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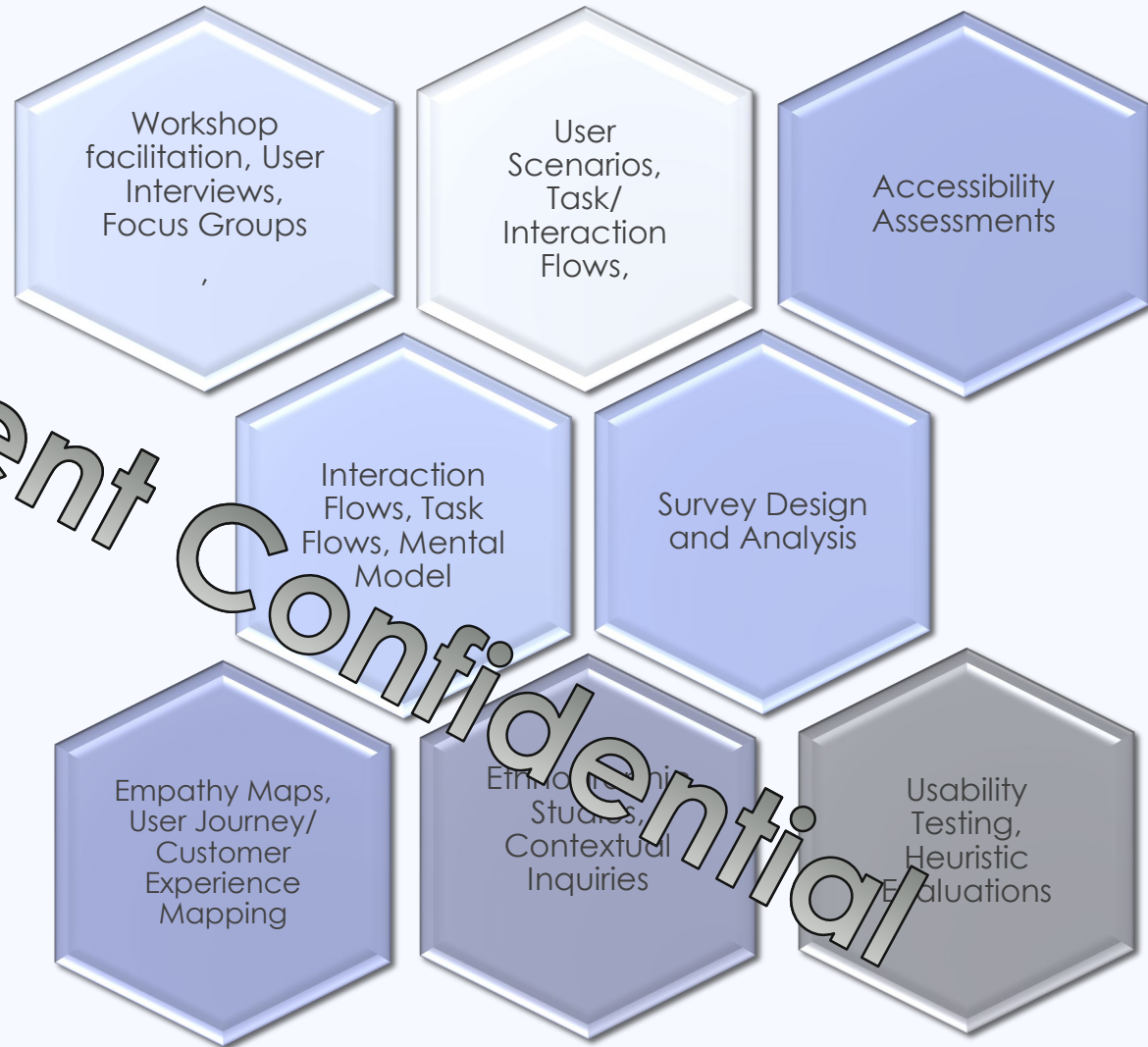
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USER RESEARCH PROCESS

My process is flexible and iterative, following basic user research principles throughout the product development process.

- Discovery/Strategy phase – personas, journey mapping, surveys, interviews, contextual inquiries, ethnographic studies

- Research phase – usability analysis, content audit, ethnographic studies

- Design phase – card sorting, storyboarding, "Wizard of Oz" testing

- Test and Iterate phase – heuristic evaluation, accessibility testing, usability testing

Discovery/ Strategy

Research

Design

Test and Iterate

Product Development Process
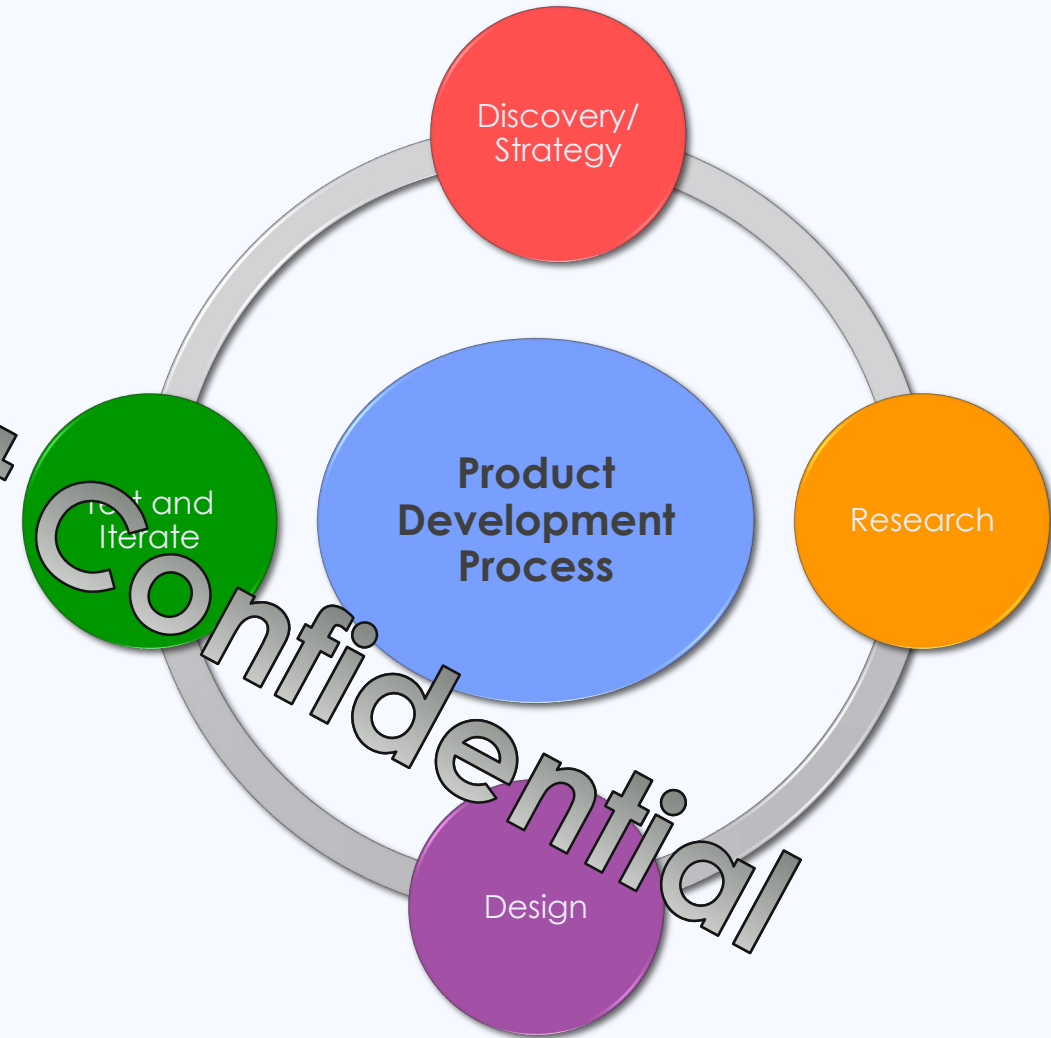
RESEARCH COMPETENCIES

My broad expertise and background enables abilities that support me in communicating key concepts, developing solutions and strategies while balancing user and business needs to complete business objectives within the complex business enterprise space.

Workshop facilitation, User Interviews, Focus Groups,

User Scenarios, Task/ Interaction Flows,

Accessibility Assessments

Interaction Flows, Task Flows, Mental Model

Survey Design and Analysis

Empathy Maps, User Journey/ Customer Experience Mapping

Ethnographic Studies, Contextual Inquiries

Usability Testing, Heuristic Evaluations

Business Process Reengineering Project

Goal: Multi year project to modernize and streamline primary applications with the objective of improving the efficiency, effectiveness and satisfaction of the systems that support the overall process.

Key Processes:
- Discovery
- Research
- Test

Project Objectives

Functionality that emphasized parity along with reduction of critical points of pain for quicker roll out for an internal group with over 10,000 users.

- Integrate applications through a single point of entry
- Improve usability of applications and user satisfaction
- Provide method for patent employees to access web based provided applications
- Improve the current workflow and status of patent applications as they flow through the system
- Support telework and collaboration of users
- Promote a common behavior across all applications

Role:

- Lead - leading team of UX professionals, planning work, and providing primary interface with stakeholders
- User Researcher on key design areas, facilitating user research

Primary Design Responsibilities & Deliverables:

- Leading team of UX professionals to ensure products delivered on time
- Collaborating with stakeholders to identify requirements and solutions
- Working with dev team(s) and business owners in Agile environment
- Write user stories based on analysis and research into user needs
- Conducting user research to gain understanding of user needs
- Designing accessible wireframes that integrated into the enterprise application through iterative process with developers and stakeholders
- Designing and facilitating regular usability tests with end users

Legacy Systems

Older systems had frequent crashes and were not expandable for the 10k users who relied on it every day.
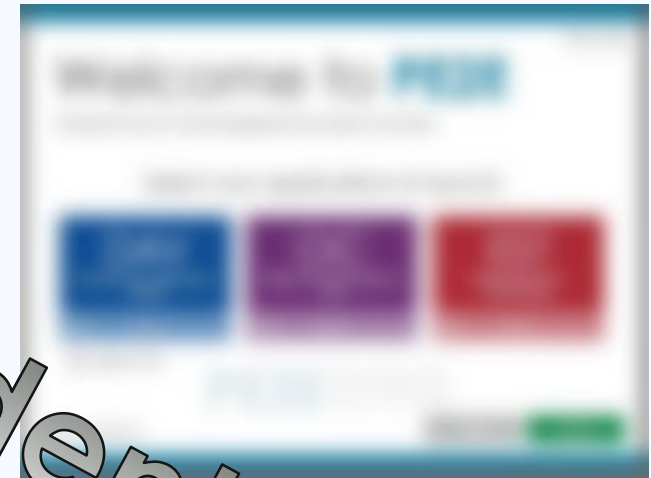
The system is comprised of 3 applications:

Old Client Server based system
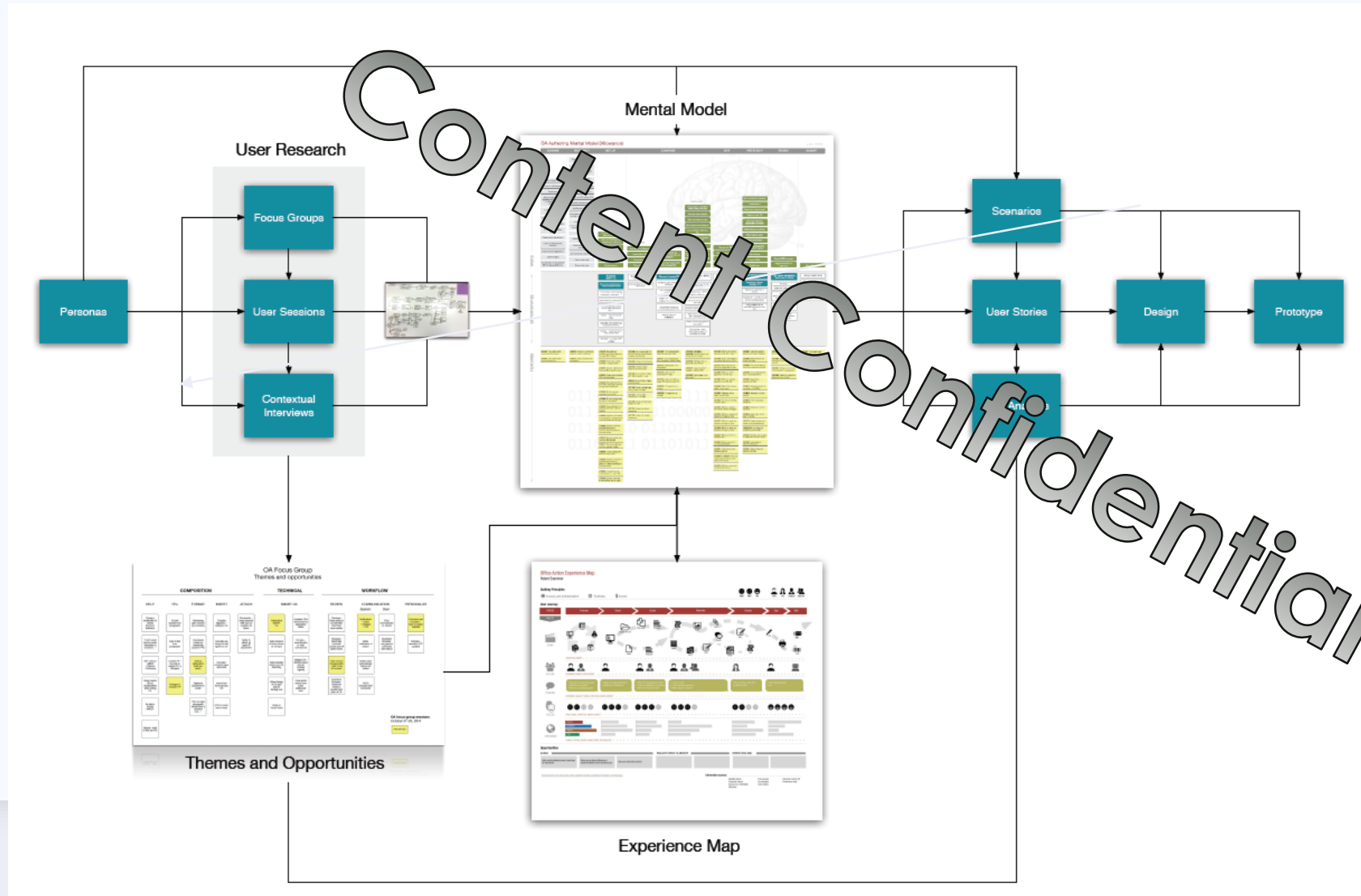
Old Word macro based system

Old web based system

Discovery Process

Overview of activities and products produced as result of research

Patent Examination System: Discovery Process

Mental model/Journey Map exercise

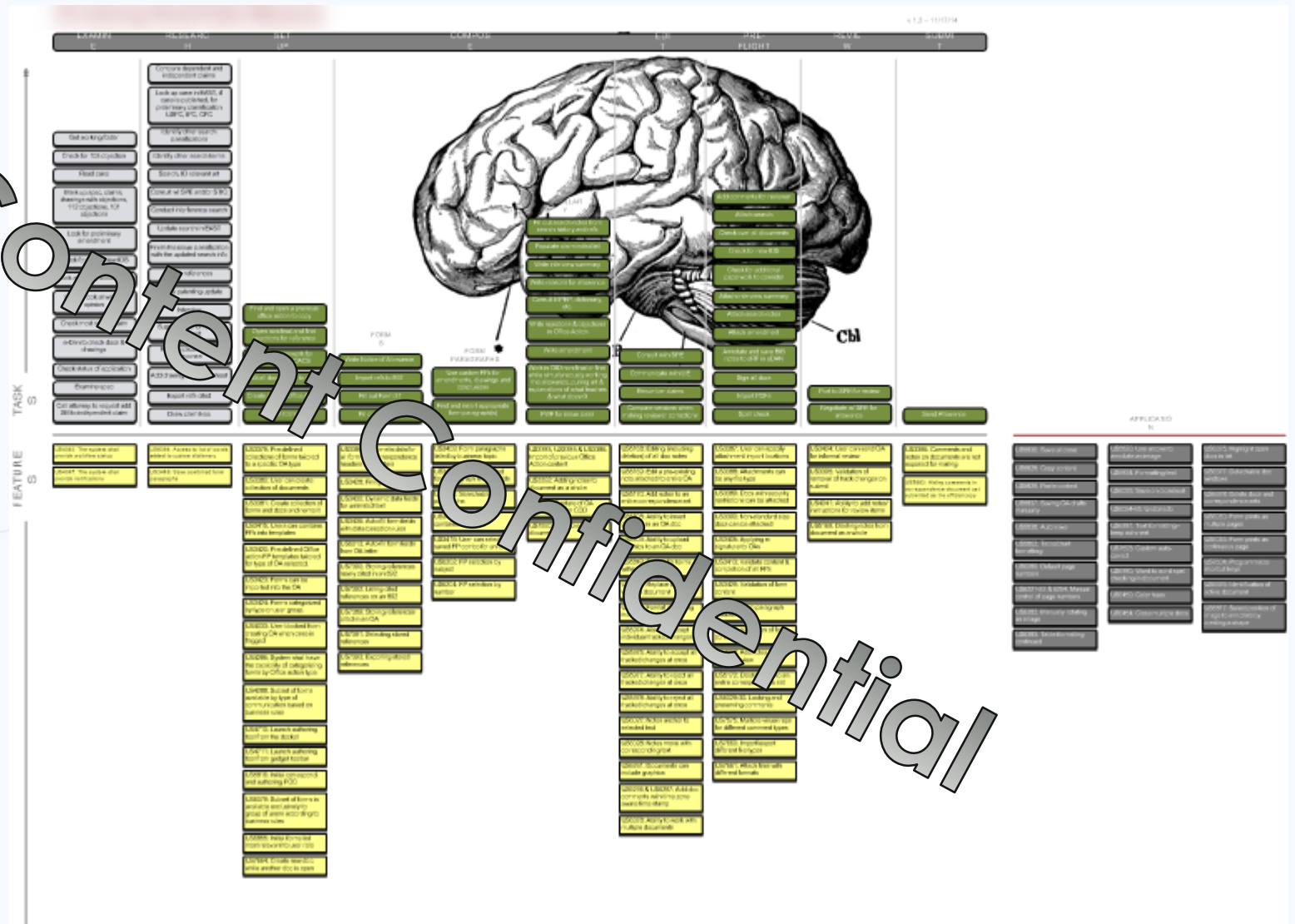Mental Model Exercise with users to identify:

- Actions

- Needs

- Issues

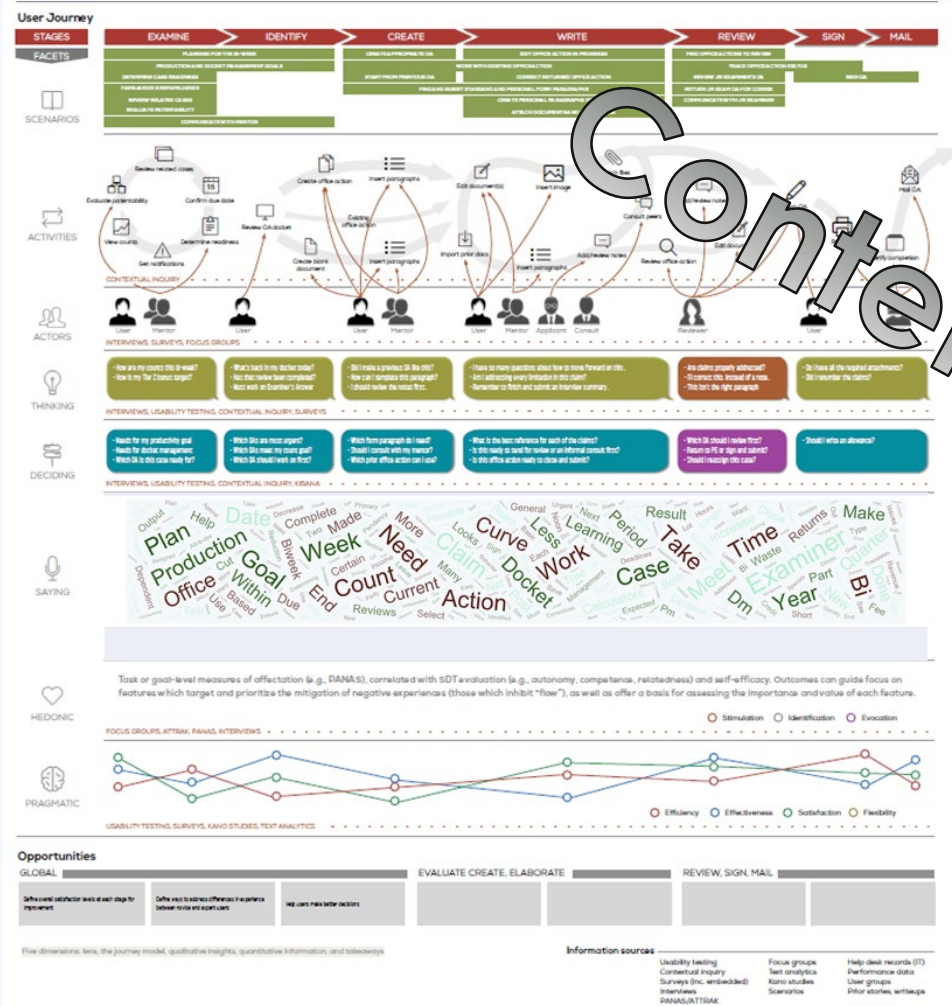- Sentiment

Discovery Process

Mental model / Journey Map exercise

Coded the information within spreadsheets during analysis

Discovery Process

Mental model

Created and aligned user stories (bottom of diagram)

With the tasks/activities in the mental model (top part of diagram)

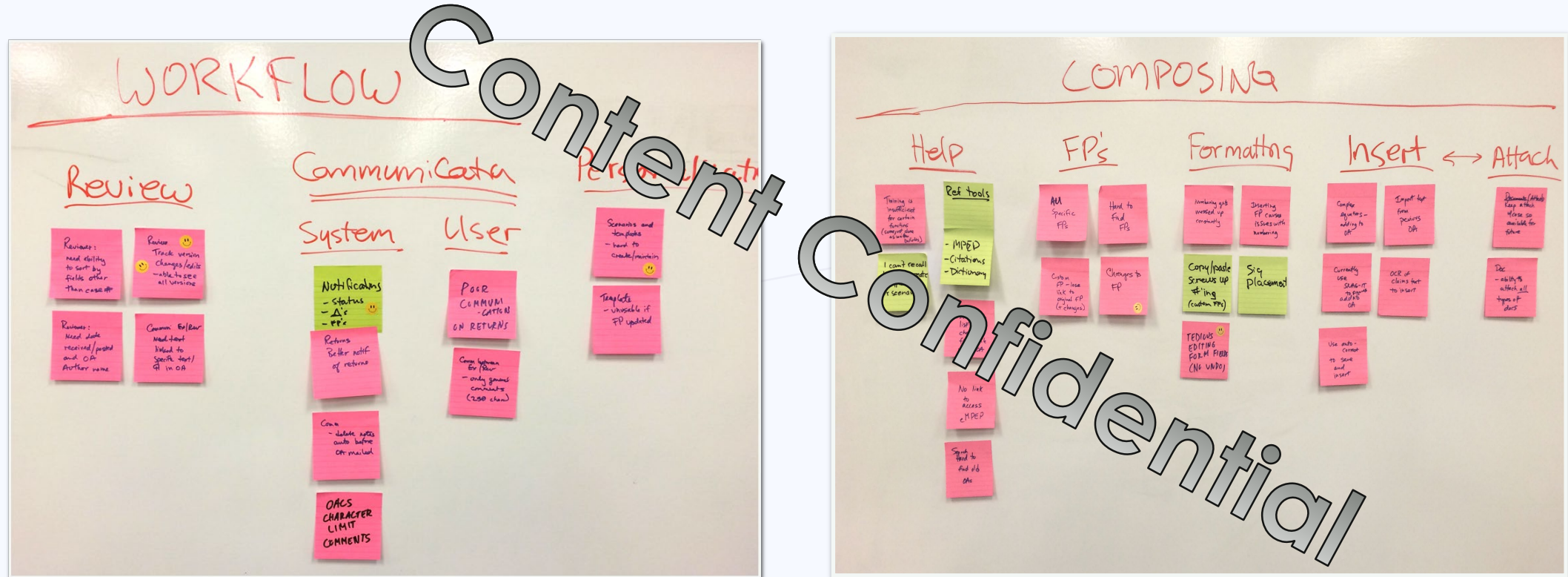# Discovery Process

User Journey Map

Created map based on analysis of the data collected to provide a holistic view and understand how core functionality fit together

Used data from user interviews and focus sessions.

- Stages/processes

- Actors/people

- Touchpoints

- Emotional aspects (feeling, decision making. Thinking)

- Potential Opportunities

Discovery Process

Identification of Themes and Opportunities – analysis of results to identify commonality
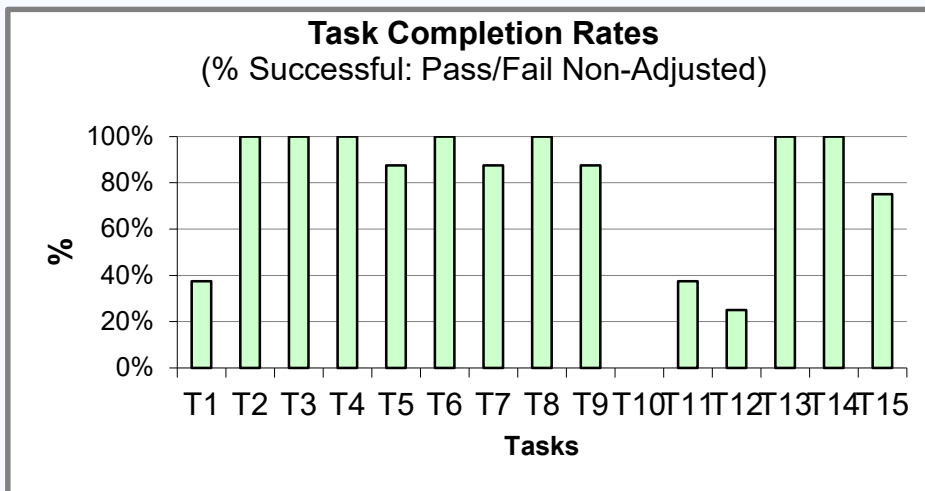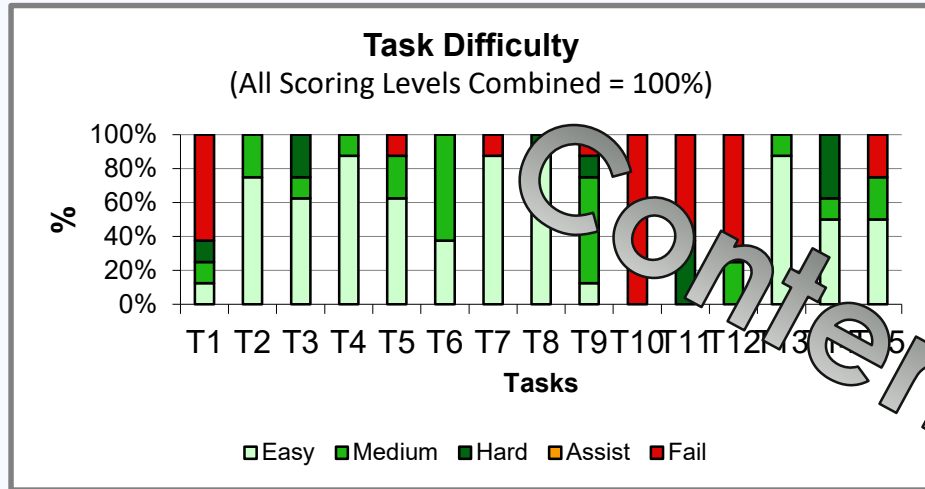
Discovery Process

Identification of Themes and Opportunities

Themes and opportunities

COMPOSITION

HELP	FPs	FORMAT	INSERT
Timing is insufficient for certain functions (bulletins)	Art unit specific form paragraphs	Numbering gets messed up constantly	Complex equations – adding to OA
"I can't recall how to create templates or scenarios…"	Hard to find form paragraphs	Copy/paste screws up numbering (custom FPs)	Currently use Snag-it to add figures to OA
REF TOOLS • MPEP • Citations • Dictionary	Custom FP – lose link to original FP (+ changes)	Tedious editing form fields (no undo)	Use auto-correct to save and insert
Using chapter list as checklist/flow while writing OA	Changes to standard FP	Signature placement is erratic	Import text from previous OA
No link to access eMPEP		"OAs as legal documents should have a standard look…"	OCR of claims text to insert
Search – hard to find old OAs			

Documents – keep attached with case so available for future

Ability to attach all types of documents

TECHNICAL

SMART OA

[Information (SML)]	Available OA's determined by application status
Auto-inclusion of forms based on OA type	[type display "document list"]
Auto-populate forms, e.g. OA Summary	Validate OA – identify issues prior to posting/signing
Allow change of OA type without starting over	Track which claims have been addressed auto
Ability to "recall" items	

WORKFLOW

REVIEW	COMMUNICATION	
	System	User
Reviewer: Need ability to sort by fields other than case number	Notifications • Status • Changes • FPs	Poor communication on returns
Reviewer: Need date received/ noted and OA author name	Better notification of returns	Examiner/ Reviewer: only general comments (250 chars)
[Track changes/edits … able to send ...]	Delete notes automatically before OA [sent]	
Examiner/ Reviewer: Need text linked to specific text/ para. in OA	[OA ... comments]	

PERSONALIZE

Scenarios and templates – hard to create/ maintain
Template – unusable if FP updated

FAVORITED

Research Process

Facilitated regular user sessions to drill down and document detailed process flows and scenarios

Detailed process flows provided a means to gain understanding and agreement on current system and user processes and decision points.

Scenario documents represented a robust understanding of a specific user task informed by a variety of user research activities

User session notes capture feedback, task clarifications, and other insights that provides the valuable information to support design activities

Test Process/Results

Task Difficulty
(All Scoring Levels Combined = 100%)

Tasks (X-axis: T1–T15, Y-axis: % from 0% to 100%)

Legend: ☐ Easy ■ Medium ■ Hard ■ Assist ■ Fail

Task Completion Rates
(% Successful: Pass/Fail Non-Adjusted)

Tasks (X-axis: T1–T15, Y-axis: % from 0% to 100%)

Heuristics

UX Rep
OPIM Rep
Examiner(s)
UI Dev

- Facilitated usability sessions with users

- Collected and analyzed metrics around the usability studies such as:
  - Task Difficulty
  - Task Completion rates
  - Average Time on Task
  - System Usability Scale (SUS)

- Created recommendations for improvements based on the metrics from the test results

- Presented findings to stakeholders to gain approval/direction

- Incorporated recommendations into new designs as appropriate

Website Redesign: Public Standards Organization

Goal: Project to modernize and streamline the website for a public standards organization to improve the efficiency of clients.

Key Processes:
- Discovery/Strategy
- Research

Project Objectives

Organize information to make it more findable and usable for clients

- Improve usability of website and user satisfaction

- Provide consistency and professional customer experience

- Deliver a personalized experience for clients

- Support collaboration between organization and clients

- Promote unique products and services

Design Role:

- Principal Researcher and Designer on key design areas, facilitating user research

Primary Design Responsibilities & Deliverables:

- Collaborating with stakeholders to identify requirements and solutions

- Working with dev team(s) and business owners in Agile environment

- Write user stories based on analysis and research into user needs

- Conducting user research to gain understanding of user needs

- Creating/validating information architecture and content strategy for new website

- Creating wireframes for all page types within website for use with new branding

Public Standards Organization: Discovery Phase

Discovery Phase

- Worked with marketing director

- Held interviews with stakeholder

- Identified SWOTs:
  - Strengths
  - Weaknesses
  - Opportunities
  - Threats

- Created user profiles/personas for key system users

Public Standards Organization: Research Phase

Research Phase

- Facilitated workshops with project team/stakeholders to understand current processes and desired system functionality

- Audited content inventory to identify content groups and uncover metadata available for filtering and grouping

- Conducted workshop with stakeholders to gain insights on each stakeholder's mental model of the content organization which also sparked discussion and further refinement of requirements

- Revised information architecture to reflect content inventory findings and support the refined requirements
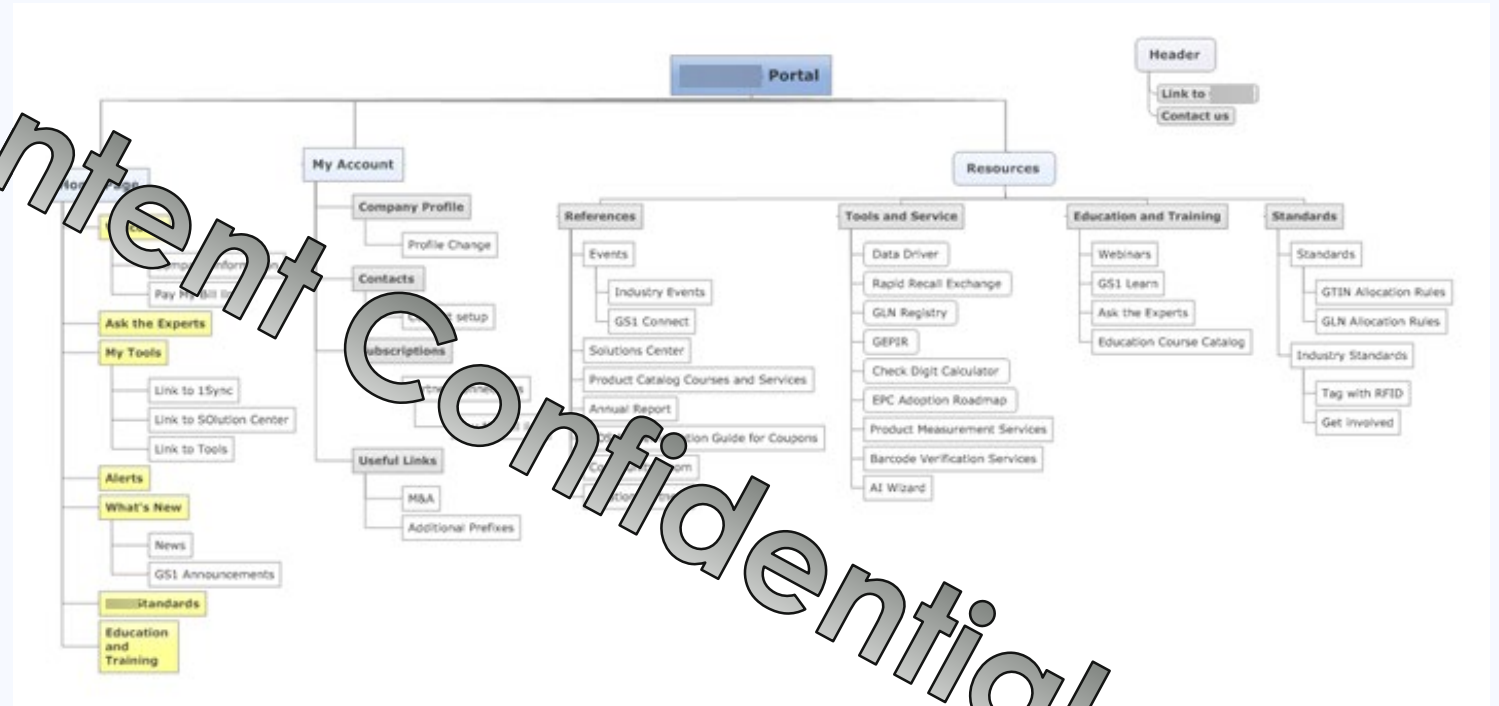
Usability Study: Design Validation

Goal: To test design across international clients, identifying design and usability issues and providing recommendations for implementation

Key Design Processes:

- Research

- Design Recommendations

Project Objectives

- Identify major themes for each alternative

- Determine the usability of major functionality

- Provide recommendation on design changes

Primary Research Responsibilities & Deliverables:

- Designing testing plan including identifying task scenarios

- Recruiting, screening and scheduling test facilities and participants

- Analyzing test results

- Making recommendations based on results from data

Design Validation: Test Planning

Test Planning
Document to define the testing process, the required resources to complete the plan and the testing schedule

Participant Screening
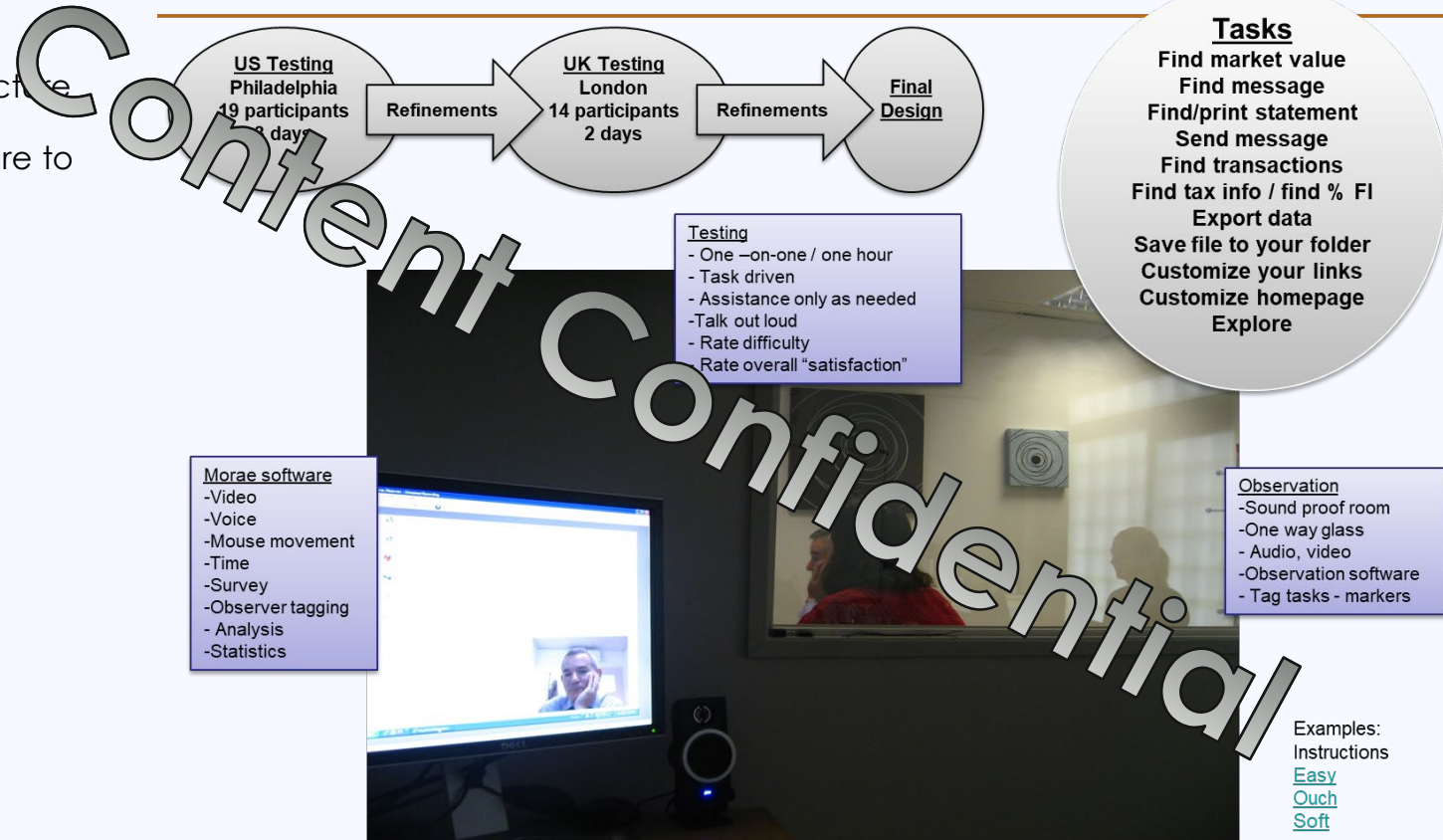Scripted screener for identifying qualified participants for the test.

Facilitation Guide
Scripted facilitation guide that includes introduction, tasks and task descriptions and closing

Design Validation: Testing Process

Study Background/Structure

- In person moderated test structure

- Used TechSmith Morae software to capture session data

- One-on-one sessions with 33 participants from US and UK

- Collected data on:
  - Task Difficulty
  - Errors
  - Time on Task
  - Completion Rate
  - User Satisfaction
  - Usability
  - Learnability

User Test Process

US Testing
Philadelphia
19 participants
3 days

Refinements

UK Testing
London
14 participants
2 days

Refinements

Final Design

Tasks
Find market value
Find message
Find/print statement
Send message
Find transactions
Find tax info / find % FI
Export data
Save file to your folder
Customize your links
Customize homepage
Explore

Testing
- One –on-one / one hour
- Task driven
- Assistance only as needed
-Talk out loud
- Rate difficulty
- Rate overall "satisfaction"

Morae software
-Video
-Voice
-Mouse movement
-Time
-Survey
-Observer tagging
- Analysis
-Statistics

Observation
-Sound proof room
-One way glass
- Audio, video
-Observation software
- Tag tasks - markers

Examples:
Instructions
Easy
Ouch
Soft

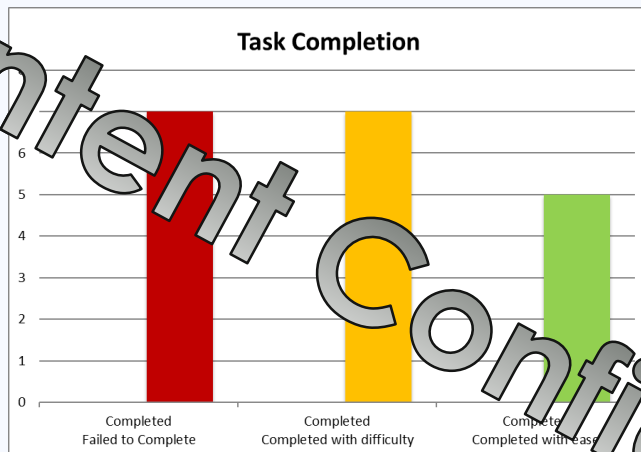# Design Alternative: Research Results for Single Task

Task 7 –Find tax information (gains/losses)

- Users clicked on Statements and Tax but couldn't find tax info – information was in third level of navigation
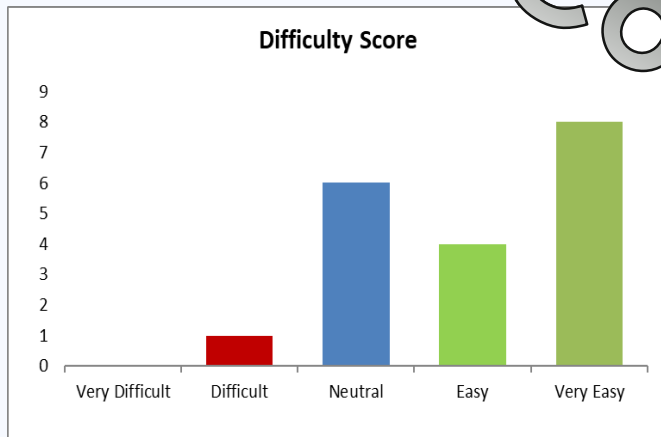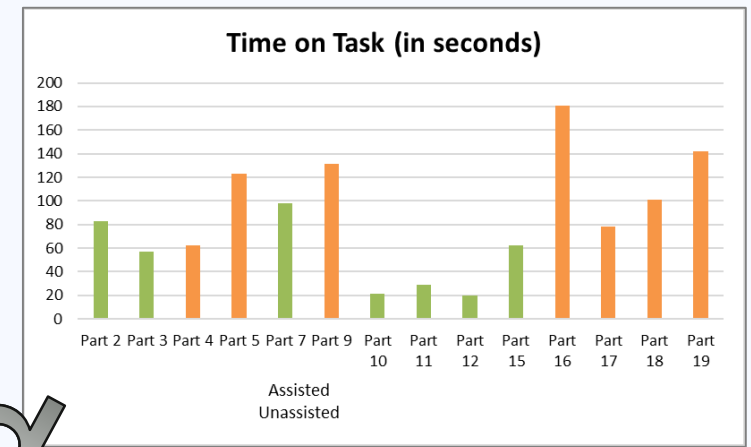

Task Difficulty
- Task difficulty was similar for many of the tasks, however, the key tasks of navigation and communication was easier for Design Alternative 1.

Task Completion
- Task Completion was much better for Design Alternative 2. However, some tasks were not completed for either alternative.
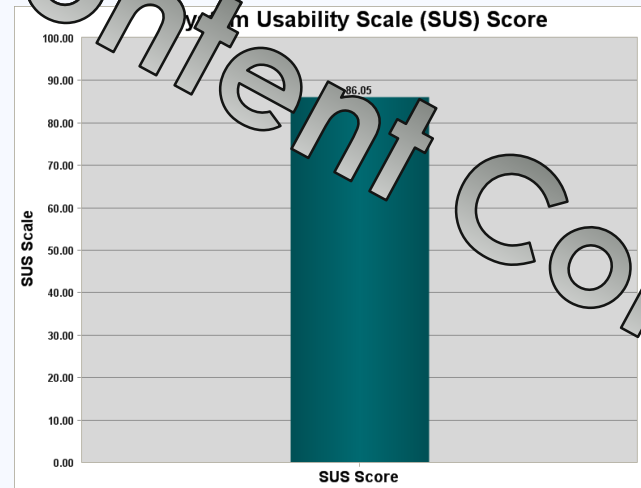
Time on Task
- Task time varied greatly with 5 people never completing task so are not included
- Showing Assisted versus Unassisted

Design Validation: Key Insights, Findings & Recommendations

Key Findings

- Easy was most common theme
- Overall SUS rating of 86% reinforced by the user comments of easy and user friendly

System Usability Scale (SUS) Score

Design Change Recommendation

Key Issue / Underlying Cause	Proposed Design Change
Task 6: Account activity not found Underlying cause – secondary / tertiary navigation is not easily visible	Redesign navigation for visibility Make visual indicator of sub-tab more prominent Make visual indicator of main tab more prominent
Task 8: Tax related information not found Underlying cause: users did not see the tax documents menu	Redesign navigation for visibility Make visual indicator of sub-tab more prominent Make visual indicator of main tab more prominent
Task 9: Copy file to folders not easily found / understood Underlying cause: too many buttons on that page – not well organized – too crowded	Relocate buttons in one location (top right) – possibly switch to text links only – stacked vertically
Task : Send Message (to advisor) link not Underlying cause: user expected it within communication	Include within messages pages
Task : Export data not easily found / understood Underlying cause: not manual in this today	While not relevant to underlying cause – will relocate export button to be closer to table of data Include instructions in HELP section
Task 11: Homepage portlet user priority Underlying cause: user preference	Change default portlets on homepage to match most important information to user

Thank you for taking the time to review!

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