

Remote User Testing 2

Step-by-step analysis: For each page that the user decides to navigate to, ask what the user likes, doesn't like, thinks looks weird, what they think each button/option does, and anything that doesn't make sense.

Current process: This is more information gathering. We want to learn more about what they currently do from the start of farm season to the end.

Ryley Richards

Step-by-step analysis:

Team members page

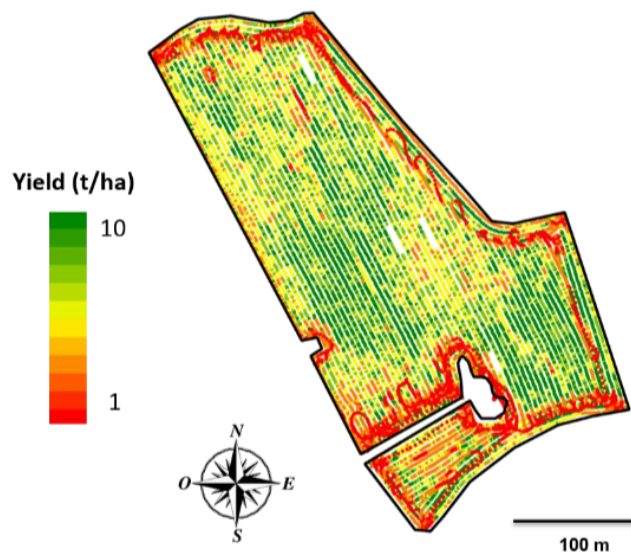
- Had to lean in slightly to see the team members' page
- Straightforward, very simple, no reason to overcomplicate"

Notifications

- Interested in having some notifications on a large scale
- Probably won't change what they are doing in real time

Map screen

- Different than what they are used to looking at (not a generalized yield map)



Yield map

- "Nothing wrong with what we got"
- Knows that different colors = different grades

- He likes that the circles will still show patterns
- “Don’t mind dots, not overcomplicated, nice and simple”

Imaging view

- “Image for each dot?” Yes.
- He knew that the graph showed the grade factor bringing it down the most
- “Can I pull protein out of dots?” Yes, filter by characteristic.
- “If I just want to look at protein, I want to just look at protein. If I want to look at the grade, I just want to look at the grade.”
 - Be able to filter only by one thing at a time.
- He likes that the app gives the user the ability to find the information to solve their problems.
- Changes to style: **not a fan of color scheme**. Red, green, yellow, blue, and dark blue is what they usually use for colours.
 - “Pink, green and yellow look bland, they blend for the graph”.
- “Say grading sampler isn’t working on combine x, can we differentiate between combines from admin view?”
 - Not currently. Combine implementation is beyond the scope of this application. Potentially, a workaround if you could flag each sample.
- Wasn’t clear the little bars behind the graph which represented the subcategories of grade; When he first looked at it, the yellow bar was a generalized grade but didn’t know what bars meant behind the graph.

Authentication

- “Same as any other app for login/signup”
- Inviting other admins? Potentially. In his case, his COO might be an admin.
 - Multiple admins is desired.
- Custom operators are the only way that drivers would belong to multiple farms. Not important. Minette’s farm: managers might go from farm to farm and maybe they have operations as different to keep things clean.
 - Case: Agronomer will be logging into his farm, for My John Deere app, they sign in as partner and admin. They would access multiple farms.

Current process

- Everything is broad base, combines roll through field, 55k bushel bins, combines dump to cart, cart to truck, truck to bin, once bin is done, you have a mass volume of grain for a bin. The top of the bin drains before the bottom. So if he knows there's 70% of HVK in the bottom and 90 HVK on top, he will take average
- It's bulk sampling. If I have 7 derm bins, he will have samples from each bin, if I am shooting for average of grade 1. Pull from bins (1k tonne contract thats gotta hit target hvk). If **we knew exactly what was in the bin, you could get more refined with it**.
- More accurate whats in the bin, it will **provide info they have never had on agronomy basis**

- Never had grade factors to back up what they are doing. If this area is producing more protein how do we...
- Protein is a big one that has never been answered in wheat and durum
- If theres low grade areas, are they more disease spots in that area? App answers more questions that they have never been able to answer.
- Contract: "big time affects this." Cereal or lentil, generally waiting until its all off (15 days from start of harvest), could contract before market begins to fill. If you have contacted 3 quad durum 3 (with upside), it answers questions on forward contracting
- If he wants contract for october, he cant start combining in september
- Match cash flows: he had to make 2 million, if he waits too long, the market may fill.
- Will canola market go up or down? If it goes down, I want contract now.
- Is characteristic what you would call binburnt? "characteristics is a fine way to approach it or grade factors"
- Language admin vs driver?
 - "Admin, partner, driver makes sense"

Brady Fahlman

Step by step analysis

Imaging view

- Is each bounding box potentially a different grading characteristic or does it just show mildew?
- He likes that you can see each individual, it will tell you where it falls in grades
- Bottom part shows single location of where it is in field? Yes. straightforward.
- Image might get a little bit confusing with a bunch of colors (annotations)
- Straightforward, gives critical information
- First thing they look for is the grade quality to determine if they will bin it separately.
- Green, yellow, red. He assumed where it says grade 2 - high quality but he assumed it was high quality grade 2 because of where boxes show. He nver noticed colors right away, He got it from the positioning. Ticks on boxes show how close they are the grades. Colors didn't jump out at him but he understood by the ticks.
- Image every 30 seconds, imaging would show a new one every 30 seconds.
- Map is more of an analytical tool for afterwards. If im in the field, the analytics are critical things to see.

Map view

- Immediately first thought: AFS connect has yield maps. **He really likes the dots** because he doesn't need it to be complete layer, dots make it easier to overlay. Easier to view and see when overlaying with yield maps.
- Likes the color of the grades
- Likes that you can click into each grain sample

- “Can you flag a sample somehow? If we are out combining and we go over something weird. We may want to mark it so you can come back to it. Certain spots that farmers want to check out on their field, flag something on the go. **Might not be based on quality might be a spot that does 80 bushels an acre vs 40 bushels per acre.** Tie it back to a soil test to see what they did differently.

Filter

- Filter by flags? Filter by saved samples?
- “So you could filter by mildew? Love that. Stackable. Really good because for fungicide trials, stacking diseases and quality is very good feature!”
- One thing that stood out is stacking them (good). That covers all the bases to start (straightforward). Perfect until they started using for a year or two, then some tweaks.

Team

- “Gear icon: go back to **settings**, select how often camera takes sample?”
- Put a grain buyer role in there. View only role would be good to put in there.
- More info about driver?” Probably fine”. He doesn’t know what other information would be in there besides drivers/combines. Fleet analytics is already through AFS connect. Maybe which combine they are driving?
- Are you thinking that this app would be used across multiple users? Multiple users on one farm? yes.
- I could see maybe a marketer want to be a team member so as they start to fill contracts, you can start to see which contract you are filling. Might want to have a title for them. Ex: name, email, agronomist ex: brady, email, marketing.
- “If im going to manage, i would want everyone other than me to be view only” (agronomy, marketing so they know they can price/fill contracts based on data). Limit it to one person to be main admin (flag certain things). Most farms have 1 or 2 admins, everyone else is view only, other may be best as another category. User can type in their title. Agronomists would probably be in analytical side in winter, unless you send file of one sample for a test plot.
- What kind of export formats are most important? Shape file and csv.
- Exporting: Agronomy side: Wants to be able to export all samples in a field to a shape file, import in afs connect to overlay. “If we include grain buyers in members, I would want to export a single sample”. Probably just need to send Reese (buyer) one sample if it's all pretty consistent. Combination of both. Marketers probably don't want to look at all the points. Ex: ex: consistent field would be nice to send one point every 2 hours. Probably want to export single sample and field.
- He is still guessing on what the grain buyers will want.

Authentication

- Signup makes a new farm makes total sense. Login makes sense for driver.

Main takeaways:

- Drop notifications from current scope
- Color scheme of the imaging page needs to be fixed. They did not easily understand the graph's background colors. Needs refinement.
- Like the ability to filter by only 1 characteristic.
 - We have to update the color to be based off the characteristic's grade level rather than the whole sample's lowest grade color.
 - Refine filtering. Must test extensively.
- They like the circles which represent the points. Potentially implementing fortun's algorithm may be less important than initially thought. However, circles appear dynamically via the Mapbox map controller, this means that we still need to convert those points to geoJson so it works as layers statically.

Next steps:

- Focus on fixing all current bugs (simulation, signup, filtering, team members) and improving UI/UX experience (imaging view).
- Changes:
 - Add ability to flag important samples. Ability to filter by flagged samples as well.