



Visions on UX/UI

Redesign document of: Egg, Inc.

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Index

Redesign document of: Egg, Inc.	1
Index	2
What is Egg Inc?	3
Why did I choose Egg Inc?	3
Analysis of Egg, Inc. based on UX/UI principles	4
Nielsen heuristics	4
Hodent's 7 principles of Usability	9
Gestalt principles	11
Egg Inc UX/UI principles score original	13
Problem and Solution analysis	14
Severity of the problems in Egg Inc	14
Design and user requirements	15
Summary of what will be changed	16
Low Fidelity	17
Main screen	17
Common research screen	18
Egg progression screen	19
Egg Inc Flowchart	20
Medium Fidelity	21
Main screen	21
Common research screen	22
Egg progression screen	23
Wireflows	24
High Fidelity	25
Explanation	25
Main screen	26
Research screens	27
Egg progression screen	28
Extra screens	29
Wireflows (buttons)	30
Design evaluation	32
Nielsen heuristics	32
Hodent's principles	33
Gestalt principles	34
Egg Inc UX/UI principles score redesign	35
Conclusion	36
Figma Links	37
Sources	37

What is Egg Inc?

Egg Inc (or Egg, Inc.) is a simple idle clicker / simulation game published by Auxbrain Inc. in July 2016 on both iOS and Android platforms. The game is free-to-play with optional in-game purchases and gets supported by ads and premium in-game currencies.

The main gameplay of Egg Inc revolves around building a chicken farm. Your goal in the game is to keep hatching more chickens, keep upgrading all aspects of your farm, and ultimately progress through all the different eggs the game has to offer. The game continues playing and generating resources in the background even when the player does not have the app open.

Egg Inc uses a clean and cartoonish visual design that uses both a lot of 3D elements as well as 2D elements. Most of its user interface emphasizes minimalism and clarity, unlike a lot of other faster paced games made for mobile.

Why did I choose Egg Inc?

When looking at our 4 games to choose from one instantly struck my eye: Egg, Inc. That is because Egg Inc is a game I have actually played before. That being said, I did not want to choose this game purely because I played it before. I gave the other games a fair chance. For some reason Used Car Dealer Tycoon and Demon Blade both did not interest me a lot so I dropped those quite quickly, leaving Returned Warrior RPG and Egg, Inc.

For a good while it looked like I was actually going to go with Returned Warrior RPG. The gameplay was fun and interesting and the game had a lot of stats (I love my stats). However after a bit of playing I felt like I was going to be able redesign one screen and not much more, so I stuck with Egg Inc after all.

Since I had already played Egg Inc a bit before this assignment I already knew quite a bit about the game's shortcomings regarding UX/UI, and after going through the game specifically looking for them I encountered even more, leading me to get quite some ideas for redesigns. Because I am also quite far into the game I could confidently say that most of the game's problems become more apparent later on, so I want to change this.

And come on.

Egg game.

Need I say more?

Analysis of Egg, Inc. based on UX/UI principles

Nielsen heuristics

Before choosing which heuristics are bad and which aren't, I first wanted to go through all heuristics (I will be using the 10 from the link above) and analyze the game based on those. After this analysis I will then take out the problems and rank these based on severity.

1. Visibility of System Status

- ❖ Egg Inc provides the player with a lot of especially numerical data that is continuously updated. Data such as your income per second, egg progression, your current farm size / capacity and your production rates are pretty much always displayed. (1)
- ❖ Egg Inc also has notifications that pop up from time to time. These notifications pop up from the side of your screen and stay there until they are clicked. While clear for some people, these pop ups seem to be overlooked quite often. (2)
- ❖ Egg Inc also uses models in-game that go around your farm to showcase system statuses. Such as warning signs whenever capacity gets overloaded or a delivery bus whenever a package gets delivered to your notifications. (3, 4)
- ❖ Egg Inc also shows ongoing events and active boosts in a similar manner as notifications, just on the other side. (5)

All in all I would say the visibility in Egg Inc regarding system status is perfectly fine, except for the notifications. (4/5)



2. Match Between System and the Real World

- ❖ Egg Inc heavily simplifies and stylises running a chicken farm. The game uses quite some real life features such as hen houses, chickens, silos, pickup trucks, physical mail and of course the delivery of eggs.
- ❖ While Egg Inc is somewhat based on reality in the beginning of the game, once you are hooked into the game, a lot of elements start to get out of hand with their realism. Hen houses become wormholes late game, the chickens their eggs become whole universes condensed and the delivery of eggs becomes based on futuristic hyperloop trains. However this transition is done tastefully and slow enough where it only enhances the gameplay.
- ❖ There are of course some mechanics that break realism (such as tapping to make chickens appear) but these are done to make gameplay more fun.

All in all I would say the match between these worlds are there in the beginning of the game to introduce you to the mechanics, and once you are familiar newer, more unrealistic features start getting added. (3/5)



3. User Control and Freedom

- ❖ Egg Inc has a very linear progression system for most of the game.
- ❖ Players of Egg Inc can choose to perform pretty much all their actions at any time, as long as the funds are there.
- ❖ There are quite some (semi) permanent choices in Egg Inc however. These choices (such as progressing to the next egg or prestiging to your first egg) can be a bit unclear in their consequences and can therefore accidentally be performed when the player did not actually mean to.
- ❖ There is a way to backtrack through the game. This mechanic is called prestiging and actually becomes a crucial way to progress due to permanent bonuses being unlocked upon performing a prestige. However performing a prestige can be very time consuming meaning accidental permanent mistakes can often only be fixed after a good while of having to deal with them first.
- ❖ There is one quite annoying feature that is present in all lists but especially in the research upgrades list. That feature is that you will have to scroll all the way down the list every time you go back up or down. Whenever the player chooses prestige often this becomes especially annoying because the player has to keep scrolling down and buying a lot of upgrades over and over which take quite a while. This is also weird because other menus such as the hen houses or cargo delivery both have MAX buttons that enable you to buy as much as you can afford. The menu that arguably needed this most (the research menu) is the only one lacking this feature.
- ❖ Some parts of the UI can be in the way when trying to catch drones.

All in all the freedom in Egg Inc is pretty sound, but the game does struggle with some possibilities of making irreversible mistakes that can only be fixed by going through a time consuming process. The lists as well really can be a struggle to go through. (4/5)

4. Consistency and Standards

- ❖ Egg Inc's user interface mostly follows the same style a lot of other mobile applications use. Elements such as simple icons and simple buttons.
- ❖ Egg Inc often uses lists or grids for the menus to enhance clarity.
- ❖ Terminology of upgrades, currencies or everything really in the game is amazing. There are never any cases where the terminology of elements clash with one another, creating cohesion in the current build of the game.
- ❖ Some of the menus in Egg Inc have different layouts. This creates a difference that can be seen as incoherent but also as a way to distinguish different parts of the game.



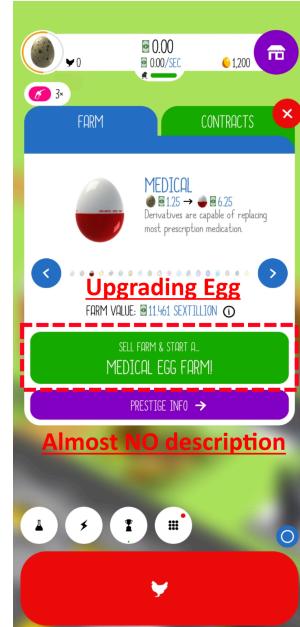
- ❖ At some point in the game you unlock space missions. These missions and everything that is related to them suddenly have a dark UI instead of a light UI as seen everywhere else in the game. This can also be seen as discohorent or as providing more clarity between different parts of the game.

All in all the consistency is mostly there. Some menus use different layouts which can make for an incoherent experience. (3.5/5)

5. Error Prevention

- ❖ Egg Inc does include quite some tooltips and pop ups whenever you are about to make a big decision with consequences. However quite a few of these tooltips can be misleading. They can mislead people in two ways really: one is via not stating the consequences enough. This happens mostly when progressing to a new egg. But they can also mislead you in a way that it hinders some people from ever going through with a decision. This can be the case with prestiging, where you completely reset your egg progression, but gain very powerful permanent bonuses. The way it is explained can make it that players feel too intimidated by prestiging and ending up never able to progress past a certain point.
- ❖ Egg Inc luckily does not have any true fail states where a decision permanently ruins the game and makes progression impossible. However poor spending or upgrading in some areas can greatly hinder progression.
- ❖ In general some descriptions could use some better explanation to prevent confusions and misunderstandings.

All in all while Egg Inc does include quite some error prevention, the way things are explained in the game can make for misunderstandings. (2.5/5)



6. Recognition Rather Than Recall

- ❖ Most of the interactions in Egg Inc rely on recognition. A lot of upgrades or progression elements stop being explained after you interact with them enough times.
- ❖ Egg Inc's user interface constantly updates and constantly shows the player what is up so that any important information can always be seen in an instant.
- ❖ Some late-game mechanics (for example artifacts and epic research) require external guides for a full understanding of them. These mechanics are very complex with a lot of variables that are not fully explained in-game.

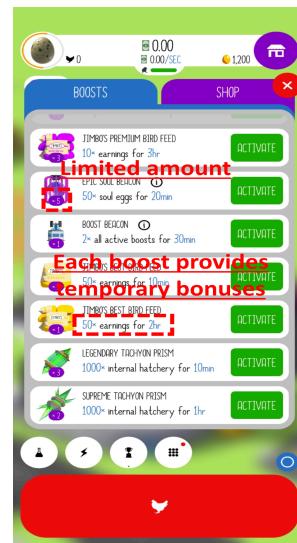
All in all I would say that Egg Inc is mostly fine in this regard, except for late game mechanics. Epic research is doable since it is very similar to normal upgrades, but artifacts are a great deal too complex for the amount of explanation Egg Inc provides. (3/5)



7. Flexibility and Efficiency of Use

- ❖ Pretty much the entire game is based on very simple and quick single tap interactions. One issue is the long scrolling times of certain lists (such as research menu)
- ❖ For fully optimized efficiency frequent actions and checking up on your farm can become mandatory, but not necessary.
- ❖ Players are able to maximize loadouts through different research upgrades, and most importantly artifact and boost setups. These are quite complex to utilize with its full potential but offers a fun challenge for players that really want to push the game to its limits.

All in all Egg Inc is almost as simple as a game can be regarding interactions. However if players want to stray away from casual play that is still possible through different options in the game.
(4.5/5)



8. Aesthetic and Minimalist Design

- ❖ The UI of Egg Inc is very clean with little unnecessary details that clutter your vision. However the UI is in certain areas *too* clean. As mentioned before the game could benefit from explaining more or providing more visual feedback regarding some elements in the game.
- ❖ While Egg Inc of course uses UI elements to provide the user with information. A lot of the game is actually not at all able to be reached through menus. Egg Inc provides visuals of your farm during gameplay. However these visuals are also able to be pressed to go to their respective menus. For example clicking the research building opens the research menu the same way as clicking the UI button does. When unlocking more in the game you start unlocking extra buildings that strangely enough do NOT have UI counterparts. Some of these buildings include the Hall of Artifacts (1), Space mission control (2) and your Fuel Tank (3). These buildings are quite crucial for especially late game progression but they are only accessible through clicking the buildings, no UI explanation whatsoever.
- ❖ Later on in the game when you start to unlock more and more upgrades and elements, minimalism can make way for a bit of cluttering.
- ❖ The font is not very readable at times, this becomes more apparent when viewing from further away.

All in all Egg Inc can use a bit more descriptive UI but more importantly should definitely make sure that all elements of the game are reachable through UI. (3/5)



9. Help Users Recognize, Diagnose, and Recover from Errors

To prevent repetition: See heuristics 3, 4, 5, 7, 8 (3/5)

10. Help and Documentation

- ❖ In the beginning of the game Egg Inc provides the user with some basic tutorials to make the user get a feel for the game. As we progress into later in the game, these tutorials still pop up whenever something happens for the first time, but often they are not very descriptive. This together with the already increasing complexity of the game later on, makes that the player will most likely need third-party services such as wiki's to understand all the mechanics of the game.
- ❖ The game does offer a help section in the game. This section covers some frequently asked questions and also shows a link to the official Egg Inc wiki. The game even has a list of youtube tutorials under the name of Egg, inc. University which provides players with video tutorials on how to perform certain actions in-game together with some tips.

All in all Egg Inc does provide you with quite some help to get going. But when the game starts to ramp up in complexity, most of your information will actually become available outside of the app, having to leave the app to continue playing. (3/5)



Hodent's 7 principles of Usability

Before moving on it was highly recommended to take a look at the 7 principles or pillars that Celia Hodent had created regarding user experience. So that is exactly what I will do now.

1. Guidance

The game should provide the player with clear instructions, hints and tutorials so that the game is playable without getting frustrated by unclear elements. I did discuss this in the heuristics multiple times. The game mostly expects you to know what everything does so it's alright. (3/5)

2. Feedback

Here the player is supposed to get quick and meaningful responses whenever to perform an action. I have not really discussed this above in the heuristics. Egg Inc provides the player with a lot of (almost) immediate feedback. Albeit in the numbers changing or whole buildings changing appearance, almost any action the player can perform, can be instantly seen the effects of. The only part where this might not be the case are certain research upgrades that act similar to investments. However these are few and far in between and are worded clearly enough that it still shows you exactly what is going to happen. So not a problem in Egg Inc. (4/5)

3. Clarity

This is where the game should provide clear visuals that are easy to read and understand. I mostly discussed this in the heuristics above. There is one small matter and that is that I heard from people that on some other devices depending on the devices settings, the games UI can scale weirdly which makes it lose clarity. But mostly this is alright. (3/5)

4. Consistency

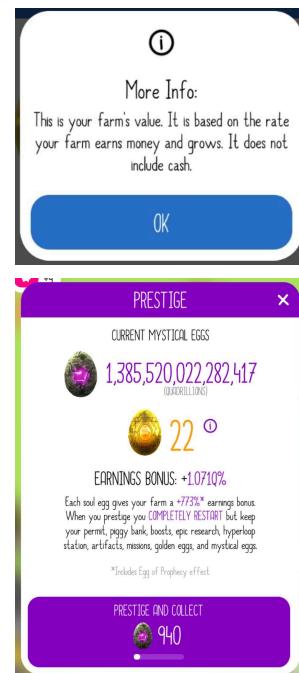
Consistency is where the game keeps using the same icons, wording and UI elements so that the whole game feels like one piece and coherent. I discussed this plenty in the heuristics above. Is not a problem except for different menu layouts. (4/5)

5. Significance

Players should always be able to tell how significant an action will be, whether it is for progression, efficiency or other goals. I slightly touched on this in my heuristics but Egg Inc mostly does this quite well. All upgrades are always very clear in what they will do. There are however two exceptions where it might be a bit unclear. Those are egg progression and prestiging.

In order to process towards your next egg, your farm needs to have a certain amount of value. The game tells us that this value is calculated based on the rate your farm grows and earns money, but this does not say a lot. So in truth it is often hard to keep track of how much your choices really affect the main progression of the game: increasing farm value and upgrading your egg. The other one where this is the case is on the prestiging screen.

For prestige you have to earn a special sort of egg. The way these eggs are earned are simply via earning money. However the calculations for this are very weird and unintuitive (I think some exponential stuff is going on). Since prestiging is also incredibly important it is unfortunate that not a clear description is provided. (2.5/5)



6. Control

It is important that players feel in control over their own actions but also just in general in the game. I touched upon this a bit in Egg Inc but there really is not that much to touch upon really with Egg Inc. Again the only problem with control in Egg Inc is the possibility to accidentally make irreversible mistakes, but this feels more like a description issue than a control issue because the control of the player is never taken aback, the text prompting the action is just a bit misleading. (3/5)

7. Cognitive Load

This is where Egg Inc can struggle a bit depending on the type of player you are. With this principle it is important that the player does not get overloaded with information when playing the game. Egg Inc shows quite a lot of data, a lot of it being numbers. In my own opinion this is not overwhelming at all since it still is not that much. However if you are someone that likely gets overwhelmed by bigger amounts of data, this can be a small issue I can imagine. Due to the nature of this game I do feel like this is something that can hardly be avoided. The numbers sadly are a big part of the game and taking them out of the game, or reducing the amount of them would directly take away some core game mechanics. (3.5/5)

The main takeaway from these 7 principles would be again that Egg Inc would benefit from being more descriptive in certain areas of the game. This ties in with what I noticed in the heuristics as well so this comes not as much of a surprise. I did figure out that the egg progression and prestige system really does need a bit more love before it is fully understandable for every player.

Gestalt principles

Analyzing Egg Inc based on the Gestalt principles will help me understand what the developers and designers already did with these principles. It will also enable me to see more clearly what might still be lacking, and what I can then do in my redesign to make the design better.

1. Proximity

- ❖ Certain UI elements are grouped locally close to each other signifying that they belong to each other. For example all notifications are on the right (1), all research and related menus are at the bottom (2), all events and boosts are on the left (3) and everything regarding progression and earnings is situated at the top (4).
- ❖ This is also the case for the buildings that Egg Inc makes use of. All silos are on their own patch of land (1), all hen houses are in their own special row and all research buildings are also situated together (2).
- ❖ Only problem is that some are excluded from proximity all together by not existing (space related menus) (3.5/5)



2. Similarity

- ❖ Icons with similar functions share similar shapes. For example pretty much all buttons that open menus are shaped in circles and all boosts are capsule shaped.
- ❖ All currencies are shown in a similar manner: icon for currency > amount > potential order of magnitude. This makes it that the player is instantly able to recognize whenever the game shows a currency.
- ❖ Pretty much all upgrade menus also use the same card / list like style. (4/5)

3. Closure

- ❖ I suppose the egg processing cycle (hatching > egg laying > production > delivery) is simplified as you do not see this process actually being performed (aside from maybe picking up the eggs for delivery). This does not really mean anything though for gameplay so this principle is not really used that much. (4/5)

4. Continuity

- ❖ Everything in the game is based along a path. The chickens follow this path and all buildings are situated somewhere along this path. This guides the user's eye through the game and its different sections.
- ❖ All the buildings are based on different sections and in those sections they are laid out in a grid, making sure that new buildings are easy to find.
- ❖ Within the menus little arrows are used to direct the user's eye and to show the direction of lists. (3.5/5)

5. Figure-ground

- ❖ Numbers and figures are pretty much always black on white or vice versa to create contrast and thus making it more visible.
- ❖ The actual farm uses 3D models with details and different colors and movement, while the UI uses flat colors with simple shapes. These two clash in a way that makes both of them very distinguishable from one another.
- ❖ Whenever a menu is open, the background becomes darker and blurred, making sure the focus is on the menu, not the farm. (4.5/5)

6. Common Fate

- ❖ The farm itself has quite some animated elements such as the chickens running to their hen houses after being hatched, but also the delivery trucks that come to pick up the eggs. These simulate the production of the eggs.
- ❖ Drone rewards (and other bonuses) are always extra models that are normally not there, making them stand out and incentivize clicking on them.
- ❖ Notifications for new missions, upgrades, daily rewards or anything you can get a notification for really all pulse every now and then together with shaking animations to draw attention to them. (3.5/5)

7. Symmetry & Order

- ❖ The whole game uses even spacing together with symmetry and balance. You will not be able to find any menus in this game that are not structured in one way or the other. This makes sure that at all times the screen never becomes too messy or overbearing. 5/5

Egg Inc UX/UI principles score original

Nielsen heuristics	33.5/50
1. Visibility of System Status	4/5
2. Match Between System and the Real World	3/5
3. User Control and Freedom	4/5
4. Consistency and Standards	3.5/5
5. Error Prevention	2.5/5
6. Recognition Rather Than Recall	3/5
7. Flexibility and Efficiency of Use	4.5/5
8. Aesthetic and Minimalist Design	3/5
9. Help Users Recognize, Diagnose, and Recover from Errors	3/5
10. Help and Documentation	3/5
Hodent's principles	23/35
1. Guidance	3/5
2. Feedback	4/5
3. Clarity	3/5
4. Consistency	4/5
5. Significance	2.5/5
6. Control	3/5
7. Cognitive Load	3.5/5
Gestalt principles	28/35
1. Proximity	3.5/5
2. Similarity	4/5
3. Closure	4/5
4. Continuity	3.5/5
5. Figure-ground	4.5/5
6. Common Fate	3.5/5
7. Symmetry & Order	5/5
	84.5/120

Problem and Solution analysis

Severity of the problems in Egg Inc

So now that I analyzed the game based on heuristics, Hodent's principles and Gestalt's principles, I will pick out the most important and outstanding problems with Egg Inc.

To view this in a clear concise way I will put them in a table where they will be ranked / sorted based on how severe of a problem it is, or rather what the priority is in fixing them. The numbers chosen do not represent a 1-10 scale but are rather there to show hierarchy.

Priority <i>From highest to lowest.</i>	Heuristic <i>As seen above</i>	Description <i>A shorter description than the one shown in the analysis above</i>
1	8.2	Some parts of the game are not reachable through the UI while all other parts are. This can lead to accidentally missing out on important features.
2	3.3 / 5.1	It can be unclear what the actual effect of an upgrade could be before buying it. This is due to a lot of numbers affecting the same value for example. This could be fixed by having previews of what would happen after buying an upgrade.
3	3.5 / 7.1	The game's lists can be a hassle to traverse through when progressing to late game. This together with the upgrades taking quite long to perform.
4	8.4	The font is not very readable and can be straining for the eyes.
5	6.3 / 8.1 / 10.1	The game could use better descriptions in some parts of the game. Especially when getting later into the game, a lot of information becomes only accessible by making use of third-party services.
6	Hordent's Principles	Two of the most important parts of progression; egg upgrades and prestiging, lack proper explanation making the core progression sometimes a bit unclear in its workings.
7	1.2	Notifications in-game can be hard to keep track of. While the game does give them animations to make them easier to spot, they still go up into the rest of the UI making it more difficult to see them.
8	3.3 / 5.1	Whenever (semi) permanent choices will be made, the game usually prompts the user with the consequences they are about to face, but sometimes this is <u>not</u> the case and even if it is, the descriptions can be unclear to understand.
9	4.4 / 4.5 / 8.2	The game is not fully consistent with its menus. Some menus are grids while others are lists and some other menus are a mix of the two. To enhance cohesiveness this could be fixed to become more of the same type.

Design and user requirements

In this paragraph I want to create some design requirements possible users of the app would have. I will then think of some possible solutions based on these requirements to help me with making decisions for my redesign.

- ❖ *As a user I want to be able to have a clear insight in what way my farm grows.*

This can be done by providing the player with an actual calculation regarding farm growth. Right now this is done via a vague text masking the calculation, however by giving the player this calculation together with an explanation on how it works allows the player to make more calculated decisions.

- ❖ *As a user I want to be able to have a clear insight in what way I earn my money.*

This can be done by providing the player with more statistics and calculations regarding their money earnings. These statistics can be put away in a different tab to not make it clash with gameplay, but rather be there for anyone interested in them.

- ❖ *As a user I want to be able to have a clear insight in how my progression is determined.*

This can be done by providing the player with a more clear and detailed vision on your progression. Right now you can only ever see the next step in your progression and this step is only viewed as a number, not any indicators depicting how long it may take or what it will unlock.

- ❖ *As a user I want to be able to see what effects all my decisions will have on my farm.*

This can be done by noting down clearly what the consequences are of one's actions before an action is done. Another way is to enable a preview of what would happen after an upgrade.

- ❖ *As a user I want to be able to easily navigate the app and use all its features without confusion.*

This can be done by providing a clear and uncluttered UI with icons and menus that are self-explanatory in their function.

- ❖ *As a user I want to be able to change settings in the game regarding customization and optimizations.*

This can be done by including a settings menu in which the player can tweak and customize different settings.

- ❖ *As a user I need to be able to understand all icons and data presented to me without confusion.*

This can be done by using coherent terminology and easy to understand icons that are self-explanatory in their meaning.

- ❖ *As a user I need to be able to read all the text in the game without straining my eyes.*

This can be done by using a more readable font so that the text in the game becomes more readable both for farther away and in general.

Summary of what will be changed

Looking at all this data I will now be able to compile everything I want to get changed. A very important general note is that a lot of Egg Inc could benefit from simply being more descriptive.

One of the two other pretty big oversights in Egg Inc designs would have to be that some elements of the game are just not accessible via user interface elements. This is of course a pretty crucial mistake in the user interface because this could lead users to miss out on important gameplay mechanics.

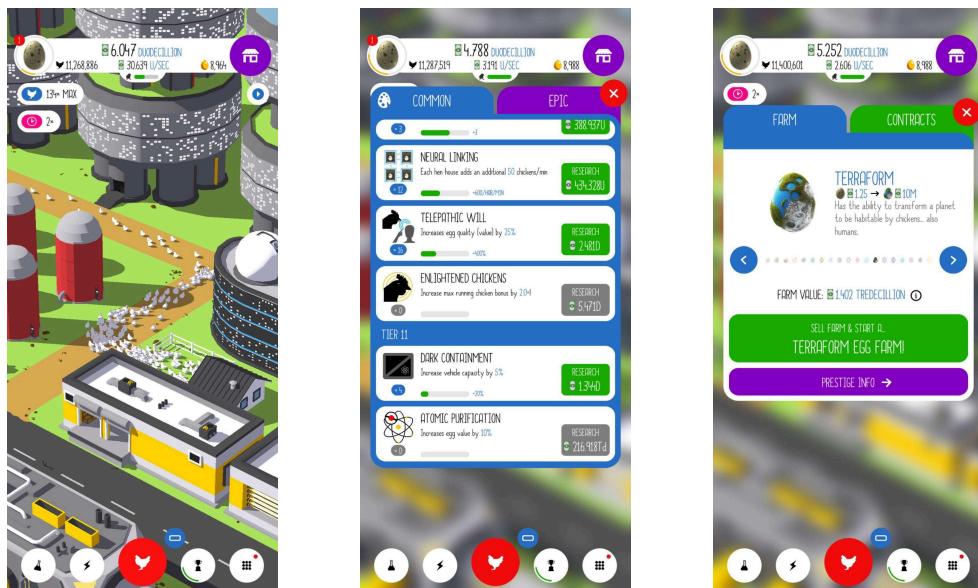
The other important oversight I figured had to be the very long lists, especially the research upgrades menu. Here the main issue is that later on in the gameplay loop it often comes down to prestiging a lot and upgrading a lot, but everytime you prestige you will have to go down that very long list and spend ages doing all the upgrades only for you to do it all over again when you prestige (or upgrade your egg) again in a few minutes. This together with the fact that the lists also make the research menu quite unstructured. Yes, the lists technically are quite structured, but the incredible length of them makes it that an overview becomes quite hard to get.

So, the main things I will want to fix are (individual screens might have more):

- ❖ Make the UI more descriptive where need be.
- ❖ Make the UI show previews for upgrades or permanent choices.
- ❖ Make ALL elements of the game accessible from the UI.
- ❖ Make unnecessarily long lists of another structure for better overview.
- ❖ Make the font more readable.

The screens I will apply these changes to are:

- ❖ Main screen. (First)
- ❖ Common research screen (and potentially Epic research). (Second)
- ❖ Farm value / Egg progression screen. (Third)



Low Fidelity

Main screen

For the main screen I actually do not want to change everything, mostly shuffling stuff around, however the notifications could use a change in how they are displayed. Another big thing is that certain menus are not reachable through the UI which also needs a change.

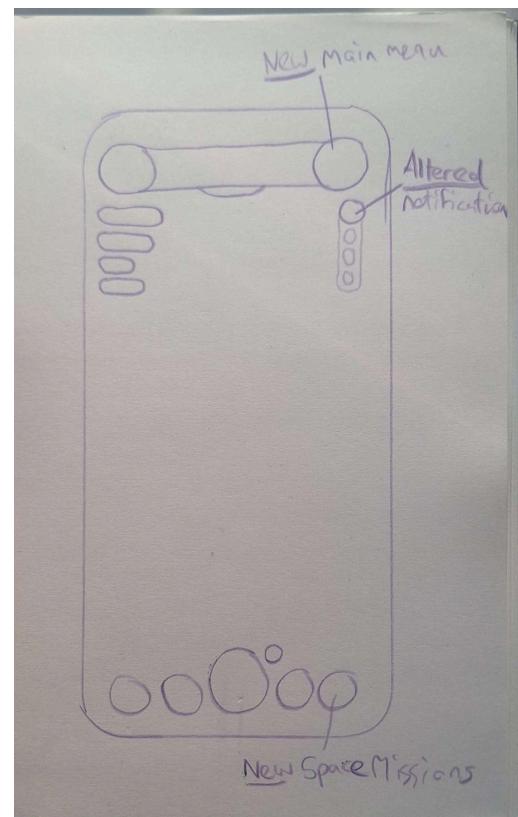
I want to handle this by including more UI icons that refer to the missing menus. These menus include the Hall of Artifacts, Mission Control and the Fuel Tank. All 3 of these menus are all special as they are the only 3 menus necessary for everything the space missions have to offer. This leads me to think that I could include these menus not as 3 separate buttons (at least not directly) but rather as a button that opens up into more buttons. This is similar to how the Main menu button works where it opens up into a grid of 8 more buttons.

I want to do something similar to this as well for the notifications, where a single button alerts you if you have notifications which you can then open up to view them.

The shop is also a feature that is usually never being used (since it uses real money), yet it takes up quite a big part of the menu. I am thinking of including the shop into the main menu grid, and moving the main menu button to where the shop was.



Original main game screen



Low Fidelity redesign of main game screen

Common research screen

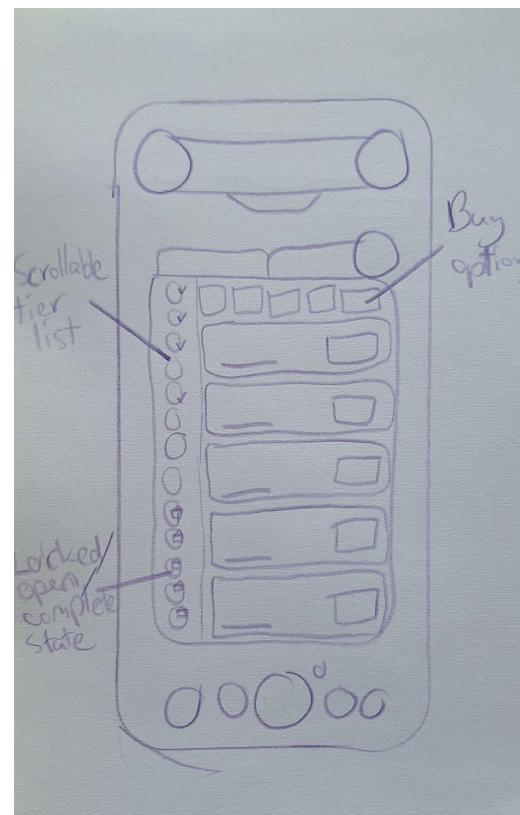
The research menu has two bigger issues. One of these is the fact that it consists of one very long list which makes traversing it and checking if you have done everything a bit of a hassle. The list is already subdivided in different tiers with 4-6 upgrades each. I will probably want to make a list of just the tiers, which you can then open up to find the upgrades inside. This way you could also easily add a checkmark or something to note a tier is completed.

The other big problem is that buying upgrades in bulk is really annoying. Especially when you start resetting often and having to rebuy 2000 levels of upgrades every few minutes it starts to get in the way of fun. This could be fixed by providing the user with a button that changes the amount you buy (what other upgrade menus already have). For example: 1, 10%, 20%, 50% or MAX.

Final small thing as an extra could be a preview of what the effect of an upgrade really is going to be. For example showing how much egg value you will have in total.



Original common research screen

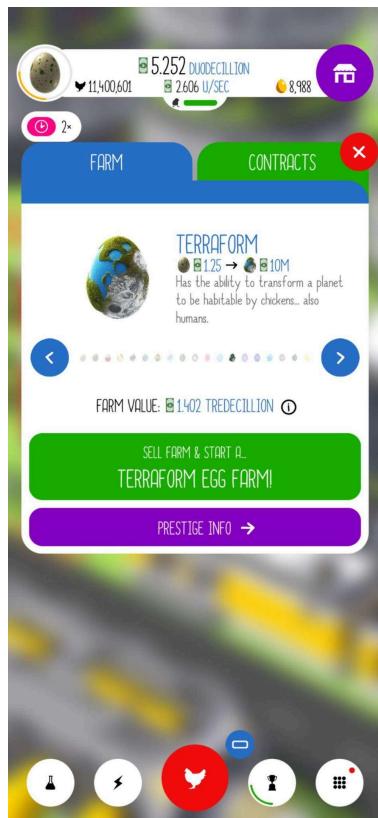


Low Fidelity redesign of common research screen

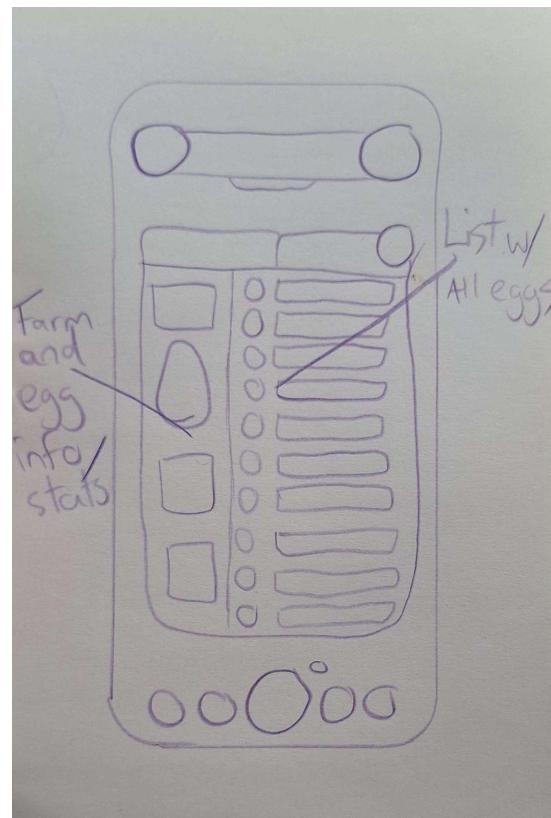
Egg progression screen

This screen is not that bad, however there are some personal things I want to try out with it. There is one issue though and that is that your main way of progressing is your farm value, the way your farm value is determined however remains a bit of a mystery since not a clear description is provided.

Personally I also want to play around with the display of all the egg levels. In-game, especially when you have not unlocked all eggs yet, it is quite unclear what future eggs are going to be. Another nice extra could be that you see your trophies before going into an egg since this becomes one of the main focuses entering late game.



Original egg progression screen



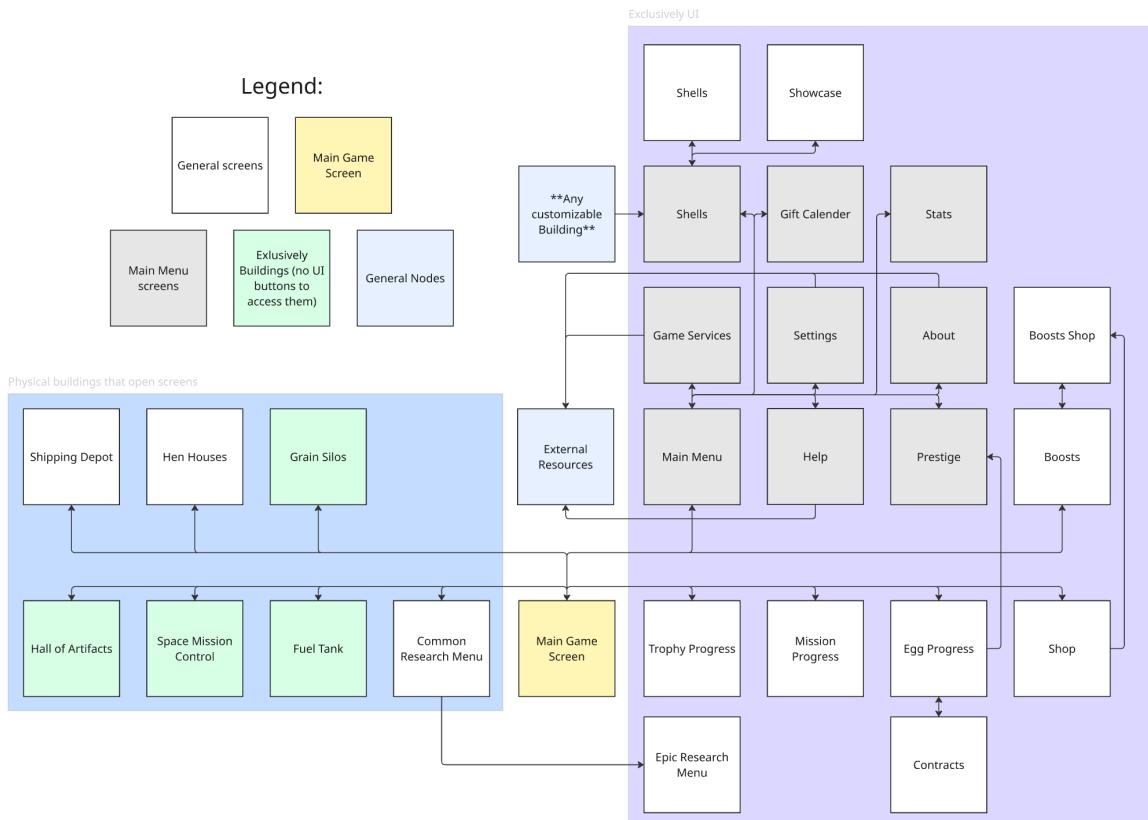
Low Fidelity redesign of egg progression screen

Egg Inc Flowchart

This game has a lot of screens, with a lot of them actually accessible in the main gameplay screen. I wanted to create this flowchart to have an easy sheet to refer to whenever I want to check how the interface is loaded out.

Since some UI screens are accessible through tapping 3D buildings instead of 2D UI elements I also included these but in a separate category.

Since there are quite a lot of screens and some of them are interconnected in unexpected ways I might have missed a few screens. I did however thoroughly check all the screens I will be changing so even if I missed a screen, it should not influence me or my redesigns.



Flowchart showing Egg Inc's interactions.

Medium Fidelity

Main screen

In order for me to effectively include the new elements I added I decided to remake the rest of the UI of the main screen as well. The main elements include:

- ❖ Main menu button now at the position of the original shop menu.
- ❖ Shop menu into the main menu.
- ❖ A new space menu taking the place of the original main menu, includes a collapsible menu with all the space related menus.
- ❖ Notifications are now inside a collapsible smaller menu.
- ❖ A small change: the hatchery icon is now the same as the chicken spawn button.



Mid Fi redesign of main screen (menus collapsed)



Mid Fi redesign of main screen (menus expanded)

Common research screen

The common research screen includes a couple of changes. To list all of them:

- ❖ The big original list is now broken down in smaller (unscrollable) lists, divided by tiers.
- ❖ The different tiers became a new (scrollable) list aside from the research upgrades.
- ❖ Each tier now has an indicator in the list showing its state of completion.
- ❖ New buttons have been added to change the amount you buy of an upgrade.
- ❖ A little extra indicator now exists to show the total stat of an stat you upgrade.



Mid Fi redesign of common research screen

*Mid Fi redesign of common research screen
(alternate tier and multiplier)*

Egg progression screen

The egg progression screen includes a couple of changes. To list all of them:

- ❖ The original horizontal list became a vertical (scrollable) list in which details are now shown.
- ❖ Each egg shows its collected trophies.
- ❖ Farm value calculation is now explained (will be a high fidelity pop up).
- ❖ Each egg now shows its farm value that needs to be earned in order to unlock the egg.



Mid Fi redesign of egg progression screen



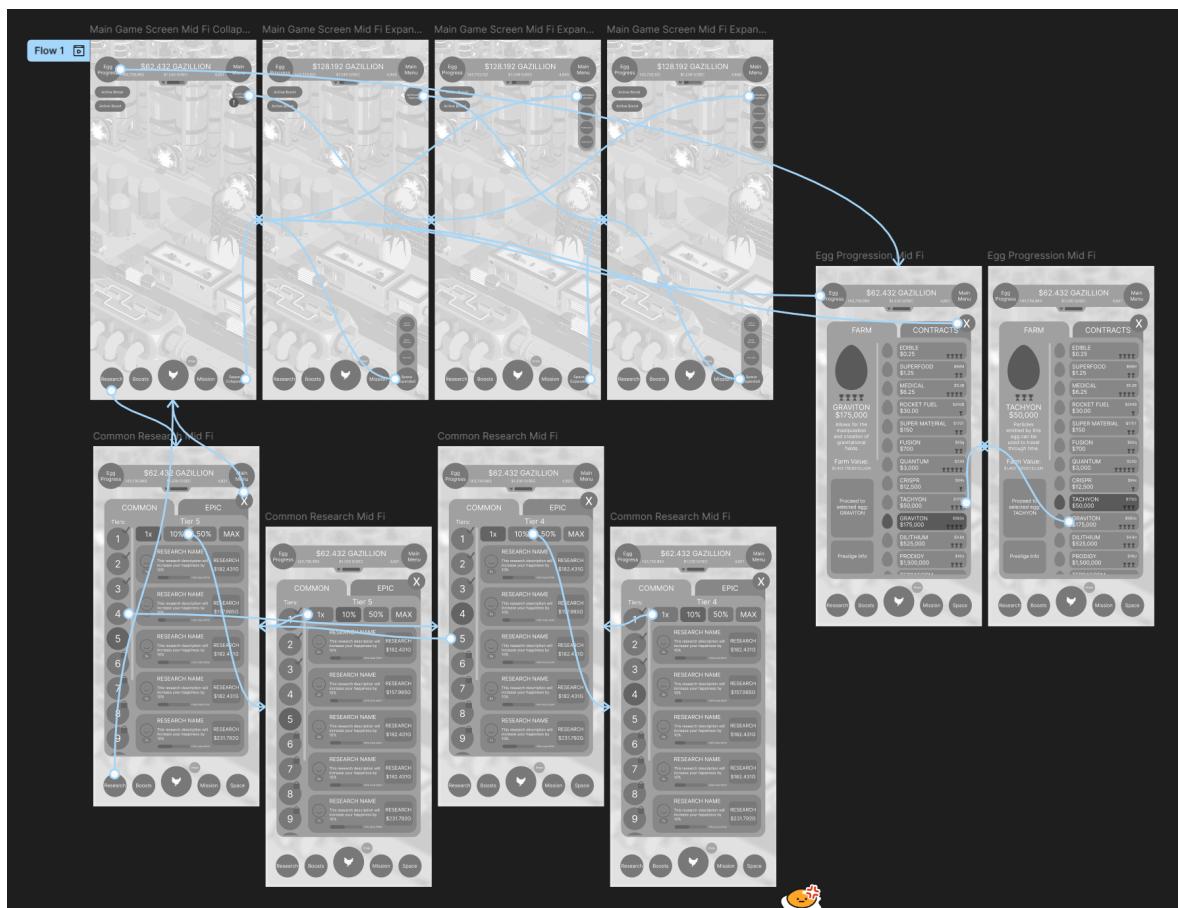
*Mid Fi redesign of egg progression screen
(alternate egg)*

Wireflows

To get a rough idea on how the buttons and screens would interact with each other I made a simple wireflow with basic interactions.

To explain the interactions I put into my mid fi:

- ❖ Navigation between different types of screens (main game, research and egg progression).
- ❖ Navigation between the different versions of the main game screen (notifications and space menu popped in and out).
- ❖ Navigation between different eggs in the egg progression menu.
- ❖ Navigation between different tiers in the research menu.
- ❖ Changing of the buy multiplier in the research menu.



Mid Fi wireflow showcasing

High Fidelity

Explanation

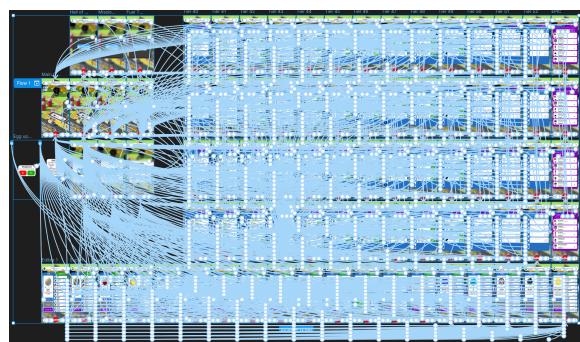
I went hard. For my high fidelity redesigns I mostly followed my mid fi redesigns. I however did add a few extra screens to showcase the usage of different buttons. I added the following screens purely as previews that the buttons work: Mission control, hall of artifacts, fuel tank, boosts and trophies. These are not redesigned, they are empty, they are just there to show the usage of buttons. I also added the altered main menu to showcase where the new location of the shop would be since I changed that location.

I ended up doing quite a bit more than I first anticipated when I started, but I really wanted to create a redesign that really felt part of the game. I wanted someone to open up my redesign and feel like it is the exact game they are playing. This is why I refrained from using any in-game screenshots apart from the background.

To showcase my beautiful Figma file here are the screenshots viewing it in its entirety:



All design screens in Figma



Bombastic wireflow

*** I want to mention that because my Figma file is so big, it becomes very difficult to showcase everything in a google docs file without making the file 150 pages long. Because of this I chose to keep the screenshots at the amount they currently are. If you truly want to see all the details of the redesign, please open up the Figma prototype. ***

Main screen

For the main screen I basically followed my mid fi redesign 1 on 1. I recreated Egg Inc's UI and shuffled around the buttons I wanted to shuffle around. To quickly summarize once more: I moved the main menu button from the bottom right to the top right. In place of the original main menu button there exists now an expanding space menu showing the three space related menus that were normally not accessible through the UI.

Another element added is the dropdown menu for the notifications. This way they are less in the way during gameplay (for example when trying to catch drones) and it becomes easier to see when a new notification has come in through the new animated exclamation mark.

I also decided to change the font of the game. I tried out a bunch of different fonts (even more than the ones underneath here) and I ended up choosing Sofia Sans Extra Condensed. This font matches the thinness of the original Egg Inc font, but makes it a lot more readable and clean.

This is Rajdhani. I am trying out this font. 12345

This is Shadows Into Light Two. I am trying out this font. 12345

This is Exo 2. I am trying out this font. 12345

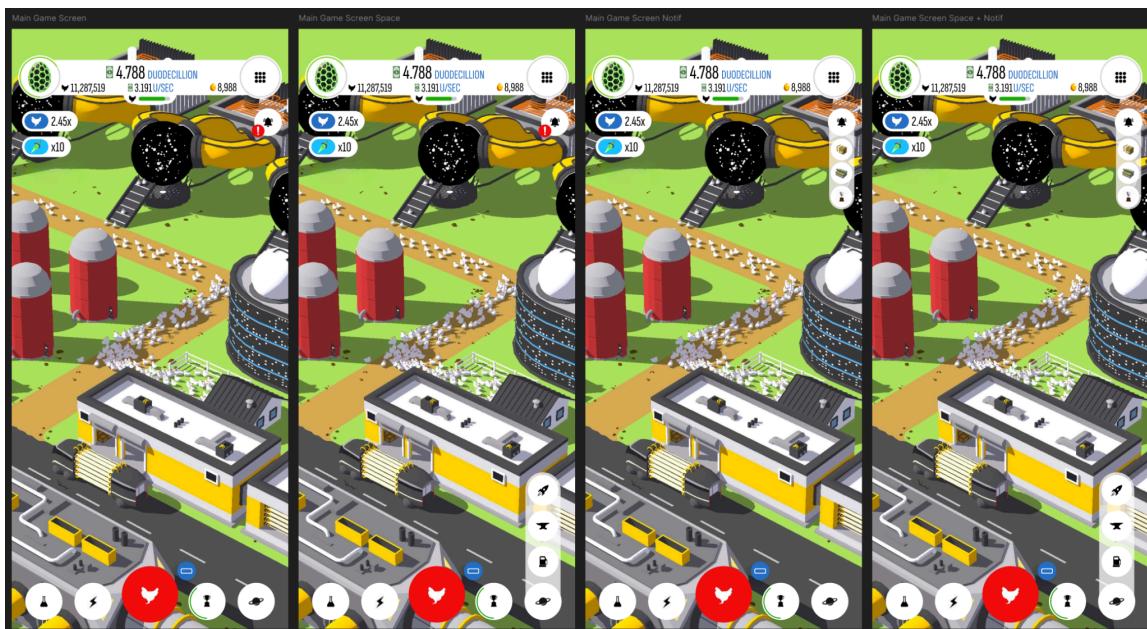
This is Barlow Condensed. I am trying out this font. 12345

This is Poppins. I am trying out this font. 12345

This is Sofia Sans Extra Condensed. I am trying out this font. 12345

This is Titillium Web. I am trying out this font. 12345

This is Orbitron. I am trying out this font. 12345



High fi redesign of all variations of the main game screen

Research screens

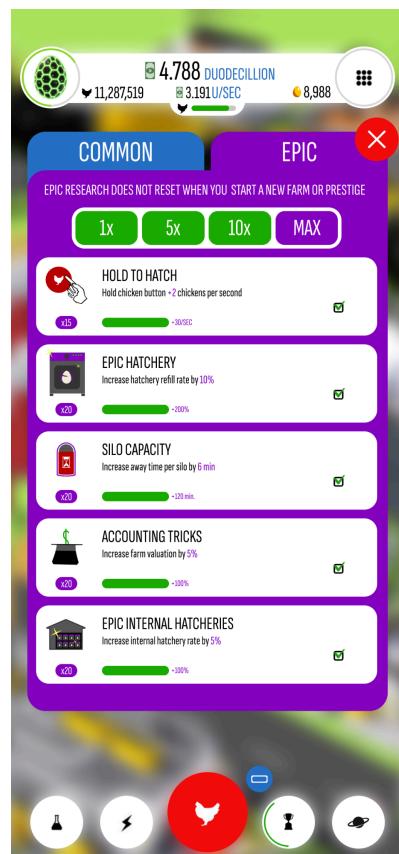
The research screen is where stuff began to get out of hand. First of all I want to mention that I decided on redesigning the Epic research screen as well. So I made both the common research screen (previously seen in the lo- and mid fi's) and the epic research screen. The reason I did this without first creating a mid fi is because the epic research screen is still a research screen, thus following the same design rules as the common research screen, the one I already made. The only thing different between them is that in the epic research list is one big list again instead of different tiers because epic research upgrades don't have tiers and there are way less of them. And the color is purple instead of blue, because it's epic.

To summarize the changes made to the common research screen again: I decided to subdivide the big list into smaller lists categorized by tiers. All these tiers now have become a new list on the side of the screen through which you can easily scroll and see the status of each tiers. I also added different buttons for buy options. These change the amount you research per time to speed up bulk researching sessions.

Because Figma did not let me change variables for free, these changes to the research menu led to the immense block shown in the explanation tab. I wanted to make all buttons work, but in order to do that I had to create a lot of variations of each screen. On top of this I also decided to make every single research upgrade with the correct information to show off the font and really enhance the sense that this UI is actually in the game.



High fi redesign of common research



High fi redesign of epic research

Egg progression screen

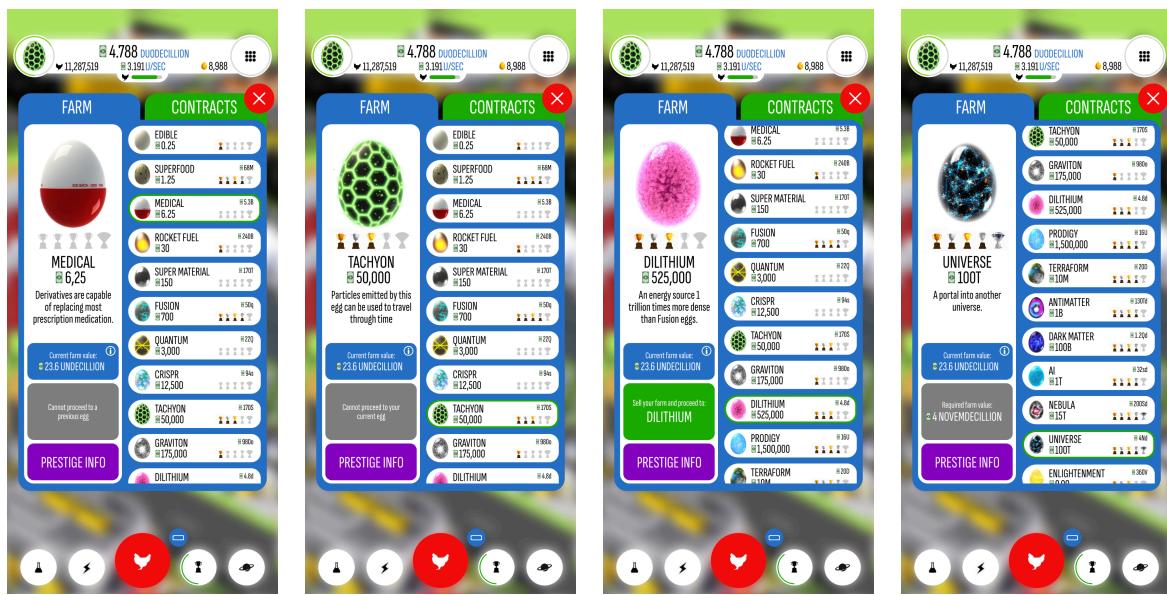
With the egg progression screen I again stuck very closely to the design I created in my mid fi. I decided to transform the game's original horizontal list into a vertical list that goes down. This vertical list allows for a lot more descriptive view of all the eggs. In the original game you could only really view one egg at a time but with this layout it is possible to view a lot of eggs and their crucial information at once. It now also showcases collected trophies since this becomes quite important later on in the game without a really clear way to view all of them.

Similar to the research screens I decided to fill in all the information of all the eggs to really show the maximum potential of this new UI. This of course was a bit more work but shows way more information and paints a way clearer image. I prefer to show, not tell.

I also added a pop up explaining the farm value calculation in greater detail. The actual calculation is too complex to show in-game so I provided an external link to it. Another pop up was also added for a confirmation on egg upgrade.



Pop up of farm value and egg upgrade confirmation

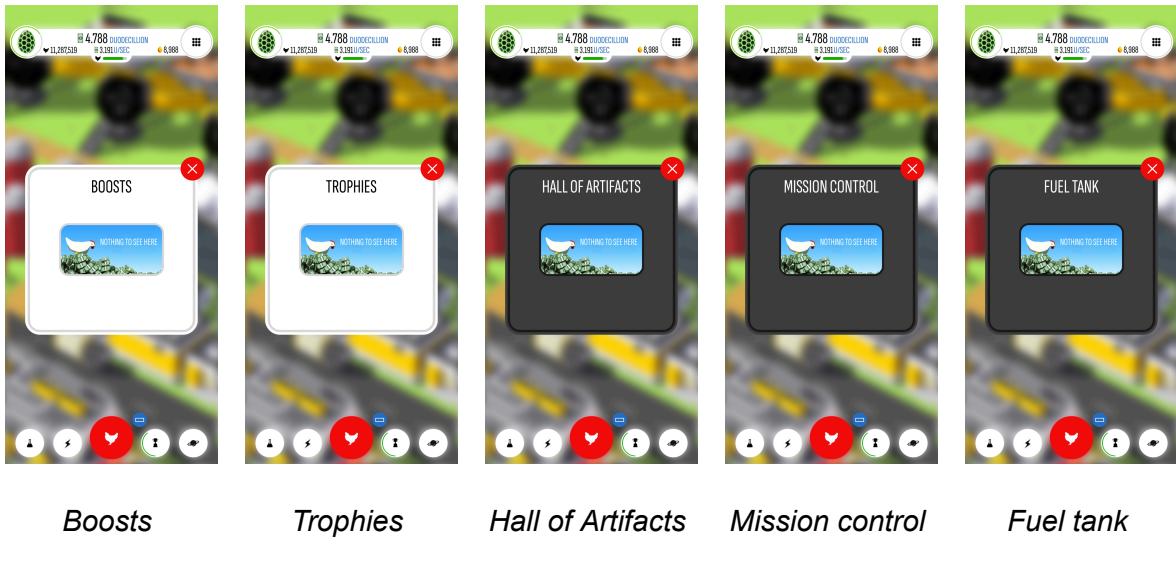


High fi redesigns of egg progression screen

Extra screens

I added some extra screens in the High fi to showcase the usage of buttons. These screens are without contents since they are just there to show that the new buttons I added are working as intended.

The screens added for this reason are: Boosts, trophies, mission control, hall of artifacts and fuel tank.



There is one extra screen added that does include a small change, that being the Main Menu. In my redesign I replaced the store button with the main menu button. I then placed the store button inside the new main menu button. This little menu showcases where the store button would have gone in a complete real redesign.



Main menu with new shop button

Wireflows (buttons)

I have already shown a funny screenshot regarding my total wireflow in the explanation section, but this alone does not show much useful information regarding the actual wireflow of my prototype.

The wireflows however are too difficult to even showcase when simplifying them so instead I will discuss the different buttons and their effects. This screenshot on the side is the simplest I could make it, most are **way** worse.



All the buttons will be categorized by the screens (apart from Main UI) on which they are visible.

"Simplified" wireflow of notification screen

Main UI (Visible anywhere)			
	Research button This button opens up the common research menu		Trophy button This button opens up the (preview) trophy menu
	Boosts button This button opens up the (preview) boosts menu		Space button This button opens up a dropdown with the new space related menu buttons
	Egg progression This button opens up the egg progression menu		Main menu This button opens up the (preview) main menu
	Close button This button usually closes back to the main gameplay screen. Only exception is the farm value popup where it just closes the popup.		

Main Game screen			
	Notification dropdown This button opens and closes the dropdown for notifications.		Mission control This button opens up the (preview) space mission control menu
	Fuel tank This button opens up the (preview) fuel tank menu		Research building This 3D building opens up the common research menu whenever it is pressed during gameplay
	Hall of Artifacts This button opens up the (preview) hall of artifacts menu		

Research screen			
COMMON	Common research This button switches to the common research if you are in epic research	EPIC	Epic research This button switches to the epic research if you are in common research
	Tier scrollbar This scrollbar has 13 buttons that each change the screen to their corresponding tier.		Amount buttons These 4 buttons change the amount you buy. In case of the prototype they go to alternate versions of the screen you were on.

Egg progression screen			
	Farm value This button opens up the farm value calculation pop up.		Egg scrollbar This scrollbar has 19 buttons that open up screens with their corresponding eggs.

Design evaluation

Egg Inc already achieved quite a big score when beginning to redesign the game (84.5 / 120), now to check how my redesign ranks compared to the original.

Nielsen heuristics

1. Visibility of System Status

Egg Inc already had quite a good visibility going on for itself, except for the notifications. That is why I changed them. I even got feedback confirming that they are better visible now so this definitely got improved. (5/5)

2. Match Between System and the Real World

While a chicken farm is pretty realistic, the levels Egg Inc goes to are not. My task was redesigning the user interface and sadly most of Egg Inc's unrealistic elements are rooted in its mechanics. I did not end up changing anything here. (3/5)

3. User Control and Freedom

The main, and pretty much only problem, of Egg Inc were long lists that were either messy or a hassle to go through. This together with the research being able to take ages on higher levels. I fixed this by breaking down certain lists and making other lists show more information at the same time. I also added the buttons providing the research with a possible multiplier to your amount you are buying. (5/5)

4. Consistency and Standards

I altered Egg Inc's consistency a small bit by providing more similar lists that behave more like each other. Besides this I kept up the standards already in place and even made some small tweaks to certain icons to make sure they are more consistent with each other. (4.5/5)

5. Error Prevention

The main problem here was that Egg Inc's descriptions could be quite lackluster. I changed this, fixing the problem a bit but not entirely I would say. The other problem was that some choices could be accidentally made, voiding you out of certain possibilities for the near future. I also lightly touched upon this so all in all this heuristic got improved slightly. (3.5/5)

6. Recognition Rather Than Recall

I very slightly touched on this by notifying the player a bit more with the space related menus and the notifications, but that is all. So this heuristic is mostly still the same as the original. (3.5/5)

7. Flexibility and Efficiency of Use

Made this even better due to the changing of the lists, making traversal even quicker and easier. The rest already was perfect in Egg Inc so that marks off this heuristic. (5/5)

8. Aesthetic and Minimalist Design

I now made everything in the game accessible through the UI which was a big problem in the original game. I also changed the font and changed a few icons. (4.5/5)

9. Help Users Recognize, Diagnose, and Recover from Errors

I added a few more descriptions and made getting some pieces of information such as the farm value calculation a lot easier to get. All in all a small improvement over the original. (3.5/5)

10. Help and Documentation

I again made a small change regarding this heuristic where certain links are now directly available from inside Egg Inc. However these links are still to third-party websites so it did not completely solve the problem. (3.5/5)

Hodent's principles

1. Guidance

I provided the player with a few more descriptions, pop ups and icons to guide the player through the game so I made an improvement here. (4/5)

2. Feedback

Feedback already was quite good in Egg Inc so I actually did not end up touching this principle since it already had a good score. (4/5)

3. Clarity

My version of the UI is scaled in a way that it should be perfectly fine even when viewing from a small distance (normal phone distance). I also changed some icons to be a bit more representative with what is being meant (for example the space menus). (4/5)

4. Consistency

All wording, icons, colors and UI elements in my prototype are consistent with each other. I also changed some of the inconsistent lists to become more consistent with each other. (4.5/5)

5. Significance

Originally this was a problem with egg progression and prestiging. Admittedly I have not touched prestiging but I did alter the way egg progression is conveyed to the player, showcasing way better their significance to the player. (3.5/5)

6. Control

The problem here that I decided to tackle was that there existed a few descriptions in pop ups that could be a bit misleading leading you to make a wrong decision. I changed this, but not much else regarding this control principle. (3.5/5)

7. Cognitive Load

This is something I could hardly change sadly. With the nature of Egg Inc being an idle clicker / simulation game, a lot of numbers are bound to be included. I did play around with some options to reduce this problem, but none of them seemed to work, keeping the score of the original. (3.5/5)

Gestalt principles

1. Proximity

I now included the missing buildings and placed them in proximity of each other within the already determined proximities. I also moved some elements such as the shop and the main menu to better match their locations surrounding them. (4.5/5)

2. Similarity

I improved the similarity in some aspects by introducing new UI elements for the space related menus and moving the shop to similar related menus. However I also accidentally reduced it a bit, especially the egg progression screen where the shape of the egg progression list is one that has not been seen before. Because I improved a bit, and reduced a bit the score stays the same. (4/5)

3. Closure

I did not change anything regarding closure in my redesign so this score also stays the same. (4/5)

4. Continuity

I added some lists that guide the user through the list to higher levels. This made continuity increase by a small bit but not a lot. (4/5)

5. Figure-ground

By ridding the UI of just a bit more detail, making it just a bit smoother, the difference between the 3D background and the 2D UI becomes just that bit more noticeable, even though it already was very noticeable. This was really the only “problem” regarding figure-ground. (5/5)

6. Common Fate

I decided to tackle this one by removing the way the old notifications worked. Now the notifications are in the same shape as other buttons, with a dropdown that works the same as the space related dropdown. The rest of the slight problems of common fate I did not touch, slightly increasing its original score. (4/5)

7. Symmetry & Order

Even though there was zero problem with this in the original, I might have actually reduced it. Call it a slip up of my own enthusiasm but through my own desires in creating the lists in a particular way, some symmetry actually got lost. That being said I do not think this is actually any issue, but it does slightly reduce this principle's score. (4.5/5)

Egg Inc UX/UI principles score redesign

Nielsen heuristics	38/50
1. Visibility of System Status	5/5
2. Match Between System and the Real World	3/5
3. User Control and Freedom	5/5
4. Consistency and Standards	4.5/5
5. Error Prevention	3.5/5
6. Recognition Rather Than Recall	3.5/5
7. Flexibility and Efficiency of Use	5/5
8. Aesthetic and Minimalist Design	4/5/5
9. Help Users Recognize, Diagnose, and Recover from Errors	3.5/5
10. Help and Documentation	3.5/5
Hodent's principles	27/35
1. Guidance	4/5
2. Feedback	4/5
3. Clarity	4/5
4. Consistency	4.5/5
5. Significance	3.5/5
6. Control	3.5/5
7. Cognitive Load	3.5/5
Gestalt principles	30/35
1. Proximity	4.5/5
2. Similarity	4/5
3. Closure	4/5
4. Continuity	4/5
5. Figure-ground	5/5
6. Common Fate	4/5
7. Symmetry & Order	4.5/5
	95/120

Conclusion

From my analysis the original Egg Inc came out with a score of 84.5 of the 120. My new redesign increased this score, by my own grading, to 95 out of the 120. That is around a 12% increase which honestly does not sound like a lot. However I believe this is because the game already had a fairly high score to begin with. Considering that and the fact that I was still able to fill in 30% of the remaining points, I am still satisfied with what I achieved.

When I first went into this assignment I for sure thought that having played this game would give me an incredible boost for my redesign, however I found out that this actually started working against me at some point. Having played the game a lot before and for a long time as well, the user interface of Egg Inc did not really seem a problem to me. I quickly noticed that I found it hard to discover more flaws in the interface because everything felt so natural to me. Luckily I could circumvent this by chatting with fellow students about the assignment, comparing notes and discussing redesigns.

All in all I am happy with what I was able to achieve with this assignment. I found it was also quite fun to give another look to this game compared to most of my classmates. Where most students would delve into the very first problems you encounter in the game, I could instead focus a bit more on the problems that were presented later on in the game, that were just as important in my opinion. This also allowed me to put in some fun little details in my High Fidelity redesign to really give it just that extra touch the game could use.

Egg,

Roy Onrust 09/04/2025

Figma Links

All my different fidelities are in the same Figma file, just in different pages. Because of this only one link is necessary of course. Here it is:

<https://www.figma.com/design/AhSsbJ7Ik0hAVVSBK6mbM9/Egg-Inc?node-id=38-12&t=NwHhULz4kp01jqrW-1>

Since I can also provide a link to my prototype file, I might as well:

<https://www.figma.com/proto/AhSsbJ7Ik0hAVVSBK6mbM9/Egg-Inc?node-id=38-12&t=NwHhULz4kp01jqrW-1>

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