

Does Frida have warm hands?

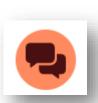
A case study of using chatbots in public (social) services.

Babak A. Farshchian, Elena Parmiggiani et al. (Work in progress) Presented at "Helse og Arbeid seminar i Midt-Norge," May 31, 2022

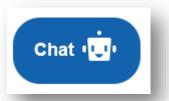




Chatbots are here to stay













Hei! Miten voin auttaa?



Frida is a heroine

- "Vi hadde rett og slett ikke klart oss uten Frida i denne tiden, sier direktør for NAV Kontaktsenter, Jørn Torbergsen."
- "Trykket på NAV Kontaktsenter har vært ekstremt stort i denne koronatiden, så takk og lov for Frida. På de verste dagene har hun håndtert henvendelser som tilsvarer kapasiteten til 220 veiledere, sier Torbergsen."



Frida jobber døgnet rundt

Arbeidsmiljøloven gjelder ikke for Frida, som har vært uunnværlig for NAV de siste ukene. Chatboten har besvart over 270 000 henvendelser fra folk som har spørsmål om sin situasjon.



...or is she?



svare.



Background

 Frida@Work: Collaborative project with UiO, UiA, NTNU, and NAV call center. Funded by NAV.

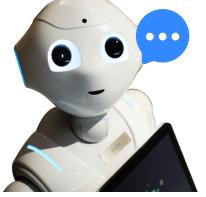
 To investigate how Frida the chatbot affects trust among citizens and employees.

 Based on interviews with employees at NAV, and interviews and qualitative online surveys with chatbot users.



Chatbots

- Computer programs
 - "that emulate conversations with humans using natural language processing (NLP) capabilities to facilitate text-based or voice-based service dialogs."
- Chatbots and anthropomorphism:
 - "the attribution of human-like physical or nonphysical features, behavior, emotions, characteristics and attributes to a non-human agent or to an inanimate object."
- Chatbots are increasingly used in public service delivery.





Theoretical lenses

- Digitalization of public encounters.
- Self-service and the transfer of administrative burden to users.
- Care at a distance.
- Platformization and public value.



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Preliminary findings

- The complexity of self-service
- Adapting to chatbot communication
- Dealing with different citizen groups
- Chatbot's roles and public image
- Chatbot as a strategically prioritized channel
- Trust in chatbots



The complexity of self-service

"I think it's <u>easy to use</u> because it is often easily <u>accessible</u> on the website and in terms of design you get things written in the chatbot easily, you get the answer very quickly, so there is no obstacle there."

"It would have been nice if we could make them understand this with the fact that the **chatbot could only answer general questions**. But we know that it is a challenge for people to understand what lies in the concept of 'general questions'."

"I want the right answer for the situation I am in now. Because the chatbot does not see the bigger picture, it is not capable of giving me any advice, which is at the end what I need in such situations"



Adapting to chatbot communication

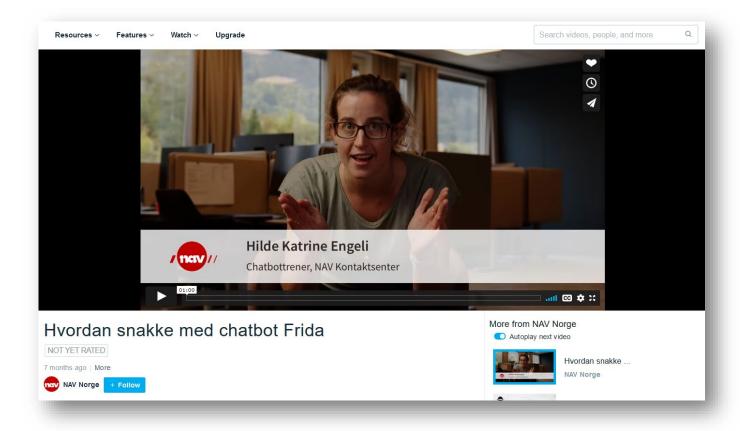
"They [citizens] have <u>a story to tell</u>, there is a background, before they get to the point. And a chatbot is not able to relate to that...little story, the same way that a human does."

"When the chatbot is mandatory, and I know I have a question it cannot answer, then the dialogue becomes all about <u>fooling the</u> <u>chatbot</u> to let me talk to a human being"

"I think it expects me to have one precise question. That it knows what I'm wondering. I do not always know what the answer should be or what topic I am actually going to ask for."



Adapting to chatbot communication





Dealing with different citizen groups

"We launched this filter, which we will also continue to work with, where you choose which user you are. Whether you are an employer or personal user. We will eventually add more roles like doctors, collaborators etc."

"We also have a pension area that we started with in January [2021], where we may see that it is <u>not quite that simple [for older people]</u>. They formulate themselves as if the chatbot is a person and this would result to problems with prediction."

Currently NAV does not personalize their citizen contact channels, i.e. there is no "Frida-free pass" for a citizen. A large portion of Frida conversations are abandoned by the initiator.



Chatbot's roles and public image

"They [the chatbots] are <u>replacing human</u> <u>beings</u>. I expect that they are at least as good as and as competent as human beings"

NAV chose to have a human (female) representation of the chatbot in order to avoid appearing cold and cynical -which is what a mechanical representation of the chatbot might have created.

"...the chatbot should be perceived as something more than the search engine in NAV.no or Google search, but at the same time not exactly the same as an employee."



Strategic importance

"We started with Frida on one page, [...] it should be on about eighty, ninety percent of the time on nav.no now. And it haunts you. So we have in a way increased the availability significantly in recent months."

"The times I have chosen chatbot, it has simply been because the [phone] queues have been too long."

"We see that we may have the problem with the channel called 'write to us' where you send a message and <u>it takes approximately 2</u> days before you receive an answer."



Trust in chatbots

"I did not expect for [the chatbot] to give me the right answer. When it did, I think I trusted it a bit more"

"There is a huge risk there, if something happen and if there is a wrong answer. There are user groups that have a lot of different challenges and it is something completely different than being a bank, for example, than being a telephone company and that there are often people in vulnerable situations and that is okay to take that into account"

"If it says in black and white that I am not entitled to one or the other. I would soon call to genuinely verify or get the matter clarified carefully enough. So that I know I have not overlooked something, but I do not settle down until I get the response I want, obviously"



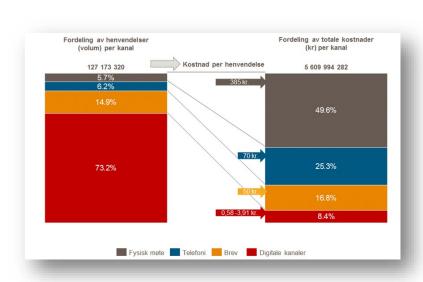
Discussion

- The problem with 24/7 availability.
- The unclear role of anthropomorphism.
- Digitalization's connection to welfare.
- Frida's future.



The problem with 24/7 availability

 It is important not to forget the sheer size and cost of the problem.



Telefonhenvendelser
4 440 258
4 048 358

Skriv til oss 683 746

Chatbot **146 102**

Chat **73 747**

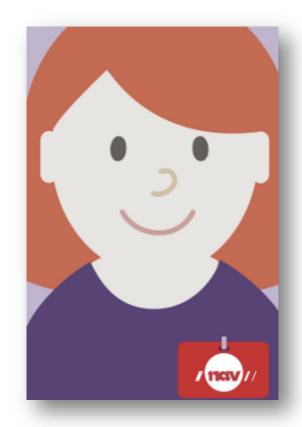
Stillingsregistrering **384 165**

4,8 millioner brukermøter



The unclear role of anthropomorphism

- Is Frida more than a bad version of Google search?
- Does Frida manage to convey "care at a distance"?
- What message does an anthropomorphic channel convey to the citizens/employees?
 - The uncanny valley.
- Is Frida technology- and hype-driven?





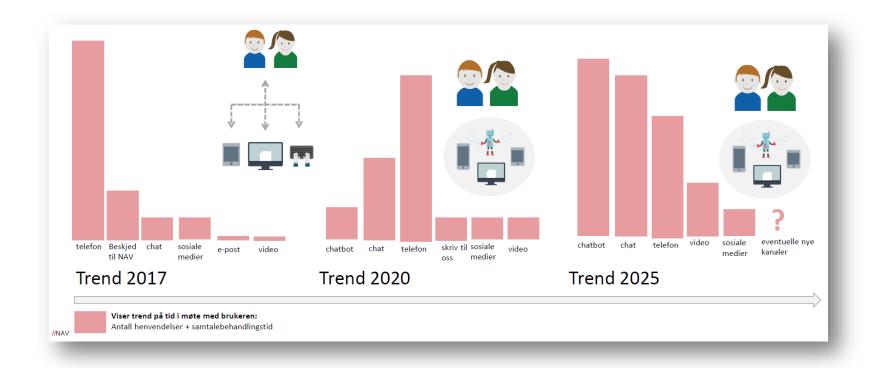
Digitalization's connection to welfare

- The digital divide.
- 3% don't use internet, 11% low digital competence, 24% average digital competence.
- Always a challenge to use cutting-edge technology.
- The effect of digital public encounters on mental health not welldocumented?



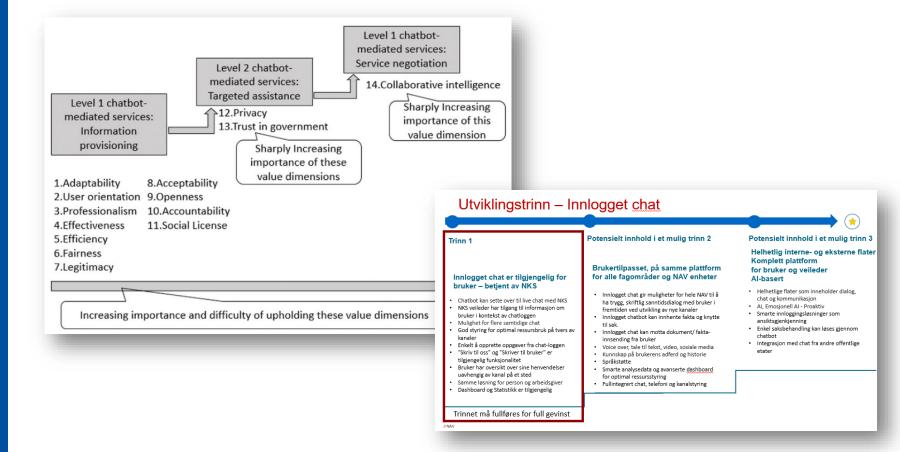


Frida's future





Frida's future?





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Thank you for your attention! Questions?



