



## **FUTURE OF SECURITY THROUGH UX DESIGN: A CASE STUDY OF MYSOS**

**Date:** November 25, 2022

*Disclaimer: This briefing note contains the encapsulation of views presented by the speaker and does not exclusively represent the views of the Canadian Association for Security and Intelligence Studies.*

### **KEY EVENTS**

On November 25, 2022, Ms. Emily Niemann, a User Experience (UX) Designer at Esri presented on the *Future of Security Through UX Design: A Case Study of MySOS*. The presentation was followed by a question-and-answer period with questions from the audience and CASIS-Vancouver executives. The key points of discussion were the UX design process, human and user-centric focuses on UX design, a case study of the MySOS app in Japan, and the impact of old processes and norms in Japanese society.

### **NATURE OF DISCUSSION**

#### **Presentation**

Ms. Niemann presented on the UX design process, a case study of the MySOS app in Japan, and solutions to design problems that hindered users during the COVID-19 pandemic. Ms. Niemann also proposed solutions to solve the issues the MySOS app had and where the focus of design should lay.

#### **Question & Answer Period**

During the question-and-answer period, Ms. Niemann considered the perspective that apps such as MySOS are extensions of Japanese government control. International standards or regulations of travel can be beneficial if individuals have to travel during pandemic lockdowns. Navigation is also a serious issue to be considered in UX design as too many submenus can be tricky.

### **BACKGROUND**

#### **Presentation**

Ms. Niemann highlighted that old processes and social orders hindered Japan's ability to adapt to the fast-evolving demands of the modern world. UX designers

must go through a four-step process to overcome challenges and fulfill user needs, designing personas to understand who the target audience is, what their challenges are, and how to combat the challenges. The first is empathy, as the designer must understand what the users' challenges are and how to overcome them. The second is to define the requirements to overcome the challenges. The third is ideation, where the designer draws or sketches prototypes and beginnings of true designs of problem solving. The last stage is testing to ensure that the experience is helpful for the target users and any issues in previous stages can be fixed.

Ms. Niemann followed with the case study during the COVID-19 pandemic where Japan imposed rigid travel restrictions, especially to protect the large elderly population (nearly 30%) within the country. Every visitor, regardless of nationality, must download the MySOS app prior to entering the country to ensure the protection of the domestic Japanese population. Research data was gathered from interviews and app reviews on the Apple App Store on user experience with the MySOS app, which revealed a dislike for the design of the app and the rigid restrictive nature it imposed on people.

Ms. Niemann then used her own experience traveling to Japan and using the MySOS app. She had difficulties with a 72-hour negative COVID test result with the app, as the strict time frame and cost of the certification caused difficulties when entering the country. Ms. Niemann further had issues with the usage of her full name on the passport certificate and the app's rejection of the certificate photo, as the passport certificate and airline ticket names did not match with the inclusion of her Japanese names.

Ms. Niemann used a case study of an individual named Daniel, a first-time visitor to Japan, to explain further the UX design of the app. The first issue of the MySOS app was that it was hard to get started as the app forced the user to read the text-filled privacy policy upon downloading and starting the app. The second issue was that there were too many redundant steps that became repetitive. The third problem was that there was a general lack of user research on their preferences and needs such as locations of food vendors during their quarantine period.

The first solution is to consider translation nuances as serious content can be misunderstood due to its accessibility; the second solution is to create an auto-fill functionality to fill in answers to repetitive questions and status that may not change; the third solution is to leverage business partnerships during national initiatives. Ms. Niemann proposed that linking apps such as UberEats to MySOS

would allow users to have a more human centered user experience as the negative user experience with the MySOS app can deter individuals from visiting Japan during and post-lockdown.

The MySOS app is currently influenced by government departments, travel authorities, border check requirements, technical requirements, and stakeholders' interests to uphold the government mandate to protect the population. Ms. Niemann then presented the ideal state of the app where a transition considered user-centered design, human-centered design, human-computer interaction, and design thinking. Ms. Niemann remarked that products are not perfect the first time they are released but the purpose of good design is to continuously improve it.

Ms. Niemann also highlighted that inclusivity of elderly Japanese natives, international visitors, and international business people in the design process can help create a better user experience on the app. There may be issues such as digital literacy, comfort with technology, and the various needs and demands that users may have. Ms. Niemann also shared that Mr. Taro Kono, the current Japanese Minister of Digital Affairs, has successfully abolished the use of the old bureaucratic *hanko* stamp approval process, as it is time consuming and inefficient. Ms. Niemann used the example where Japanese business contracts required a *hanko* stamp for ratification, which served as an official signature unique to each individual, and how it was inefficient and problematic during the COVID pandemic and lockdowns. Mr. Kono's abolishment of the *hanko* stamp requirement resulted in an increase of efficiency for approximately 15,000 administrative procedure types.

Ms. Niemann concluded that Japanese society needed to reconsider if the old processes and cultural practices are efficient and effective in modern society and business practices. Any design of an app should be centered around the user, the human, and the four-step framework should be followed.

### **Question & Answer Period**

Ms. Niemann considers apps such as MySOS as an extension of Japanese government control and a reflection of its desire to influence the population. Ms. Niemann also considers having an international model of regulation or standard of travel during a pandemic to be beneficial to those who need to travel for work when remote work is not possible. Colour design is considered in User Interface (UI) design, as it is akin to the choosing of the colours or wallpaper of a house; green is likened to positivity and red to errors. Conversely, UX design is akin to architecture, designing where the walls and rooms of a house are. Navigation is

also an important aspect of UX design and depends on the priorities of a business or users' needs. Ms. Niemann concluded with an idea that having too many submenus can be tricky but something to seriously consider when designing the UX of an app.

## KEY POINTS OF DISCUSSION

### Presentation

- UX design follows the four-step process of: Empathy, Define, Ideation, and Testing.
- Japanese society follows old processes and bureaucratic practices that hinders its adaptability to challenges in the modern world.
- MySOS, the COVID lockdown app in Japan, was designed to keep the large elderly Japanese population healthy, but had a rigid and non-user-friendly design that negatively impacted user experience and people's outlook on travel to Japan.
- MySOS had the major issues of: difficulty starting the app, repetitive and redundant steps, and lack of user research on preferences and needs.
- MySOS can be improved by: considering translational nuances due to accessibility, creating an autofill function for repetitive tasks, leveraging business partnerships and integrating apps (such as UberEats).
- Human centric and user centric approaches should also be considered as a focal point in UX designs.

### Question & Answer Period

- Apps such as MySOS can be considered as an extension of Japanese government control and a reflection of its desire to influence the population.
- An international model of regulation or standard of travel can be beneficial.
- Navigation and submenu design depend on the priorities of business and user needs and something to be seriously considered as part of UX design.



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