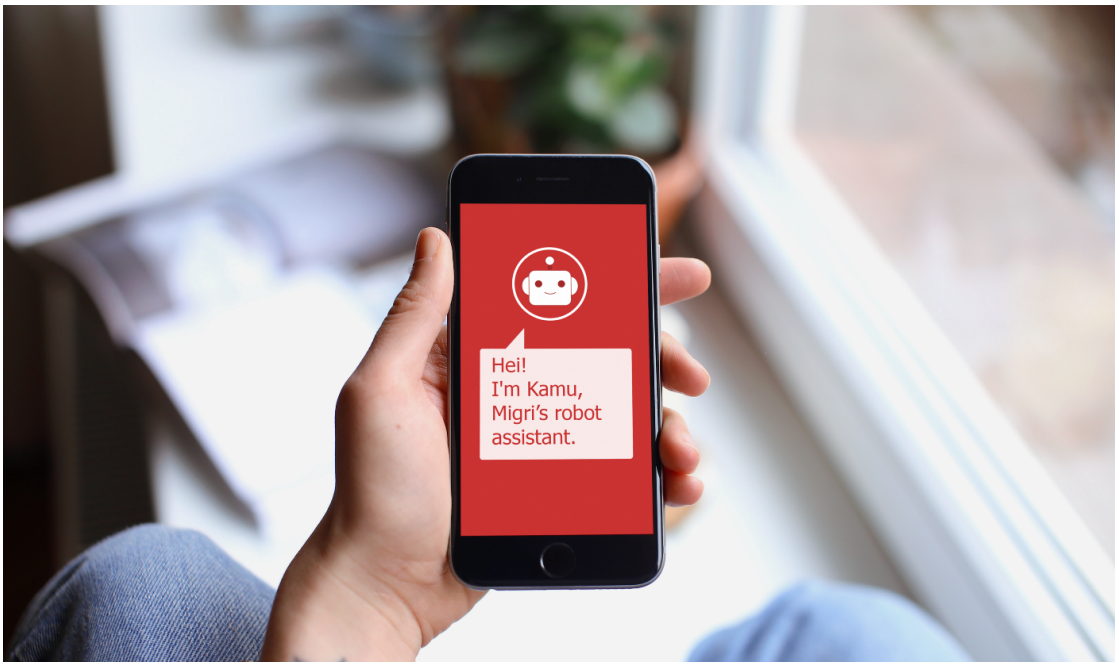
Inland Design - Kamu - Chatbot for immigration practices

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Inland Design is a government design and innovation lab working inside the Finnish Immigration Service (Migri). Its mission is to codesign new solutions to improve the immigrant experience through a human-centered design approach, experimentation and technology. As their first big project, Inland codesigned with other Migri employees and their end-users a chatbot to improve customer service. The process was done almost entirely through participatory processes engaging not only immigrants but also front- line staff and management. The project was a success and even led to the creation of a networked service in an attempt to bridge organizational silos between Migri and two other public organizations: the Tax Administration (Vero) and the Finnish Patent and Registration Office (PRH).

## Introduction & Organization

### Context

Inland Design is the design and innovation lab and co-creation team inside Migri, the Finnish Immigration Service. It follows a long and interesting history of design in government experiments over the years. Finland, in fact, has had many iterations of bringing design into government on different levels and forms. From 2009 to 2013, design was first integrated into the Finnish government through the Helsinki Design Lab, which was managed by Sitra,

the Finnish National Innovation Fund. Their goal was to apply strategic design to the complex social challenges that were (and still are) arising. Following this, interest was taken up by academia in the form of a 14-week course called “Design for Government” (DfG), launched in 2013, which is part of the Creative Sustainability Master Degree program at Aalto University. The course applies empathic design and system thinking to address complex challenges faced by the government and Finnish public sector and collaborates yearly with one or more Finnish ministries to address a policy challenge. In 2014, the Finnish Prime Minister’s Office launched a tender to find new ways for advanced behavioral and experimental research to support government policy making[1]. Think tanks, Demos Helsinki and Avanto Helsinki, won the bid in collaboration with the DfG course. The project’s outcome was a working model for experimenting in government and how hands-on behavioural approaches can make policy more user-centered [2][3].

The emphasis on experimentation in government was taken up by the Governments for the Future project from 2012-2014, under which thought was given on how to create systemic change. As a result of this process, a committee was formed to understand what an experimental culture in government could look like in Finland and what benefits it could bring (OECD, 2017). The Prime Minister at the time, Juha Sipilä, was a part of this committee and in 2015, under his mandate, the Finnish Government initiated two key projects under its Strategic Program “Finland, a Land of Solutions”: (1) the digitalization of public services; and (2) the introduction of a culture of experimentation. This came about in response to the changing socio-economic and also political context that Finland found itself in, which included rising unemployment, decreasing economic growth, political instability related to the crisis in Ukraine and conflictual relations with Russia that have affected economic markets, high levels of bureaucracy and over regulation that has affected labor markets [4]. Consequentially, the government has identified experimentation as a method to bring more concrete and effective solutions and innovation to the public sector. As a result, the key project of the Prime Minister’s Office is called Experimental Finland with the objective of finding new ways to foster societal growth and develop new services; one example of such was the basic income experiment [5].

A dedicated team, platform – Kokeilun Paikka (Place to Experiment) – and advisory board have been established to facilitate this transition towards experimentation. The program took a top-down and bottom-up approach focusing on three levels of experiments: strategic experiments (which supported the key objectives of the political agenda), pooled pilots and partnerships, and grassroots level experiments (which were citizen-led initiatives and more intuitive in nature). It was found that a lack of flexible financing and connection among innovators, as well as difficulty in finding information about viable solutions and innovative approaches were key obstacles towards the spread of innovation and the improvement of government-citizen relations [6]. It was identified that while experimentation on the local and grassroots level is common in Finland, there is a lack of a common overview of the projects being conducted, thereby isolating learning outcomes. The digital platform was thus created with the intent of overcoming these gaps, working to re-define citizen-government boundaries and shift service development from a top-down approach to a co-created – and even crowdsourced or crowdfunded– process[7] .

Upon the closure of the Helsinki Design Lab in 2013, the D9 group within the State Treasury became the focal point of design in government in Finland. Its mandate to enable cross-agency experimentation started in 2016 and ended in 2018. The team's taskwas to assist the public sector in creating customer-centric digital services and improve customer experience[8]. D9 was also an important supporter of Experimental Finland.

Furthermore, in 2016, Helsinki became one of the first cities in the world to name a Chief Design Officer to bring a culture of design into the municipality. Anne Stenros served a two-year mandate in this role. In the same year, CDO Stenros set up HelsinkiLab as an experimental collaboration platform meant to run until 2019. The lab's goal is to further embed design practices, digital competences and interaction into the development practices of the city and its agents. In order to further highlight the work being done and spread awareness of the lab's working principles, the open workspace is located in the lobby of City Hall [9].

This track record of design experiments in the public arena have served to legitimize design thinking as a way to bring a "new way of doing and thinking" into government. This impetus paved the way for two leaders inside Migri's digital services team toidentify it as a means to bring change to Migri's operational procedures and organizational culture. In 2017, they founded Inland Design as an internal design and innovation lab.

## Organization

Inland Design is the design and innovation lab inside Finland's Immigration Service, Maahanmuuttovirasto, officially abbreviated to Migri. Migri manages applications for residence permits, citizenship, asylum and their reception and protection, passport issuance and renewal, deportation, and other immigration-related duties. It is one of the public agencies under Finland's Ministry of the Interior. Migri is divided into four Substance Units (Citizenship, Asylum, Residence Permit and Reception Centre) and five Support Units (Legal and Country Information, Customer Service and Communication, HR, Finance, and Digital Services). Inland is part of the Digital Services Support Unit, SÄPA (Sähköiset Palvelut), within Migri. SÄPA provides advanced technological expertise and is one of the biggest and best IT teams in the Finnish government[10]. Residing in SÄPA thus gives Inland a convenient position from which to combine advance technology with design thinking in its work. In fact, its technology-based projects have validated its work within Migri, supporting its organizational legitimacy [11]. The nature of this work is well exemplified in their Chatbot project, which will be the focus of the next sections.

Consequentially, Inland's mission is to co-design new solutions within Migri to improve the immigrant experience through empathy, experimentation and technology. Their goal is three-fold: (1) to create organizational change within Migri through an experimental culture, (2) bring a human-centered approach to Migri projects, and (3) launch projects that see cross-agency collaboration [12]. Inland's team is currently composed of three (service) designers, who are Migri employees, and one intern (the intern was also a Migri employee, but she is no longer working with the team). The team has been hired on a 2.5-year contract.

It is unclear what will happen at the end, of the contract but likely there will not be a renewal. Being “regular” civil servants has, however, allowed them to gain the trust of their colleagues and gain access to organizational resources and insight. In other words, acting as in-house designers has afforded Inland a position of greater impact by being viewed as being on the same team and not having to sell certain services. Inland was created to bring change to Migri’s way of working, especially in response to mounting pressures to digitalize public services and disruptive technological breakthroughs. The first steps towards this were taken in March 2017 by consulting with Fjord Helsinki on how to get things started, build the concept behind Inland, the brand and visual identity, and to launch four pilot projects in Migri to demonstrate and test what design could do for them[13]. As the design and innovation lab was meant to introduce new ways of doing things, a new mindset and ultimately a new working culture, it was made distinct from the rest of the organization in its visual identity and brand. While this distinction has granted Inland the freedom to “be different”, it has also challenged the legitimacy of Inland within Migri as it is perceived as not conforming to the values and norms of the organization [14]. Inland Design was officially launched in August 2017.

Inland’s activities fall under four main strategic objectives that are in line with its mission: (1) to co-create new services with other public agencies; (2) to initiate new projects with/for internal units in Migri; (3) to bring an experimental culture to Migri; and (4) to spread design thinking throughout the organization. Inland doesn’t hold ownership of any of their projects, but rather seeks to wean their presence as leader, leaving the project to run autonomously, assuming a role as either consultant or regular project member. Its activities are divided into two typologies that serve the different objectives: project work which carry out the first two objectives and initiatives which carry out the latter two. Inland has developed four operating models in its year and 8 months of existence, in which the role of Inland changes based on the needs of Migri’s different teams, allowing it to flexibly adapt to organizational needs and thereby serve it better [15]. The four models are as follows:

1. from leading to consulting in which Inland takes the idea given to them from another Migri team or an immigrant and it is the expert lead. Through the process eventually fades out to become a project partner or consultant. An example of this is the chatbot project which will be covered in the upcoming sections

2. participating, in which projects are led by other units and Inland brings in its service design expertise

3. consulting, in which Inland starts and remains consultants, never entering as a formal part of the team.

4. building space for collaboration, in which Inland functions as a connector between design expertise coming from different stakeholders: academia, NGOs, other public agencies or even different teams in Migri [16].

## Processes and tools

Inland adopts a co-design approach to their project work, making use of a vast array of service design tools to carry out their tasks and engaging users and other service actors in the design process. As Inland is located in the digital services team, technology is a big part of their work and has acted as a figurative “foot in the door” to gain organizational legitimacy. However, it is not a pre-requisite for their intervention. Inland, in other words, seeks to be engaged in non-technological solutions, promoting initiatives that seek to embed a design approach to the work of the entire organization. A part of its activities, in other words, are cultural.

Inland’s goal, in fact, is to bring a human-centered design approach to the work that Migri does and help bring the immigrant, or the user, in the center of services. In order to spread this mindset, Inland has two methods by which they seek to spread design competences and a user-centered approach, both of which are rooted in learning-by- doing processes: project work and initiatives that directly seek to build design capabilities in the organization. A key example of the latter is the Service Design Ambassador program which is a 1-year long training course for civil servants in design competences, in which participants advance their own projects through the help of course instructors and training modules. The first edition just concluded. Each participant had to dedicate 160 hours total through monthly, day-long workshops and monthly “homework” days in which participants were given readings and tasks to advance their projects. The course involved 8 lectures from service design experts, a field trip, project work and readings [17]. An open call was sent out to all of Migri personnel and 35 people from different departments and positions applied, all of whom were accepted. The course trained 28 ambassadors who have taken what they learned and are applying it in other contexts.

## The Case - Kamu, Migri’s Customer service chatbot and starting up smoothly

### General description

**Name of the Initiative: Kamu, Migri’s customer service chatbot and Starting up Smoothly**

**Website/ link: https://migri.fi**

**Location: Migri (Finland)**

**Starting and ending date of the initiative: September 2017 - ongoing**

When Inland started its work in August 2017, Migri provided them with visions and a map of prioritized goals and objectives to improve their services and upon which to focus project work. These decisions were based on quantitative statistics to guarantee that the problem being faced would benefit and impact a large user base both internal and external[18]. Based on these statistics, a project to strengthen customer service was identified that also supported one of Migri’s four strategic priorities, which are as follows: (1) to be customer oriented; (2) increase operational effectiveness; (3) improve readiness; and (4) have a great

workplace. The main input coming from the statistical analysis was that from January to March 2017, only 21% of phone calls were answered. This challenge was caused by the large increase in the number of applicants following the refugee crisis in 2015-2016, which saw over 30,000 asylum seekers in Finland, effectively increasing its yearly asylum requests by 822% [19].

The first step made was to conduct interviews with the customer service workers about what topics were most covered in the conversations. The results were that customers usually asked questions concerning the two general topics:

1. general information found in the public migri.fi-website
2. inquiries on application status, which required the customer to be identified. This step took by phone a long time (1 to 5 min)

Based on these insights, the team decided that the solution was to lower the number of calls received per day by ameliorating access to key information by automating a part of the calls through a chatbot and a live chat. The chatbot, who's been named Kamu and given a personality, has had considerable success and between May 2018 to January 2019 has had more than 45,000 conversations, averaging about 180 a day. It has also been a source of inspiration for other public agencies and has led to a joint project on a network of chatbots between Vero, the Tax administration and PRH, the Finnish Patent and Registration Office, seeking to bridge organizational silos and offer comprehensive events-in-life services. A first prototype was made for foreign entrepreneurs coming to Finland. In January 2018, the Ministry of Finance expanded this concept to a larger scale, calling for a national network of chatbots under the project name "Aurora AI", to which Kamu served as a best practice.

## Governance

The idea behind the chatbot project was catalyzed by a look at the statistical data available, paired with Migri's strategic objective to be more customer oriented. In order to better serve their users – the immigrants – as well as alleviate the burden on front line civil servants working the phones, Migri decided to implement a technological solution to allow its employees to concentrate their effort on cases requiring their expertise and have more general questions be handled by the chatbot or live chat and in the process better serve their clients.

Inland was project leader at the beginning and made heavy initial investments in the concept development, research and development, user testing, prototyping and translation of user and technological requirements. Once the initial phase was over, Inland phased out to become only a project member as the dedicated team, ENNI, took over. ENNI is hosted in SÄPA. All content is made together with the Migri substance units involved, as well as experts coming from the supporting units. All the units furthermore collaborate as a review group to provide feedback on the content quality of Kamu's responses before they go live.

Kamu is owned by Migri: its content belongs to ASPA (customer services), while the technology development to SÄPA. In the network of chatbots, together with Vero and PRH,

each organization remains owner of its own chatbot and is responsible for the content provided.

## Stakeholder landscape

In the Kamu chatbot project, Inland took the lead at the beginning with the support of other colleagues from SÄPA, who, already in the initial phases, set up a dedicated team, ENNI, to support the development and future maintenance of the service. While SÄPA provided technological expertise, Inland was responsible for the preliminary research, concept formulation, idea generation, prototyping and evaluation. As their first big project, Kamu represented for Inland an opportunity to show Migri what design could do and the opportunities coming from adopting a human centered approach. In other words, it was an opportunity for them to demonstrate the value of Inland for Migri.

The users of the service are the immigrants and their families who are requesting for various reasons permission to stay in Finland. As will be further explained below, finding information was very difficult as it was located in four different channels. The chatbot and live chat have helped solve this need and helped ensure that more of their needs were being met. Before Kamu, only 21% of calls were taken and thus the large majority of their questions were left unanswered.

Likewise, the customer service staff who received the calls have benefitted from the additional support. While before they were burdened by a large rise in information requests – most of which was already located elsewhere on the website – Kamu helped customer service employees to invest their time on cases that really required their expertise.

Regarding the Starting up Smoothly project, Inland once again took the lead initially. Vero wanted to start up a chatbot, after seeing the work done with Kamu. They asked Inland to support their concept development through a collaboration between the two services in an experiment that involved Vero's China help desk to help Chinese entrepreneurs who wanted to come to Finland. As shown later on, this was soon expanded to cover entrepreneurs coming from all over [20]. The experiment was interesting for all parties: for Vero and PRH to start up a chatbot and experiment with its uses and benefits, and for Inland to understand how to create a network of chatbots. Immigrant users can now ask questions that pertain to all three organizations and have their answers be given through redirects by the chatbots to the right organization[21]. This has helped bridge organizational silos around life events like starting up a company as a foreigner in Finland, but also as just an immigrant who needs a resident card but also a tax card.

Each organization contributed with it its own expertise and sectoral knowledge. All content is generated and managed by the specific organization as the chatbot remains the property of the specific organization. The process of designing this service has created new relationships between the three organizations, as well as insight on the working processes of the different departments.

## Process structuring and stakeholder engagement

**Problem Framing and Ideation**

The concept behind the chatbot was catalyzed by an analysis of the statistical findings regarding the poor customer service response rate. This prompted Inland to conduct initial interviews with the customer service staff to understand the problem better and get an idea of the actual need, not only from the user-immigrant perspective but also those of the front-line service providers. These insights helped frame the problem around more tangible and concrete needs. One insight was the difficulty of users to find and filter useful information from Migri's digital services. Information was communicated on four separate channels: the public Migri.fi website, the application portal EnterFinland.fi, the phone service lines and the customer services points spread across the county. Likewise, the customer service staff were pressured to find information quickly, having to search and filter information through various internal channels: emails, Migri.fi, document sharing platforms and EnterFinland. It was clear that Migri's customers needed support finding critical yet also basic information and that these types of requests could be easily taken care of through technological means, freeing up the customer service staff for more complicated cases (Figure 1).

Based on these insights and on the idea of using conversational interfaces to ease access to digital content for users, Inland conceived the idea of a chatbot for Migri, supported by a live chat and as a final resort a phone call. Chatbots have become a hot topic for increasing customer service quality in public organizations in Finland for the following features: (1) they conduct natural conversations; (2) information can be given at the user's pace without pressure and the answers remain written in text for later consultation; (3) all information is given in the same window rather than searching and filtering through many tabs or windows; and (4) given the ease of the conversational tool, it doesn't require users to be tech savvy to use it [222324].

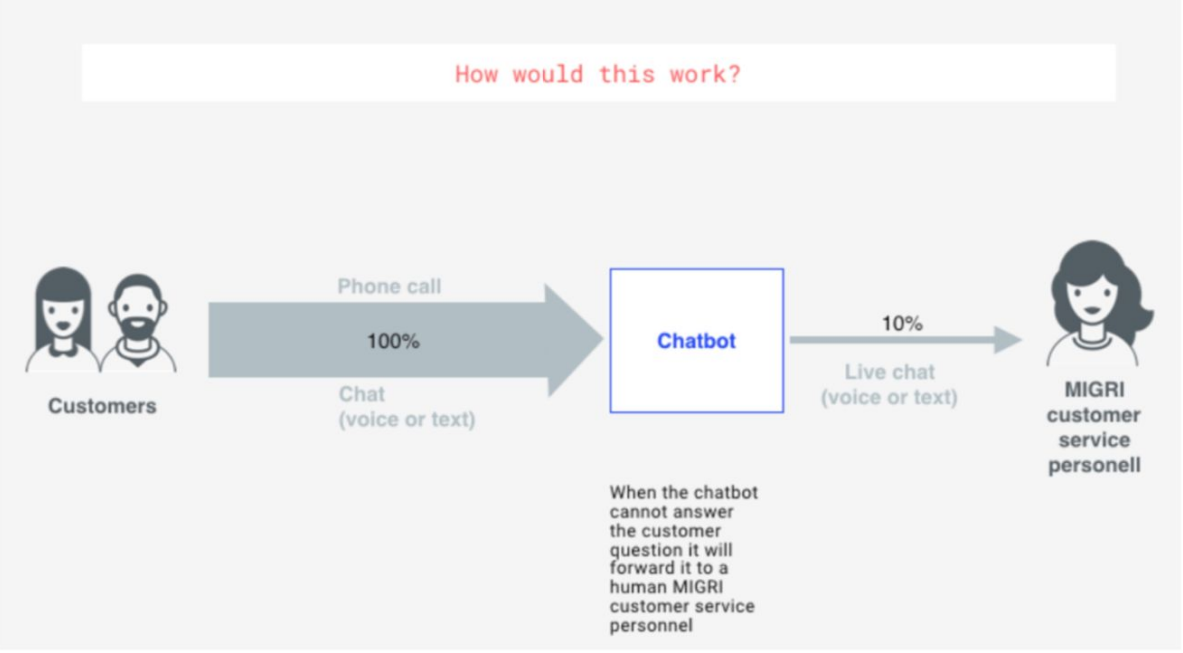


Figure 1 - Concept for Kamu[25]

When seeking to explain and describe their concept to their Migri colleauges, the team at Inland used system maps, user journeys and detailed and high-level road maps.

**Design**

In order to guarantee that the chatbot's content was relevant and would actually reduce the number of phone calls, it was important to co-design the bot with the customer service staff. In September 2017, Inland spent three days in Kuhmo, one of Migri's sites where the customer service staff respond to telephone calls. During this session, the team learned a lot about: the everyday work of the staff, what challenges they face, the importance of involving them in content generation and that the staff is often frustrated with other Migri units who often fail to respond to their requests, thus confirming the poor interaction between the units [26]. The customer service staff furthermore made clear that the bot should inspire trust and state clearly that it is a bot. This insight confirmed a research question that the team had had on how to make sure that people trust the answers given by the machine.

The answer to this for Inland was to design a personality for the chat bot, which represented another objective of the three days in Kuhmo: to test with customer service staff what kind of personality the bot should have (Figure 2). Here the team wanted to understand what personality traits the customer service expert used in their daily work. In October/November 2017, the team did further research on the personality of the bot through immersion testing with immigrant users via a survey done at the Helsinki Service Point to understand what kind of customer service servant they expect to find at Migri. The last step was done in February 2018 in which the team tested on users how informal or distant the chatbot should be. Immigrants were given movie tickets for their participation. Following the decision regarding the chat bot's personality, the team asked the Migri employees to vote on a name. Only gender-neutral names were provided for the vote and Kamu was the name that was chosen.


Figure 2 - Kamu's personality profile card[27]

### Implementation and Evaluation, Monitoring and Measurement

In June 2018, the team ran a pilot of the services and evaluated it during the summer. Overall, Kamu is considered a success. It engaged in 45,000 conversations between May 2018 and January 2019, averaging 180 conversations a day. In terms of organizational gains, the project has helped ingrain a user-centered mindset in the team, making user testing an integral part of their working practices[28]. While there was initial skepticism on the utility of Kamu, the chabot has now become an integral part of the service offering and requests to add new content has now surpassed the team's capacity to produce. Lastly, while at the beginning the live chat was only open for 2 hours a day, it is now open from 9am to 4pm just like the telephone services (Figure 3).

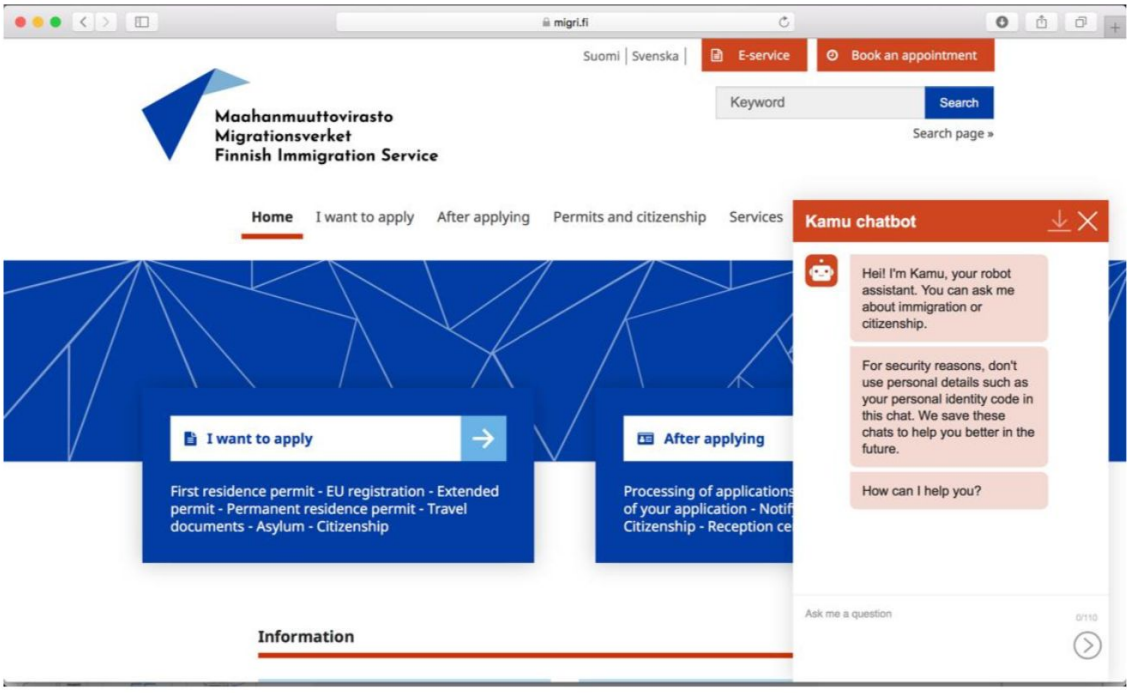


Figure 3 - Kamu chabot on the Migri.fi website[29]

The success of the project has also translated in Migri becoming a leader in chatbot development for public services and the team is often asked to share their experience and help other organizations replicate their experience. This has led to another project led by Inland, Starting up Smoothly, that works to create a networked chatbot service with Vero, the Tax Administration and PRH, the Finnish Patent and Registration Office.

## The process

### Problem Framing and Ideation

In Finland, as is common with most public organizations throughout Europe, public service organizations work in silos to guarantee efficiency. This however results to be problematic or rather less efficient for the user who often must visit various organizations to accomplish tasks related to specific life events: e.g. moving to a new country, birth of a child, loss of a loved one, etc. The need to bridge organizational silos around life events is the key insight that drove the Starting up Smoothly project to create a networked chatbot service. In their concept, each organization remains the owner of their own chatbot and its content. The individual chatbots are then interconnected on an additional network layer to provide a more holistic service. The experiment started with two initial research questions, which were: (1) How can we serve customers through a common channel? Should the customer be aware of organizational silos? (In other words, does it make sense for the customer to have one bot for two organizations? And if so, do they need to know that there are two organizations behind the single bot and which content comes from which?); and (2) How can we collaborate across organizational silos? How can we take another organization on board [30]? The answer to the first question was that the customer needed to be aware of the two different organizations and their respective areas of expertise should the user decide to go in

person to ask for information or to call the phone services, etc. Thus, the decision was made for each organization to keep its own chatbot and to create a networked layer that refers users to the right chatbot. The second question was reflected upon at the end of the process and will be explored below.

**Design**

The first part of this service took the form of an experiment between Migri and Vero. The experiment was designed to have a short turn around, starting in March 2018 with the expectation of having an initial prototype of the service by June 2018. The initialprompt was to help Vero's China Desk serve Chinese entrepreneurs who wanted to set up a business in Finland. The teams coming from the two organizations met once a week at the Vero offices to learn about substance matters but also how chatbots work, for which the experience that the Migri team had was very beneficial. Some team members worked on this project full-time while others just on the official day of the week allotted to it, also depending on the tasks of the member and the phase of the project [31].

The project had six steps: the first step was an online survey to get to know what kind of content was needed: what were the user's questions, needs, pain points, etc. Three categories of user types were distinguished from this activity, which led to the second step: interviewing 3 users representing the three types to gain further insight. At the end of the user research, the team decided that the struggles of the Chinese entrepreneurs were the same as any entrepreneur coming to Finland, irrespective of country of origin. Thus, the decision was made to change the target to any foreign entrepreneur coming to Finland. The team also decided to limit this to immigrants who wanted to come to Finland to work either in a start-up or a big enterprise, i.e. specialized workers. This was done to find common ground between Migri's target (personal applications) and Vero's target (enterprises) [32]. At this point of the process, the teams had defined their user target and defined what content they needed to convey. What remained was the personality of VeroBot. As there was not intent to go live immediately, for the sake of the experiment, the teams conducted a quick survey done through a paper questionnaire to understand the characteristics of VeroBot's personality. The fifth step saw the building of the content and in the final step the team tested the bot with target audiences.

In June 2018, the final prototype of the experiment was demoed live with success and participants encouraged them to pilot the service as soon as possible [33]. In August 2018, PRH came on board and the experiment turned into a project to build a common service helping foreign entrepreneurs start up business in Finland. The process took on the same double diamond process (Discover/Research; Define/Synthesis; Develop/Ideation; and Deliver/Implementation) and built the service around three user personas based on the identified targets: limited liability companies or private traders. The personas were: (1) Yu Chen who wants to start up a subsidiary; (2) Vera Allik who wants to start up her own business and (3) Berat Asani who wants to start an import-export company [34] (Figure 4).

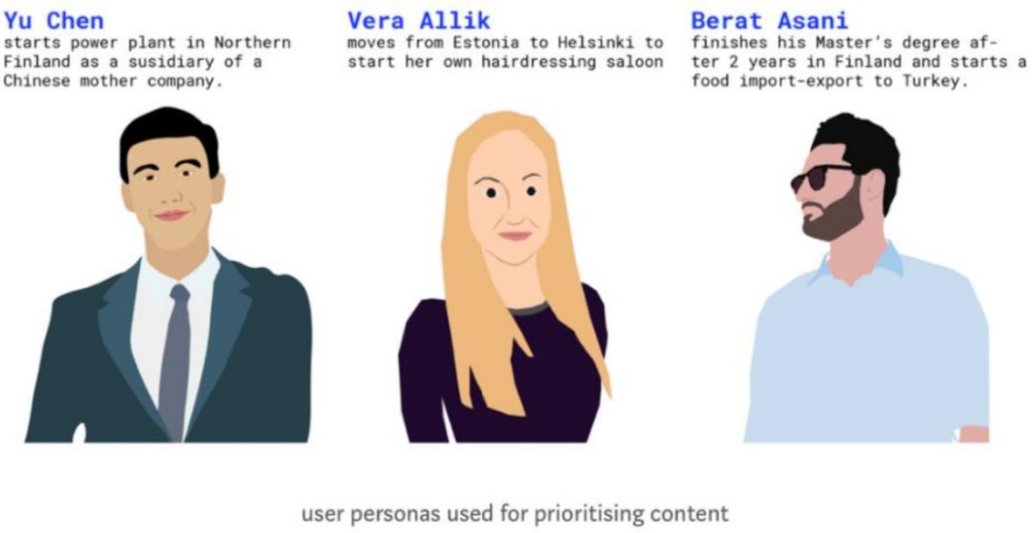


Figure 4 - Starting up Smoothly User Personas[35]

In the final prototype, users can ask questions to one bot and be referred to another bot for questions that concern the partner organization in the same conversation and window. For example, a foreign entrepreneur may first go to the Vero website interested in how to start up a company in Finland and then be referred to Kamu through VeroBot for questions regarding immigration. Or vice versa, an individual may go to the Migri website interested in getting a work permit and then be referred to VeroBot by Kamu for questions regarding personal taxes (Figure 5).

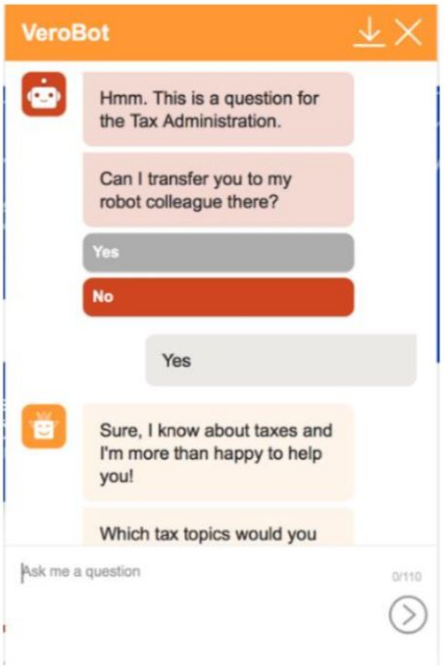


Figure 5 - Kamu to VeroBot referral [36]

**Implementation and Evaluation, Monitoring and Measurement**

The service started piloting in December 2018 and will run until June 2019. The main evaluation of the project will then take place during summer 2019. During the process, Inland and the institutional organizations, Migri, Vero and PRH, learned a lot about collaborating within agencies and the bureaucratic and technical hurdles that arise. One insight that came out of this process very clearly is that technology comes after accounting for and understanding user needs. Inland took an agile and collaborative approach to creating an integrated, networked service of organizational chatbots. Rather than investing in large infrastructure and convincing organizations to get on board, Inland chose to connect separate prototypes designed to meet the individual organization's and its users' needs [37]. In this way, a networked solution that meets a larger scope is also suitable for specific needs – social, cultural, technical, etc.

## Insights on political influence

Inland Design doesn't have any political ties. It is an internal team of Migri, whose staff are hired internally. They are thus civil servants. This has given them a special position as designers for public sector innovation by allowing them to fully understand organizational needs and constraints. This has allowed them to gain trust from the organization, as there is no hidden agenda or profit motive, as can be the case with external design consultants.

## Media and communication

Inland has documented their work very well through articles on their website, posts on their social media channels, master thesis done by trainees and also through a Medium blog. In addition, we also document and write for our internal website in Finnish. This has allowed them to be read and connected with a diverse array of actors and other design labs working in the public sector, which has been useful in their development. Most communications are in English, as the lead designers are not native Finnish. The working language of the lab is a mix of the two languages.

The constant documentation of their work has also prompted them to reflect on their activities and determine what's working and what could be done better the next time. This critical lens is crucial in design work but is also an element that is often ignored in the hype of design thinking and its promises of systematic innovation. This focus on documentation has helped them close this gap.

## Insights on culture, behaviours and organizational aspects

While no formal evaluation has been made on baseline levels and current levels, what can be observed is an increasing appreciation of and trust in the co-design approach and user centricity that Inland promotes. This can be seen in the number of new projects that are brought to them and new groups asking to do user testing, some of whom have not had any involvement in Inland previously. This demonstrates that their work is being followed and

shared “through the grapevine”, manifesting the value that Inland’s work is being attributed by Migri.

Furthermore, through additional activities that go beyond project work, Inland’s initiatives promote an experimental culture in the organization. For example, the Service Design Ambassador initiative mentioned above has worked to this effect, instilling a human centered mindset and embedding design capabilities within the organization in a learning by doing process. Moreover, an internal program called “Lunch and Learn”, in which Inland had informal lunches with managers, helped get buy in from the organization and establish informal connections and relationships[38]. Once again, the emphasis of meeting without an agenda [39]proved to be useful in establishing relationships within Migri.

## Insights on the co-creation process

The codesign approach has been fundamental to the work of Inland. In the words of Inland’s Director, Mariana Salgado, “Co-design as a mindset aligns with the key government goals to have more flexible structures and less siloes, be more transparent and less hierarchical in the way the work is organized”. The approach has provided a framework under which to engage diverse stakeholders around a common problem and to encourage everyone on the team to take on a human centered approach. This was clearly seen in the work done with the chatbots. Inland’s strategy of spreading design competences and a human-centered approach through a mix of project work and initiatives has allowed for learning-by-doing and design awareness, which has facilitated the uptake of a new mindset and a bigger acceptance of a new way of doing things. There are three particularly interesting insights coming from the case.

The location of the lab: inside or outside. The value of in-house designers.

Public organizations are characterized across Europe as being risk-averse, burdened with layers of bureaucracy and highly siloed; all of which stifle innovation efforts.

However, over the past decade government innovation labs have arisen to help governments and their agencies innovate their practices and services (Tõnurist et al., 2017a). Inland Design, being a government innovation lab, housed within a government agency, has an interesting position. As was seen in the case, their location was quite influential to their work in two principle ways: (1) being located inside the government agency as employees, i.e. as civil servants and colleagues, leveled the playing field allowing them to more easily gain trust from the rest of the organization and have inside access to organizational resources and knowledge; and (2) being located in the digital service unit gave them access to bigger projects and also gave them a metaphorical “foot in the door”, being able to demonstrate their value in an area in which design is more easily accepted: technology (as opposed to business strategy).

Being in-house designers rather than external consultants allowed Inland to be viewed as part of the team, rather than agents needing to sell something. This position of being colleagues working to better the department allowed them to gain access to resources, also in terms of insights coming from informal conversations, that helped them direct their

operating strategies in a manner that aligned with the strategic goals of Migri but also those of Inland (which were to help Migri change its working practices and better serve its clients). Being in-house has also allowed them to follow their project from conception to implementation, while also changing roles during the process. The hand- off from design expert to project member or consultant is an important moment because it ensures that ownership of the new process and the competences that go along with it are passed on to the organization, while also providing space for guidance and constant support. While a lot of the design work and experimentation being done in public services has often ended at ideation, being in-house has given Inland the possibility of following the project beyond conception and service ideation and into implementation and even evaluation, thereby demonstrating the value behind the codesign approach. In the case of Inland, being located inside government has given it a strategic position from which to operate and make an impact.

While being housed within Migri and its digital service unit as internal design experts has its positive features, it also comes with its problems. For example, the nature of the work that Inland is invited to do is mostly service-oriented, and rarely touches upon strategy, where co-creation processes could be quite impactful. This leads to questions regarding the location of design competences within the organization and to its permanence. In the case of Inland, the designers have a temporary contract which most likely will not continue. As stated by Inland's Director, in order for designers to be able to propose radical solutions and truly impact the organization, "[it] needs to be a permanent resource in public organizations, not a pop-up endeavor or an experiment". This alludes also to the fragmentation of the learning outcomes of design work in public sector innovation efforts thus far. Moreover, the separation of design competences from strategy and limiting it to the design and delivery of service solutions is also found on a macro-scale in the policy cycle, where design is being used predominantly to find and test solutions (McGann, Blomkamp, & Lewis, 2018b). As highlighted by Junginger (2013)[40], limiting the role of design to policy implementation (i.e. the design of services) can lead to problematic policy outcomes (i.e. the possibility [and futility] of designing [even great] services that implement poor policy). She thus emphasizes the interconnectedness of policymaking and policy implementation as paired design activities. Likewise, on the organizational scale, design can help public sector organizations navigate the complex, emergent and 'wicked' problems and needs that they face, if they are given a seat at the strategy table and if they are taken on as permanent resources. Linking these activities could lead to higher levels of organizational efficacy and efficiency and ultimately public value, which should be verified by future studies.

**Using technology to bridge silos**

As mentioned at the beginning of this section, governments across Europe are built around siloes for organizational efficiency and are hierarchically run. This division has made it difficult, as was seen in the case, for organizations to respond effectively to user needs that often span across organizational divisions. Understanding how to serve citizens from a life-events approach is critical towards improving the efficacy of public services and bettering the rapport between citizens and government.

Inland's strategy to bridge government silos through technology, in this case through a network of chatbots, is an attempt to help organizations create a networked solution centered around a life event requiring interaction from the user/citizen with several departments (which in the case was on foreigners starting a business in Finland). The important role that technology played as a conduit for this solution is evident as it heavily reduced the work burden of the customer service staff, while contemporarily improving the service for the users. Without technology, the solution would have been more costly for Migri (most likely entailing higher labor costs) and less efficient. As we are speaking of the public sector, it is not an issue of cutting profits but rather spending public money in a manner that maximizes public value. Technology here managed to accomplish this and highlights the strategic role that new technologies stand to play in improving public services and generating public value. What is important also to note is its role in supporting and improving existing services which didn't see a reduction of human resources but rather allowed the staff to focus their energy on problems requiring their expertise.

Inland chose an iterative and "lean" strategy that was based on the activation of a unique organizational pilots which were then connected through a network layer of collaborative services. This allowed organizations to get on board in an organic way without bypassing the crucial learning outcomes that are acquired through the design process. In other words, in other more traditional solutions that see the construction of large infrastructures in the hopes that other organizations will join in, learning is disjointed, occurring only in the leading organization. Inland, however, walk each organization through the necessary steps towards creating a chatbot for the specific user group of the organization. In this way, each organization acquires an understanding of the technical and social aspects of the solution, the competences to move forward and also the necessary mindset for collaboration and "doing something new or old in a new way". The case demonstrates the importance of the learning process that occurs during the codesign process and the benefits it has in terms of successful implementation of an innovation in contexts that are rigid, highly bureaucratical and hierarchical.

Lastly, a case could also be made towards a different strategy: rather than breaking government silos, bridging silos could be an effective strategy. Silos are effective for organizational efficiency. The problem lies in the lack of communication and connection between the organizations, i.e. the closed versus open nature of public organizations and the rigidity of bureaucracy and specific cultures that have impeded collaboration. This is in line with Callon (Barry & Slater, 2002) who stresses the importance of connection and the role of science and technology in accomplishing this: "what science and technologies do is to maintain or to make possible connections between frames and between different places. So, you are freed from this image of a multilevel society. You don't need several layers, different layers. You don't need infrastructure and superstructure and embeddedness. You only need places that are connected and the possibility for actors and information to circulate from one place to another one... Technologies and sciences can be used to frame interactions, but also to mobilize other places and to connect them to the place where interactions are done" (p. 293).

The network of chatbots that Migri, Vero and PRH are experimenting with is an interesting start in this direction. Their strategy, which could be interpreted as "flat- oriented", pushes

away from re-structuring in drastic measures (e.g. infrastructure changes) but rather uses technology to simplify and ameliorate the process of communicating and collaborating between organizations.

**Co-design ensures that technology supports social needs (social first, then tech)**

In the process of designing Kamu, it became quite clear the importance of structuring the content of the chatbot before diving into the technical aspects. Profound user research regarding their needs and the modality through which this could be met (technical competences but also emotional needs – the personality) were the foundation of the development process around which technical solutions were made. What can be learned is the importance of the social structure when designing the technological infrastructure. The social structure includes more than just the user but extends to all actors of the service system. In Starting up Smoothly, it was equally important to understand the organizational needs of the partners as it was of their users in order to guarantee a fruitful and effective collaboration. It is thus crucial to keep in mind the content (both technical and social) and context of technology when developing innovative solutions (Lea, O'Shea, & Fung, 1995). The case demonstrated the virtue of pairing co- design methods with technological development as the prior focuses on the user and stakeholders of the solution, ensuring that the social structure is accounted for both in terms of the content of the solution but also the context into which the solution will be used.

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