



— APP EVALUATION —

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To evaluate the user interface, we're using the Nielsen severity rating scale (Nielsen, 1994). The first step is to identify interface problems while using the Apps (Hidden and Hidden AR). Furthermore, the problems mentioned above will be rated according to the Nielsen Scale as followed and ideas to solve the problem will be given. However, no problem has been defined as a "usability catastrophe" (=4).

1 - cosmetic problems

The **used map** in Hidden isn't the best choice, it contains unnecessary information like contour lines. That can be distracting. Also, while zooming in, the map gets more blurred, especially the street names.



Using/Offering a different type of map, not the one from Google so the graphic design can be improved and fit more the needs of the App.

The **layout** is not appealing very much at first sight and therefore it is less fun to use.



Using more clear structures. Maybe it would be a good idea to get inspired by other Apps that have a very clean layout. Including pictures or previews of the places.

In the Hidden AR App, the **buttons to return** or repeat are half-hidden at the corners of the phone screen (rounded edge screen).



Adapting to new phone designs is necessary.



2 - minor usability problems

A **menu** in Hidden is missing and there is no further information about the App itself (what is it about, how does it work?), e.g. no guideline or landing page.

A menu is helpful that is providing the user with insights and general information. Producers should create a menu, giving the people something to choose from, the option to get further information and more options to engage. More suggestions in part 2.

In the Hidden App, the button in the right lower corner, which the different **categories** displays, is misleading. Therefore, when users see it, they might think that it gives the option to change the map type, like in Google Maps, and not that there are categories to be selected.

It must be clear which button has what function. Instead of the symbol there can the word "categories" be used.

It's not visible in the Hidden App if there is an actual **AR option** at the location or just a text with information.

Including a VR category to filter by the information.

Hidden AR is only usable when you hold the phone **horizontal**.

Releasing an option to choose vertical/horizontal.



3 - major usability problems

Both Apps are not easy to find in the Android or Apple **Appstore** directly. You have to either phrase very precisely or download them actively via the Hidden website. In the AppStore it is placed in the category of entertainment.

It would be better to place the App in one of the categories “education”, “travel” or “AR” instead of “entertainment”. On the one hand, in these categories are fewer competing apps like games, and on the other hand, it fits better with the character of the app. In general, it is necessary to make the app known and more famous and therefore invest in advertising.

The use of **two Apps** is necessary. AR is not integrated into the main app, therefore you have to switch all the time and that might lower the willingness to use the app in the first place.

Including the AR function into the main Hidden App.

There are few problems regarding the **language**: only English or Norwegian can be selected; if you switch into the English mode a lot of texts are still in Norwegian, because the translations are missing; at first sight, it's not obvious that the language is changeable with pressing the Hidden Sign in the left upper corner.

Users must be able to find the option for changing the language directly and easily after opening the App. Create an option for filtering the texts by language. Locations without English texts must be able to be filtered. Improve translation so more people can use the app.



PEDAGOGICAL FUNCTIONALITIES

For analyzing the pedagogical functionalities we will engage directly with the app's interface by using the walkthrough method (Light et. al, 2018). First of all, we will describe the app's **vision, operating model and modes of governance** to get a better understanding of the expected using environment.

VISION

Hidden wants to provide users with an opportunity to explore different places in Norway and inform them about their historical and cultural meanings. They do so in a realistic, visual and interactive way. The target group consists mainly of tourists and people who are interested in learning more about the area they currently are in. The app can be used by everyone with a smartphone to gain further knowledge about the places they visit in Norway. They can either plan to go to Hidden Spots actively or just explore Norway and use the app more spontaneously or occasionally when they see

that a certain spot they are visiting is offering the use of Hidden. Furthermore, including AR technologies offers a more interactive way of learning new information about Norway and therefore makes it more interesting and exciting to get to know more about the culture and history of different places. The use of AR in the Hidden context creates a better incentive for targeted users to deal with these topics. All in all, the app makes a contribution to cultural education when interested users carefully receive its content in different places.

OPERATING MODEL

Up to this time, Hidden is a free to use application. The plan is to develop it further: Having sponsors, publishers and editors participate in the App and would be willing to pay for their article being part of it. To set a "point" in the hidden App, a creator would pay up to NOK

3.000,- with different models of payment offered. Since Hiddens interest is to lighten up the user with historical and cultural information, another part of the income would come from public and state foundations and donations.



MODES OF GOVERNANCE

Since users do not have to register, Hidden does not influence who uses the app. It doesn't come with big guidelines or terms of service. For now, the user is only capable of seeing the different points and using the AR function. To use the AR the User has to go to a particular

place, which therefore can be seen as a way to manage the way of using the App. If you are trying to participate in the Apps content, it gets more restricted: The App producers are functioning as gatekeepers and deciding which content is visible in the App.

TECHNICAL WALKTHROUGH

Secondly, we will use the technical walkthrough, considering the different mediator characteristics. This part of the walkthrough method contains analyzing the following stages:

App registration and entry

The numbers below refer to the numbers in the screenshots in the following page.

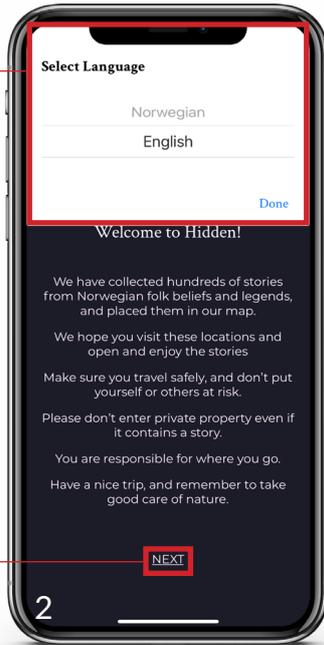
1. Welcome screen of the Hidden app. The preset language is Norwegian, but you can change the language into English by tapping the flag button in the right corner (screenshot 2).
2. English and Norwegian are available languages.
3. Starting screen with welcome text and some warnings.
4. Terms of service, which you could read on the website (screenshot 5) and have to accept to use the app.
5. Terms of service on the website of Hidden are available in Norwegian only.
6. Another safety barrier with the ask for location permissions by the smartphones software.
7. After these steps, you are landing on the starting screen for everyday use which is explained in the next step.



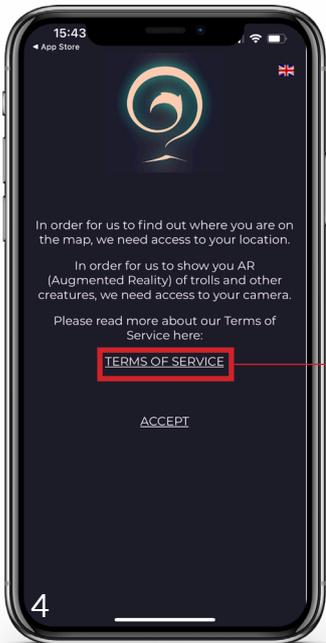
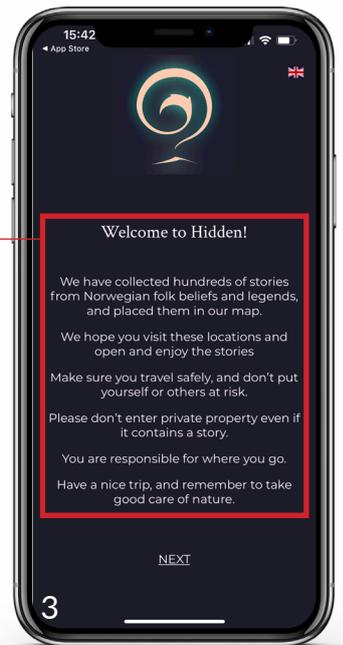
PEDAGOGICAL FUNCTIONALITIES



button to continue



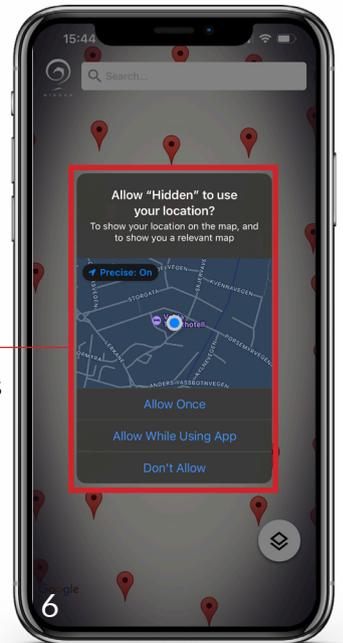
welcome text with infos and warnings



link to website to get informed about terms of service



terms in norwegian



accept location permissions



starting screen for the everyday use

PEDAGOGICAL FUNCTIONALITIES

Everyday use

The numbers below refer to the numbers in the screenshots in the following page.

1. The starting screen of Hidden with a few red circled buttons and functions like a searching option. With the button on the right corner, you can go to your own location on the map immediately like in Google Maps.
2. The categories menu can be reached through the button with the different layers on the home screen (screenshot 1). There you can choose different categories which should be displayed on the map.
3. Tapping the Hidden-Logo on the home screen brings you to a menu layer, where you are only able to choose the language so far.
4. Possible language options are Norwegian and English. This setting affects the language in the user interface, but not the language of the content in the articles, as you can see in the screenshots 8 and 9.
5. With the searching bar at the top of the screen, you can find specific spots or articles to different topics on the map.
6. When you zoom the map out you can see the large number of Hidden spots that are available in Norway. To keep the overview they stack on each other if they are too close.
7. The single spots on the map are marked with different symbols. Every symbol belongs to another topic. The different symbols are explained in the categories menu (screenshot 2).
8. When you tap on the symbol you get more information about the story at this specific place. Also, you get the message if there is more content when you visit the place physically.
9. When you arrive at the location, you get an acoustical signal and the extra information about the place.

Discontinuation of use, App suspension, closure and leaving

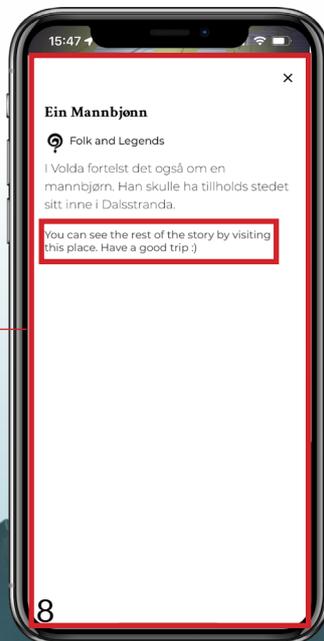
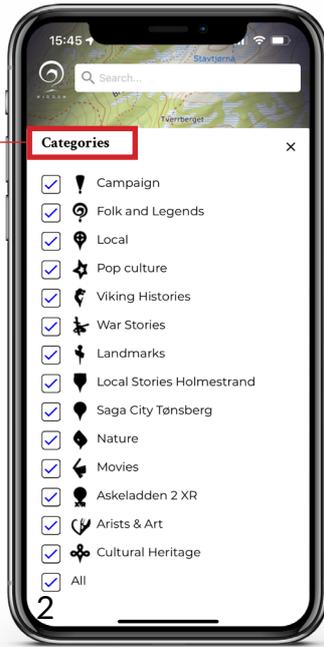
Because of the non-necessary login, there is no account data or barriers when you deinstall or leave the app. You don't have to log out or delete your account.



PEDAGOGICAL FUNCTIONALITIES



navigate to own GPS position



To analyze the technical and normative appeal of Hidden, we will look at parts of the “**model of worthwhileness**” by Schrøder. By that, we will figure out certain features that can be improved or should be established to refine the overall appeal of the app.

The first important question is: **When do people use Hidden?** The answer is simple: If they want to learn about the place and area they are in at the moment. In their free time. This should be the focus in developing the App further: Hidden has to get the prestige of being the App someone thinks of when travelling around. By signs in the street, corporations with cultural and local authorities, create a **public connection**, which helps to identify oneself with the place and gives you a cultural understanding (“democratic worthwhileness”). This way a **positive normative pressure** can be established that doesn’t push people into using the App but rather inspire them to gain knowledge by and with it. Coming with this there is a huge **participatory potential**. For now, users only can generate content, when **paying** for it. This seems to be a good solution for having quality content. On the other hand, if it would be free or at least easier to access, that would mo-

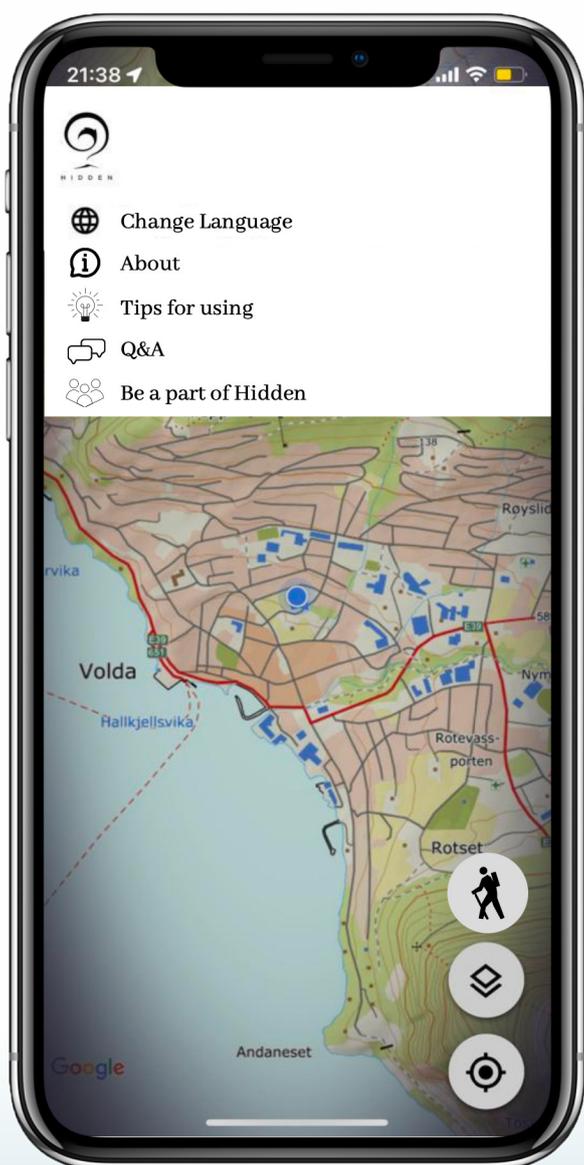
tivate culturally interested people in participating more and thereby spread the word about Hidden. In addition personal accounts that can comment, gain points, take quizzes and unlock special features should be established. A strength of Hidden lies in its **technological appeal**: The AR function is a special technical feature that you don’t find in every app and that some people would certainly like to try out. Therefore it should be a bigger and more visible part in the main app. Having some of the features mentioned above would be motivating for the user to try out the AR more and more. In the end, Hidden is **suitable** for the time and place of its use. It is perfect for learning more about the place and area you are staying in. It hasn’t reached its full potential yet, but in focusing and establishing some of the features listed above, it certainly can. To visualize it, we have drawn out some possible solutions in Part 2.



NEW SOLUTIONS AND FUNCTIONALITIES

Based on the analysis, the following section contains suggestions on how the app could be improved. We have focused on new features that can benefit the users by making the app more interactive and more informative and including the AR function in a more challenging way.

HIDDEN MENU



“About the App”

Offers an introduction with further information about the development of the app and underlying idea and its vision.

“Tips for using”

Presents technical tips by the producers to maximize the user experience, e.g. “Make sure that the screen brightness is high enough for the full AR experience” and give further information about the use of the AR function.

“Q&A”

Gives an informative overview of Q&As regarding the history and use of Hidden. The producers are collecting and answering the most important and most asked questions.

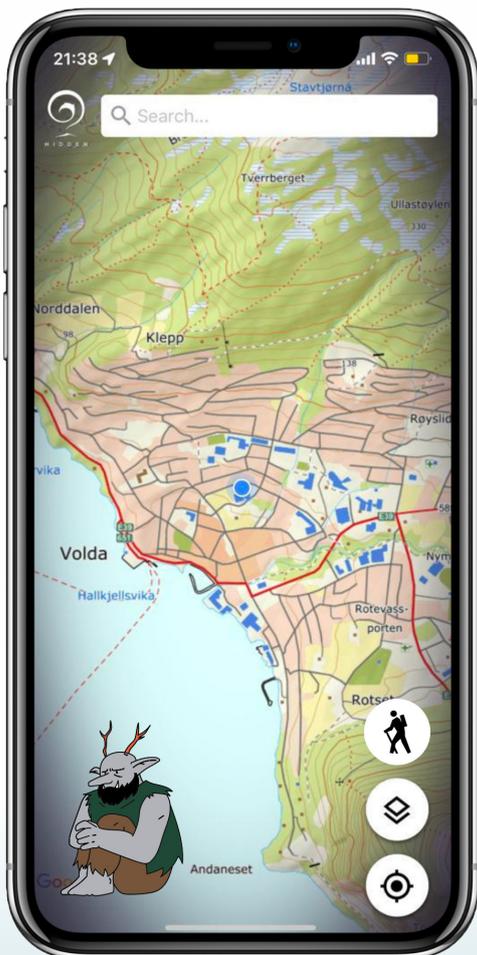
“Be a part of Hidden”

Contains information about how someone can provide their own content and participate as an editor as well as information about the pricing.

HIDDEN PLAY

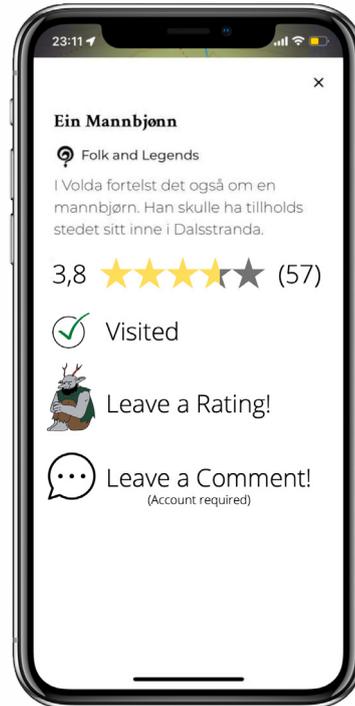
The idea of HIDDEN PLAY is to make the app more interactive and exciting by using gamification. Users can create their own character, which can have different attributes, clothing etc. With that character, users can playfully dive into the world of Hidden: For every location users are visiting in real life, they are gaining experience points in the app, which they need to level up. An extra: With a registered account, users can gain experience more quickly and unlock new, special locations

(not obligatory, but recommended). Another way to earn points and reach the next level is using the possibly new offered AR gaming mode. In that mode, users can interact with the AR characters while using the AR function in ways of playing games like i.e. football with a girl from an ancient century. Another option is chatting with these AR figures and having simple conversations about their life (like the Siri function used by Apple).



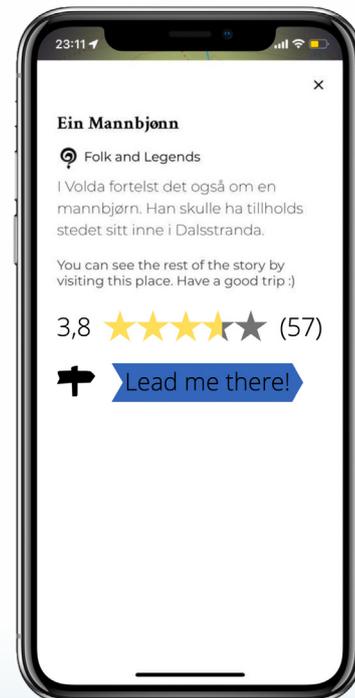
HIDDEN RATING

Every location gets a rating feature, where users can select one out of five stars. If one has visited the place, one can rate their experience and the place itself. Moreover, they can leave a comment for other users, but an account would be needed for the comment option. This helps users to anticipate what to expect on a location and reinforces the feeling of community with other users.



HIDDEN WALK

In addition, Hidden producers organize community events for people to meet and experience Hidden as a group. Once a month there is a HIDDEN WALK taking place in a different city on a planned route, where users can join and walk together to different Hidden locations. The events could also be linked to a motto, i.e. a certain cultural or historical event or epoch. All dates and locations are getting announced in the app.



USED METHODS

Light, B., Burgess, J. & Duguay, S. (2018).

The walkthrough method: An approach to the study of apps. *New Media & Society*, 20(3), 881-900.

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Schröder, K. C. (2015).

News Media Old and New. Fluctuating audiences, news repertoires and locations of consumption, *Journalism Studies*, 16(1), 60-78.

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Severity Ratings for Usability Problems

