

## REGIONAL REPORT TO SUMMARIZE THE FINDINGS OF THE CO-CREATION BASED NEEDS ASSESSMENT PROCESS

final version

CE1516 I-CARE SMART PROJECT  
HUNGARIAN TASK4S

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## 1. Needs assessment to reveal the unmet needs of the elderly

In response to the COVID-19 situation, the municipality of the 11<sup>th</sup> district of Budapest (LP) has set up a call center to receive inquiries and calls for help coming from seniors of the district. The call center of 19 stations also dispatched volunteers to help seniors with their daily routines that would require them to leave their home and risk being infected. Dispatchers were nursery teachers. The process of the call center was:

- A call is received at the call center
- The dispatcher logs inquiries and other data
- The social service calls them back specify the requests
- The requests are forwarded to volunteers and experts
- The call center logs feedback about whether the request was fulfilled

Over a 3-month period, 3000 requests were processed. We used this data for the basis of our needs assessment with the elderly. The qualitative data was grouped into topics and a detailed content analysis was implemented to distill the insights. The resulting groups of insights were then elaborated and saturated by the expertise of the task4s members in the light of the value proposition canvas in a series of 3 workshops.

In the following section we briefly describe the callers to give insight into the persona of the value propositions.

### 1.0. Demographic description of callers.

Three quarters of the calls were made by women. We hypothesize that women find it easier to ask for help and the traditional role of women as caring, open for and to help facilitated them more in making these requests compared to men. 90% of the callers were more than 70 years old (since the call center was targeted and communicated towards this age range). For this reason, the following data is specific to the group of “older elders”. 87% of the callers whose household status could be verified were living on their own and 10% with their spouse. 89% of the callers asked help for themselves. 15% of the callers had reported chronic diseases they deal with, dominant among them were diabetes.

### 1.1. Security.

In general, need for security is similar to the need of connection. It's different in that it involves a higher chance of elders becoming victims of intentional or unintentional forces. There are 5 dominant customer jobs related to feelings of security:

1. Decrease feelings of vulnerability.
2. Being able to ascertain the validity and credibility of information.
3. Gaining foresight by indicating physical, contextual barriers.
4. Keeping themselves up to date with support processes.

The metrics of security might be generalized as follows:

1. The more they can protect their autonomy the better.
2. The more they able to stay an active member of the society the better.
3. The more they can be involved in cultural functions, the better.

Security is closely linked with the need for autonomy. Being able to conduct an autonomous lifestyle is the function of their mental, physical health and environmental support. Cultural differences also play a role. Men of authoritarian values who are used to being the head of the family and making decisions about the daily lives of an extended circle of people might be extremely frustrated by feelings of



vulnerability. They experience extreme tension in a situation where they need to admit that they are vulnerable, need help and support from younger people. In a more liberal family, where the status of children and parents are equal and decisions are made democratically, reverse directions of support is more familiar. However, liberal values might lead to an argument that children are not responsible for being born, parents are, so children are not responsible to take care of their parents. Elders must be autonomous and use resources and services external to the family. Currently in Hungary the social service system reflects an authoritarian culture: market-based and social services are scarce so much of the caretaking responsibility is implicitly delegated to the relatives of the elder.

In the following section we detail each of these customer jobs in the structure of the value proposition canvas.

### 1.1. Decrease feelings of vulnerability.

There is a need for smart solution that decrease elders feelings of vulnerability. Feelings of vulnerability were emphasized during the outbreak due to the demographic being an at-risk group.

*She is 89 years old, she has everything she needs, she just asked if we will help her if she needs. I reassured and heartened her to call if she needs help in getting her medications or the groceries.*

### Pains.

They are uncertain about the accessibility of support. During the covid-19 outbreak, some phone calls were coming from seniors who just wanted to make sure the municipality would help if they had any trouble. They are alone at home, experiencing isolation and loneliness. Living their day to day lives in this context, they need to make sure that in a vis maior situation they would be able to receive help quickly. They wanted to make it certain that they would receive help if they needed it. The confirmation about the accessibility of support seemed to put their minds at ease to some extent.

They become especially uncertain during and after vis maior situations. In vis maior situations, even if the actual consequences of the situation are negligible elders might become extremely frustrated and experience their vulnerability in quite a harsh way. For example, they might be unable to get their food from the delivery guy who is at the door. In and after these situations the need to confirm accessibility of support might be triggered.

They have reservations about calling for help. Extremes of this pain point had revealed their vulnerability more explicitly and received “psychological first aid”. Extreme calls for help on the general dispatcher service was scarce possibly due to elders’ reservations about crying out for help, which goes against their central need for autonomy. However, during the outbreak, calls to the psychologist phone service “Délután” tripled, showing the importance of this problem. Men might be more reserved to call for help due to cultural reasons. They might be more embarrassed and might ignore emotional and health problems if they are not emergencies, leading to a higher mortality ratio .

Worries about the long-term sustainability of their current security. Financial decisions for the moment are usually not hard, they tell social services that they would pay for services that solve their problems. However, they are afraid of “being left alone” at one point due to running out of money.

### Gains.

The quicker and more real time reaching out is, the more secure they feel. In general, if elders are able to reach a service, authority or personal contact who they trust quickly, they will feel more secure.



The higher the level of credibility, the more trusting the elders are. However, with a public office like a municipality, their trust is fragile due to their long-time disillusionment with bureaucratic processes: “you are just like any one of them”.

### 1.1.2. Being able to ascertain the validity and credibility of information.

Having a clear idea about who credible sources of information are and whose authority they can trust when they need safety instructions or other form of help.

*She was asked by a man called XY that he was asked by an unknown association to go to the groceries. She didn't ask for this, that's why she called.*

*He called because of her aunt. She was called by the social service to let them know that two ladies will come by to her to assess her financial status. She asked if this is valid. I told him that we only respond when they call, but we don't do home visits. I asked him not to let her invite them to her home.*

*She asked if the person who she was assigned to get her medicines is trustworthy or not.*

### Pains.

They have a high level of mistrust. The level of mistrust is conditioned to be high with many elders as they have been targets of fraud schemes extensively. During the outbreak, the municipality decided to foster this general mistrust in their official communication towards the demographic because covid-specific fraud schemes had appeared. In some situations, the elders seemed to call the municipality by reflex. Some information or request they were made triggered a mistrust reaction so they turned to their trusted authority to verify the information.

### 1.1.3. Gaining foresight by indicating physical, contextual barriers.

The risk of becoming vulnerable due to anomalies of the physical environments drives elders to indicate these contextual barriers to the authority. They see these

The entryphone is out of order.

She is supposed to receive medicine and lunch but on the 2020.04.06th between 10.00-16.00 there will be a power cut. She let us know that she is uncertain if she will be able to let the colleagues in.

### 1.1.4. Keeping themselves up to date about processes aimed at supporting them.

Some of the conversations were initiated by callers who were inquiring about how a previously discussed arrangement (such as shopping voluntary service) is progressing. **Their sense of security partially comes from being able to see clearly and in real time how support processes aimed to help them are progressing.**

Her prescriptions were taken but the medicine hasn't arrived yet. I asked for her patience.

She asked for grocery service yesterday but she hasn't been called yet.

She asked for grocery service last year which she hasn't received since. She is asking again.



**Pains.**

Asking for help might be embarrassing for them. They did not seem to find it embarrassing to initiate these follow-up inquiries. However, when the service initiated the follow-ups, some of the elders seemed embarrassed by asking for such complex help. Many of them had solved the original issue by the time the follow-up happened. This is partially connected to the “confirming the accessibility of support” - making sure that they can trust the service to solve their need is central to them.

**1.2. Access to medical attention.**

This job group was found most important of the three during the co-creation sessions because solutions with an outcome is preventive, reduces pain and fear and increases security. The needs of this section were seen as a consequence of the lack of cooperation between the Hungarian public services related to seniors by the co-creation experts. A plausible solution would be making a connection between social and medical services by a channel that facilitates information flow (GP-social service, hospital-social service). The high ratio of preventable deaths in Hungary might be related to this systematic issue. There are 2 dominant customer jobs related to medical attention:

1. Access to medical attention as quickly as possible.
2. Providing adequate reaction to a medical emergency in an at-home context.

For effective solutions, the following criteria are essential:

3. Relieving relatives’ burdens related to caretaking.
4. Relieving burdens on the medical service.
5. Improvement in day-to-day living standards of the seniors.
6. Real-time information flow about the seniors medical needs.
7. Case-specific information flow about emergencies to support adequate interventions.

**1.2.1. Access to medical attention as quickly as possible.**

The user journey of getting medical attention (especially) after leaving the hospital is problematic.

An old lady asked about medical services. Information about medical services. I gave her the number of St. Kristóf Hospital.
She asked if the surgery and rheumatology is available or not. I gave her the number of the hospital.
She had to go for a cupping but she is unsure whether St. Kristóf’s or the GP can do it or not. She is afraid to step onto the street, I asked her to call her doctor.

**Pains.**

Pointless personal visits to a facility. Sometimes due to a lack of otherwise easily accessible information, their personal visit to a doctor might turn out pointless. The facilitation of these types of information is a municipal responsibility, delegated to the district social services.

Online and landline services are not accessible for many seniors. They have hard time communicating through these channels so they do it personally.

Psychiatric patients are at higher risk. Patients with panic disorder or obsessive-compulsive disorder are afraid of going out, so their clinical symptoms prevent them from making a visit to the doctor. However, the psychiatrist would only receive them in the hospital. The same is true in a situation similar to the COVID-19 home-bounding policies.

Comorbidity of conditions increase the complexity of adequate medical attention. A senior diagnosed with multiple diseases may receive colliding treatment or lifestyle advice, such as a surgeon advising



as little movement in contradiction to the cardiologists fitness demands. Another systematic issue: a holistic approach to intervention is missing from the medical system.

Hospitalized seniors don't know who will take care of their post-hospital needs. There is no communication between the hospital and the social service. Transportation and post-hospital medical needs are thus implicitly delegated to the relatives . The user journey of leaving the hospital is full with barriers.

They are uncertain about what is the responsibility of the social and medical service. The boundaries of responsibility are overlapping (such as in the leaving the hospital example) and seniors don't know who to turn to about their issue.

**Gains.**

Improving the accessibility of general medical information might be dramatically improved by redesigning a few websites. The callers mentioned just a handful of medical facilities of the district. They asked about information that was available but possible not accessible for them on the official websites of these facilities.

**1.2.2. Providing adequate reaction to a medical emergency in an at-home context.**

She asked if a crucial injection procedure can be implemented because she didn't reach her doctor and the hospital. I helped her find some phone numbers from the website of St. Kristóf's, gave her two, she was grateful. 79 year old lady. She asked for help in asking for the prescription as well because she didn't know how to take care of that.

They need help SOS, a spastic elder man needs a place to stay at. She is unable to take care of him, asked for help, she is very agitated. The GB is over 65 and i unavailable, the elder man was moved home from the hospital yesterday.

**Pains.**

Professionals are reluctant to perform medical procedures at home. After life-saving interventions such as laryngotomy the nurse would report themselves to the authorities and go through an exoneration process in the judicature system.

Knowing what to do as a relative in a situation where specialist expertise is needed. The senior being lost or falling in their homes might be effectively covered by their relatives. However, they might not be knowledgeable about medical conditions related to specialty fields such as dietary or diabetes. On-demand consultation with such experts is needed. Non-emergency topics that are important to long-term prevention and wellbeing of the patient might not be discussed with the doctor due to their tight schedule.

**Gains.**

Easy access to day-to-day nursing and effective, case-specific help in vis maior situations. Each issue is specific and background data is needed for effective help in many situations; eg. A diabetic who falls in their homes needs different help than someone with a cardiac risk.

**1.3. Verifying, augmenting and information relevant to their daily lives in a two-way communication channel.**

In many cases callers needed general information. Important messages relevant to the elders that were relayed through different media didn't reach many of them effectively. In other cases, they had



questions for which they didn't find the answers from other sources. They also made effort to verify their understanding of these messages, sometimes for good reason: the information had to be refined augmented which in turn boosted their feelings of security. There are 5 dominant customer jobs related to information control:

1. Getting access to the information they need
2. Being connected to a human and receiving personalized information
3. Solving an issue around their living context by informing the authorities.

The metrics of information control summarized:

1. Simple and straightforward information flow.
2. As much as possible, two-way, live personal communication with a trained helper.
3. Having a channel to relay information themselves.

It must be noted that the source of the data was an information and volunteer dispatching service so its fair to say informational needs were overrepresented. However, the co-creation workshops revealed that the lack of a senior-friendly information interface has been an ongoing issue for decades. The functionality of google for younger generations meets these needs for those demographic, but for seniors, google is not a friendly interface for information queries.

### 1.3.1. Getting access to the information they need

It should be as simple and straightforward to get the information they need as possible. There are more barriers for seniors in getting the information they need than for younger demographics.

Inquiry, nothing specific
Inquiry about whether we can get them masks and sanitizers. I told her she doesn't need those if she stays in the flat. She gave up on the mask but she really wants the sanitizers because there's two of them in the flat. She is waiting for our call.
Inquiry: he was called by elders, asked if he can give this number to them. I said yes and thanked his help.

#### Pains

They de facto don't receive the information they need, or they are not competent in getting the information via digital means. Mental or physical capacities are often deflated, and as social circles are narrowed (such as in the COVID-19 situation) social support is deflated as well.

#### Gains

They feel calm and at ease by getting an answer. In many cases, information is equivalent to security. If they are reminded that they are not alone, they have support, they feel secure.

They feel validated by being listened to. The callers were often relieved by the fact that the issue they reported or the question they asked was found important enough to be officialized in the dispatcher issue tracking system. The mere fact that the issue is administered is a gain in itself.

They feel validated by getting an answer. They feel like they matter if there is someone they can turn to with their struggles. Getting answers to one's inquiries is not only informational but affective feedback as well.

### 1.3.2. Being connected to a human and receiving personalized information

Their sense of social belonging is reinforced by having a person to turn to with their questions. It is important for them to have a "human interface" when getting their questions answered because the



questions are also attempts to reach out socially. The callers often asked for dispatchers whom they had talked to before and were a bit disappointed if that person wasn't available. Elders who are physically challenged are especially buffed in their autonomy by the social interaction.

They have difficulties solving day-to-day housekeeping operations, especially the ones that need extended physical effort, such as cleaning the house or shopping for groceries. Its hard to substitute for this so it becomes to some extent a social service responsibility.

**Pains.**

Buerocracy and GDPR-related barriers that set back solving their problems. They are dominantly not worried about data security if a problem is solved. For example, the online system for redeeming medical prescriptions was ceased by a regulation during the COVID-19 crisis. The regulation was quickly revoked due to the shocked reaction of the population.

**Gains**

Being able to ask someone who can follow their thinking. Another reason why they turned to dispatchers with questions is that these professionals were able to "decode" their communication. The communicator has to be able to adapt to the abilities and thinking pace of the senior.

Getting reinforcing feedback about their interpretation of events. They might be uncertain about how they filter the information that they receive about eg. Regulations or advice communicated towards them in a one-way direction.

Getting the practical help they need not what they say. In many cases, practical inquiries such as putting together a shopping cart for the shopping voluntary service included some form of consultation. The seniors would not be able to verbalize what they need so the dispatcher had to decide for them. For example, they would say they are diabetic so the dispatcher would choose the appropriate snacks for them. These case specificities demand in-depth contextual knowledge for the caregiver about the senior.

Social and family support is relieved by a third-party service. Their minds are put at ease if they know that the senior has credible, trustworthy information about a problem.

**1.3.4. Solving an issue around their living context by informing the authorities.**

They make small reports about potential mobility or health risks, such as dead animals on the street or the entry-phone not working and so they feel useful to their local community in the eyes of the authority.

Complaint about a dead bird. I gave him the central phone number.
Whats up with the waste bones ont he street and the playground?
They are partying all day ont he square. A bigger gorup, no one is warning them.

**Pains**

Giving room to report on others reinforces negative behavioral patterns. It's important to outline that when the information is about the behavior of others (especially in cross-generational context), the intent might be malignant and so shouldn't be encouraged. Reporting on others is also emotionally loaded because of the dark legacy of the socialist system. Also, there is a strong stereotype among they younger generation about malignant seniors making their lives hard. For this reason, the reaction given to these reports are crucial in educating seniors about this behavior.

They don't feel competent and confident to solve interpersonal conflicts. When the behavior of neighbors is disturbing, people feel confident to initiate a conversation, as long as they are in the





same generation . They might feel incapable to solve a situation when said person is younger than them by a generation. These issues might also come from different expectations about the different generations standard of living context. Seniors might have higher standards since they feel settled for life in their living context and so are critical about flaws.

### **Gains**

Feeling useful by informing the authorities about issues they discover in their living context.

Getting feedback and closure when an issue is solved. When a troubleshooting process is finished, they feel important if the issue is solved, having triggered the process in the first place.

## **2. Business models and business needs assessment.**

In the following section we outline insights coming from the engagement of businesses in the Budapest innovation ecosystem. We talked to key players of the startup mentoring, venture capital and pharmaceutical industries to understand the state of the industries and the business needs of its participants.

To conduct this research, we used a stepwise in-depth interviewing procedure to collect the data, content analysis and co-creation techniques to analyze it.

We conducted 60 minute in-depth interviews with 3 executives of incubation/accelerator programs of Budapest. These 3 interviewees in total have worked with 4-600 projects in the past five years and had the expertise to put the Silver economy and research services in context. We have also interviewed 2 startup projects that specifically focus on seniors and develop smart solutions for the elderly. We interviewed 2 investors who have had diverse experience in supporting innovative startups in their early stage. We have also interviewed a product manager from a pharmaceutical company who has provided invaluable insights about the needs of his service line.

After transcribing the interviewees, we performed content analysis in co-creation with two user researchers, an economist innovation manager and an executive innovation manager. This resulted in a set of service directions that were discussed and weighted in a task4s meeting. The groups of topics and insights were elaborated in the light of the business model canvas in another co-creation session with two user researchers, an economist innovation manager and an MBA innovation manager and a product manager from a pharmaceutical company. Finally, transcripts from these co-creation sessions were summarized.

The business modeling should be considered a work in progress as a lot of data is missing to support the insights outlined below. Each business model has its caveats and risks that are expected to be challenged during the preparation of the Silverstar challenge.

### **2.1. Business model 1: investors / startup projects.**

In the following we outline a business model closest to the heart of the task4s. This business model has many risks, in conclusion based on the in-depth interviews and co-creation sessions we see that the venture capital, market research and innovative startup industries are not mature enough to support an innovation boosting end-user research service in the Silver Economy segment. We plan to build up an expertise in the segment over the pilot action process and also educate the market about the importance of research.

In the next section we outline the key patterns of insight that are relevant to the ICSS.



### 2.1.1. The venture capital industry in Hungary is not mature enough to provide a market for our Silver Economy specialization.

Digital health investors and longevity funds are investment models specialized in building businesses in the target segments. Western European business models might not work if adapted 1-to-1. In Hungary there is currently no health-specific investment fund because the regulations in this field are profuse. A bottom-up market entry has many barriers, the business would have to make deals with units like the National Health Insurance Fund of Hungary (NEAK) or the National Healthcare Service Center (ÁEK) to ensure an entry on the full width of the 10million market.

The venture capital industry in Hungary is young and immature. Leading voices of the industry are the private funds that were established among the first after 1989. Venture capital investors in Hungary have a portfolio of several focus areas. They invest in startup companies of 2-7 industries, taking a general approach. The biggest funds in the venture capital industry in Hungary are not classic capitalists in the sense that they invest money from the national (and EU) budget, not their own. All interviewed experts see this as detrimental in the development of the industry because the return on investment for these funds are not market-based: a major part of it is returned into the national budget in taxes even if the companies fail. Due to this fact, these investors have little incentive to build up expertise in riskier niches like the Silver Economy.

### 2.1.2. Credible business research is hard to come by, there is a need for a credible innovation research service.

The value and quality of market research is low in Hungary. One of the experts mentioned that he would be in a hard position if he wanted to contract a researcher that can credibly lower the risk of his investment decision. Market research in Hungary is generally low quality and overpriced in the opinion of some other experts. Bias towards the agenda of the clients is a particular problem. The term has especially negative connotation among pharmaceutical companies. In this sector, marketing and market research activities have just recently been regulated, 12 years ago market research was a synonym of paying off doctors to market their medicines. Experts warned us about the use of the word “market research” and proposed to use “user insights” or “patient behavioral insights” instead.

In addition, investors, according to the experience of interviewees, have little ability to tell quality research from shallow research. There may be an opportunity to deal with these problems by branding the ICSS similar to how quality management (ISO standards) are presented for later-stage products. Manufacturers are regulated and often recommended to meet a set of standards regarding the different points of the value chain for a specific product. To take a concrete example, one of the accelerator/investor platforms we’d interviewed mentioned that they made it a standard procedure to have projects talk to 15-30 end users and do a fake door test before investments. The quality of the research methods applied by these teams is quite diverse.

As a solution, the ICSS service can provide a certificate of excellence towards investors or other third parties regarding the quality of user research (and the value proposition). There is an opportunity for parallel inspiration about the branding and “productification” process of any quality certification services. If we package the ICSS similarly to quality certifications towards investors and projects, we might fill a gap in the market research industry of Budapest.

In order to establish credibility in the eyes of investors, long-term and short-term impact measurement is necessary for the ICSS. In the long run, we expect that the success ratio of ICSS client startups will be higher than non-clients. Since the market is small and we expect only a few projects each year, this is not enough. We advise short term measurement as well: product strategy, marketing and business development insights of each research and consultancy project must be well documented pre-success and matched to the post-success success factors. A high ratio of matches shows that the ICSS were the key advisors behind the business decisions that lead to success.



### 2.1.3. There is a low potential of revenue from early-stage startups.

There is a strikingly low number of startup projects targeting the silver economy in the incubator and accelerator programs we talked to: the ratio, according to the experience of interviewees are between 1 and 0%. The market of innovative scalable businesses within the sector at the moment is not large enough yet to sustain a for-profit research company.

Value proposition research is a typical step for a seed or pre-seed startup. The value proposition canvas and business model canvas are basic formats for communicating the value of a product or service concept and it is usually validated via research. However, these startup teams are typically unfunded, these steps are prior to investment. Unless they are specifically dictated by an investor to do so, they would not burn their money on contracted research.

According to the interviewees, investors expect startups to deliver answers to the business development and user value proposition questions they ask. They don't care about what methodologies the startups use to answer these questions, as long as they are convincing. For this reason, it is hard to expect that investors would "prescribe" working with a specific user research company such as the ICSS. However, investors might "prescribe" a more general incubation program for the projects where they expect the projects would find the contacts and resources needed to answer these questions. "Prescription" seems to be an alternative to investment when it comes to the decision of the investor: they assess the risk to be too high and they expect that 3 months of incubation in the right context will help reduce the risk.

Even after investment, spending on research is tricky for the startups: the basic budgeting template at the biggest investment fund in Budapest doesn't provide any recommendations on allocation for research (contrary to development or marketing).

### 2.1.4. The low ability of investors and startups in end-user research calls for educational activity.

Expertise about end-user research is low at investors and startup teams as well, there is a need for education. Investors in general, according to all interviewees don't understand the value of and methodological requisites of end-user research. Experts of startup-supporting services and startup teams all mentioned examples where investors questioned the budget allocation for research, made overgeneralizations about the insights or simply ignored insights about the end users. In order to build a market for an ICSS service targeting startups, investors must be educated about the value of research. According to the insight of one innovation consultant, if the businesses of a specific portfolio are all coached to put a weight on end-user research in their development strategy. This way, the investor of that portfolio might open up. Education of investors about the value of research creates values for all involved stakeholders, building the maturity of the venture capital industry. This activity might align with the goals of national economic policies and requires little investment from the national budget.

Education is necessary for the startup teams themselves as well. Answers to user-related product questions are typically collected by the team and with ad-hoc methodologies. The teams we contacted miss the knowledge needed to provide structured end-user insights. Project members are sometimes educated about these practices before the investment (one of the reasons why an investors might "prescribe" an incubation program for a potential investee).

## 2.2. Business model to engage innovative startups and investors

In the following section we outline the current version of this business model, which is a work in progress.



### 2.2.1. Customer segments

Non-profit activities: we expect that the market will not be mature enough to sustain a for-profit business model by the end of the 2-year pilot period. For this reason, the ICSS depends on support from national bodies. We haven't contacted possible partners yet.

For-profit activities: venture capital investment funds with a (willingness to) focus on the Silver Economy.

### 2.2.2. Value proposition

User-centric (not product-centric) expertise is built up by research projects to understand behavioral bottlenecks of medicine efficiency and medicine marketing communication efficiency.

Consultation and on-demand research about elderly end-users to prepare early-stage startups.

The credibility gap in the market research market is challenged by a focused, quality certification-inspired branding and service design.

### 2.2.3. Channels.

Investors are reached directly and through the education of startups about the value in research.

### 2.2.4. Revenue streams.

Non-profit activities: the consumer market is growing. We have to implement a sustainable business model in an eastern-european consumer context. Spendings of the target group might be low at the moment but the amount spent by each consumer is consistently growing and the number of consumers is increasing consistently as well. For this reason, in our concept the research center works in a non-profit structure, turns all of its profit into its operation. The center makes some market revenue but will depend on national funding after the Interreg project. Setting a long-term mission for this NGO with a quantifiable goal (eg. 50 services brought to market) can make a quantifiable budgeting plan in the long run. This goal then is expected to be supported by governmental units.

For-profit activities: we aim to contract investors with a package deal: end-user research that supports multiple startup teams. In this structure, the service would deliver customer insights to multiple startups at the same time, so the investor would cash out value from the same research for each project.

### 2.2.5. Key resources.

The most important key resource of the service is its expertise and research data built up on senior end-users living context, habits, behavioral and decision-making specificities, segmented properly. This asset must be built up during the 2-year pilot period.

### 2.2.6. Key activities.

Research and consultation to support the development of products and services in the Silver Economy.

Educational activity to boost the business culture of the venture capital investment industry and innovative startups.



The ICSS engages seniors through the Social Service of the municipality. We expect to build up a community of elders. The core community is engaged periodically and an introduction system is set up to help us grow a panel of elders.

#### 2.2.7. Key partnerships.

For for-profit activities: one investment fund is currently being established in Budapest which aims to build a specialization (among others) within the Silver Economy segment. The firm is experienced in startup incubation and investment. Previously they have been operating in a startup studio model, where human resource for software development and UX design is funded by the investor (the studio). They are focusing on seed investment and want to build a rigorous pre-investment validation standard to de-risk their decisions. They seem open to collaboration with task4s.

For research and testing we need access to a community space that is familiar for the elderly, which will be provided by the Újbuda social services. Since most of the researcher-end user interaction will be done in the elders community space, the infrastructure needs of the service are low: an office where internal workshops, individual work and client interactions can be managed. The office space of Demola Budapest fills these needs. In addition, we have an undecided concept to set up a standalone office within the district, as the municipality has access to suitable properties.

The task4s partners.

#### 2.2.8. Cost structure

Research projects: 3000 EUR / project in human resource cost. Cost-per-unit is decreased as the research expertise is built up. We expect that by the end of the pilot years about 50% of human resource expenses can be saved.

Material cost of research projects: 300 EUR / project. This is mainly made up of incentives to engage seniors. The cost of incentives are expected to decrease over time as the ICSS staff gets familiar with incentivization.

Operating cost of the office: 1000 EUR / month. If the operating costs can be decreased (via, for example partnerships with sponsors or the use of municipality resources), the research projects don't need to overlap.

To reduce the human resource and operating costs of the ICSS staff / office, we are considering a gradual service development. The task4s members dedicate some of their time to ICSS, however, "blank time" is paid by the activities of their current employers.

### 2.2. Business model 1: multinational / pharmaceutical companies..

In the following we outline a business model that seems the most viable if business value is taken as the primary output of the ICSS. It must be noted that the task4s has moral reservations about working closely with pharmaceutical companies. Extreme care must be taken to ensure the moral use of the insights the service provides to these companies and end-user benefits must always outweigh company benefits. It must also be noted that the insights discussed below come from 3 experts that have experience working for multinational companies. Because of this low reliability of the data, all insights below must be treated as hypotheses and explored further.

In the next section we outline the key patterns of insight that are relevant to the ICSS.

#### 2.3.1. Multinational companies need market research from the Hungarian market.



Interviewees saw the ICSS fitting to the marketing or CSR budgets of multinational companies. Hungarian marketing departments typically don't have Hungarian data, it is typical that they use research insights from the eg. Polish branch of the enterprise translated to English (and interpreted in in Hungarian). This is not ideal, according to a researcher expert, as the target group is very specifically in their cultural values, daily habits, financial context and consumer preferences. In addition, the CSR budget of these companies are spent in a somewhat free way, the reasoning behind the spendings is often creative (the accelerator of one interviewee is budgeted from the CSR cost lines of a bank).

### **2.3.2. Product managers at pharmaceutical companies have freedom in spending their budget.**

Marketing budgets are controlled by product managers at pharmaceutical companies, they are fully agent business owners. Their spending decisions are not reviewed or authorized as long as they meet their KPI's. About 30% percent of the specific manager we talked to was fluid, that is, he had complete freedom in investing however he saw fit. If they decide, they can even launch their own product development process as long as it helps them meet their yearly KPI's.

Their motivation to meet or exceed these KPI's comes from the fact that a major portion of their yearly earnings come from bonuses base don these metrics. This might be, however impeding them from high-risk decisions. Each product manager is different in how they see the value of research (and innovative solutions). The pharmaceutical innovation index might provide a way for us to segment companies where the innovation culture is high therefore the of risk reduction via research is a priority.

Product managers are active on linkedin.com, they can be reached directly on the social media platform or at sales conferences. There is pharmaceutical marketing e-mail database as well that can be purchased from the biggest medical journal of Hungary.

Product designers in the pharmaceutical companies have a relatively high budget for research, 30% in the example of the manager we interviewed. The research is used to increase the efficiency of physician visits as this in-person sales activity is the highest cost in the marketing funnel of pharmaceutical products.

### **2.3.3. Cost-per unit price for the research might be lower if the research is target group specific, not product-specific.**

The international context of I-Care Smart is an important opportunity for a silver economy project, especially for products of pharmaceutical companies. A product manager from a pharma in Budapest mentioned that his company wouldn't see risks in generalizing behavioral insights about Hungarian patients to an international context. The ICSS might gain additional profit from reselling results from a Hungarian sample to international sites of the same company. This way the cost-per-unit price decreases due to the "economics of scale" effect.

### **2.3.4. Pharmaceutical companies might spend more easily on understanding the end-users generally in contrary to understanding product-specific attitudes and behaviors.**

Pharmaceutical companies' marketing activity and other forms of persuasive behavior is closely regulated by the law. Product-specific marketing activity must be targeted at patients who have signed up for such messages, for example in joining a patient support program funded by the company. End-user research in some forms might be credited as product-specific influencing behavior so these companies.





Pharmaceutical companies rely strongly on doctors in their sales funnel: salesmen contact medical professionals directly when trying to make a sell. For this reason, medical professionals are the primary target group of pharmaceutical marketing, however, a patient-centered approach in communication (both for doctors and pharmas) emerged recently. Understanding patients closely and formulating the sales pitch through them towards the doctors helps convey an emotional message.

For this reason, pharmas might spend more easily on behavioral and habitual insights that are not specific to a treatment or medicine. One pharmaceutical product manager was unable to find a similar hungarian service. A general knowledge about the daily lives, habits, pain points might be built by the ICSS by conducting target-group specific research that is not product-specific.

Adherence is a behavioral bottleneck in the efficiency of medications: the ratio of patients taking the medication the prescribed way or not. Elders might forget taking the medication or even take more than prescribed. Irregularities in the medication regime might be determined by specificities in the daily routines and living context of the elder.

The qualitative aspects of daily lives when under medication is an important decision criterion for patients. One medication might promise a longer life for patients at the cost of reduced standard of living and these physically and mentally deteriorating side effects might be too much of a “cost” for elders. Pharmaceutical companies might be interested in the priority order of well-being aspects of the target group. A unique value proposition might come from something as trivial as “I don’t need to ask for help when I’m taking a bath”.

The ICSS may build a target group-specific knowledge about effective messaging and communication channels. Pricing for the target group might be another focus. According to one of the interviewees, seniors prefer to pay recurring subscriptions for the services they use, even electric home equipment such as kitchenware or television. This form of consultation would build on a sound understanding of the cashflow status of different segments of hungarian seniors and current pricing best practices on the market.

Product managers build patient profiles based on the diagnosis and demographic attributes of the patients. These profiles are often based on international patient data. These personas need to be re-specified, adapted into a Hungarian context. Data from the US is hard to translate into an eastern-european context: product managers might ask for consultation on “weighing” the insights of these market research results.

#### 2.4.1. Customer segments

Multinational pharmaceutical companies.

Multinational pharmaceutical companies with several branches worldwide (for reselling research results)

Multinational companies that produce any type of general consumer product with a significant segment in the 60+ population

#### 2.4.2. Value proposition

User-centric (not product-centric) expertise is built up by research projects to understand behavioral bottlenecks of medicine efficiency and medicine marketing communication efficiency.

The ICSS would advise the company in developing a senior-specific marketing, branding, communications strategy. The costs of bringing a consumer product to market is dominated by the marketing budget.



The ICSS would also help pharmaceutical companies develop their patient-support programs by implementing interventions that target behavioral bottlenecks of medicine efficiency, such as adherence. The ICSS consults these companies in the development of these interventions and provides insights to specify them.

Research projects might be funded by several clients (even in an international context). The user-centric insights are flexible enough to adapt to different consultation questions.

An ideal product or service of focus is one that targets the widest possible demographics and one of the more dominant target groups are 65+ seniors. The company markets the product for different demographics in different ways. The Task4s service would advise the company in developing a senior-specific marketing model.

#### 2.4.3. Channels.

Product Managers of pharmaceutical companies are reached directly on linkedin and on sales conferences for the industry.

#### 2.4.4. Revenue streams.

During consultation projects the ICSS licenses user insights to pharmaceutical companies at a fee starting from 1million forints per consultation. The IP remains with the ICSS, however, a cost structure for exclusive licensing might be constructed.

Beyond the consultation projects, companies might contract the ICSS in a long-term subscription basis.

#### 2.4.5. Key resources.

The most important key resource of the service is its expertise and research data built up on senior end-users living context, habits, behavioral and decision-making specificities, segmented properly. This asset must be built up during the 2-year pilot period.

#### 2.4.6. Key activities.

Ongoing research about the target group

Business development towards pharmaceutical companies

Consultation

#### 2.4.7. Key partnerships.

A pilot project partner: one key pharmaceutical company with preferably several product managers who would invest their time in helping build up the expertise. An ideal product or service of focus is one that targets the widest possible demographics and one of the more dominant target groups are 65+ seniors. This (most probably multinational) company markets the product for different demographics in different ways.

For research and testing we need access to a community space that is familiar for the elderly, which will be provided by the Újbuda social services. Since most of the researcher-end user interaction will be done in the elders community space, the infrastructure needs of the service are low: an office where internal workshops, individual work and client interactions can be managed. The office space of Demola Budapest fills these needs. In addition, we have an undecided concept to set up a standalone office within the district, as the municipality has access to suitable properties.





The task4s partners

#### 2.4.8. Cost structure

The business model is not mature enough to calculate costs, more data is needed.