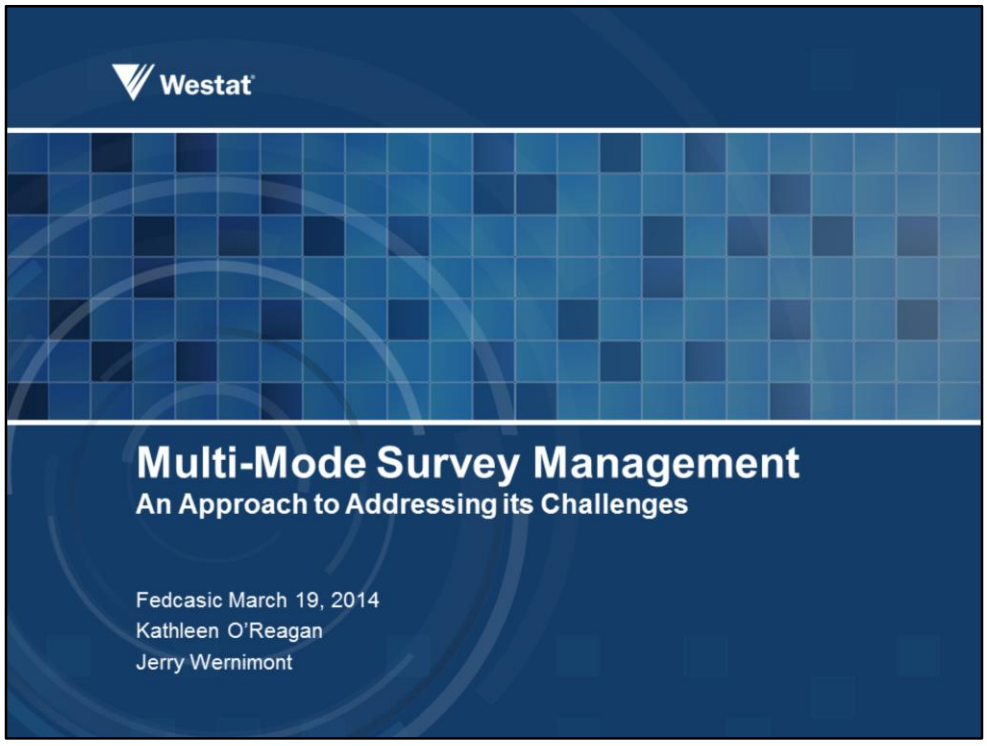
Westat
Multi-Mode Survey Management
An Approach to Addressing its Challenges
Fedcasic March 19, 2014
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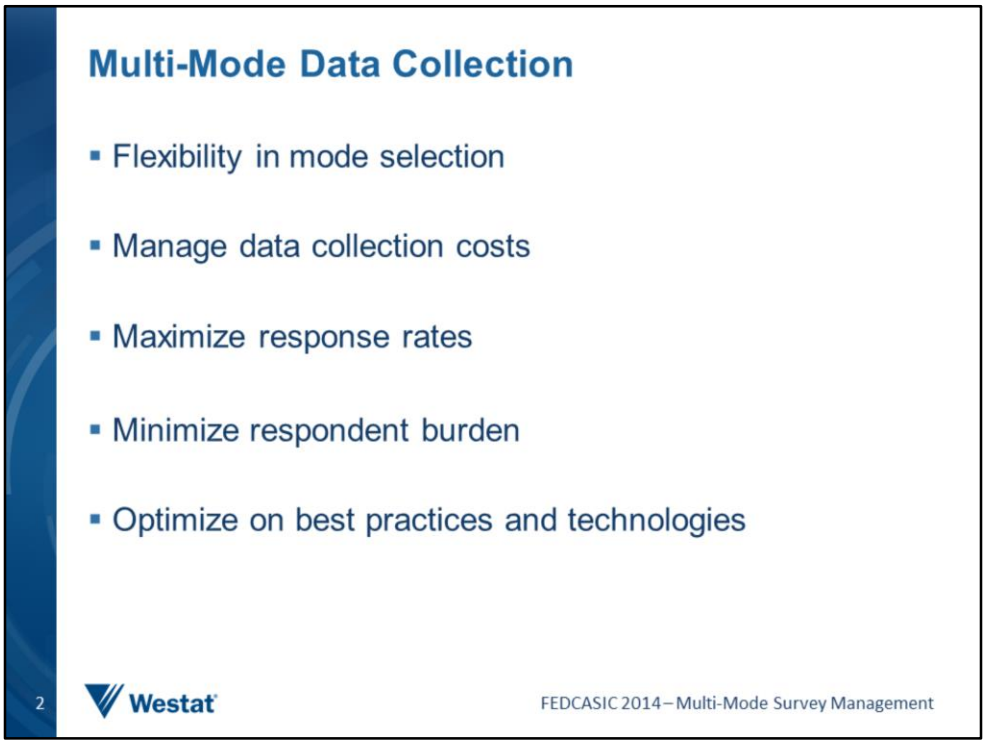


First slide-Multi mode data collection

Most studies today use multiple modes of data collection –

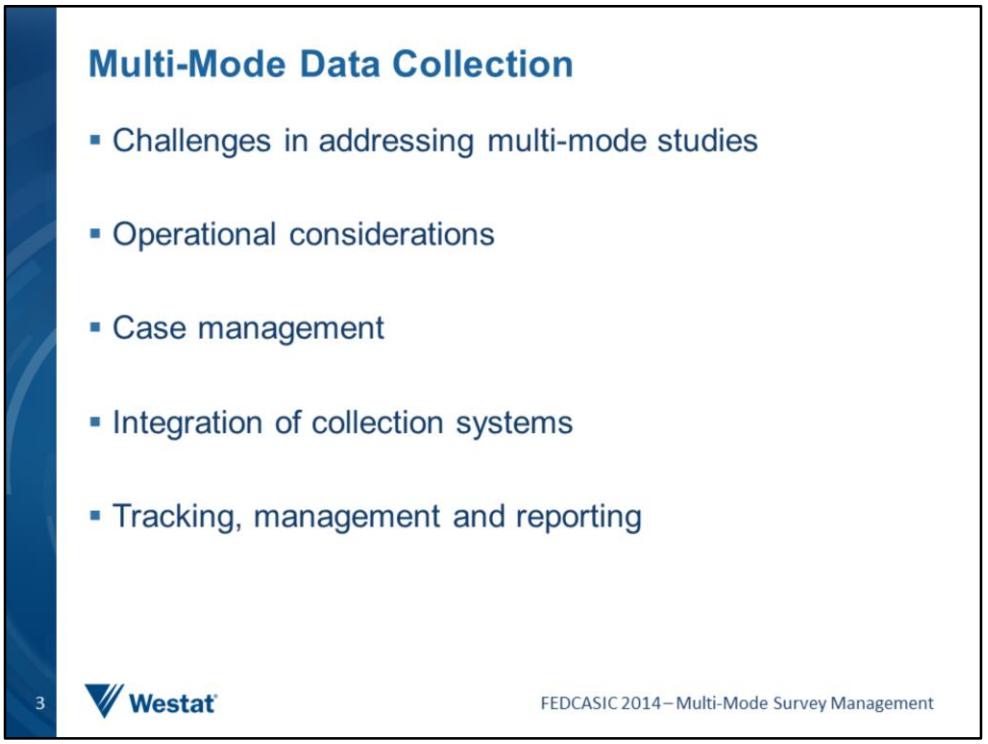
We see a lot of flexibility in mode selection across various studies, modes refer to approaches used to obtain data from respondents. typical modes may include web, telephone, in person, mobile, interactive voice response, or hard copy (address based sampling approaches) for example These modes employ different workflows and technologies In addition to modes of data collection there may be other processes such as advance letter mailings, incentives etc that need to be managed.

The advantage of a multimode approach is to permit flexibility in mode selection to meet the objectives of the study

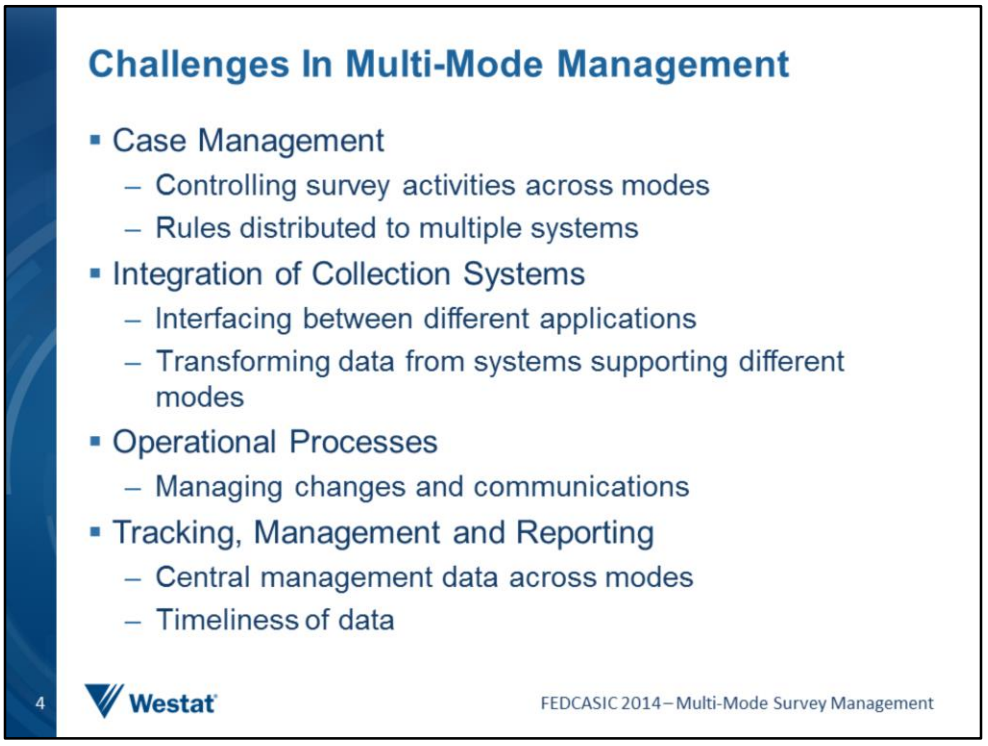
Second bullet. Costs can be better controlled and timeliness improved by making adjusts in modes or processes supporting the data collection as the survey moves through its lifecycle

Third bullet- and fourth Response rates can be maximized by selecting response modes most suited to your survey population so that you can most easily reach them and offer a survey completion mode that is preferred by that population

By centralizing with a management system one has the opportunity to standardize on best practices and optimize on the best technology to use for each mode



Some topics we'll address today about multi mode data collection are ….

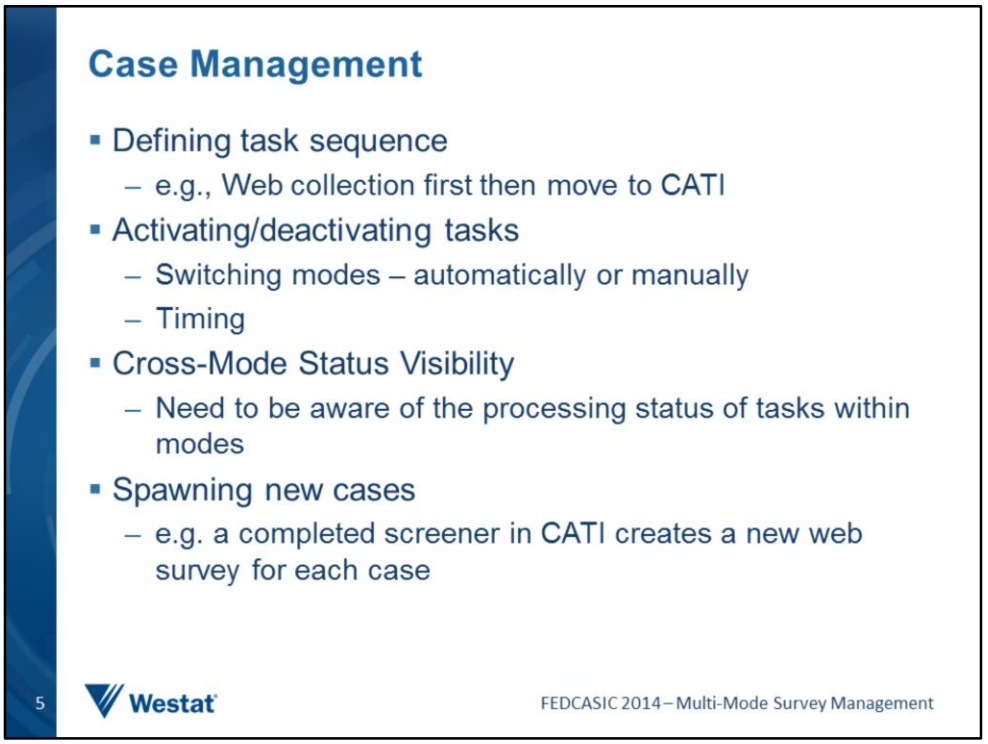


Survey management operations are adapted to multi-mode data collection Methods of contact, scheduling, data editing/retrieval are influenced by the mode of collection used; for example advance contact may involve mailing a letter or a telephone call or IVR depending on the population.

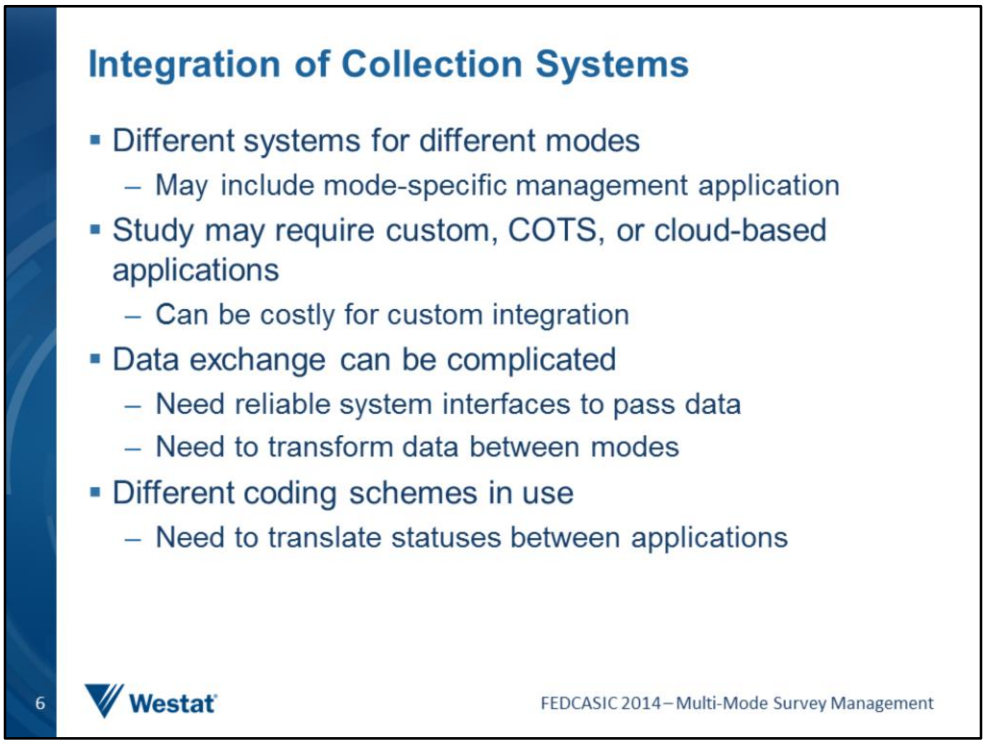
Maintaining coordinated communication between multiple modes can be complicated. A status code can trigger the startup of another action. For example if there is no response to a survey screener within a certain time period, another action may occur. For example, a telephone call, another letter, an email, etc.

Rules need to be established regarding the communication and protocol flow and dispersed to all systems. By specifying the flow rules for interaction between modes and processes, the data collection lifecycle can be more easily managed

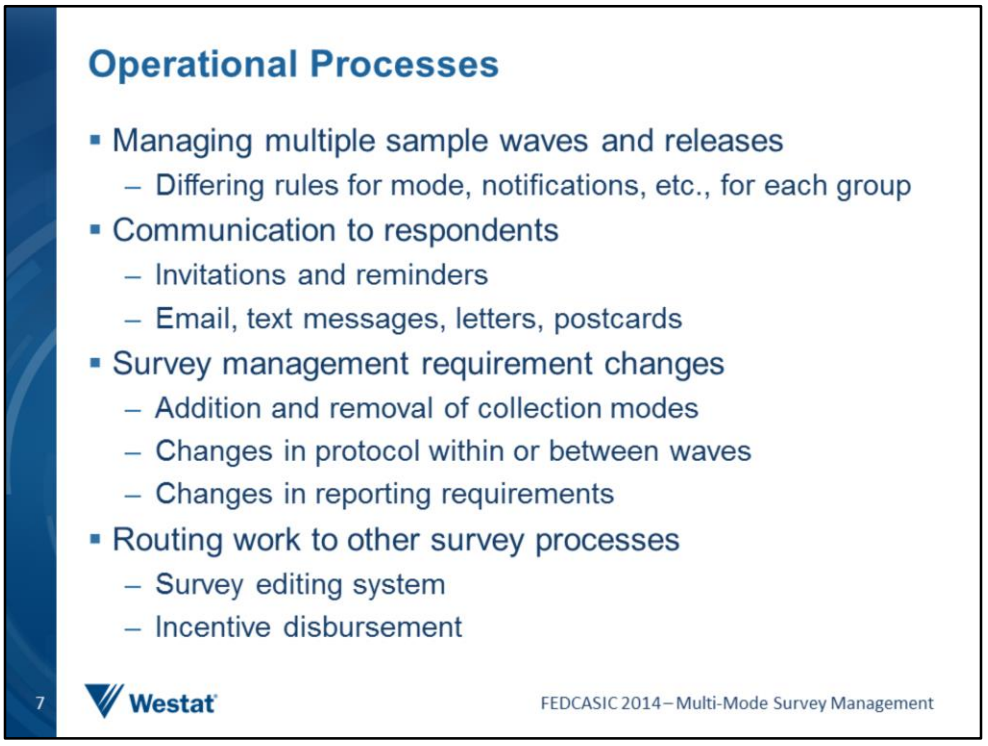
Reports on case status are available in integrated management reports. In multimode studies many dimensions are available to report on – and the data may need to be presented across respondent and integrated with other project information



Cross mode-need to be able to follow up partially completed cases across multiple modes
Must be able to track flow of case and status between modes
Must be able to avoid duplicate collection efforts so case completion must be tracked and reported across modes
Contact attempts and results must be sequenced.
Should respondent declare a preference for completion in a particular mode, must have the ability to switch case mode
Scheduling components must account for
Contact at

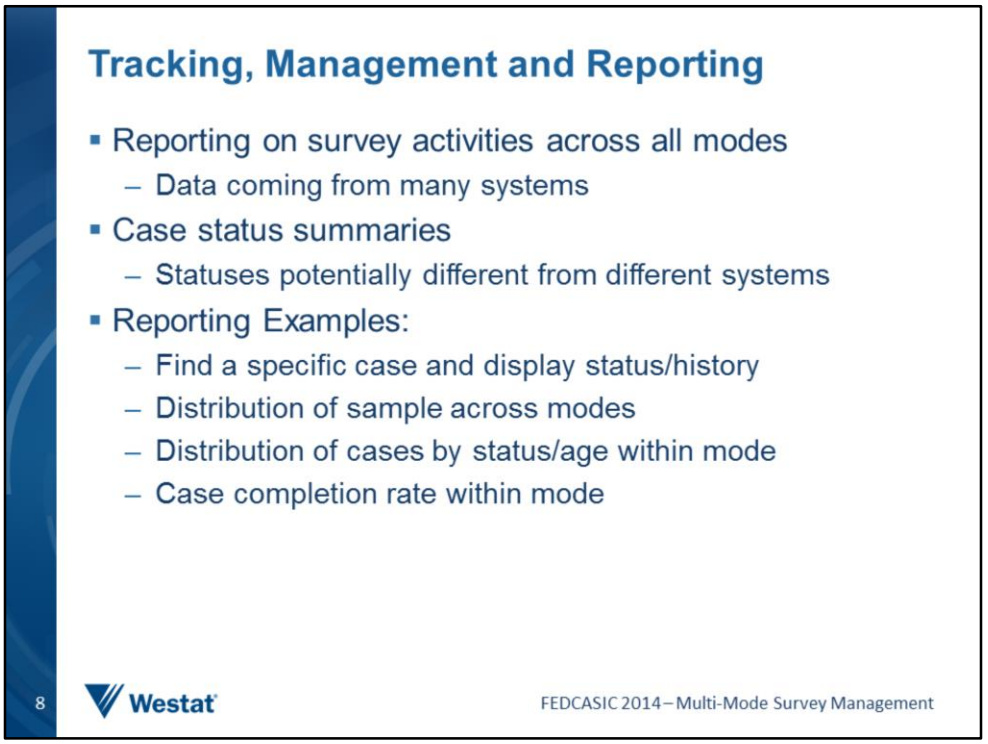


Access to cases must be able to be manipulated so that a case completed in one mode is not available in another mode.



May need to manage versions in addition to waves and releases
The use of multiple channels of communications can increase the chance of contact but must be sequenced
Addition and removal-May wish to begin with least costly and progress to more expensive modes.
Also need to be able to receive communication from respondents in multiple ways

It is important to be able to pass information to other systems so that editing or coding can begin, and incentives can be paid while the study is in progress in many cases. A multimode management system supports this



Need to be able to report and act upon reports relating to locating, mailouts,email response,cases flaggged for particular protocols or
Special handling (ie NISMART)

M3: Westat's Multi-Mode Manager

M3 is a platform for establishing a robust integrated systems environment for conducting multi-mode surveys with flexibility and efficiency.

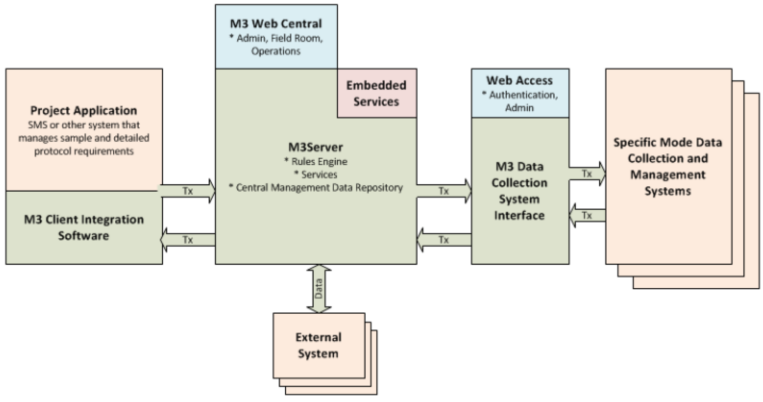
- Defines a "master" data model that reflects a superset of management data used across collection modes
- Serves as the integration point to multiple applications
- Provides a configurable study lifecycle engine
  - Route cases, perform services, or move data based on rules, conditions and timing
- Is designed for adaptability
  - Adjust rules for response rate, cost, or other reasons

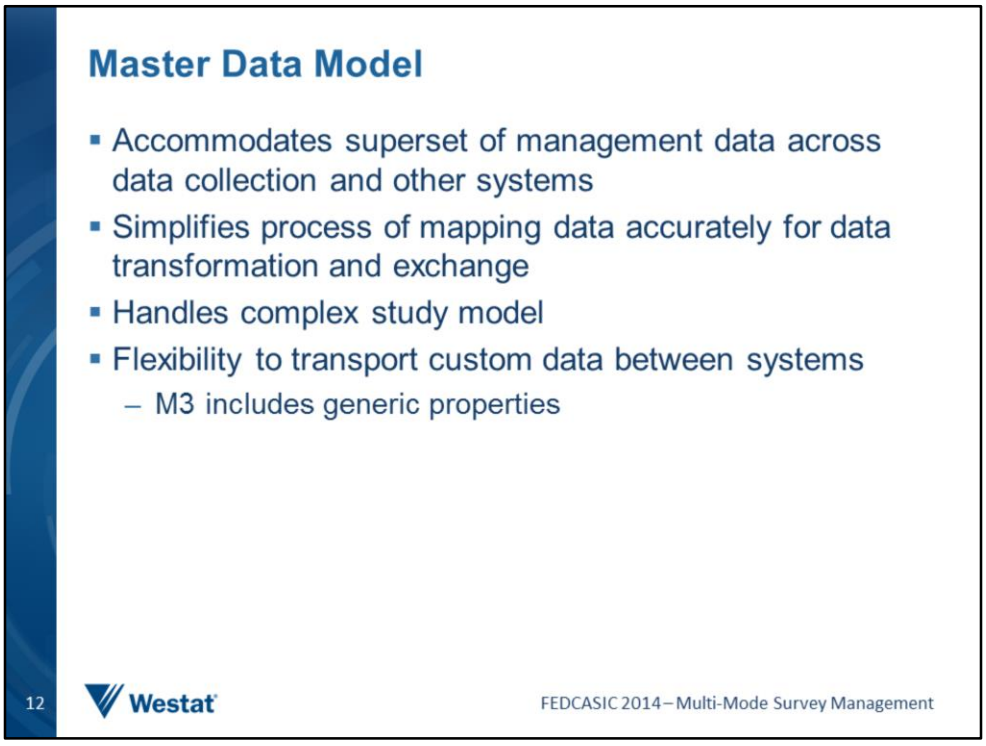
M3 Architecture – Some Realized Benefits

- Provides a central repository of case management data
  - Central reporting from a standard model
- Eliminates the need for each study to "stitch" data collection systems together
- Eliminates one-off development work
  - Each system requires a single interface to the M3
  - Implementation can be used for more than one study
- Provides standard access to value-added services
  - Studies can leverage existing integration
- Provides platform for agile study configuration
  - Configurable rules-based engine provides flexibility

M3 Context

Different components of M3 work to integrate project applications, data collection systems, and other external systems.





Can handle sample management if specific application does not exist for study.

M3 Task Management Engine

- Central case management within the survey lifecycle
- Rules-Based
  - Manages tasks and artifacts
  - Supports explicit and relative timing of tasks
  - Can apply different rules to different waves and releases
- Captures detailed management data
  - Detailed task statuses and outcomes
  - Supports cross-mode reporting
- Communicates with data collection systems, as well as other work management processes

Data Exchange and Transformation

- Data can originate in any system
  - Study Management System (e.g., sample)
  - Data Collection System (e.g., screening)
  - Loaded directly into M3
- Architecture supports bi-directional update of data
  - Use of Universal Unique Identifiers
- Communication via standard model
  - Transformation at the edges of the integration points
- Near Real-Time for many integrated systems
  - Impacted by capability of external system

Other Service Examples

- Respondent Notification Service
  - Automatic method selection based on rules or preferences
  - Email
  - Mailing
  - Texting
- Authentication Service
  - Generation of web access user accounts for respondents
  - Integration into web access into rules engine
- Incentive Management and Disbursement
  - Checks
  - Debit Cards

Technology

- Based on a Westat developed framework
  - Leverages .NET Entity Framework
  - SQL*Server implementation, but supports Oracle
- Robust entity model and implementation
  - Abstract concepts support reliable and easy extension
  - Supports bi-directional data updates
- Flexible Integration Methods
  - Web services with entity serialization
  - Drop-in database integration
  - XML Export / Import
  - Old-fashioned CSV files
- Supports near-real time data exchange and processing

Questions?

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