Research and Workflow Techniques: Designing complex applications with digital and manual components

Stephen Turbek and Mary-Lynne Williams
When does it make sense to transform a manual process into a digital one?
When does it make sense to integrate applications?
And how do you decide?
For example
The case of the institutional banking organization that needed to optimize operations applications
What did we do?
1. We talked to the client.

2. We talked to the client’s clients (who use the applications).

3. We documented and analyzed their team structure, interactions and workflow.

4. We made recommendations for workflow improvement (some digital, some not).
Why do research?
To find out HOW users work and WHY they work that way (the why is often more important).
You might be surprised at how they are using your system.
Who should you conduct research with?

1. Use your analytics to identify heavy (power) users and light users).

2. Pick people based on their roles, their usage of important applications, types of clients.

3. Find out who they interact with and interview them, too.
How many people should you talk to?
More is more…

Talk to at least 10 people.

(For statistically significant samples, you need many more).
Where should you interview them?
Anywhere you can.

1. At desk (the ideal scenario)

2. Via Webex (and share their desktop)

3. Over the phone

(Interview them individually to get their personal process or in groups to get workflow dynamics.)
Interview people where they work.
The Research Process:

1. Analyze usage statistics.
2. Write screener for interviewees.
3. Write interview script.
4. Interview users.
5. Record actual usage.
6. Perform card sort exercises.
7. Shadow users.
8. Document findings.
Learn how they organize with card sorts.
Don’t just ask them… Watch them.
Now what?
Present what you learn about the users in the form of a persona
This information must be easily readable and should represent your key user types
What are our typical users like?
(showing 1 of typically 3-5 personas)

OPS/GENERALIST

Ops/Generalists provide support for all aspects of middle-office trade operations. Their daily tasks involve an assortment of moderately complex activities and processes that require them to be very detail oriented, disciplined and organized. Ops/Generalists will juggle several applications which they visit a few times a day, primarily in the morning.

Job titles include: Receptionist, Operations Specialist, Trade Assistant, Operations Assistant, CFO

Paul
Operations Staff
Galiant Capital | New York, NY

I have been in this industry a total of two years, the last year and half at Galiant. I act as a backup for the two other operations people here, and because my company uses more than one prime broker I use multiple PB systems throughout my day. Many of my tasks need to be completed before the market opens, particularly the reports that I provide to the trader and CFO. I am a big user of Microsoft Outlook – I use the calendar for corporate actions and proxy vote reminders. In general, if I am not working in Outlook, Excel, Access, or then I am either on the phone, faxing, copying, on the trading floor going over discrepancies, or discussing an issue with my colleague who backs me up.

Goals
- To quickly and effectively resolve matters that protect our client’s trading positions
- To complete multiple sequential tasks on time, as driven by market times
- To feel confident that all my numbers are accurate and can be substantiated

Tasks
- Acts as an administrator, assists Controller, Trader and CFO
- Investigates and resolves trade breaks, cancels and corrects trades, retrieves and prepares positions reports for traders and management
- Handles FX Affirmations, reviews upcoming corporate actions, maintains internal calendars, electing and booking actions when necessary
- Maintains pricing, book dividends, completes wire transfers, maintains cash positions, makes cash entries as needed
Persona Plus: How do we make the traditional persona more useful for workflow analysis?
What is the ecosystem in which the applications are used?
How do multiple team members interact with each other in the course of a day?

**KEY**
- Manual Process
- User 1: Coordinator
- User 2: Entry and Approval
- User 3: Entry and Approval
- User 4: Manager
- Digital Process
- User 2: Entry and Approval
- User 3: Entry and Approval
- Any user submits “Ready to Send” transactions

1. User 1 gets fixed order tickets from the machine and stamps them.
2. User 1 divides the workload into two piles and gives each stack of tickets to User 2 and 3.
3. User 2 enters transactions into BTI.
   - User 2 gives the hard copies of the order tickets to User 3 for approval.
   - User 2 approves transactions and hands denied tickets back to User 3.
   - User 2 amends denied transactions and hands them back to User 3 for approval.
4. User 3 enters transactions into BTI.
   - User 3 gives the hard copies of the order tickets to User 2 for approval.
   - User 3 approves transactions and hands denied tickets back to User 2.
   - User 3 amends denied transactions and hands them back to User 2 for approval.

(if no approval is required)
How do teams of users complete their tasks in a single application?

Task: Respond to Corporate Action Notification

- Microsoft Outlook: Receive Corporate Action expiration email from system.
- Microsoft Outlook: Add calendar reminder for corporate action to personal calendar.
- Microsoft Outlook: Receive updated Corporate Action expiration email from system.
- Microsoft Outlook: Update previously entered calendar reminder.
- Microsoft Outlook: Print email and add to folder of upcoming Corporate Actions.
- Microsoft Outlook: Update printed file of reminders with new reminder.
- Bloomberg: Operations user researches Corporate Action on Bloomberg (or other source).
- Verbal: Operations user contacts Portfolio Manager to make decision on election.
- Log In: Go to Portal site and use VPN secure id to log in.
- Portal Screen: Select "Corporations" from navigation bar or Quick Link.

KEY
- Manual Process
  - User 1: Operations/Generalist
  - User 2: Operations/Specialist
  - User 3: Manager/Approver
  - User 4: Portfolio Manager
- Digital Process
And how can that be improved?
(to digitize or not to digitize…)

Task: Respond to Corporate Action Notification

Microsoft Outlook
Receive Corporate Action expiration calendar item by email from system and accept calendar reminder which is automatically added to users Outlook calendar.

Microsoft Outlook
See that Corporate Action is due in Corr. Action notification.

Microsoft Outlook
See that Corporate Action is due in Corr. Action correction.

Bloomberg
Operations user researches Corporate Action on Bloomberg (or other source).

Verbal
Operations user contacts Portfolio Manager to make decision on election.

Log In
Go to Portal site and use VPN secure id to log in.

Portal Screen
Select “Corporate Actions” from navigation bar or Quick Links.

KEY
- Manual Process
- Digital Process

User 1: Operations/Generalist
User 2: Operations/Specialist
User 3: Manager/Approver
User 4: Portfolio Manager
How do teams of users complete their tasks throughout *multiple* applications?

**Two applications, but only one workflow**
And now onto design!
THANK YOU.

;-(

mary-lynne.williams@aa-rf.com
stephen.turbek@aa-rf.com