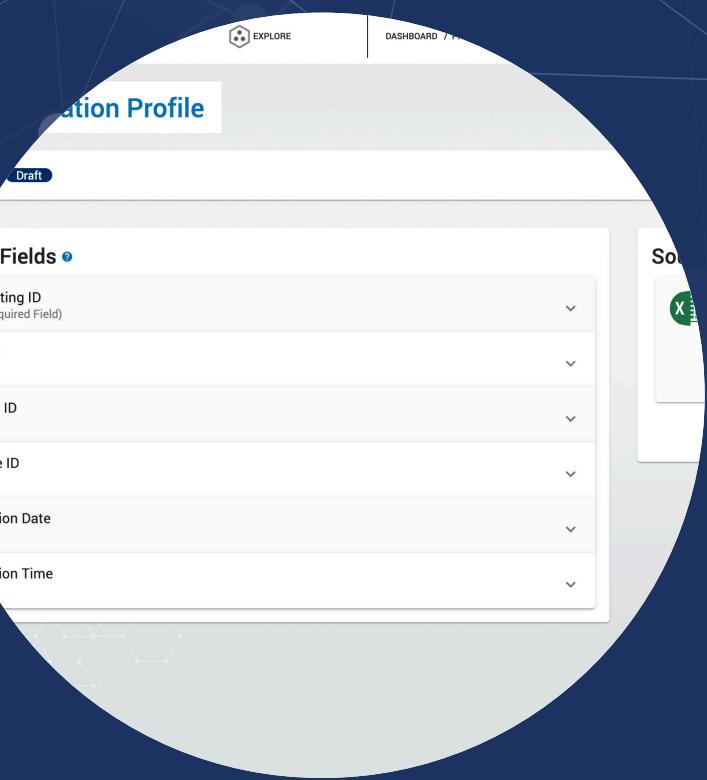


Usability Test / Transformation Profile Setup



14OCT2019
Jarrod Murray / UX Lead

Summary:

I invited three PMs, two CCs and one TC to participate in an usability study of the Transformation Profile. The CCs were unable to participate in this study at this time.

Findings

- Users found the experience and design 'simple' and 'straightforward'
- The language and terms were understood
- Still some questions about who will perform this workflow... it depends on the arrival of the source file/manifest which can vary
- The experience is lessened when users fear making a mistake... users want assistance during mapping (seeing examples or visual indication when options have been previously used)
- Users were much faster at performing tasks the second time... hinting at high learnability

Recommendations

- Add visual indicator when a Source is already Mapped to a Target
- Make the empty/blank option more obvious as a 'Target Field not in Source File' selection
- Allow users to click on the Profile Name to open it (Arrow button is not enough)

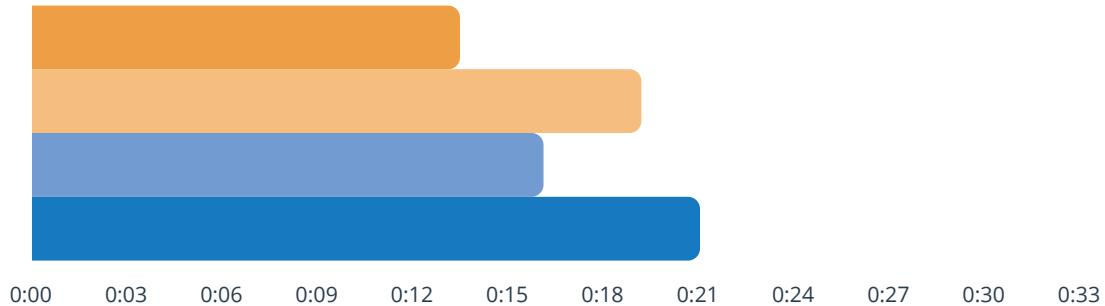
Enhancements

- Target Fields include an example and/or default value
- Target Field option as 'Not in Source File'... user can opt to hide this field from the Mapping Screen

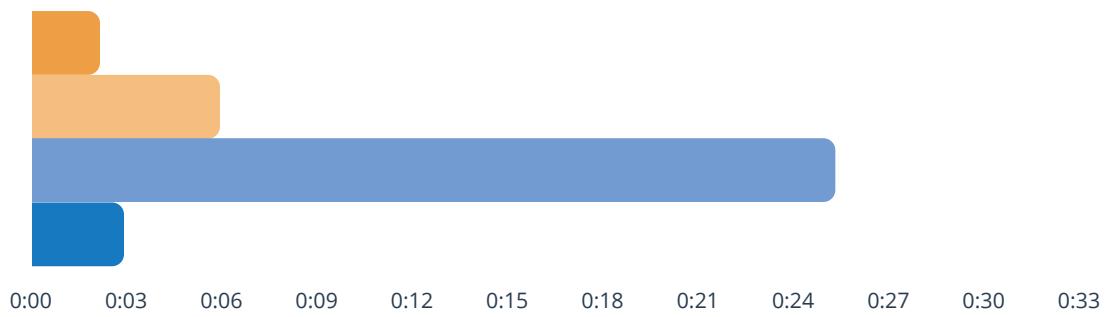
- It's a little weird. I'm not going to lie but only because it's new. **I would assume that it has to do with Manifesting?** It's either the Project Screen or importing manifest. I'm not really sure, but from the Target Fields that's what I gathered. And from the source files that's what I'm gathering.
- It looks kinda like the Sample screen. Has your ID, your Project and then some of the **Data Element information**... I'm assuming... so Patient, Sample ID, Collection Date and Time. It has your Manifest file. Which I'm assuming is already loaded up so this is already Registered maybe... maybe not? Or that we're going to use to Register. Then it says that the file is Mapped. Then it only allows for one file source type so XLSX.
- **It looks like it is in regards to manifesting.** Over in the Target Fields are the **Data Elements**... I'm guessing that are captured within the project. The Source Files is probably the Importing Manifest, it looks like. I don't think it's been fully done yet because it's says 'Draft' for the particular shipment that is listed here.
- **Looks like Manifesting** because I see Source Manifest. And then **I see what looks like Data Elements** on the left. By saying Target Fields makes me feel like those are the Data Elements... and kind of we're trying to match what's in the Manifest to the Data Elements. Other than that, just the basic header with the Logo in different buttons to take us to different places within the site.

Time on Task (First Profile)

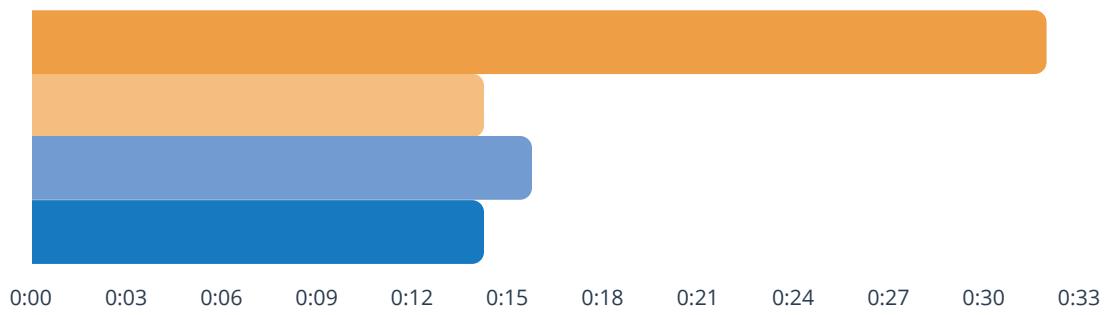
Create a Profile



Open the new Profile



Upload Target Fields

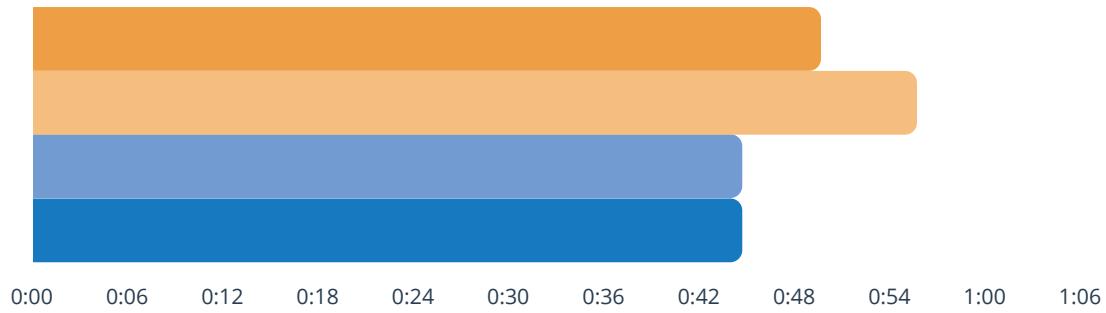


Time on Task (First Profile)

Upload Source Files



Map Target to Source File



How would you describe the overall experience?

- **It was pretty easy and straightforward.** Is this for manifesting? Is this for importing manifest? I was like I think this is what this is but I just want to make sure. It seems like it's pretty easy and pretty straightforward. Nothing was difficult about it except the mapping part being like OK. I haven't done this before. Hopefully this is the one that matches up. Just having an example would be very beneficial on our end of it. Because that's what we get from the Project Screen is, 'Oh wait is it supposed to be this, or is it supposed to be this other number' and you get an example on our Project Screens.
- Seems fine. Maybe if there was an example of each... it could help. So like if it said... for Sample ID and Sample Number since they're not exactly the same maybe have... either the formatting that one is supposed to have versus what's actually present and the other to make sure that you have like a second verification would be nice. **Overall it's fairly straightforward.**
- **It's pretty easy** to map it however... would there be a way to map it without having to do each individual one... would there be a way to do it like a file map? Because I know like some clients have like 99 Data Elements so going through individually and mapping them would be very time consuming, whereas if you have a file that you can upload... that would already map... kind of thing... it would make it definitely less time consuming.
- **Very simple** and I did it without you really telling me what to do.

How would you rate the level of difficulty or ease?

- On a scale of 1 to 10, 10 being the hardest... I would say this was **like a 2**.
- Like on a 1-5? If 1 is the easiest... **maybe a 2**... because it does require a little bit of brain power... because they're not all identical.
- It was **really easy**.
- **Very easy**.

What is your opinion on the language/terms used?

- **It's been pretty straightforward** Mapping may be difficult for some people. I deal with CCRs so that's how I know what it was. Some people who are in Ops might not know what that is. Hopefully we can train them on that.
- **Language is fine, it seems pretty consistent** with most current Project current Manifests. I think most Manifest that you import are going to be even more difficult than this, but it gets the point across.
- **They made sense to me** for what was asked of at this particular time.
- **Very self explanatory**. For the profile... for me... it's thinking that it's like... that's who I am logged in as. I don't exactly know what 'Test'... I don't know what that means. Is that the shipment? Is that the 'my profile...' is what I'm doing' so I don't exactly know that is.

Follow-Up

- Yeah, maybe instead of Target Fields, we use something more familiar like data fields or data elements? Today we use Data Elements and Manifest Files rather than Target versus Source. It's not a hard change to make but maybe even just like in the little question mark (Helper text) it could say like Data Elements or something that's more familiar to some of the more seasoned people.
- Part of it does make sense to me probably a little bit more just because I already have to use the transformation tool... so I already kind of know that connotation, but I feel like once it gets out, people should be able to understand it.
- Target Field are obviously targeting what you're trying to match to that in the Source is where you're pulling the information from.

What did you like the most?

- It's just an easy layout. I can look at the screen and there's not a bunch of stuff on there doesn't need to be. **I know what I'm doing when I go into it.**
- It definitely seems like you're not going to have to drag and drop columns to reorder them. It gives you more flexibility ordering because you're making the Data Element header match... this way instead of making it match chronologically, which is what we do now. And then it was **very simple to upload your table** versus having to go... navigate to one screen figure out what table you're supposed to have go back to your file and make sure your file matches and then uploading it seeing if all the Data Elements went through see if you got an error code definitely makes that faster.
- I like the fact that you don't have to rearrange everything... **you know exactly what header goes to what...** which is really nice.
- It just **seems very user friendly**. Very simple.

What did you like the least?

- I don't think there's anything I didn't like other than the little examples, **not having like a little example to see**. If that makes sense?
- Least? I'd say... **there's no examples**. So there's no example of what these Data Element fields or Target Fields are supposed to contain and you can't see the file itself when you map them together. So you don't know if one thing that's called Subject ID actually does match to what we call Subject Number.
- Like I said the main thing for me would be having do it 1-by-1 and there is the possibility that I could definitely see **where Data Elements are named similarly**... so like Sample ID and Sample Number those kind of be both the same thing, so I could see that causing some confusion.
- The dropdowns... having to scroll through that if we have a number of Data Elements. I've seen Projects with 90 Data Elements. Scrolling through that's going to be very **trying to find the right one, it's going to be very time consuming**.

Who might be tasked with this workflow?

- If I'm understanding this correctly, I get a Manifest in and I'm uploading it or it's already uploaded. Then I open up a file and drop all my information into there... it would be a **TC** or a **Senior Tech** most likely... **someone who Manifests.**
- It would make more sense if it was like a **CC** or **PM** creating the actual profile. Maybe a **TC**. But then making the Source File dropping the file. It would be a CC or a maybe a TC if they weren't the ones creating the Transformation Profile... a **Senior Tech**... **someone who is Manifesting today.**
- I could see the **PM** team, possibly **CCs**, then also probably **TCs** and that level and up since they kind of **deal with the Manifesting**, and making sure the Shipments get manifested correctly and everything like that.
- **Anyone trained on Manifesting.** So **CCs, PMs, TCs, Senior Techs.**

Follow-Up

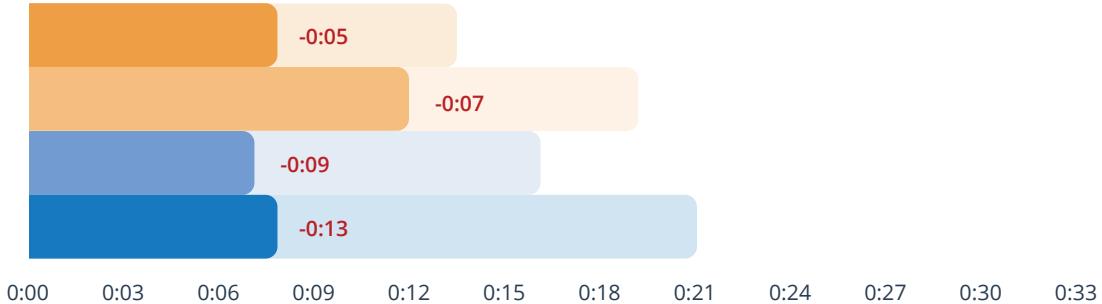
- Definitely be Project level... would be using it at the time of loading a Project or Group. I think it sets up Projects... another part of the setting up the PD.
- (Could you see PMs doing this workflow?) No. Sometimes the CCs will help out with Manifest... especially Electronic Manifesting... because they don't have to have the Samples in front of them. So I could see them potentially doing this and it not being that bad... but I don't see the PMs doing this on a regular basis.

When might you use this feature?

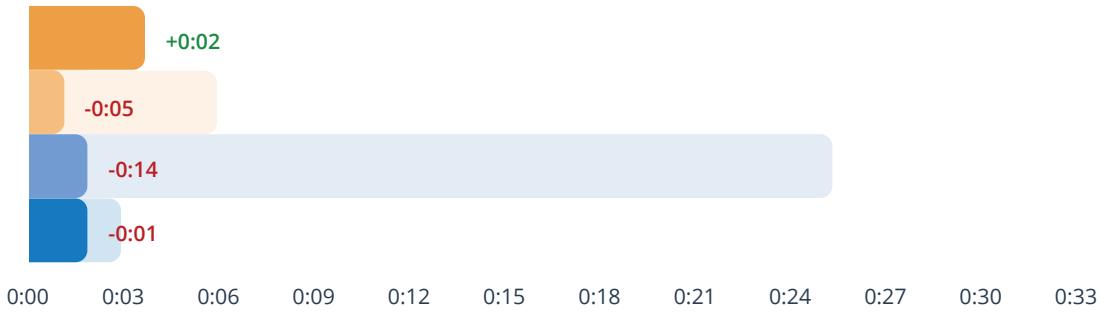
- **Whenever I have to Manifest stuff.** Ideally... I would do it if I had to check a Manifest... no... if I'm just building I would ideally do it from here.
- If I was making the Transformation Profile like if it pulled from the PD or separately. Or there are some instances, where I do Manifest some of my own stuff. **So special projects, identification projects where I am the one blinding the data.** Maybe if I was free in some magical world and everybody else is busy.
- So we receive a lot of Manifest that aren't standard by any means... so. If we received particular ones from certain sites, I could definitely see this being useful and transforming it into an easy to use kind of thing within the system. Like I said, **I already use a transformation tool... so this would just replace that.**
- **For Manifesting.** So you receive the manifest... it's not in the correct order... or it's not able to be loaded as an electronic manifest. You're trying to get into the acceptable format. So kind of gives you a file that you need.

Time on Task (Second Profile)

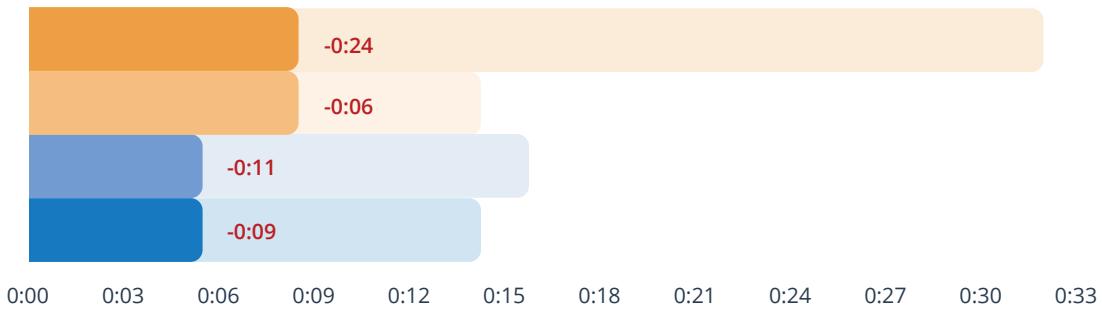
Create a Profile



Open the new Profile

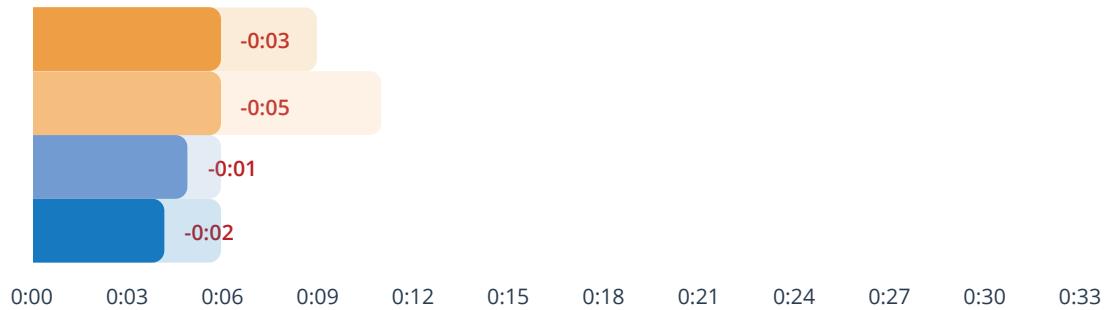


Upload Target Fields

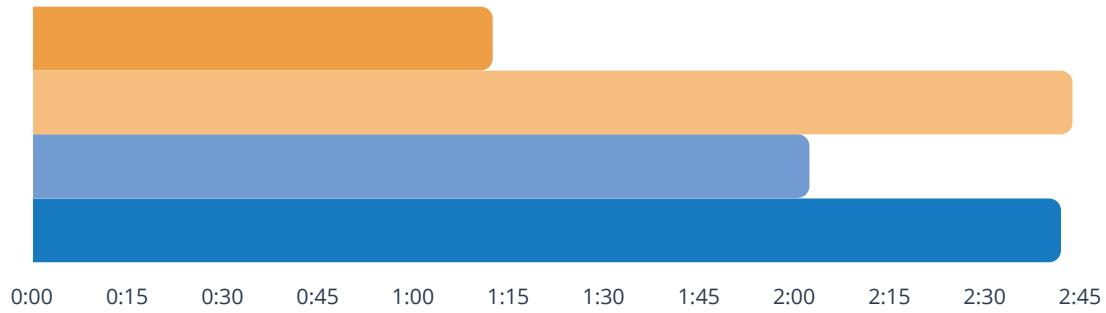


Time on Task (Second Profile)

Upload Source Files



Map Target to Source File



How can this experience be improved?

- I don't really think it can be. I'm one of those people that have to see it in action being done. I'd have to open the files and I'd totally get this. But so far it seems pretty straightforward.
- **Maybe having an example.** Even just over here where it says text... having some kind of an example and then when you go to map it maybe having either even like the first line be the example underneath each one. And then making you... at least verify that you know you left things blank, maybe even just like a pop up that says fields... XYZ were not selected or something of that nature **something that tells you either didn't select everything from the source file or you didn't create a map for everything** on the transformation profile something to alert you that. You may have missed something accidentally or on purpose, whatever it may be.
- Right now, what they do is they send me kind of a standard Manifest every time that goes into the transformation tool. It looks like there might be multiple ways to put multiple source files in so like if they come from different sites that will be able to be transformed, which I think will definitely be easier, but like I said, because they have like 96 Data Elements... **doing it 1-by-1 could be really time consuming**, I get that it's like the first time... but doing it over and over again with that dropdown with the number of click(s)... I could see the errors definitely occurring... at least at the beginning while you're still setting it up.
- **I think that I had a lot of difficulty with the choosing the matching fields.** I don't really have suggestions on how to be approved, but I think that that is our place for improvement.

When would this workflow become frustrating?

- If I had 50 Manifest to do. A lot of times... for certain clients we will get in a bunch of manifest that are smaller and that's the only time I could think that it would be frustrating.
- What if you have a Shipment of multiple Projects? If the projects were identical would it be a one time thing or? So that could be a frustrating part... **we get runs that have four different clients in it** maybe... **it has 100 different projects in it, and there could be 2 Samples per Project on a different Manifest file** so you're right now going through and doing hundreds of files for one Shipment. This could make it easier or it could just be equivalent.
- If you receive a whole lot of Manifest that are all different and you know multiple Data Elements all different configuration. I could definitely see this becoming frustrating.
- I think **when you have a lot of options like here**, there was some very similar options, so trying to go through and figure out what matches with what can be very frustrating.

Follow-Up (How many Targets are too many?)

- **If there were more than twenty that I have to map out** I'd get a little frustrated with it. Sometimes at least with my clients...I know one of them has about 30 fields that I would have to map out. And each time, I'd probably be like 'I don't think I wanna use this anymore'.
- I would say... **up to 15 not a big deal**. After that, it would probably become cumbersome just because again double checking and making sure with a dropdown list like that, it can be hard to make sure... and having to scroll.
- This is confusing just because I don't know... it's getting confusing when you have multiple that don't match exactly.

When might you receive the files needed to complete this workflow?

- **We ideally get these when the client Ships or the lab Ships them.** We'll get them in an email. If we don't, we reach out or do a QR.
- **So you could have the Target file as soon as like a PD was loaded.** Then you can technically have it before it was even signed off as long as they don't make changes to the Data Element table, so that ideally is before the samples are ever Shipped. **Your source file, theoretically gets sent when the samples are shipped from the site** or the day before the samples are shipped from the site...maybe a day or 2 in advance of the sample arrival.
- It could be the day... or a couple days... prior to shipment. It could be the day of the shipment. It could be weeks after the shipping has arrived... so really **anytime that we get an inbound shipment.** It could be at any point in that.
- After they come from the client... when I think very basic **when a shipment is sent to us...** like I get an email saying Shipments coming out of this tracking number here's the manifest. You get the manifest from there. Or if we ask the client for a manifest.

Follow-Up

- Right now, we send what we call the PD Questionnaire to the client. So I guess that'll be part of that would be... while you're giving me all the data that you have... that you want to define your project... can you also send me what a manifest would look like? We kind of already do it with building the Data Elements right now. We ask for a file and we kind of build the elements from there. This will allow us to have multiple sites sending us different manifests. We don't have to be stuck to that same one where, Site One... it matches perfectly. Site Two we have to do a little bit of manipulation to get it correct.
- That's also where a lot of our errors come in (manipulating Excel sheets). We're human. Some people know Excel better than others... sometimes we make mistakes. This would be really beneficial.

What are your thoughts on the design and layout?

- **It's clean it's pretty straightforward.** I can navigate it pretty easily. My buttons are where I need them to be, and I can... not even really looking at it for more than five seconds be like... 'Oh, ok that's what I need to click on'.
- The design is not bad **it's kind of boring. It's very square.** But I don't know if you would be able to get much more creative with it. It's not bad it gets the point across and it gives you everything that you need. It seems like this area is very large (Source Files) in comparison to this is going to be a long list (Targets). So maybe making it work, a little bit easier, so that you see more of it without having to keep scrolling up and down. (Maybe) make it a little bit more friendly so that you're not scrolling up and down as often.
- **I think the design is really good.** I think is really easy to read it's very... it's nice to be able to see you know what you're looking at what what's coming up next kind of thing, so I like I like the layout a lot.
- **Very simple.** I would think I was a little confused by... this is just me being weird... I would think sources on the left because it's moving to the right and the targets. Other than that it seems very user-friendly. The buttons and everything very much, you could see what you need to press and very bright.

Follow-Up

- When I click the profile... when it had me click the arrow to go to it... I think being able to click the whole bar instead of just the little arrow. Which also might lead to errors because you can accidentally click the whole thing.
- I did like the green box at the bottom... where it popped up. I kind of questioned if it would tell me if it had an error in the middle of that, like. What happened that was wrong. They were flashing so I couldn't really tell what they were but it was obvious that there was different things happening.

N/A and/or Blank Option

- **So if there is not one on here, can we leave it blank?** (Q: Is that what you would expect?) Sometimes depending on what Project it is, we have to put 'N/A'. Because some of our Projects can have N/A and some of them can't... so that sometimes determines if we have to build a QR if we just leave it N/A.
- **Do you have the option to say that something is allowed to be blank or N/A?** I know there's a required button. But like are you allowed to say if it's not required, put N/A... or if it's not required, leave it blank?
- **Do I have to choose one?** (Q: if there was nothing in the Source File to map to it, what would you do?) Probably as 'blank'... can you leave it as 'blank'? (Yes. Is that what you would expect?) Maybe 'N/A'. Because what we have written out right now is 'N/A allowed' and we either leave as blank or put 'N/A' in there. So having 'N/A' something like you're (selecting) because from here it looks like I'm just kind of forgetting something. If I'm able to choose something for all of them... I can see that it's complete I guess.
- **So can you leave things blank if there's nothing there to map to?**
- On the PD now it has a field that says whether or not N/A is allowed. Some clients choose 'No' on that, even though some of the data is not going to be present because they don't want to see N/A... they'd rather see it blank. So it forces you to leave it blank. You can't put anything... you can't put N/A in there. You can put anything in there, you just can't put N/A? So we use that kind of as a way to remind the Tech to leave it blank if it's not present.
- If there was something in it, it couldn't say like 'Oh no, you can't put something there 'cause it supposed to be blank'. It could stop them from putting N/A if it was in the actual Source File. Maybe it would just delete out the N/A...and force it to be blank. Some sites do put N/A in their files that clients don't like. I think it would be more of a reminder for us than anything.

- Maybe even if it just said 'blank'... so that way it knew that there was nothing there. Otherwise if you are quickly going through the list and you just forget to select one of them... it doesn't make you verify there's nothing to tell you, 'Oh you missed this'.
- (Expectation of leaving Mapping Blank) An error. Because it wouldn't have anything to pull. In the new version... even if you don't have Data for that Data Field, you have to have the header, and everything else has to be blank. Otherwise, you don't have enough columns and it won't pull. So I'm assuming it's going to be similar. Can I leave one blank to see what it looks like?
- Not what I expected. I figured it would make me pick something. But I guess if there wasn't a 'blank' option. I assumed I would have to pick some. So from the dropdown there will be something that I would have to pick in order to fill in each field rather than being able to just leave it completely blank.

Adding Empty Columns

- The way I see the Target Field is what Data Elements are in the Project Definition, so all of those Data Elements, even those 23 are in the Project Definition, so I would definitely see those but... I would guess you would have to put that in the Mapping Field where you would have the blank... because there is the off chance that they could have a Data Element... like one day... in that particular field that comes in the manifest. So I don't think you could necessarily put it in like the Target Field 'this will always be blank when you receive it' kind of thing.
- Even if you could put within a dropdown like a 'Blank' or something along those lines that doesn't map directly to it. That would help because just visually you're able to see that there is a Data Element there, it just doesn't have anything in the file that moves to it. But definitely having something that just indicates 'Yes, we know that there is a field there but not anything that Maps to it.'

- I would think it would have to have some kind of a box. So, like the Required box. If you check Required, I would assume if it is not located in the Source File that you're going to get an error. So if you don't select something to be mapped to it. It should give you some kind of an error, saying that 'this is required and you don't have anything' so... maybe it would be the opposite? So you would have it here and he would... I don't know what the language will say... but it would have to say something along the lines of 'it should never have anything match to it', and then default maybe. We would have a default that would be blank. So that way, if you did happen to have it mapped to something, it couldn't have anything in the column it would have to all be blank in case somebody accidentally had it as a header or something.

Features/Functionality

- Would that check capitalization? Or date formats? That's one of the things they're trying to look at... it all has to be capitalized and sometimes that's not caught. And date formats.
- Even having like the 3 digit month all capitalize or only the 1st digit of the month actually capitalized like various stuff that we do now where we have to use a lot of data manipulation.
- Would any of this go automatic? Today when the Project Definition is loaded, the Data Elements table is automatically set... you can't make any changes to it. Would the **Target Fields automatically be pulling** or is that something that they were going to have to start over from the beginning?
- As far as the Transformation Profile is that **created from a Project Definition?**
- Does it give you the same errors... on character limits?

- The QC tool originally was hoped to make it so that data was more consistent like a Subject ID would always have 4 values or 5 values or whatever the client decided. Will it hopefully have that kind of intelligence one day? Where you can set up format for everything?
- What about default values? So if you create a Project Definition now... I have a client that has two data elements that are always the same... every single group in that project are always going to say the same exact thing in there. Right now unless you double data enter the default value does not do anything. So would there be a way to have like a default value when you create the Target Field to say like it's always going to say 'this' no matter what it says on the source file. I wanted to say 'this'?
- I know there are specific data elements that are default... so will always give you like the 'Sample_ID' like you can't use that as a Data Element so... maybe it would have like the same just for our version... the same limitations like you couldn't create a Target Field with something that it already has. But if it does at some point integrate with the PD the PD already gives you that error, you wouldn't really need it again.
- Is there a second check to this before it becomes final... for the source? What if I happen to click like the wrong one? Is there a way to check if I clicked the right one to map it? Like it's a double check for us? (Q: Do you mean like a second set of eyes?) Even being able to just go back in like yourself. Once you click that 'Save' just to double check... to be like "OK... yeah", it's actually mapped correctly... kind of thing. In case you get distracted and you clicked it... it would be helpful to just be able to go back and make sure it... 'yes, it is correct' not necessarily even like a double check just a way to see what has mapped. (Q: How do you think you would do that now?) Let's see... it would be somewhere over here... and I would probably look at the map source file potentially? OK so you can do that. It's just with it being the dropdown... just making sure that you click on the right thing could be potentially problematic if you click the wrong one.

Mapping Dropdown

- I was looking to see if as I click these, they disappear. I think that if it's saying that we've already used that... it would disappear... so kind of narrows our list. Like '**'you've use that, so you're not trying to use it twice'**' I guess... if that makes sense?
- I think **visual indication**... because so you did make a mistake and you come across one that you 'ohh... that makes better sense that it goes there' and you could possibly choose that instead of actually disappearing. Because I'm guessing if it disappeared you'd probably have to go back up and deselect it go from there.
- Maybe if you've already used one of these, it should have **some kind of an indicator that you've used it once**, that way you're not accidentally mapping something to the same thing twice. You are doing it with a purpose.

Exploring the Page

- I have no idea what those would mean... text and list. (Q: what do you think they would mean?) I'm trying to... knowing how we're pulling things... 'text' obvious mean it's just searching for text. I don't know what would be searching from list for that. Like I don't know how that would be used. I'm guessing required means that it's required to be checked as a Data Element on the label. So if someone's Registering they would have to look to make sure that the Study Name is required to be on the label in this case.

Final Thoughts

- It seems... going in the right direction. Even if only the current functionality was there where you are able to map common things together, it's an improvement from what we have right now. So it's definitely a step in the right direction.
- This is already better than the current Transformation Tool... just because you can do multiple files you don't have to do a special like workflow didn't be able to get like a new file put into the transformation tool necessarily... because... honestly, transformation tool right now is not great. It was made so that we could appease them quickly... so I mean this... it's more comprehensive. I'm able to actually go in and see how it Maps, which is really nice because I currently can't do that.
- When do we get this? Please and thank you.