

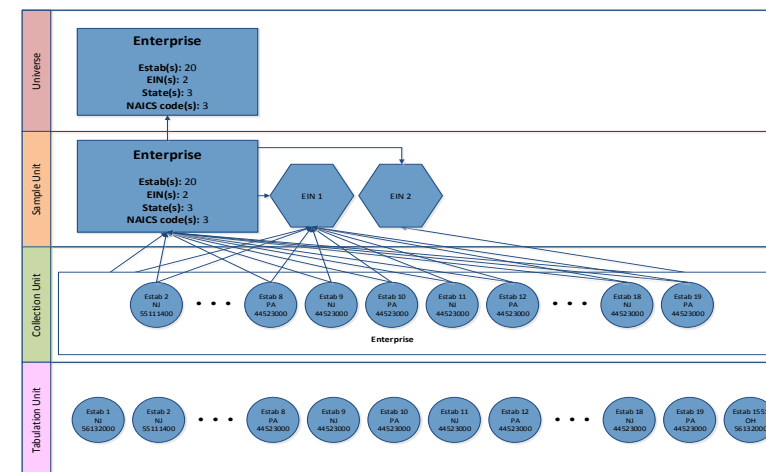
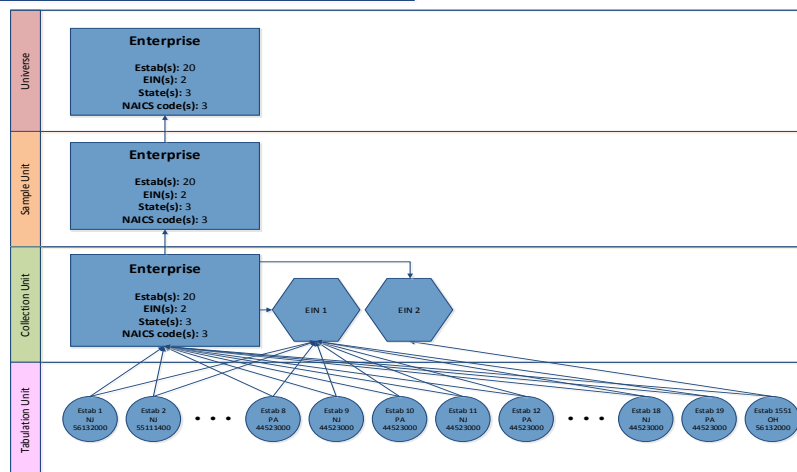
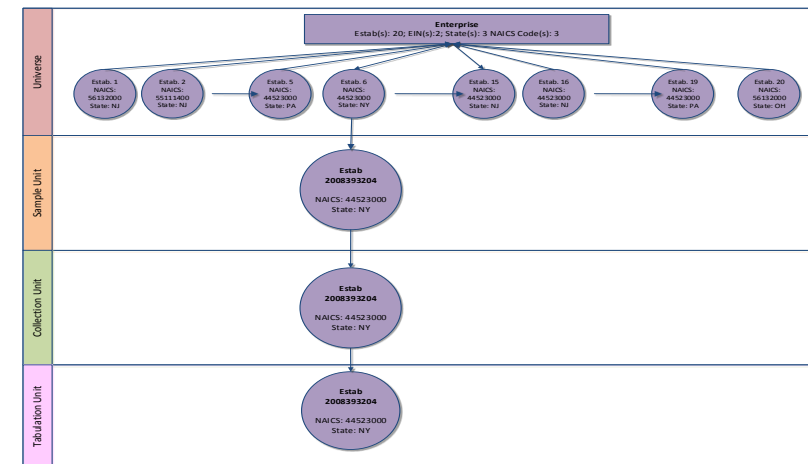
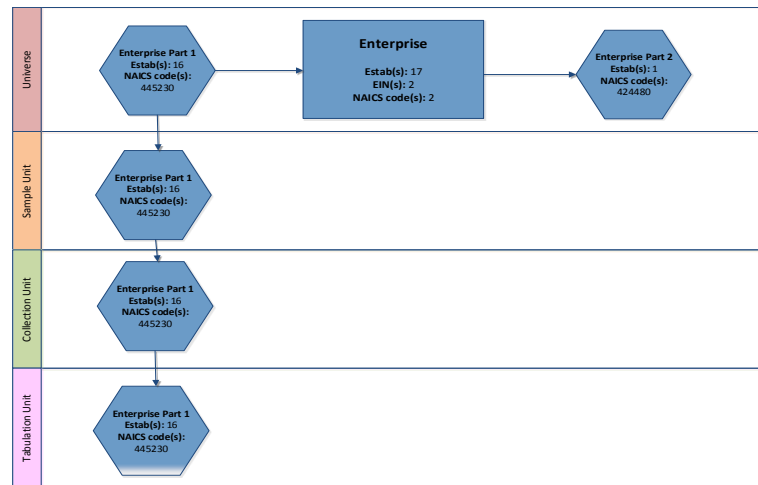
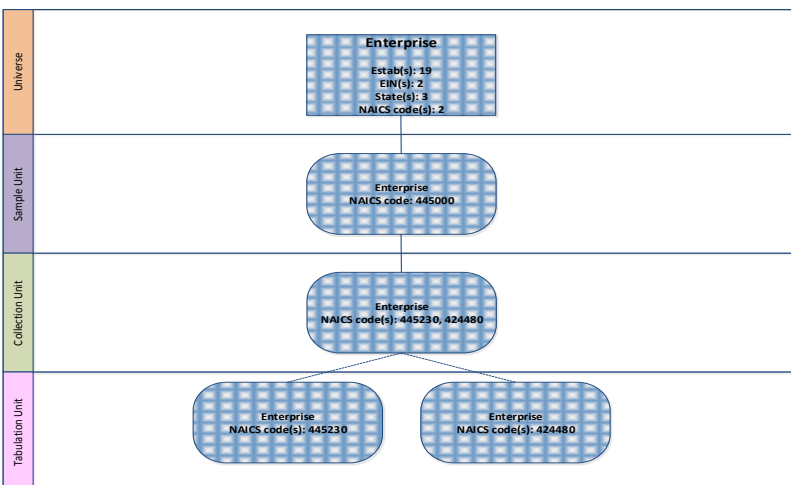
Harmonizing Economic Surveys

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Why Business Unit Harmonization?



Business Unit Harmonization

Goal:

Determine a harmonized unit across Business Register programs that aligns best with the operating structure for the majority of companies while maintaining existing measurement objectives



Step 1

Assess High Impact Companies

Objective: Find a standard unit for largest, high impact companies

Process: Study the 52 most impactful companies

Conclusion: This is impossible!

One reporting unit would not meet the needs of all companies researched

Step 2

Review Universe

Objective: Understand the make up of our universe

Process: Develop objective measures to understand the universe

Conclusion: We can do this!

Step 2

Review Universe: Objective Measures

Complexity Score

- Size Measure - Payroll
- Structural Complexity
 - Number of establishments
 - Number of unique 8-digit NAICS
 - Number of unique EINs
 - Number of unique states with business activity

Used Shannon's Entropy to measure complexity, by evaluating annual payroll's distribution across four partitions

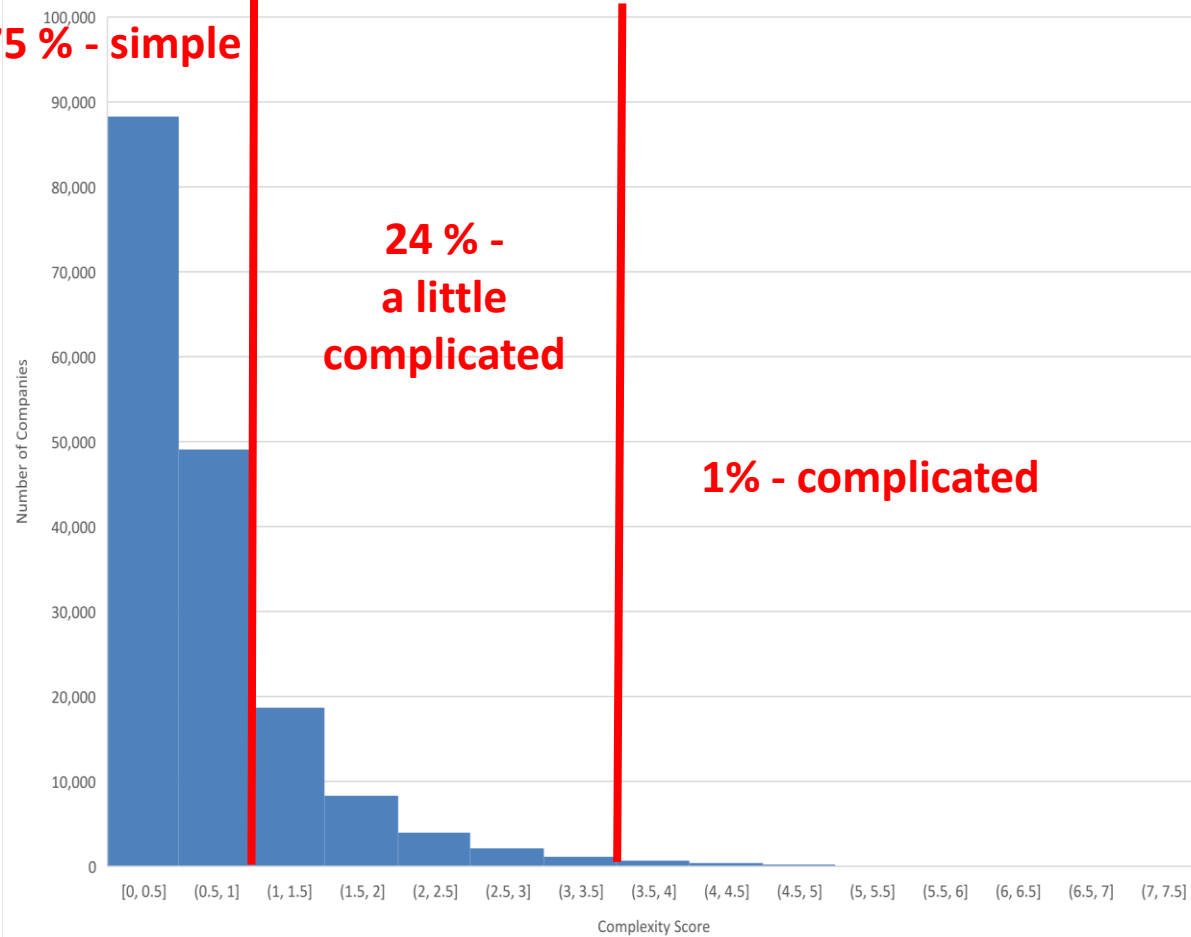
Accumulated Burden

- Total burden of a company across all program they are sampled in

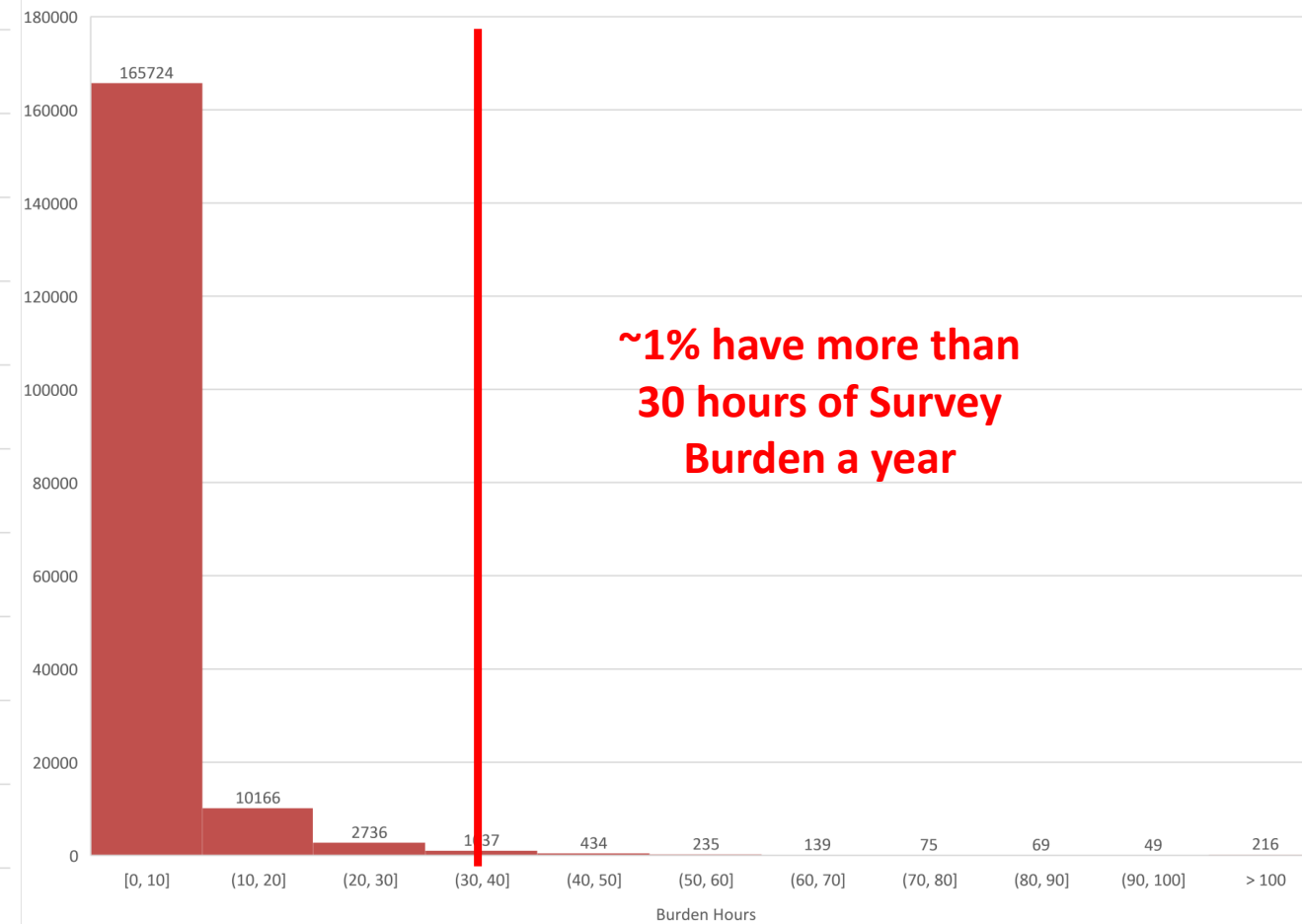
Step 2

Review Universe: Objective Measures

Distribution of Complexity Scores



Total Survey Burden Hours for Companies



Step 2

Review Universe: Top 1%

99th Percentile:

- Contains: 1,809 Enterprises (1%) covering 867,816 (44%) establishment
- Burden: 20% of total burden
- Coverage: 14 % of business register payroll



Too complicated for a harmonized unit

Too important to ignore

SOLUTION: Assign an account manager

Step 3

Determine Harmonized Unit

Universe: The other 99% of companies

Constraint: The unit will support existing tabulation levels;

Conclusion: Lowest common denominator prevails & must be NAICS Based

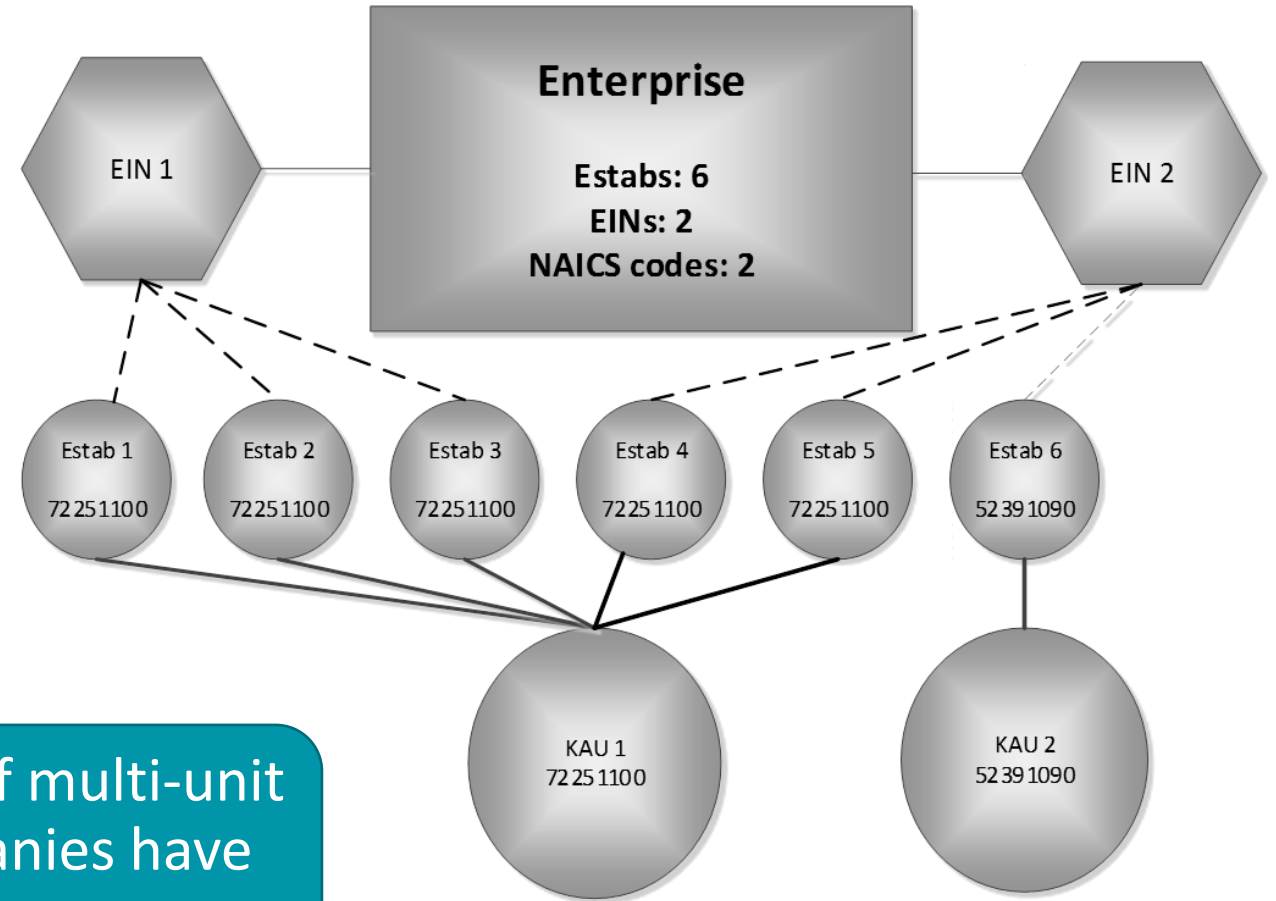
Survey	Highest NAICS Publication Level
Annual Capital Expenditures Survey (ACES)	4-digit
Business R&D and Innovation Survey (BRDIS)	4-digit
Quarterly Services Survey(QSS)	4-digit
Annual Retail Trade Survey (ARTS)	6-digit
Annual Wholesale Trade Survey (AWTS)	5-digit
Manufacturers' Shipments, Inventories, and Orders (M3)	3-digit
Monthly Retail Trade Survey (MRTS)	6-digit
Services Annual Survey (SAS)	6-digit
Monthly Advanced Retail Trade Survey (MARTS)	6-digit
Monthly Wholesale Trade Survey (MWTS)	4-digit

DECISION: Create 6-digit NAICS based unit called the Kind of Activity Unit (KAU)

Step 3

Determine Harmonized Unit: Kind of Activity Unit (KAU)

Number of KAUs	6-digit NAICS		
	Number of Companies	Percentage	Number of Estabs
1	110,291	60%	378,462
2	45,979	25%	302,065
3	13,072	7%	228,134
4	5,436	3%	188,757
5	2,738	1%	124,683
6	1,581	1%	86,765
7	964	1%	84,672
8	660	0%	45,309
9	420	0%	55,008
10	313	0%	46,541
11+	1,207	1%	389,761
Total	182,661	100%	1,930,157



60% of multi-unit companies have only one KAU

Step 4

Research Methodology Issues

- Inability to share status changes across programs
- NAICS codes are assigned independently across programs
- Difficult to maintain the relationship between the sample unit and collection unit
- Programs independently create collection units
- Need to maintain time series

Step 5

Implement Harmonized Unit



**Estimated
Implementation
Date:
Fall 2020**

Content Harmonization

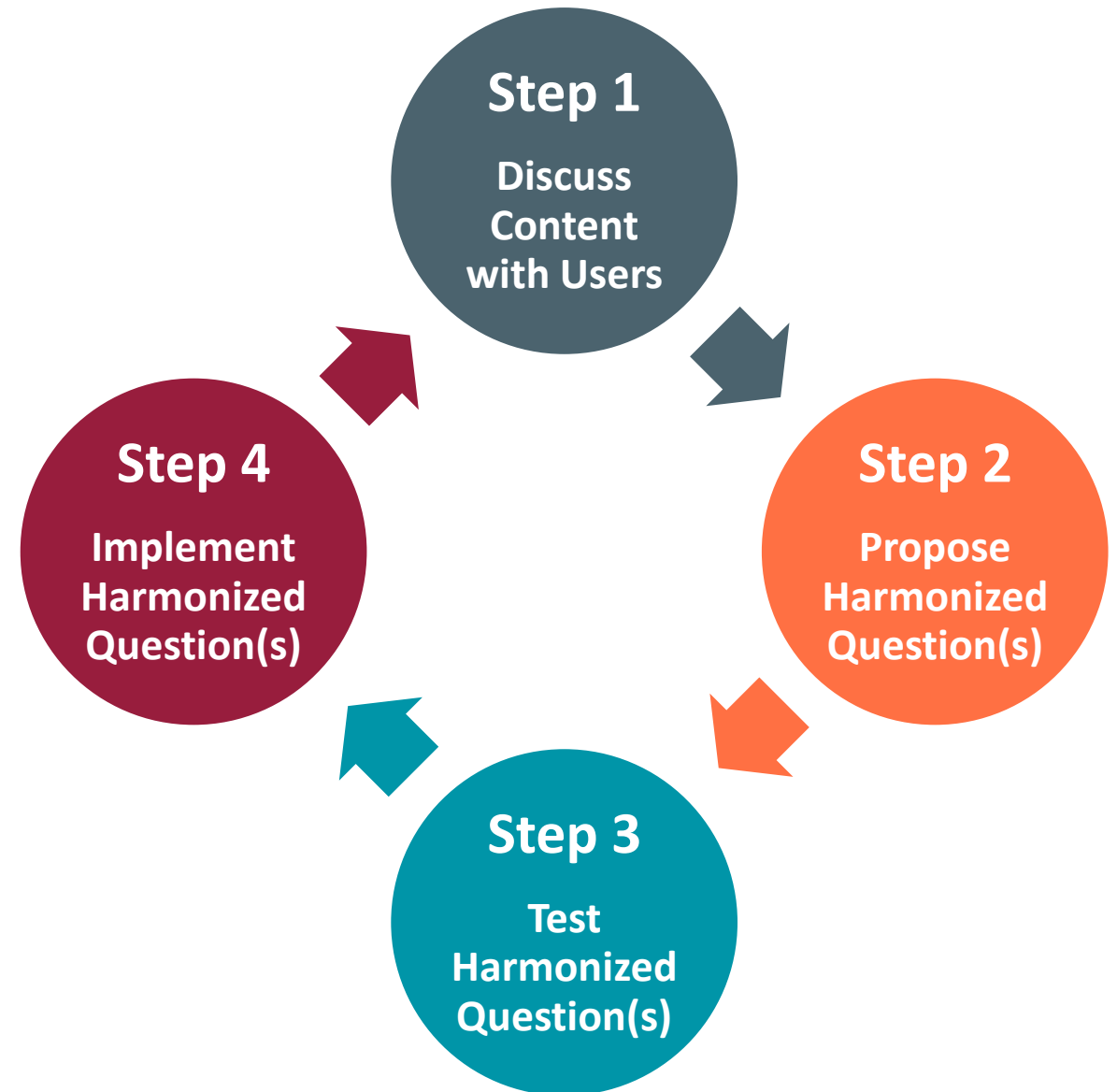
GOAL:

Harmonize definitions, questions, and instructions across all Economic programs

Process:

Repeat these steps for each of the following concepts:

- Inventory
- Payroll
- Sales/Receipts/Net Shipments
- Control Data
- Expenses



Content Harmonization: Complications

Step 1: Discuss Content with Users

- Failure to understand the ‘why’ behind content

Step 2: Propose Harmonized Question(s)

- Different collection instrument approaches and styles
- Resistance from subject matter experts

Step 3: Test Harmonized Question(s)

- Lack of funding and resources for testing

Content Harmonization: Example

Program	Question Wording	Proposed Harmonized Wording
Monthly- Advanced Retail	What was the value of merchandise Inventories, regardless of where held, owned as of the end of the month?	What was the value of inventories (if applicable, before Last-in, First-out (LIFO) adjustment) owned by this (establishment/firm) as of XX/XX/XXXX.
Monthly- Retail	What was the value of inventories (before Last-in, First-out (LIFO) adjustment) as of the end of the month?	
Monthly- Wholesale Trade	What was the value of inventories (before Last-in, First-out (LIFO) adjustment)?	
Annual- Retail, Wholesale, Services	What was the value of merchandise inventories as of December 31 in 20XX?	
Annual Manufacturing	What was the value of inventories owned by this establishment as of December 31 before Last-in, First-out (LIFO) adjustment (if any) for:	
Economic Census-Mining	What were the value of mined products and supplies owned by this domestic reporting unit as of December 31 before Last-In, First- Out (LIFO) adjustment (if any) for:	
Economic Census- Island Area's	What was the total value of merchandise inventories owned by this establishment?	
Economic Census- Manufacturing	What were the value of inventories owned by this establishment as of December 31 before Last-in, First-out (LIFO) adjustment (if any) for	
Economic Census- Information	Report inventories owned by this establishment as of December 31 before Last-in, First-out (LIFO) adjustment (if any).	
Economic Census- Construction	Using current cost, what was the value of inventories owned by this establishment as of December 31? (If using Last-In, First-Out (LIFO) method of evaluation, adjust to obtain First-In, First-Out (FIFO) or current cost.)	
Economic Census- Wholesale, Transportation	What were the inventories and Last-in, First-out (LIFO) adjustment, if any, for products owned by this establishment as of December 31?	
Economic Census-Mining Sector	Report inventories and Last-in, First-out (LIFO) adjustment, if any, for products owned by this establishment as of December 31.	
Economic Census- Information	Report inventories owned by this consolidated reporting unit as of December 31 before Last-in, First-out (LIFO) adjustment (if any).	

Discussion Questions

- What are challenges, successes and opportunities that others have experienced during harmonization efforts?
- How are business units defined for data collection purposes in your organizations? What is their relationship with statistical units?
- Are they consistently defined across survey programs? Why or why not?
- What benefits do you see in harmonizing survey content and collection units? What are some (potential or realized) obstacles to harmonization?