CASIC Survey Management Challenges

Co-Chairs: Karen Davis, RTI and Jane Shepherd, Westat

This panel provides a venue for presenting and discussing the management and administrative challenges in today's CAI environment.

There are two panels addressing different management challenges, and within each of these topics, the panelists and a moderator address current issues, approaches taken, and lessons learned.

The approach is to discuss the techniques used in different organizations to address key management issues, participate in a discussion of these issues, and have an opportunity to ask the panelists about effective approaches to common situations

CASIC Survey Management Challenges

Co-Chairs: Karen Davis and Jane Shepherd

- First Panel

  Top Three Management Challenges in Survey Technology and Programming Agencies and Organizations Face Today

- Second Panel

  Management Challenges Related to Staffing, Recruiting and Retention focusing on Data Science and Artificial Intelligence

Top Three Management Challenges in Survey Technology and Programming Agencies and Organizations Face Today

- Panelists will identify the top challenges facing their agencies or organizations today given the changing survey technology, data systems, and programming environments.
- Projects today often include innovative survey technologies, the use of specialized programming customizations, incorporated administrative and extant data sources, and the integration of different devices and technologies to support data collection.
- The panelists will discuss the ways that their organizations are dealing with the environmental changes that they have identified, and offer examples and lessons learned in addressing these challenges.

Top Three Management Challenges in Survey Technology and Programming Agencies and Organizations Face Today

Moderator:

Karen Davis, Business Group Chief Information Officer and Vice President, Research Computing at RTI International

Panelists:

- Bryan Beverly, Data Collection Branch, Current Employment Statistics program, U.S. Bureau of Labor Statistics
- Gina Cheung – Chief Technology Officer, Survey Research Center, University of Michigan
- Cheryl Lee, Survey Operations Team Leader, U.S Office of Energy Statistics' (OES) Office of Oil, Gas and Coal Supply Statistics (OGCSS) at the Energy Information Administration
- Tara Merry, Data Science and Technology, Mathematica Mathematica Policy Research

The Top Three Management Challenges in Survey Technology and Programming

FedCASIC 2019
April 16th, 2019

Bryan Beverly
Data Collection Branch
Current Employment Statistics
US Bureau of Labor Statistics

Current Employment Statistics (CES)

- The Current Employment Statistics (CES) program of the U.S. Bureau of Labor Statistics is a monthly payroll survey of 142,000 businesses and government agencies representing approximately 689,000 individual worksites.
- Provides detailed industry data on employment, hours, and earnings of workers on nonfarm payrolls.

Management Challenge #1

- SITUATION: Many legacy SAS programs and program office staff are experienced in SAS, while the younger staff are onboarding with R skills.
- SIGNIFICANCE: Mismatch between support and skills.
- SOLUTION: Begin to migrate critical legacy programs to other formats; going forward, develop new R tools.

Management Challenge #2

- SITUATION: Transition risk of new data collection software. More experienced call center interviewers struggle more than new interviewers in learning new software.
- SIGNIFICANCE: The pace of change causes a mismatch between established skills and new software.
- SOLUTION: Be patient and provide support as the experienced interviewers ‘unlearn and learn’. Also, adjust the schedule of software enhancements, so that the interviewers have time to become acclimated to the software upgrades.

Management Challenge #3

- SITUATION: Over time, Subject Matter Experts in the program office emerge for critical operations. As they change jobs or retire, irreplaceable knowledge is lost.
- SIGNIFICANCE: Nuanced and esoteric information is not transferred as new staff are onboarded.
- SOLUTION: Document critical tasks and cross-train the staff.

SUMMARY

- The overarching management challenge in survey technology and programming is to maintain continuity of operations in the midst of change.
- Change management is not often planned for because we work ‘in the moment’ and are seldom given authority, mandate and capacity to proactively plan for changes beyond our immediate horizon.
- The major barrier to change is the effect that it has on people. Hence any type of change in support of continuity of operations must be guided. To that effect a “manager” must transition from being a noun into a verb.

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Top Three Management Challenges in Survey Technology and Programming

Gina-Qian Cheung

SRC, University of Michigan

Top Three Management Challenges

1. Integrating Mixed-Mode Survey Method (Protocols) into the full production process for the panel studies

2. Adopting advanced technologies with the “older” devices and training with new technologies

3. Testing for any component of a survey is getting more and more complex

1. Integrating Mixed-Mode Survey Method (Protocols) into the full production process for the panel studies

a) Data comparability with previous waves in Mixed Mode settings

b) Reduce the mode effectiveness

c) “Standard” production reports

d) Production monitor process

e) Procedure changes

2. Adopting advanced technologies with the "older" devices and training with new technologies

a) "Smart" devices to collect information

b) Newer devices for our interviewers

c) Training to use new devices (training our interviewers and respondents)

d) Cost sharing to purchase/replace the new devices during the production

3. Testing for any component of a survey is getting more and more complex

a) Complex protocols are hard to simulate in a testing environment

b) Integration testing always is “in the last minutes”

c) Different users are in different environments and security settings are complex

d) Performance measures and reliability signals are critical but hard to implement

Thanks!

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Management Challenges in Survey Technology: U.S. Energy Information Administration

For

FedCASIC Management Challenges Workshop: Top Three Management Challenges in Survey Technology and Programming Agencies and Organizations Face Today

April 16, 2019 | Washington, DC

By

Cheryl Lee, Survey Operations Team Lead, Office of Oil, Gas & Coal Supply Statistics

EIA Background

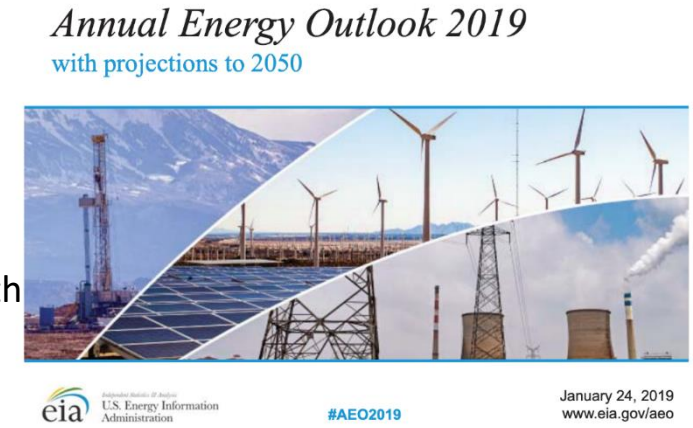
In response to the 1973 oil embargo, the Federal Energy Office was created to coordinate American efforts to cope and to allocate supplies of petroleum products. In 1977 the U.S. Energy Information Administration (EIA) was created.

The Nation's source of energy information

EIA collects, analyzes, and disseminates independent and impartial energy information to promote sound policymaking, efficient markets, and public understanding of energy and its interaction with the economy and environment.

EIA's products are independent

By law, EIA's data, analyses, and forecasts are independent of approval by any other officer or employee of the United States Government.

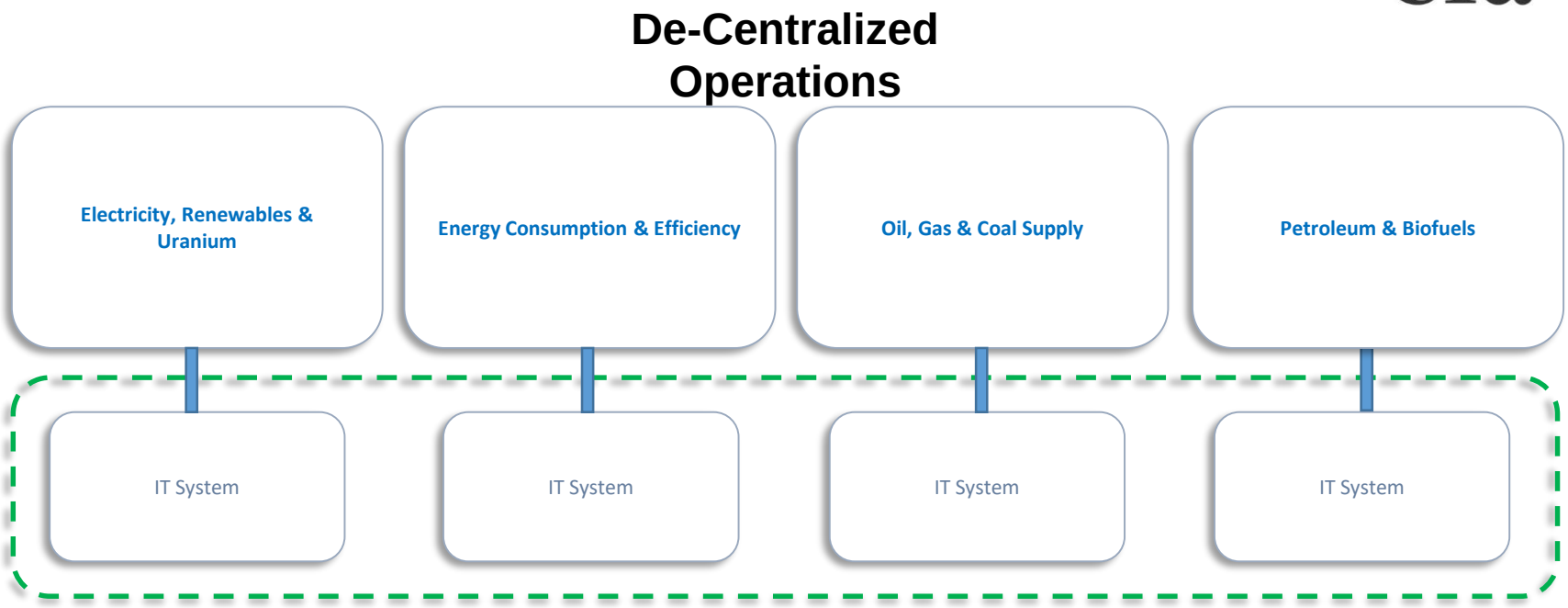


EIA's Top 3 Survey Technology Management Challenges

- Numerous disparate survey specific legacy IT systems
- Support for the specific legacy systems is often one programmer, which allows for a single point of failure
- Significant cost to maintaining the legacy systems, but they must be maintained in order to continue processing surveys.

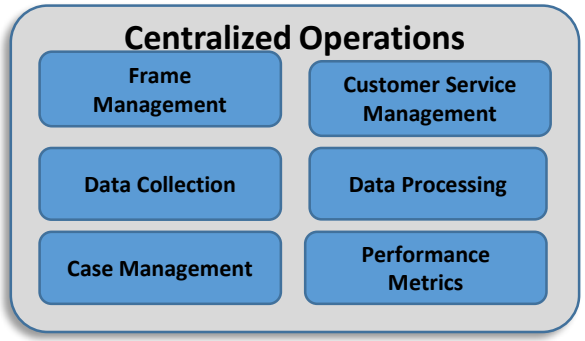
Today's EIA
Manual interventions and processes
Over 300 production systems
Disparate processes
Insufficient integration and coordination
Limited visibility into processing and analysis

Office of Energy Statistics – Current State



Current Focus: IT Modernization

- Survey-specific legacy systems must be replaced with a more centralized modernized IT platform
- Documentation of processes and procedures is necessary to avoid potential single points of failure



Tomorrow's EIA
Process Automation
Single, integrated collection, processing, and analysis system
Standardized enterprise-wide survey processes
Increased collaboration and integrated survey planning
Process and analysis transparency
Coordinated, streamlined operations

Top Three Management Challenges in Survey Technology and Programming Agencies and Organizations Face Today

Driving innovation while managing risks

Tara Merry

Mathematica

Pervasiveness of low/no-code and open-source tools

Access to new tools can encourage innovation and reduce costs

However…

- More tools = more support
- More “casual” users
- Harder to develop & enforce standards
- Security

Solutions:

- Product owners/advocates
- New support models
- Constraints on use
- Training
- Flexible QA approach

Promoting new technology solutions

Identifying the right solution

- Openness to new technology varies among staff and clients
- Lack of awareness/familiarity
- Resistance to change
- Concerns about risk, cost

Solutions:

- DataTech single points of contact
- Specialized teams (Data Viz)
- SMEs

Managing technology in data collection projects

Tech solutions are becoming more complex

- Multiple systems → complex integrations
- Changing management responsibilities
  - Tech teams need more survey knowledge
  - Survey teams need more tech knowledge
- "Translator" role important

Solutions:

- Staffing models - IT PM, BA, Solutions Architect
- Training/support for survey teams
- SDLC

Discussion