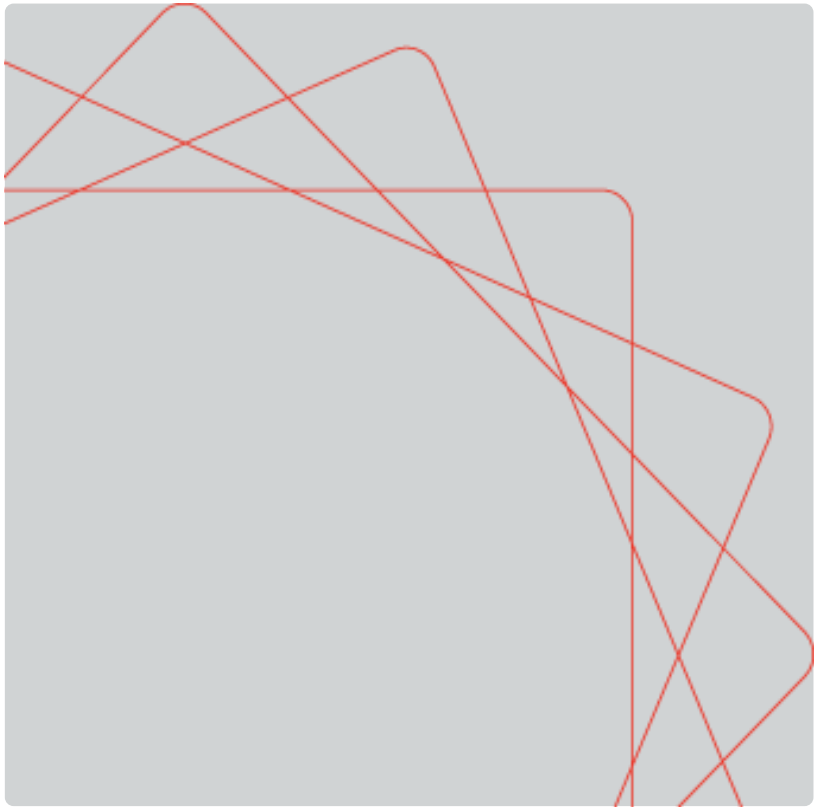
Development of Web Paradata Dashboards

2017 FedCASIC Workshops
Suitland, Maryland
April 12, 2017

Josh DeLaRosa, Paul Schroeder, Sarah Stepina, David Pulaski, David Nagglee



Acknowledgements

- Nick Murray
- Allison Ackerman
- Lori Metz
- Survey sponsor & reviewers

Overview

- Understanding paradata
- Process of developing web paradata dashboard
- Lessons learned
- Next steps
- Demonstration

Framework

- Research-based explanation of paradata in web surveys
- Example of quality metrics
- Use cases of paradata
- Common Web analytics

Callegaro, M. (2013b). Paradata in web surveys. In Kreuter (ed.) *Improving Surveys with Paradata: Analytic Uses of Process Information.* Hoboken, New Jersey: Wiley. 263- 282.

Typology of Survey Data

- Response data – data collected from responses to questions presented to respondents
  - Demographic data; Economic data
- Meta data - contextual data on how the data was collected
  - Questionnaire; Codebook
- Auxiliary data – information collected outside of the survey instrument
  - Frame data; Matched data
- Paradata – data collected during the **process** of administering the survey instrument
  - Number of contact attempts; Time of day

Paradata

Device data

- Browser
- Operation System
- Device type
- Java enabled

Response behavior data

- Time to complete question
- Last question answered (breakoffs)
- Number of re-entries

Methods to Explore Paradata

Flat file

- Limited to the variables on the file
- Requires statistical package
- File access barriers (e.g., FTP, codebooks & permissions)
- Allows for deeper analysis

Dashboard

- Limited to the variables read into dashboard
- Requires a browser
- Provision user to dashboard
- Allows for performance monitoring

Why Visualize Paradata?

- Explore and visualize paradata
- Identify trends over time
- Agile and scalable solution
- Operations and subject matter tool
- Interactive
- Shareable

Number of Sessions

	Device Type		
Session Count	Mobile Phone	Tablet	Desktop
1	86.59%	83.01%	91.27%
2	9.18%	11.61%	6.04%
3	2.03%	2.80%	1.24%
4	0.99%	0.86%	0.52%
5	0.60%	0.65%	0.36%
6	0.27%		0.46%
7	0.11%		
8	0.11%	0.65%	
9		0.22%	0.10%
12		0.22%	
24	0.05%		
99	0.05%		

Sourcing Data

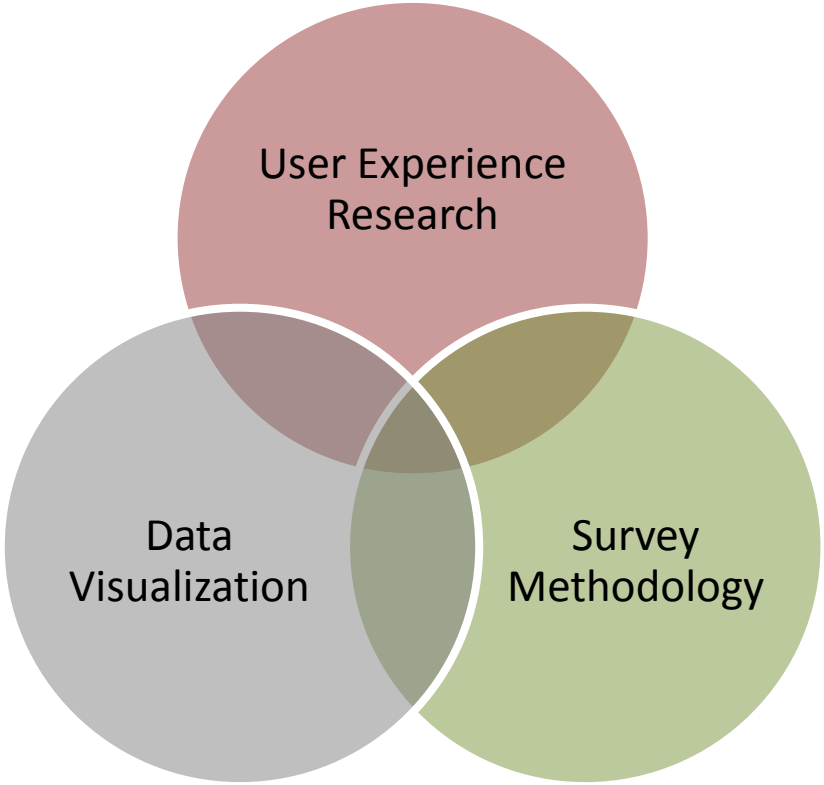
- Nationally representative web panel data
- Server-side data collection
  - Observed errors with client-side JS data collection
- Parsing User Agent String
- **Organically** produced by web data collection instrument

Visualization Platform

- Off the shelf software
  - Prototyping
  - Quick turnaround
- Requirements analysis
  - Subject matter
  - Operations/ technical
  - Developer (feasibility analysis)

Lessons Learned

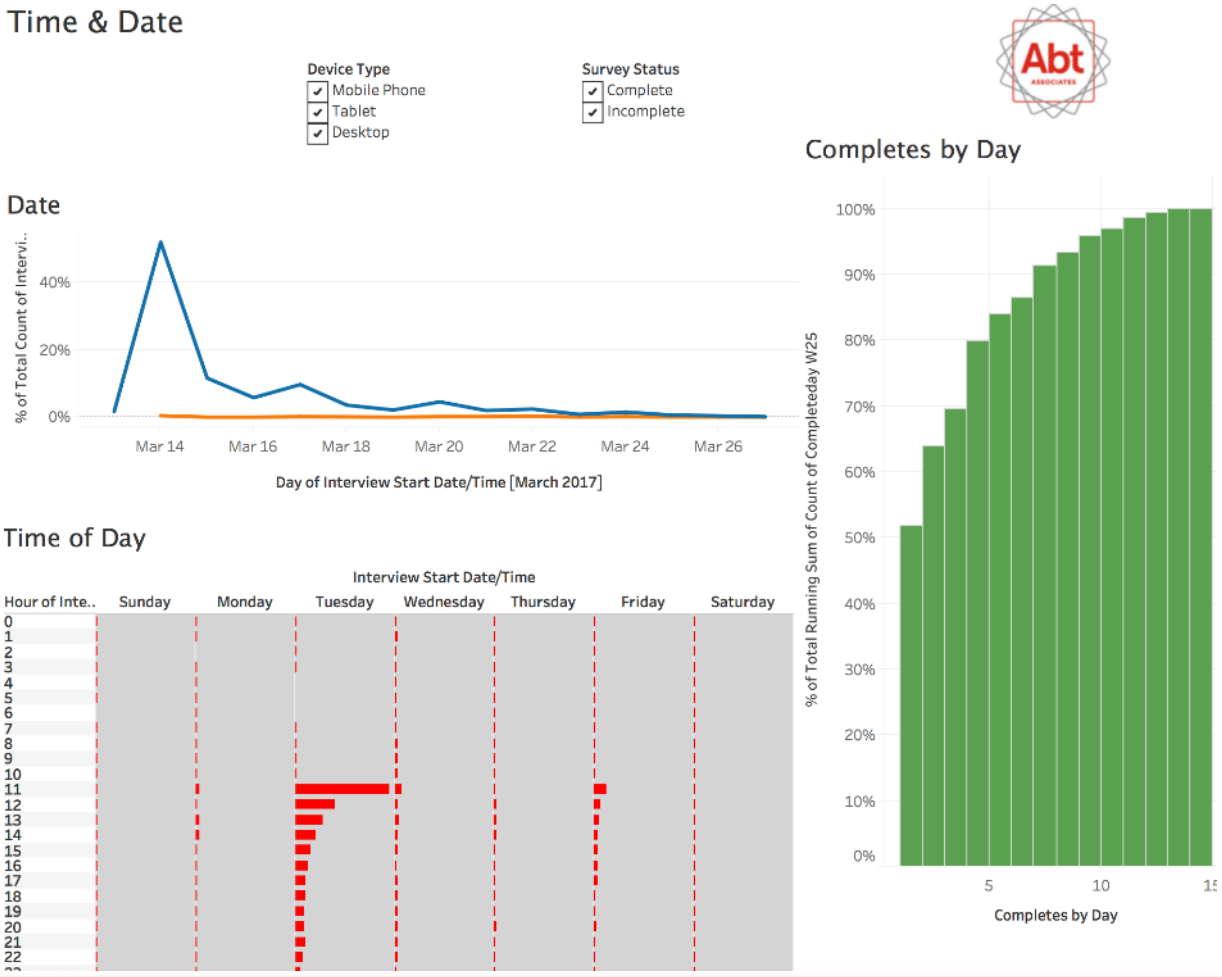
- Dashboard can be created lean & quickly
- Intended to enhance, not replace ex-post facto review of paradata
- Engage diverse view points to maximize impact
- Data quality: compare JS vs server-side data
- Mix of disciplines



Next Steps

- CATI paradata
- Scale up
- Establish benchmarks
- Response data

Demonstration



Questions?

Josh_delarosa@abtassoc.com

Abt Associates is about opportunity and hope.

Helping people move from vulnerability to security so they can thrive.

We think boldly, crossing disciplines, methods, and geographies to bring the best solutions to the toughest challenges.

OUR MISSION

To improve the quality of life and economic well-being of people worldwide

OUR VALUES

Mission-Driven | Global | Committed to Excellence | Collaborative | Accountable | Balanced

TACKLING THE WORLD'S

TOUGHEST CHALLENGES

Abt ASSOCIATES

BOLD
THINKERS
DRIVING
REAL-WORLD
IMPACT

abtassociates.com