



U.S. Department of the Interior's User Experience Journey

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About the Speakers

Martin Quinlan

- Director, Business Integration Office, US DOI
- Career Fed - FBMS since 2006, FBMS Director for the past few years

Stephen Way

- Applications Development Manager, Business Integration Office, US DOI
- 21 years SAP experience, 4.5 at Interior

Richard Drake

- Consultant, Spartacus Consulting
- 14 years of SAP ERP consulting, 10 years at Interior



Key Outcomes/Objectives

1. Provide background on the U.S. Department of Interior's ERP Financial and Business Management System (FBMS)
2. Review User Experience (UX) related efforts and progress
3. Discuss lessons learned shifting to the new UX paradigm

Abstract

- The journey of the U.S. Department of the Interior to SAP S/4HANA includes implementing the new SAP Fiori user experience (UX) and SAP Screen Personas software to modernize its portal. This session focuses on the experiences with new UX technologies, the integration of design thinking methodologies, the impact on stakeholders, and operating in a highly decentralized environment.



Agenda

- Overview of U.S. Department of Interior's FBMS system
- UX Background & Initial efforts
- Defining a UX Roadmap
- Honing UX Strategy
- Design Thinking in a decentralized environment
- Lessons Learned

What is DOI





FBMS Goals and Background

- Need visibility to facilitate good decision making & stewardship
- DOI operates across 12 time zones
- Traditional offices and the “Field”
- Understand and leverage massive amounts of data

All Part of the DOI Puzzle



FBMS transitioned DOI from bureau owned, bureau operated with little integration to a single, cooperatively-managed, tightly integrated system.

FBMS has replaced 86 systems



FBMS Facts

- First transaction in 2006
- Full deployment in November, 2013 marked a significant achievement in the Federal government; no other cabinet level agency has conceived, created and successfully deployed a software solution on the scale and scope of FBMS.
- FBMS **manages total average assets of approximately \$95B**
- Includes a **Fund Balance with Treasury of approximately \$55B**
- FBMS **Property, Plant and Equipment (PP&E) balance of \$21B**
- 11,200 users (4,500 on a daily basis)



FBMS Benefits

- Builds a unified business environment across DOI
- Improves information for business decisions across DOI
- Improves the business processes across DOI
- Reduces data calls from the policy offices to the bureaus
- Improves implementation of advanced technology such as the migration to the cloud



UX Background & Initial Efforts

UX Background & Initial Efforts

- We have been running on the SAP Portal for the last 10 years. This has been meeting our needs but it is getting dated.
- It also was mostly created by our implementation team with minimal user input.
- It is the entry point for all users into FBMS.

UX Background & Initial Efforts

The screenshot shows the FBMS portal interface. At the top, there is a navigation bar with tabs for HOME, ACQUISITION/FINANCIAL ASSISTANCE, AVIATION, USER MANAGEMENT, BPC, FBMS BIO, MDG, DATA MANAGEMENT, EMIS, PROPERTY, TRAVEL, and CORE FINANCIALS. Below this is a secondary navigation bar with links like NEWS & INFORMATION, MY TASKS, and HELP DESK. A left sidebar contains a tree menu with items like Home, FBMS Access, and Links to DOI Organizations. The main content area displays a message about results being published in late May. On the right, there are two panels: 'BIO Podcasts' and 'FBMS Functional Documentation', both containing tables with columns for Name and Changed On. A 'System Status Information' panel is visible at the bottom left of the main content area. Two blue callout boxes are overlaid on the image: one pointing to the navigation structure and another pointing to the System Status Information panel.

Navigation via nest tab selection then side menu tree loading GUI screens

Existing Portal in place for 10+ years

Name	Changed On
Remedy Training	7/14/14 10:34:27 AM
SAP GUI 7.50 Patch 5	12/20/18 12:53:11 PM

Name	Changed On
Acquisition/Financial Assistance	6/19/17 3:06:20 PM
Core Finance	5/22/17 10:22:01 AM
Portal	6/8/17 3:19:20 PM
Property	12/15/18 9:07:38 AM
Security	6/8/17 3:19:00 PM
How to search for documents.docx	6/9/17 10:37:21 AM



UX Background & Initial Efforts

In 2017 we conducted a study on how to best move forward with modernizing our portal. Two key recommendations came out of the study:

- Begin implementation of the SAP Fiori Launchpad now as the eventual replacement for the current FBMS Portal. We would begin with small, targeted rollouts and then expand over time. This would give our team time to ramp up our skills and also start familiarizing our user community with the new Fiori UI.
- Create a joint group consisting of BIO and Bureau representatives with the goal of engaging our user community in the new UX design up front. This group became known as the User Experience Working Group (UXWG).



UX Background & Initial Efforts

- We formed the UXWG in late 2017, began getting that group up to speed on the new UX features coming with Fiori & Personas and began building a potential backlog of UX improvements.
- In 2018, we attended the Sapphire conference and focused on UX and Design Think sessions. Seeing the benefits of how Design Think complemented Agile, the decision was made to try out Design Think in our initial Fiori Launchpad design process with the UXWG.



UX Background & Initial Efforts

In 2018 we started with a few small Fiori Launchpad related rollouts:

- GRC
- Solution Manager
- A Bureau specific Launchpad for the National Park Service
- SAP Screen Personas effort for Real Property

FBMS Current Fiori Launchpad

The screenshot shows the FBMS Fiori Launchpad interface. At the top, there is a navigation bar with tabs for 'FBMS BIO', 'Solution Manager', 'System Monitoring', 'NPS', 'User Management', and 'Analytics'. The 'System Monitoring' tab is active. Below the navigation bar, there are several tiles for system monitoring, including 'Create Incident', 'My Business requirements', 'My Incidents', 'Resolve a Dispatch', 'Monitor Message Flows', 'My SAP EarlyWatch Alert Report', and 'Monitor User Experience'. A blue callout box points to these tiles with the text 'Launchpad groups for targeted deployments'. Below this, there are more tiles for 'BW Savings Potential', 'Maintain Owner Namespace', and 'Reorganization and Compression'. A second blue callout box points to these tiles with the text 'Bureau specific groups tailored to their user needs'. At the bottom, there is a row of tiles for 'UPC Xwalk', 'NPS FBMS Forms and Tools', 'System Status Dashboard', 'Recorded Links Document', 'NPS FBMS Report Library', 'NPS FBMS Role Report Dashboard', 'BOC Xwalk', and 'UDO Dashboard'. A third blue callout box points to these tiles with the text 'External links and references'. Below the tiles, there is a footer section with various links and resources, including 'AFS4', 'AOC Website', 'FBMS Recent Changes', 'NPS FBMS Dashboard Inventory', and 'NPS FBMS Feedback Suggestion Form'.

Home

FBMS BIO Solution Manager System Monitoring NPS User Management Analytics

System Monitoring

Create Incident
IT Service Managem...

My Business requirements
SAP Solution Manager

My Incidents
IT Service Managem...

Resolve a Dispatch
IT Service

Monitor Message Flows

My SAP EarlyWatch Alert Report

Monitor User Experience

Launchpad groups for targeted deployments

Bureau specific groups tailored to their user needs

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BW Savings Potential
NLS and Unused Info...

BW Savings Potential
Temporary and Admi...

Maintain Owner Namespace
Custom Code Names...

Reorganization and Compression
Saving potential

NPS

UPC Xwalk

NPS FBMS Forms and Tools

System Status Dashboard

Recorded Links Document

NPS FBMS Report Library

NPS FBMS Role Report Dashboard

BOC Xwalk

UDO Dashboard

External links and references

AFS4

NPS FBMS SharePoint Site

Project Management Information System

AOC Website

NPS FBMS Training & Communications Page

WASO Contracting, Procurement & Fin Asst

FBMS Recent Changes

NPS Travel SharePoint Site

NPS Charge Card Site

NPS FBMS Dashboard Inventory

Office of Property & Fleet Management

NPS FBMS Feedback Suggestion Form

Park Facility Management Division (PFMD)

FBMS Fiori Customized GRC Application

Single screen entry for what was previously a multi-step/tab process

Simplified Access Request

EP Request

*Request For: Self Other

*Reason For Request: Need to do stuff that is extra special

User ID: RTDRAKE

*First Name: Richard

*Last Name: Drake

*Manager ID:

*Selected

Add

<input checked="" type="checkbox"/>	Firefighter ID	Firefighter Name	Systems	Valid to Date
<input checked="" type="checkbox"/>	ZBP_FIRE4	ZBP_FIRE4	FQ1CLNT100	4/1/19

Submit Back

SAP Screen Personas Efforts

Fiori inspired Floorplans (Wizard example) of standard T-Code

The screenshot shows the SAP Fiori 'Building / Structure: Quick Release' screen. The interface is divided into four numbered steps: 1. Required Data, 2. Dependent Data, 3. Optional Data, and 4. Data Review. A blue callout box in the center reads 'Render Personas flavor in Fiori Launchpad through Slipstream plugin'. Another blue callout box on the left side reads 'Tiles for each Personas 'flavor' of the transaction code'. The screen displays various input fields for 'Quick Entry: Required Data', including Business Area (G000), Business Entity (10000081), Building (20000000), and Asset / Sub (050000322061). There are also optional data sections for funding and settlement toggles. At the bottom, there is a 'Next' button and a 'Quit' button. A status bar at the bottom left shows a warning icon and the text 'E: Fill out all required entry fields'.

Tiles for each Personas 'flavor' of the transaction code

T-Code: REBDBU

A close-up photograph of a hand holding a black pen, pointing at a road map spread on a table. The map shows a network of roads in various colors (red, orange, yellow, green, blue) and some geographical features. A small area on the map is circled in black. In the background, there is a glass of water and a cup of coffee. The overall scene suggests a collaborative meeting or a strategic planning session.

Defining a UX Strategic Roadmap



Defining a UX Strategic Roadmap

- Initial efforts focused on skills development of technical teams and limited engagements
- Functional team and process development occurred later after technical infrastructure established
- Time taken to consider the best strategy for UX prior to S/4 HANA transition and building out a corresponding UX roadmap

Defining a UX Roadmap (What to do?)

- Answer a series of questions to help focus effort for the what

1	Goals	2	Selection	3	Evaluation	4	Speed
	<p>What are the primary driver(s) for the evolution of UX before S/4 HANA?</p>		<p>How do we pick which areas to consider in future deployments?</p>		<p>How do we decide what is relevant for Personas/UI5 custom development?</p>		<p>What is the bandwidth that can be achieved in half-year cycles?</p>
	<p>Examples:</p> <ul style="list-style-type: none">• Maximize user efficiency• Move all users to Launchpad• Familiarize resources with UX tools		<p>Examples:</p> <ul style="list-style-type: none">• Small roles that can be easily converted wholesale to Launchpad• Highest used Transactions		<p>Should we consider future Fiori apps or changes coming from S/4 Posting Models (e.g. universal ledger, etc)?</p>		<ul style="list-style-type: none">• Complex UI5 apps• Simple UI5 apps• Personas flavors• Stock WebGUI/Slipstream



UX Goal Definition

- Use goals definition exercise to drive overall roadmap strategy

Tier 1 Goals

Minimize throw away effort prior to S/4 HANA to avoid rework

Familiarizing resources/ end users with UX concepts, tools, and methodologies

Move all FBMS transactions and users to default to Fiori Launchpad (multiple browser support, mobile support, better external integration technologies, etc.)

Tier 2 Goals

Honing UX standards and processes

Maximizing solutions to reduce hours spent on high volume processes

Maximize interface ease of use (integrating outside of FBMS, etc).

Subsuming the maximum number of existing backlog that can be addressed via UX solutions

Opportunity Selection Approach

Step 1

Identify low transaction count roles to pilot full Fiori Launchpad transition with combination of custom Fiori, Personas and standard WebGUI transactions; pick one to start/learn

Step 2

BP teams evaluate roles to identify similar opportunities and use experience from Step 1 to execute across BIO for low volume roles

Step 3

Analyze usage statistics to identify transactions with high volume (and no S/4 impact) transactions for large value improvements to FBMS

Step 4

Leveraging lessons learned from first two steps and items selected from Step 3, develop UX solutions for select opportunities and bring over unimproved transactions to support

Step 5

Continue development of UX prioritized solutions while bringing remaining unimproved transactions to Launchpad via WebGUI and fully filling out the catalog

Evaluation Criteria to Move Forward

- More opportunities will exist than can be done prior to S/4
- Simplify evaluation process with checklist/filters (two stage)

Negative Filter

First Checklist

Is this impacted by a S4 process change

Does an S4 only app exist that we will use

Does an S4 only app have >50% of need

Is the process highly complex (initial only)

If any above are yes, remove candidate

Positive Filter

If passed,
second Checklist

Does an existing tcode need simplification

Would guided entry help ease data entry

Could analytics drive clearer user action

Does a tcode have many user roles using distinct sets of information

Is the process custom to DOI (priority)

If any above are yes, evaluate candidate

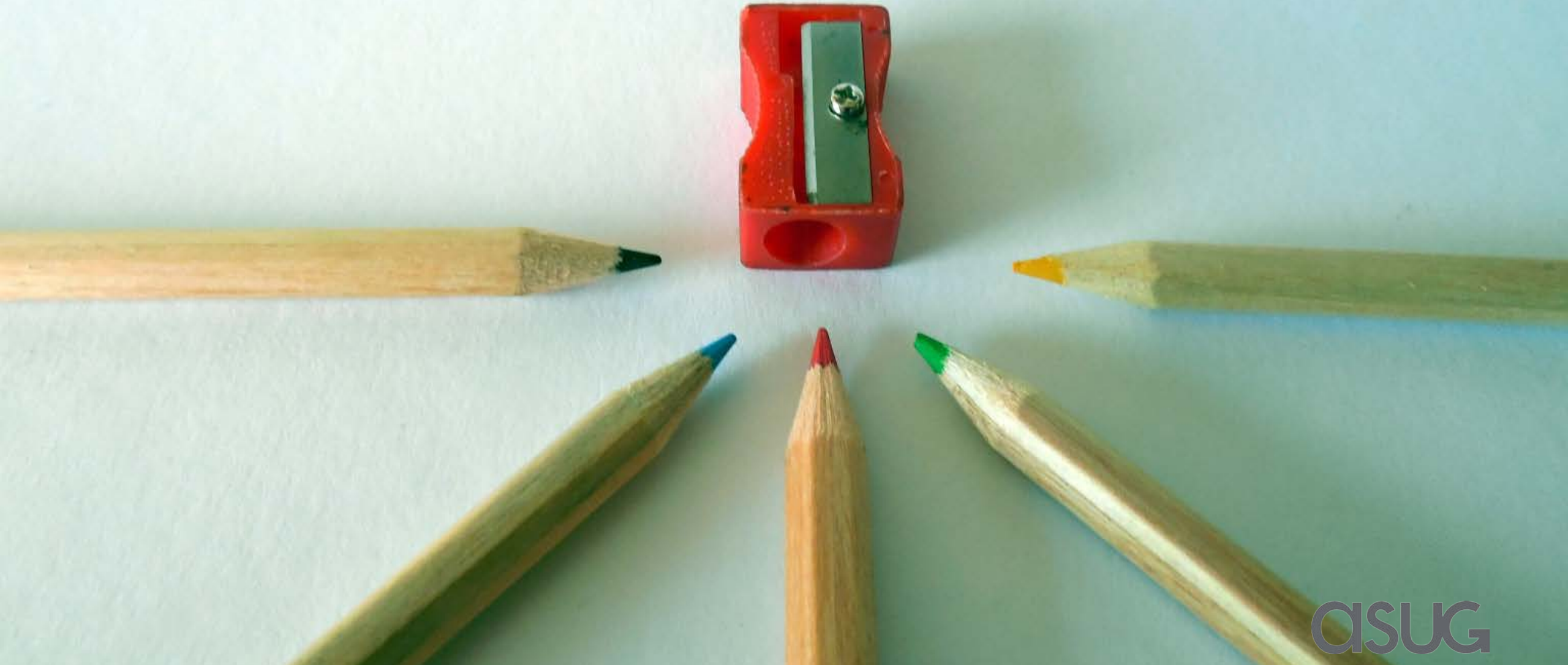
Assessing Throughput Speed

- Review team impacts to understand volume of work

	Stock Fiori App	Simple Fiori App/Extension	Complex Fiori App	Stock WebGUI/Slipstream	Custom Personas
BP Impact	Medium	Medium	High	Low	High
AD Impact	Low	Medium	High	Low	Low/Medium
Security Impact	Neutral	Neutral	Variable	Neutral	Neutral
Portal Impact	Neutral	Neutral	Neutral	Neutral	Neutral
TI/Basis Impact	Neutral	Neutral	Variable	Neutral	Neutral
Training Impact	Neutral	Neutral	Variable	Neutral	Neutral

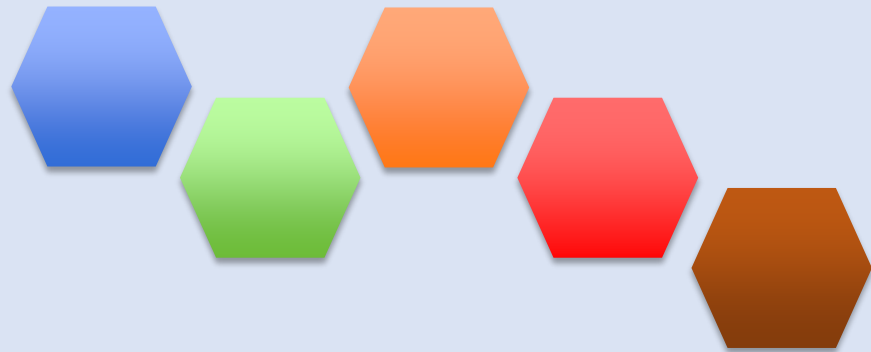


Honing UX Strategy



Honing UX Strategy (How and Who)

- Focus given to process differences and resource matching for success

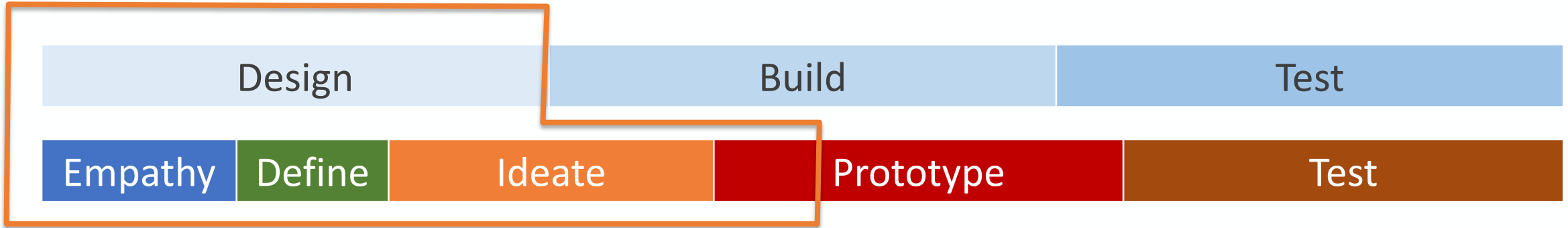


How: Design Thinking



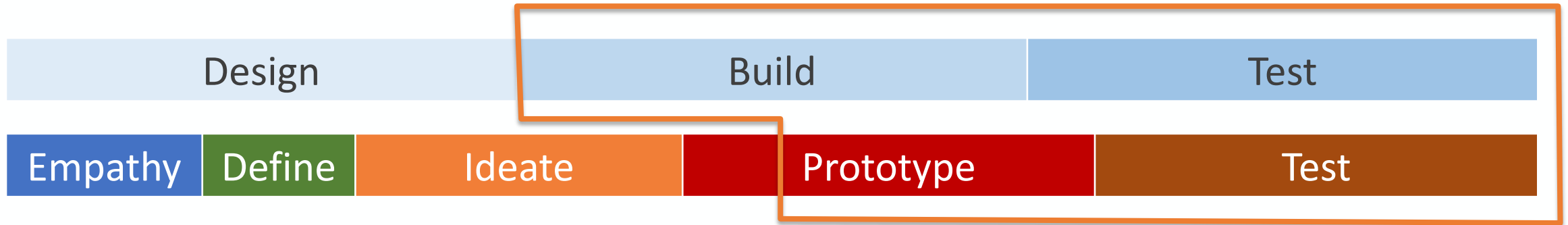
Who: Matching Skills
and Interests

Design Thinking Application v. Existing



- Traditional design phase is subsumed by 3+ phases of Design Thinking
 - **Empathy:** more outreach to end users to understand real needs vs. surface requests only
 - **Define:** similar to existing process
 - **Ideate:** Major change both with who is involved and how feedback is solicited, structured, and generated
 - **Prototype:** Early low fidelity wire framing to boost feedback and eliminate misunderstandings before any code is written

Design Thinking Application v. Existing



- Build phase merged with Prototyping
 - Difficult to continuously prototype and review solutions per standard methodology
 - Cutoff made for changes after final wire frames until testing
- Testing phase structure similar to existing process
 - When possible adding in more “beta” like testing (late stage prototyping)



Building the Right Teams

Teams to support Design Thinking have a slightly different set of needs than traditional waterfall style development processes

- End User participants should be at least partially driven by actual user statistics (average + extreme users) instead of only people who most often volunteer
- Internal resources should be creative, inspired and enthusiastic for user experience (these may be different than usual suspects)
 - Ideally some background in prototyping, design, or similar
- Identify or train key individuals who can run Design Thinking sessions with strong people skills, ability to easily defer judgement and coax feedback out of end users
- Designated UX Designer(s) who can keep look and feel consistent across all projects





Decentralized Design Thinking Challenges

- Participation for in-person workshops has significant logistical challenges with many users groups (no budget or availability to travel)
 - Ideal use of in-person white boarding and breakout groups not feasible in these environments
 - Intentional focus given to how best to do online collaborative Design Thinking sessions by finding right mix of tools and process
- Tool(s) should not require log-ins or passwords (minimize friction)
 - Tool(s) should cover ability to solicit feedback not requiring speaking on phone to allow for maximum participation (difficult to get many to speak on conference calls)
 - Tool(s) should support simple and quick wire framing to show what is being discussed
 - Process must regularly provide feedback loops in real-time to simulate break out sessions and keep participants engaged
 - Process must minimize call-in comments that go too in depth and enforce headlining
 - Process requires at least two individuals working in collaboration online to be able to keep updates in tool(s) in real time while still administering session

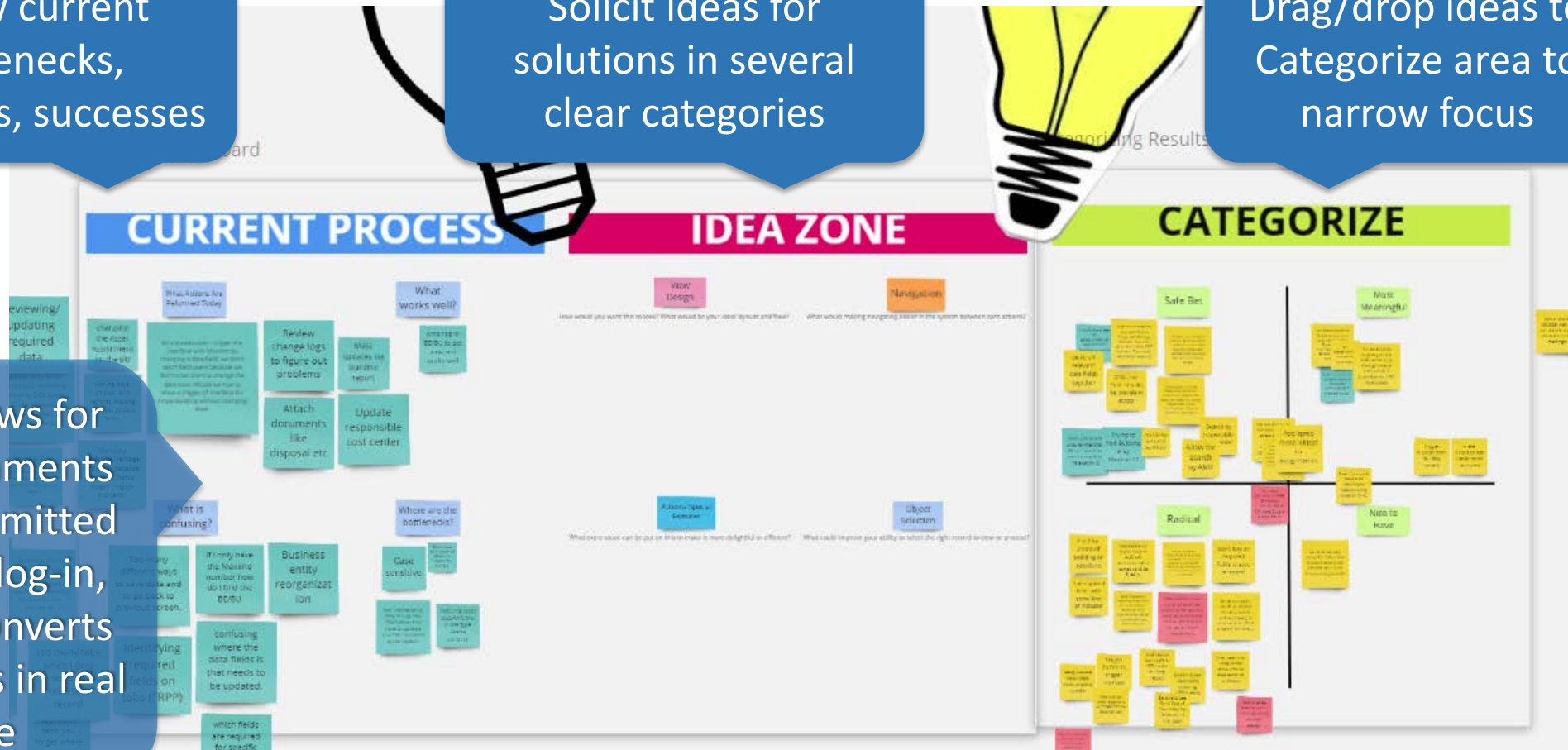
Online Design Thinking (Ideation)

Review current bottlenecks, challenges, successes

Solicit ideas for solutions in several clear categories

Drag/drop ideas to Categorize area to narrow focus

Tool allows for user comments to be submitted without log-in, admin converts to post-its in real time





Lessons Learned

- Focusing on the ideal solution instead of how things are done today is necessary to break away from old technologies and processes
- Getting to wire frames and prototypes as quickly as possible generates buy-in and helps people understand the value of their inputs
- Experience with outcomes begets better participation and understanding, which makes for better future outcomes (People don't "get it" immediately – both internally and end users)
- Internal culture takes time to change; valuing end user opinions over our own is a skill that must be developed and not a personality trait
- Stakeholder shift from primarily management, to primarily end user driving development should be carefully planned and communicated

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Presentation Materials

Access the slides from 2019 ASUG Annual Conference here:

<http://info.asug.com/2019-ac-slides>



Q&A

For questions after this session, contact us at [email] and [email].



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