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# Introducing the Statistical Product First Approach

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**December 8, 2023**

*The views expressed in this perspective are those of the presenter and not the Census Bureau.*

# Forces Driving Transformation Today

rapidly changing  
new data use of increased demand  
sources technology for information  
declining new data challenges to  
response tools traditional  
rates artificial data collection  
intelligence methods

# Value Proposition



*Our success critically depends on our ability to seize the opportunities in front of us to **deliver statistical products that address the increasingly complex and diverse needs of our users.***

**Ron S. Jarmin, Ph.D.,** Deputy Director  
U.S. Census Bureau

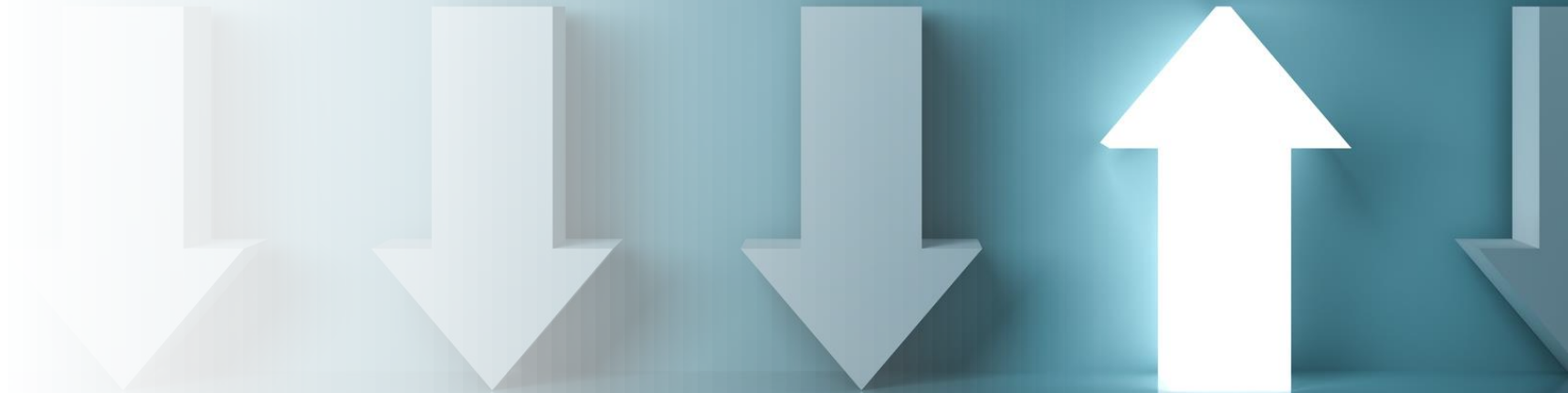


# Flipping the Focus

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Determine what information stakeholders need to reach their objectives

From there, shape the statistical products to be developed

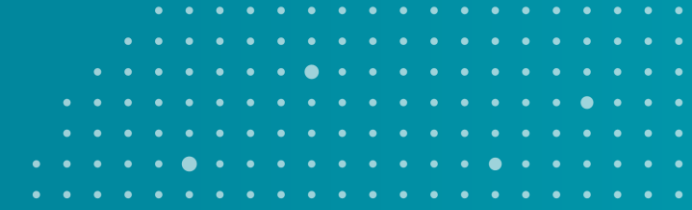


# Statistical Product First Approach

Moving from managing  
surveys to managing  
data and statistics



# Statistical Product First Approach

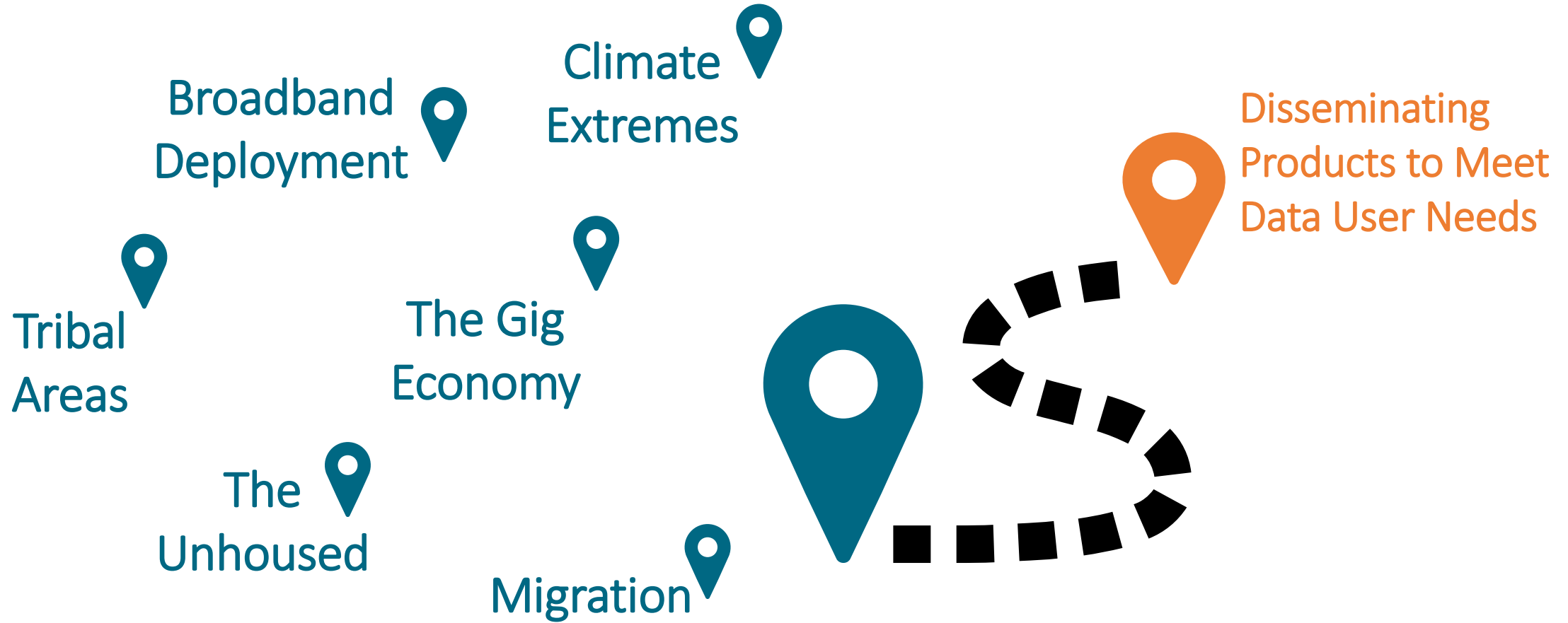


Ensures Data Support Purposes and Uses

Purposes  
and Uses



# What are some purposes and uses?

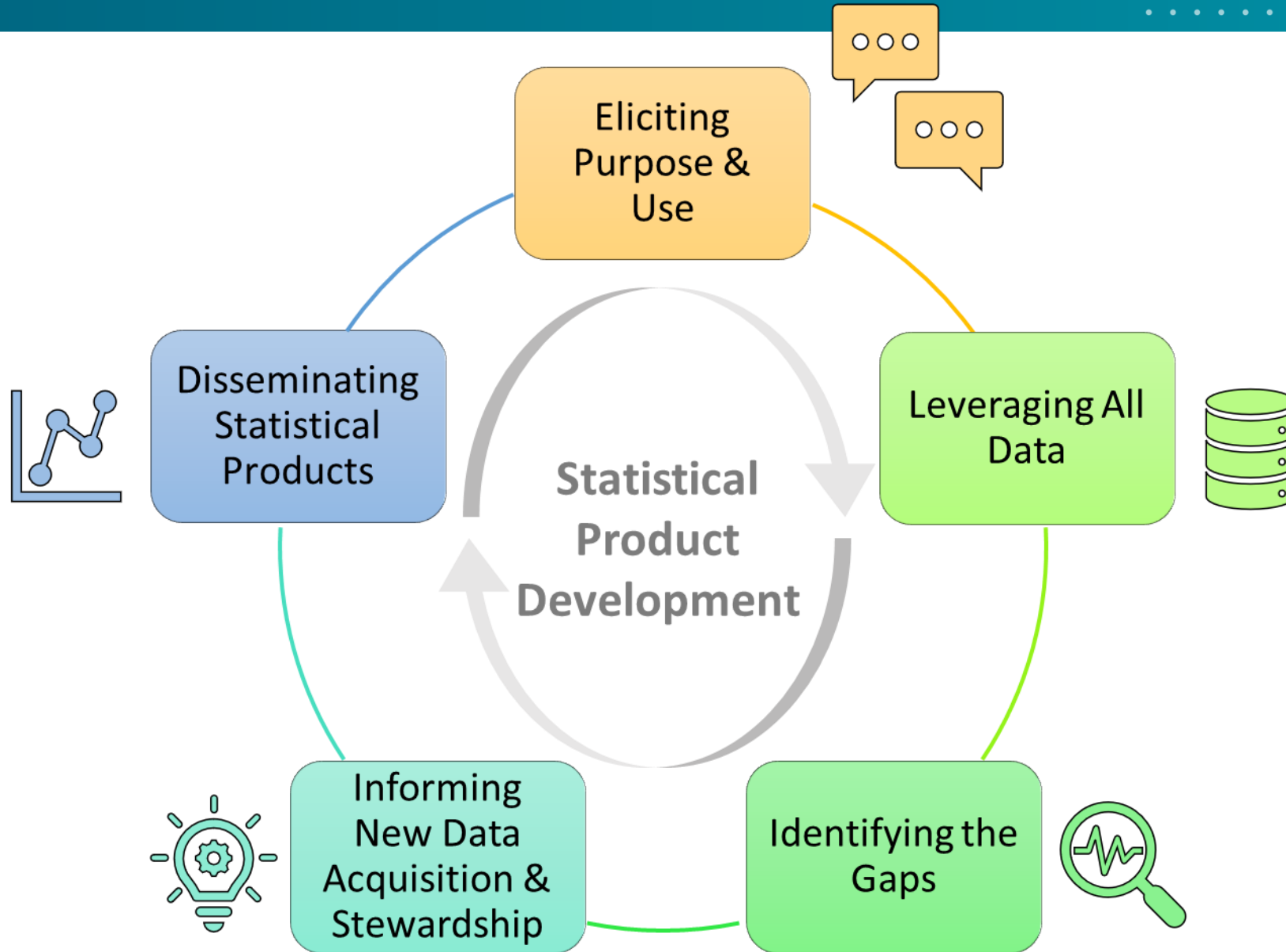


# What are some purposes and uses?





# Statistical Product First Workflow



# Engendering Equity through Collaboration with the IRS



Agencies often lack access to data with self-reported race, ethnicity, disability, and other important characteristics.

Linking data from multiple sources can help fill the demographic gap in agency data.

The Census Bureau has a wealth of demographic information that is linkable to other agencies' data.

Equity can be improved through carefully crafted cross-agency sharing agreements.

Equitable data stewardship includes the commitment to confidentiality.

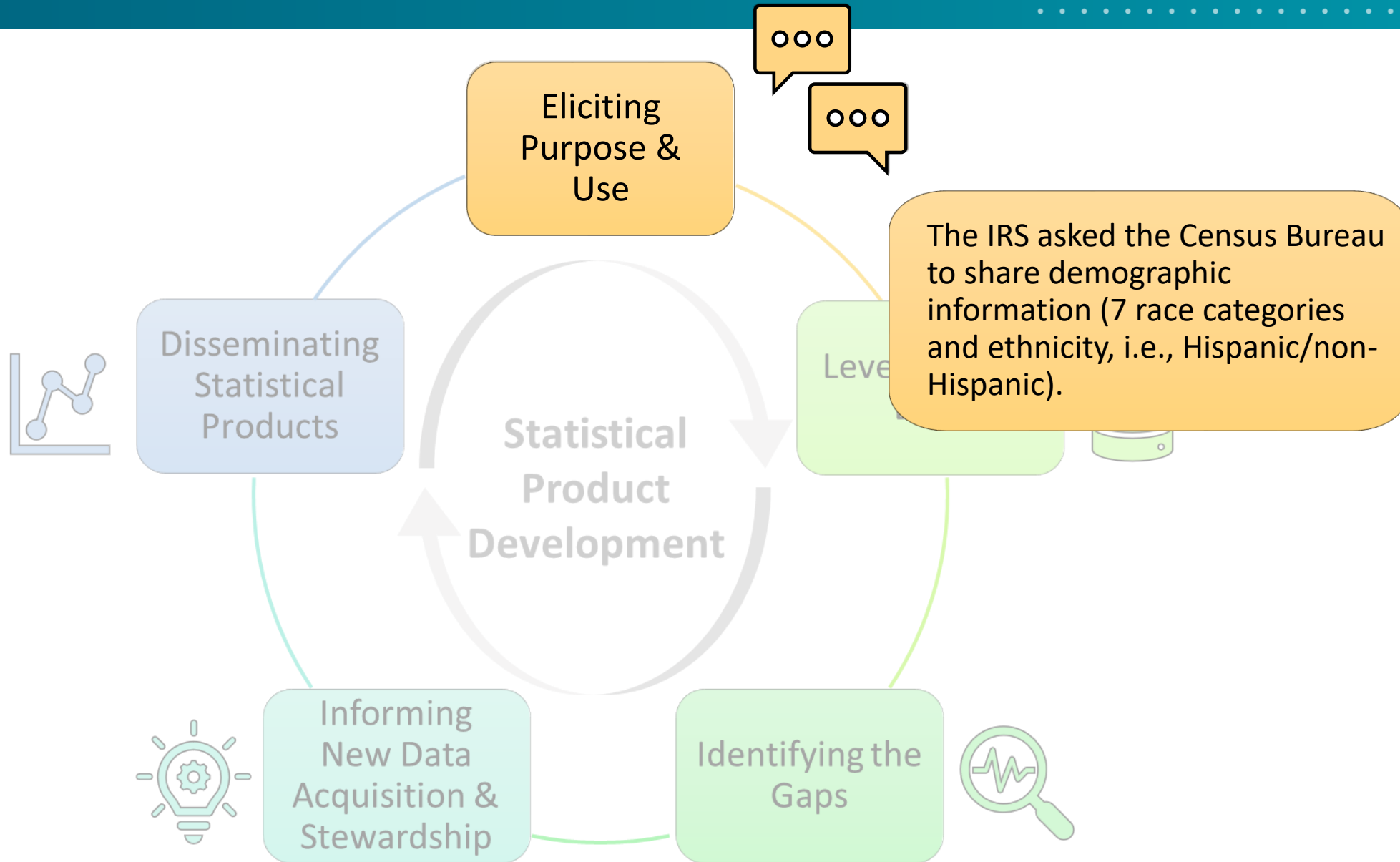


Acquisition &  
Stewardship

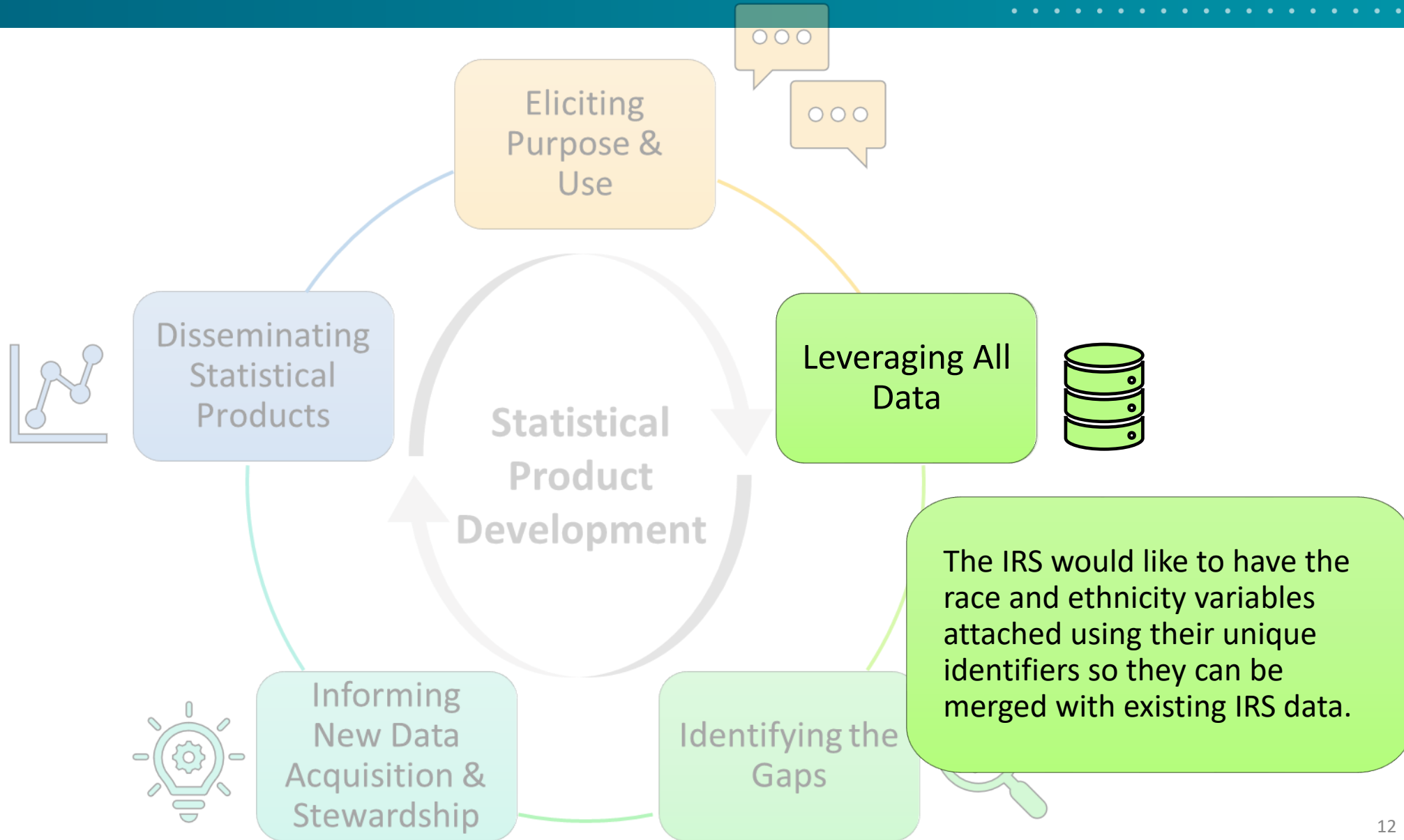
Gaps



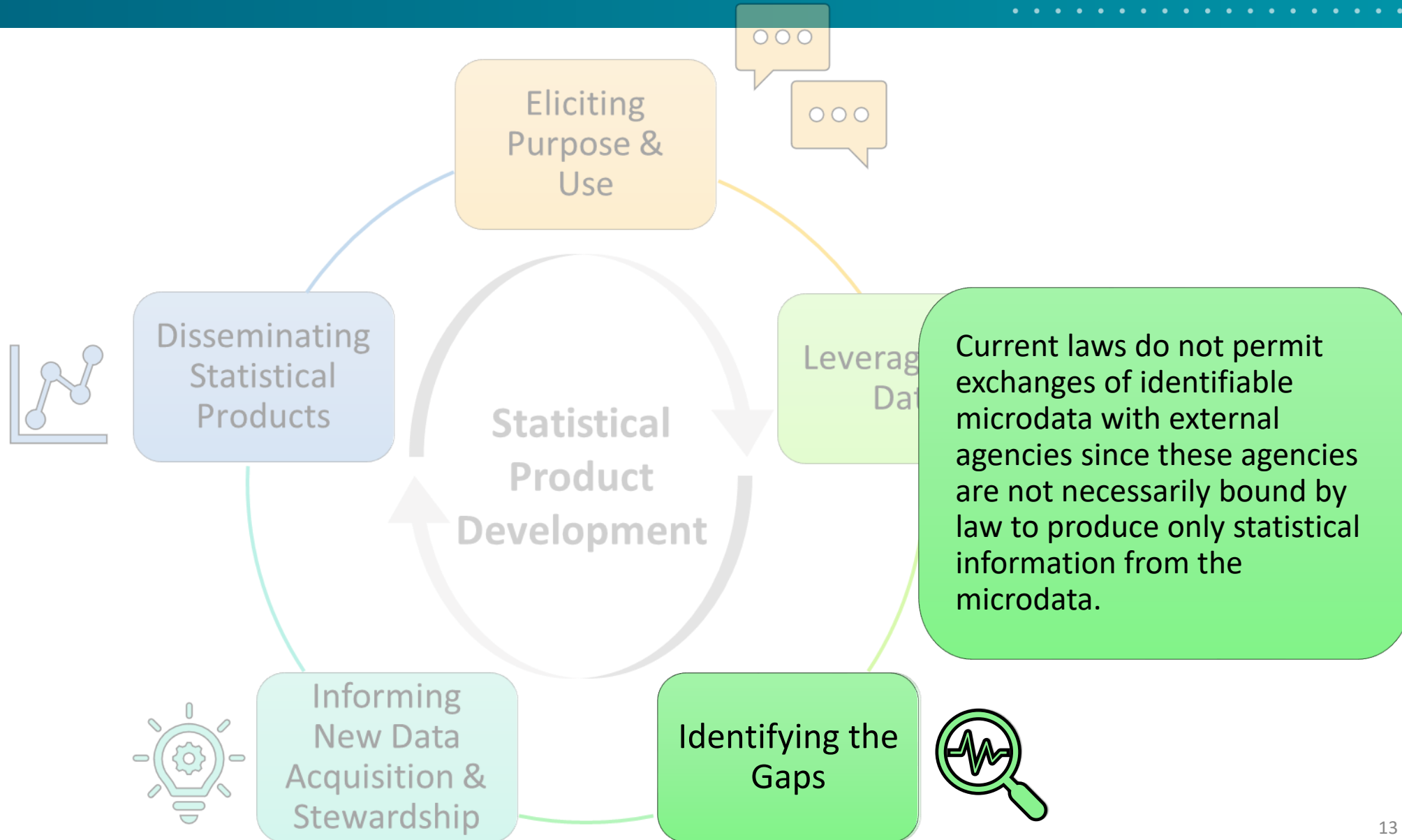
# Exemplar: Linking Demographic Data for the IRS



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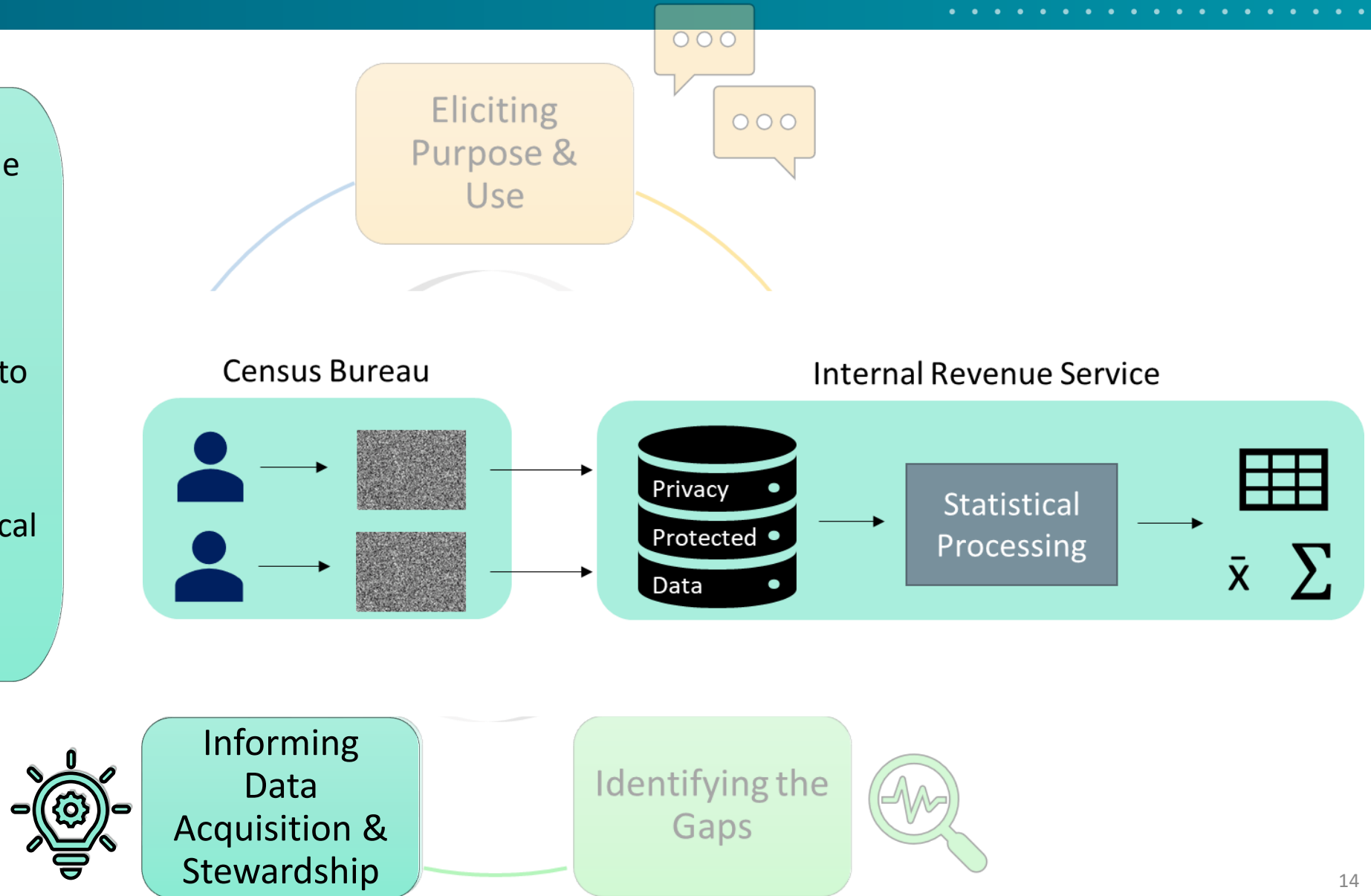
# Exemplar: Linking Demographic Data for the IRS



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As the statutory data curator under Title 13, the Census Bureau protects statistical output before sharing data with other agencies.

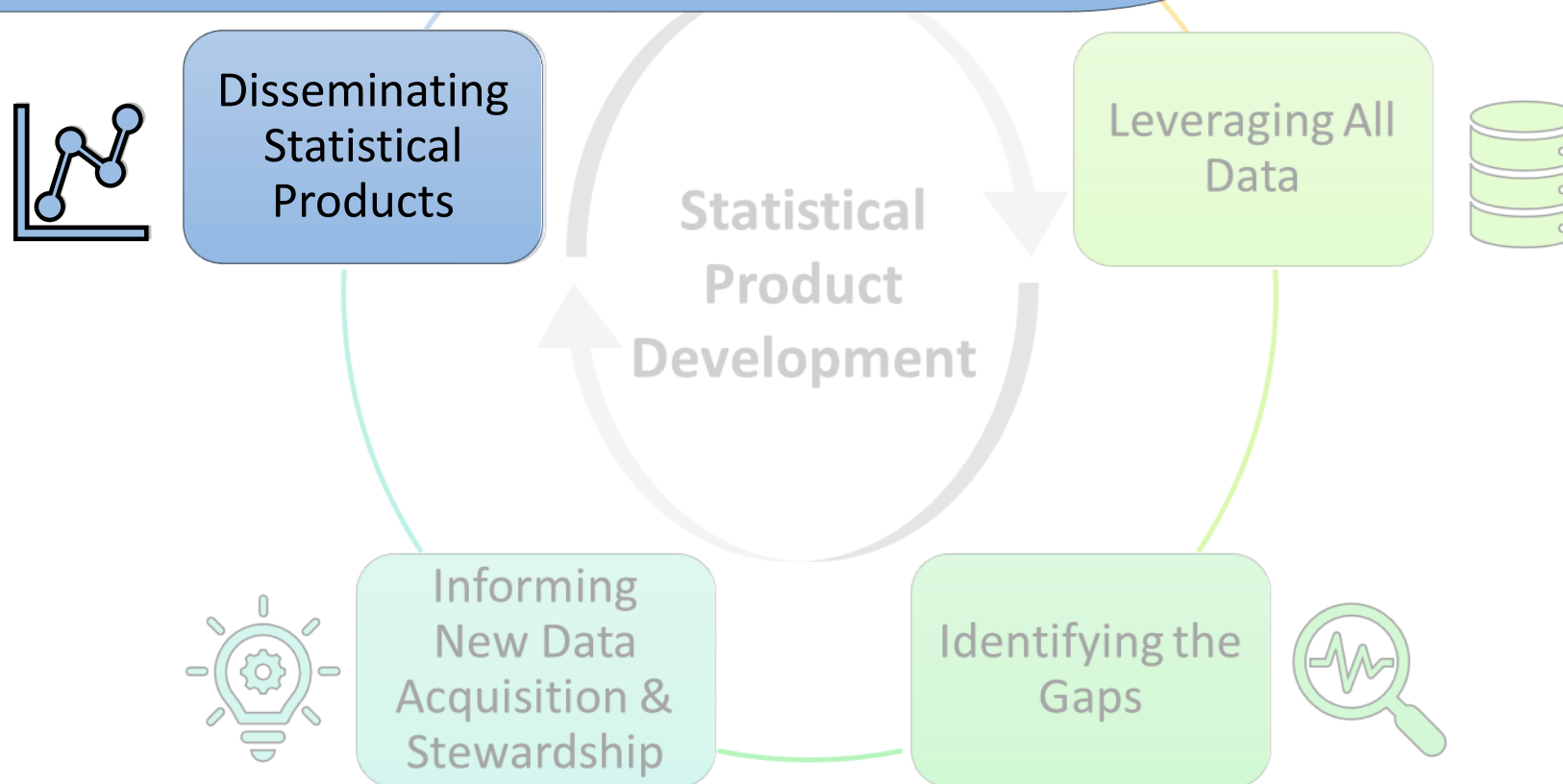
We are developing tools to protect respondent confidentiality before sharing microdata. The tools are based on the local differential privacy framework (multivariate randomized response).



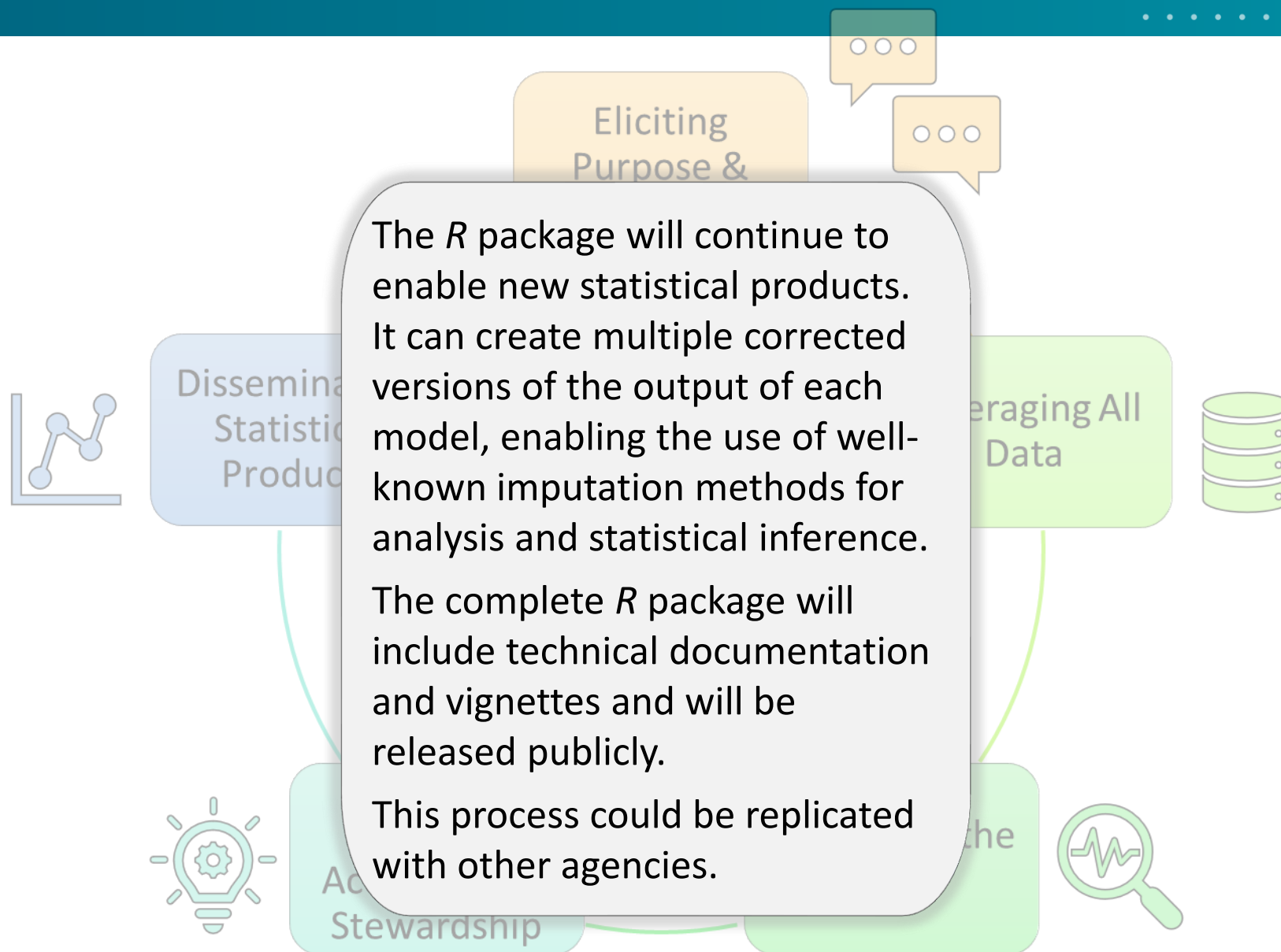
# Exemplar: Linking Demographic Data for the IRS

Proper statistical analysis of privacy protected data requires adjusting for the privacy filter—which enables data sharing but increases the number of statistical skills needed to obtain proper inferences.

To help, the Census Bureau is developing an *R* library that fits properly adjusted models on datasets merged with the protected race and ethnicity data.

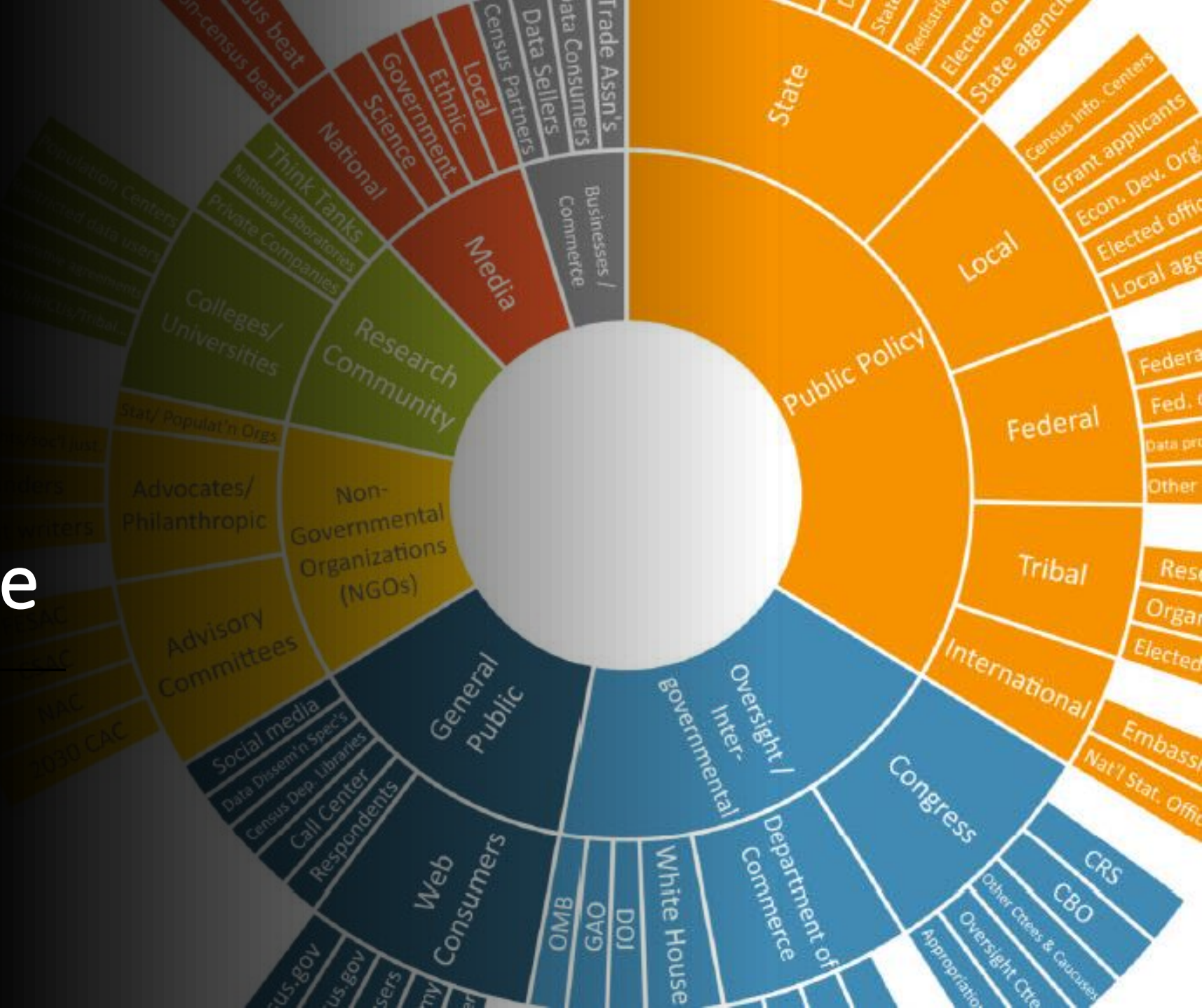


# Exemplar: Linking Demographic Data for the IRS





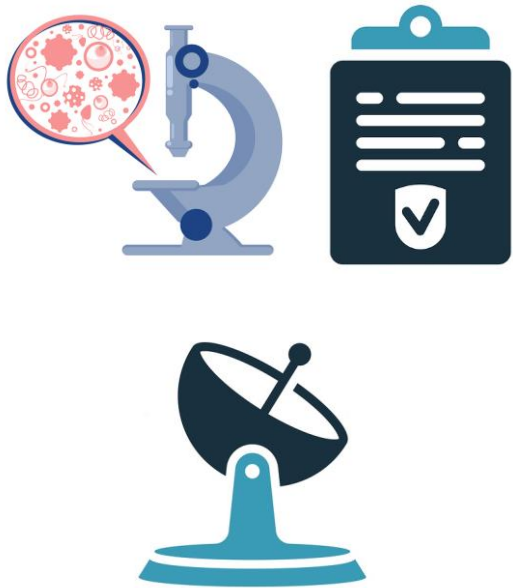
# Illuminating the Ecosystem of Data Users to Elicit Purpose and Use



# Use ALL Data Assets

## Going beyond the survey data we collect

### Designed Data



### Administrative Data



### Opportunity Data



### Procedural Data



# Adhere to Legal Framework and Data Governance

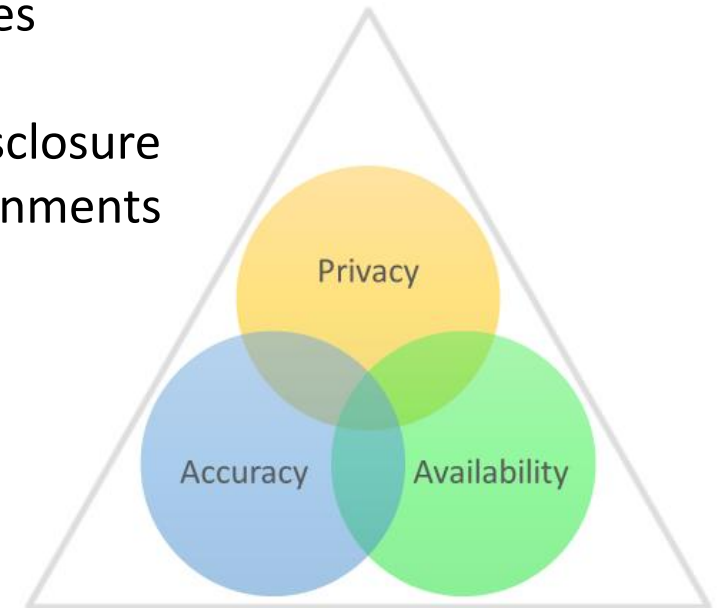
*Title 13 directs us to acquire and use external data records for statistical purposes.*

*Foundations for Evidence-Based Policymaking Act promotes and encourages data sharing.*

*Confidential Information Protection and Statistical Efficiency Act sets forth functional separation of statistical versus administrative uses of data.*

## Ethical Data Stewardship

- ✓ Ensure only statistical uses
- ✓ Disclosure review
- ✓ Punishing of wrongful disclosure
- ✓ Secure computing environments

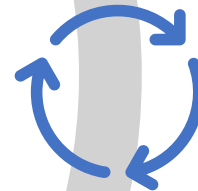


# Statistical Product Spectrum for *ALL* Users

An opportunity  
to identify and fill  
the space in between



Protected  
microdata  
(in FSRDCs)



Simple, public  
use products

# Statistical Product First Selected Demonstrations

# Grant Applications Demonstration

We're conducting demonstration projects focused on statistics to support federal grant applications.

Teams from Census and the Georgetown Data Science Program are working with us.

Identifying	Identifying authoritative statistics to satisfy grant application requirements among tribal, state, and local governments and non-profit applicants.
Creating	Creating statistical products based on grant application requirements that combine multiple data sources to better serve grant applicants/data users.
Deploying	Exploring dissemination options to maximally benefit grant applicants in need of authoritative statistical information.



# State Demographers + State Data Centers Demonstration

We're developing tiered access demonstration based on engagements with Federal-State Cooperative on Population Estimates (FSCPE) and State Data Centers (SDC).

We anticipate this will include tabular output projects with restricted data, expanding user base to evidence builders—including state governments.

## Reviewing

Reviewing SDC websites to gain insight into how SDC network *leverages data* and capturing the statistical tools they use and produce.

## Looking

Looking for *early adopters* to participate in the demonstration and help characterize broad purpose and use needs.

## Building

Building a *tiered access model* (FSRDC-light) to support demonstration focused on special tables and integration of local data.

# AIAN Product Co-Development Demonstration

We're engaging with American Indian and Alaska Native (AIAN) stakeholders to collaborate on the design of new statistical products to meet their needs.

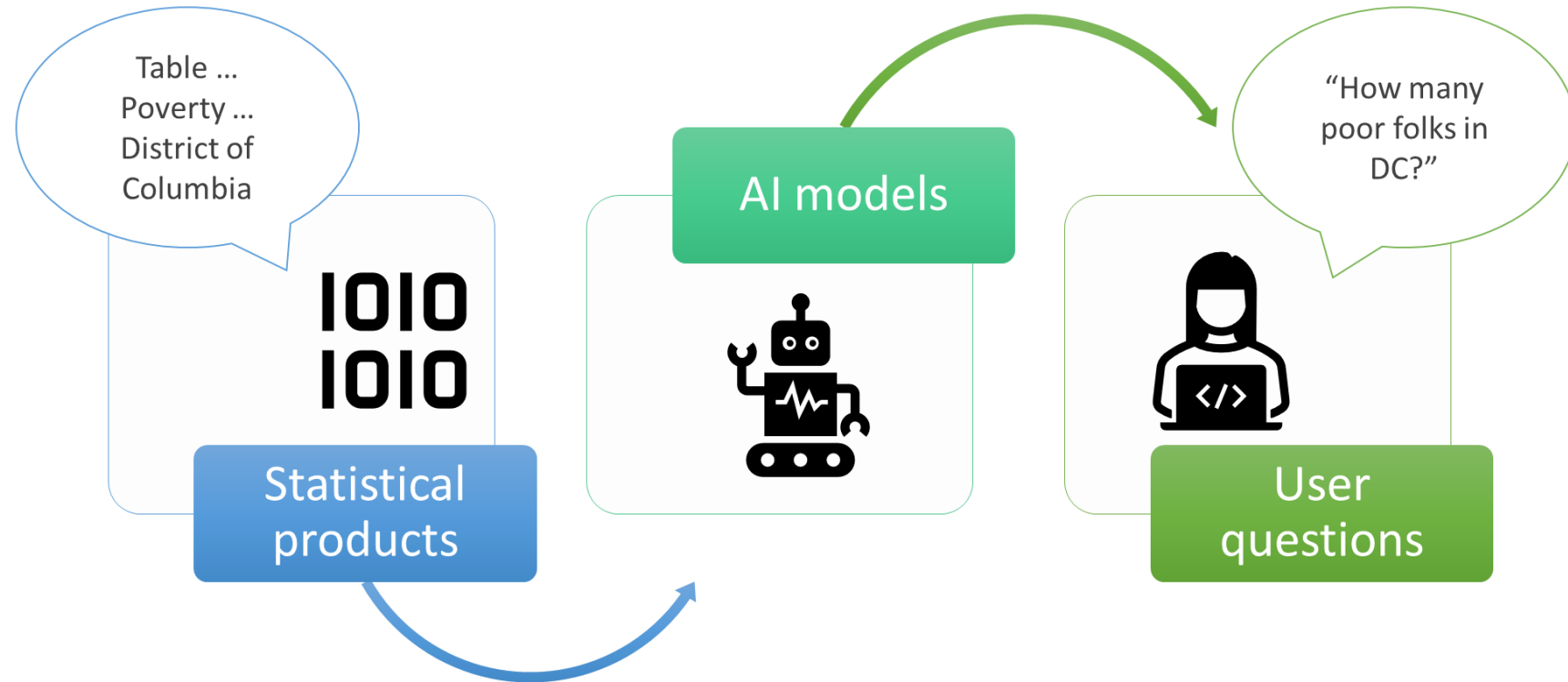
We were in Indian Country and Native Alaska this fall, attending NIEA, NCAI, and BIA Tribal Providers conference to begin engagement and collaboration.

Engage	Engage with American Indian and Alaska Native (AIAN) community to seek input on what <i>questions and issues</i> Census statistical products need to support.
Collaborate	Collaborate on the design of future statistical products designed <i>specifically</i> with the AIAN community in mind.
Leverage	Leverage existing data assets and identify new data opportunities to support the <i>co-development</i> of future statistical products.



# AI Readiness Application

- Determining how to better deliver Census statistics for use in *AI platforms*.
- Enabling the *lay person* to engage with Census statistical products through large language models.
- Improving and expanding the *contextual information* about statistical products; formatting them so they will be captured by AI systems.
- Currently *targeting ACS* dissemination as early exemplar.







Imagine the Art of the Possible



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# Thank You

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