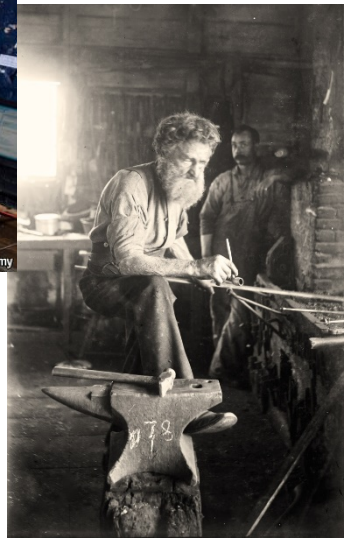


# Implementing the 2018 Standard Occupational Classification System into the American Community Survey

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# Outline

- Occupation classification overview
- Updating the Census Occupation Code List for 2018
- Comparing ACS occupation data across time

# Occupation Classification Overview

**45** What kind of work was this person doing?  
*(For example: registered nurse, personnel manager, supervisor of order department, secretary, accountant)*

Web designer

**46** What were this person's most important activities or duties?  
*(For example: patient care, directing hiring policies, supervising order clerks, typing and filing, reconciling financial records)*

Develop websites

- Other variables:
- county
  - state
  - age
  - sex
  - education
  - class of worker
  - industry
  - active duty military

Assign best code:

- Autocoder
- Clerical coders

4-digit code and title assigned from 2018 Census Occupation Code List:

1032 Web and digital interface designers

2018 Census Occupation Code List based on:  
2018 Standard Occupation Classification (SOC) System

→ 1032 Crosswalks to 15-1255 in SOC

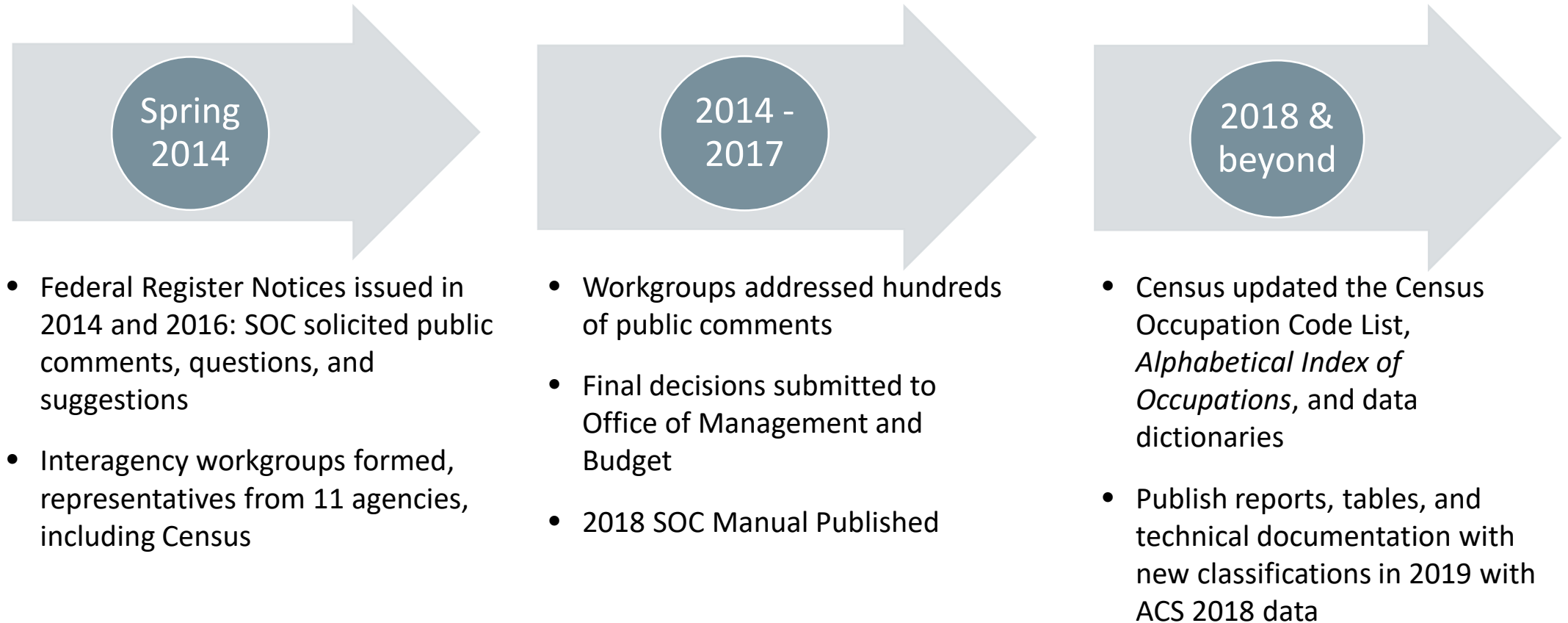
# Occupation Classification Overview

- SOC system is a statistical standard under the auspices of the Office of Management and Budget
  - SOC used by all federal statistical agencies to classify occupation since 1980
- The SOC classifies paid work or work for profit into occupational categories based on the *work performed*
- Changes to the occupational classification system are needed
  - to recognize the growth and decline of occupations
  - to provide data users the greatest detail
    - Considering collectability and confidentiality

# Occupation Classification Overview

- The Census Occupation Code List is an aggregate form of SOC
  - The Census Bureau has maintained its own code list since 1850
  - Many SOC detailed occupations are aggregated due to collectability, confidentiality and statistical precision
  - Every Census code crosswalks to an SOC code
  - The 2010 SOC was updated in 2018  $\Rightarrow$  2010 Census list updated in 2018

# 2018 SOC and Census Revision Process





# Updating the Census Code List for 2018

- Title changes
  - Example: Education administrators to Education and childcare administrators,
  - Example: Funeral service managers to Funeral home managers
- Occupations move between minor and major categories
  - Example: Personal care aides moved from Personal Care and Service Occupations to Healthcare Support Occupations
  - Example: Stockers and order fillers moved from Office and Administrative Support to Transportation and Material Moving Occupations



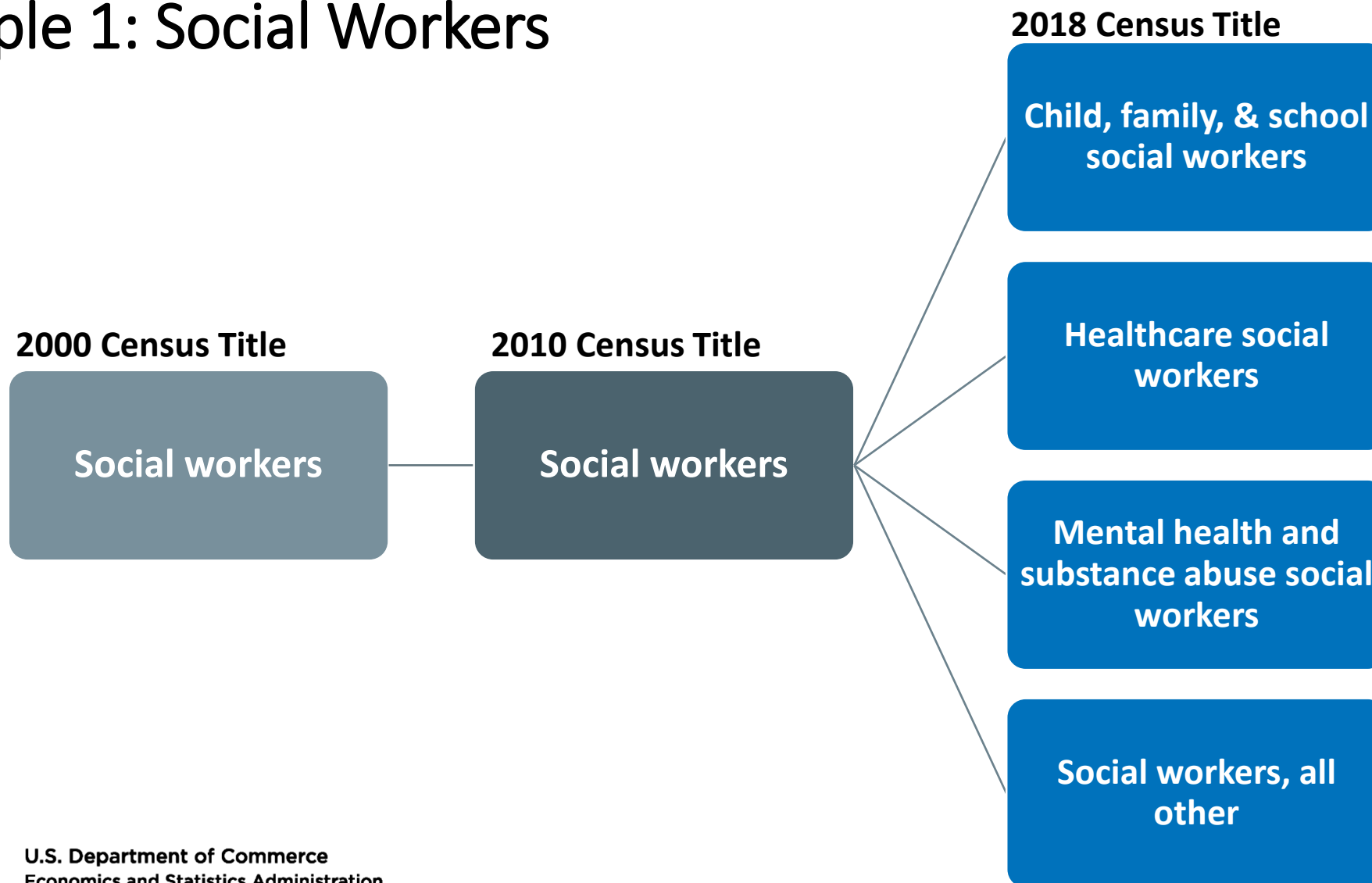
# Updating the Census Code List for 2018

- New SOC occupations assigned their own Census code
  - Examples: Project management specialists, Tutors, Acupuncturists, EMTs, Paramedics
- Deleted SOC occupations collapsed with similar occupations
  - Examples: Computer operators, Hunters and trappers

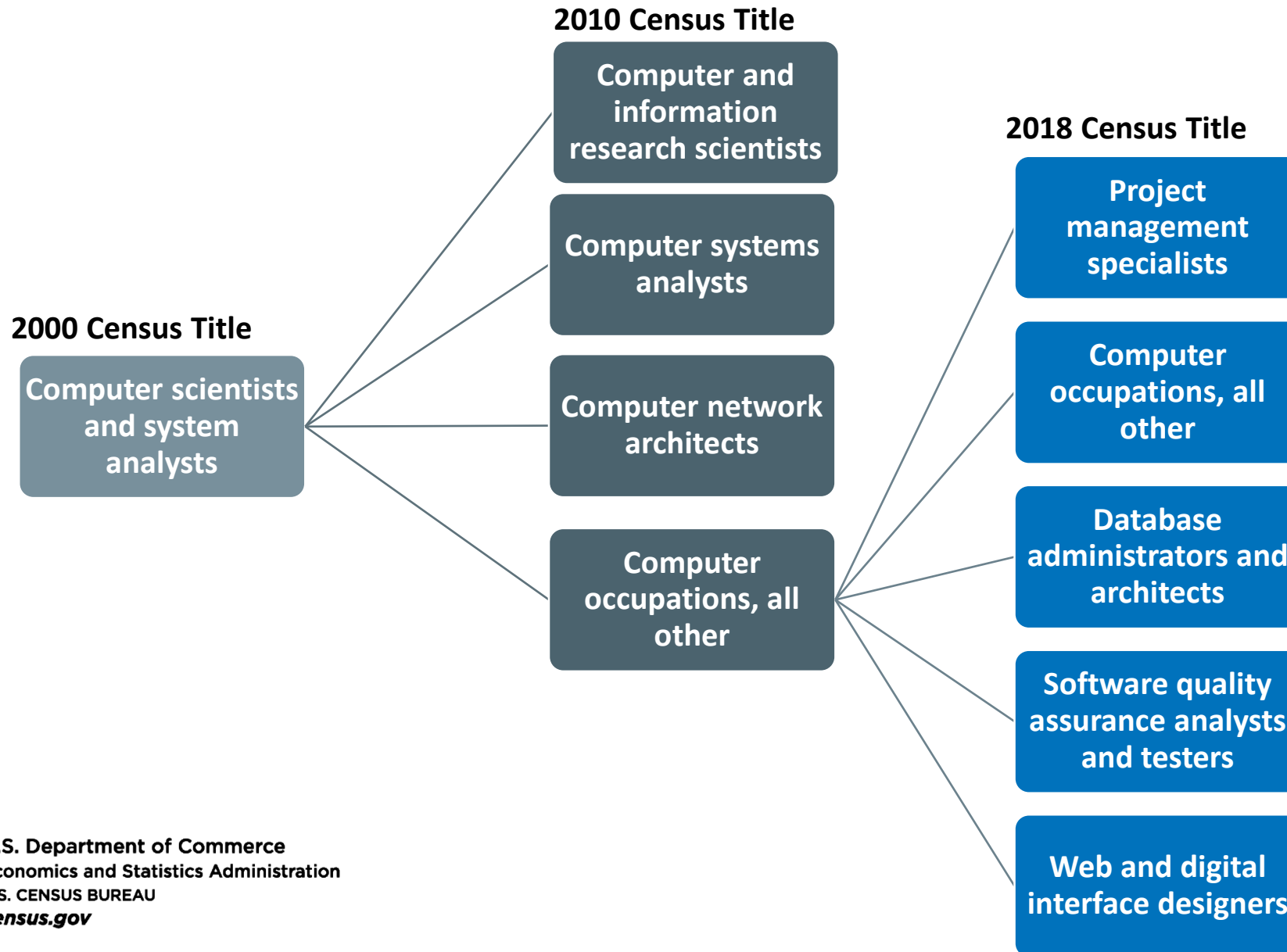
# Updating the Census Code List for 2018

- The Census Occupation Code List is an aggregate form of the SOC
- Annual ACS data allows Census to make adjustments to the aggregations:
  - Growing occupations are assigned their own Census code
    - Example: Physicians and surgeons expanded to 4 new Census occupations
    - Example: Counselors, Social workers, Designers, and others expanded to more detail
  - Declining occupations are collapsed with similar occupations
    - Remain in the SOC but no longer shown on the Census Code List
    - Example: Motion picture projectionists, Transit and railroad police, Painters, and Paperhangers

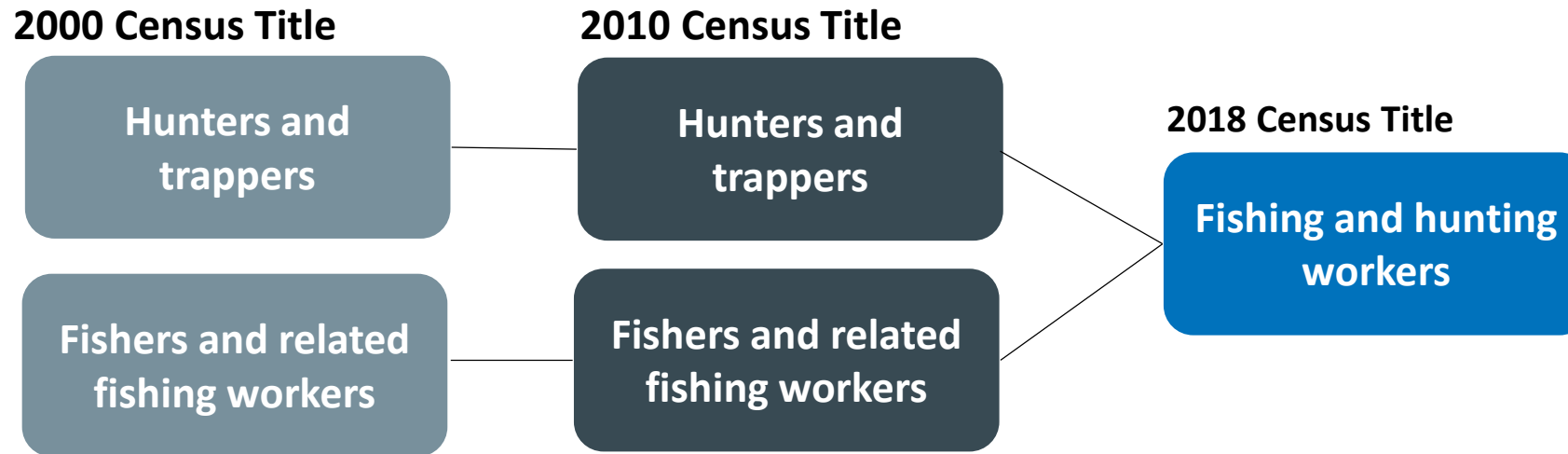
# Example 1: Social Workers



# Example 2: Computer Scientists and Systems Analysts



# Example 3: Fishing and Hunting Workers



# Updating the Census Code List for 2018

- 2000: 504 occupation codes
- 2010: 540 occupation codes
- 2018: 570 occupation codes
  - 125 Census occupation codes deleted
  - 155 new Census occupation codes added
  - Total increase of 30 codes

# What Does This Mean for Data Users?

- More detail in microdata
- More detail in published tables
- More detail in PUMS
- Greater difficulty in comparing occupation data across time

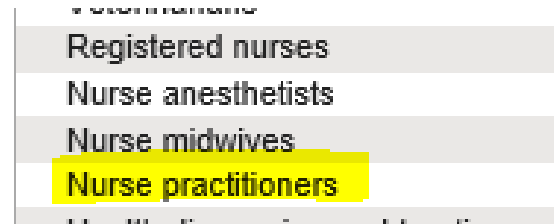


# How Can Data Users Make Comparisons Over Time?

- Example: Project management specialists
- New occupation in 2018 SOC and 2018 Census code list
  - With “old” 2010 code list, were likely coded as:
    - Managers, all other
    - Business operations specialists
    - Computer occupations, all other
  - How can data users make comparisons across time?
    - Need to know the proportion of each “old” occupation that was actually project management specialists
    - These proportions, “conversion rates” are provided by Census with every new code list released

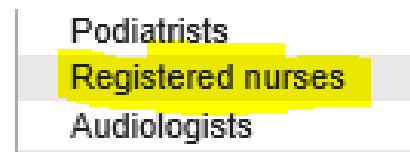
# How Can Data Users Make Comparisons Over Time?

- Example: Nurse practitioners, new Census occupation in 2010
- A data user wants to compare Nurse practitioners between ACS 2009 and 2010
  - Find occupation table on data.census.gov and look for Nurse practitioners
    - In 2010, Nurse Practitioners are there along with other nursing occupations



Registered nurses
Nurse anesthetists
Nurse midwives
Nurse practitioners

- In 2009, only see a line for Registered nurses

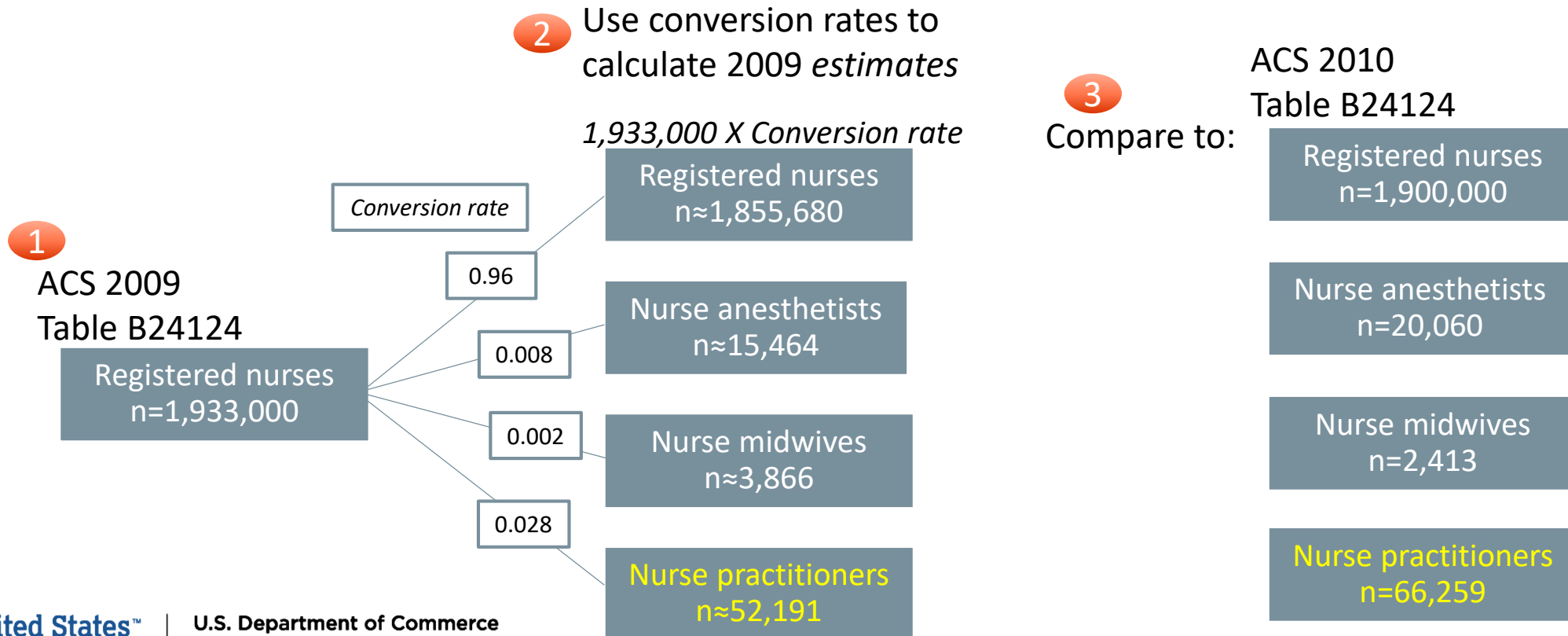


Podiatrists
Registered nurses
Audiologists

- Tables do not have a line for Nurse practitioners before 2010

# How Can Data Users Make Comparisons Over Time?

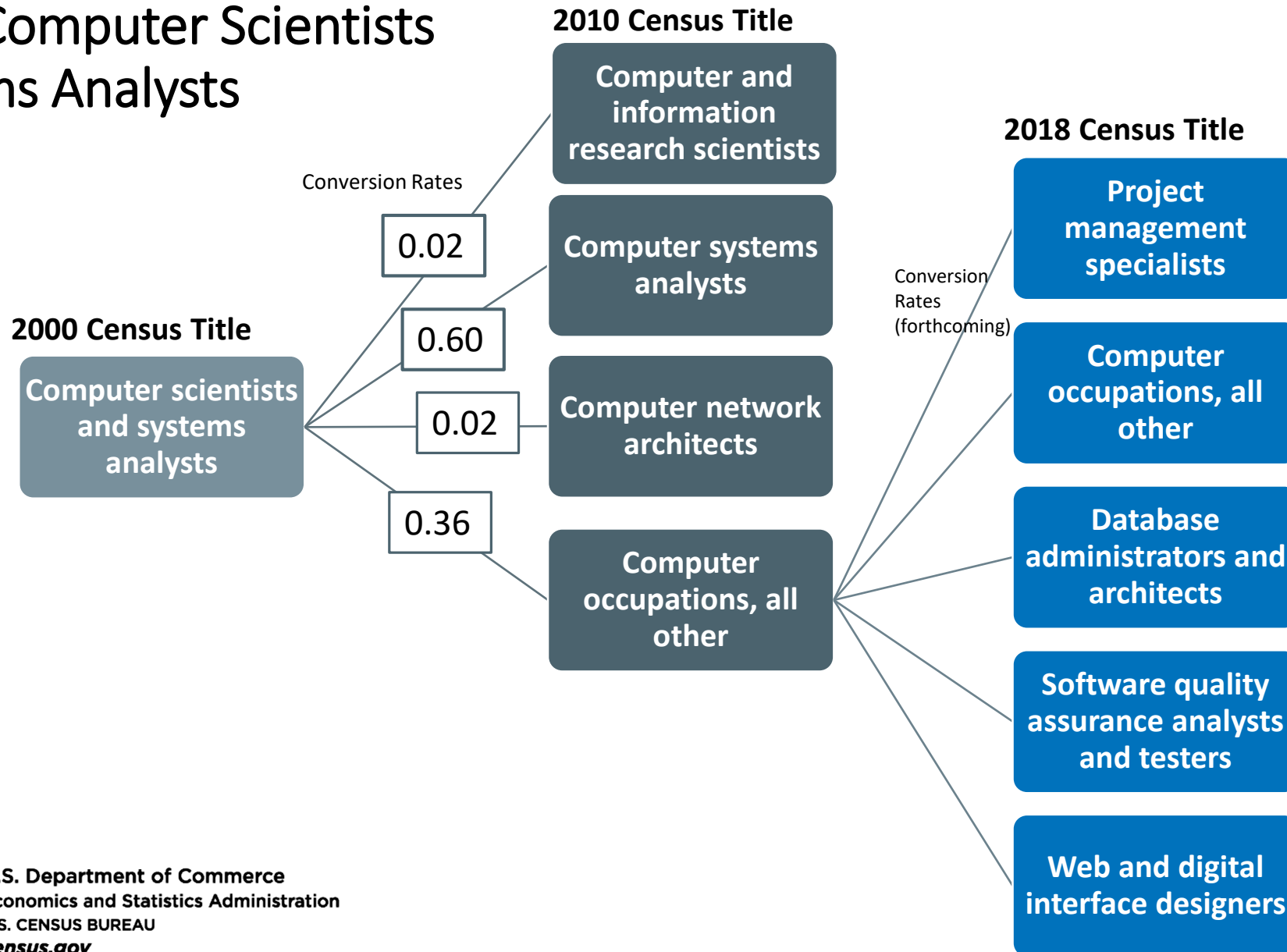
- Example: compare Nurse practitioners between 2009 and 2010



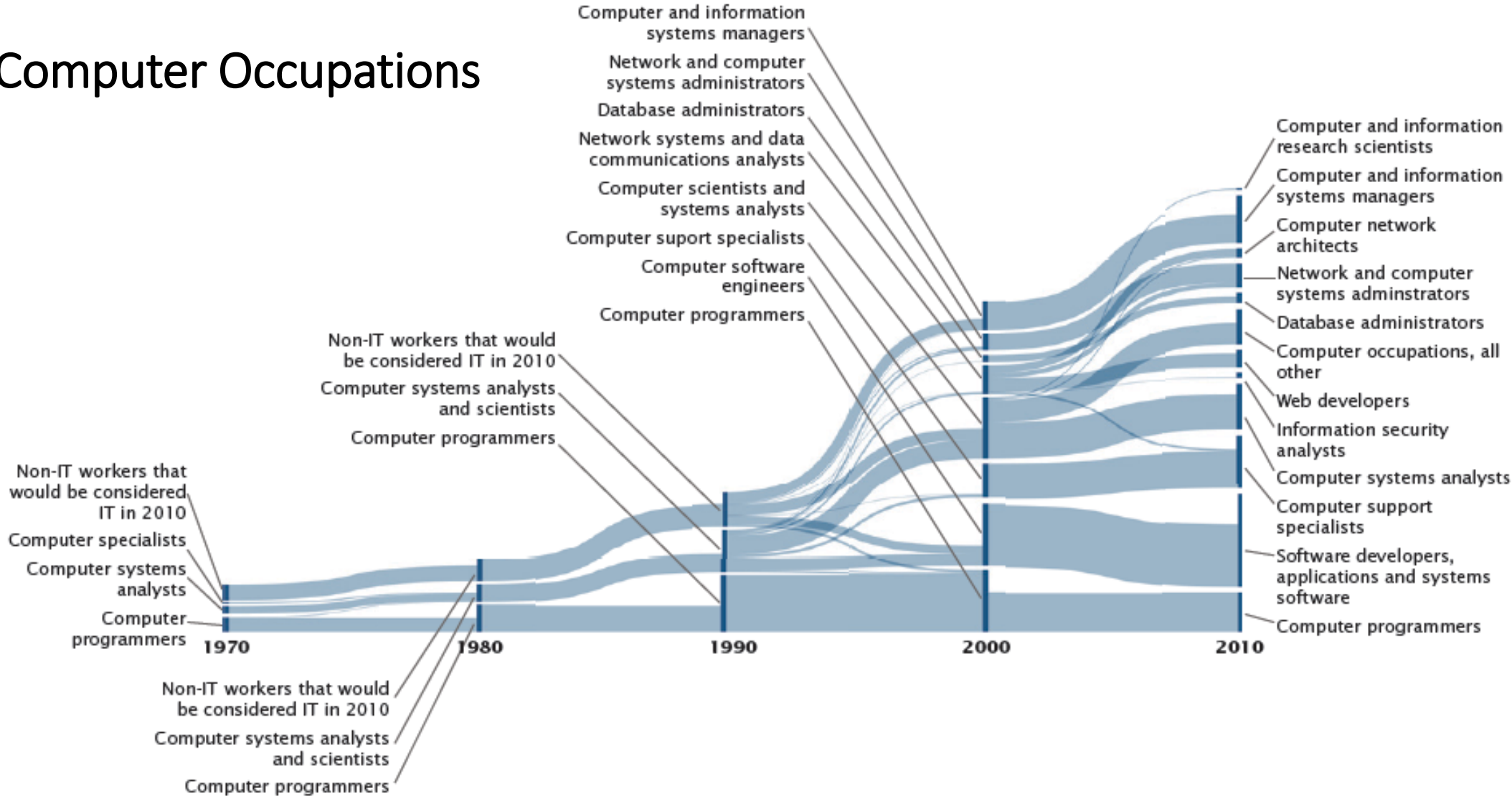
# How Can Data Users Make Comparisons Over Time?

- How are the conversion rates created?
  - Data from 2014-2017 ACS was double coded using the “new” 2018 code list
    - Autocoder, Clerical coders
    - Example: a 2015 response for occupation, “Project manager” that was coded as 0430 Manager, all other from the 2010 list would likely be double coded as 0705 Project management specialist
  - Cross-tabulations of the old codes by the new codes in SAS to calculate the proportion of cases with each old code that was double coded into the new code
    - Total
    - By sex, educational attainment
  - Conversion rate=proportion of cases with old code double coded to the new code

# Example: Computer Scientists and Systems Analysts



# Example: Computer Occupations



Sources: EEO Supplementary Reports from the 1970, 1980, 1990, 2000 decennial censuses and 2010 American Community Survey

# Takeaways and Forthcoming

- NEW 2018 Census Occupation Code List; based on NEW 2018 SOC
- More detailed occupation data in ACS 2018 released this Fall
  - 1-year, 5-year and PUMS
- New Occupation tables will no longer be directly comparable with previously released tables (even if the title remains the same)
- Documentation released this Fall
  - Technical paper
  - Occupation code list crosswalks between 2010 and 2018
  - Conversion rates
    - Separate set of conversion rates for PUMS



# Contact Information

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<https://www.census.gov/topics/employment/industry-occupation.html>

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