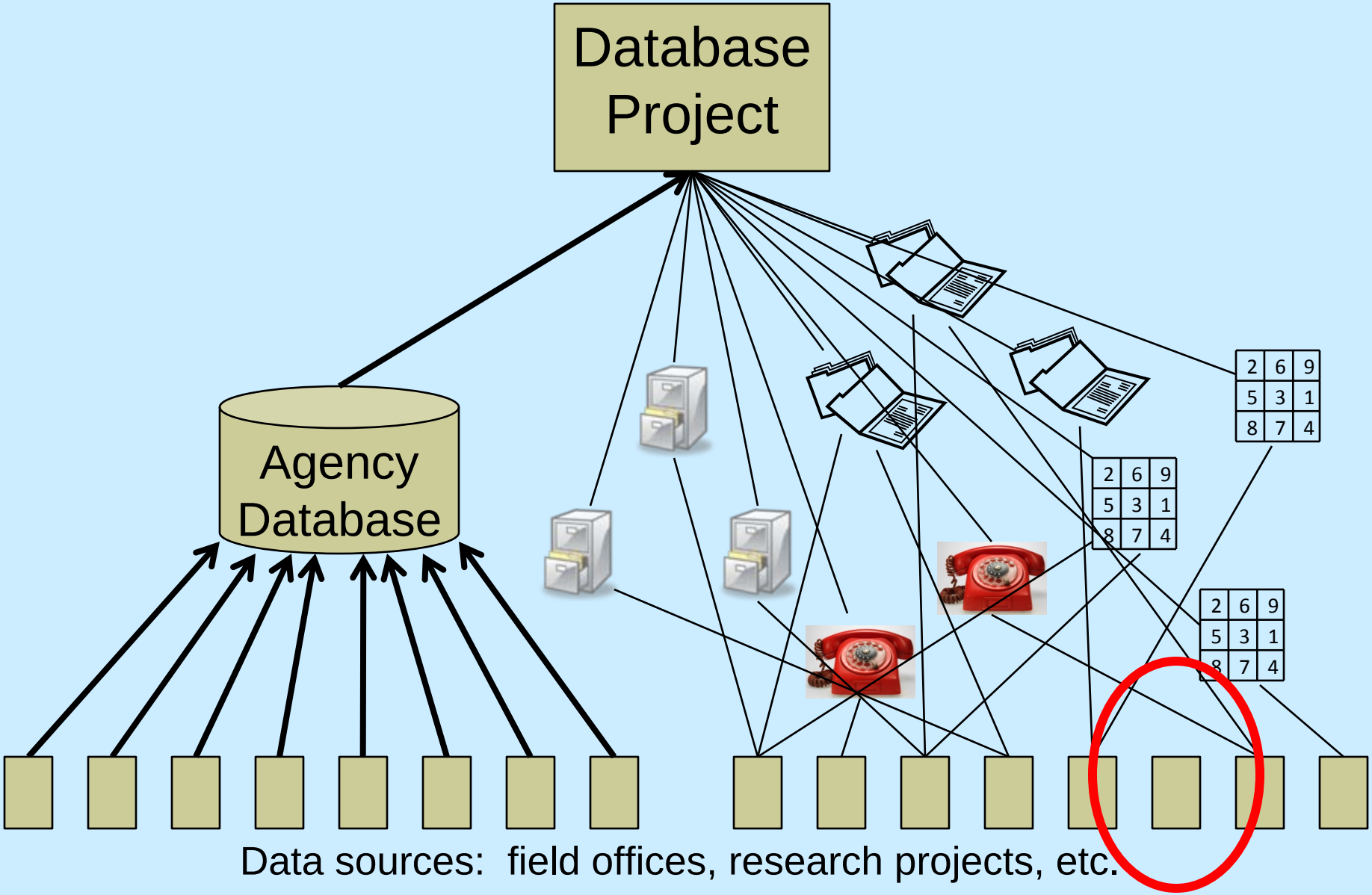
SOTR	Population models
Population Assessments	Subbasin planning
Planning	HLIs
Management	Public, etc.



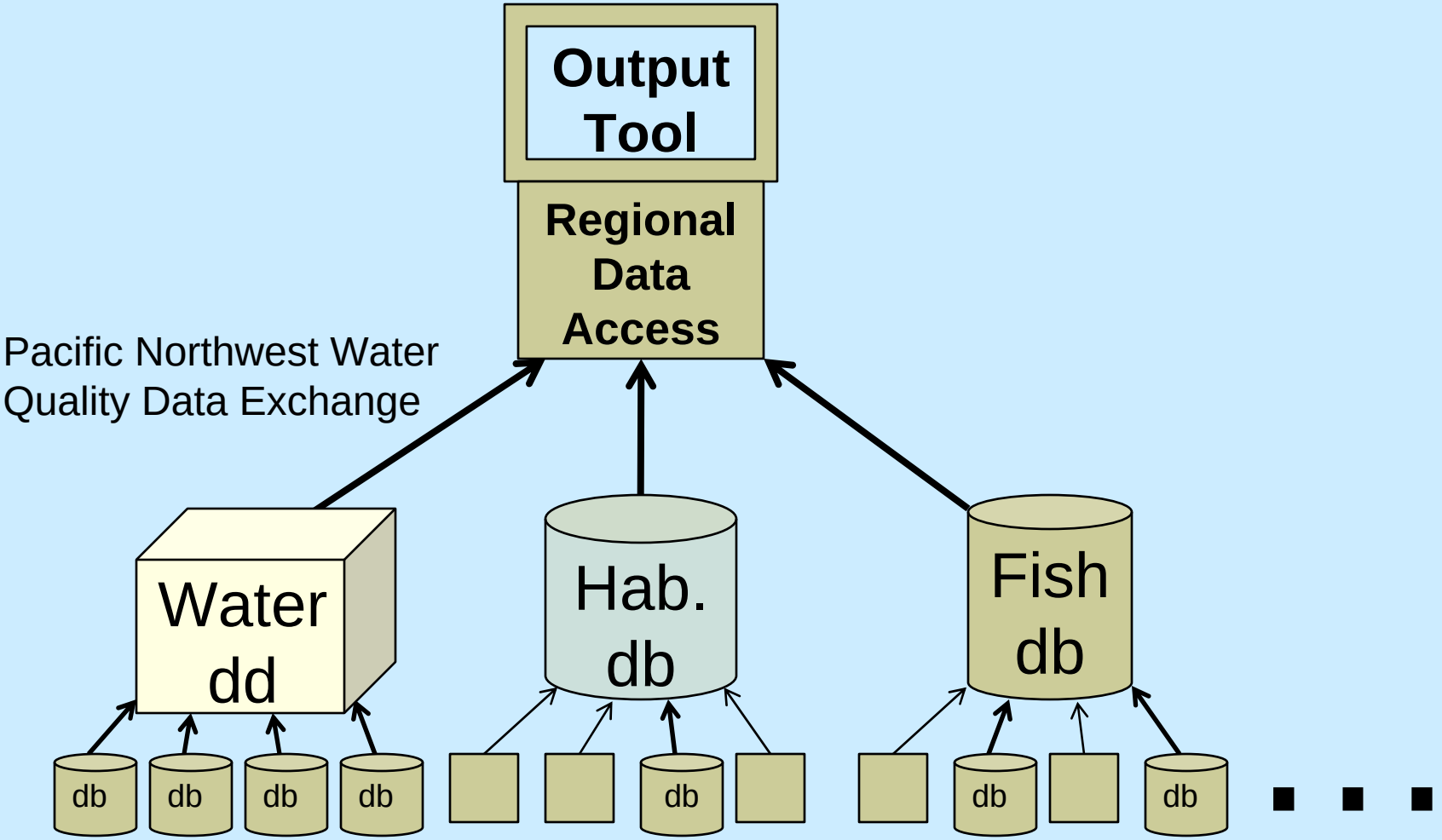

Output Tool
Regional Data Access
DB Project
db
db
db
Data sources: Agencies / Tribes / Projects


Output Tool
Regional Data Access
DB Project
?
?
db
db
db
?
?
Data sources: Agencies / Tribes / Projects

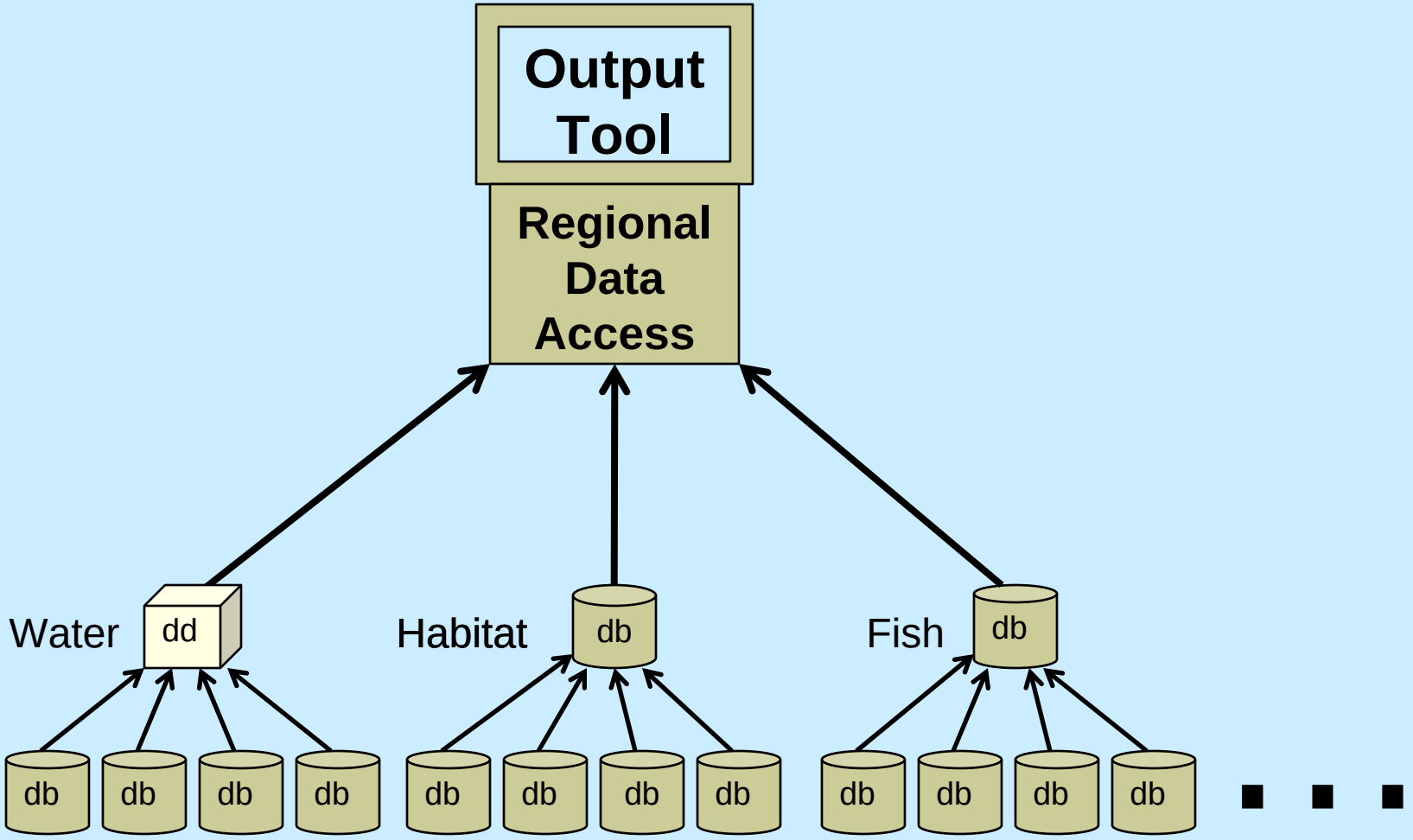
Smooth, organized v. current inefficient approach



Most efficient – start with existing projects:

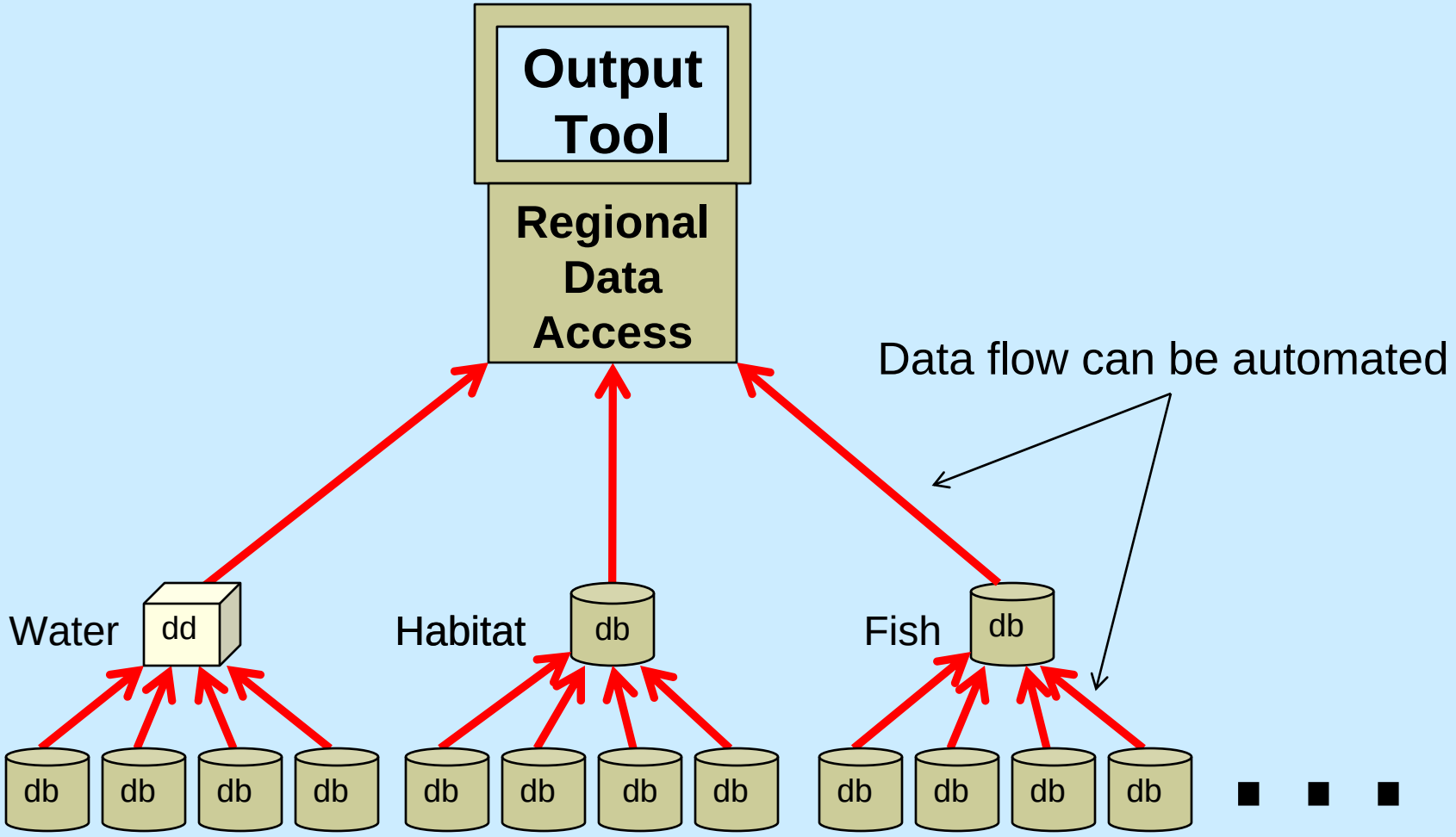


Improve from there:



Multiple types of data from multiple sources, standardized by data type

The essential driver of a comprehensive data delivery system:

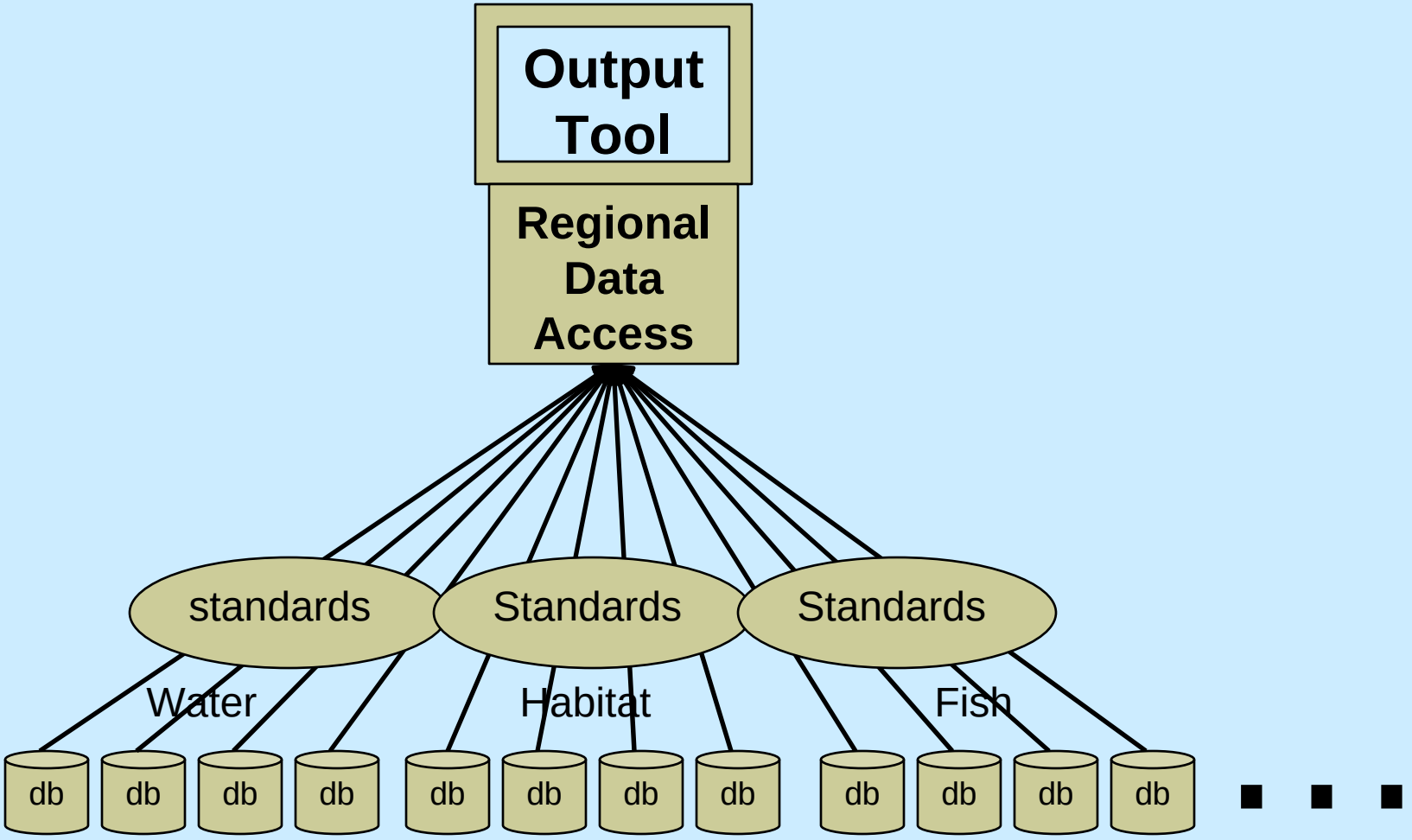


Multiple types of data from multiple sources, standardized by data type

Automation is the key!

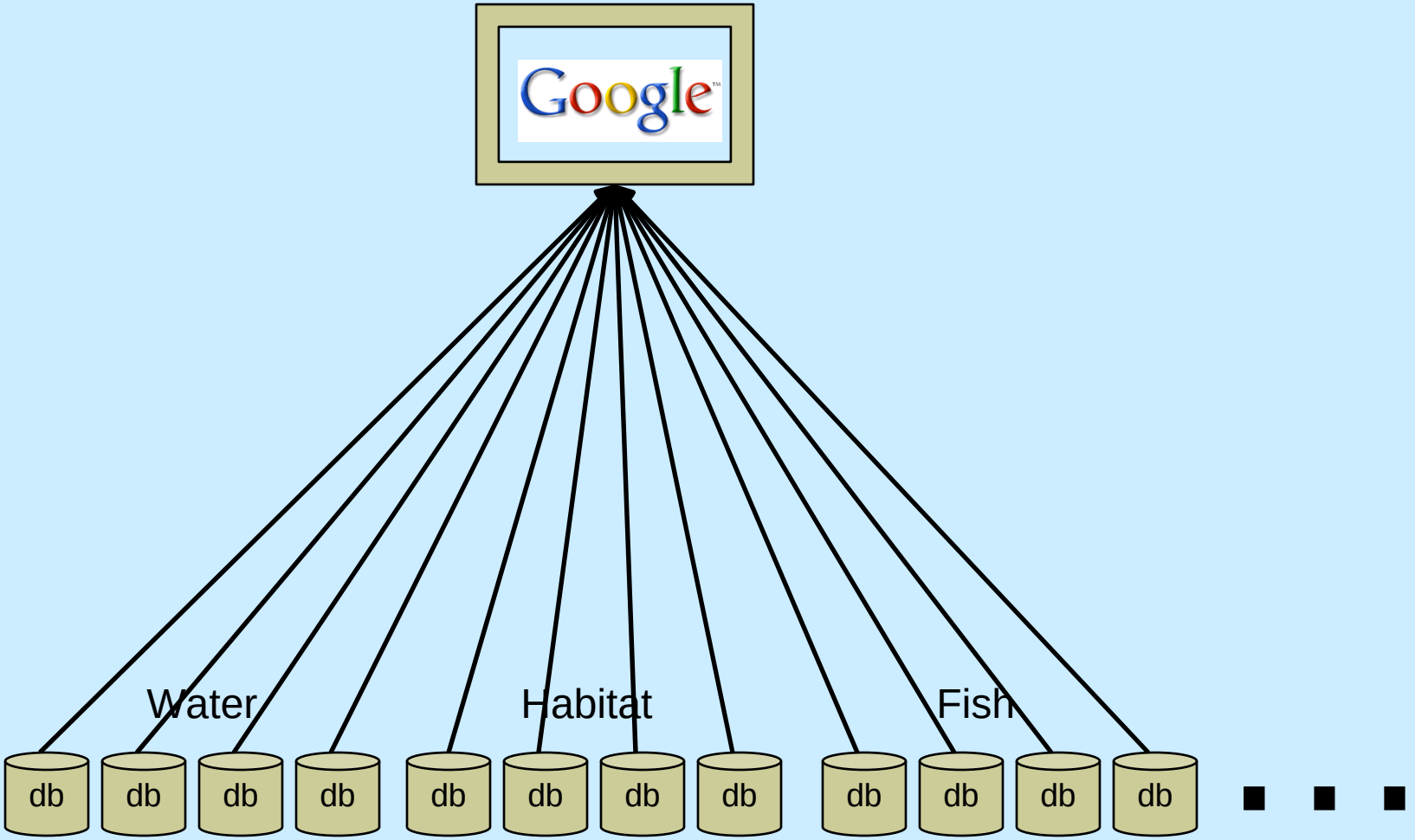
- Efficiency, Speed
- Accuracy
- Automatic data updates
- Canned products
- Translation to regional format
- Essential for any database technology

Continue to evolve:



Multiple types of data from multiple sources, <u>standardized</u> by data type

The ultimate endpoint??

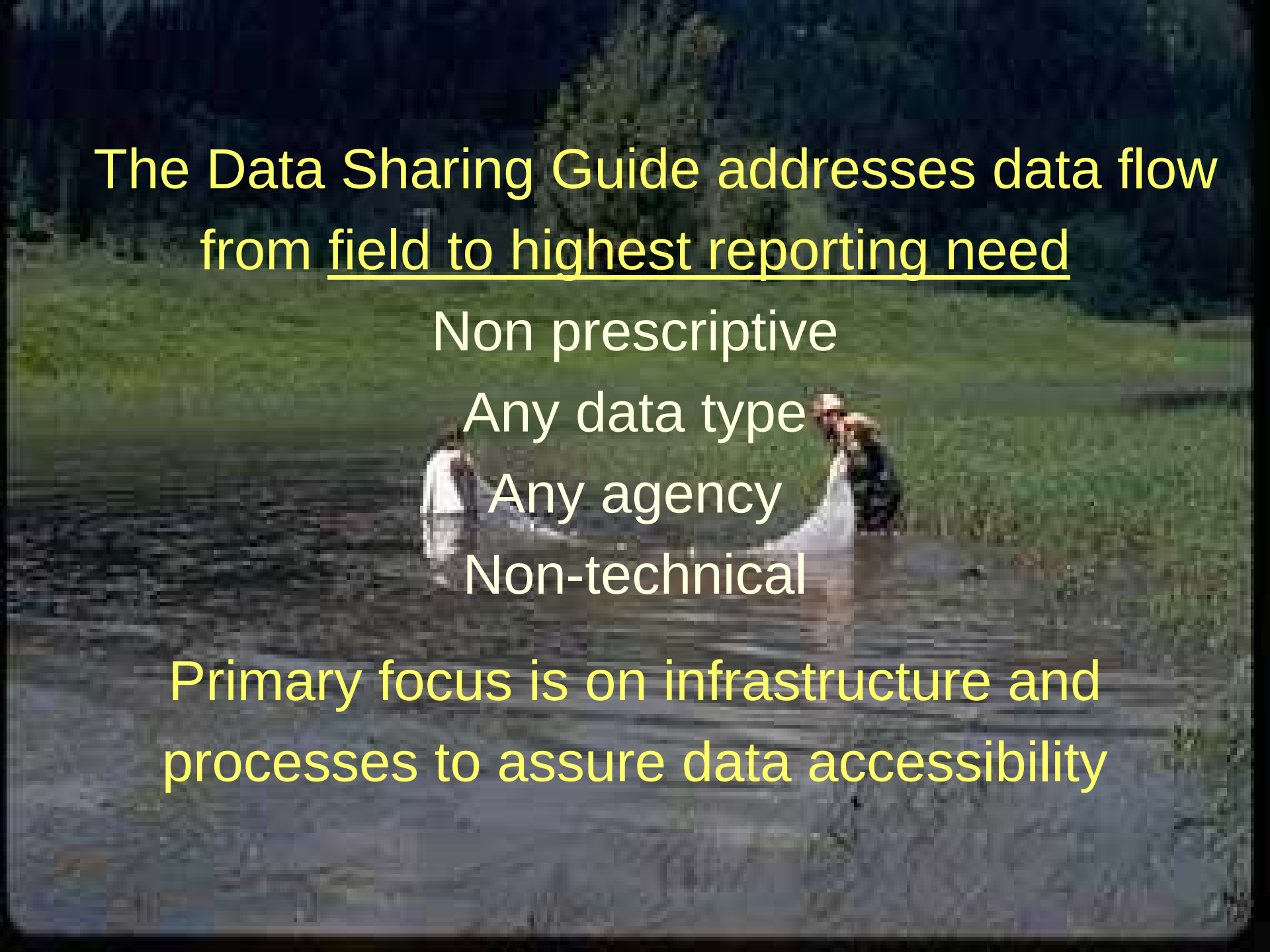


Multiple types of data from multiple sources, standardized by data type

How does the Data Sharing Guide help?

- Organize discussions
- Consider ALL components
- Provide a blueprint
- Identify needed support

Assure that when a system is built, the data are there to deliver!



The Data Sharing Guide addresses data flow from field to highest reporting need

Non prescriptive

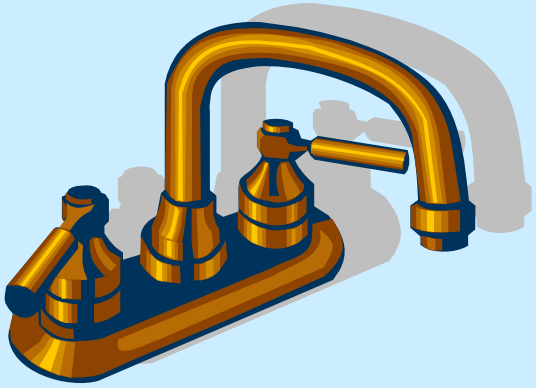
Any data type

Any agency

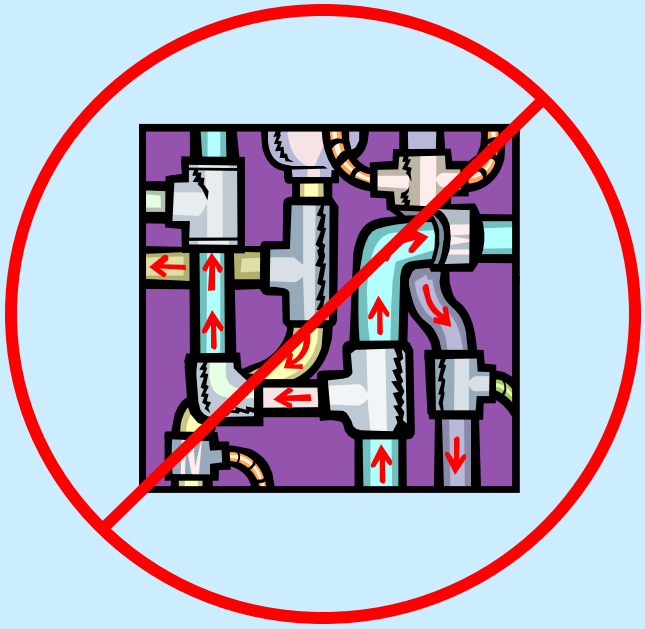
Non-technical

Primary focus is on infrastructure and processes to assure data accessibility

Previous Proposals



Vendors pitched their output tool…

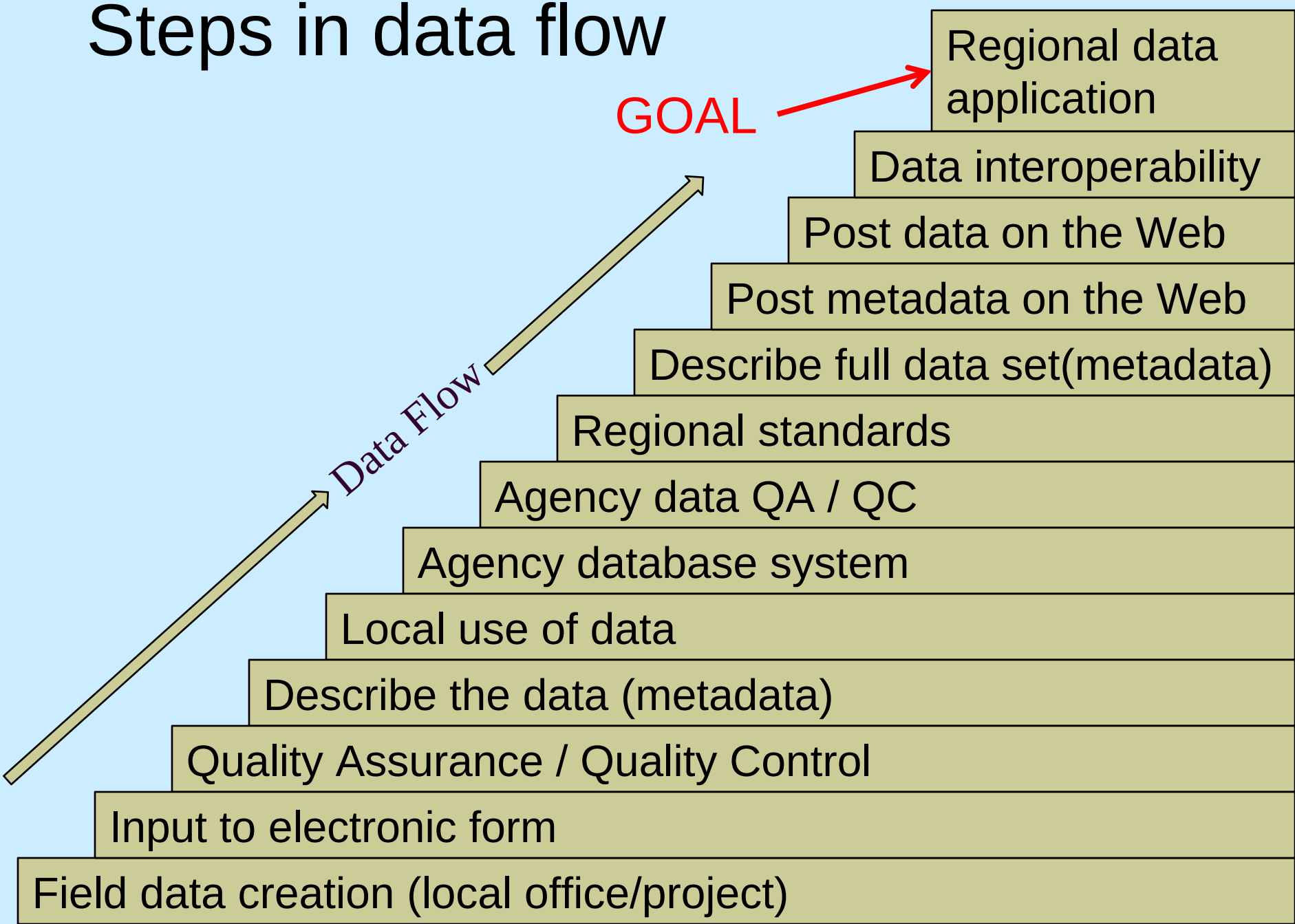


but not getting data <u>to</u> the tool

What’s needed?

1. Uninterrupted data flow, source to output

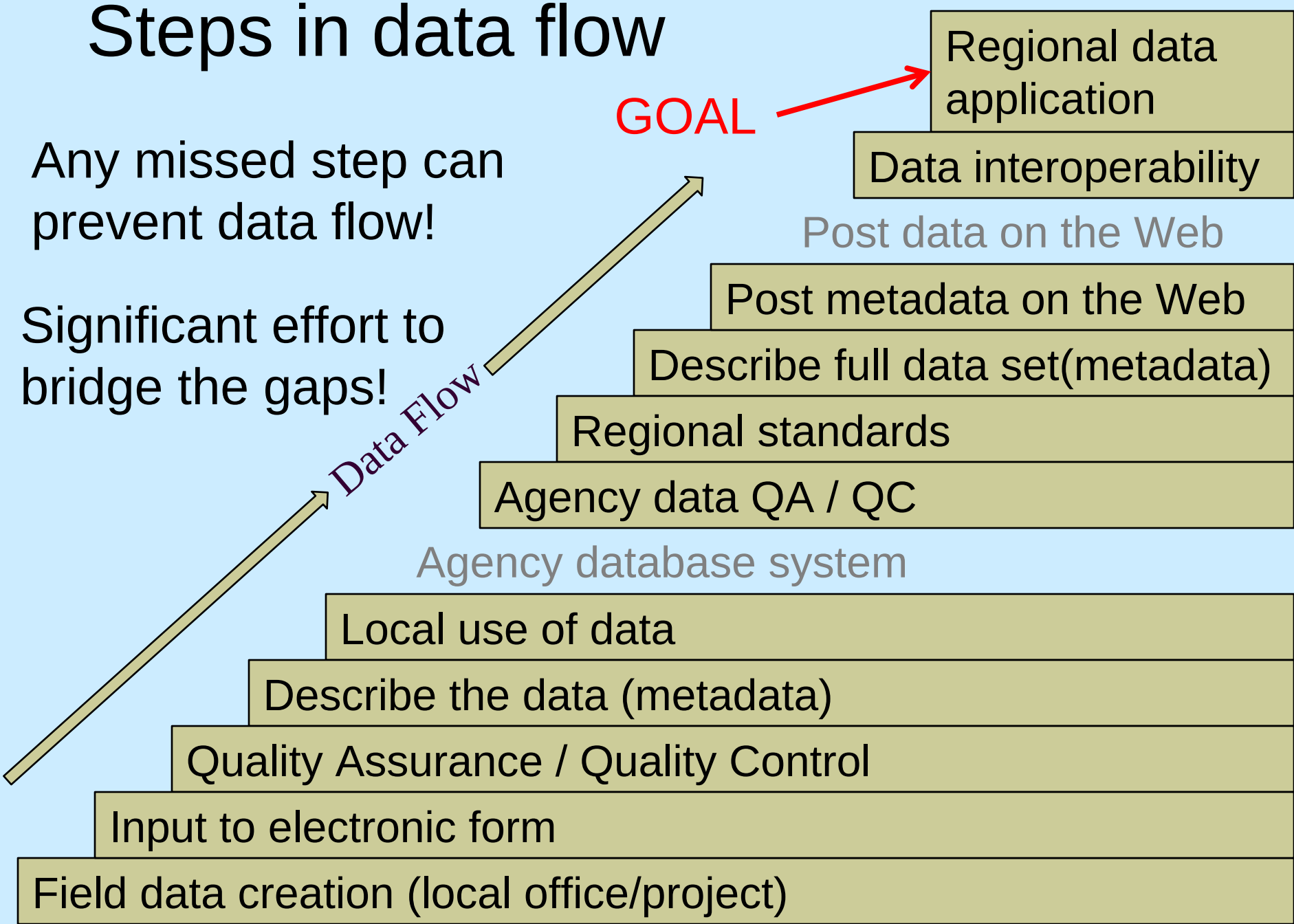
Steps in data flow



Steps in data flow

Any missed step can prevent data flow!

Significant effort to bridge the gaps!



What's needed?

1. Uninterrupted data flow, source to output
2. Data validated by agency

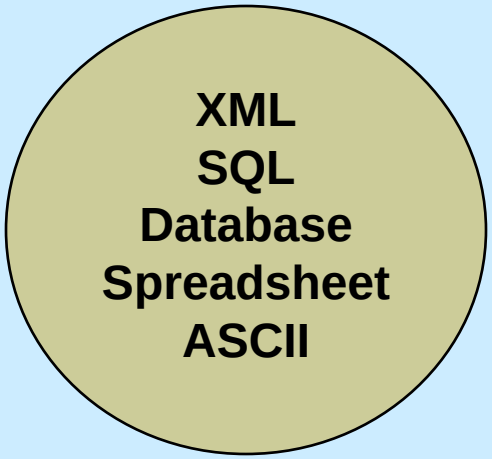
What's needed?

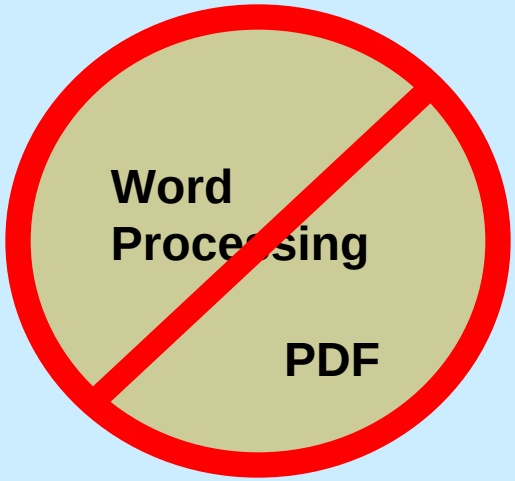
1. Uninterrupted data flow, source to output
2. Data validated by agency
3. Descriptive information (metadata)

X .	Y .
238	51
375	28
265	44

What's needed?

1. Uninterrupted data flow, source to output
2. Data validated by agency
3. Descriptive information (metadata)
4. Data and metadata on the Internet





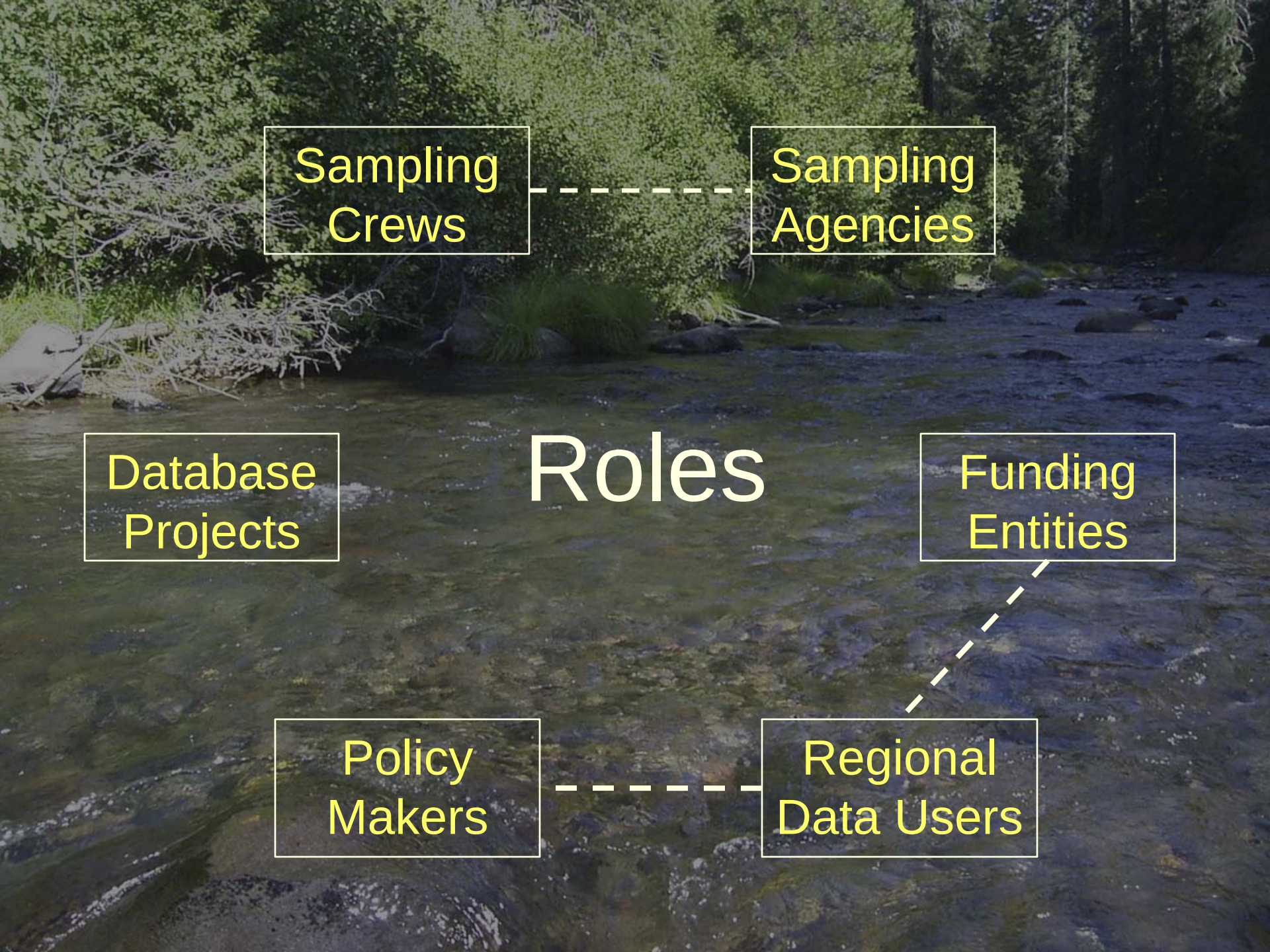
What's needed?

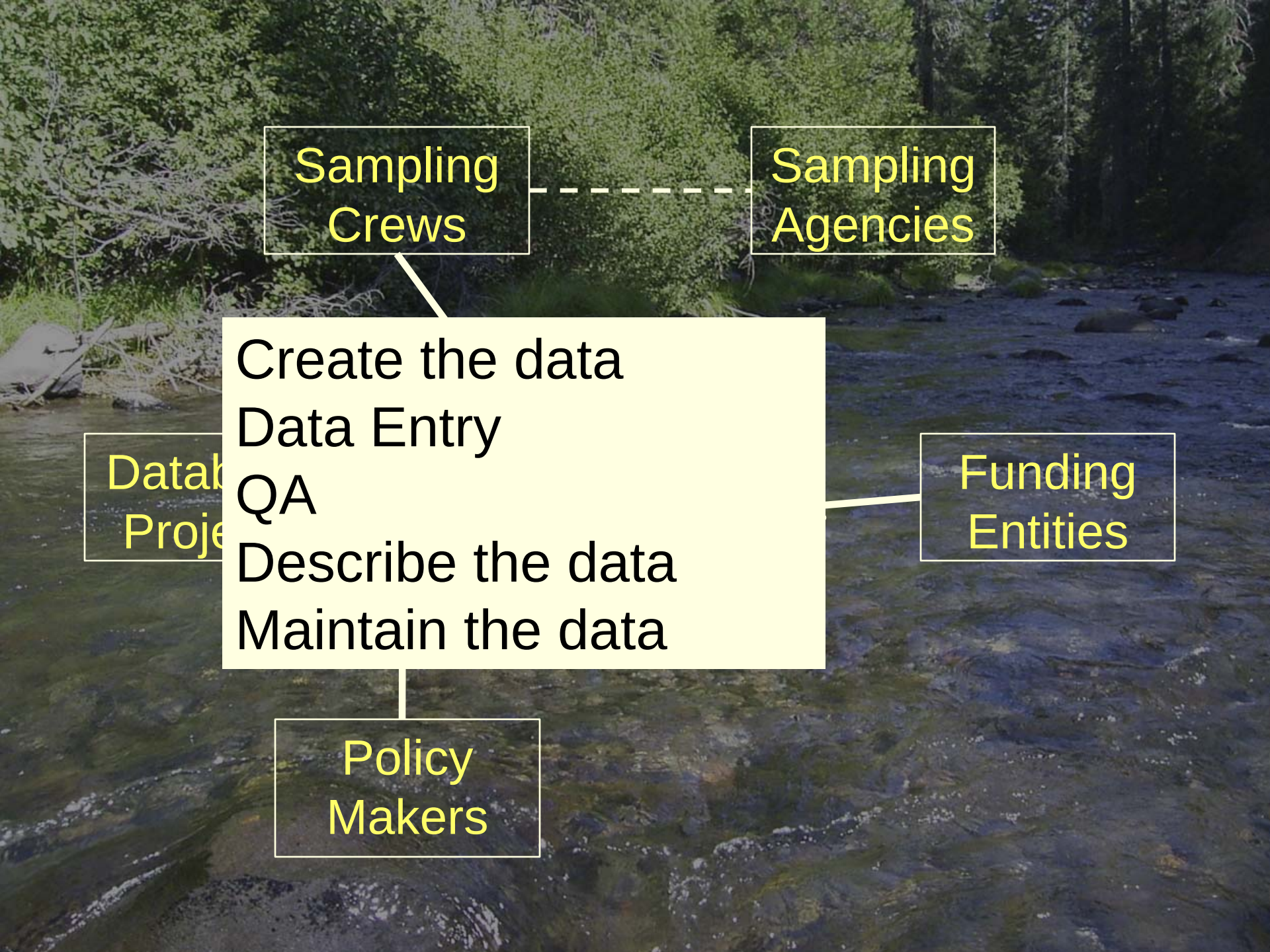
1. Uninterrupted data flow, source to output
2. Data validated by agency
3. Descriptive information (metadata)
4. Data and metadata on the Internet
5. Data able to roll together

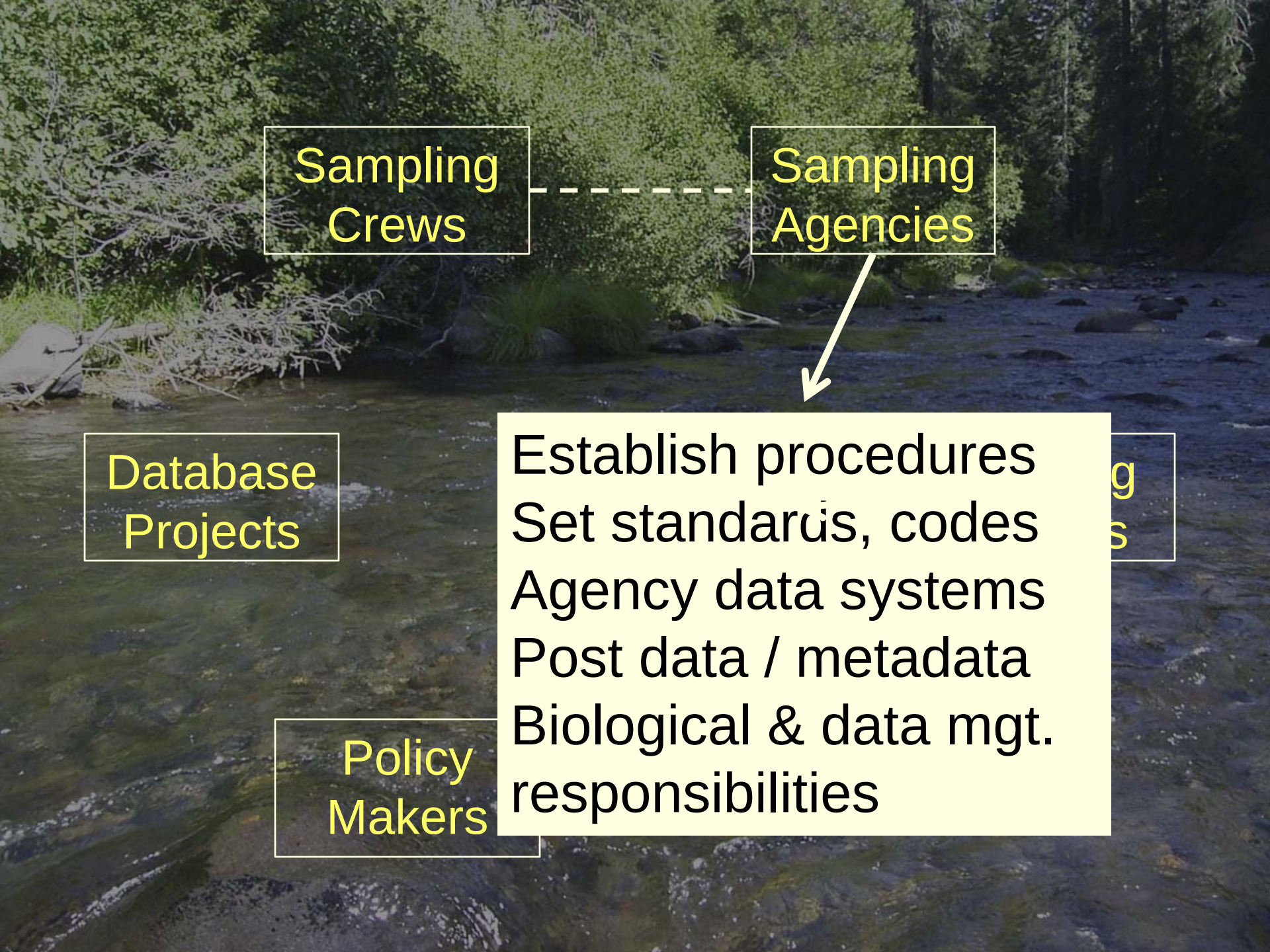
   Ideal: standard data collection, definition, codes

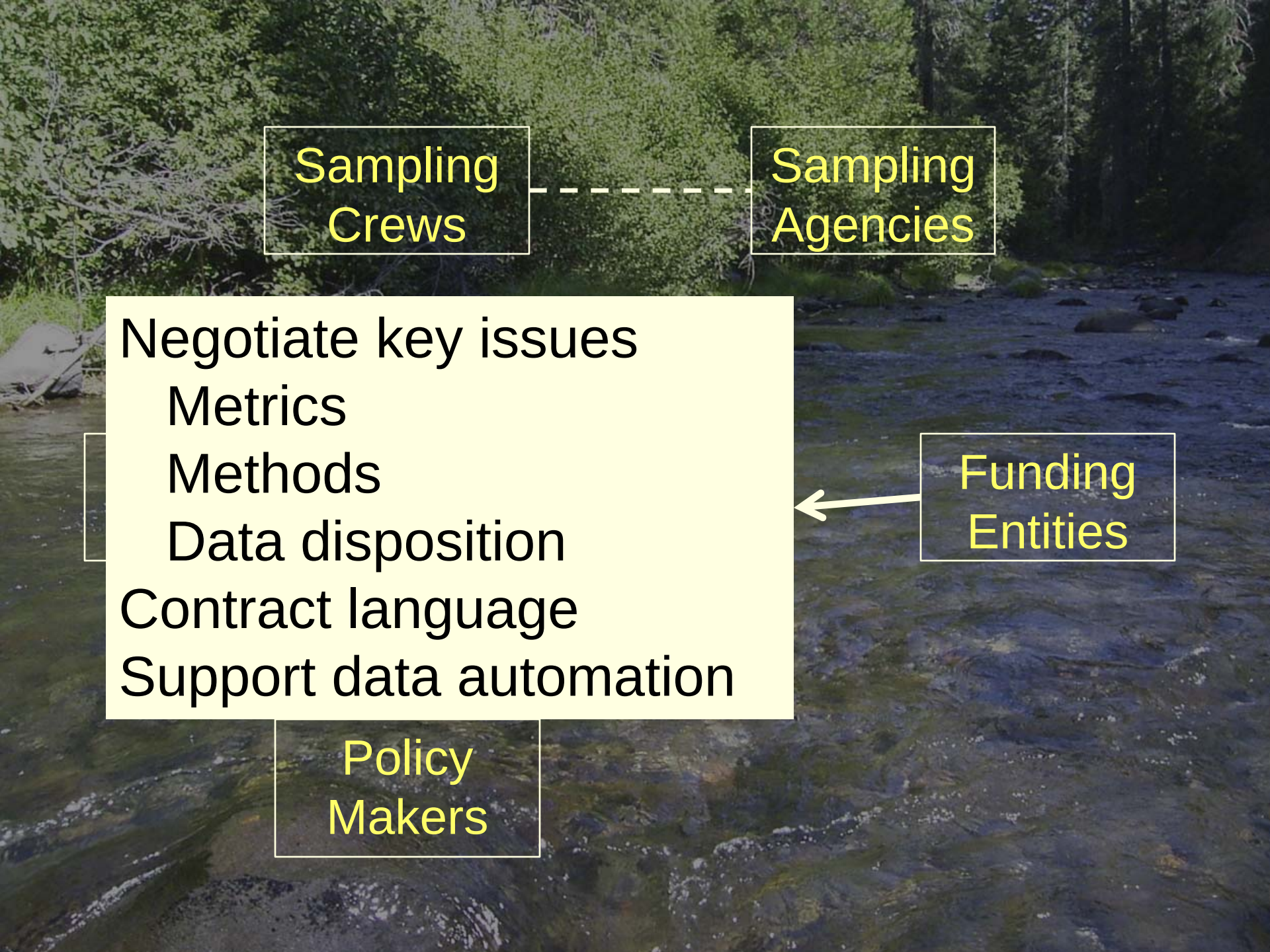
   Minimum: Data translate to a standard

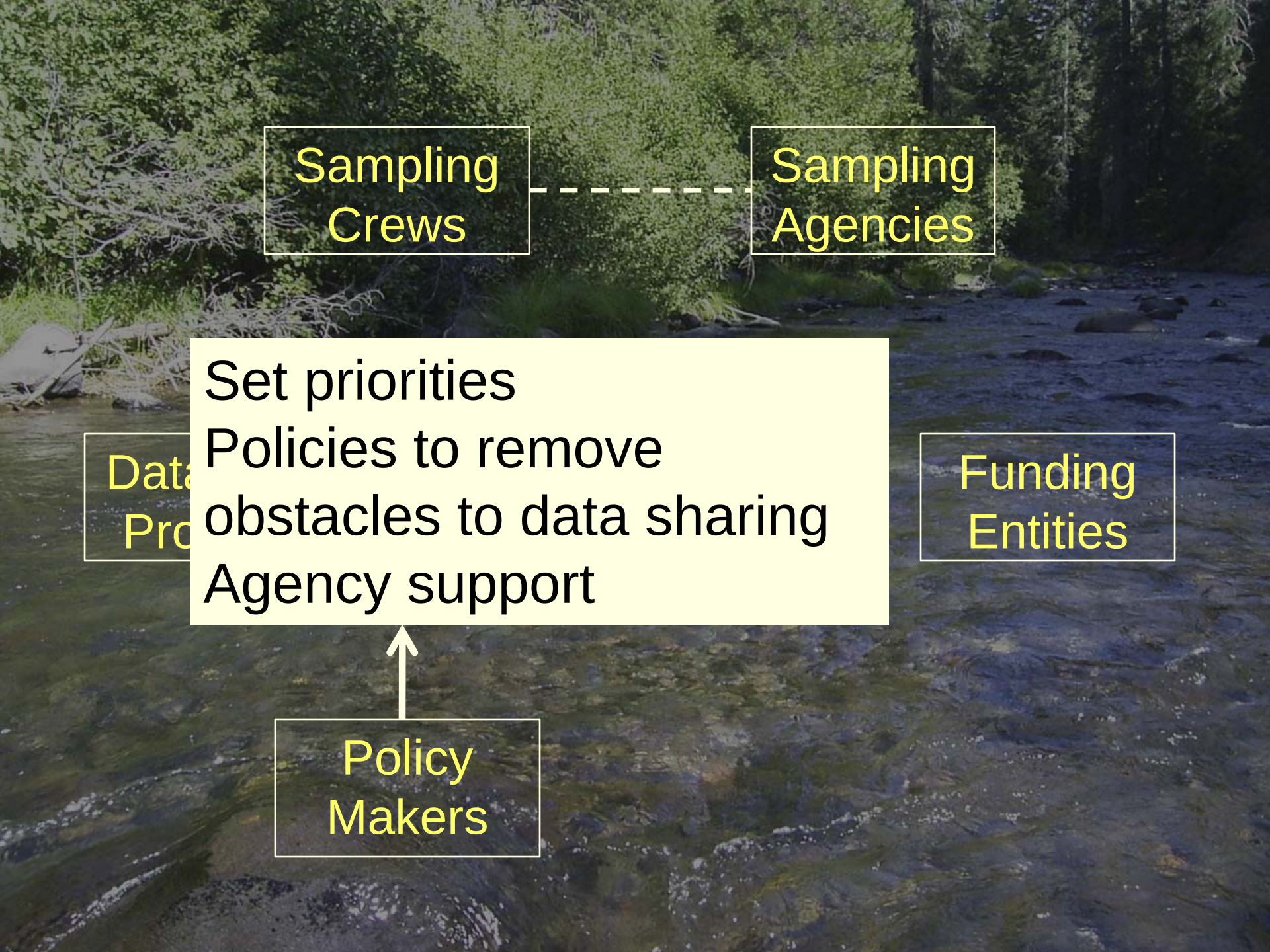

All of this is needed for seamless data delivery to ANY regional tool
We can implement these steps before deciding on a data sharing tool

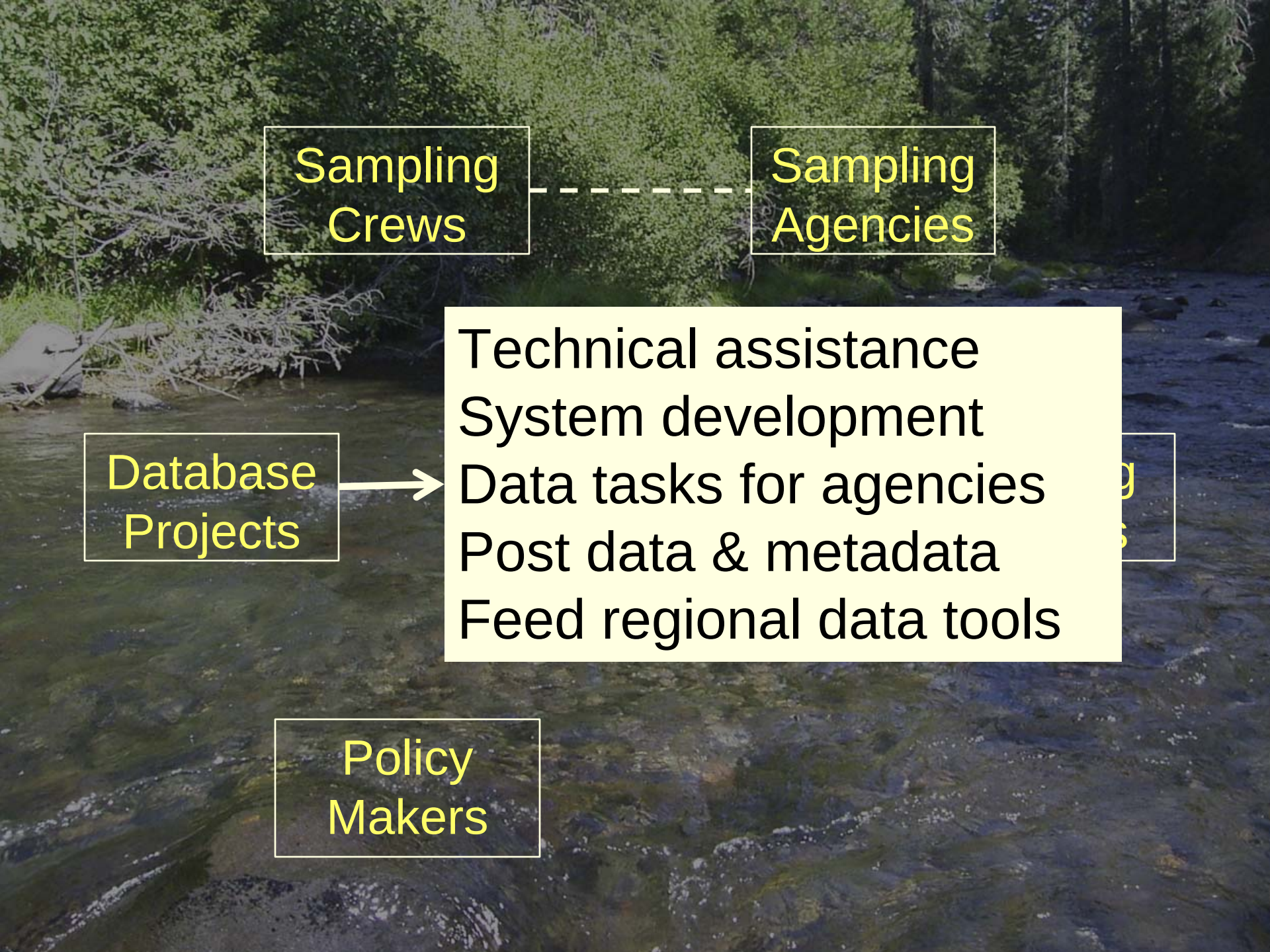

Sampling Crews
Sampling Agencies
Database Projects
Roles
Funding Entities
Policy Makers
Regional Data Users


Sampling Crews
Sampling Agencies
Create the data
Data Entry
QA
Describe the data
Maintain the data
Datab
Proje
Funding Entities
Policy Makers


Sampling Crews
Sampling Agencies
Database Projects
Policy Makers
Establish procedures
Set standards, codes
Agency data systems
Post data / metadata
Biological & data mgt. responsibilities


Sampling Crews
Sampling Agencies
Negotiate key issues
Metrics
Methods
Data disposition
Contract language
Support data automation
Funding Entities
Policy Makers


Sampling Crews
Sampling Agencies
Set priorities
Policies to remove obstacles to data sharing
Agency support
Data Pro
Funding Entities
Policy Makers


Sampling Crews
Sampling Agencies
Database Projects
Technical assistance
System development
Data tasks for agencies
Post data & metadata
Feed regional data tools
Policy Makers

So, why don't we have a regional data delivery system?

- Infrastructure to automate data flow is not in place
- Focus was on the data delivery tool
- Didn't address all roles

We think the Data Sharing Guide will help to:

- inform development of a regional data system
- avoid skipping essential components
- Get us started

Questions?

StreamNet
FISH DATA FOR THE NORTHWEST

www.streamnet.org

Funded by:

Through: Northwest Power and Conservation Council

Fish and Wildlife Program

Administered by: Pacific States Marine Fisheries Commission (Idaho • Oregon • Alaska / Washington • California)