Welfare Technology
Tool Box
PROJECT: Connect – Collecting Nordic Best Practice Within Welfare Technology

CONNECT

Published by
Nordic Welfare Centre

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Graphic design: Idermark & Lagerwall Reklam AB
ISBN: 978-91-88213-16-7

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The report can be requested in printed format or be downloaded from www.nordicwelfare.org
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Foreword

Welfare technology has increasingly been on both the political and media agenda during the last five to seven years. Yet despite this great interest and intensive hype, perhaps not as many new solutions have been implemented as might have been expected. The over 1,200 Nordic municipalities have faced challenges in transforming interest and projects into implemented solutions and innovative new everyday lives for staff and citizens.

This publication, and the CONNECT project overall, addresses some of the problems faced by the Nordic municipalities in their work with welfare technology: How can we capitalise more on our projects? How do we ensure that the knowledge we gather is integrated in the municipal organisation? How can we become better at sharing our knowledge and experience, rather than thinking that we each need to reinvent the wheel? How can we strengthen the joint Nordic market for welfare technology? How do we ensure that staff see technology as a co-player? The issues to be tackled are numerous and complicated. CONNECT gathers these threads to create the first complete Nordic toolbox for how municipalities can work with welfare technology on the best possible basis.

Yet the toolbox is not just the advice given by experts, but is also based on practical experience and municipal "best practice", as it is created by ten of the Nordic region’s leading municipalities in the welfare technology area, in cooperation with a number of national authorities.

Nordic Welfare Centre hopes that this publication and this toolbox can help to promote welfare technology initiatives in the respective countries, and also to promote cooperation across national borders in the Nordic region.

We hope that you will find both the toolbox and the publication useful.

Enjoy your reading!

Ewa Persson-Göransson
Director
Nordic Welfare Centre
The CONNECT project is conceived for and funded by a special program overseen by The Nordic Council of Ministers, called “Sustainable Nordic Welfare”. This program was initiated to ensure the long term sustainability of the Nordic welfare model. The Nordic model has received increasing international interest for its ability to create both high quality social welfare and economic growth, but future demographic and economic challenges, facing both the Nordic region and most of the western world, threaten its continued success. The program “Sustainable Nordic Welfare” was designed to address some of these challenges with a special focus on healthcare, the labour market, and education.

As the Scandinavian term “welfare technology” had gained considerable momentum as a new tool to innovate public healthcare in all five Nordic countries, “Sustainable Nordic Welfare” was looking for a project within welfare technology in the program. The task fell to the Nordic Welfare Center, NVC, an institution under the authority of the Nordic Council of Ministers, working with issues within health and social affairs who already had placed welfare technology as a high priority.

The task for NVC was to design and complete a project that strengthened the general competence level and implementation power within welfare technology in the public sector in all of the five Nordic countries.

Within this framework, NVC chose to design a project directed at the over 1200 municipalities in the Nordic region. Municipalities are the main service providers within the Nordic welfare model and they are also the sector level most directly involved in working with welfare technology today – so a project with municipalities as the main target group would have the greatest impact.

From here NVC looked at the municipal challenges when working with welfare technology – Are they similar across the Nordic borders? Are we facing the same problems? – in short, does it even make sense to cooperate at a Nordic level within this field?
The answer was a resounding ‘yes’. It turns out, that in spite of obvious differences in development, marked strength, and competence level across the Nordic region, we all seem to be facing the same basic problems when trying to work with welfare technology. These main issues are:

- **Too many projects with too little end-product**: A common Nordic problem. Municipalities love projects, for various reasons, but unfortunately they remain projects and are often run as something extra and not as an embedded part of the actual, everyday service delivery. This means that the knowledge obtained in the projects remains within the projects and is never integrated into the wider organization. This results in municipalities jumping from project to project with very little actual implementation or end-product.

- **We are all unique**: We are still not good enough at sharing knowledge and experiences – acknowledging what others have already done. Too many municipalities tend to think that they are unique – their citizens are unique, their organization is unique, etc. This means that whatever others have done before, simply does not apply to them. This “not invented here” thinking produces too many similar projects, which wastes valuable resources.

- **Weak common Nordic market**: Surprisingly the common Nordic market for welfare technology is fragmented. The Danish public sector prefers to buy from Danish suppliers, Swedish from Swedish etc. This does not apply to traditional assistive technology, but as soon as something becomes digital the markets weaken. This remains a barrier, naturally more so for the weakest of the Nordic markets.

Overcoming these challenges and raising the knowledge and awareness regarding welfare technology at a municipal level would prove a significant boost for welfare technology in the five Nordic countries.
Methodology and approach

The idea to counter the aforementioned challenges was to first create the optimal process for working with welfare technology. For each step in this process, we would create a best practice tool kit. This would give everyone easy access to best practice knowledge and it would help municipalities gain a structured approach to working with this area.

The connect process and toolbox aims to:

• Provide knowledge and experience. Hopefully having a validated Nordic tool box would help raise the general competence level, as knowledge is gathered and readily available.

• Create a common frame for working with welfare technology. Meaning if we all work within the connect frame, sharing experiences is much easier, as we know we all follow similar models or similar guidelines. If Copenhagen knows that Oslo has already evaluated a given technology, using the same or a similar evaluation model to themselves, then sharing experiences and learning from each other becomes much easier.

• Structure helps embedding knowledge. By working with a structured approach like connect, it will help you realize the complexity of working with welfare technology. This insight will help you follow the steps and integrate your projects into your organization better – to better learn and to optimize the chance that project becomes an implemented solution.

• Helping suppliers. Although indirectly, having a common Nordic frame will help suppliers sell across the Nordic borders. If we use the same framework, we will ask the same questions making it easier for suppliers.

To understand more about the process and toolkit see the section: Explaining the CONNECT process.

It was important for CONNECT that both the process and the toolkit were formed via a bottom-up process, meaning that the best practice knowledge that the process and toolkit contain should actually come from the municipalities themselves. For this reason, it was decided that the project consortium behind CONNECT should consist of ten Nordic municipalities, two from each country – and they should be recognized as front-runners within welfare technology in their respective countries. The selection process was carried out by NVC in cooperation with national players such as the respective national organizations for local and regional governments. For Norway, a special consideration was made. Given the fact that Norway had a newly-established national program for welfare technology, in which more than 30 municipalities participated, it was important that the two Norwegian participants in CONNECT also participated in the National program, to ensure synergies and mutual learnings from each project.
In the end the following ten municipalities were selected: Denmark: Aarhus and Odense. Finland: Oulu and South Karelia. Iceland: Reykjavik and Akureyri. Norway: Lindås and Lister. Sweden: Västerås and Gothenburg.

These municipalities formed the main core of the CONNECT project consortium. But, it is important for CONNECT that the process and tools created can be used by all municipalities across the entire Nordic region. So, to counter any bias the above composition of municipalities may give, we decided to include certain relevant national authorities to give input along the way. This is to ensure that our guidelines etc. were equally useful in a metropolitan municipality as well as a rural municipality. The national authorities giving input in CONNECT are: Denmark: KL (National organization for local governments). Finland: THL (National institute for health and welfare). Iceland: Ministry for Welfare. Norway: KS (National organization for local governments) and The Norwegian directorate for eHealth. Sweden: SKL (National organization for regional and local governments) and The Swedish agency for participation.

You can read more about each participant in the “Participants” chapter.

The first objective for the project was to agree on the process. The team agreed on a nine step process, which in theory is linear. We say in theory, as we realize that in real life steps may intertwine – but thinking of the process as chronological can help you gain structure in your approach to working with welfare technology, and also ensure that you have thought it through and covered all bases.
The steps were created using the following process: NVC sent out a template, gathering information from the municipalities. This input was then compiled into the first draft of the step. This first draft was then discussed in each country, through a national meeting between municipalities and authorities from each country. Each country then sent feedback to NVC, who, in return, produced a second draft. This second draft was then discussed in a common decision meeting which all participants joined. The resulting third draft was then open for input from other municipalities or relevant players, in a listening process. During the CONNECT project period, more than fifty municipalities gave input regarding the steps. The external input was discussed during the following decision meeting, meaning in the end it was still the CONNECT municipalities deciding the final content of each step.

Nordic cooperation:
Three years of close cooperation between ten very different municipalities and seven national authorities from five different countries naturally had its challenges, but turned out smoother than expected. Due to differences among the countries, both when it comes to the definition of welfare technology and also motivation for working with welfare technology, more compromises were expected. But, as the project started to take form, it turned out that the ten municipalities were very much in line, creating both the process and each step. Naturally there have been discussions along the way and some had a greater focus and competence within certain steps than others, but overall welfare technology remains an obvious area for Nordic cooperation, as our service delivery and mindset towards public sector innovation is very much alike. Furthermore, this is an area in which we can all learn from each other. Working with welfare technology is complex and tightly connected with service delivery, organization, staff, end users, etc. The many aspects mean that you can always find inspiration and learn from others, even if you are among the absolute best within this area. The ten participating municipalities did not only learn from each other during the project, it also facilitated closer cooperation between them. Closer cooperation not only across borders, but also between the municipalities from each country, a very positive by-product from this project.
Introducing the process and toolbox

The process is designed as a guideline for working with welfare technology within a municipality. These are the nine steps you need to be mindful of in order to optimize your chances of success and to optimize the chance that your project becomes an implemented solution.

1. Vision
2. Strategy
3. Communication Plan
4. Needs-Analysis
5. Market Screening
6. Evaluation Model
7. Procurement Plan
8. Implementation Model
9. Effect Monitoring

Unsurprisingly, many of the steps you would also find in any other innovation process, though some are more specific to working with welfare technology.

CONNECT would like to underline that the above process is meant as inspiration and assistance. We are not trying to tell municipalities what to do or how to do it – everyone is free to pick and choose. You can use it all in the chronological order it was conceived, or you can choose the steps that fit your organization and simply let those inspire you. We do however recommend you at least consider the entirety of the process, to ensure your work with welfare technology is properly integrated in your organization.

When going through each step of the toolbox, you will find a small introductory text for each step stating what this step means and why it is important to the entire process.
It is also important for the CONNECT team to underline that while we consider this to be best practice, it does not necessarily mean that all ten municipalities have done all of the steps exactly as they are presented here. All ten municipalities have experience with all steps and all ten municipalities agree that this is best practice, based on their experience – but it does not mean that all ten for instance have a specific procurement plan for welfare technology. The ten CONNECT municipalities are among the prime movers, learning as they go – this document and these steps are for collecting that knowledge and these experiences for others to follow and to avoid some of the challenges they faced (for instance by not doing one or more of the above steps). All steps contain a section in the end, called “practical experience”. This consists of examples of the given step from the ten CONNECT municipalities. However, not everything is available through links – so to get practical examples you will, in many cases, need to contact the municipalities directly (contact information is provided under the “participants” section). You are welcome to contact all ten municipalities, even if they are not mentioned in the given example section. Due to space restrictions in this publication, it is also likely that you will find more detailed information and more examples on our webpage: www.nordicwelfare.org/connect

The steps themselves are thought of as a toolbox. It is a relatively short document offering a few general recommendations, a range of specific guidelines based on experience from the ten CONNECT municipalities, and a ‘methods and tools section’ in which we point towards existing methodologies that the municipalities have found useful. For instance, in the step for ‘evaluation model’, we point towards 4-5 different models and it is then up to the reader which evaluation model they think will best fit their purpose and their approach. Finally, there is the examples section – which is merely meant as a teaser. It does contain links, but we encourage readers to contact the municipalities for more detailed information.

We hope you find our toolbox useful and welcome any input you may have.
Step 1: Vision
What is it, and why is it important for the entire process of working with welfare technology?

A vision is quite simply an understanding of ‘Why are we doing this? What do we want to achieve by working with welfare technology? What are our goals and ambitions?’ It can be a document that inspires, but it is important that it is neither a strategy nor a “business plan”. It should not explain how these goals and ambitions are to be achieved.

A vision is important since it is difficult to achieve an ambition if you do not first take time to properly define it. A good vision can act as guidance for staff and management, to ensure everyone is pulling in the right direction. It is important for the entire process as it formulates your ambitions and key reasoning for working with welfare technology and, as such, it feeds into several of the following steps in the process.

Recommendations

On a general level, remember that no vision is better than a bad vision: Too many visions are made simply because “everyone has one” which makes them either unrealistic or nonsensical. Ensure your vision is tailor-made to fit your organization.

Also remember to consider the big picture. Many of the Nordic countries already have national goals for the municipal level within welfare technology, so ensure your vision embraces these. Furthermore, welfare technology is a relatively small area of expertise, but covers many professions and organizational divides. Consider whether a vision on welfare technology is better served in combination with other overall agendas – for instance innovation – to ensure organization-wide anchoring.

Similarly, if your municipality has an overall vision or simply an overall set of values or ambitions, remember to ensure your vision within welfare technology matches these to ensure continuity and avoid confusion.

Guidelines based on experience

- A vision is individual, based on the values which are important to you. It is also clearly and unambiguously worded. Although it should be ambitious, it is important that it is also realistic, given your position in the market and the resources available to you.

- A vision for welfare technology gains validity if a broad contingent of stakeholders has had the opportunity to contribute (such as management, staff, users and relatives).

  - But, the vision must be approved and agreed upon by politicians and top management to insure full anchoring and ownership throughout the organization.

- The vision should be clear and ambitious, to give direction - but at the same time the ambition should still be obtainable to ensure a continued momentum (the area of welfare technology is still young and success breeds success).
• When wording your vision consider its timeframe. A vision for a public authority should look ahead and cover at least 3-5 years. Do not include time-specific goals or aspects, as this is best applied in a strategy, but consider whether your vision has the correct longevity.

What did having a vision mean to the Connect participants?
In Lister we see “a vision” as an enabler. Having a vision unites our combined efforts within our organization towards a common goal. The vision enables and anchors the strategy and new initiatives within welfare technology. It also eases overall communication, including with politicians and top management.

Västerås has so far lacked a vision for welfare technology. This means that most work has been done ad hoc, mainly initiated by unplanned events like calls for project funding or meetings with technology vendors. Therefore we haven’t ensured that the efforts were targeted at prioritized needs and we have not been able to achieve maximum synergy effects. We strongly recommend founding the welfare technology work by elaborating and anchoring a vision (and a strategy).

Göteborg: When working to create a vision the discussions are sharpened and go deeper into the places we want to reach, for whom and also why. Such discussions generate creativity, participation and consensus. Once the vision is formulated, it is energizing and gives direction to our shared efforts.

Available tools
• The Danish Agency for Digitalization offers a template on the webpage (see link below). If you choose to use this tool please consider whether your communication plan should be separate (as recommended by CONNECT – see step 3).
https://www.google.se/?gfe_rd=cr&ei=-vK8VOGrKoq6wQPV6IDgB w&gws_rd=ssl#q=skabelon+vision
Examples of visions from the Connect participants
The examples below are just selected excerpts. Please contact each municipality directly for the entire document or more information about their vision for working with welfare technology, (see contact list in publication).


Forligspartierne ønsker at sætte Aarhus på det velfærdsteknologiske verdenskort ved at:
• Skabe et globalt førende udviklings- og erhvervsklima inden for velfærdsteknologi.
• Aarhus Kommune bliver pioneer inden for brug af velfærdsteknologi på alle kommunens serviceområder.
• Aarhus Kommune gives borgerne ansvar og kompetence til at bruge teknologi i hverdagen.

Oulu (excerpt): In Oulu we have created a complex, innovative environment connecting the municipality with the university and hospital, etc. Together we have a vision: “To achieve an effective use of health technologies in a city where citizens actively manage their well-being”. You can read more about this at www.ouluhealth.fi
Step 2: Strategy
What is it, and why is it important for the entire process of working with welfare technology?

In the context of CONNECT and working with welfare technology, a strategy is the operationalization of your vision. This means that your strategy should be the method or plan for how you are going to achieve your vision – a practical plan for realizing your goals and ambitions.

Your strategy is an important tool, which allocates resources in your endeavors to fulfill your vision.

Some strategies will include a communication plan. In the context of CONNECT we have separated this into a separate step (see step 3), to underline the importance of a well thought-through, comprehensive communication plan.

The strategy will have a direct influence on all the subsequent steps in the process of working with welfare technology, so please make sure your strategy can facilitate them all.

**Recommendations**

Please keep the big picture in mind. All Nordic countries have national strategies that will influence the welfare technology area. Some countries even have very specific strategies aimed directly at welfare technology in the municipalities, including specific compulsory goals. So, make sure you research the existing national strategies (national strategies exclusive to welfare technology can be found in the examples section in this document), so that your own strategy compliments these. For more information about national strategies in your country please consult your national association of local and regional governments.

When writing your strategy consider that a municipality is a big and complex organization and that welfare technology will be relevant across departments and professions – from children to the elderly, from disability to social issues. Make sure your strategy is either relevant across these organizational divides or in other ways consider this potential complication.

Consider whether cooperation with like-minded municipalities or regions would be beneficial. A common strategy can be an effective way of overcoming a lack of resources and or experience.

If you feel uncertain about how to create and write a strategy, there are several consultants specializing in this exact area which could be helpful.

**Guidelines based on experience**

- Operationalize your strategy by creating obtainable subsidiary goals – do not be afraid to have several subsidiary goals for each part of your strategy.
  - Example: Strategy statement: XX wants welfare technology to ensure that XX offers attractive jobs and a good work environment. Subsidiary goals: XX will offer yearly training to employees to optimize their technical competences. Subsidiary goal: XX works on continuously identifying technology to replace or ease repetitive and tedious tasks.

- A strategy should not micro-manage your efforts within welfare technology. It is beneficial to use action plans
(from common template) for each project to ensure a common goal and common effort. Action plans cannot replace a strategy, but act as a good supplement.

- It is beneficial to add an element of time to ensure momentum within the area. It can either be in the form of a deadline on certain goals (such as a three year plan) but it can also be a clause suggesting the entire strategy is revised / evaluated yearly.

- Consider how your strategy can help integrate the process of working within welfare technology throughout your organization – across departments and professions. (As examples, do not forget the procurement department, the legal department, the IT department or Finance and administration)

- Consider how welfare technology can support and even enhance existing organization-wide initiatives.
  - Examples: Important municipal initiatives such as “implementation of rehabilitation” or “promotion of trade and industry development” are easily supported and even enhanced with a welfare technology strategy.

- Values and ethics are difficult to operationalize, but are important for both internal and external communication.
  - Example: When formulating the ethical foundations and basic values of welfare technology for XX it is absolutely necessary to involve all stakeholders, especially those that will use and benefit from the new technology.

- Consider how your strategy can support and even promote a successful implementation process (bearing in mind that a successful implementation process can involve complex issues such as ownership, training, organization, support etc).

What has having a strategy meant to the Connect participants

In Lister, having a strategy has lessened the task of working with welfare technology. Our strategy has shaped the framework we work within. We now have a common goal of not only understanding the means and instruments available, but also the limitations. The strategy provides us with a common, practical directionality in our work.

Västerås has so far lacked a dedicated strategy for welfare technology. When planning and implementing different activities, such as pilot projects and scaling-up implementation, we have sought support and guidance in the overall goals of the political committee for the elderly, and that has been of some help to tailor and prioritize the efforts. It has also given guidance on what goals to achieve with welfare technology. As with the vision we do recommend setting aside the necessary time and resources to elaborate such a policy document – it will pay off later.
**Tools**

Templates for strategies vary greatly, and you may even have one for your own particular organization. We recommend you browse through the strategy examples listed below, to see examples from experienced Nordic organizations.

The Norwegian Association of local and regional governments has a tool on their homepage which can be used as inspiration when creating a strategy for welfare technology. For more information see: www.ks.no/samveis Please note that this is not a strategy template, but it contains very useful information about different aspects of working with welfare technology.

**Innovation design can be helpful**

Furthermore, tools intended for designing or completing innovation processes may also be very helpful in writing a strategy specifically for welfare technology. There are several available online, but our Norwegian partners have recommended the following two:

**N3:** (New, Useful and Utilized). This is a digital tool for those who want to know how to adopt innovation methodologies.

**N3 consists of three parts:**

1: The first is the short film “Let go - party of choice” that provides a concise presentation of why KS works with innovation.

2: The second is a training component. This includes an introduction to what innovation is.

3: The last module is for those who have a specific idea or project. In step 3, your project will be challenged through a series of specific questions. Upon completing the module, you can download a summary and use it to assess the strengths and weaknesses of your idea or project.

**N3:** http://ks-innovation-tool.herokuapp.com/

**SLIK:** (Systematic management of municipal innovation). This is a digital tool designed to ease and support innovation in municipalities. The product is primarily educational and takes the form of a game. The game will gradually
take the user though layer after layer, increasing the user’s competences and understanding of what municipal innovation is and how it can be utilized.

SLIK: http://ksinnovasjon.laboremus.pl/#!div1

Examples of strategies from the Connect participants, including national strategies
National strategies/programs for welfare technology:

**Denmark:**
http://www.digst.dk/digital-velfaerd

**Norway:**
https://helsedirektoratet.no/velferdsteknologi#ta-i-bruk-velferdsteknologi-i-kommunene

Municipalities:
Below, you will find links to a select few of the strategies from the participating municipalities. Please feel free to contact the municipalities directly for more detailed information. More examples can be found on our webpage: www.nordicwelfare.org/connect

**Odense:** Has a strategy for welfare technology, along with other guidance documents. These can be found on www.odense.dk/cfv - for the actual strategy document please contact Odense municipality directly (please use the contact list).

**Lister:** The municipal health cooperation between the six municipalities in the Norwegian Lister Region has uploaded its strategy on its webpage, it can be found on: http://lister.no/helse/370-helsenettverk-lister

**South Karelia:** The Eksote cooperation in the region of South Karelia has also formalized a written strategy which can be found on their webpage: http://www.eksote.fi/eksote/strategia-ja-johtaminen/Sivut/default.aspx
Step 3:
Communication Plan
What is it, and why is it important for the entire process of working with welfare technology?

A communication plan within the area of welfare technology will more often than not be a part of your strategy. But, to underline its importance and how it dramatically increases your chances of success, we have allocated a separate step for the communication plan. Whether or not you include it in your strategy or keep it separate is not vital – it is the considerations required to produce a good communication plan that makes a difference.

A communication plan is for both your external and internal communication. It helps you communicate your vision and the specifics of your strategy.

**Recommendations**

The communication plan should help you communicate your message across every department and every profession within your organization. For this reason, creating a communication plan should include inter-departmental cooperation as well as end-users. If your organization has a central communication department they are naturally important players.

Given the need to communicate difficult messages, the need to differentiate who gets what information, and the need for the communication plan to support a cultural change, it may be beneficial to consider cooperation with a research institute or other external experts.

In all phases of planning, preparing and implementing welfare technology it is very important to identify and involve all roles that are affected by the changes – the target group for the services, their relatives, staff providing the traditional and (if other) those that will provide the welfare technology services, managers of care providers, case managers, strategic planning officers, politicians and others directly involved in the welfare service. And also professionals necessary for facilitating those changes – specialists within IT, legal issues, procurement, economy, communication and so forth.

When seeking cooperation with end users (the elderly, persons with disabilities, etc) it is important to consider the target group. Strive to find engaging people that really will benefit from the new services, and not merely someone that simply believes themselves to be a representative of the target group. It is always better to have those that are actually using traditional services, rather than their relatives, the chairman of the local association for pensioners, etc. This gives us special challenges, as it's often frail persons or sometimes with special disabilities who make it an extra challenge engaging them in the dialogue, but it is worth being a little extra creative in finding the right methods.
Guidelines based on experience

- As a supplement to an overall communication plan, consider also applying project-based communication plans. During your work with welfare technology you will carry out multiple projects at once with different communication requirements and needs. To facilitate this, consider using project-based communication plans (as a supplement to your overall communication plan) in much the same manner as using action plans to operationalize your strategy.

- Working with welfare technology involves an organization-wide cultural change and the communication plan needs to facilitate this. Therefore the communication plan must be able to create a common understanding within the organization and across professions.

- One of the most importance tasks in facilitating an organization-wide cultural change revolves around three key concepts: Anchoring, obligation and ownership.
  - Anchoring: Ensuring that everyone, from top management to front staff, from politician to relative, knows why we are working with welfare technology.
  - Obligation: They not only know why, they know why it is important and why it has become a part of daily life at the job.
  - Ownership: It is not only a part of the job, but something to take pride in.

- In complex organizations, people have different needs when it comes to infor
information, both with regards to amount of information and the way it is delivered. The communication plan for welfare technology requires a differentiated approach – both different target groups and different purposes.

- An analysis of all interested parties could be beneficial to a differentiated communication plan.

- Risk analysis and risk management should be a part of the communication plan, so efforts without effect or even with an undesired effect are identified and changed.

- This is to maintain continuity and momentum (also internally)

- This is also to keep politicians happy – if they are associated with positive stories.

- Consider the use of social media. Social media can provide a positive outlet for your communication needs. It is fast, and easily accessible, which can help keep your target group continuously updated. It also provides a different and more direct aspect, hitting different target groups from more traditional media outlets.

- Consider making a short film on welfare technology involving end users. This can be used as a powerful communication tool, both internally and externally. For examples, please contact either Odense or Västerås.

- External communication is very important. Welfare technology is not always portrayed positively within the media, so it is a good idea to have a continuously updated list of positive stories directed at different media outlets.
What has having a communication plan meant to the Connect participants?

Lister: Having a communication plan ensures a better overall quality of your communication. It helps you to deliver information at the right time and in the right way. It also helps you get better input from your organization, as you now have team players rather than individuals.

Examples of communication plans from the Connect participants

Not all of the CONNECT participants have a formalized individual communication plan just for welfare technology (while all acknowledge the advantage of having one). Some have an overall communication plan, which they adapt, while others have it as part of their strategy. All of the participating municipalities have thoughts and experiences from communicating on the work within welfare technology, so feel free to contact them for their practical insights.

Västerås: Has formulated a communication plan for welfare technology. It structures internal and external communication to ask the basic questions – what, why, who, when, how etc. It’s not available online, so please contact Västerås directly for more information.
Step 4: Needs analysis
What is it, and why is it important for the entire process of working with welfare technology?

Understanding the needs of your organization and the end-users provides the foundation for successfully implementing new welfare technology.

A needs analysis can, as we will see later in this document, encompass many different aspects and perspectives, and as such can be very complex. In its most simple form, however, it is simply a methodical examination of an organization and its end-users, with the goal of identifying areas with potential for improvement.

A needs analysis lays the ground for later steps, but is closely connected (and often intertwined) with the marked screening process. Unfortunately, the needs analysis is often overlooked or underestimated. This, simply because many public authorities believe they know the needs of their organization and their end users by default. This preconceived notion can lead to failed projects and sub-optimal use of scarce public resources.

Apart from increasing your knowledge about the entirety of your organization and the end users, a thorough needs analysis has the added benefit of creating a feeling of ownership concerning new technology across sectors and professions. When staff have helped identify the problem and the need, the early involvement helps create a sense of ownership towards any technology covering this given need.

Recommendations

It is very important to stress that doing a thorough needs analysis will provide an organization with a better understanding of its true needs and thus a better idea of which initiatives will be the most effective, both in terms of quality and cost. Though it is key to making smarter decisions, a needs analysis is a knowledge-gathering tool and we recognize that as such it is only a part of the decision-making process. In a politically controlled organization there will be several other factors influencing the decision on which project to start or which area to prioritize. These factors could be:

- Certain areas may be viewed very positively or negatively by the public, which can/will influence its prioritization.

- Certain areas may have administrative and/or political prioritization within your organization.

- Certain areas may have national or regional political prioritization.

- Marked screening may reveal innovative solutions with great potential.

- Existing possibilities for external funding.

It is recommendable to supplement the traditional needs analysis with a “technology based needs analysis” (intertwining needs analysis and market screening). While a traditional needs analysis (even with the thorough methodology provided in this document) primarily provides acknowledged and observed needs,
a “technology-based needs analysis” can be more innovative due to its external origin. It is however important to stress the word supplement. Relying purely or overly on marked screening or “technology based needs analysis” is a common “pitfall” and often leads to the creation of new needs rather than fulfilling existing ones. It is easy to be impressed by new, innovative technologies, but without a good traditional needs analysis, its viability is hard to determine and you risk wasting resources on superfluous testing.

**Guidelines based on experience**

- Your needs analysis must be followed by a prioritization process. A needs analysis will most likely point towards several possible focus areas, and it is helpful to the efficiency of the follow-up process if these focus areas are prioritized. It is recommendable to make this prioritization at the top level to ensure ownership and engagement.

- Because of the complexity and variety of a municipality, needs analysis needs to be focused and clearly defined within a department or professional subject area. Prioritize which subject area of your organization has the largest potential and work your way through the prioritized list. Including more subject areas at once will not necessarily improve your needs analysis, as it will require huge resources to compile and process the collected data.

- Identify and work with a range of needs analysis methods (see later section) to ensure the right correlation between the resources you spend and your general efforts within welfare technology. Choose one or more methods that best suit both your organizational set-up and resource limitation.

- Make sure your needs analysis includes all perspectives, in order to identify true needs. To do this, it is beneficial to map out which perspectives within the given subject area should be included in the analysis, including all management layers, front staff, end users, relatives etc. (See section on available tools for more information about “partner analysis”).

- Communicating your identified needs to the market improves the understanding and dialogue you have with potential commercial partners.

**What has having a needs analysis meant to the Connect participants?**

- In Odense, anthropological studies have led to a better and wider understanding of welfare technology, from the end-users to the top management within each department. Identifying and focusing on identified needs has strengthened our communication with the market.

**Methods and tools**

There are several methods for conducting needs analysis. This section lists suggestions based on the experience of the participating organizations. Remember that a needs analysis needs not be limited to one method, but usually includes several of the listed methods.
Suggested methods

Interviews
With structured or semi-structured interviews, you can collect data and identify problem areas. This method is usable with different target groups, from top management to end user and relatives.

Anthropological study
This is an observational study in which an anthropologist observes behavior and workflow of both staff and citizens. This is highly effective for identifying needs at particular institutions.

Workshop
In a workshop setting you can gather different stakeholders in a structured forms to work with the current situation descriptions and improvement areas where, for instance, technology could make a difference.

Focus groups
A focus group can be either cross-composed of different stakeholders or consist of only one group. This requires careful leadership to avoid prejudice or ‘putting words in the mouth’ of the participants.

Enquiries/Follow up interviews
When needed, often as part of a larger process, you can use enquiries to clarify the importance of your findings, reconcile that we are on the right path, and get help with prioritizing.

Questionnaires
Are a frequently used tool for gathering knowledge. For internal purposes, using web-based questionnaires can be both swift and useful.

A day of inspiration
Invite suppliers to pitch their solutions. This can be in a structured form for relevant staff or it can include users, e.g. a day of inspiration could also include an exhibition or a workshop to clarify fields of use, target groups, and important functions.

“Network”
To ensure continued feedback from front staff and end-users it can be useful to establish a formal network including staff from all areas of your organization. They report potential problem areas and articulated needs from throughout your organization.

Statistics
Sometimes it can be useful to go back to previous measurements and different kinds of business statistics to get a picture of e.g. how common different kinds of actions or target groups are.
Available tools

- “Blandede lærende netværk” Teknik for ældre projektet http://www.hi.se/publikationer/rapporter/blandade-larande-natverk/

- KLs roadmap: www.ks.no/samveis also see: http://www.samveis.no/verktøy/


Examples of needs analysis from the Connect participants

Odense: Needs analysis is a very important part of working with welfare technology in Odense municipality. They use several of the methods listed in this document, and have formalized documents / templates for different parts of the needs analysis. This includes: Questionnaires, outlines for workshops, and reporting templates. Unfortunately, these are not available online, so please contact Odense municipality directly or check our webpage www.nordicwelfare.org/connect.
Step 5: Market screening
What is it, and why is it important for the entire process of working with welfare technology?

This step is closely connected with the needs analysis. The market screening can both be a thorough search of the existing market to see whether a current commercial product can cover an identified need, but it can also be a continuous process in which an organization can stay up to date with, and even be inspired by, new, innovative products.

A good knowledge of the market and which products are successful or “up and coming” within different areas of welfare technology can inspire your work, but also make for a better and more informative evaluation process. Instead of simply testing the first technology that covers a need, or the one with the best salesperson, a good knowledge of the market will allow you to test better products and perhaps even test several competing products, optimizing the collected data as well as your chance of success.

Recommendations

- On a general level, remember that market screening and market dialog can, and often will, be a precursor for procurement, so treat everyone equally and with a high degree of transparency.

- To the extent to which your resources allow, it is not recommendable to simply perform market screenings in short, intensive time intervals that are intended to identify solutions for an identified need. If possible, seek to integrate the market screening process into your everyday work with welfare technology – to achieve a continuous state of market awareness. (For more information about how to do this, see the guidelines section).

Guidelines based on experience

- On a general level, when performing a market analysis, whether it be as an integrated part of your daily work or during an intensive search, first take some time to clarify which standards and regulations companies and products should adhere to in your organization. Examples:
  - Regulatory standards
  - Inter-operability / communication with existing technologies or databases within your organization
  - National regulations for instance regarding data safety

If your organization does not possess the required expertise needed to determine the above, help can be found in national authorities, other municipalities or specialized consulting companies.

- Integrating market screening into your daily work:
  - Attend relevant exhibitions and conferences. Update your knowledge by attending, or even arranging, relevant exhibitions and conferences. Do not be afraid of attending exhibitions and conferences abroad for inspiration.
- Employ an open market dialog. Companies should have easy access to dedicated personal resources within your organization.

- It is recommendable to arrange structured and open dialogue meetings with the market. These could be monthly/quarterly/yearly meetings, in which companies get an opportunity to pitch their latest products. To minimize use of resources this could be done in cooperation with neighbouring municipalities.

- Establishing a living lab or showroom within your organization can also be a good way to connect with technology suppliers and hear about their new products and updates. Remember, a living lab requires time and resources or it will not have the desired effect.

- It is highly recommendable to establish a knowledge-sharing network with like-minded municipalities or other partners such as hospitals and universities. Sharing information about new products, usability and profitability saves valuable resources.

- Join existing professional networks using Social Media to exchange knowledge with colleagues from other municipalities and sectors.

- **Intensive market screening:**
  - Desk research: The internet wasn’t invented for nothing, use it to identify potential solutions.
  - Cooperate with marked cluster organizations. An easy way to gain access to technology suppliers is through marked specific clusters – the organizations themselves are also useful sparring partners when doing desk research. (For examples see “methods and tools”).
  - Similarly, use your knowledge-sharing network of like-minded municipalities when doing desk research.
  - Do not be afraid to communicate your needs to the market. This may very well result in the problem being solved in a manner you had not previously thought of.

**What have market screenings meant to the Connect participants?**

In Odense, we continuously screen the market to ensure we know and use a wide range of solutions, which in turn increases the likelihood of the solutions being profitable. Market screening within welfare technology has led to knowledge-sharing across municipal departments, and this has facilitated the integration of working with new technology in departments which previously had no experience in
doing so. Quite simply, a thorough market screening increases the likelihood of successfully implementing sustainable solutions by matching identified needs with the right technology.

Methods and tools
• In Finland, the web portal that announces new procurements from public authorities also has a built-in option for doing a market screening before procurement – to ensure there are solutions that will fulfil the needs of the procurer. http://www.hankintailmoitukset.fi

• Methods and guidelines for public-private cooperation and dialogue: http://www.opilab.dk/viden-om-opi/modeller-og-guidelines/

• Municipal cooperation and knowledge-sharing in Denmark: http://kl.dk/ Aktuelle-temaer/ Centerforvelfaerдрste_knologi/Det-velfardsteknologiske-landkort1/

• There are private companies that provide IT platforms for public-private dialogue leading up to a procurement (examples: www.processio.dk / www.comdia.com )

• Cluster organisations – (One example from each country, more can be found using Google):
  - Welfare Tech (http://www.welfaretech.dk/), Denmark
  - Oslo Medtech, (http://www.oslomedtech.no/), Norway
  - Välfärdsteknologi.se, (http://valfardsteknologi.se), Sweden
  - FIHTA Healthtech Finland, (http://www.finnishhealthtech.fi/), Finland

Examples of market screenings from the Connect participants
Oulu: In the city of Oulu, we use OuluHealth Labs to search for new innovations and existing technologies available in the market. We also have permanent show rooms in the hospital and in the city library:

http://ouluhealth.fi/labs/
http://www.ouka.fi/oulu/kirjasto/kokeilupiste

Odense: Has experience with different approaches, including living lab and pitches etc. At www.odense.dk/cfv they have structured the way companies can approach the municipality. For more information about market screening please contact Odense municipality directly.
Step 6: Evaluation model
What is it, and why is it important for the entire process of working with welfare technology?

This step is of paramount importance in order to ensure that any technical solution you might consider implementing actually fits within your organization. The evaluation model should ensure that the technology meets the needs you have identified and can deliver on the parameters you set for it—for example improved service quality, enhanced work environment, higher cost efficiency or all of the above.

The evaluation of the solution is your chance to gather information about the interaction between the proposed technology and your organization, the service you deliver and of course between the technology and your staff and end-users. A good evaluation model can help you weed out potential failed products and projects and is the foundation upon which later implementation is often built. This means validity is of paramount importance.

The evaluation model tests whether the products you have identified in the market screening actually meet the needs in a satisfactory way and gives you a platform to build on for future implementation and effect monitoring.

Recommendations

- To increase effectiveness and ensure conformity in the evaluation process it is recommendable to use a set evaluation model (for example one of the models mentioned in this document). This ensures a systematic approach and leads to an increased clarity in both the decision-making process and the prioritization process.

- It is advisable to do a “potential assessment” (assessing the potential benefit of a given technology) before using a lot of resources on an entire evaluation process. It is important however, that this assessment of potential is built on the same framework as your set evaluation model, in order to ensure continuity and accuracy in the assessment. If it is not built on the same framework, you increase the risk of the initial “potential assessment” turning out to be way off and that your decision whether to do the evaluation or not, is made on inaccurate information.

- When assessing the potential of a given technology, remember to connect this with your identified needs as well as your strategy and vision for working with welfare technology.

- An evaluation process is demanding on both time and competencies. Please ensure that you allocate the required resources and, if possible, coordinate with other existing activities.

- It is wise to start any evaluation process by determining the goals for the process. Always consider including the end-user in determining the goals. The goals can later be adjusted as you go along, but when set from the start, it helps give the process direction and creates transparency. Similarly, it is often beneficial to include
the practical level (front line staff) and/or end-users when determining which data-collection methods to use (questionnaire, interviews, etc) as involvement helps with ownership and commitment.

**Guidelines based on experience**

- How your municipality is organized will play an important role in how the technology will perform. Be sure to include an analysis of whether the given technology performs well within your organization in the evaluation model. When doing this analysis consider if organizational changes would enhance performance.

- In order to ensure local ownership and commitment, it is very important that the evaluation goals are relevant to everyday life. This is to make sure that the evaluation process is a part of the normal daily routine, comparable to other work activities – and not something extra on the side.

- Remember the future success of the technology depends on the validity of your evaluation. So, when designing the evaluation process make sure the technology is tested for an adequate amount of time and with a sufficient amount of test subjects. Cutting corners may result in a cheaper evaluation process, but significantly increases the chances of failure when implementing the final solution.

- Ensure that the test group is representative for the intended target group. Furthermore, ensure the test group is fully informed, including about what happens after the testing period ends.

- It is essential to remember to establish baseline measurements to serve as your foundation upon which the evaluation is build. A baseline is required for all the parameters you wish to evaluate.

- Check your network or national authorities to see if others have evaluated this specific technology or even something similar. Even if an existing evaluation is not directly applicable for you, it can serve as valuable inspiration and save you time and resources.

- It is recommended that your evaluation, amongst other parameters, include an economic perspective, a cost-benefit analysis if you will. Furthermore, if you wish to effectuate any financial savings the technology may bring, remember to include this in your evaluation model. It is important to include this as “harvesting” any economic benefit often requires a closer look at your organization and the way that you finance services internally.

- Remember your evaluation report should also include a model for how the given technology is supported and distributed after potential implementation.

- Remember the long-term success of a technology may depend on the competencies of the staff. Any additional training of staff is naturally an important part of any evaluation model, and will affect the cost side of the final business case.
What has having an evaluation model meant to the Connect participants

Odense: It has given Odense a tool that is used in all departments, ensuring that everyone is using similar methodologies and parameters. It provides us with a systematic approach and also raises awareness about the complexities involved in evaluating new technology. Finally, the evaluation model provides a solid platform for decision-makers.

Methods and tools

- Odense uses the Danish evaluation model called VTV developed by the Danish technological institute, together with a separate business case model. Both can be found on our webpage www.nordicwelfare.org/connect
  - The VTV offers a good overview and covers the most important issues in a product evaluation. It also provides a visual perspective on the performance of the technology and serves as a good platform for decision-making. In Odense it is combined with a more comprehensive business case model which takes a more in-depth look at the financial aspects of the technology and its potential impact. You can read more about the VTV at Danish Technological Institute's website (link below) or go to the connect website to find Odense’s guidance documents on how to use VTV: http://www.teknologisk.dk/ydelser/vtv-velfaerdsteknologivurdering/32944

- Gothenburg uses the balanced scorecard model in four perspectives: Users/relatives, employees, organization and finances. Different parameters can be positioned in the second axes such as functionality, safety, quality and cost.
  - Gothenburg also recommends the following tools:
    - E-delegationen’s “metod för utveckling i samverkan” (http://www.esamverka.se/stod-och-vagledning/vagledningar/metod-for-utveckling-i-samverkan.html)
    - E-delegationens ”Business case model”.

- www.opiguide.dk contains both business case models, as well as innovation evaluation models that could be useful tools or used for inspiration.

- Digitaliseringsstyrelsen in Denmark recommends the following business case model: http://www.digst.dk/Styring/Business-case-model

- Samveis.no contains both advice and tools to guide you through the evaluation process. More information at: http://www.samveis.no/metodikken/utvikling-utproving-og-evaluering/

- Sitra in Finland has a handbook on social and health care management that South Karelia finds helpful, both with regards to evaluation and other management issues. More information on the Sitra webpage: http://www.sitra.fi/julkaisut/muut/Sosiaali_ja_terveyspalveluiden_tietojohtamisen_kasikirja.pdf
Examples of evaluation models from the Connect participants

Examples for this particular step are mirrored by the methods and tools section regarding methodology. The CONNECT municipalities are pleased to share their evaluation reports of given technologies if you contact them directly.

- As an example, on www.odense.dk/cfv you can see which technologies are tested and implemented in Odense municipalities. On our webpage www.nordicwelfare.org/connect you can also find Odense’s guidance documents on how to use the VTV methodology (mentioned above) and how they do a thorough business case.

The Connect participants also perform the evaluation process in different settings both with or without partners. As an example of a setup with partners, see the below example from Oulu:

- OuluHealth Labs provides a unique, integrated health test and development environment – including professionals’ feedback – for every phase of the R&D process. OuluHealth Lab services are provided by the region’s top organizations, such as Oulu University Hospital, Oulu University of Applied Sciences, and City of Oulu’s Health and Social Care Services. Oulu CityLab is part of OuluHealth Labs. It is a test environment where the end-users are – at customers’ and patients’ homes and in all social and health care services within in the City of Oulu. Product developers will get direct professional and customer feedback on products in a real, everyday social and health care environment. Read more: www.ouluhealth.fi

In Västerås, they use the following general approach to evaluating new solutions:

- We have done evaluations of new technology for seven years now. We try to design the evaluation method individually from case to case.

We generally divide the evaluation into two phases:

In the first phase we ask test persons to help us with their expert knowledge (on being an elderly person or a person with a disability) when trying the technology for us. We emphasize that it’s all about helping us evaluate, and we carry on giving them as much help as usual, or at least being present when they use the technology.

The second phase is where we replace the normal way of providing care with the new way through technology. Here we still have some extra resources for support and to replace technology when it fails, so in that sense it is still a pilot running, but now we can say that we actually provide our care with the technology.

From both of these phases, we collect experiences from all involved – users, relatives, staff and others. The data is usually qualitative and unstructured but sometimes – especially when comparing similar solutions – we also use inquiries and other quantitative data.
Step 7: Procurement model
What is it, and why is it important for the entire process of working with welfare technology?

It goes without saying that investing in new technology is a big step for any municipality, so it’s very important to get it right.

Procurement in general is a complex, specialized task that requires both time and resources. Municipalities have been handling large scale procurements for many years but procuring welfare technology often requires a different approach from procuring, for instance, office supplies, so it’s important to explore your procurement options.

This step is not going to give an in-depth legal analysis of the different existing procurement models, but aims to provide food for thought on what to be aware of and which models are the most popular among the leading municipalities within the area of welfare technology.

**Recommendations**

- It is very important to ensure a good and responsible administrative practice and promote transparency and equality throughout the entire process. This is not only good practice, it also ensures that you do not exclude any interested party.

- While the traditional procurement process is tried and tested, it is often not the best solution when procuring advanced welfare technology. It is often too slow and inflexible for a fast moving technology market and its framework makes encompassing innovation difficult.

- Be aware that there can be legal differences between procuring services and procuring products. For more detailed information please check the links in the tools and methods section.

- Consider which procurement model and method best fit your need. Be advised that it may very well vary from technology to technology. Different forms of innovative procurements have been used successfully. See some of the different options below:
  - **Innovative Procurement** (3. Variations. For detailed information on innovative procurement see tools and methods section)
  - 1) Innovative procurement where the need is specified – meaning a needs analysis has been completed and the area needing improvement is known. This procurement form is looking for a service/solution/function. It targets:
    - A) An existing adequate solution already on the market
    - B) An existing solution already on the market that needs further development to meet the need
    - C) Solutions that are not yet on the market
2) Innovative procurement of a solution where the need is not identified, only the area that needs improvement. It targets:
- A) Ideas on how to improve the area
- B) Ideas and possible solutions on how to improve the area.

3) Innovative procurement of research and development services.

- Public Private Innovation (PPI) and Public Private Partnerships (PPP) are also very effective ways of ensuring a high degree of innovation and flexible product development.
  - PPI: A PPI is an agreement on an innovation or development process that normally precedes a procurement. A procurement can also be included in the agreement under certain circumstances. For detailed information on how to create PPI and/or PPI including a procurement, see the methods and tools section.
  - PPP: Is especially effective for larger projects, for example construction. PPP integrates financing, design, and construction, often including maintenance and operation. See more under tools and methods.

**Guidelines based on experience**

- As public procurement is a very complex area it is highly advisable to bring in procurement experts from the beginning process.

- Procurement can be very demanding and costly – consider cooperating with like-minded municipalities to share costs and enjoy the benefits of buying in scale.
  - If you lack competencies within public procurement, cooperation with other municipalities may also be a good way to obtain access to competencies, knowledge and to gain valuable experience.

- Many procurements fail, for different reasons, and have to be re-done, wasting time and money. One way of reducing the chances of failure is pre-procurement market dialogue. This can be conducted by the municipalities themselves or through private specialized companies.

- Focus on increased cooperation and knowledge-sharing between those working with procurement and those working with welfare technology:
  - Both welfare services and welfare technology are complex areas and knowledge of both is essential for creating an optimal procurement process within welfare technology. Therefore, it is important that the procurement specialist is better equipped with knowledge of the area.
- There is a recognized fear among many working within welfare technology of getting too close to suppliers, due to limited knowledge of procurement rules. This can result in a them-against-us relationship between the public and private sectors, which does not promote innovation or development. This can be countered by involving your procurement department from the very beginning of the process.

• It is recommended that you establish a working group encompassing different skills when procuring welfare technology. The skills needed in the working group will change from technology to technology, but should include knowledge about the target group and procurement. This group can also assist in:
  - Selecting and clarifying section criteria and weighing factors
  - Clarifying the conditions for involved suppliers

• Be careful throughout the process with regards to documentation. It’s important all potential suppliers have equal opportunities.

• Including end-users in the procurement process can be very fruitful (end-users can be employees, citizens or relatives) - although when and how may vary from procurement process to procurement process. Remember to consider how best to involve them in the beginning of the process.

What has having a procurement model meant to the Connect participants?
Example: Gothenburg: Using innovative procurement has meant the suppliers see the municipality as development-oriented and they have a clearer understanding of our needs within this area.

Methods and tools
As our main document is deliberately devoid of legal advice or in-depth information about the intricacies of each procurement type, this section contains links to publications and webpages that provides this information.

• For a better, in-depth understanding and judicial analysis of innovative procurement, please see the following publications:
  - Innovationsvänlig Upphandling (SKL 2012). Experiences from municipalities and regions explaining how to promote fresh thinking and innovation in the procurement process (Includes practical examples).
  - Innovationsupphandling – Utvecklar din virksomhet (Upphandlingsmyndigheten). In depth explanation of innovative procurement. It looks at the possibilities innovative procurement presents for public authorities.
    http://www.upphandlingsmyndigheten.se/globalassets/publikationer/uhm_innovationsupphandlinga5_webb.pdf
• National procurement websites:
  - www.anskaffelser.no/innovasjon
  - www.udbudsportalen.dk
  - www.comdia.com/ide-udbud.aspx
  - http://www.hankinnat.fi (The Finnish website also contains explanations about the different methods within public procurement).

• Public Private Innovation and Partnerships (PPI and PPP) as well as general advice on procurement:
  - http://www.opiguide.dk/
  - www.opall.dk

• Cooperation between the public and private sector and procurement in general:
  - http://leverandorutvikling.no/

• Innovative procurement and Pre Commercial Procurement:
  - http://markedsmodningsfonden.dk/kort_intro_off

Examples of procurement models from the Connect participants

None of the participating municipalities have an entire procurement model specific to welfare technology available online. They all have vast experience in procuring technology and if you are interested they will share the background information behind these procurements with you directly.

The city of Västerås does however publish their criteria and background information behind procurement processes. Examples include: video calls, safety alarms and other technical solutions for assisted living. All examples can be found on: www.viktigvasteras.se
Step 8: Implementation model
**What is it, and why is it important for the entire process of working with welfare technology?**

An implementation model is a framework designed to guide you through a successful implementation. It contains descriptions and guidelines for the different aspects and stages of an implementation process. In reality, and indeed in the CONNECT process, implementation is echoed throughout the different steps – we consider implementation when doing the communication plan, the needs analysis the evaluation model etc. This means that implementation is to be considered throughout the process – not only after the technology has been bought.

It is often stated that implementation is 80% of the job when introducing new technology, which is why it is so very important to consider how each of the previous 7 steps will effect the implementation as you do them. This step however, will try to give advice on what to remember when starting the actual implementation after the product has been procured.

**Recommendations**

- Do a thorough implementation plan before starting, including goals, tasks, timeline and follow-ups. Do not make the timeline too tight, leave room for unexpected factors. Also, remember to communicate the plan, and arrange follow-ups before starting.

  - Accordingly, good communication is key. Use your communication plan (step 3) well – and consider including a communication officer in the implementation phase.

- Ensure your implementation plan is anchored correctly – on all levels – during the different stages of the plan. Essentially: who is responsible for what at the different organizational levels and at the different stages of the implementation process.

- When forming the implementation plan use your evaluation report (step 6) and consider how the impact on existing systems and organization is best managed during the implementation.

- The plan must include a very clear guideline on who is eligible to receive the technology. Ensure that this is implemented and understood by those doing the service assessment for each citizen – so that the new technology is a part of the future service delivery.

- Do not be afraid to include the technology supplier in the planning (and possibly execution) of the implementation. They know the strengths and weaknesses of the product, and a very hands-on approach from the supplier can help offer a sense of security for the staff during the initial introduction phase. Implementation assistance can also be part of the procurement package (see step 7)
• Training is always an essential part of the implementation plan. Training always includes the staff – and often includes citizens and relatives. Training of employees is not limited to “front line staff” delivering the service, but also to those responsible for service assessment.

• It is highly recommendable, regardless of the size of your municipality, to establish formal networks between employees that work with implementation of welfare technology, so that knowledge can be shared and resources used in an optimal way.

As an example: Odense Municipality has the following networks:

Citizen and user involvement
- Formalized cooperation with the senior citizen council - technology group – in regards to testing and sparring on new welfare technology
- Gathering experiences through the ambassador network, described later, in relation to cooperation with citizens on specific technologies
- Citizen participation in various projects

Network of decentralized management
This could be managers of decentralized units, such as homecare nurses, or nursing care homes etc.

The decentralized manager’s job is to support the implementation of welfare technology strategy and to contribute to the agenda-setting in the organization, including:
- Strategic sparring on implementation of welfare technology
- Mediate the strategy to the leaders, colleagues and employees
- Practical sparring on new technologies (growth), new work processes, implementation, etc.

Ambassador Network
A network of employees across all areas
The Ambassador’s role is to support the implementation of welfare technology strategy and contribute to the agenda-setting within the organization, including:
- Taking an active role in the implementation processes
- Qualifying initiatives and mapping challenges in the welfare technology area
- Being a positive voice and partner with colleagues, citizens and relatives around welfare technology
- Acting as link between colleagues, citizens and Implementation and Development
Guidelines based on experience

• When formulating the goals and tasks of your implementation plan, consider making them measurable. Having a clear target can help give the implementation process a focus and sense of direction that helps efficiency.

• Carefully consider the organization behind the implementation plan. Choose one responsible project officer, as well as a working group. This will increase ownership and prove helpful when anchoring the implementation plan.

• Ensure sufficient time and resources are allocated for training. Letting go / getting rid of old methods is difficult and requires a systematic approach. Consider including a model for how the employees should be trained in using the new technology in your implementation plan. Remember that repetition is necessary, so plan for follow-up training (and remember to include those doing the service assessment).

• When performing large scale implementation check that it does not clash with other innovation processes or major changes in the organization.

• It is during the implementation phase that your “communication plan” (step 3) really pays off. Be sure to incorporate it into your implementation plan.

• Structure a systematic follow-up with employees and departments for continuous feedback and evaluation, not simply with regards to training, but for the entire implementation process.

• Start the actual implementation at the units/departments that participated in the evaluation of the product first. That should make for an easier and more positive start, to get the ball rolling.

• Consider having a contingency plan, a back-up for if the technology, supplier or organization fails.

• Your implementation plan should include a plan for future logistics (storage and transportation), technology servicing and user support.

• Consider making tools to support the implementation process, now - and in the future. Support tools could include:
  - A visual implementation model: See below for examples from Sweden and Denmark under the methods and tools section. A visual implementation model is a tool that presents a basic methodology for implementing technology – to give the people involved a common understanding of the process.
- **An implementation log / implementation check list:** Create a basic list of tasks and people to involve etc. This log / checklist can act as the basis of your implementation plan ensuring continuity and a structured approach. For examples of an implementation log / check list, see section for methods and tools.

- **Living labs:** A physical location where technologies are displayed and available. This way, employees and end-users can learn more – or even receive training in a controlled environment. For examples see the tools and methods section.

- **Designated test facilities:** Special institutions that are awarded extra resources to test technologies and consider the best organization and approach to implement new technologies.

- **Easy instruction and guidance:** This can be done by applying barcodes (QR codes) to new technologies that, when scanned, show a small video of how to use the given technology. It can be a series of webinars or similar solutions. These are examples of the continuous training of employees, which helps implementation.

- **A specialized technology support unit:** A specialized unit that handles end-user support, that being from employees, citizens or relatives.

**What has having an implementation model meant to the Connect participants?**

Odense: Having an implementation plan has given the evaluation process structure and continuity. It gives the process a certain robustness and validity regardless of the product or process being evaluated.
Methods and tools

- Examples of Visual implementation models
  - Västerås and Gothenburg recommend using the nine steps below as a guideline/visual implementation model. They also act as a good basis for an implementation plan.

- Odense uses the visual implementation model below:

MODEL FOR IMPLEMENTATION OF WELFARE TECHNOLOGY

Citizen and user involvement

Companies

Needs Assessments

Knowledge Sharing

Test facilities

Test portfolio

Workflow

Supported implementation

Area South

Area East

Area West

Making technology available

Network

Input

The engine-room

Implementation
• Examples of Implementation guides:
  - Odense uses an “Implementation log” to ensure continuity in their implementation processes. To see this log visit www.nordicwelfare.org/connect

  - Lindås uses an implementation checklist which can also be found on the above-mentioned webpage.

• Examples of Living labs:
  - Teknolog til lejligheden I Odense: http://www.teknologitillejligheden.dk/

  - Oulu Health Lab: www.ouluhealth.fi

  - Mistral Vesterås: http://mistelinnovation.se/

  - Bo Bedre, Göteborg:

  - Agder Living Lab:


    - See also Nordic Living Lab Alliance: http://livinglaballiance.org/

• National implementation guides:
  - KS / Samveis Norway: Roadmap to welfare technology: http://www.samveis.no/

  - Swedish National Board of Health on “Implementation”: http://www.socialstyrelsen.se/publikationer2012/2012-6-12

  - Three step education: National Board of Health in Sweden, about “Implementation”

• Examples on training staff:
  - För exempel på hur CONNECT-kommunerna utbildar personal och slutanvändare under och efter implementering, gå till vår webbplats: www.nordicwelfare.org/connect

Examples of implementation models from the Connect participants

The above methodology can be acquired by contacting the Connect municipalities directly. In addition Aarhus and South Karelia use other sources for inspiration, which can be found below.

Aarhus has made a visualization of their implementation plan, a link can be found on our webpage: www.nordicwelfare.org/connect Aarhus also has a living lab at Dokk1 in Aarhus city center which is open daily.

In South Karelia they use and share good practices for implementation and innovation through a Finnish webpage: https://www.innokyla.fi
Step 9: Effect-monitoring
What is it, and why is it important for the entire process of working with welfare technology?
Effect-monitoring can be seen as your insurance policy when working with welfare technology. If set up properly it gives you feedback on how well your implemented solutions are working in everyday life. This is of primary importance because delivering social services is an extremely complex task involving a wide range of parameters (staff, organization, citizens, management geographical districts etc). If any number of those parameters change over time, the service delivery changes and when that happens you want to make sure that the implemented technology is still performing as needed and as planned.

So having a good system for monitoring the effect of the implemented solutions guarantees that both the municipality and the end-users continue to get the quality that you have paid for.

Not many Nordic municipalities have a specific effect-monitoring plan, when working with welfare technology. Many see this as part of a good implementation process – to set up a system that checks that the implementation was successful. In CONNECT we have chosen to make “Effect-Monitoring” an independent step, to force municipalities to consider what happens after a successful implementation and to help municipalities to ensure that they do indeed get a positive return on their investment – both in terms of provided quality but also financially.

Recommendations
- As effect-monitoring requires extra resources, ensure political and/or management backing. This can be done by utilizing the collected data as a tool to justify and promote further investment in welfare technology.
- Remember that effect-monitoring includes a time perspective. From a quality perspective, the time frame for effect-monitoring should be the entire life expectancy of the given technology. But, we understand individual limitations may apply, shortening the period of the effect monitoring (such as economic or strategy choices). Please note that your “effect goals” for the technology may also include a time perspective, which can influence your effect-monitoring.
  - Example: When implementing a new technology, it will most likely take time before the staff and end-users are fully comfortable with the technology/new service and similarly it will likely take time before the new workflows or organization work efficiently. So, it is likely that a new technology will not be working to its full potential from day one, and this should be considered when doing effect monitoring.

Remember, a benefit has not been truly realized until you have successfully implemented a sustainable change. This is much harder than it sounds, as giving up old habits and workflows is difficult and often takes time.
Effect monitoring provides you with extra data on the everyday use of the technology. Consider how this data can be used going forward – perhaps patterns of use can provide information that benefits future evaluation processes or perhaps it can even help to optimize your general service delivery (use aggregated non-individualized data to avoid legislative challenges).

**Guidelines based on experience**

- Effect-monitoring should be a part of both your business case and your implementation plan. It should be clear to everyone how and why this step is necessary and it should be visible early on in the process of working with the given technology.

- Continuous effect-monitoring will cost both time and resources, so consider the scale of your investment and adjust the effect-monitoring accordingly. You can re-use the evaluation model methodology and scale up or down according to individual requirements.

- When collecting data during effect-monitoring, remember to explore and include existing data sources such as electronic patient journals for cheaper and easier effect-monitoring. Similarly, when collecting data for effect-monitoring make sure to identify and utilize existing workflows rather than wasting resources creating new ones specific for this process.

- Selecting the effect-monitoring parameters is very important. We recommend you start by looking at your effect goals for the technology and the already completed technology evaluation. This can be combined with input from end-users as well as the staff responsible for carrying out the actual effect-monitoring.
  - Example: Effect goals could include a focus on quality of life, work environment, economic gains or similar – use these as starting points for selection of parameters.

- If you have procured a service, rather than simply a physical device, remember to include effect-monitoring in that service (see step 7 for procurement plan). Furthermore, make sure to specify that delivering effect-monitoring means delivering measurable and usable data to the municipality – not simply stating whether or not the service is still working.
What has having an effect monitoring plan meant to the Connect participants?

Lindås:
Effect-monitoring serves as a guideline to help visualize to what extent we have achieved the desired effect of the technology. It gives an indication to whether the goals have been met and continue to be met.

Further, it gives an indication to what extent the resources have been prioritized in a smart way.

Methods and tools


- For evaluation methodology see CONNECT step 6

Examples of effect monitoring from the Connect participants

- South Karelia: Uses the Sitra handbook on social and health care management. South Karelia finds the handbook helpful, both in relation to evaluation and effect-monitoring. You can browse the handbook at the link below or contact South Karelia for practical examples: http://www.sitra.fi/julkaisut/muut/Sosiaali_ ja_terveyspalveluiden_tietojohtamisen_kasikirja.pdf
Denmark

- **Aarhus Municipality:**
  - The Municipality of Aarhus is the second largest municipality in Denmark with a growing population of more than 340,000 people. Since 2007 the City Council have dedicated a great focus and effort to assisted living technologies. This investment has made the municipality the leading public body in Denmark within the field of assisted living technology – and amongst the leading public bodies in Europe.
  - Contact information: Sonja Hansen: sonha@aarhus.dk eller Ivan K. Lauridsen: ijk@aarhus.dk
  - Webpage: [www.velfaerdsteknologi-aarhus.dk](http://www.velfaerdsteknologi-aarhus.dk)

- **Odense Municipality:**
  - Odense er den 3.største by i Danmark og kommunen har ca. 200,000 borgere. Kommunen er opdelt i 5 forvaltninger; Børn og Unge, Ældre og Handicap, Beskæftigelse og social, By og kultur og Borgmesterforvaltningen. Odense har en strategi for velfærdsteknologi der går på tværs af forvaltninger, men arbejdet med velfærdsteknologi er forankret under Ældre- og Handicapforvaltningen.
  - Contact information: Rikke Falgreen Mortensen: RIFMO@odense.dk or aehf@odense.dk
  - Webpage: [www.odense.dk/cfv](http://www.odense.dk/cfv)

- **KL / LGD (Local Government Denmark):**
  - Local Government Denmark (LGDK) is the association and interest organisation of the 98 Danish municipalities. All of the 98 municipalities have voluntarily decided to be a part of LGDK. The mission of LGDK is to safeguard common interests of the municipalities, assist individual municipalities with consultancy services, and ensure that the local authorities are provided with up-to-date and relevant information.
  - Contact information: Morten Ejlersen: moe@kl.dk or kl@kl.dk
Finland

City of Oulu:
- The city of Oulu is the largest city in Northern Finland with 200,000 inhabitants. The City of Oulu’s services comprise Well-Being Services, Educational and Cultural Services and Urban and Environmental Services. The Department of Central Administration is responsible for the preparation and expert tasks related to development and decision-making. The Department of Well-Being Services provides social and health care services to local residents in accordance with the law and decrees. It is also responsible for the prevention of social problems and their adverse effects in Oulu. The highest decision-making body is the city council, which is elected every four years in local elections. There are about 11200 employees in the city of Oulu, in Well-Being Services 3 500.
- Contact information: Jaana Kokko: Jaana.A.Kokko@ouka.fi or palaute@ouka.fi
- Webpage: http://ouluhealth.fi/labs/

Eksote, South Karelia:
- South Karelia Social and Health Care District (Eksote) produces health services, family and social welfare services, and services for senior citizens that promote health and everyday wellbeing and functioning. Eksote is a joint municipality authority of the South Karelia region, and is comprised of nine municipalities. The population of the social and health care district is about 132 000.
- Contact information: South Karelia Social and Health Care District Strategy and Development Unit. Department head: Tepponen Merja: merja.tepponen@eksote.fi

THL (Finnish National Institute for Health and Welfare):
- The National Institute for Health and Welfare (THL) is a research and development institute under the Finnish Ministry of Social Affairs and Health. THL seeks to serve the broader society in addition to the scientific community, actors in the field and decision-makers
in central government and municipalities. The aim is to promote health and welfare in Finland.

- Contact information: info@thl.fi

Iceland

- **Akureyri Municipality:**
  - Akureyri nursing homes (ÖA) is a part of the welfare service for elderly in the municipality. It includes service for elderly living at home and in need of support like day care or short term stay and rehabilitation at the nursing home. 183 people lives in ÖA and about 80 people attend the day care center on weekly bases. There is 18500 inhabitants in Akureyri in total but the nursing homes also gives service to elderly from neighboring municipalities.
  - Contact information: Halldór S. Guðmundsson, halldorg@akureyri.is
  - Webpage: www.hlid.is

- **Reykjavik Municipality:**
  - The Reykjavik Welfare Department is responsible for the city’s welfare services, including social services, child protection, services to children and families, disabled people, senior citizens, immigrants and homeless people. This includes policy making in matters of welfare, the implementation of social services, planning, integration of welfare services. The Welfare Department is also involved in operating nursing homes, housing solutions and rehabilitation initiatives and the department is responsible for comprehensive prevention work in Reykjavik.
  - Contact information: Berglind Magnúsdóttir: Berglind.Magnusdottir@reykjavik.is
  - Webpage: http://reykjavik.is/

- **Icelandic Ministry of Welfare:**
  - The Ministry of Welfare in Iceland was established on January 1st 2011 in accordance with Act no. 121/2010. The Ministry has the responsibility for administration and policy making of social affairs, health and social security in Iceland as prescribed by law, regulations and other directives.
- Contact information: Thor Thorarinsson, thor.thorarinsson@vel.is
- Webpage: https://eng.velferdarraduneyti.is/

Norway

- **Lindås Municipality:**
  - The municipality of Lindås is a medium sized Norwegian municipality with approximately 16000 inhabitants. Geographically it is rather large with 474km² containing fjords and mountains and a scarce population. This makes service delivery problematic especially given the demographic challenges facing us. To counter these obstacles Lindås focuses on innovation and welfare technology a focus that was recognized nationally in 2013 when Lindås was chosen as one of thirty municipalities to lead the national programme for welfare technology.
  - Contact information: Kari Björkheim: Kari.Bjorkheim@lindas.kommune.no or Hildegunn Baravelli: Hildegunn.Baravelli@lindas.kommune.no
  - Webpage: http://www.lindas.kommune.no/omsorgsteknologi.331496.nn.html

- **Lister Region:**
  - Lister region consists of six municipalities in Southern Norway, Farsund, Flekkefjord, Hægebostad, Kvinesdal, Lyngdal and Sirdal, with a total population of about 35,500. The region has since 2012 collaborated on development and innovation in health care services, particularly focusing on assistive living technology and telemedicine. Each municipality has their own workgroup, and a project coordinator organizes projects and work across the six municipalities.
  - Contact information: Marianne Holmesland: Marianne.Holmesland@kvinesdal.kommune.no
  - Webpage: http://www.lister.no/helse/velferdsteknologi-telemedisin

- **KS (The Norwegian Association of Local and Regional Authorities):**
  - KS is the Norwegian Association of Local and Regional Authorities. All 428 Norwegian municipalities and 19 counties are members, as well as approx. 500 public enterprises. KS conducts the central collective bargaining on behalf of its members, and advocates the interests of its members towards central government, the
Parliament and other organizations.

- Contact information: Une Tangen, une.tangen@ks.no or ks@ks.no
- Webpage: www.ks.no

Sweden

- **Gothenburg Municipality:**
  
  Gothenburg is the second largest city in Sweden with roughly half a million inhabitants. It is located in the region of Västra Götaland on the country’s west coast. The city of Gothenburg has a program for digitalization called “Göteborgs stads våg till e-samhället” which goal is to create an open, simple and effective digital service. The development within elderly care is placed in the department “Senior Göteborg” who places a high priority in welfare technology and works actively to introduce new innovative services within home care for the elderly.

  - Contact information: Åsa Wall: asa.wall@ostra.goteborg.se or Elna Hansson: elna.hansson@stadshuset.goteborg.se or go through: www.goteborg.se/seniorgoteborg
  
  - Webpage: [http://goteborg.se/wps/portal/enhetssida/senior-goteborg!ut/p/z1/04_Sj9CPykssy0xPLMnMz0vM Afijio8ziTYzcDQy9TAy9_f0N3AwcQ](http://goteborg.se/wps/portal/enhetssida/senior-goteborg!ut/p/z1/04_Sj9CPykssy0xPLMnMz0vM Afijio8ziTYzcDQy9TAy9_f0N3AwcQ)

- **Vasteras Municipality:**
  
  Vasteras is Sweden’s sixth largest city with approximately 145,000 inhabitants. Since Vastra Aros was founded by the river Svartan more than 1,000 years ago, the city has grown, developed and changed character. The city is evolving and growing closer to Lake Malaren. Vasteras is developing into an attractive knowledge and meeting/conference city at the forefront of development. The engineering industry has been very important for Vasteras, but today the business life is more diverse, focusing on high technology, automation, logistics and trade.

  - Contact information: Strategic planning officer Erika Barreby: Erika.Barreby@vasteras.se or snf@vasteras.se
  
  - Webpage: www.vasteras.se or [http://www.viktigvasteras.se/](http://www.viktigvasteras.se/)
SKL / SALAR (The Swedish Association of Local Governments and Regions):

- The Swedish Association of Local Authorities and Regions, SALAR, is both an employers’ organization and an organization that represents and advocates for local government in Sweden. All of Sweden’s municipalities, county councils and regions are members. SALAR represents and acts on their initiative. As their employer and representative organization we advocate their interests and offer support and service. We raise issues, act decisively and enlighten public opinion. Our mission is to provide municipalities, county councils and regions with better conditions for local and regional self-government. The vision is to develop the welfare system and its services. It’s a matter of democracy.

- Contact information: Maria Gill: maria.gill@skl.se or Patrik Sundström: patrik.sundstrom@skl.se

- Webpage: www.skl.se

Mfd (The Swedish Agency for Participation):

- The Swedish Agency for Participation has the mission to accelerate the progress towards a society in which everyone can participate on equal terms, regardless of functional capacity. The Swedish Agency for Participation have a cross-sectoral approach with the task to stimulate and develop knowledge building in the area of participation, accessibility, universal design digital assistive technology, living conditions, environment and the rights of persons with disability.

- Contact information: Raymond Dahlberg: Raymond.Dahlberg@mfd.se or info@mfd.se

- Webpage: www.mfd.se

Project lead

Nordic Welfare Centre:

- The Nordic Welfare Centre is an institution under the Nordic Council of Ministers. Its mission is to enhance social policy work in the Nordic countries through education, public information, research and development, networking and international co-operation.

- Contact information: Dennis C. Søndergaard, dennis.soendergaard@nordicwelfare.org or info@nordicwelfare.org

- Webpage: www.nordicwelfare.org or www.nordicwelfare.org/connect
CONNECT – Collecting Nordic Best Practice Within Welfare Technology