The Business Register as a Service Provider:
Examples from the U.S. Census Bureau

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Disclaimer: Any views expressed are those of the author(s) and not necessarily those of the U.S. Census Bureau (*)

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(*) …even if they happen to be unimpeachably correct.

Overview

Five Business Register Services:

1. Sampling Support
2. Operational Control System
3. Geographic Coding
4. Company Reporting Calendar
5. Workflow System

- *What*
- *Why*
- *When*

Sampling Support

What:

Creating "frozen" rectangular data sets for querying and survey frame construction

BR Data Sets

Why:

The BR database is…

- Optimized for high-volume transaction processing– i.e., "normalized"
- Subject to near-continuous update from multiple sources
- Complicated– many tables, variables, and reference periods

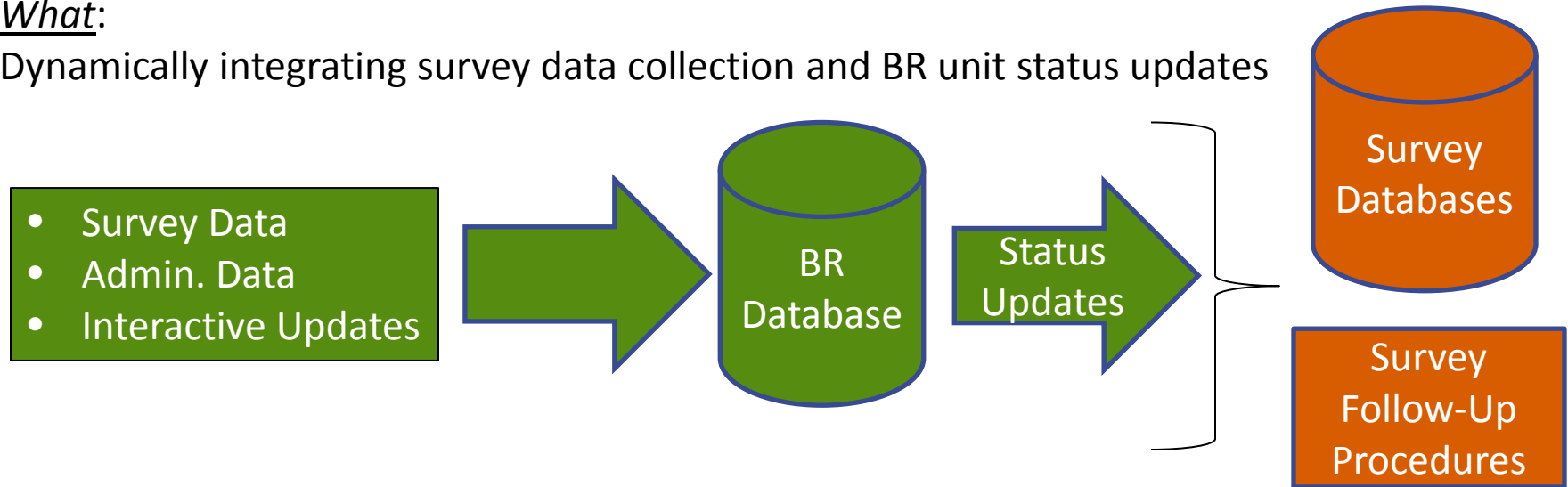So…a **simpler**, more **stable**, and **user-friendly** data structure is desired

When:

- Monthly→ Administrative Records cycle
- Annually→ Report of Organization cycle

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Operational Control System

What:
Dynamically integrating survey data collection and BR unit status updates

| Survey Data
Admin. Data
Interactive Updates | → | BR Database | Status Updates | → | Survey Databases

Survey Follow-Up Procedures |

Example: The EIN of a single unit (SU) company becomes linked to a multi-unit company
- A signal is sent to the survey database to remove the SU from tabulations
- The SU is removed from subsequent follow-ups and reminder notifications
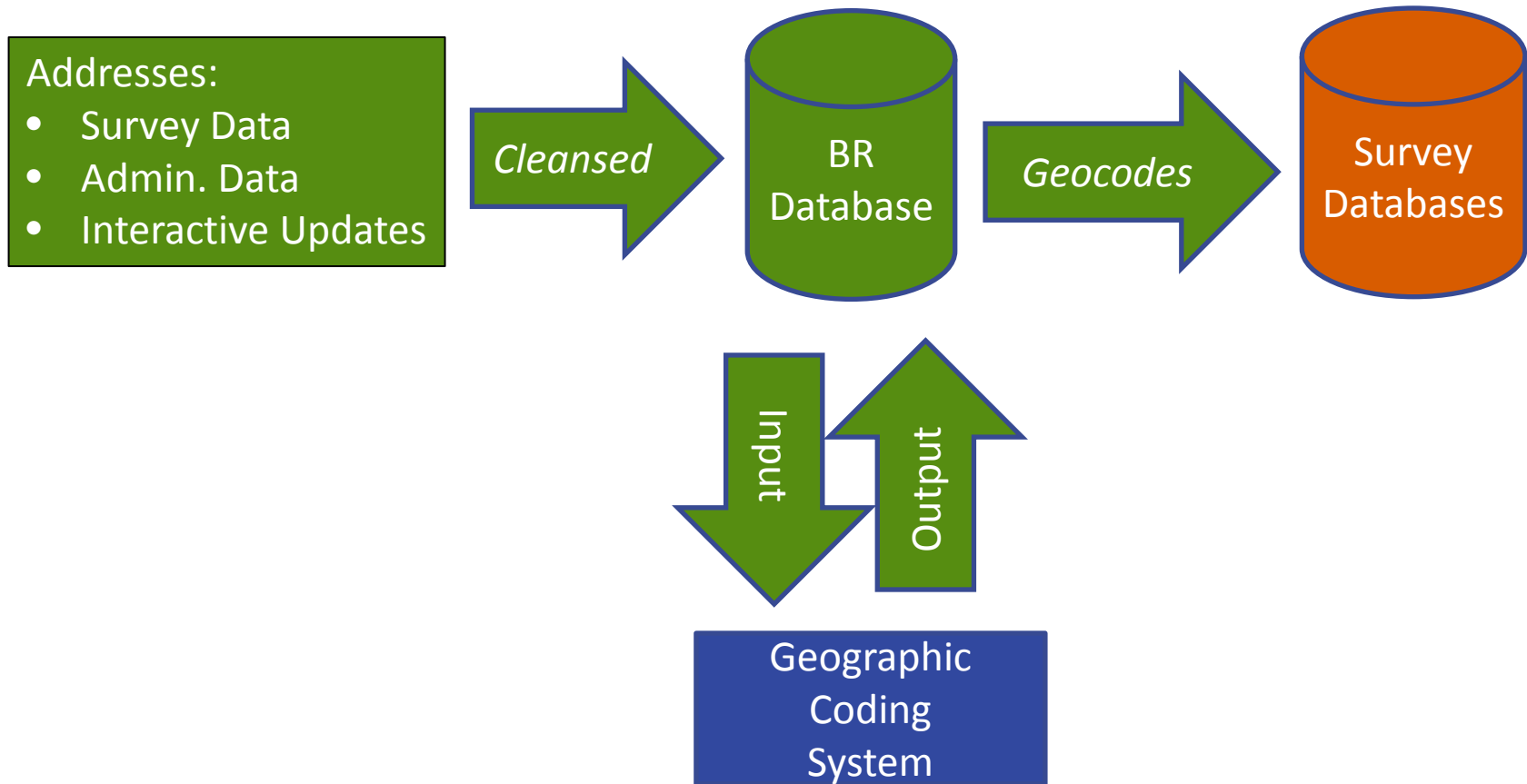
Why:
- Reduces survey costs
- Improves data quality
- Reduces response burden

When: Continuously throughout the survey reference period

Geographic Coding

What:

Assigning coordinates, tabulation codes, and flags to BR addresses for use in mapping, tabulation, and analysis

Addresses:
- Survey Data
- Admin. Data
- Interactive Updates

Cleansed →

BR Database

Geocodes →

Survey Databases

Input / Output

Geographic Coding System

Geographic Coding

Basic Characteristics of the Geographic Coding System:

- Input elements:
  - STREET
  - CITY
  - STATE
  - ZIP (Postal) Code
- Output elements:
  - Area Tabulation Codes
  - X/Y Coordinates (longitude and latitude)
  - Address quality indicators
- Based on:
  - Master Address File (MAF/TIGER)
  - Street- and higher-level matching
  - Geographic Area Reference File (GARF) → Metadata

Geographic Coding

Example:

INPUTS	
STREET	9132 C BAY AVE
CITY	NORTH BEACH
STATE	MD
ZIP	20714

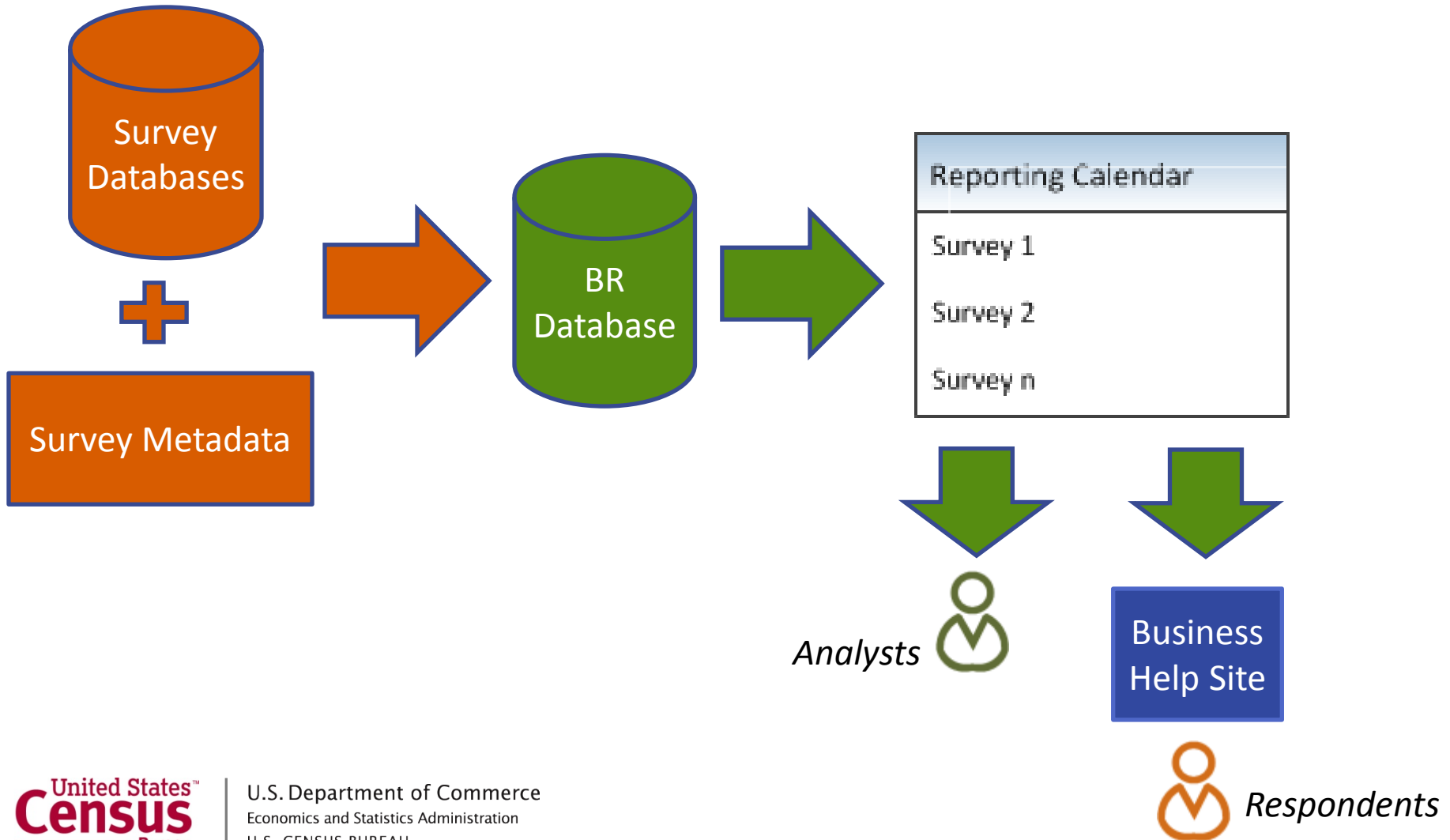| OUTPUTS		
Tabulation Codes	**Coordinates**	**Quality Indicators**
ST= 24	X = -76.5314	LEVEL = 8 (*Block-level*)
COU= 009	Y= 38.70786	MATCH=M (*Exact*)
PLACE= 98009		
CSA= 548		
TRACT=860401		
BLOCK= 1053		
CD= 05		

Why:
- Centralized, shared resource
- Ensures consistency in statistical products
- Promotes program standardization

When: Nightly from all sources

Company Reporting Calendar

What:

Providing a comprehensive status report for all surveys in which a company participates

Survey Databases + Survey Metadata → BR Database → Reporting Calendar (Survey 1, Survey 2, Survey n) → Analysts, Business Help Site → Respondents

Company Reporting Calendar

Two Parts:

Part I: Survey Information
- Survey name and purpose
- Survey identifier
- Reporting media available
- Reporting unit type
  - Enterprise, establishment
- Mailing frequency
  - Annual, Quarterly, Monthly
- Due date
- Burden hours
- Primary contact at the Census Bureau

Part II: Reporting Unit Information
- Reporting Unit ID
- Name & Address
- Survey identifier
- Company contact data:
  - Name, Title, Phone, and e-mail
- Filing status
- Filing medium
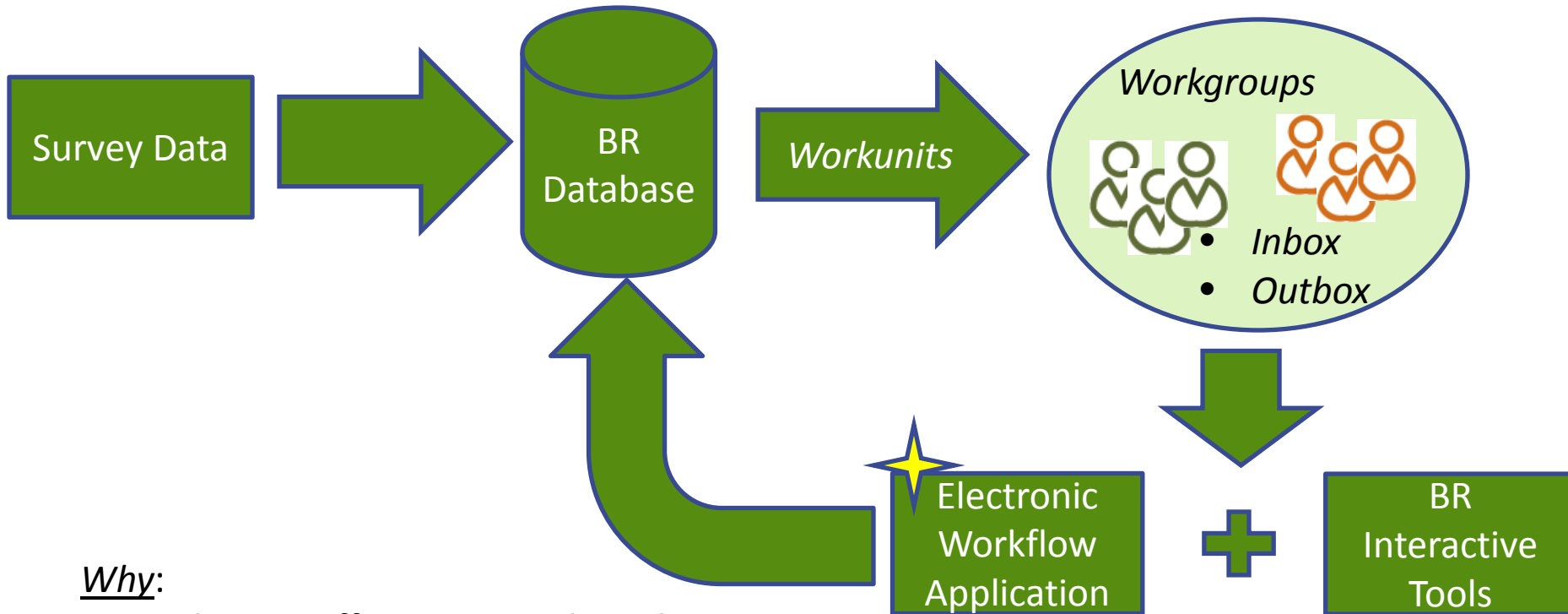 - Paper vs. Electronic

Why:
- Provides a single, consolidate point of reference
- Facilitates communication with respondents
- Assists in burden management

When: Weekly updates

Workflow System

What:

An electronic case management system for Business Register analysts

| Survey Data | → | BR Database | *Workunits* → | Workgroups (Inbox, Outbox) |

Electronic Workflow Application

BR Interactive Tools

Why:

- Replaces inefficient paper-based system
- Reduces costs
- Provides improved management information

When: Continuously throughout the survey reference period

Concluding Remarks

The Census Bureau's BR...

- ...is much more than just a "business list"
- ...is an important platform for interoperability, efficiency, and standardization
- ...has an indispensable role in survey administration and operations

Future Roles and Services?

- Merging "survey databases" with the BR?
- "Big Data" repository?
- Interoperability with "corporate solutions"?