

# Using the Quick Start Toolkit (QST) at the Census Bureau



# Topics



- Business Process Management and Modeling
- Quick Start Toolkit (QST)
- Business Process Efforts at the Census Bureau
- Using the QST to Document Survey Processes
- Demonstrate the QST – specifically the Model Readiness Check

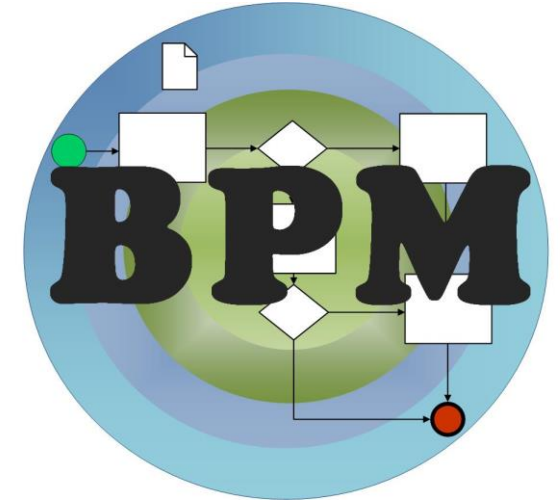
# Presenters

**Brenda Damario & Marisa Pedro**

US Census Bureau

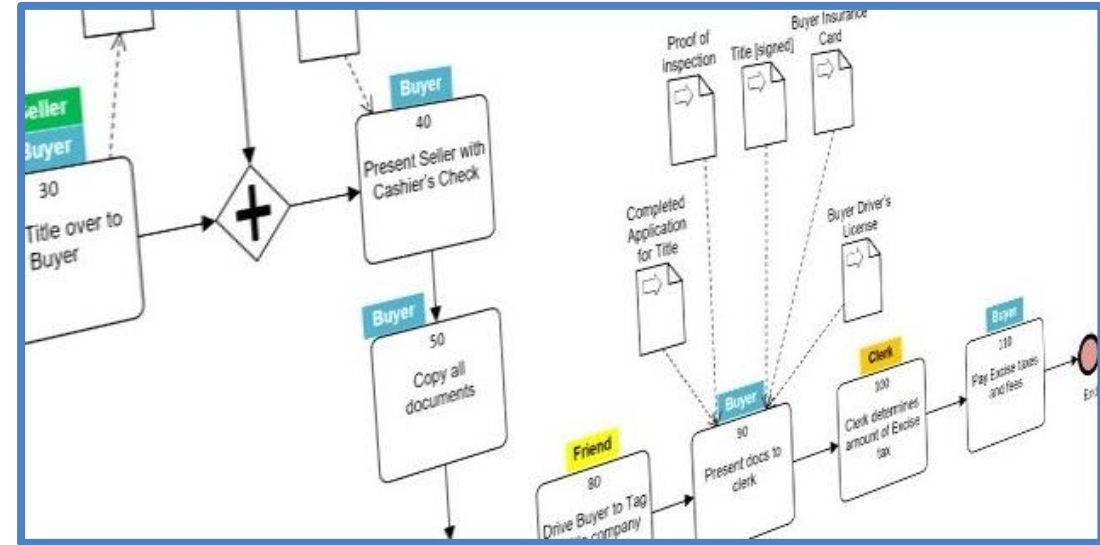
Office of Program, Performance and  
Stakeholder Integration (PPSI)

Business Process Management (BPM) Staff



# Model That Process!

What's your process for washing the dishes?



- Need 2 volunteers to provide additional content
- Draw the Wash the Dishes Process

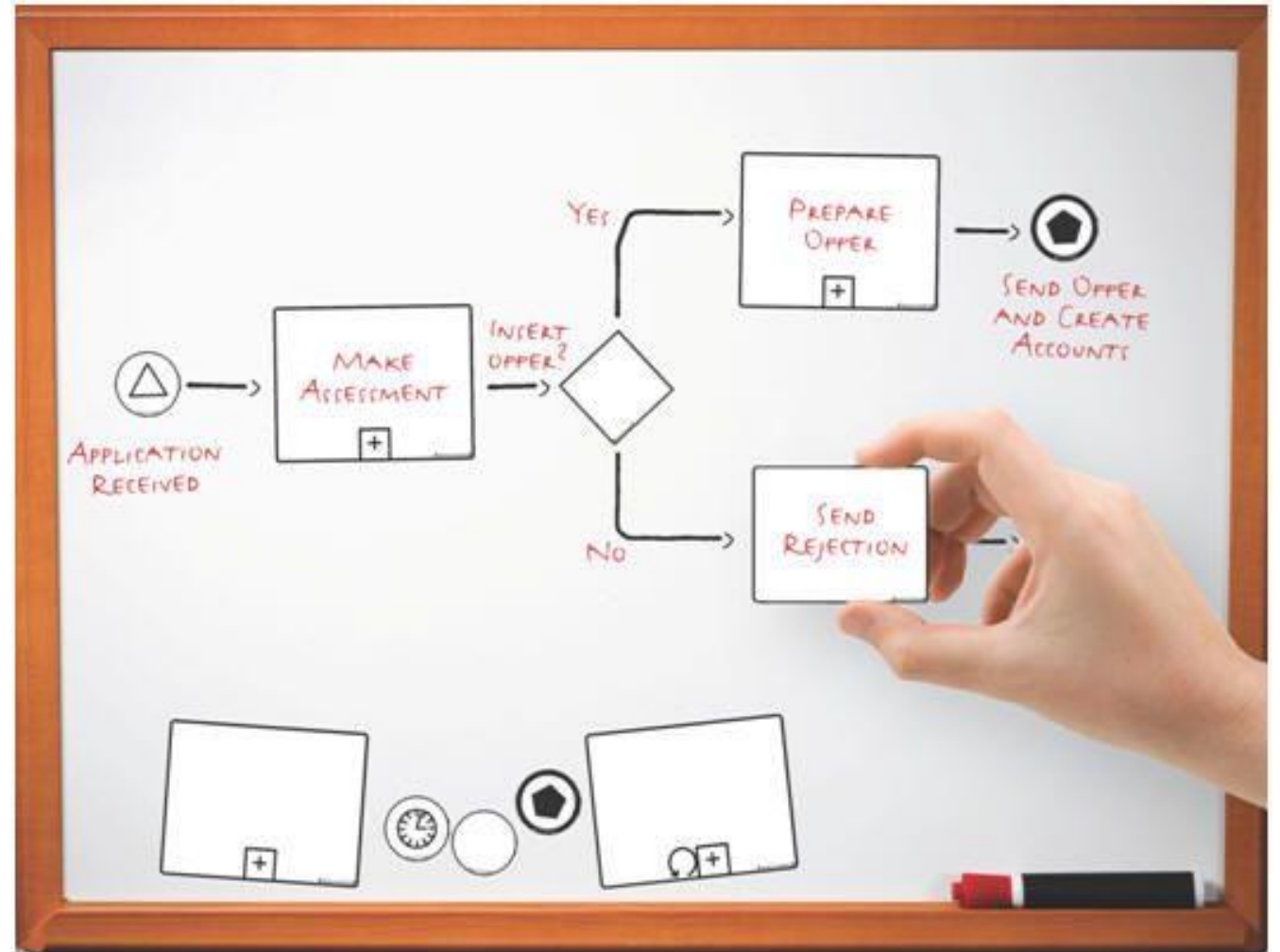
# What Just Happened?

- Developed a process
- Came to agreement about a process
- Learned about the process for washing the dishes

Thank you to the audience members who participated in creating this!!



# What is Business Process Management ?



# Business Process Management (BPM)



- a systematic approach to making an organization's workflows more effective, efficient and capable of adapting to an ever-changing environment

BPM is of significant value to organizations like the U.S. Census Bureau as it is particularly useful in the following kinds of activities:

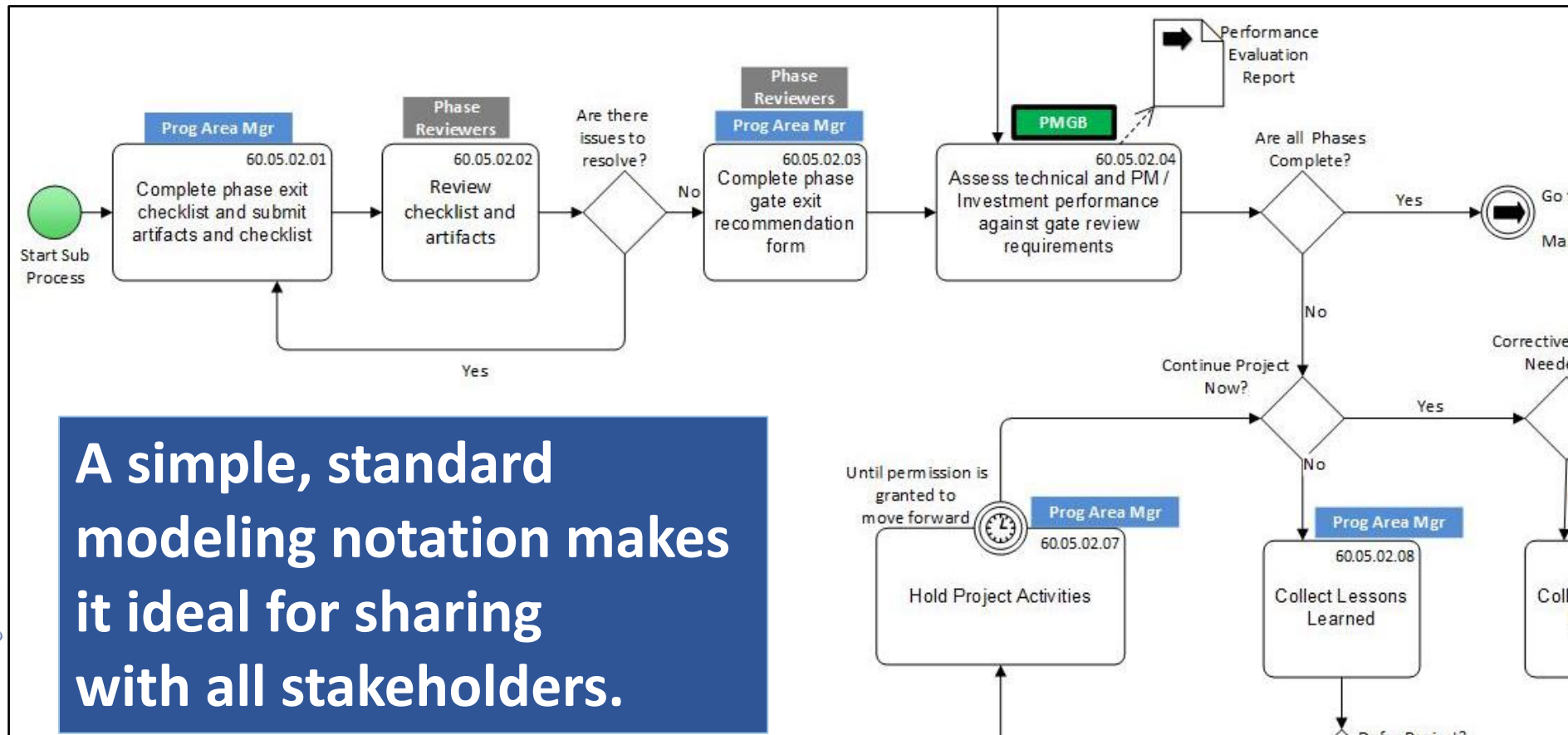


- Developing requirements
- Sharing knowledge
- Keeping everyone on the same page
- Linking processes to IT infrastructure
- Training newcomers
- Retaining agency knowledge
- Improving processes

# Process Models



At the heart of Business Process Management is a business process MODEL that provides an easy-to-read graphical representation of the flow of work.





# Business Process Management Staff Goal



“Enable the agency to uniformly implement business process management focused on using models to communicate census program methodology to relevant stakeholders and to promote process improvement.”

# Communication Focus

The focus on communication promotes:

- Innovation
- Collaboration
- Agility
- Efficiency





# What is the Quick Start Toolkit (QST)?

# Quick Start Toolkit – Definition



The Quick Start Toolkit (QST) is an effective usage of MS Visio and MS Excel to deliver economical process modeling and analysis.

Two major steps of modeling and analysis with the QST

### 1 – CREATE PROCESS FLOWS

The screenshot shows a Microsoft Visio diagram titled 'Context Model: Publish BPM Blog Context'. The diagram is a flowchart with various swimlanes and tasks. Key elements include: 'BPM Staff Created Blog', 'Guest Blogger Blog', 'Design & Review Blog within the BPM Staff', 'Publish Blog', 'Review & Approve Blog', 'Publish Final Blog to Shared Blog', and 'Work with ACCOM to Shared Blog'. The diagram is set against a background of a Visio interface with a 'Census' logo.

United States Census Bureau  
Microsoft Visio

then

### 2 - GENERATE DETAILED PROCESS REPORTS

The screenshot shows a Microsoft Excel spreadsheet with multiple data tables. One prominent table is titled 'Activities by Actor Report' and lists various activities, actors, and durations. A large yellow banner with the text 'Coming Soon!' is overlaid on the spreadsheet.

Microsoft Excel

# Quick Start Toolkit – Background



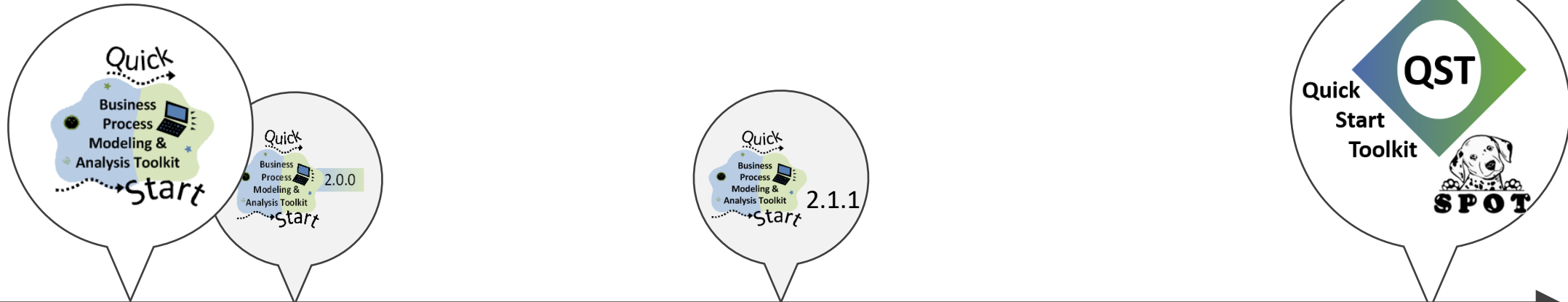
## Current Process State:

- Very few documented processes across the agency
- No standard way to document processes
- No way to see what other organizations have for documented processes.

## Future Process State:

- Documented processes across the agency
- Standard notation for documenting processes
- Directory or repository of documented process from across the agency.

# Quick Start Toolkit – Background

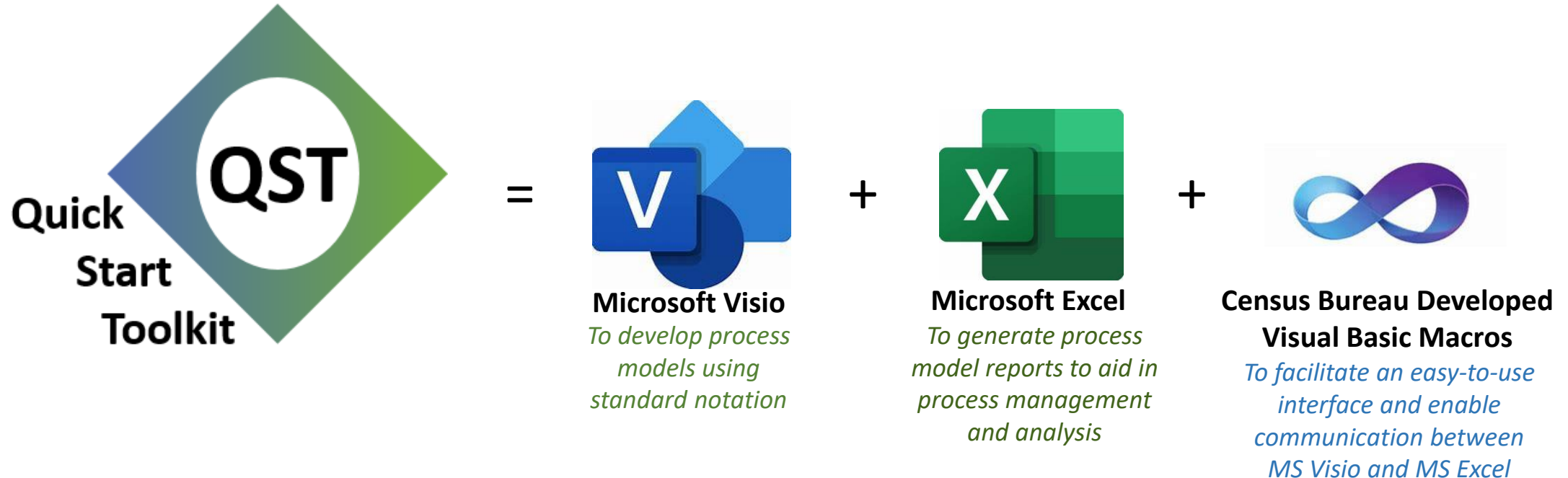


2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
BPM Staff created		QST v1 Released	QST v2 Released			Started QST 3.0				Released QST 3.0
<ul style="list-style-type: none"> <li>Analyzed COTS</li> <li>Studied BPMN 2.0</li> <li>Tried Notation</li> <li>Developed:                             <ul style="list-style-type: none"> <li>Census BPMN</li> <li>QST</li> <li>Training</li> </ul> </li> </ul>		Evolved Hands-On Training			Held Focus Groups			Developed Video Training		
		Trained more than 1000 Students (Hands-On Training)								
Developed Processes for Organizations Throughout the Agency										

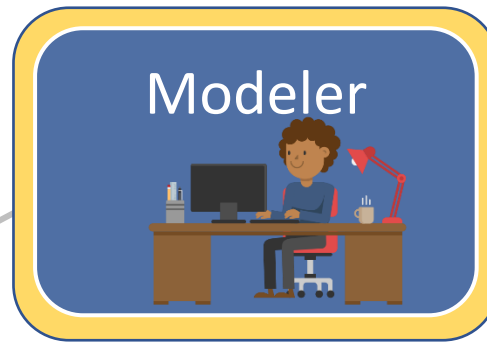
# Quick Start Toolkit – Development/Support



The Quick Start Toolkit is developed and maintained by the Business Process Management Staff.



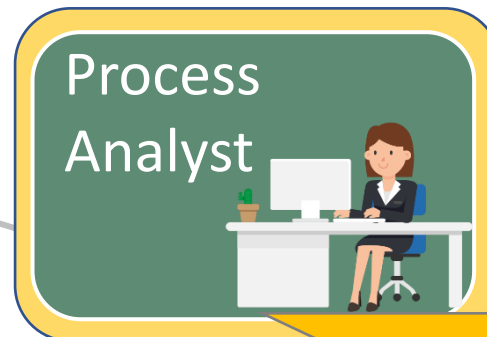
# QST 3.0 Features by Role



- “Health check” of tab or entire model
- Creation of hyperlinked Sub Process tabs
- Automated table of contents (TOC) ....



- Custom “Shape Key”
- Hyperlinked TOC
- Model Facts on Cover



- E-Z Reports

Coming Soon!

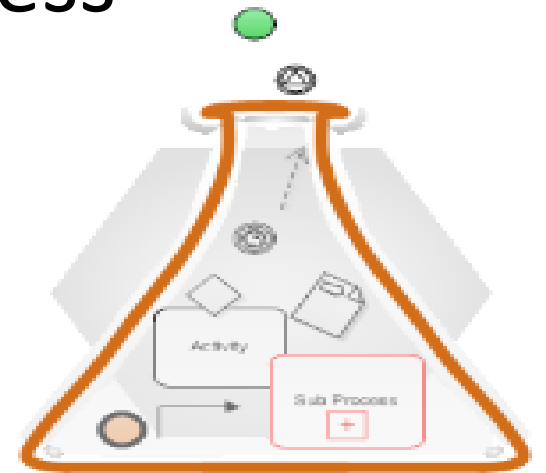




# Modeling Best Practices

For this exercise, we will focus on identifying modeling best practices and correcting Business Process Models using those practices.

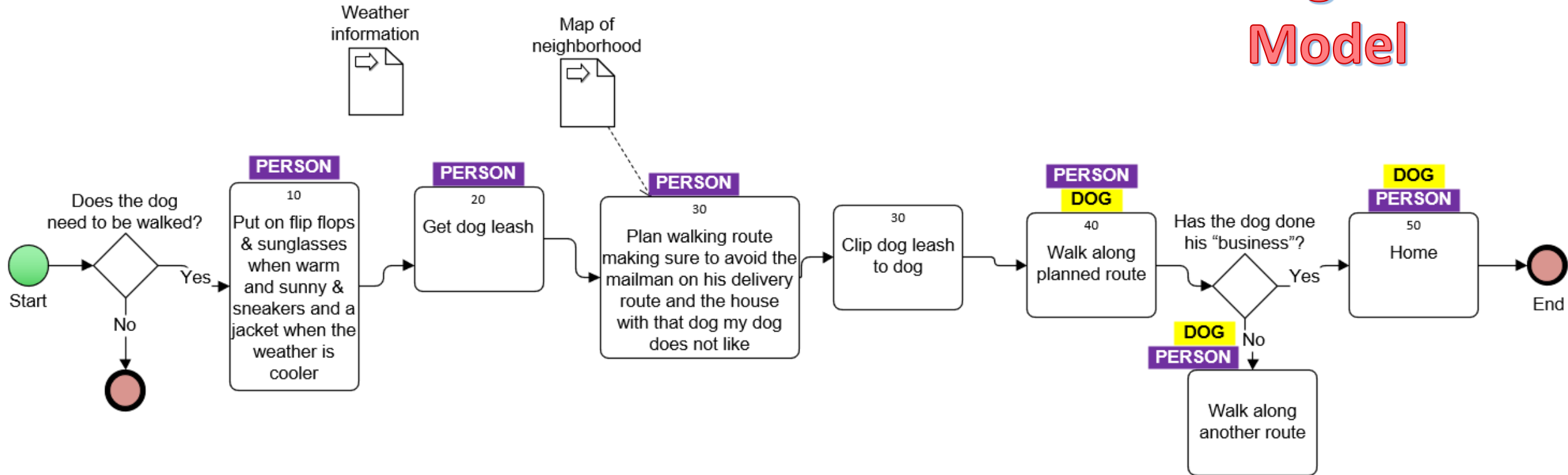
- Structured to teach, then practice on a process
- Need 4 volunteers to play



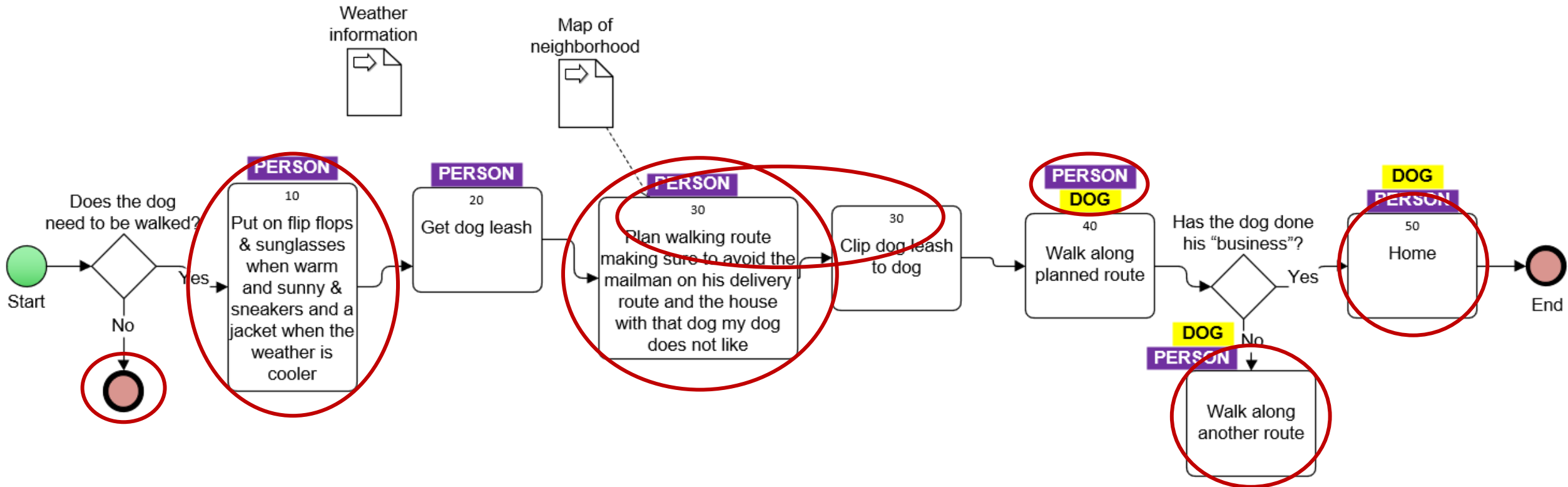
# Modeling Best Practices

## Walk the Dog Process

Original Model



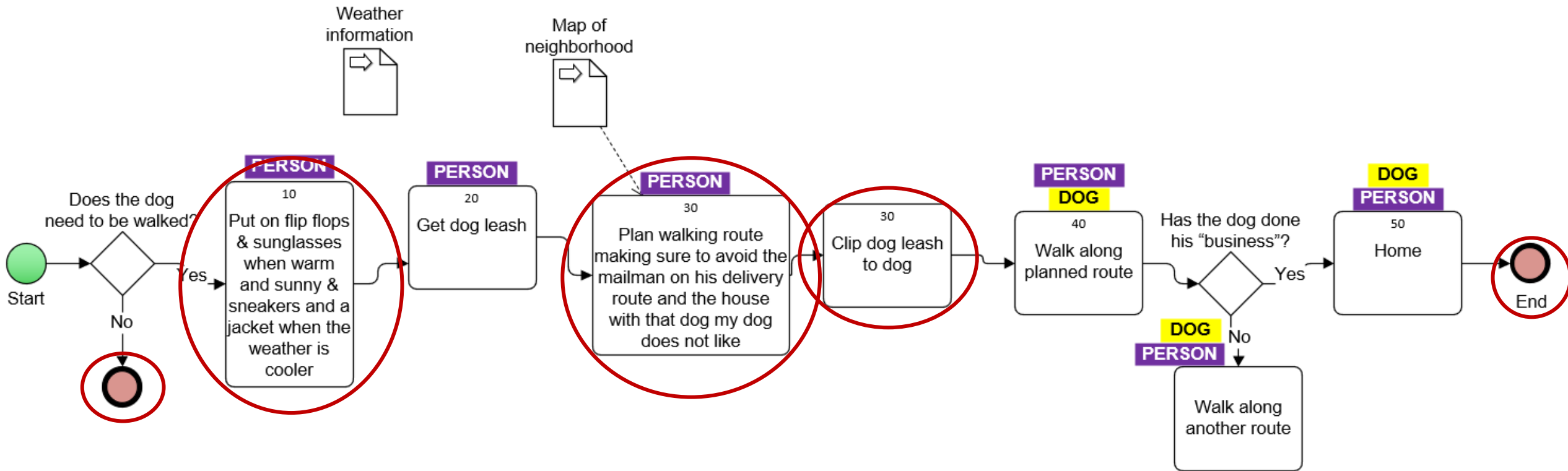
# Modeling Best Practices - Text



- Label all events
- Regarding activity descriptions:
  - Keep them concise
  - Use annotations when appropriate

- Uniquely identify Activities
- Alphabetize Actors
- ALWAYS start with present tense verbs

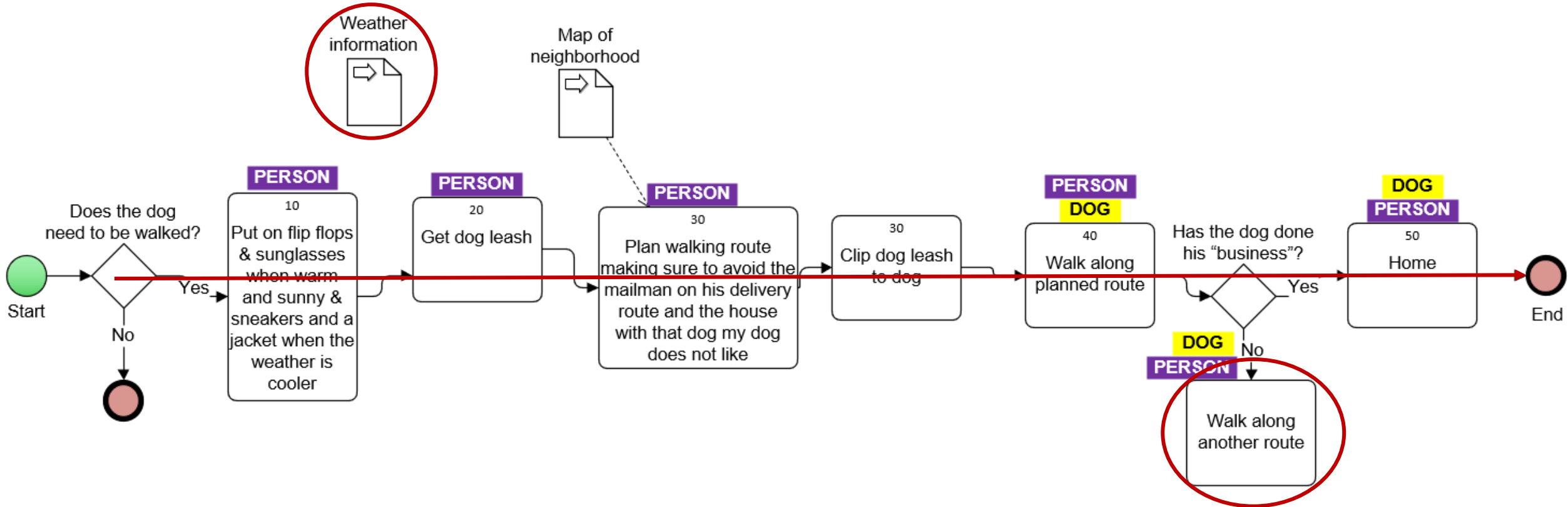
# Modeling Best Practices - Shapes



- If necessary, resize Activities horizontally
- Have only one Start and End Event

- Attach at least one Actor to every Activity

# Modeling Best Practices - Connections



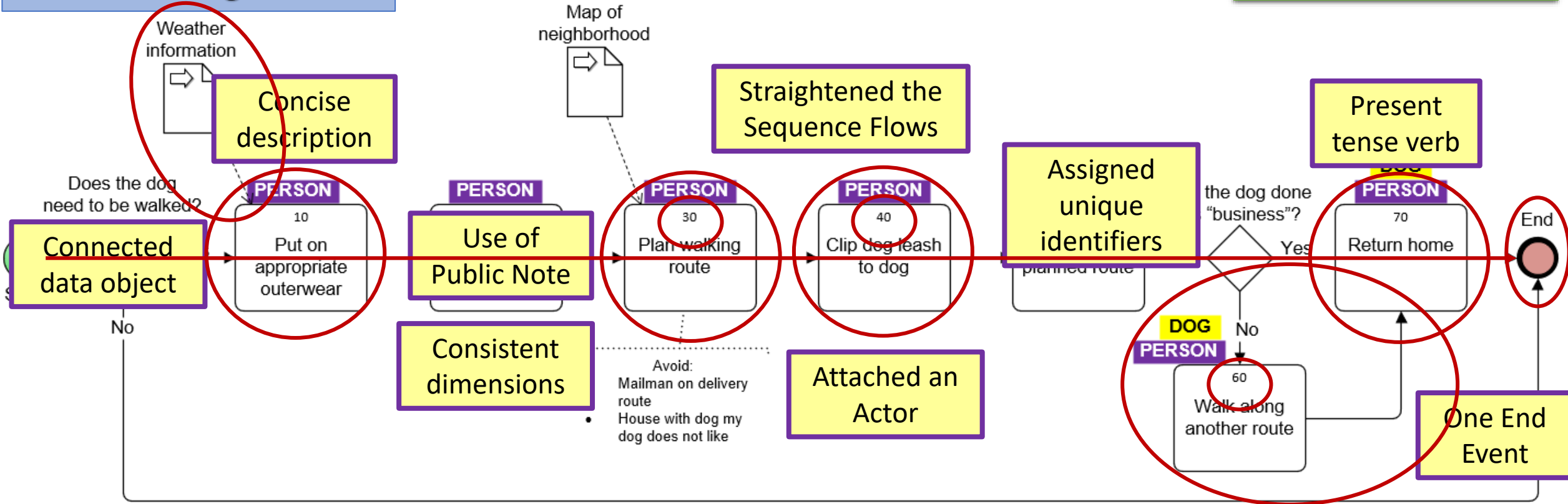
- Connect all objects to the process
- Do not leave dead ends

- Ensure Sequence Flows create straight lines

# Modeling Best Practices

Corrected Model

## Walk the Dog Process







# Game – Improve that Process!

## Identify opportunities to improve Sub Process 40 – “Prepare Survey Collection Instruments”

The model contains **10** issues that violate the best practices we have reviewed.

1. Your host will read the sub process model
2. Participants, when called upon, will have 15 seconds to share ONE (and only one) issue with the model

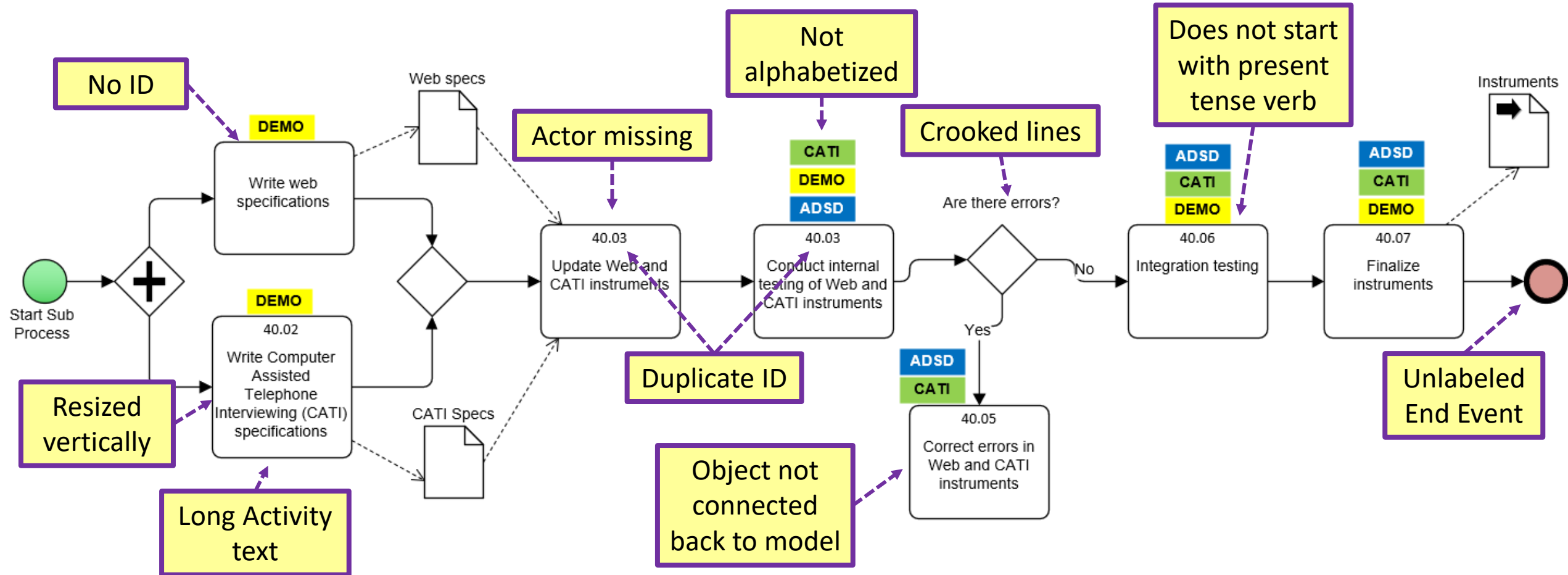
### To make things interesting . . .

- Participants have been randomly assigned to teams:  
- Five points will be awarded for each issue identified 
- Five points will be deducted for issues identified out of turn 

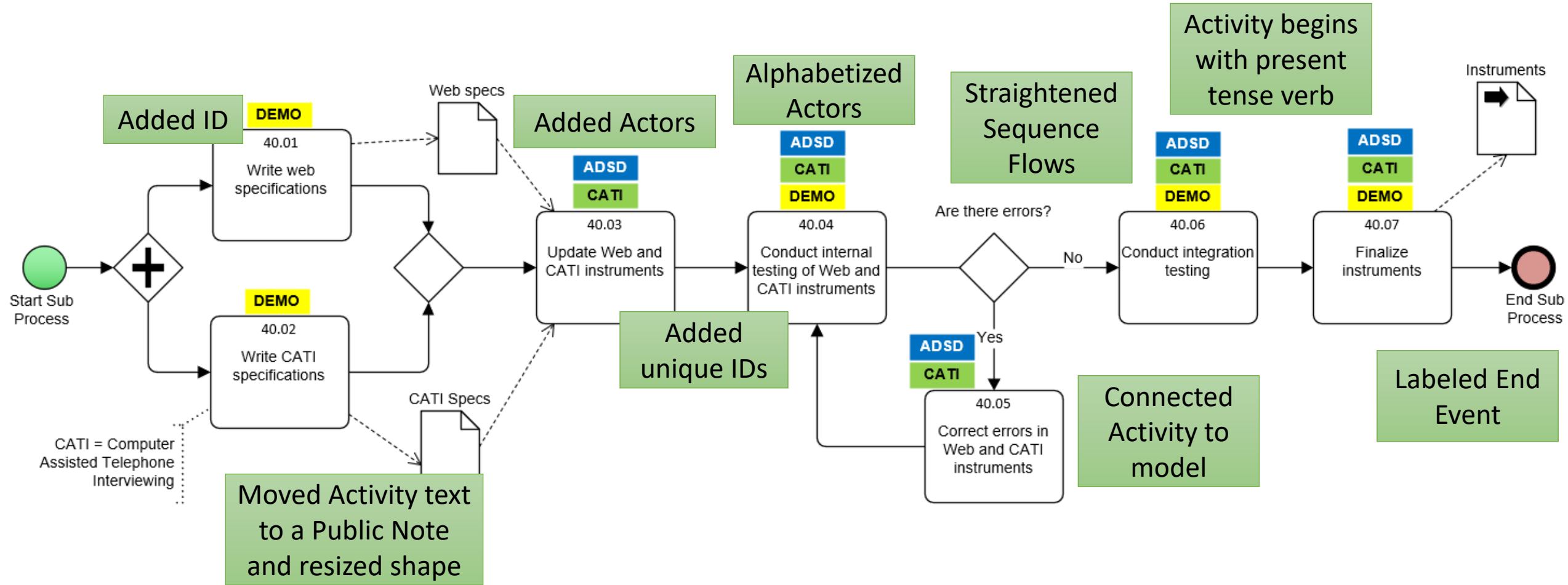
Thank you to the audience members who participated in this game!!



# Prepare Survey Collection Instruments – Before Review



# Prepare Survey Collection Instruments – After Review



# Why Follow Best Practices?

Models will improve when you follow best practices, making them easier to use as a communication tool.





# Census Bureau Programs Benefitting from BPM

# Where we are – Display of 100+ Process Modeling Efforts at Census

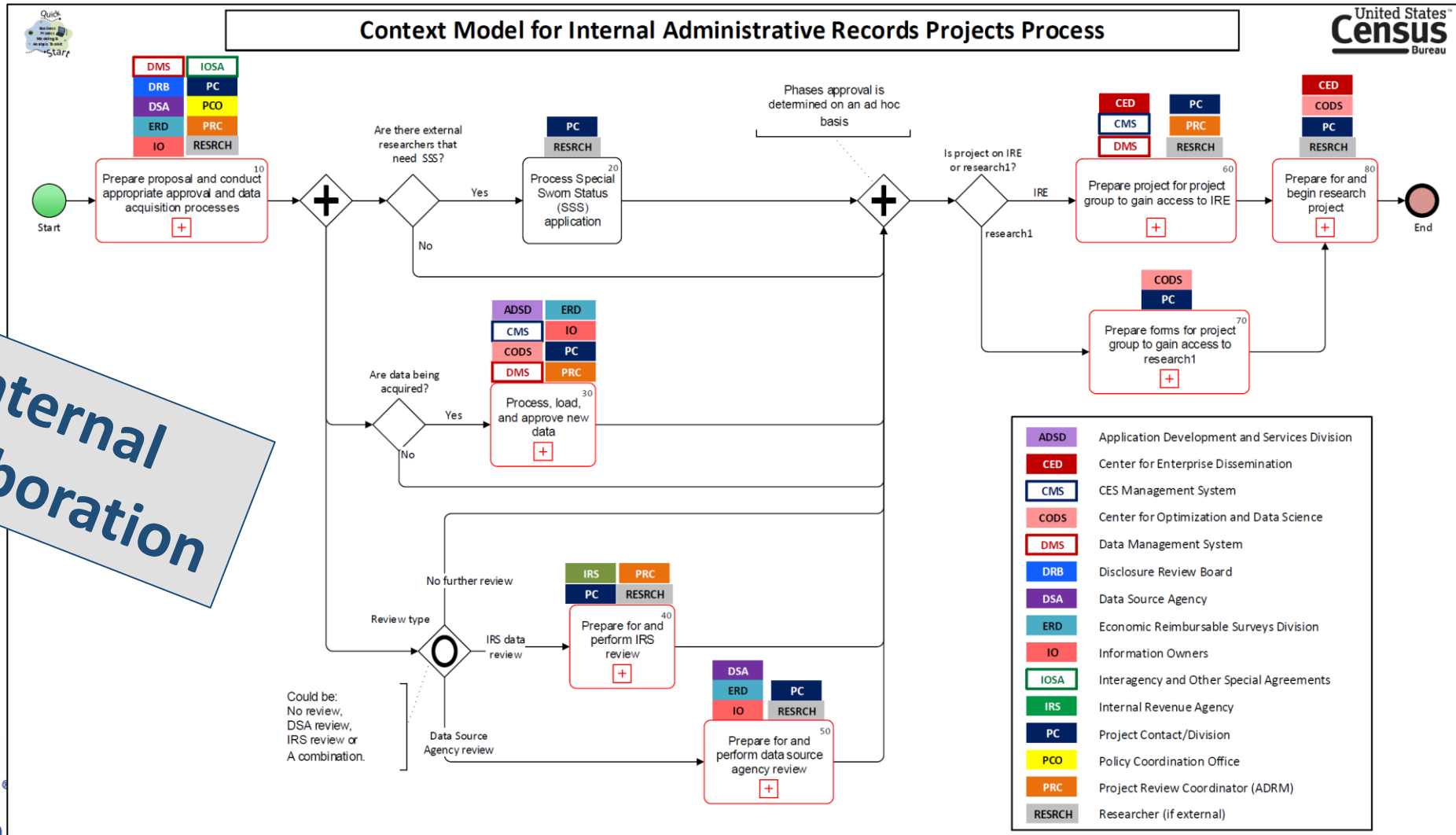
Demographic Surveys

Economic Surveys

Decennial Census

ES Enter on Duty	Enterprise Investment Management	Disaster Recovery	Property Plant and Equipment	2020 Address Canvassing	Domestic Travel
2020 Decennial Service Center	Gifts and Bequests	FR Recruiting and Hiring	External Administrative Records Projects	Freedom of Information Act	
Negotiating Collaborative Arrangements	2020 Update Leave	Survey Data Capture Prep and Processing at NPC	Control And Response Data (CARD)		
Geospatial Metadata Creation and Posting	NPC Kits Receivable Inventory Control	Software Upgrade	FSRDC Access	Business Continuity Planning	
Facilitating New Employee Orientation	National Teacher Principal Survey	2020 Nonresponse Followup	2012 Construction Sampling & Mailout		
NPC Workflow Image Processing Setup	2020 Non-ID Processing	Reimbursable Work Authorization	Internal Budget	Report IT Operational Plan	
2020 Language Services	End of Year Processing	Enterprise Risk Management	National Partnership Program	SIPP ID and Update Pre-Processing	
Report E-300 Passback	Foreign National Visitors	2012 Manufacturing & Mining Mailout	IOE Data Call Idea Evaluation	2020 Response Processing	
SCS Hiring	FSRDC Build Out	2020 Local Update of Census Addresses	Paperwork Reduction Act OMB Clearance	Current Population Survey	
NPC Intelligent Postal Tracking	WBT Course Development Request	2020 Redistricting Data Program	WCF Mid-Year Review	Reimbursable Tab	
Report E-300 Annual Development	NHIS Redesign First Stage	E-Correspondence	2012 Wholesale Retail Mailout & Sampling	Lease Lifecycle	
Event Management	CE Quarterly	IUS Capitalization	Implementing Content Changes	Training Request and Approval	NPC Process for ACS
2020 Logistics Management	Virtual Access Tracking	NPC Kits Expendable Inventory Control	Document Correction	Breach Incident Response	
Census of Governments	2020 Count Review	Onboarding	Receiving and Closing Out Customer Requests	Geographic Update Partnership Software	
Data Ingest & Collection for the Enterprise (DICE)	2020 Federally Affiliated Count Overseas	NPC Fulfillment	National Survey of College Graduates		
NPC Data Capture and Tracking	NSSRN Sampling	1099 Miscellaneous Income Tax Reporting	Business Process Mapping Request	2020 Archiving	
Annual Unit & GQ Sampling	Census Hiring and Employment Check	2012 Service Sectors Sampling & Mailout	Report IT Dashboard Submission		
Zip Code County Universe Update	FTI Blue Bin Replacement	NPC Kits Shipping	Census Enterprise Data Collection and Processing (CEDCAP)		
HQ Building Evacuation	Internal Administrative Records Projects	NHIS Redesign Second Stage	2020 Integrated Partnership and Communications		
Schedule Management	Initial Housing Unit Followup	Content and Metadata (CoMet)	2012 Front End Edits	Cooperative Agreements	SIPP Editing
Content Change Coordination	NHIS Yearly Sampling	EHS Hiring	NPC Automated Tracking and Control	2020 Census Questionnaire Assistance	

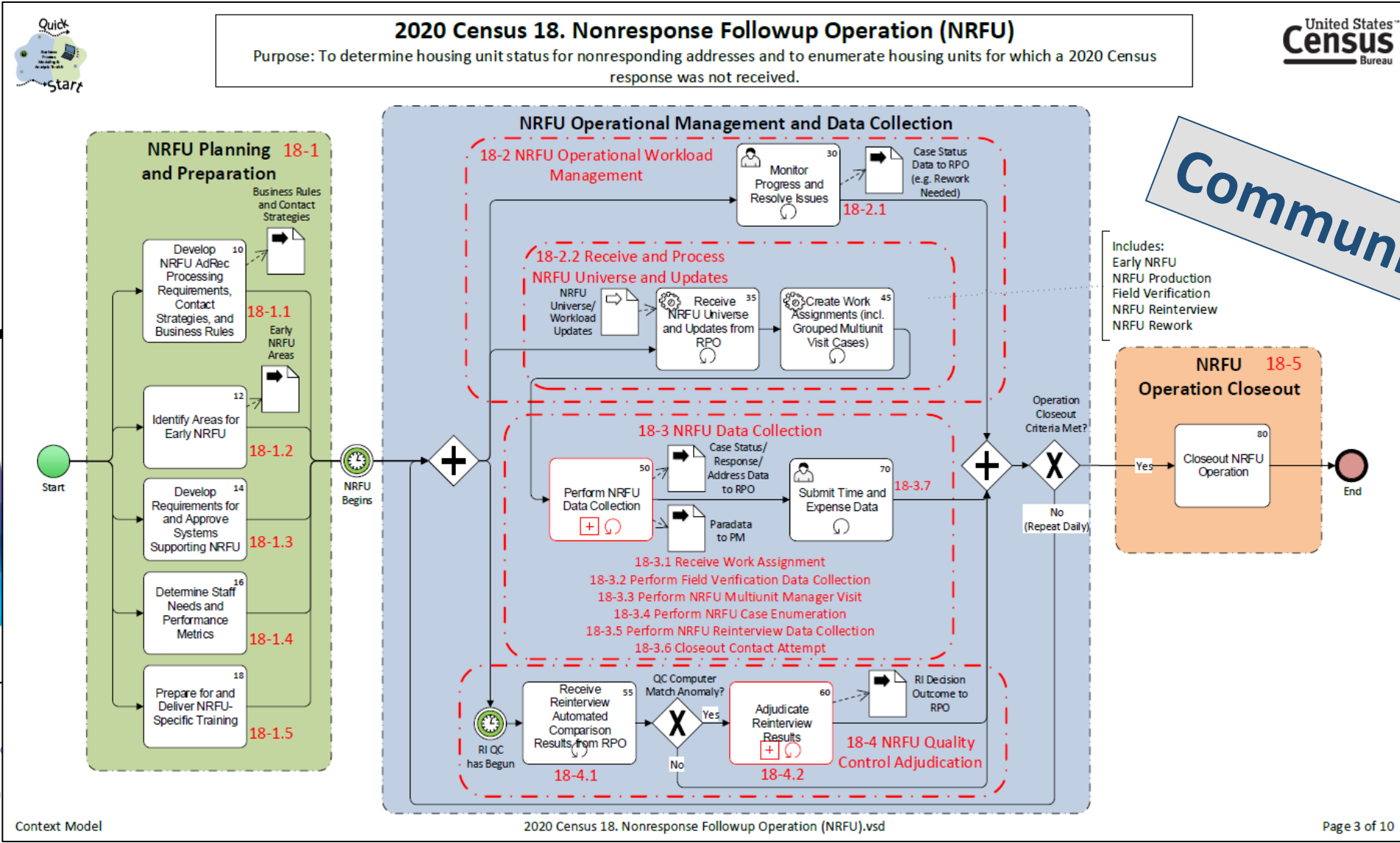
#	Effort Focus	Organization	Begin Date	Duration
1	Internal Administrative Records Projects at the Federal Statistical Research Data Centers	Economic Reimbursable Surveys Division	Sept 2018	4 months



Internal Collaboration

#	Effort Focus	Organization	Begin Date	Duration
2	2020 Decennial Business Architecture	Decennial Information Technology Division	June /2014	Over several years prior to 2020

2020 Census Detailed Operational Plan

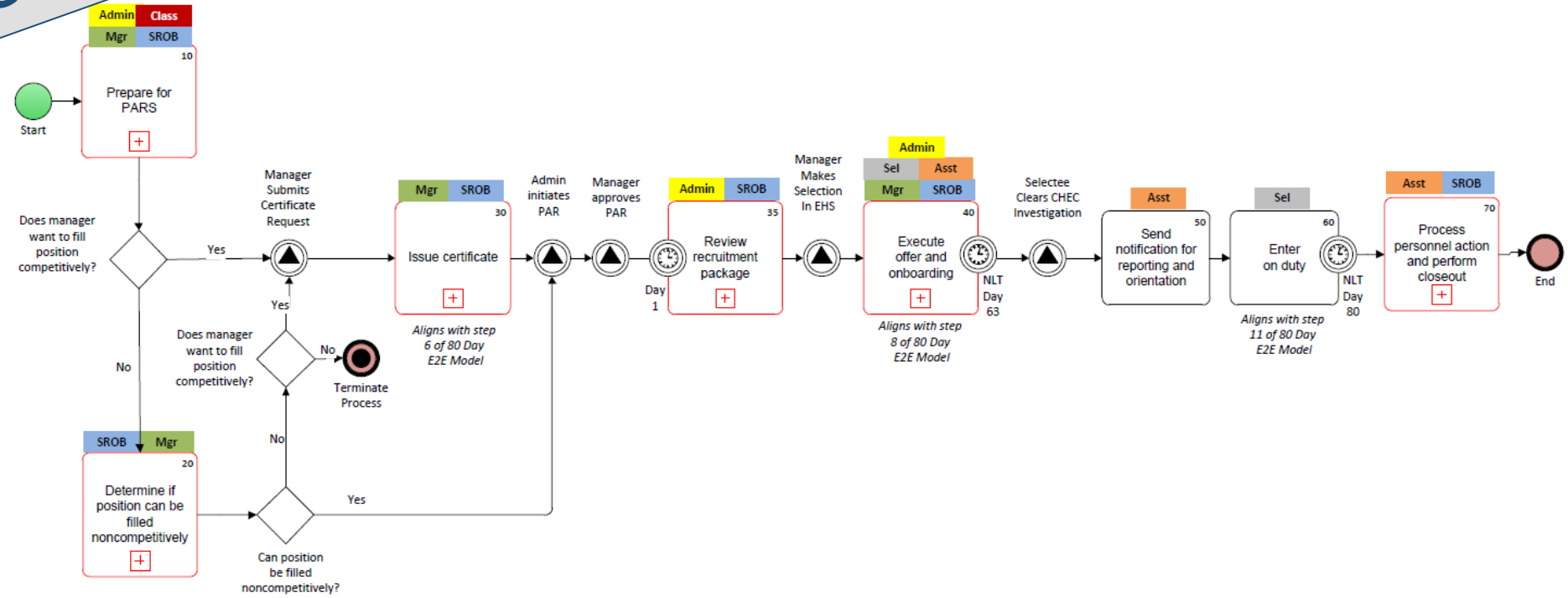


#	Effort Focus	Organization	Begin Date	Duration
3	Human Resources Hiring Process	Human Resources Division	January 2015	2 months

**Improvement**

**EHS Hiring Process Context Model**

This process assumes hiring is from the EHS open and continuous announcement used for mission critical occupations (i.e., 1530, 1529, 2210, grades 5-12)  
Applicants are evaluated by Office of Personnel Management

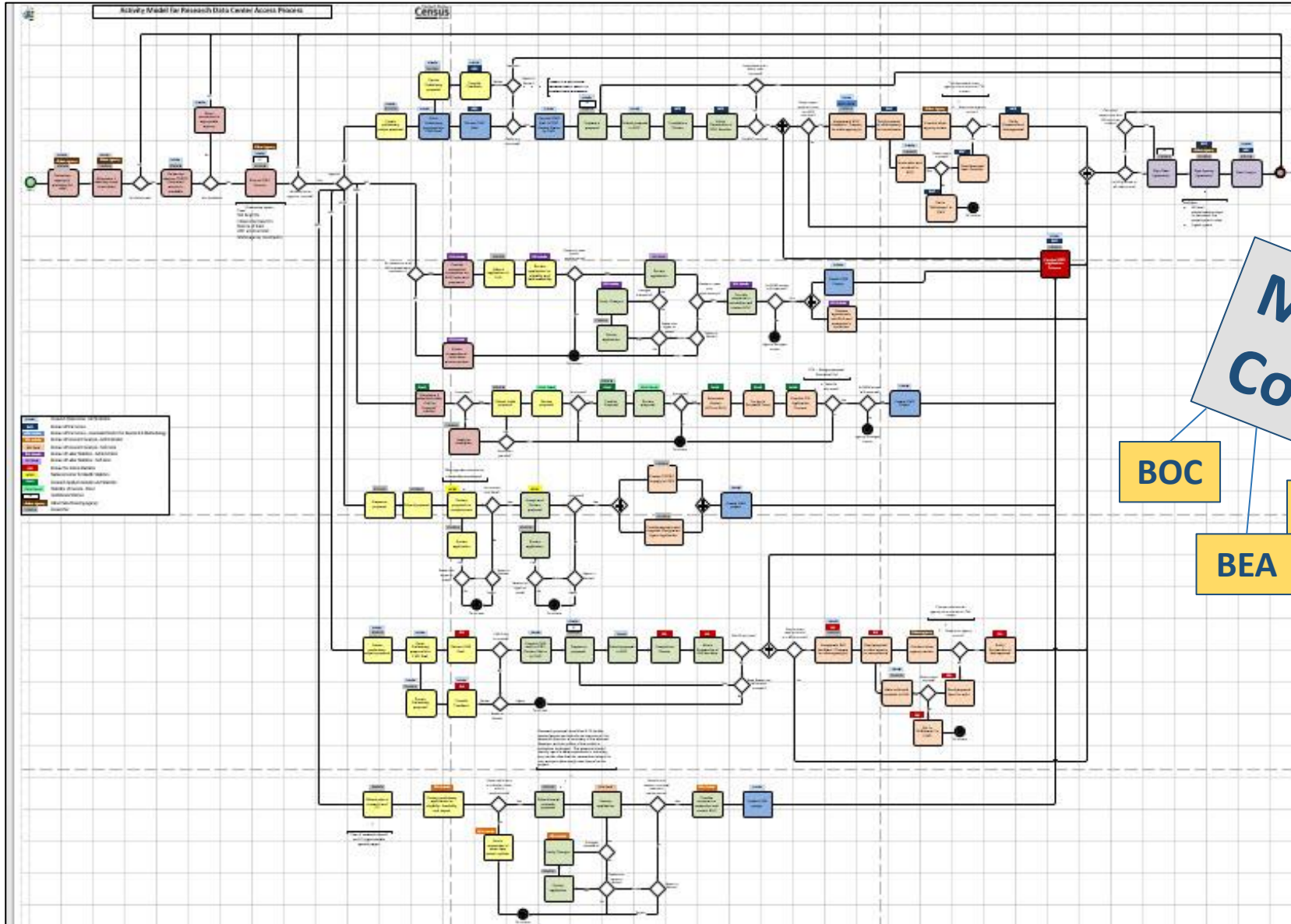


Mgr	Census Hiring Manager	Admin	Administrative Office
SROB	SROB HR Specialist	Sel	Selectee
Asst	SROB Assistant	Class	Classification Team

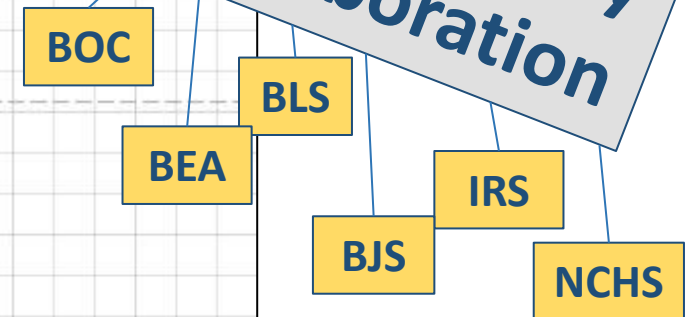




#	Effort Focus	Organization	Begin Date	Duration
4	Research Data Center Access	Center for Economic Studies	July 2018	5 months

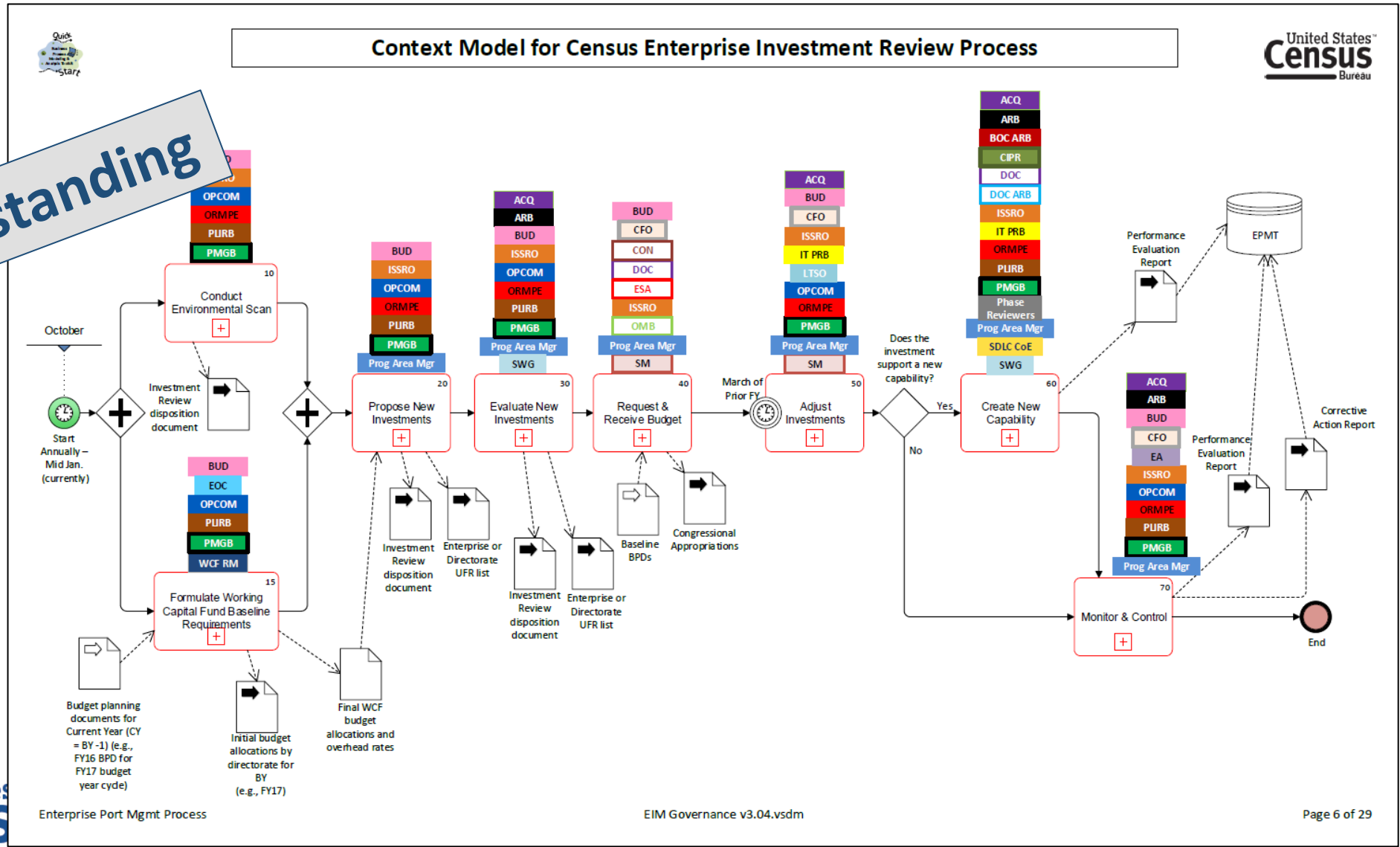


**Multi-Agency  
Collaboration**

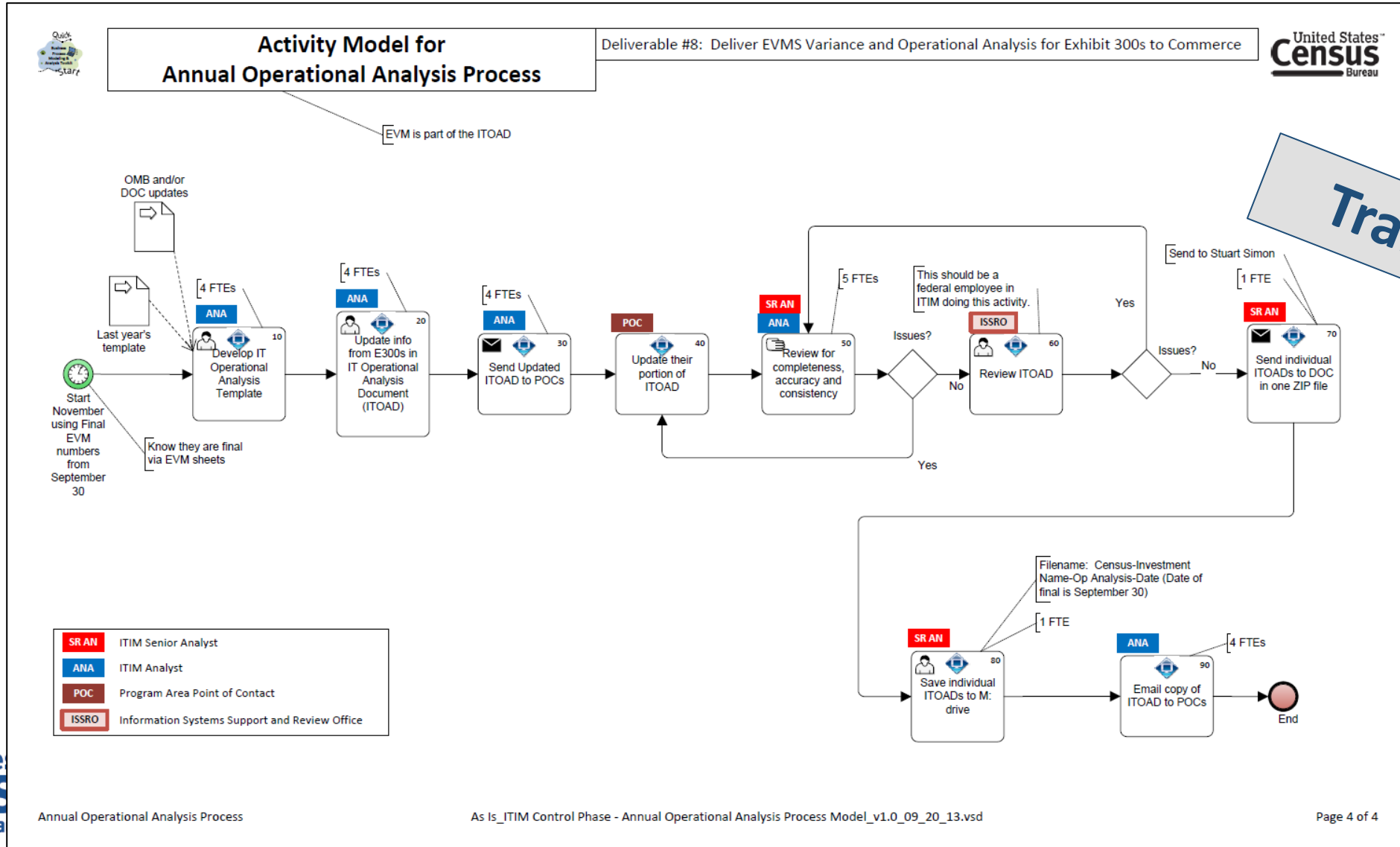


#	Effort Focus	Organization	Begin Date	Duration
5	Census Investment Governance	Office of Program, Performance and Stakeholder Integration	June 2014	10 months

Understanding

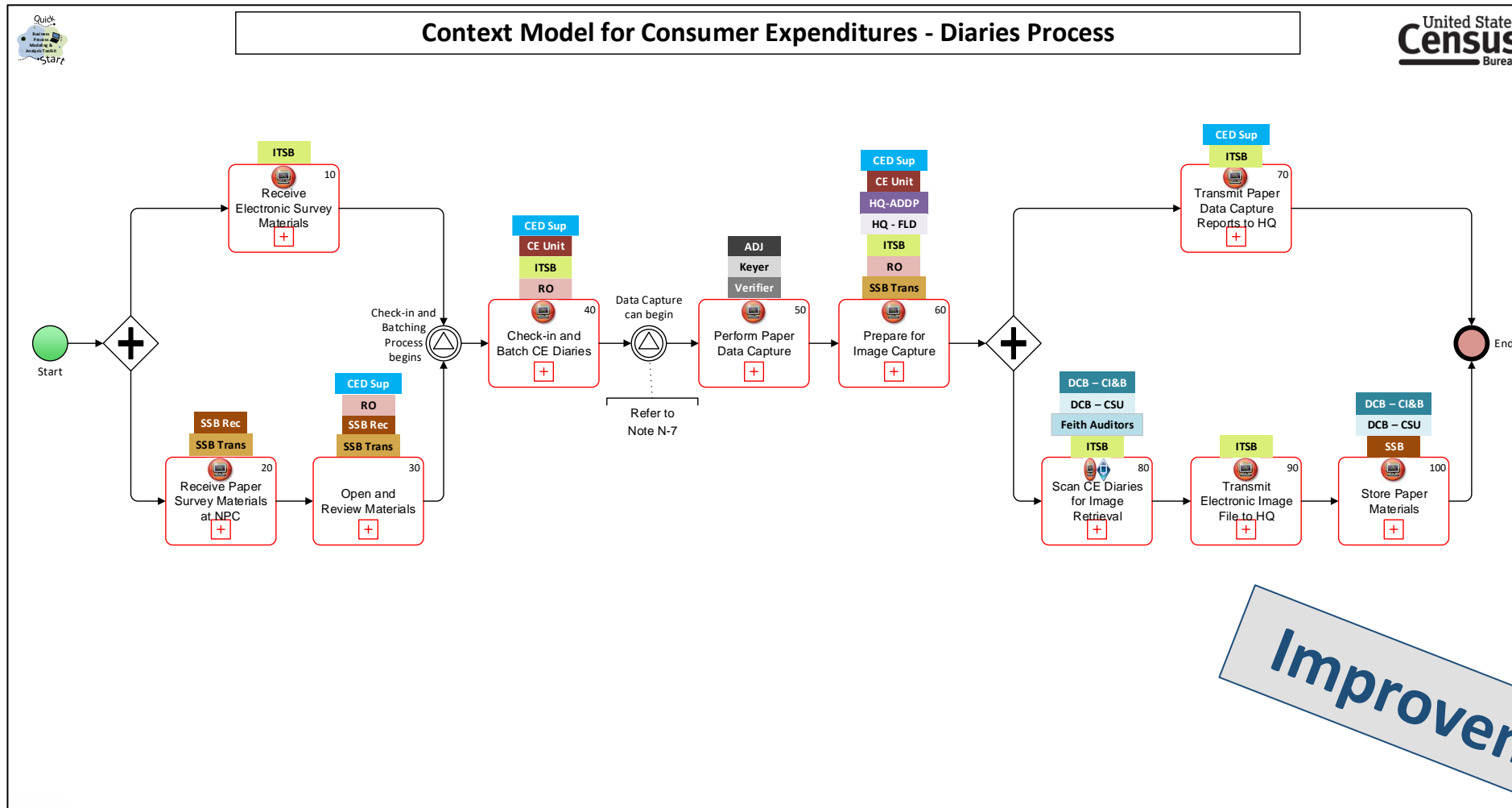


#	Effort Focus	Organization	Begin Date	Duration
6	Information Technology Investment Management Processes	Information Technology Service Management Office	September 2013	3 weeks





#	Effort Focus	Organization	Begin Date	Duration
8	Consumer Expenditures Diary (CED)	National Processing Center	March 2018	4 months



Improvement

... and many more.

Because of the decentralized approach to process modeling at the Census Bureau, process model benefits are being realized by areas working independently of the BPM Staff.

At no point is the BPM Staff aware of all BPM development work at the Census Bureau.





# Using the QST to Document Survey Processes

# Documenting a Survey

What is your reason for modeling?

- Communication
  - Train New Staff
  - Process Improvement
  - Basis for Software Development
- 

When a modeler uses the QST to document their survey process, they need several things including...


- Knowledge of the Notation
- How to use the QST






# Self-Paced Online Training (SPOT)

- ✓ Each Piece of Notation
- ✓ How to use the QST




## Self-Paced Online Training (SPOT)








Training on this site will not provide official training credit.










*Click to provide feedback on one of the videos below.*

 = Transcripts

### About QST 3.0

<a href="#">An Introduction to Quick Start Toolkit 3.0</a>	14:51	
<a href="#">Download &amp; Open QST 3.0</a>	6:13	
<a href="#">Control Menu</a>	5:24	
<a href="#">START HERE File Overview</a>	13:22	
<a href="#">Model Readiness Check (MRC) Kiosk (provides basic MRC information)</a>	---	---
 <a href="#">Model Readiness Check Practice</a>	28:38	
<a href="#">Drawing a Business Process Model in the Quick Start Toolkit 3.0</a>	24:15	

### Modeling Notation Basics


<a href="#">Activity and Actor Shapes</a>	16:38	
<a href="#">Data Object and Data Store Shapes</a>	8:37	
<a href="#">Event Shapes</a>	11:42	
<a href="#">Exclusive Gateway Shape</a>	11:30	
<a href="#">Notes and Group Shapes</a>	8:22	
<a href="#">Parallel Gateway Shape</a>	8:00	
<a href="#">Census Business Process Modeling Notation</a>	10:26	

Reference Files

- [Invalid Characters](#) - List of characters that cannot be used in Activity, Sub Process or tab names.
- [Census Business Process Modeling Notation \(BPMN\) Quick Card](#) - Two-page list of all shapes and their definitions.

### Context and Sub Process Modeling

New to Context and Sub Process Modeling? We recommend that you view the following videos in order:

<a href="#">Sub Process Shape</a>	7:29	
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### Model Readiness Check (MRC) Artifacts

*Practice Files*

# Quick Start Toolkit 3.0 Demo

The QST 3.0 Cover page contains a lot of information to help readers understand the process model, including:

1. The title of the process model,
2. Informational text that explains the model's purpose, scope, audience, etc., and
3. Table of Contents

Each item in the Table of Contents is hyperlinked to its respective tab.

Double-clicking the title or any of the text in the container on the right-hand side will open the Model Information Form where the modeler can add or make edits to provided information.

The screenshot displays the Visio Professional interface for the 'Develop and Conduct Survey Process Model'. The main window shows the cover page with a 'Table of Contents' on the left and a 'Model Information Form' on the right. The 'Model Information Form' is a modal dialog box with the following fields:

- Essential** / **Optional** tabs
- Process Name**: Develop and Conduct Survey
- Version #**: 1.0
- Revision Date (MM/DD/YYYY)**: 11/5/2021
- Purpose**: The purpose of the model is to show the process of conducting a survey via online methods with a paper mailout.
- Audience**: Any one who conducts a survey.
- Scope**: The scope is from the writing of the OMB package to receive approval for collecting data to the final processing of data.
- Content Authors**: (Empty field)

The 'Model Information Form' also includes a 'Help Panel' on the right side with the following text:

**Help Panel**  
When you click on a field, this panel will provide useful information for completing the field.

**Process Name**  
Present tense verb phrase.  
Examples: Collect Data, Perform Review

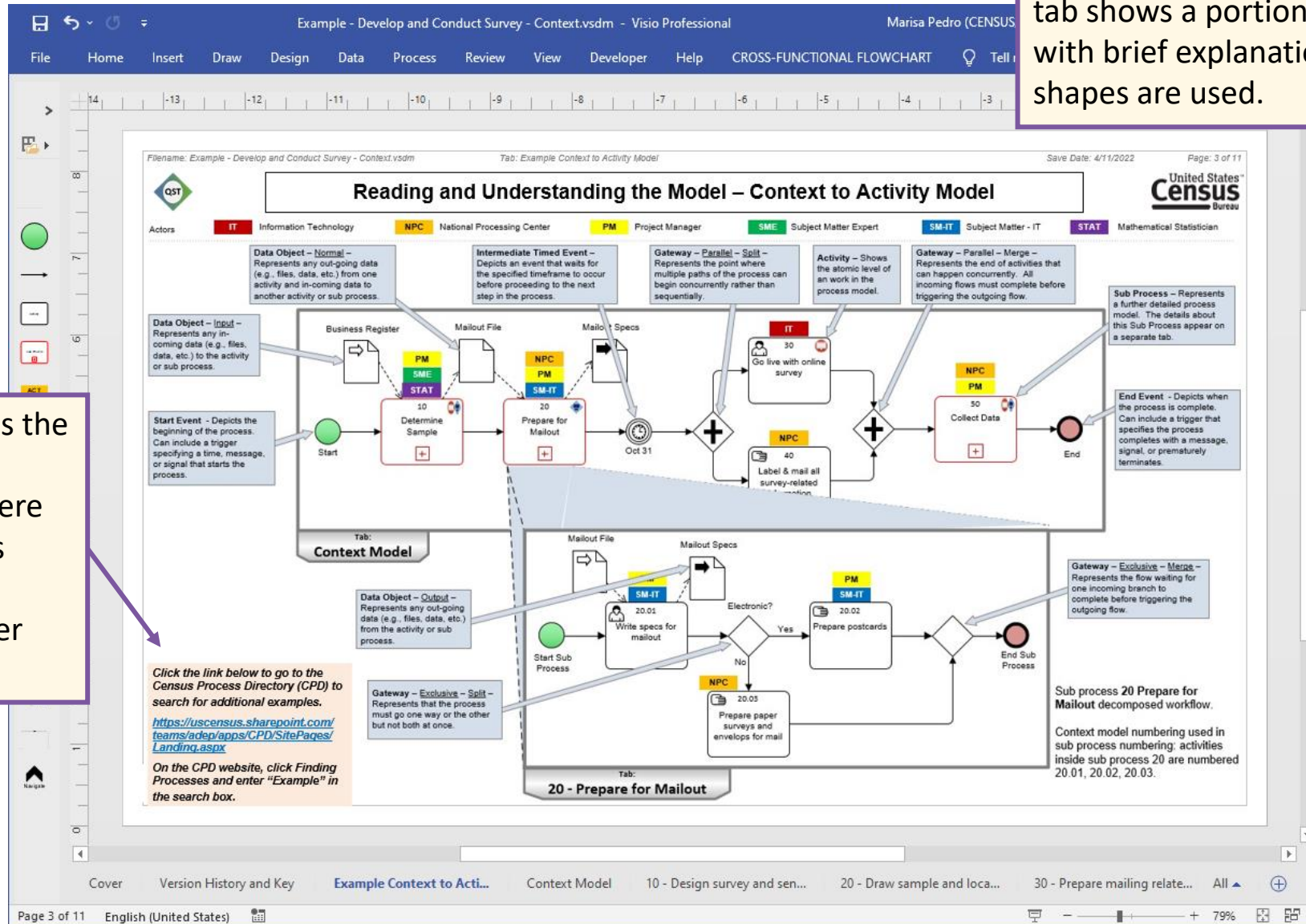
At the bottom of the 'Model Information Form' are 'Save Form' and 'Cancel' buttons.



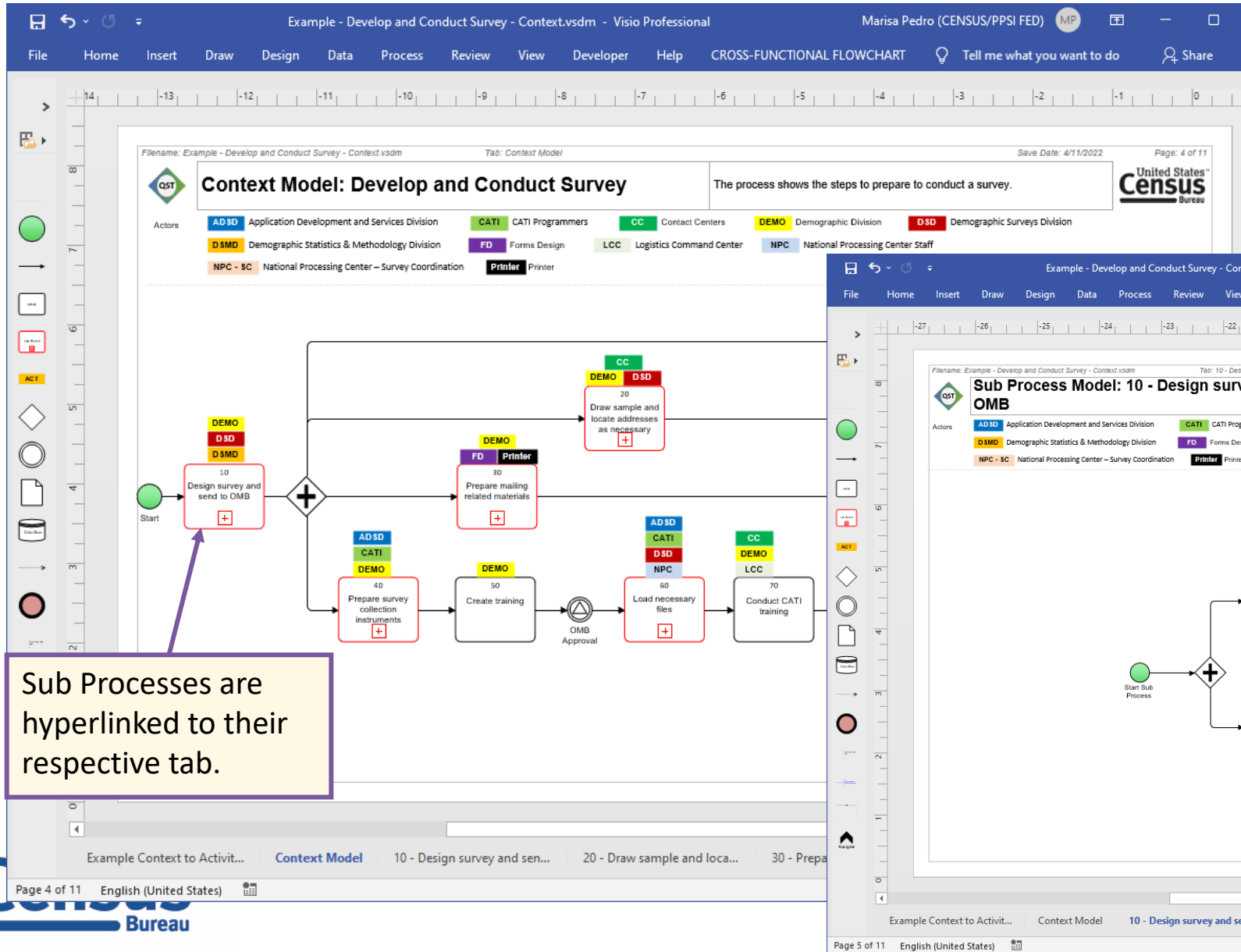
# Quick Start Toolkit 3.0 Demo

The Example Context to Activity Model tab shows a portion of a Context model with brief explanations of how the shapes are used.

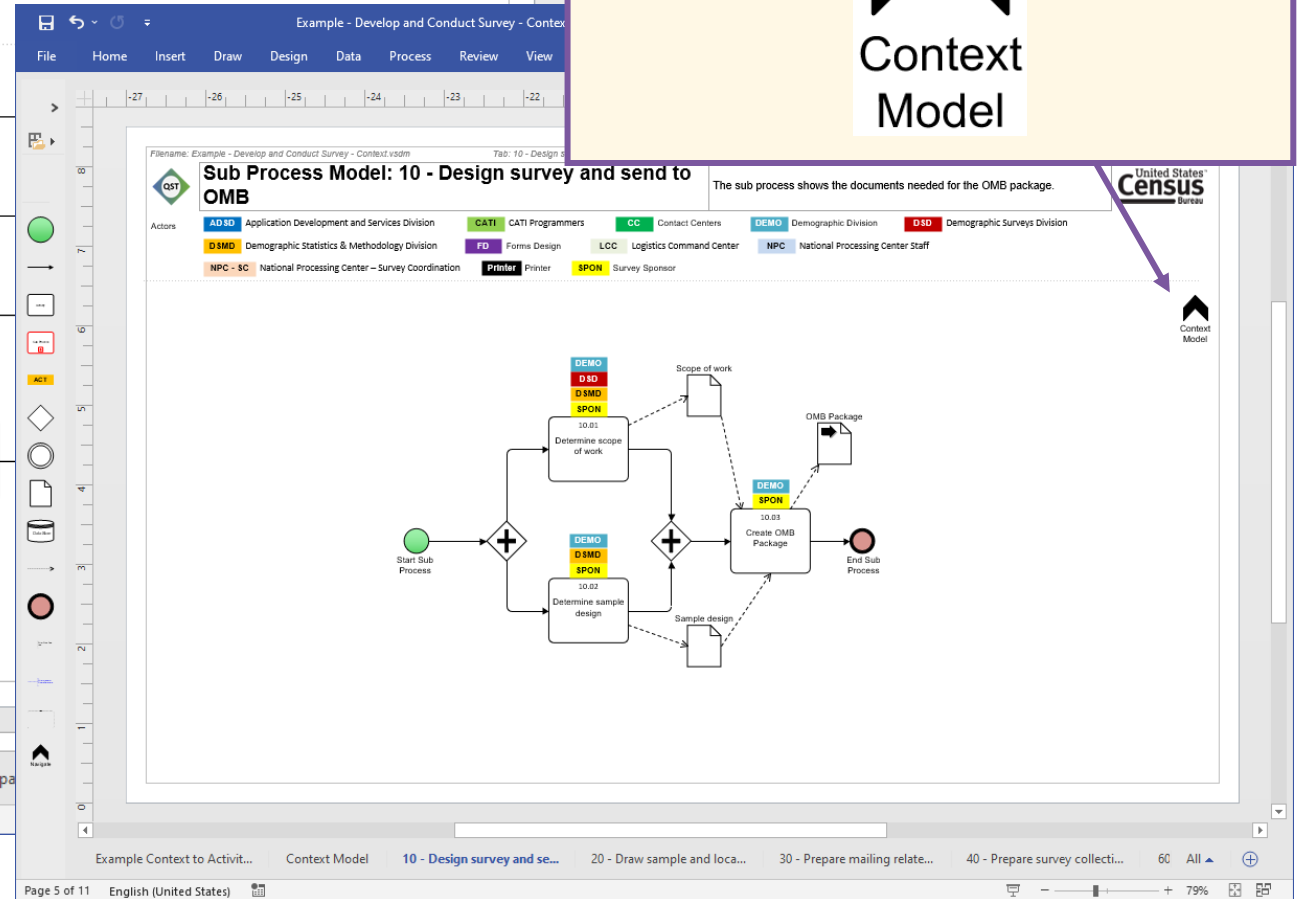
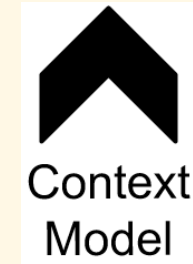
Clicking the links takes the user to the Census Process Directory where they can view models others have built and shared as well as other example models.



# Quick Start Toolkit 3.0 Demo



The Navigation shape on each Sub Process Model tab is hyperlinked to the Context Model tab to aid in navigating the model during reading and review.



# Quick Start Toolkit 3.0 Demo

From the QST Control Menu (accessed by holding Ctrl+Q on the keyboard), clicking Check Tab will run the Model Readiness Checks on the currently active tab – also shown in blue text on the QST Control Menu.

QST Control Menu - Visio Component

**Draw Model**  
Closes this window to begin drawing.

**Auxiliary QST Menu**  
Access to Sub Process Hyperlinking and the QST Shape Details Window.

**Check Tab**  
Runs the Model Readiness Check on 40 - Prepare survey collection instruments.

**Check File**  
Runs the Model Readiness Check on the whole file.

Reminder: Press <Ctrl+Q> from the Toolkit to access this Quick Start Toolkit Control Menu.

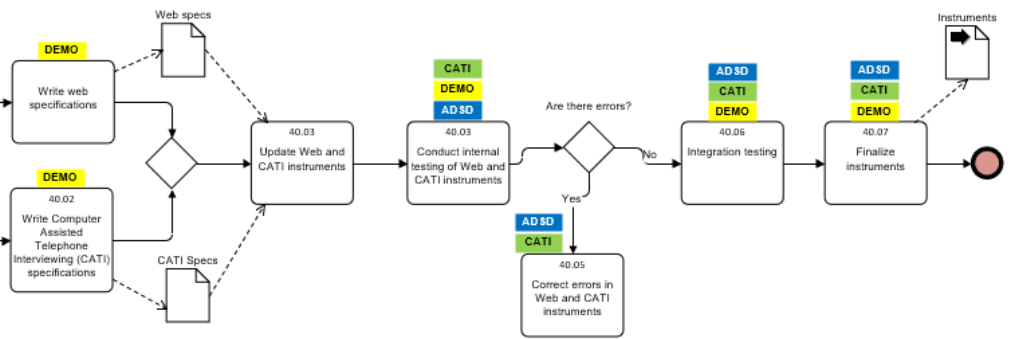
Example - Develop and Conduct Survey - Context.vsdm - Visio Professional

Draw Design Data Process Review View Developer Help CROSS-FUNCTIONAL FLOWCHART

Sub Process Model: 40 - Prepare survey collection instruments

The sub process shows the steps for pre...

ADSD Application Development and Services Division CATI CATI Programmers CC Contact Centers DEMO Demographic Division DSMD Demographic Statistics & Methodology Division FD Forms Design LCC Logistics Command Center NPC National Processing Center NPC - SC National Processing Center - Survey Coordination Printer Printer



Model Readiness Check Tab Results - 40 - Prepare survey collection instruments

Summary Text Shapes Connections Other

Count of Issues for 40 - Prepare survey collection instruments:

Category	# of Issues
Text	5
Shapes	1
Connections	1
Other	0
<b>Total</b>	<b>7</b>

Click on the tabs above to read detailed information regarding the issues found and how to correct them.

1 - Disabled Readiness Check

Although it is highly suggested modelers correct the issues, it is not mandatory. There may be instances where the results point out issues that should remain for business reasons. Use the "Customize Readiness Checks" button to enable or disable any readiness check(s).

Re-Check Tab Readiness Check File Readiness Customize Readiness Checks Close

The Model Readiness Check Tab Results appear after the QST has concluded its check for the active tab

# Quick Start Toolkit 3.0 Demo

Tabs where you can find either summary issue information or detailed information by category of issue.

Name of tab on which the check was run.

Information for the selected Tab Check tab. This screen shows the Summary tab.

Model Readiness Check Tab Results - 40 - Prepare survey collection instruments

Summary | Text | Shapes | Connections | Other

Count of Issues for 40 - Prepare survey collection instruments:

Category	# of Issues
Text	5
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1 - Disabled Readiness Check

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Re-Check Tab Readiness | Check File Readiness | Customize Readiness Checks | Close

Closes the Model Readiness Check Results window and returns to the Visio file.

Re-runs the readiness checks on the tab. No need to return to the QST Control Menu.

Runs the readiness checks on the whole file.

Reveals the list of readiness checks that the modeler can turn on/off.

# Quick Start Toolkit 3.0 Demo

ID Column – Displays the information provided in the ID field of the shape (accessed through the QST Shape Details Window).

# Column – Displays sequential issue number within this issue category.

Shape Text Column – Displays the name/label that appears on the shape. This text is truncated if it is too long for this column.

Issue Summary Column – Displays a short description of the issue.

Model Readiness Check Tab Results - 40 - Prepare survey collection instruments

Summary	Text	Shapes	Connections	Other
#	ID	Shape Text	Issue Summary	
1		Write web specifications	Activity missing ID	
2	40.02	Write Computer Assisted Teleph...	Activity text exceeds 52 characters	
3	40.03	Update Web and CATI instrument..	Duplicate ID	
4	40.03	Conduct internal testing of We...	Duplicate ID	
5			End Event not correctly labeled	

More

Re-Check Tab Readiness    Check File Readiness    Customize Readiness Checks    Close

More Button – Displays a pop-up that provides additional information for the selected issue – “Issue Details”.

Issue Summary is a short description of the issue.

Issue Details

**End Event not correctly labeled**

Issue Detail:  
The End Event is either not labeled or labeled incorrectly. All Event shapes should include appropriate text to help with understanding.

Resolution:  
Add a label to the End Event. (The label must have at least two non-space characters.)

Visio Internal ID: End Event.1906    Close

Resolution provides a description of how to modify the model to correct the issue.

Issue Detail provides a full description of the issue.



# Quick Start Toolkit 3.0 Demo

Name of file on which the check was run.

Checkbox to toggle on to show the Cover tab and all modeling tabs or off to show only the tabs with issues.

Main portion of the screen that lists the Cover tab and all the modeling tabs in the file with a count of the number of issues per type of issue and per tab.

Model Readiness Check File Results - Example - Develop and Conduct Survey - Context.vsdm

Summary

Count of issues for: Example - Develop and Conduct Survey - Context.vsdm

Show Cover and all modeling tabs

Tab	Text	Shapes	Connections	Other	Total
Cover	1	0	0	0	1
Context Model	0	2	0	0	2
20 - Draw sample and locate addresses as necessary	0	0	1	0	1
40 - Prepare survey collection instruments	5	1	1	0	7
80 - Collect data	1	0	2	0	3

Double-click on the tab name to run the readiness checks and view the resulting issues for that tab.

Although it is highly suggested modelers correct the issues, it is not mandatory. There may be instances where the results point out issues that should remain for business reasons. Use the "Customize Readiness Checks" button to enable or disable any readiness check(s).

1 - Disabled Readiness Check

Re-check File Readiness    Check Readiness of Selected Tab    Customize Readiness Checks    Close

Closes the Model Readiness Check Results window and returns to the Visio file.

Re-runs the readiness checks on the whole file. No need to return to the QST Control Menu.

Runs the readiness checks on the current tab.

Reveals the list of readiness checks that the modeler can turn on/off.

# Questions



**Brenda Damaro & Marisa Pedro**

US Census Bureau

Office of Program, Performance and  
Stakeholder Integration (PPSI)

Business Process Management (BPM) Staff

[PPSI.BPM.Staff@census.gov](mailto:PPSI.BPM.Staff@census.gov)

# Hope you enjoyed the journey!

Business Process Efforts  
at the Census Bureau

Quick Start  
Toolkit (QST)

Business  
Process  
Management  
and Modeling

Demonstrated  
the QST Model  
Readiness Check

Using the QST to  
Document Survey  
Processes