



QUICK GUIDE TO IMPLEMENTING WELFARE TECHNOLOGY TO CHILDREN AND YOUNG PEOPLE WITH DISABILITIES

National Welfare Technology Program



Introduction

Research [shows](#) that the implementation of welfare technology for children and young people with disabilities provides benefits in the form of increased coping, independence and normalization, as well as relief for parents. Welfare technology contributes to children, young people and adults with disabilities being active participants in a digital society.

The use of welfare technology means a holistic focus on the child's everyday life, around the clock, throughout the week and throughout the life cycle. This presupposes a cross-sectoral collaboration between health personnel, school staff and technical personnel in the municipality.

The quick guide provides practical guidance for activities and assessments that are necessary when testing and implementing welfare technology for children and young people with disabilities. The guide has been prepared under the auspices of the National Welfare Technology Program and is based on KS's Roadmap for service innovation and other Quick Guides within the same theme. See KS sine [websites](#) for more information.

Continuous anchoring ensures ownership and commitment

Good user involvement throughout the project process ensures that the services offered meet the needs of children and families. Experience shows that close user involvement is important for creating interest and motivation in children and their families so that the technology is used in everyday life and does not lie on a shelf.

Furthermore, it is important to have a good foothold among employees in the municipality and thus also create a mutual understanding of each other's professional perspective, everyday work and available resources.

Managers must set goals for the service and what benefits they want to achieve with welfare technology for children and young people with disabilities. Managers have a special responsibility to follow up the project's results.

Good and regular work with anchoring is encouraged from before the project starts until the service is in daily operation.

Experiences from other municipalities provide inspiration

An important source of information and inspiration is experiences from other municipalities. The Kvikk guide links to examples from other municipalities, as well as relevant resources. The examples will be able to provide a good understanding of the scope for welfare technology.

It is recommended to collaborate with other subjects and service development projects for the target group based on national initiatives. Including welfare technology, mental health of children and young people, public health, the primary health report and

quality reform Live your whole life.

As part of the National Welfare Technology Program, the National Center for e-Health Research has carried out research related to pilot projects for welfare technology for children and young people with disabilities. The research provides a good understanding of the challenge picture, the opportunity space, the potential for gain, as well as technical and organizational prerequisites for successful implementation of welfare technology. The publications are collected by the Norwegian Directorate of Health [websites](#).

Focus on benefits ensures a sustainable service

Good goals and well-established benefits ensure a good understanding of the benefits the municipality wants to create for children and their families. Experience shows that measuring and communicating gains creates motivation for further investment welfare technology among the target group. It is therefore encouraged to work well with profit realization throughout the project. Please see the course for [gain realization for more information](#).

Furthermore, good luck with the project implementation!

How to read the guide

The Quick Guide is divided into four main phases:

1. Clarify needs and define objectives
2. Design service and procure
3. Implement the service
4. Operate and evaluate the service

For each phase, activities have been defined with advice and tips, and links to tools, reports and examples from municipalities that have gained experience with welfare technology for children and young people with disabilities.

Welfare technology

On [Helsedirektoratet.no/Velferdsteknologi](https://helsedirektoratet.no/Velferdsteknologi) You can read more about the National Program for Welfare Technology, of which the testing of welfare technology for children and young people with disabilities is a part.

On the basis of a 4-year trial, it has been prepared [national professional advice](#) on welfare technology for children and young people with disabilities. The Quick Guide is a practical tool that will support municipalities in implementing the national councils.

National professional councils

- The municipality should establish one or more cross-sectoral service courses for the allocation and follow-up of welfare technology for children and young people with disabilities.
- The municipality should offer welfare technology in services to children and young people with disabilities to increase their mastery of their own lives and participation with others.
- The municipality shall involve the child and the family in the process of mapping, allocating and following up welfare technology for children and young people with disabilities.

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Identify challenges and needs

In order to decide whether an implementation project for welfare technology should be initiated, it is important that the municipality acquires insight into the challenges and needs of children, families and service providers. Base the insight on both numbers and interviews. Complete a stakeholder analysis to identify the target group and the service providers.

Perform a stakeholder analysis

- Map all service providers who work with children and young people with disabilities in various arenas in the municipality. Write the actors in a stakeholder analysis. See attached example.
- Map out which actors assign and administer aids to the target group, such as occupational therapists.
- Conduct interviews with service providers to identify children and young people who may need welfare technology. Write down children and their family relationships in the stakeholder analysis.
- Investigate which welfare technology aids and apps are used by children and young people with disabilities in the municipality. See attached mapping form.

Need for service recipient and family

- Conduct an interview with family to identify their challenges and needs, such as the need for relief or inadequate follow-up from the municipality. Discuss opportunities related to welfare technology.
- Conduct interviews with children to identify their needs and challenges in everyday life. This may, for example, be a need to master activities in line with children of the same age.
- Conduct an interview with the coordinator of the individual user to uncover challenges and needs related to the child.

Challenges in the municipality

- Map challenges and incentives across service providers in the municipality. Examine how the actors interact and whether there are overlapping areas of responsibility.
- Examine routines for mapping service recipients across the primary and specialist health services.
- Map how technology is used across arenas. In particular, involve the IT department. Explore potential for improvement in the division of responsibilities and technical follow-up.
- Use statistics to identify challenges and needs in the municipality. Look in particular at demographic development, number of service recipients, use of resources in the service and deviations.

Map opportunities

- Examine the possibilities that exist. Les [the experience report from a four-year trial](#) , and contact other municipalities that have gained experience in the area.

Summarize and anchor findings

- Summarize findings from the insight work in a presentation and anchor the findings in key decision-makers.

Examples

- Example of stakeholder analysis from Horten municipality.
- Examples of mapping forms from Bodø.
- Examples of presentation of challenges and needs from Steinkjer

Tool

- 🔧 [Outside accounts.](#)
- 🔧 Bufdir - [Municipal monitor disability](#) . SSB - [Nursing homes, home care services and other care services](#) . SSB - [Living conditions of people with disabilities](#) . [Target for stakeholder analysis](#) .
- 🔧 [Experience report from 4 years of testing](#)

Checklist

- Stakeholder analysis has been completed.
- Welfare technologies in use have been mapped.
- The needs of the service recipient and family have been mapped.
- Challenges in the municipality have been mapped through interviews and statistics and figures.
- Findings from the insight work are summarized and anchored.

Sources for information



Children and family



Employees in the municipality



Employees in specialist the health service



Statistics and figures



Other municipalities

Define common goals with the service

Implementation of welfare technology for children and young people with disabilities depends on common goals across actors, internally in the municipality and externally, such as NAV Assistive Technology Center. In this phase, the desired benefit effects for children, family and service providers are determined before the project's deliveries are agreed.

Impact target

Identify impact goals based on insight into needs, challenges and opportunities. Assess the benefits for children, families and service providers, for example:

- Increased mastery for children in everyday life, for example that the child can perform certain activities even with reduced support from the adult, or that the child masters new activities.
- Relief of the family through independence of the child, for example through reduced follow-up of the child or less extravagant behavior.
- Increased normalization in that the child can perform similar activities as other children of the same age, use technology in line with other children or have less need for facilitation.
- Free time for service providers, for example through reduced use of support contacts or a reduced future need for compensatory services.
- Improved cooperation in the municipality, such as correct referrals or fewer repeated surveys of the child.

Carry out a profit survey and prepare a profit realization plan.

Performance targets

Identify performance targets based on the benefits the municipality wants to create for its residents and employees. The performance targets constitute the project's deliveries:

- Establishment of a comprehensive service model for the allocation and follow-up of welfare technology to children and young people with disabilities.
- Preparation of specific work processes with associated division of roles and responsibilities, procedures and work tools.
- Allocation of welfare technology to children and young people who are actively used across arenas in the municipality and in their free time.
- Training of service providers across sectors in the municipality about the opportunities that welfare technology provides and how it can be used and followed up.
- Documentation of benefits for children, families and service providers.

Decide and anchor goals

- Define objectives across health actors, representatives from kindergarten and school, in accordance with parents and NAV Assistive Technology Center.
- Verify that the objectives correspond to the municipality's overall strategies for children and young people with disabilities and welfare technology.
- Anchor the objectives of the management in relevant sectors in the municipality.

Examples

- Profit realization plan from Steinkjer, Horten, Drammen, Risør, Bodø and Ålesund.

Tool

-  [Roadmap for service innovation - Gain realization](#)
-  Template for profit mapping and profit realization plan.

Checklist

- Impact measures have been prepared and anchored in the management.
- Performance targets have been prepared and anchored in the management.
- Estimate of expected gains

Gain-mapping

- Gains are positive benefits that arise from changes in existing work processes or from the establishment of new work processes. Identify potential gains related to freed up time, avoided costs or increased quality.
- Estimate the size of the costs avoided, such as the municipality avoiding a given number of hours of support contact time for a group of children who use welfare technology. These are resources that can create value in other ways or for other children. Prepare a project budget and include costs for free purchase of personnel, purchase of technology and other relevant costs.
- Assess expected gains against the project budget. Decide whether the project should be initiated based on the financial analysis.

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Establish collaborative projects across the services

In order to start a new service offering, good collaboration is a key factor for success. In this phase, a collaborative project is established with employees at various levels and across sectors, especially health and upbringing. It will ensure clear project ownership, coordination and anchoring in the entire municipality.

Establishment of project ownership

- Clarify which leader in the municipality is to be the project owner. Then decide which municipal actor will have service ownership for the service. See fact box below.
- Establish steering group. The composition of the group must be organized so that good anchoring at the top management level in both the IT, school and health sectors is taken into account. Schedule regular steering group meetings.
- Prepare project mandate. Discuss with the board how the project will achieve good grounding across actors in the municipality, especially actors in the IT and school sector.

Financing

- Map relevant grant schemes for carrying out project work, for example through the County Governor.
- Investigate whether the project can engage resource persons free of charge, for example from NAV. Free buy other project participants, also participants from IT and school.
- Ensure that the municipality provides a binding deductible that ensures the continuation of the project if the grant lapses.

Involvement of relevant actors

- Ensure that representatives from both the IT, school and health sectors are represented in the project. Involve user representatives, whether they are children, parents and / or user organizations.
- Involve the municipality's privacy representative early in the project. Invite the person to sit in the project group or schedule regular meetings to discuss privacy implications.
- Involve NAV in the collaborative project to ensure a close dialogue and coordination of aids offered to children and young people with disabilities.
- Involve actors from the specialist health service to ensure good lines of communication by referral, documentation sharing and coordination of service offerings.

Project planning

- Prepare an activity and milestone plan based on the templates from Veikart for service innovation. Evaluate activities such as interdisciplinary workshops, subject days and fieldwork.
- Prepare an anchoring plan based on previously performed stakeholder analysis. Engage the steering group members in the anchoring activities.

Examples

- Example of activity and milestone plan from Ålesund.
- Example of anchoring plan from Steinkjer.

Tool

- 🔧 Target for [project plan](#) and [anchoring plan](#) on Roadmap for service innovation.
- 🔧 Difi sin [Project Wizard](#) .
- 🔧 [Quick guide to welfare technology.](#)
- 🔧 [Quick guide to digital home follow-up .](#)

Checklist

- Project owner and steering group have been established.
- The service ownership is assigned to an arena-flexible player in the municipality.
- Funding is secured and relevant people are redeemed for project work.
- Project group has been established with user involvement.
- Activity and milestone plan has been prepared. Anchoring plan has been prepared.

Service ownership

- The service ownership lies with a municipal actor who has the overall responsibility for ensuring that the service offer related to welfare technology for children and young people flows well across actors, and that the service is continuously improved.
- This actor has control over which other services the child receives, and is often responsible for performing the majority of the activities in the service process. The actor is happy to be the project manager in the implementation project.
- The service ownership should lie with an actor who is arena-flexible, who focuses on following up the child throughout the day and who has mastery as a central purpose. Examples of such actors are the occupational therapy service or services for the mentally handicapped.

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Design a new service

Allocation and follow-up of welfare technology to children and young people with disabilities is a cross-sectoral process that requires good planning and coordination. This means mapping existing work processes in order to be able to adapt and prepare new routines for all relevant arenas.

Map existing work processes and division of responsibilities

- Prepare examples of users (user case) in the target group of children and young people with disabilities. Describe the child's / family's needs and which actors they relate to.
- Take each user case as a starting point and draw up user journeys for today's work processes. Use the enclosed templates in A3 format. Prepare the following user journeys:
 - a) From the time the child is born until the child has reached the age of 18 and is going into adulthood. Indicate in particular which municipal actors the child / family encounters in everyday life, transitions between kindergarten and schools, transition from child to adult, and coordination across actors in the municipality.
 - b) Current process for allocation and follow-up of aids or compensatory services. Start by identifying the child's needs, including referral and assignment, and end with daily follow-up of the child.
- Make a list of challenges in today's work processes. These can be repetitive surveys, time consuming allocation processes or inadequate follow-up of aids.
- Rephrase the challenges into opportunities that the project can focus on. For example, that the project will improve the allocation process so that children and young people receive aids faster.

Develop a comprehensive service model

- Decide which municipal actors will be responsible for mapping needs, allocating welfare technology, training the user, as well as following up and evaluating the service. It's bad.
- Decide which municipal actors will be responsible for technical maintenance and support, and stockpiling of technology.
- Decide which player is responsible for continuous improvement of the service. The service owner is often responsible for this role.

Prepare service courses

- Take as a starting point mapped challenges and opportunities when new service courses are prepared.
- Prepare detailed service courses that show who can identify and refer to a need for welfare technology in children and young people, and how the technology is assigned and followed up.
- Identify needs for forms, tools, routines and procedures in the service process. For example, a procedure for referring children for a survey or a survey form.

Examples

- Examples of service courses from Bodø, Steinkjer, Risør, and Horten.
- Examples of routines and procedures from Bodø, Steinkjer.

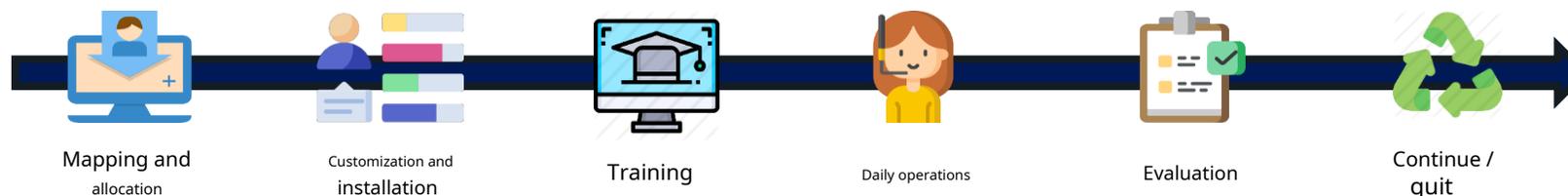
Tool

- ✂ User case template.
- ✂ Template for user travel.
- ✂ Template for comprehensive service model.
- ✂ Template for service flow

Checklist

- Work processes are mapped through user journeys.
- Challenges and opportunities in today's service identified.
- Comprehensive service model prepared.
- Service course prepared.
- The need for forms, tools, routines and procedures has been identified and prepared.

Course of service



Map out requirements and prerequisites

Technical and legal prerequisites must be studied before the service can be implemented. Remember to involve IT and assistive technology resources from both the health and school sectors in the work. Also involve NAV, privacy ombudsman, hospitals, the County Governor, suppliers and other municipalities if necessary.

Mapping of municipal and private infrastructure

- Map the need to adapt existing journal or quality systems. This can, for example, be for logging alarms or serial numbers in the municipality's record system.
- Map signal strength for WiFi and 4G in relevant arenas for the target group, such as school and home. Assess whether there is a need to establish new networks or improve existing signal strength.
- Map whether the municipality's WiFi network is secure for the transfer of sensitive personal information from welfare technology.
- Map whether parents, the municipality or both parties should respond to alarms from welfare technology.

Mapping of functional and technical requirements

- Map in dialogue with children and parents functional and technical requirements for equipment. This is an important prerequisite for creating motivation, commitment and willingness to learn in children and families.
- Carry out a similar survey in dialogue with employees at schools, relief housing and other relevant service providers.
- Map out if there are restrictions on school tablets or other aids that can create confusion or technical trouble for children, family or school.

Mapping of requirements for privacy and information security

- Map out which adverse events may occur in the processing of personal data. Involve the municipality's privacy representative. This can e.g. be that equipment and systems are not adequately password protected.
- In collaboration with the Privacy Ombudsman, assess the need to carry out a detailed Privacy Impact Assessment (DPIA).
- In collaboration with the privacy ombudsman, consider risk-reducing measures to safeguard privacy. Think especially of the risks associated with technology that will communicate over the internet.
- Consider in which cases parents must consent to the processing of personal data, for example if the welfare technology registers sound or image of the child or sibling.

Mapping of legal preconditions

- Contact the County Governor or the habilitation service for children and adults for assistance in assessing the use of intrusive technology for persons without consent competence. Investigate which welfare technologies are intrusive, such as GPS. Look further in [The ABC of Welfare Technology - Legislation and Ethics](#) ., where this is described in detail.

Examples

- Example of a plan for safeguarding privacy and information security from Risør.

Tool

- ✂ [The norm - Norm for information security and privacy in the health and care sector .](#)
- ✂ [The norm - Supervisor in information security and privacy when using technologies in the municipality](#)
- ✂ [Quick guide to the processing of health and personal information using welfare technology .](#)
- ✂ [Datatilsynet - Assessment of privacy consequences \(DPIA\). The ABC of Welfare Technology - Legislation and Ethics](#)

Checklist

- Infrastructure has been mapped.
- Functional and technical requirements have been mapped.
- Requirements for privacy and information security have been mapped.
- Legal preconditions have been mapped.

«It is especially complicated when monitoring equipment is owned by NAV and the network they are to be connected to is owned and operated of the municipalities. Who is responsible? This is an issue that will become more relevant in the future. »

Provide welfare technology

Welfare technology for children and young people with disabilities can be provided in various ways. This can be allocation from NAV Assistive Technology Center, allocation of municipally purchased equipment or private purchase of equipment.

Resources from NAV Assistive Technology Center and Statped

Initiate a dialogue with NAV Assistive Technology Center and Statped to obtain information on the following:

- Which welfare technologies NAV offers in its portfolio. Aids are lent to the child upon application for testing or permanent use, and are returned to NAV upon termination of use.
- What user needs different technologies meet and expected benefits for the child.
- Access to training materials and user guides related to certain aids.
- Counseling related to aids, adaptations to the individual child's needs and skills development in the municipality.

Municipal allocation

- Take as a starting point mapped needs, as well as NAV's product portfolio, and consider whether the municipality should go for the purchase of equipment or software licenses for lending.
- Assess whether children and young people in the municipality need security and coping technologies. Investigate with health and care if the municipality has an existing framework agreement for such equipment.

- Summarizes the number of units or licenses the municipality needs to procure. Consult with the municipality purchasing department to decide how the equipment should be procured.
- Develop criteria for when municipal equipment is to be lent or allocated and whether it is classified as a municipal service.
- Consider whether the municipality should have a viewing and testing arena where children and family can test the technology.

Private purchasing

- Investigate which welfare technologies are not allocated from NAV Assistive Technology Center or as municipal lending. Consult with other municipalities and obtain prices from suppliers.
- Develop criteria for when the municipality should inform about or encourage parents to make private purchases of welfare technology. Specify which technologies this applies to.
- Prepare criteria for when the municipality will provide follow-up and support for privately purchased welfare technology. This can be the preparation of individual goals, training for service providers at school or technical support for children and families.
- Obtain information on when parents can apply for financial support for the purchase of private equipment, for example from NAV Assistive Technology Center, social services office, non-profit organizations or whether the municipality itself has support schemes.

Examples

- [Examples of software that can be adapted as aids from the App Library.](#)
- Example of an overview of aids from Bodø and Risør.

Tool

- [The knowledge bank for NAV Assistive Technology and Facilitation The Assistive Technology Database .](#)
- [Quick guide to the acquisition of welfare technology .](#)

Checklist

- Resources from NAV Assistive Technology Center have been mapped.
- The need for municipal procurement of equipment has been mapped.
- Welfare technology that is bought privately has been mapped.
- Criteria for allocation of welfare technology have been prepared for NAV Assistive Technology Center, municipally purchased equipment and privately purchased equipment.

NAV assistive technology center

- The Assistive Technology Center has an administrative responsibility and assists municipalities, schools, employers and other partners with advice, guidance, training and facilitation of assistive devices.
- The Assistive Technology Center ensures that assistive devices that are lent follow the National Insurance rules. On [the assistive technology database](#) and [the knowledge bank](#) There is information on a number of aids, certifications, courses and financial support.
- The Assistive Technology Center also assists technically in the user's home so that assigned and existing equipment is used efficiently and appropriately. The municipality is responsible for user training, but NAV assists with advice and courses for the municipality.

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Implement new service

When planning and implementing a new service, involvement, continuous training and communication are important to make the organization ready. Implementation takes a long time and does not start at a specific time. Anchoring activities and training must be repeated often and are especially important to involve all actors across different levels and across the school and health sector.

Make the organization ready

- Make sure everyone has a good understanding of what you want to achieve with welfare technology. This applies to politicians, municipal management, and administrative and professional employees in the IT, health and school sectors.
- Arrangements for collaboration forums where experiences can be exchanged and mutual understanding of each other's professional perspective, everyday work and available resources are promoted.
- Ask leaders and ambassadors to speak out for the service to create interest in welfare technology.

Training

- Make a training plan. Specify who will receive training and when the training will take place.
- Anchor the training plan for leaders in the school and health sector. Time spent on training must be clarified in advance.
- Provide training. The training should be practical, repetitive over time and based on exercises. Focus on creating positive experiences around the technology for the children.
- Encourage employees to identify and refer children and young people who may need welfare technology. Make sure everyone is familiar with referral routines.

Making routines and tools available

- Routines, forms, tools and service processes are made easily accessible to the employees, for example in the municipality's quality system.

Inform residents, users and employees

Make sure that children, parents and service providers are motivated to receive training and that new aids are given priority in the service. Perform the following activities:

- a) Make a communication plan. Describe how the municipality will inform residents that welfare technology is offered.
- b) Publish updates about the service in local newspapers, social media and municipal websites to create interest and understanding of the importance of welfare technology.
- c) Engage user representatives and hold information meetings for parents, schools, specialist health services, and the municipality to share knowledge and experiences.
- d) Distribute information brochures at municipal service providers, such as occupational therapy and physiotherapy, PPT, schools and at NAV.

Examples

- Example of information writing from Steinkjer.
- Example of training plan / training form from Bodø.
- Example of competence development measures from Steinkjer.
- [Experiences from Farsund municipality.](#)

Checklist

- The municipality's top and middle management is informed and anchored.
- Training of children, families and service providers has been completed.
- Referral of children and young people has been initiated.
- Necessary documentation is stored in the municipality's quality system.
- Communication measures have been implemented.

"The technology is less helpful if you do not use it in an environmental therapeutic way, and if you do not have people who know how to use this for the benefit of the children. They must know environmental therapy and they must know pedagogy. "

Operate and evaluate the service

In an operational situation, the municipality must ensure that the service is performed in accordance with plans and routines, evaluated and improved regularly. Children and guardians must be followed up regularly to ensure soundness, usefulness and user-friendliness in the service. At the end of the project, goal achievement and gain realization are evaluated.

Continuous follow-up of children and parents

- Conduct surveys or evaluation interviews with children and family to map their user experience. Consider the following:
 - a) Usefulness. Assess whether the child and the family achieve the intended usefulness and individual objectives by using welfare technology.
 - b) Ease of use and follow-up. Assess whether the aids are perceived as easy to use and whether the family receives sufficient follow-up from the municipality.

- Use the insight to document the gains that are in the gain realization plan.
- Assess whether there is a need to change technology, goals or routines for the individual child. This is especially important during critical transitions, such as school changes.

Continuous improvement of the service

- Map experiences from employees in the municipality through surveys or evaluation interviews. Examine the following points:
 - a) What works well and what are the potential for improvement in the service.

- b) Whether employees need further training.
 - c) Concrete feedback on aids.
 - d) The soundness of the service, both in terms of health, environmental therapy and privacy.
 - e) Achieving the project / service's objectives and benefits.
- Perform such an evaluation at the end of the project and a similar evaluation each year.
 - Update service history, routines and risk assessments based on the feedback.
 - Summarize the evaluation in an experience report and anchor the results with the municipality's management, employees and residents.

Continuous anchoring

- Maintain a good collaboration with NAV Assistive Technology Center and suppliers to receive tips on new welfare technologies or updates on existing equipment.

Examples

- Examples of surveys for gain follow-up from Horten and Risør.
- Example of an evaluation form for a user from Bodø.

Tool

- ✍️ Template for gain follow-up.

Checklist

- Feedback from children and parents has been obtained and taken care of.
- Feedback from service providers has been obtained and taken care of.
- The service's goal achievement and gains are documented.
- Service processes, routines and risk assessments are updated in accordance with feedback.
- Cooperation with NAV Assistive Technology Center and suppliers has been maintained.

Continuous improvement of the service



Conduct interviews



Conduct surveys



Assess whether winnings are achieved



Update service history



Communicate winnings and updates

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Attachments - User Stories



Emil

Age: 8 years.

Living situation: Lives at home with his parents.

Interests: Vehicles and music.

Diagnosis: Risk group for COVID infection.

Implemented welfare technology: [The robot AV1](#) 1.

Wishes and needs

- Emil's biggest wish is to be able to participate in school on an equal footing with his peers and be part of the community at school.
- The parents also want their son to be able to attend school, but most importantly that he stays healthy and avoids being infected by the corona.

The situation before aids were implemented

- After Norway reopened after the closure, many children and young people were looking forward to returning to school. This also applied to Emil.
- On the other hand, he is part of the risk group and must be extra careful to avoid becoming infected.

Start-up of technical aids

- Emil and his family got through ALV Møre og Romsdal and the project "Everyone can" test whether the robot AV1 could be a useful tool. It was a success.
- In order for Emil to return to school, at the same time as they took into account the risk of infection, it was decided in dialogue with contact teachers to use AV1. He could now go to school and sit in a separate room next to his class. There he followed the teaching closely through the AV1 robot and controlled it using an App.
- Information leaflets were sent out to all parents about the use of AV1 in the classroom and training was conducted in dialogue with NO Isolation.

Winnings

- He experienced great mastery using the technology, and Emil participated more actively than before. He was "tougher" to both answer and sing in the classroom.
- Emil experienced a greater "calm" and lower stress level when using AV1 - and therefore was not so exhausted after a day of school.
- AV1 had a materialistic value for Emil. He thinks it was cool, and was a little proud to bring something new and exciting to the class.

Without the technology, Emil would have lost his social point of contact and potentially ended up outside the classroom environment. In the long run, this could lead to dropouts in the educational process and make it more difficult to enter a future labor market.

“ I only have positive experiences with the robot in the class. When we could not have a student close to us, we still felt he was close to us and the conversation went on between classrooms and them. We experienced students who were more active in relation to conversations with the others. I think this was very nice. Best when they are with us, but a very good alternative when students can not be physically involved.

- The contact teacher for Emil

1) AV1 is a robot developed especially for children and young people with long-term illness. The robot is in the classroom and controlled from a tablet or smartphone, so that the student, who is not physically present in the classroom, can still participate. The student connects to AV1 via an app, and sees, hears and talks via AV1.

Attachments - User Stories



Petter

Age: 15 years.

Living situation: He lives with his parents, and has adult siblings who have moved out.

Interests: Outdoor life and games.

Diagnosis: Nervous system defects, mental retardation and mental illness.

Implemented welfare technology: [MEMOplanner](#) 1, [timestokken](#) 2, flush-dry toilet and GPS sole.

Wishes and needs

- Petter wants to be more independent and more free in everyday life.
- He has a need for increased self-mastery and does not want to be different from other young people in the same age group.

The situation before aids were implemented

- Petter lacks the concept of time and structure in everyday life. He has difficulty with the language and make himself understood. He struggles to finish one activity to start another. This often leads to frustration and negative behavior.
- He often went on trips on his own, and he was not always able to find his way back. Petter did not want to tell his parents where he was going and that meant that he had to have someone with him all the time. Petter did not like it.

Start-up of technical aids

- In order for Petter to get a better overview and structure in everyday life, it was decided to try out the time and planning aid MEMOplanner and Timestokk.
- In addition, it was decided to assign a location technology (GPS sole) and flush-dry toilet to facilitate increased independence.

Winnings

- Petter has benefited greatly from the aids and is experiencing a positive language development. He is less frustrated, angry and does not act as negatively after the allocation of the aids.
- He experiences greater independence and dignity in that he himself handles toilet visits and does not have to have a companion wherever he may move.
- The parents say that the aids that have been used have led to a significant change and they experience greater freedom and less concern for Petter.

Challenge

- There have been challenges with reading the text that has been added as the synthetic speech distorts the pronunciation of some of the words.

1) A time and planning tool the size of a tablet.

2) The timepiece is an aid that shows the time concretely by means of light dots.

Attachments - User Stories



Heine

Age: 14 years.

Living situation: Lives with parents.

Interests: Computer games and be with friends.

Diagnosis: Impaired functioning.

Implemented welfare technology: [MEMOplanner](#)¹ and customized mobile phone.

Wishes and needs

- Heine wants to be able to communicate with friends without needing help from her parents.
- He wants more privacy without his parents having access to absolutely everything he does.

The situation before aids were implemented

- Heine needed help from her parents to communicate with friends and make appointments via SMS.
- He also needed reminders to remember everything in everyday life, such as getting ready for school, remembering appointments, and so on.
- All social activities were organized and the parents and everything happened as "structured activities". Heine was
- driven to school every day by shuttle organized by the municipality.

Start-up of technical aids

- Heine started by using Memoplanner so that he can organize his everyday life and remember everything that happens.
- Heine was also assigned a telephone with a function for reading messages.

Winnings

The introduction of welfare technology has made Heine much more independent.

- He communicates with friends on his own via SMS. Heine is very happy that his parents no longer have access to everything he talks about and does.
- Heine can arrange cinema visits, home visits or trips to the shopping center without the parents being involved and it becomes a "formal" agreement.
- Memoplanner helps him with reminders so that his parents do not have to bother him all the time. This is important for a boy in his teens.
- He drives himself to school in an electric wheelchair, often with a friend of his.

That has been motivated to travel to and from school on his own also provides avoided costs for the municipality in the form of reduced driving.

1) A time and planning tool the size of a tablet.

Appendix - Project progress

Figure: The quick guide phases seen in connection with project start, implementation and completion. The quick guide describes preparation that is carried out before the start of the project and activities that are carried out during the daily operation of the service.

