



The cost-efficiency analyses based on the E2C Portraits

Contents

1. Introduction.....	3
2. The E2C Portraits	5
3. Scenarios	6
4. Identifying the potential chains of effects in the lives of the Portraits.....	7
5. Cost-efficiency analyses based on the Portraits	7
6. Lessons learnt	11
References.....	12
Appendix 1. Three Portraits with the scenarios	13
Kauko, the Family Amateur	14
Trudie, the Globetrotter.....	18
Kirsten, the Professional Human Being.....	22
Appendix 2. The chains of effects in the lives of Portraits based on the scenarios.....	26

1. Introduction

The focal phenomenon of Express to Connect -project is social connectedness. When measuring social connectedness of older adults we have rely on subjective perceptions. There is no objective measure for social connectedness. In the project a new solution for strengthening social connectedness has been development. In WP 4 we developed a new approach for assessing the anticipated impacts of the new service on the social connectedness of older adults. The impact evaluation was made by the users, older adults themselves, and the scale relied on the desired outcomes identified in the ethnographic study among older adults. Thus, the approach is aligned with the user-centric design process and the nature of social connectedness.

The mission impossible, to evaluate the impacts of a new service to be launched on the market in the near future, was completed. Next we had to face another mission impossible: to analyse the cost-efficiency of the new service, not yet on the market. There were, indeed, great challenges we had to encounter:

- Social connectedness is all about perception and feelings: how to identify such effects on which the price tags can be put?
- By aiming at strengthening connectedness we simultaneously are aiming at preventing loneliness and isolation. Could the detrimental effects of loneliness be considered "savings"?
- At which level should we try to analyse the cost-efficiency? At the level of the individual? Or the individual and his or her close ones as we are talking about connectedness? Or at the level of society?

Figure 1 on the next page presents our new approach to cost efficiency analyses in a nutshell. Each step is briefly described in this report. The approach has been piloted only in Express to Connect -project. At this point we cannot say: "The mission impossible was completed". A new path has been opened. The whole territory is new. Not even the name is fixed. Should the report be titled

- Expected return-on-investment calculation based on the Portraits?
- Net effect assessment based on the Portraits?
- People Value Assessment based on the Portraits?
- The cost-efficiency analyses based on the Portraits?

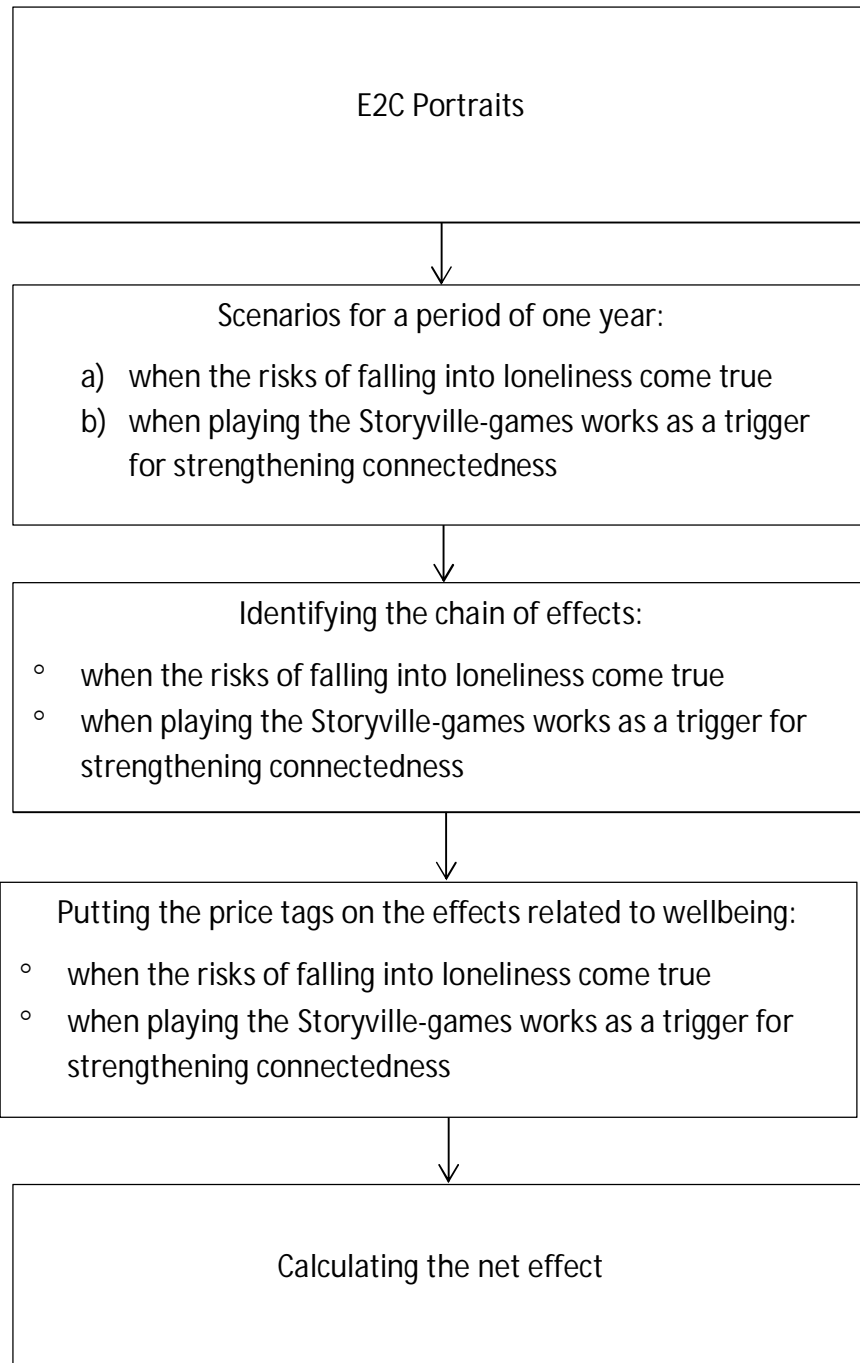


Figure 1. Cost-effectiveness analyses based on the E2C Portraits

2. The E2C Portraits

The Personas created and described by Copenhagen Living Lab in the context of the first work package focusing on gathering insights on the focal phenomenon, social connectedness, were the starting point for our work on developing a new approach for estimating the cost-efficiency of a new service to be launched on the market in the near future. The Personas – later called as Portraits – were based on the life stories of the participants in the ethnographic study conducted in the spring 2010. Thus the six Personas were “researcher-made” combinations of the lived lives of the interviewed persons in Denmark, Finland, the Netherlands, and Sweden.

We chose three Portraits out of six, and started writing scenarios for the persons described in the Portrait. We chose the following Portraits:

- *Kauko, The Family Amateur*, perceives his family relations unsatisfying. He had thought that after his retirement he would spend more time with his children and grandchildren from his previous marriage. His expectations have not been fulfilled, and the old feelings of not being really close to the children are showing more and more. It troubles him in his everyday-life but he does not know what to do about it. Kauko feels like there is an empty space in his life.
- *Trudie, The Globetrotter*, lost his husband two years ago and her children are living far away. Trudie has a large network of social relationships but no close friends. The friends she used to meet up with her husband are still the closest ones. Trudie has diabetes type 2, and she perceives that the illness restricts her life, and prevents her from meeting her acquaintances over lunches or at cafés. It is difficult for Trudie to talk about the loss of her husband and her own illness. The last thing she wants is her friends to start feeling sorry for her, but sometimes she wonders about what she would do if the illness got worse – especially because her family lives so far away.
- *Kirsten, The Professional Human Being*, retired seven years ago at the age of 62. Her husband was 10 years older than she but they were expecting to have many active and happy years of retirement together in their renovated house with a nice garden. However, Kirsten’s husband took ill, and he passed away nine months ago. After her husband got seriously ill Kirsten realized that some of her friends wanted to take a distance to her. She was and still is saddened by some of the people that she had considered as close friends no longer came to visit her and her husband. Kirsten has two daughters and three grandchildren. She thinks it is important that her children can live their own lives without her interfering.

The original texts describing Kauko, Trudie, and Kirsten were shortened to focus on the gradual changes in the social networks of the persons, and their perceptions of connectedness.

3. Scenarios

We decided to write scenarios for a period of a year. Longer periods of time were also considered but the decision was made to limit the time span. Our main reason for selecting a rather short time span for the scenarios was credibility. As we were dealing with the anticipated impacts of the use of an innovation instead of verified impacts, we didn't want to increase the uncertainty of the future paths in the lives of the Portraits by reaching out further into the future.

Two kinds of scenarios were written. The first ones describe the lives of the Portraits when the risks of falling into loneliness come true. All the original Portraits included descriptions of the smaller and bigger risks for feeling oneself disconnected or isolated due to changes in life (like retirement, one's own illness, or the serious illness or death of the spouse). Within a year nothing extraordinary will happen in the lives of the Portraits but once the risks of weakening of the bonds between family members, next-of-kin, or friends, are there, and start coming true, the accumulating chain of negative impacts on the quality of life of the Portrait person easily erodes all the chances for changing the nature of one's future path.

When writing the scenarios describing the paths towards loneliness, we relied on the substantial body of literature highlighting the impacts of loneliness on one's physiological, psychological, and social wellbeing. The impacts and the studies they are based on have been reported in the document titled The E2C Impact Model.

The second scenarios describe the lives of the Portraits when the Storyville gaming sessions work as a trigger for strengthening connectedness.

All the scenarios have been written as if they were based on the transcription of the internal speech of each Portrait. Both loneliness and connectedness are the perceptions and feelings of individuals, and thus, the evaluations on the degree of loneliness or connectedness have to be based on subjective measures. Our aim was to describe Kauko's, Trudie's, and Kirsten's own experiences and thoughts and to show glimpses of the process leading either to loneliness with its detrimental effects on wellbeing or to strengthened perceptions of connectedness and improved quality of life. When trying to enter into the feelings and worlds of thought of the Portraits we leaned on the results of qualitative studies conducted among older adults. Therefore the scenarios are not the result of the imagination of the authors but they are grounded upon the experiences of the interviewed persons.

Kauko:

- Getting old, locality, family-centric lifestyle (Vuorinen 2009)
- Grandparenthood from the perspective of a grandfather (Tirkkonen 2000)

Trudie:

- Contracting diabetes and self-care (Lin et al. 2008, Phillips 2007, Handley et al. 2010)

Kirsten:

- An older adult's perception of his or her home and the insecurity felt at home (Vilkkonen et al. 2010)
- Widowhood and coping mechanisms as a widow (Hatela 2000).

The shortened descriptions of the three original Portraits and the scenarios for each one of them can be found in the Appendix 1.

4. Identifying the potential chains of effects in the lives of the Portraits

We presented the descriptions of the three Portraits, and the scenarios to ten Finnish and four Danish experts in elderly care and wellbeing of older adults. In the meetings with the experts we gathered feedback on our new approach to impact assessment and identified several potential chains of effects in the lives of the Portraits.

In Finland we focused on the more positive scenarios, and tried to identify the positive impacts of Storyville gaming and thus strengthened connectedness on the lives of the Portraits within a time frame of one year. In addition to the impacts on the Portrait person's life the experts identified chains of effects in the lives of family members, next-of-kin, and friends, and in the society. In the Appendix 2 there are three examples of the chains of positive effects, one for each one of the Portraits.

In Denmark, the participants of the expert focus group decided to focus on the more negative scenarios. They mainly identified the chains of deteriorating effects leading to increased anxiety, loneliness and worsening of illnesses. In the Appendix 2 there are all the Danish examples of the chain of negative effects of perceptions of disconnectedness.

5. Cost-efficiency analyses based on the Portraits

Prevention of loneliness is extremely valuable, also in monetary terms, from the individual's and his or her close ones' and from the society's point of view. When we succeed in preventing loneliness it is very probable that the overall wellbeing of the person remains better, and there is no need for visiting doctors and other health care professionals, or taking medication. On the other hand, if our endeavours at avoiding the risks of falling into loneliness will fail, the costs related to health care will most probably rise.

One of our tasks included in the evaluation of the impacts of the Storyville gaming was to analyse the cost-efficiency of the new service, that is the games to be played on an iPad together with family members, next of kin, and friends. The task was extremely challenging as the games had not been launched on the market. We decided to work with the Portraits, and the chains of effects identified in the discussions with the experts.

For each Portrait we chose one chain of negative effects, and one chain of positive effects. These two chains were kind of mini scenarios, or opposite sides of one coin. We started putting the price tags on the chain of negative effects. The following tables present the costs of negative effects for each one of the Portraits and for the public sector.

Table 1.

The costs of the chain of negative effects for Kauko, The Family Amateur, and for the public sector.

	Costs for the individual and his family	Costs for the public sector
Visiting a doctor at the local health centre twice a year.	13,80 €/visit -> 27,60 €	142 €/ visit -> 284,00 €
Doctor refers to a physiotherapist. Five visits a year.	7,50 €/visit -> 37,50 €	70 €/visit -> 350,00 €
Medication: Extended use of pain killers: 352 tablets in a year.	84,00 €	0,00 €
Stomach-protective drug (needed for painkillers): 352 tablets in a year	42,00 €	17,60 €
Wife's consultation with the couple therapist.	100,00 €	0,00 €
TOTAL	291,10 €	651,60 €

Table 2.

The costs of the chain of negative effects for Trudie, The Globetrotter, and for the public sector.

	Costs for the individual	Costs for the public sector
A three day stay at hospital due to high blood sugar to adjust the level of medicine (nutrition therapist's consultation and lab tests included)	Transportation costs	2.950,00 €
How to cope with diabetes -course at the local healthcare centre	Transportation costs	147,00 €
Medicine (when the costs exceed 490 €, society covers the rest of the costs)	490,00 €	314,00 €
Multiple dose injection (MDI) therapy (follow up, care devices, insulin), further training on self-care activities	Transportation costs	3.400,00 €
Psychotherapy 10 times in a year	10 x 107 € = 1.070,00 € + transportation costs	0,00 €
TOTAL	1.560,00 € + transportation costs	12.858,00 €

The costs mentioned in the above table are based on Danish sources.

Table 3.

The costs of the chain of negative effects for Kirsten, The Professional Human Being, and for the public sector.

	Costs for the individual and her family	Costs for the public sector
Visiting doctor in local health center twice a year, including EKG, labs.	13,80 € x 2 -> 27,60 €	242 € x 2 ->484,00 €
Visiting emergency unit at night time because of the flu (instead of day time visit to health center)	27,50 €	295,00 €
Her daughter's family has to hire a babysitter 15 times 4 hours/ year (Kirsten used to babysit)	8,20 € x 60 h -> 492,00 € Tax reduction 45% -> 271,00 €	221,00 €
Safety services	361,00 €	0,00 €
TOTAL	687,10 €	1.000,00 €

The costs mentioned in the tables 1 and 3 (Kauko and Kirsten) are based on Finnish sources. All the costs have been found either in printed material or in the internet. Reference lists can be provided.

When we manage to avoid the risks of falling into loneliness, the costs presented in the above three tables, will not come true. When assessing the cost-efficiency of the new service from the individual's point of view, the costs avoided can be regarded as "savings".

To be able to calculate the net effect of the new service we have to assess the costs of the usage. In this case Kauko, Trudie and Kirsten have to buy an iPad if they don't already own one, and they have to download the games from the iTunes Store. In addition to buying the game board and the games, some money has to spent on organising the gaming sessions.

Table 4.

The net effect for Kauko

"Savings" (see table 1)	+ 291,00 €
Three games (iTunes Store)	—5,00 €
Refreshments during the visits of grandchildren (gaming sessions)	—125,00 €
Refreshments during the football matches	—125,00 €
Increase in travel expenses	—100,00 €
Subscription to a football magazine for grandchildren	—62,00 €
The net effect	—126,00 €

The table above tells us that for Kauko it will more expensive to live an active life with his grandchildren than to stay at home, more or less isolated. This is the case when the time span is limited to one year. The price for an iPad, 450 €, is missing in the table. The total net effect with an iPad will be around 575 €. However, when we calculate the net effect for the public sector, it is easy to assess that it is at least + 651,60 €. Thus, it could be in the interest of the public sector to buy iPads, for example to be borrowed from the libraries, by Kauko or his wife.

Table 5.

The net effect for Trudie

"Savings" (see table 2)	+1.560,00 €
Three games (iTunes Store)	—5,00 €
Refreshments during the visits of old friends (gaming sessions)	—150,00 €
Lunches with girl friends at the restaurants	—200,00 €
The net effect	+1.205,00 €

The costs of the chain of negative effects for Trudie are 1.560 euros, and in her case the costs for the public sector are 12.858 euros (see table 2). The net effect for Trudie will be positive even when the price of an iPad is included in the calculation.

Table 6.

The net effect for Kirsten

"Savings" (see table 3)	+687,10 €
Three games (iTunes Store)	—5,00 €
Refreshments during the visits of neighbouring ladies (gaming sessions)	—150,00 €
New table cloth, new coffee cups, and other tableware	—175,00 €
The net effect	+357,10 €

The calculation above shows that the net effect for Kirsten is positive in monetary terms, too, if the prize of an iPad is not included in the calculation. When the prize of an iPad is included, the net effect will be negative, around one hundred euros. When we compare the prize of an iPad (450 €) to the costs for the public sector (at least 1.000 €) in the table 3, the municipal decision makers would make wise decisions if they'd decide to invest in organising preventive activities like gaming sessions or include tablets and games in the selection of the local library.

6. Lessons learnt

The idea of utilising Portraits as the basis for the assessment of the anticipated impacts in monetary terms is a new one. In Finland and Denmark we had discussions with the experts in social and health care, evaluation studies, and in the finances of the public social and health care services (ten altogether). None of them had tried to evaluate the anticipated cost-efficiency or the expected return-on-investment during the development process of preventive services. The majority of the experts appreciated our innovative approach. They thought that it is valuable to try to find new approaches into the cost-efficiency analyses especially in the context of preventive services. However, some of the experts were more doubtful. They maintained that it is impossible to anticipate what is going to happen in a person's life within a year. There are so many variables impacting on an older adult's wellbeing.

As a conclusion we propose: the new approach for calculating the expected return-on-investment based on the Portraits is promising but much more work has to be done to develop the approach further. Especially it will be very interesting and challenging to try to find out ways and procedures how to scale up the net effects from the level of one Portrait to the level of a larger population.

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Appendix 1. Three Portraits with the scenarios

Kauko, the Family Amateur

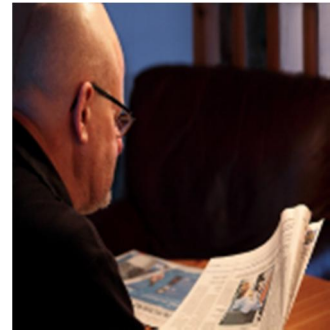
Trudie, the Globetrotter

Kirsten, the Professional Human Being

Kauko, the Family Amateur

“If the children sometimes come, they stay just for a moment and then they leave. And they have the mobile on the ear all the time. I wonder if it is like this with all the elderly”.

Background information. Kauko, 70 years, has worked as a carpenter his entire life. He used to help neighbours and family with different tasks related to carpentry. He retired eight years ago, but after his retirement he has kept on helping others when he has been asked for, and when his state of health has been good enough. Kauko had to retire due to chronic back pains a few years earlier than he had planned.



Kauko was highly appreciated as a carpenter amongst his colleagues and customers. He liked the professional contact he had with his customers. Especially Kauko enjoyed the pleased look of their faces when he had finished an assignment. His many years working as a carpenter have made him a known face in the town, and he is greeted by many people whenever he goes out.

Kauko divorced his first wife at the age of 43, as he felt they had grown apart. He found a new wife whom he loves very much. They are compatible and accept each other's preferences in chores — without even talking about it.

Kauko has three children with his ex-wife. The children all live in the same town as he does. Furthermore he has seven grandchildren in the age of 5–17 years, one of whom is a skilled football player. Kauko feels that he lost the relations to his children when he got divorced from his ex-wife, even though he has always helped them renovating their houses and anything else practical. His ex-wife has a close relationship with all of the children and grandchildren; she even takes them to the zoo and calls them frequently.

On pension. Kauko feels like there is something missing in his life. He cannot really describe in words what it is all about – but he feels like there is an empty space. It is not his colleagues that he misses, but rather he feels the absence of his children more. After retirement he had thought that he would get to spend more time with them now that he had the time but they do not come by very often – if they do it is only for a short while and they always seem to be on their mobile phones. The old feelings of not being really close to the children are showing more and more. It troubles him in his everyday-life but he does not know what to do about it. Kauko has always felt like he did a lot for the family. No one ever missed anything. After retirement Kauko has started to wonder whether his children understand the effort he has made in his working life providing for them. He thinks that if his children appreciated him and the work he has done for the family, they would call him more often and ask for his opinions and advice in all kinds of decisions they make.

Description of the daily structures. He still sees himself as a carpenter, and if the neighbours have a problem he helps them out, even though he knows it is not good for his back. He has a lot of opinions regarding the local democracy, and he has thought about joining one of the parties, but cannot decide since there is always something wrong with their overall political agenda.

Kauko and his wife recently decided to move into separate bedrooms, as there is a lot of space in the house. His wife goes to bed early, and has to get up several times during the night. And he goes to bed quite late, so it seemed like a reasonable solution.

His oldest grandchild is a talented football player. Kauko bought him his first pair of football boots. A few months ago Kauko came to know that he had stopped playing football. Kauko

has no idea of why his son let his grandson stop football practice. If he had had any say in it, the young man would still be playing football.

Kauko has always thought that the senior associations are not for him, but one day by coincidence a neighbour asked him if he wanted to join him for a game of chess and a proper meal. He thought to himself that perhaps it was a good idea – after all, his wife was active in several associations and had asked him several times why he did not go with the other guys from town. Kauko decided to join his neighbour the following Wednesday. He had never played chess, but recalled that one of his sons played it with a friend when he was quite young – maybe the son still plays? After some persuading he played with his neighbour and won his first ever game of chess.

Kauko got excited about chess, and he soon became a good player. In the senior association a lot of the others kept speaking of their families all the time, on and on and on. Once he had too much and yelled: "Argh... do you not have something else to talk about than your family – find yourself a hobby". It was shortly after that he decided to look for a chess club, a club where they could have real conversations, conversations about chess and famous moves and plays; a club where people had real interests and a club of likeminded people.

Scenarios for the next 12 months

A. Loneliness effects Kauko's health

In Kauko's own eyes there hasn't been any major change in his routines, and everyday life has continued more or less unchanged. When he had found out that the senior association is not a place for him, he did research to find where the nearest active chess club is located. He was looking for a chess club where he could just concentrate on playing chess without "pointless" talk of families, other hobbies and so on. He found the nearest chess club from a relatively long distance of 30 kilometres away. When browsing through the club's website it seemed that the club's activities are only aimed at succeeding in competitions. Therefore his chess hobby was mostly limited to playing online once a week. The interest towards chess has remained though, and he has ordered a few books on chess from the library as an interlibrary loan.

It has clearly been difficult for Kauko to find himself meaningful and interesting activities outside home. Especially his wife has noticed his growing preference to stay home. He has had some good attempts at finding good company after retiring but they have usually ended in a disappointment. As a man of few words who rather prefers doing things over just talking about them, it just seems that conversation club types of social activities aren't his thing. When asked about his own feelings he tells of a feeling of emptiness ruling his everyday life. He doesn't seem to have a good reason to be in contact with people outside home, and the time spent with the wife mostly consists of discussing everyday practical issues and routines. The neighbours also haven't been asking for help in different renovation and maintenance work for some time, and he hasn't lately really been offering his help either.

Reading, internet, listening to music and playing online chess are his ways to pass time. He hasn't ever really been particularly sporty and isn't used to the thought of going out for the purpose of a run or a walk. Such activity hasn't been necessary because during his working years his physical fitness stayed good just by doing carpentry work.

When autumn came, his back "got stuck", so to speak, due to him sitting and lying home all day long. By late autumn the pains got so much worse that it was difficult for him to sleep at night. The doctor at the health centre prescribed pain killers and protective medicine for his stomach, which he feels he needs every day. As the spring dawns he says he's coping

moderately with the help of the painkillers, even though he suggests the painkillers are making him feel tired. Never before had he been forced to take a number of naps during the day. He also tells of a nice and competent physiotherapist whom he has visited five times. The physiotherapist had given electrotherapy for his back and talked a lot about how exercise is a great remedy for pain. Lack of oxygen in the muscles might make the pain worse and that is why it's important to move as much as possible. Gym ball exercises at home have been a great help in the treatment of his back when he was no longer able to sit on a chair.

When his back pains got worse during fall, the relationship with his wife somehow changed at the same time. One night his wife announced that she will seek relationship counselling because "the relationship had regressed and got stuck in place". She felt that she was "taken for granted" in the relationship. Kauko received criticism from his wife because of his speechlessness and because he didn't pay enough attention to her needs. The wife felt that it was useless to expect a greater response from him, and that any effort related to the wife seemed too much for him. The wife said she feels very lonely and also expressed clear anger towards him a few times.

B. Kauko plays with his grandchildren

Although the chess gaming sessions at the senior association were not Kauko's thing, he became slightly interested in the world of games. He adventured in the internet and was amazed at the sheer amount of games the internet had to offer. One day a person with whom he had played chess at the senior association was in touch with him and asked if he was interested in playing the so-called Storyville games on an iPad. The company marketing the games would give the senior association access to them for a couple of weeks and after that the game would also be purchasable for personal use. He was told the games could be played in many different ways and with people of different ages. In particular his attention was drawn to the fact that also children and young people could be playing partners.

He participated in an event where information about the games and instructions on using them was given. The afternoon was interesting and fun with all the game related stories he heard there. He was given a few pictures as a sort of a gift: for example a picture of the just finished flower of Finnish wood architecture, the Kamppi Chapel. The person giving the picture rationalized it to him with the words "skilful with one's hands". True! If he had continued in the working life, he would have belonged to the elite group of carpenters that are invited to work on these demanding undertakings.

Getting to know the games was followed by an adventure where it came to be that he contacted his future playing partners: his two grandsons. Because he knew of their passion towards football he downloaded a large package of football-themed and other sports-related pictures on the game platform. It was fun to see how the boys got carried away into the world of games, oblivious to the tensions between the grownups. Especially Photobluff was to their liking. The websites of different football magazines had various snapshots of different football game situations which they loaded into the game. They got to guess together who were the players in the pictures and which countries and teams the players were from. During the games other discussions also came to life, discussions regarding local football teams, games played during the breaks at school, the school's best players, the school itself, other hobbies, friends etc. The game was light enough for many other real and relevant questions related to the boys' lives to come to Kauko's mind while playing. And the boys got to hear what kind of a player their grandfather had been in his youth. Not that great, but quite often enthusiastically part of the game anyway. Game strategy had always been his strength, not so much his running speed. A big win for Kauko was when after a few game sessions his son suggested if the grandsons could stay at his house over the weekend, if he and his wife would make a two-day trip to an acquaintance's birthday party.

Kauko now feels that the ice has begun to melt around his family relationships. The fact that the relationships with his children and grandchildren were stuck on a somewhat superficial level has afflicted him for a long time. Naturally his wife also joined in some of the game sessions, and the subjects were then a little something more than just football and sports. As an extroverted person, Kauko's wife was able to create a working relationship with the grandsons. Kauko soon found himself listening to his wife's pleasant narrative "as if with a child's ears".

When Kauko tells of his grandparenthood, he says that when his own children were young "he didn't really have time to think about love with all the busy everyday work matters to take care of". "One is behaving so differently with one's grandchildren than with one's own children." When the boys arrive Kauko reportedly isn't ever too tired to go somewhere with them. "Many trips wouldn't be carried out without the boys. And they have so many things going on, children of that age. We now get to be involved in all of that." The grandchildren have also brought nice content into Kauko's and his wife's relationship. Grandchildren are now a common thing between the spouses.

Trudie, the Globetrotter

"It is exiting when you travel abroad and play on different golf courts. This I will continue doing as long as I am able to go out there and play."



Background. Trudie, 66 years, has worked as an accountant in her husband's company. Her husband passed away two years ago. They were married for 39 years, they have two children, a son and a daughter, and four grandchildren. One of the children lives in another part of the country, and the other one lives abroad.

Home. Trudie lives in a block of houses near the city center. The flat is newly renovated; there is a lift in the building, and it is convenient to travel using public transportation. The kitchen is an open space that goes out into the living area. Wedding pictures of her and her husband are placed next to pictures of children and grandchildren. In the living room the sofa takes up a lot of the space; this is where she eats her dinner while watching the 7 o'clock news. She rarely cooks for herself but just takes something cold especially the days where she goes out for lunch. The flat also has an office; going in here she puts on her serious face as she did when she was working in their company. She mainly uses her computer to gather information about travelling, reading e-mails and doing internet banking.

Relationships with the children. Trudie has a "normal" relationship with her family, as she describes it, but since they live far away they only see each other at family birthdays and holidays. One time she invited them on holiday to Spain where they could play golf.

Health and wellbeing. Trudie has diabetes type 2, and she has not been that good at taking care of herself in this regard. But it is also hard when the device to check her blood glucose does not work properly; it has lately been showing high values of sugar in the blood and she cannot fit this with her understanding of her eating habits. She knows that she has to call the doctor to let him know that the device is broken.

She has always treasured her friendships, the close ones, but also just the fact that she always has someone to talk to, or call and meet up with. Going out with friends having coffee and chocolate cake gives value to her life so she happily forgets about her diabetes whenever she can. Giving up her favorite food is not easy. The diabetes is caused by her lifestyle - a lifestyle that she loves.

Description of daily structure. Trudie always has a lot of things scheduled for the week. When she talks to friends and family she always complains to have such a busy calendar but in fact the busy calendar is just what she wants. When she was younger she did gymnastics and she was also a gym-teacher. Now as a member of the gymnastic association, every year she goes to around Europe to watch some of the big parades. For the past 30 years she has been a member of the association "Active Women". Every Friday morning she works as a volunteer in the recycle shop. She likes attending the shop with her friends who have recommended volunteering to her. You get to do something of importance while having a good time with friends and drinking a cup of coffee.

At least once a week she goes for lunch with girlfriends. She has a lot of girlfriends but none of them are really close. Her relationships are defined by how she has come to know them; there are 'the golfing girls', 'the sailor girls', 'the sauna girls', 'friends from school' and the friends they would meet up with as couples. The friends that she considers the closest are the friends who her and her husband used to meet up with as a couple. For that reason it is imperative to Trudie that she is still a part of these gatherings because it is with these friends

that she can share the memories she had built up in her lifetime with her husband. They can all laugh and talk about the good times, the bad times and what they all miss.

In recent years she finds herself going more often to funerals and she has become aware that old friends and acquaintances are passing away. She finds it a little disturbing since she is constantly reminded of death and losing.

During the evening at home she will watch a good soap-opera or a movie. She sometimes finds herself lonesome in the evenings and then it is good to have the television to keep her company. She does not mind that she is watching television when she is at home and for the most part it is good entertainment.

The last couple of years Trudie has become more aware of her illness, the doctor has told her to radically change her diet and start doing exercise. That for sure means giving up at least half of the lunches due to the type of food that she orders, but also the time that exercise takes away from nursing her friendships.

Trudie has no troubles in talking about the travels she does and how her children is doing in the careers and what school the grandchildren attend. But when it comes to her own illness or the loss of her husband she has a hard time opening up. It is not that she does not want to, it is just too hard, and not talking about it helps her in the sense that she can keep a distance to the truth and the outcome that she knows is waiting for her. She is certain that if she talks about it, that it will only be worse. The last thing she wants is if her friends start to feel sorry for her, but sometimes she wonders about what she would do if the illness got worse – especially because her family lives so far away.

Scenarios for the next 12 months

A. Diabetes changes Trudie's life

During the next year it started to feel more difficult for her to find the balance between taking care of her diabetes and keeping up social relationships. She couldn't trust the fact that any of her current friends would like to hear about the challenges she had with her illness. After all she wouldn't have wanted to hear about them herself. Trudie withdrew from her social circles and started to become more worried about her health day by day. These worries also started to keep her up at night. But even if she didn't participate social lunches, she still wasn't sure if her eating habits were getting any healthier.

She was surprised when memories from her past life started taking over her thoughts; her husband's funeral, the people who attended, the people who didn't. She spent most of her day wearing a nightgown and her life was empty, joyless and devoid of any purpose. She had heard a lot of talk about depression but didn't think of it to be possible in her case, as she had always been an open, energetic and social person. She didn't tell her friends about her depression even though they contacted a few times. Usually she didn't even answer the phone.

Soon after the depression broke out Trudie's diabetes balance got worse, and she had to start the insulin treatment. She couldn't cope without insulin any longer as the changes in her kidneys were clearly identifiable. Patience and the change of life style were needed for the treatment to succeed. Trudie felt her strengths were almost finished. Her life was nothing but measuring, book keeping, counting the amount of carbohydrates, and frequent contacts with her diabetes nurse. She wanted to learn about her illness as little as possible.

The past year made Trudie think about her life and illness more in depth. She feels that the reason for the illness to get worse was the mental exertion which was ultimately caused by her being left alone. She feels that she has given up on life in many ways. She doesn't have

any plans for the future and she doesn't want to tie herself to any association's activities. She also doesn't want to become a burden to her children living far away and hopes to be able to perform as independently as possible in her life. The most important thing is that she has been able to bring up two children who manage very well in their lives.

B. Trudie plays games with her old friends

A time of re-evaluation began in Trudie's life when the doctor said that she had to be able to do something about her lifestyle. She was suffering in her new life situation and it wasn't easy for her to find her place in a world which was based so much on relationships between spouses and families. Would a new spouse or moving closer to the children be a solution to her loneliness and her widower's identity? She didn't have it in herself to take new types of social risks yet, but on the other hand in meetings between couples she often felt as an extra. She didn't feel like she misses any comfort or compassion, but just some nice and casual time together.

One night Trudie received an invitation from old friends to join them for a social evening where they had also invited another couple familiar to her from their travels. The setting was familiar to her; there would be two couples present and her. Like Trudie's late husband, one of the men was an active computer and other information technology user. For the evening he had downloaded a game on his iPad which he proposed they play together.

The game was exciting and in many ways different from games Trudie had previously played. She hadn't ever considered herself as any kind of a game freak as she was a bit bad at focusing and coming up with different game strategies was too troublesome. She has a few important episodes to tell about the game night where laughter was present, but surprisingly she also found herself holding back tears.

The game board had a set of pictures from the 70's. A picture with a small chest of drawers turned out to be particularly important to her. They had a similar type of drawer in their house when the children had still been little. Even though the drawer wasn't specifically a piece of furniture for the children's room, it contained a variety of the stuff children need; water colors, puzzles, music and much more. Trudie had become to love the drawer in many ways and she started thinking if the drawer could be brought to life with a new paint job. After a professional's treatment it could be more beautiful than ever and carry memories important to her in a more dignified way!

Another photo was depicting a park in autumn with many maples. She received the picture from Laila, but didn't agree to Laila's reasoning to give her that picture. Instead Trudie recalled the moments when she and her husband had covered each other in the autumn leaves — like so many other young couples. Her husband of course had had his worse sides, too, but during that night his weaknesses were left in the shadow of nice memories. Among other things the friends found it hilarious when remembering her husband's habit of rubbing his knee when he was focusing and thinking about something.

Through playing, Trudie found herself thinking how true friendship is gender free. The male and female way of dealing with things differs only slightly from each other. In addition, these types of couples who are old friends are only a few, but they are an absolute wealth in her life.

Interesting discussions related to food and drinks were born from the photos. A lovely bottle of wine in its gift wrapping, an exuberant layer cake, an English tea tray — it was easy for the players to be enchanted by all of this. However, one of the female players raised the topic of how she had just been banned from drinking wine with food because of her anticoagulant therapy. Trudie's thoughts escaped her. "Which foods were you not able to eat?", she had

been asked in a friendly manner while receiving the invitation. "Everything goes", Trudie had answered face unchanged. After all, she was so happy and impressed by the invitation that for a moment she just wanted to forget all her diabetes related limitations. It was a clear fall for after a long time, but next time it wouldn't happen around this company. After all, the others have their own limitations too. Trudie realized that she has a permission to discuss her illness and to refuse certain delicacies. She could come out of the closet with her diabetes.

Kirsten, the Professional Human Being



“Some will say ‘don’t you think you have taken on too much [doing voluntary work]?’ but I don’t think I have. I truly feel that I owe this to the human beings who have been a part of my life...(..) And what about the people who don’t have anyone to take care of them – what can they do?”

Background. Kirsten, 69 years of age, is a widow. She retired seven years ago. Her husband passed away nine months ago. She and her husband bought a house in the 1960’s and she still lives in it. The house has a big garden. She has two daughters and three grandchildren at the age of 10, 12, and 18. Her oldest grandchild is handicapped and approximately once a week she takes care of him. This arrangement already started when she was still at work. The bank made a senior arrangement when she turned 55 so she worked fewer hours per week being able to look after her handicapped grandchild once a week. Kirsten liked her job, she had good colleagues, and she was well thought of by her colleagues. She was always the one to make sure that there would be served cake along with the coffee on Fridays.

It was always important to Kirsten and her husband that they had separate activities and interests. So every Tuesday she would go to gymnastics while he would go swimming with some of his friends. Travelling with the camper used to be a joint hobby for the whole family. When Kirsten’s husband retired they joined the pensioner-club at his company as the club arranged a lot of travels, and they both wanted to see the world.

Retirement process. Kirsten’s husband was ten years older than her and had retired three years before her. She looked forward to spending more time with her husband and doing more things together as well as engaging herself in volunteer work and spending time with the grandchildren, and hereby helping out her busy children.

At the beginning of her retirement she and her husband renovated most of the house. E.g. a new roof, not because it was mandatory that the old roof had to be changed right away, but changing it now made sense, because it gave them a feeling of security. They built a new terrace that was bigger because they wanted a nice place where they could sit in the afternoon enjoying the sun and a cup of coffee.

Kirsten’s husband got ill. After her husband got seriously ill Kirsten realized that some of her friends wanted to take a distance to her. She was and still is saddened by some of the people that she had considered as close friends no longer came to visit her and her husband. She found it troublesome that friends stopped recognizing her husband as the person he used to be and all of the things he had accomplished. Instead they treated him as the sick man he was, only talking about the state of the illness, and possible treatments, asking what the doctor had said, giving advice based on stories they had heard etc.

Kirsten started seeking information about the illness through networks, friends and on the Internet. On the Internet she found an association for next of kin. She quickly became a member as she felt like she needed to get in contact with people who were in the same situation as her and therefore understood her troubles, concerns and questions. In the association Kirsten found herself bond with one woman in particular, with whom she could have confidential conversations.

Description of daily structure. Kirsten goes to gymnastics every Tuesday. She has always been active in different kinds of sports, and now she is trying out aqua-aerobics, an activity she picked up a couple of years ago and one which she enjoys immensely. She can definitely feel the physical tiredness of her body, and sometimes she has to take a nap in the

afternoon. Kirsten still takes care of her handicapped grandson once a week, but now it is more when her daughter needs her to help.

Kirsten wonders what other families with a handicapped child do, if they can't get help from grandparents or other next of kin. Those families must struggle to get the everyday to work. This thought brings sadness to her mind. Rights and equality have always been a passion of hers, and she became a member of an organization that fight for the rights of handicapped children and their families.

Kirsten thinks it is important that her children can live their own lives without her interfering, and likewise she does not miss her children because they come often enough and it is very nice when they do, but she likes that she still has some time on her own, because on a normal day she feels rather busy.

The lady whom Kirsten met at the meetings of the association for the next of kin has become a very dear and close friend. They talk on the phone at least once a week, and sometimes they meet for coffee or even dinner a couple of times. The friend is often in need of just talking about the hardness of having to make all choices by yourself and no longer being two but only one — a situation that Kirsten easily can relate to and she tells the friend that she can use her as a garbage bin, knowing that letting go and telling about the frustrations can give some relief.

Scenarios for the next 12 months

A. An empty house makes Kirsten anxious

Kirsten's year has passed by quickly and working with the association amongst other things has kept her quite busy. When she spends a relatively large amount of time away from home time passes by well. She has met many new people during the year and the new friendship formed during her late husband's illness has lasted.

So far she hasn't been able to enjoy the quiet at home and has trouble with loneliness. When the evenings get dark, some unspecified feelings of fear arise. Many of the house's "men's work" waiting for somebody to take care of them takes over her thoughts. Her biggest dream would be to get to live in a senior citizens house where neighbours' help would be close. At home she struggles with her own inactivity and unwillingness to start carrying out the everyday tasks. Her mind is just taken over by the desolation of the house and her own loneliness. She tells how "life is no longer as clean" as with some of the quicker and in better shape people, meaning that she doesn't have the strength to put effort in cleaning anymore. If she has visitors once per month, why clean every week? Second, why cook good and healthy food only for yourself?

She has also been somewhat ill. A couple of tough and long-lasting flues taxed her strength during the year and the other flu came with such a strong cough that she had to leave for the emergency unit of the local hospital one night. Doctors have become familiar with her in other ways too, as she has at times felt a vague and oppressive sense of anxiety and fatigue. As a precaution, she underwent some basic examinations at the health centre but nothing abnormal was found. Her daughter has apparently also figured out that her strength is not like before and has not called and asked for help in taking care of the grandchild for a long time. It's a shame, but true that the relationship to her daughter's family has regressed ever since she hasn't been able to help with the grandchild.

The idea of acquiring home security services has crossed Kirsten's mind, but she hasn't been able to decide whom to contact and what to get. On the other hand she understands that different gadgets won't be able to create the same sense of security she lost when her

husband passed away. When the safe and familiar, even beloved, everyday routines have disappeared, home has become a place that pushes her away. From time to time Kirsten's mind spins around the word "homeless", "homeless"...

B. Kirsten plays with her neighbours

One day, when Kirsten was leaving for the meeting of the association for the next of kin, she met a lady living next door who told Kirsten about her divorce. The husband had left her for a younger woman and she now lives in her big terraced house apartment together with her three nearly adult sons. What was interesting was that judging from her past experience Kirsten had quite a different image of the lady, and she hadn't thought the lady to be of "her kindred spirit". Now however, at that quickly fleeting moment it felt important for her to share her own life stories together with the lady. Kirsten told the lady of her own anxiety towards being at home alone, and felt surprisingly relieved. She had such a different role in her work at the association – her being a chairperson now, and nobody was there to listen to her. But how in the world could she continue to keep in touch with the lady? If they had lived as next-door neighbours for nearly ten years without ever being in contact with each other, then how to ask her now, this a bit of an introverted woman, to e.g. come visit her? It is quite a challenge, indeed.

The association had been contacted by a game company offering a game which sounded quite interesting. Kirsten did not have the habit of saying no when new ideas are offered and that is why she offered herself as the messenger. Some members of the association had played the game and told her about their positive experiences, so Kirsten decided to find out whether the game would be able to bring a nice new dimension to having a cup of coffee with the lady living next door. This slightly funny sounding idea really inspired her!

After one meeting she received a quick orientation from one of the members who had tested the games and already during the same night she took invitations to three of her lady neighbours to come and play and enjoy a cup of coffee in a few days. The ladies knew her enough to trust that she wouldn't invite them to some naive and trivial gaming thing. It was quite refreshing to clean and bake a little too.

The ladies were a bit uncertain at first if they had it in them to play a game such as this, but pretty soon they realized how much content for discussion the game offered, and sometimes they could just play to humour themselves. It was fun to realize how many of the presuppositions of the neighbours were actually true, even though the neighbours had mostly followed each other's doings in their own yards. On the other hand there were also many surprises and Kirsten herself was met with astonishment because nobody believed that she had experienced loneliness. When the game offered her a picture of a bright streetlight she chose the picture and explained her choice by saying that she does not feel like that streetlight, but rather "walking with extinguished lanterns because of her loneliness". "That's why it comes to mind that it would be lovely if the lights at home would still be on when she comes back." One of the neighbours then responded "What if you would turn your eyes a little to the side and look at our lights instead".

Kirsten's circle of friends has changed quite a bit after her husband's illness and death. These days the neighbours are more important supporters than for example her children, whom she doesn't want to cause extra worries to. Through the game meetings she connected with two ladies from her neighbourhood who also live alone. The ladies next door most certainly "can't be considered as plumbers", but Kirsten knows they have the same challenges as she does. Thus when Kirsten has home or health related problems she dials her neighbour's phone number and exchanges a few thoughts. Even though Kirsten feels like she lost her former home when her husband died, a new type of relationship to her home has in a way built itself. Stability and safety are created by her neighbours and she feels the same type of

affection towards her home as before. When she returns home, it's nice to catch up with her friends and grasp the important daily routines. Home is good food, slow morning moments with breakfast and a newspaper, a refreshing shower, rest after aerobics and moments with friends. It's absolutely premature to think about moving away from her own home, which also carries a number of memories related to her spouse.

Appendix 2. The chains of effects in the lives of Portraits based on the scenarios

Kauko, Scenario A. *Loneliness effects Kauko's health*

Kauko, Scenario B. *Kauko plays with his grandchildren*

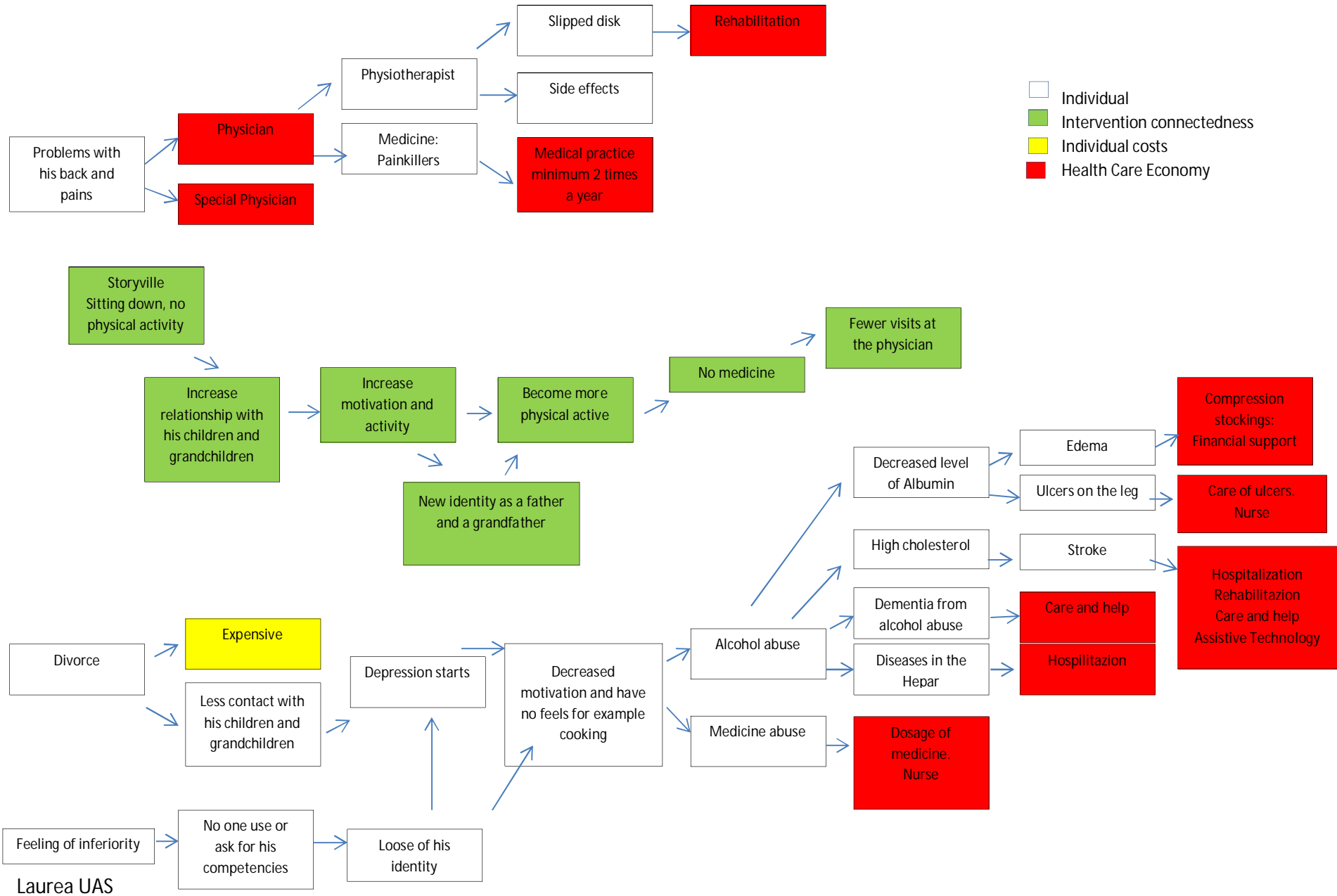
Trudie, Scenario A. *Diabetes changes Trudie's life*

Trudie, Scenario B. *Trudie plays games with her old friends*

Kirsten, Scenario A. *An empty house makes Kirsten anxious*

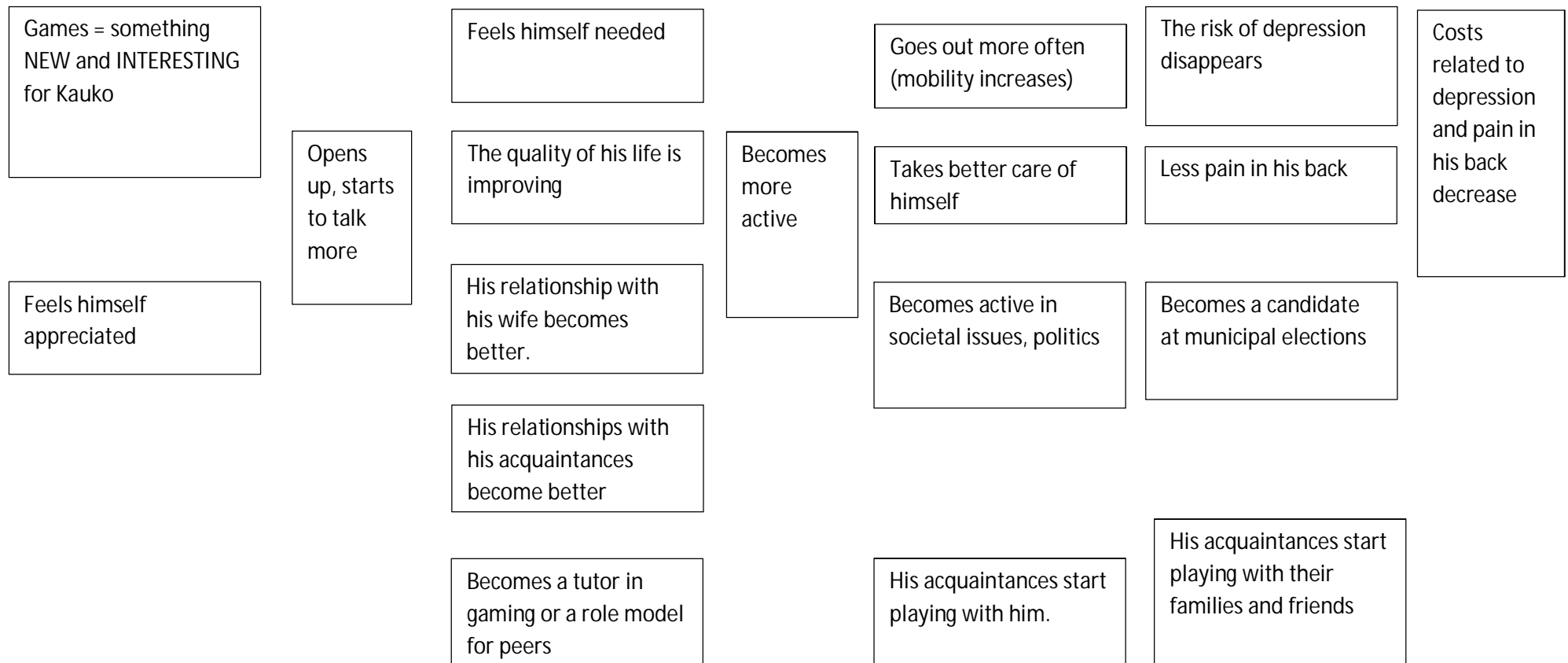
Kirsten, Scenario B. *Kirsten plays with her neighbours*

Kauko, Scenario A. Loneliness effects Kauko's health (Danish experts)

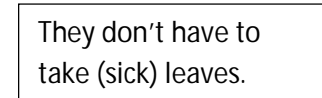
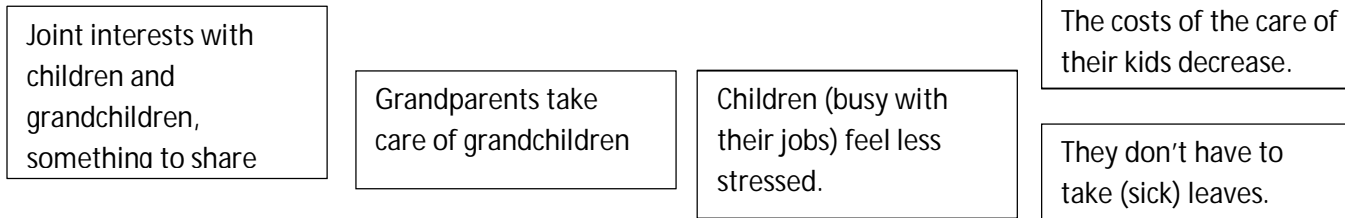
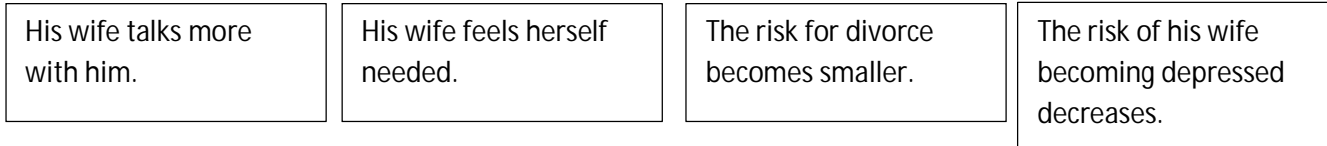


Laurea UAS

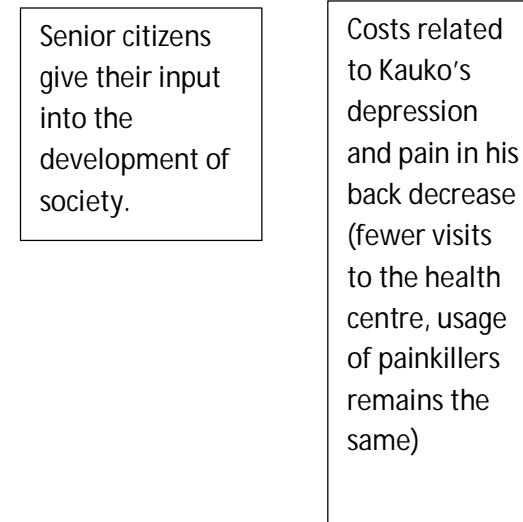
Kauko, Scenario B. *Kauko plays with his grandchildren (Finnish experts)*



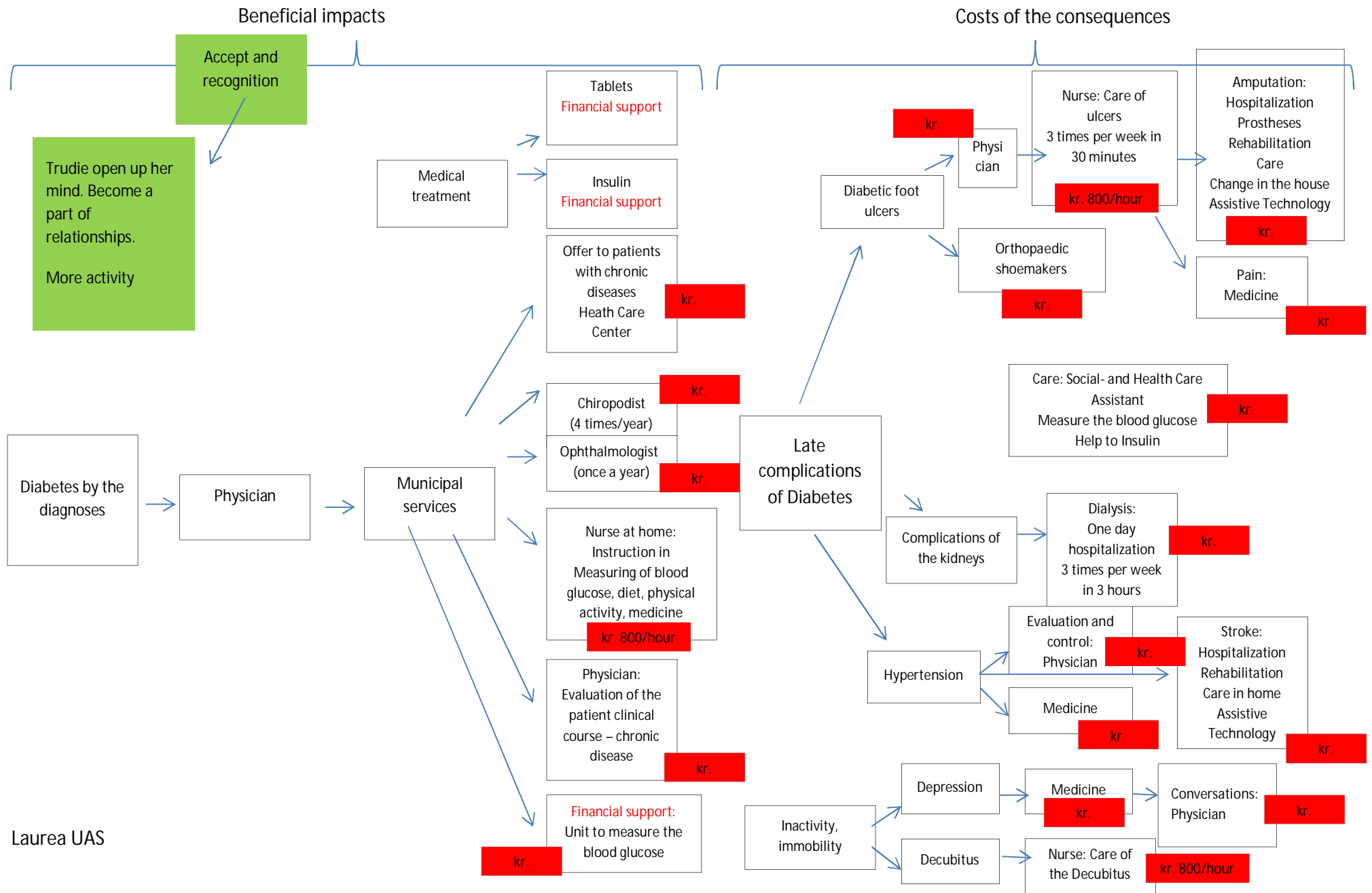
Beneficial impacts for Kauko's family members, close ones



Beneficial impacts for the public sector & society

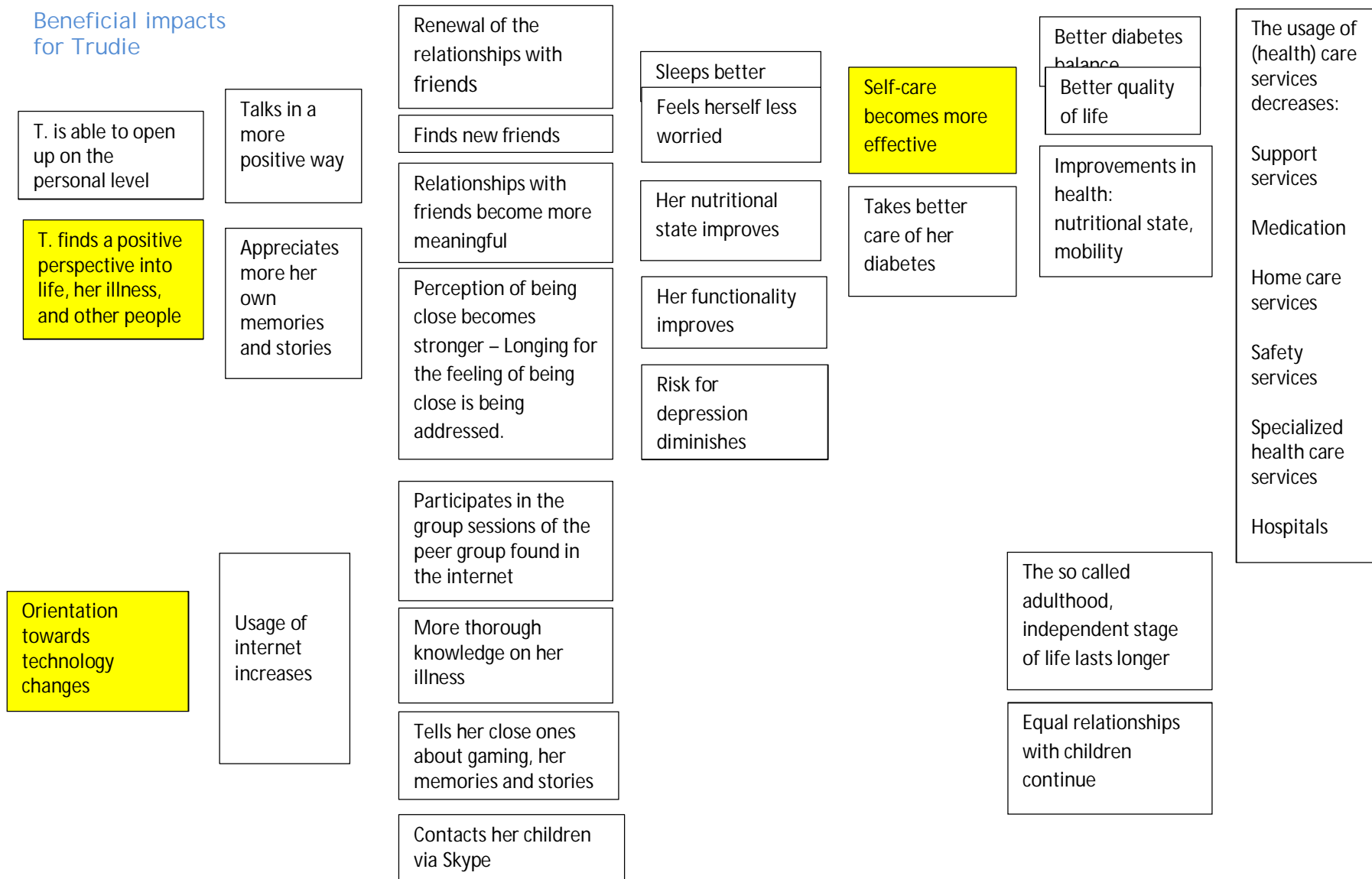


Trudie, Scenario A. Diabetes changes Trudie's life (Danish experts)



Trudie, Scenario B. *Trudie plays games with her old friends (Finnish experts)*

Beneficial impacts for Trudie



Beneficial impacts for family members, close ones

Children are told positive stories on gaming sessions, on their mother's life

Children discover Skype as a new means to keep contact with their mother

Children realize which kind of psychological and cognitive resources their mother has

Children feel less worried about their mother

Children support their mother to continue living as an independent adult.

Beneficial impacts for society

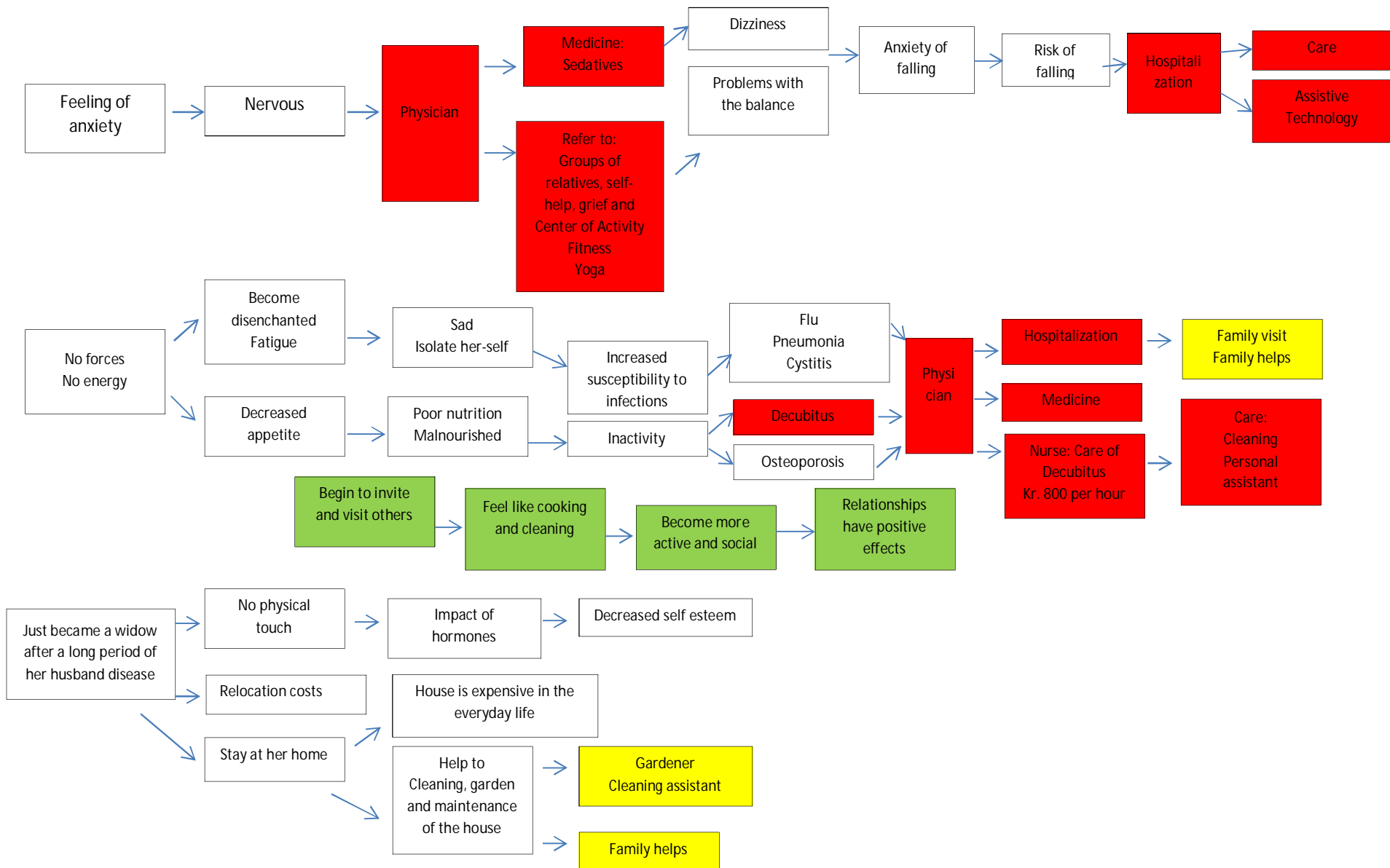
Development of knowledge society

Positive image of older adults

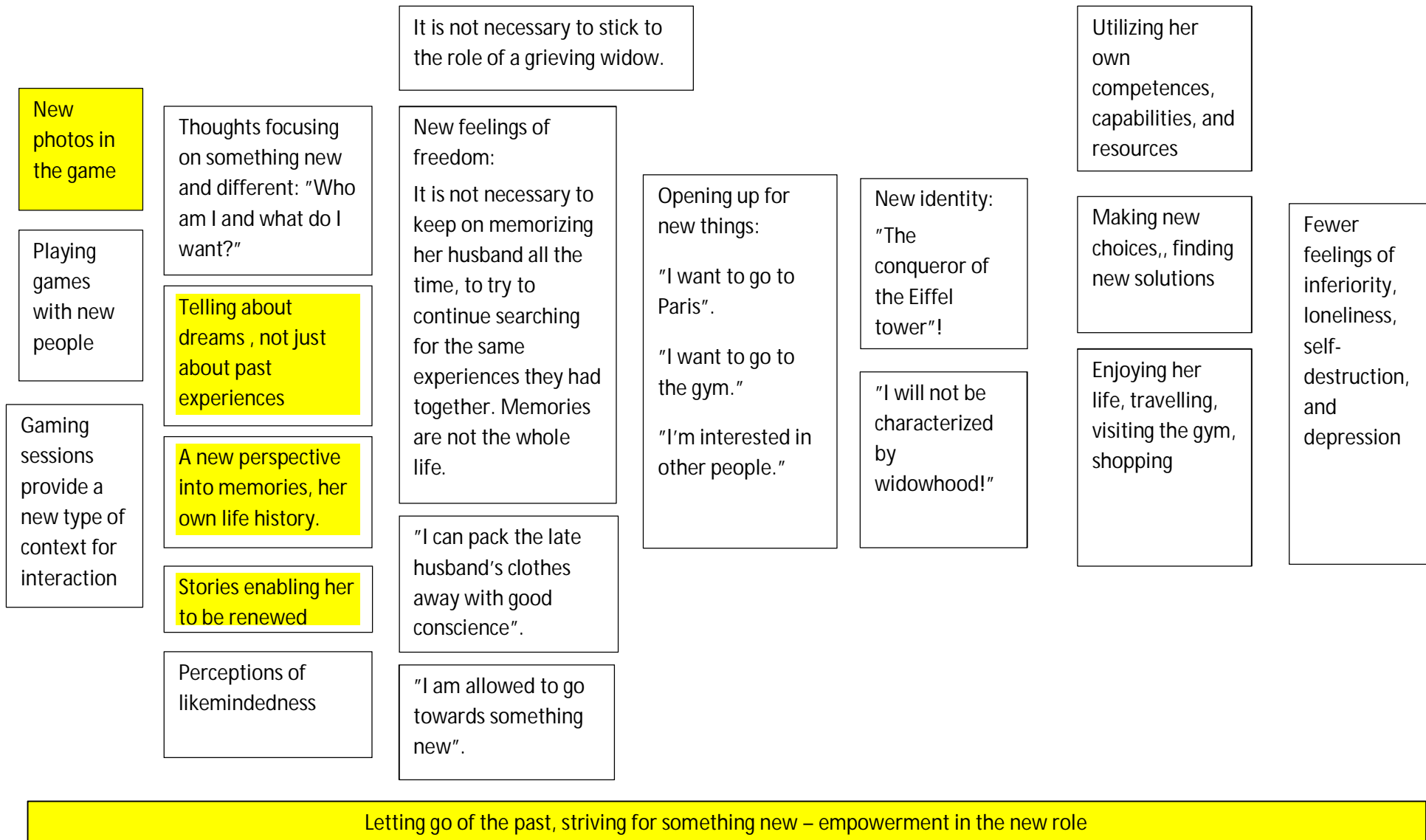
Older adults as active participants in the society

Decrease in the costs of the wellbeing services

Kirsten, Scenario A. *An empty house makes Kirsten anxious (Danish experts)*



Kirsten, Scenario B. *Kirsten plays with her neighbours (Finnish experts)*



Beneficial effects for Kirsten's family members, friends, and society

