Action Plan to create conditions for the adoption of integrated care in Norrbotten Region – Improvement of Innovation Management[1]

Background: The objective of the Action Plan is to reflect on the possibility to transfer and adopt the learning about the innovation management in Scotland to local settings in Norrbotten Region, including the feasibility of the transfer and recommendations on policy priority actions that would enable the creation of local conditions for the improvement of innovation management as one of the dimensions necessary for the adoption of integrated care.

The Action Plan builds on the outcomes of the study visit organised in Scotland on 26 June 2018. The study visit was an opportunity to learn about the innovation management in Scotland and discuss a potential transferability of learning by comparing and contrasting the maturity of the healthcare system in Norrbotten Region with the maturity of local health and social care system in Scotland. As such, the Action Plan can inform the health and social care authorities about the future strategies and policies related to the innovation management in the provision of integrated care in Norrbotten Region. This process was facilitated by SCIROCCO self-assessment tool which provided the basis for the twinning and coaching activities.

The Action Plan are co-designed jointly by Scotland as transferring region and Norrbotten as receiving region as follows:

- **Section 1:** Needs of the adopting region – Receiving region

- **Section 2:** Description of the integrated care solution – Transferring region

- **Section 3:** Maturity requirements of the integrated care solution – Transferring region

- **Section 4:** Benefits and opportunities of integrated care solution – Receiving region

- **Section 5:** Conditions for the adoption of integrated care solution – Receiving region

- **Section 6:** Adaptation of local environment to enable transferability of learning – Receiving region

- **Section 7:** Priority actions to enable conditions for the transferability of learning - Receiving region

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1 Innovation Management is one of 12 dimensions of integrated care captured in SCIROCCO Maturity Model https://www.scirocco-project.eu/maturitymodel/

1. *Needs of the receiving region – Norrbotten Region*

Norrbotten Region has the ambition to improve current health care system that is under development and change. More people survive severe diseases such as cancer or heart disease, and many are living a longer life with chronic illness such as diabetes and rheumatism. Together we can work for a better healthcare and better welfare, but there is an urgent need to flip methods. At the Department for Development in the Region, there is a digital function where individuals, employees, regional municipality of entrepreneurs and researchers in northern Sweden work together in order to develop innovative digitally enabled solutions that would underpin the improvement and necessary changes in the current health care system in order to cope with increased needs and demands of citizens2. The challenge remains on how to address a gap between emerging innovations and its implementation, monitoring and evaluations. As such, there is a real opportunity to learn from other regions and organisations in Europe how to manage innovation processes better and more effectively.

2. *Dimension of integrated care that addresses the needs of Norrbotten Region*

2.1 *Transferring region*: Innovation management in Scotland

Health innovation is an exciting and dynamic area with a range of stakeholders from all sectors working collaboratively to position Scotland as a world leader in health innovation, contribute to a thriving economy and support faster adoption of innovation across health and social care. Innovation is defined in Scotland as the invention, development, production and use of products, medicines, therapeutics, approaches and supporting services which create the opportunity to make major improvements to health and healthcare.

Scotland is already recognised as an innovation nation, boasting a world class NHS, world-renowned universities and research strengths, high levels of investment in R&D and a number of internationally innovative health companies operating in Scotland. The recently refreshed 2017 Scottish Life Sciences Strategy sets out strategic priorities for the sector to fulfil Scotland's ambitions to be a world-leading entrepreneurial and innovative nation.

The Scottish Government has outlined its commitment to innovation with recently published Scotland Can Do – Boosting Scotland's Innovation Performance: An Innovation Action Plan for Scotland (January 2017) and more specifically to health innovation within the Health and Social Care Delivery Plan (December 2016) and recently published Digital Health and Care Strategy (April 2018).

A range of initiatives and partnerships are already well established (Innovation Ecosystem) as part of the overall drive to support health innovation and its formalisation in Scotland including:

Scotland's Innovation Centres
Over the last 5 years six Innovation Centre's directly aligned to Life Sciences, with core funding of around €113m have been established. These centres are designed to link

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2 www.ideplats.se

academia and industry to turn innovation into commercial value, making Scotland more competitive within the UK and internationally.

- Stratified Medicine Scotland Innovation Centre - http://www.stratmed.co.uk
- Industrial Biotechnology Innovation Centre - http://www.ibioic.com
- Digital Health and Care Institute - https://dhi-scotland.com
- Scottish Aquaculture Innovation Centre - http://scottishaquaculture.com
- Centre for Sensor and Imaging Systems - https://censis.org.uk
- The Data Lab - https://www.thedatalab.com

For the purpose of this Action Plan and the knowledge transfer with Norrbotten, the activities of the Digital Health and Care Institute were mainly explored.

The Health Innovation Partnership (HIP)
A unique liaison service that identifies, supports and coordinates the formation of specific partnerships between NHS Scotland and the Life Sciences industry to advance health and social care challenges. A Digital Health and Social Care Innovation Partnership is also led by NHS 24.

Scottish Health Technologies Group
An advisory group set up to provide assistance to NHS Scotland boards when considering selected health technologies, excluding medicines which will be reviewed by the Scottish Medicine Consortium.

Health Innovation Assessment Portal (HIAP – Scotland)
Encourages prospective providers of new and/or innovative products and solutions to put them forward enabling NHS Scotland to assess how the solution might support strategic aims, and associated costs and benefits.

Innovation Hubs/Clusters
Local Innovation hubs within NHS Boards to support the development and implementation of innovative ideas created locally. Since 2013, each NHS Board has also an Innovation Champion. Innovation Champions serve as internal and external contact points on innovation and as drivers around the innovation agenda. Scottish Government works with the Innovation Champions through quarterly meetings and ongoing engagement.

Innovation Challenges
Scottish Enterprise work in partnership with Innovate UK and a range of public sector organisations to fund and promote a series of innovation challenges currently faced by the UK's public sector. More detail on current innovation challenges is also available via the NHS Scotland Innovation Community website.

Transferring region: **Current progress in the innovation management in Scotland**

Challenges/problems addressed by the innovation management:

Innovation is the key to delivering a new model of healthcare that meets the challenges and expectations of the modern society. It is widely recognised in Scotland that doing the same

things we always done, in the same way we have always done, is no longer an option for the sustainability of health and social care system due to the ageing population and increased number of people with chronic conditions. When properly targeted and applied, innovative ideas and technologies can transform patient care within the NHS and other stakeholders involved. As such, innovation helps to deliver patient care while simultaneously improving quality and efficiency, releasing savings through increased productivity.

Key innovative elements of the innovation management:

There are several key innovative elements of the innovation management in Scotland:
- Recognised need for innovation embedded in national policies and strategies.
- National commitment to support national uptake and scaling-up of innovative solutions.
- Innovation governance and structure; there is an Innovation Ecosystem in place in order to align and joined up the activities at local and national level.
- Dedicated funding to support the uptake and quick spread of innovation at national level e.g. Innovation Fund, Technology Enabled care programme, Test of Change and/or European funding.

Impact/outcomes observed

The following outcomes have been observed:

- Creation of conditions to enable the uptake and widespread of innovations, building on what we have and spreading what works.
- Facilitation of learning and exchange of innovative ideas in order to join up and align the innovation activities at national and local levels in order to avoid duplications and reinventing the wheel.
- National and local commitment to innovation embedded in policies, planning and implementation of care services; innovation is introduced as part of the service redesign rather than stand-alone approach
- Improved leadership and collaboration of all stakeholders involved in the innovation management.
- Large-scale deployment of some innovative solutions in health and social care delivery; e.g. scaling-up of home and mobile health monitoring solutions, cCBT services, Attend Anywhere and others.

For more information about the innovation management in Scotland please see the following links:

- Scottish Life Science Strategy
  https://www.scottish-enterprise-mediacentre.com/resources/2017-life-sciences-scotland-strategy
- Scotland Can Do – Boosting Scotland's Innovation Performance: An Innovation Action Plan for Scotland https://www2.gov.scot/Resource/0043/00438045.pdf
- Health and Social Care Delivery Plan
  https://www2.gov.scot/Resource/0051/00511950.pdf
- Digital Health and Care Strategy
  https://www.gov.scot/publications/scotlands-digital-health-care-strategy-enabling-connecting-empowering/
- Scottish health technologies Group
  http://www.healthcareimprovementscotland.org/our_work/technologies_and_medicines/shtg.aspx
- Health Innovation Assessment Portal (HIAP-Scotland)
  https://www.hiap-scotland.org/Home/Index
- Innovation Hubs/Clusters
  http://www.in0v8.scot.nhs.uk/open-innovation/nhs-innovation-champions
- Innovation Challenges
  https://www.scottish-enterprise.com/learning-zone#f:sectors-facet=%5BTechnology%20and%20engineering,Life%20sciences%5D

3. *Maturity of Scotland's healthcare system for integrated care*

Transferring region: Maturity of Scotland's health and social and care system, highlighting an Innovation Management dimension of integrated care, is captured in the spider diagram below and detailed justification is provided in the following Table:

Figure 1: Maturity of Scotland's healthcare system

Dimension	Score	Description	Justifications & Reflections
Readiness to Change	3	Vision or plan embedded in policy; leaders and champions emerging	Vision and plan for integrated care is very well embedded in policy; there is a legislation which joins up formally health and social care delivery. There are leaders and champions emerging both at national and local levels. There is still al lack of the support from generic public which prevents from a higher scoring.
Structure & Governance	4	Roadmap for a change programme defined and accepted by stakeholders involved	There is a roadmap for a change programme defined and accepted by stakeholders involved. In addition, a structure and governance for integrated care is in place but implementation is still not perfect. Governance is fully resourced at national level, but there is much diversity at lower levels.
eHealth Services	2	There is mandate and plan(s) to deploy regional/national eHealth services across the healthcare system but not widely implemented	There is a mandate and plan to deploy regional/national eHealth services across the healthcare system but not yet implemented. There are local solutions/pilots but there is no governance to upscale. The main barrier remains the culture around the data sharing.
Standardisation & Simplification	1	Discussion of the necessity of ICT to support integrated care and of any standards associated with that ICT is initiated	There is a lot of recognition of the need of ICT to support integrated care, and of the need for standards. Nothing is in place for social care. Discussion is underway.
Funding	2	Consolidated innovation funding available through competitions/grants for individual care providers and small-scale implementation.	There is a consolidated innovation funding available through competitions/grants for individual care providers and small-scale implementation. There is a national Integrated Care Fund which replaced the Change Fund. There is also some EU funding supporting integration (focus on the transition in the system rather than scaling-up); TEC funding
Removal of Inhibitors	3	Implementation Plan and process for removing inhibitors have started being implemented locally	Implementation Plan and process for removing inhibitors have started being implemented locally. There is some vision embedded in the integration legislation as to how to remove the barriers. Other incentive to remove the inhibitors includes the investments in local agencies and local support to implement services. Innovation centres were created as part of the Plan. Lot of training for different

Dimension	Score	Description	Justifications & Reflections
			professions to change towards integration.
Population Approach	2	Risk stratification approach is used in certain projects on an experimental basis	Risk stratification approach is used in certain projects on experimental basis. SPARRA is the most common risk stratification tool used which looks at responses through health and social care integration for patients who are at risk of re-admission. However, the tool only looks at patients at risks. The Integrated Resource Framework captures both health and social care data, with a focus on frequent service users.
Citizen Empowerment	2	Citizen empowerment is recognised as important part of integrated care provision, effective policies to support citizen empowerment are in place but citizens do not have access to health information and health data.	Citizen empowerment is recognised as an important part of integrated care provision, effective policies to support citizen empowerment are in place but citizens do not have access to health information and health data. There are only very small examples of where patients have access to their data e.g. for diabetes, younger cancer patients. There is an option for online GP appointment, but it is not being widely marketed and used.
Evaluation Methods	2	Evaluation of integrated care exists, but not as part of a systematic approach	Evaluation of integrated care services exists, but not as part of a systematic approach. The third sector services are evaluated according to a common model through a coordinated approach. There are more requirements for the evaluation for third sector organisations than for the statutory organisations. Unless there is a need to motivate continuous investments (as for the voluntary sector), a very systematic evaluation is not performed.
Breadth of Ambition	4	Integration includes both social care service and health care service needs	Improved coordination of social care services and healthcare needs is introduced. The ambition is about the full integration of health and social care. There is an integrated budget and integrated governance. However, some social care services are not clearly in or out of the integrated health and social care according to the legislation.
Innovation Management	3	Formalised innovation management process is	Formalised innovation management process is planned and partially implemented. There has been a degree of focus on investment in technology

Dimension	Score	Description	Justifications & Reflections
		planned and partially implemented	innovation. In third sector, there are a lot of ideas but no clear plan for the update of innovation.
Capacity Building	3	Systematic learning about integrated care and change management is in place but not widely implemented	Learning about integrated care and change management is in place but not widely implemented. The National Quality Strategy is focused on health only. However, a lot of money was invested in training management on integrated care over its 5—7 years.

4. Benefits and opportunities of improving innovation management in Norrbotten Region

The Swedish municipalities and County Councils define innovation as new solutions that respond to the needs and demands of citizens' everyday life. The value of innovation arises in its utilisation and application of an idea in the practice, when new ideas and solutions are embraced, spread and become a routine part of our working methods. This will in turn create economic, social or environmental benefits for the society.

The same applies for the healthcare system. The need for innovation and innovative solution of working are greatly recognised as a priority for the Norrbotten's healthcare system. The region is very much mature in innovation and its spread is encouraged at every level of health and social care. However, the overall strategy and plan how to manage the innovation and scale-up innovative solutions on large scale remains a challenge. Improved innovation management can lead to a number of benefits for Norrbotten's healthcare system including:

- Improved access to care that is tailored to the individual needs of citizens;
- Improved efficiency of working methods and workforce organisation;
- Improved cost-effectiveness and cost-efficiency of health and social care.

5. Conditions for the improvement of innovation management in Norrbotten Region

5.1 Maturity of local health and social care system in Norrbotten Region

Receiving region: Maturity of Norrbotten Region's health and social care system, highlighting the strengths and weaknesses of the local system is captured in the spider diagram below:

Figure 2: Maturity of healthcare system in Norrbotten Region

5.2 Conditions enabling the improvement of innovation management in Norrbotten Region

Receiving region: Maturity of healthcare system in Scotland and Norrbotten Region is captured in the spider diagram below:
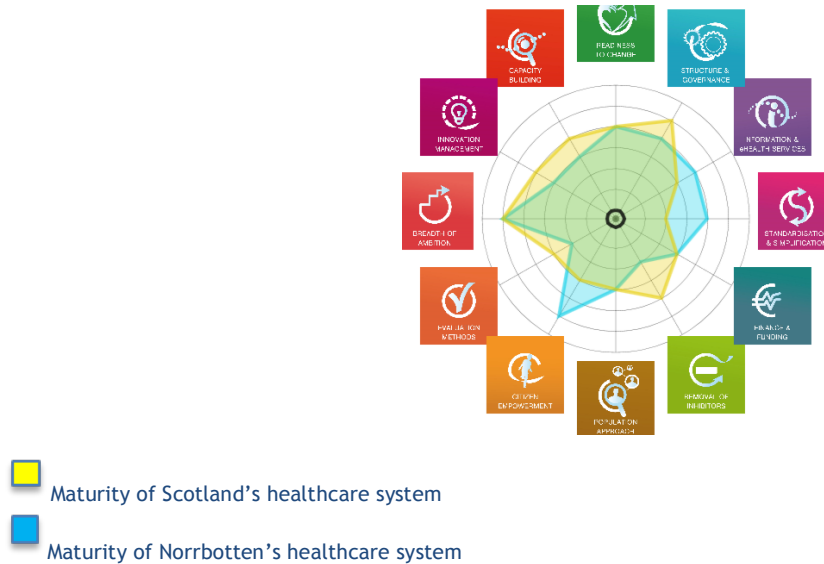

■ Maturity of Scotland's healthcare system

■ Maturity of Norrbotten's healthcare system

Figure 3: Comparison of maturity of Scotland's healthcare system with the maturity of healthcare system in Norrbotten

5.3 Feasibility of transferring the learning about innovation management in Scotland to local context in Norrbotten Region

Dimension	Score Scotland	Feature(s) of Scotland's healthcare system	Score Norrbotten	Feature(s) of Norrbotten's healthcare system	Feasibility of transfer and rationale
Readiness to Change	3	Vision and plan for integrated care is very well embedded in policy; there is a legislation which joins up formally health and social care delivery. There are leaders and champions emerging both at national and local levels. There is still al lack of the support from generic public which prevents from a higher scoring.	3	Several innovational projects are running but there is a lack of collaboration and learning between the projects which often result in the different levels of existing knowledge and performance of innovation management in the region. Models for managing change are established. From a political point of view there is an acknowledgement of the unsustainability of current healthcare system to address the need to change have been adopted to some extent. Also, on an operational level several initiatives have been implemented and are running.	Yes; the transferability is feasible with lot of efforts. It is necessary to have a legal framework for innovation in place in order to ensure that new methods are in line with Norrbotten Region's policies.
Structure & Governance	4	There is a roadmap for a change programme defined and accepted by stakeholders involved. A structure and governance for integrated care is in place but implementation is still not perfect. Governance is fully resourced at national level, but there is much diversity at lower levels.	3	A clear roadmap and specific mandates are needed to ensure implementation of innovation management.	No; the transferability is not feasible. The development and implementation of clear roadmap for innovation management would be required, including the need for motivated leaders with a strong knowledge of benefits of introducing innovation management.
eHealth Services	2	There is a mandate and plan to deploy regional/national eHealth services across the healthcare system but not yet implemented. There are local solutions/pilots but there is no governance to upscale. The main barrier remains the culture around the data sharing.	3	National innovative ICT solutions to increase patients´ access to their medical records have been developed and implemented in Region Norrbotten. Regional ICT solutions to share patient related information between different care providers have been developed and implemented. The Region has also very well progressed with building on	Yes; the transferability is feasible with no need for major adaptation There is a mature innovation infrastructure in place in Norrbotten, including integrated electronic health record.

Dimension	Score Scotland	Feature(s) of Scotland's healthcare system	Score Norrbotten	Feature(s) of Norrbotten's healthcare system	Feasibility of transfer and rationale
				existing platforms and infrastructure and creating new services to empower patients and ensure their ability to participate in the decision-making on their care as well as supporting self-care. However, scalability of these solutions remains the issue.	
Standardisation & Simplification	1	There is a lot of recognition of the need of ICT to support integrated care, and of the need for standards. Nothing is in place for social care. Discussion is underway.	3	There is a lack of common standards between the healthcare providers at local and regional level and often even among the providers at the same level.	Yes; the transferability is feasible with some efforts. The innovation management plan needs to be adapted in order to be compatible with technical standards of all organisations involved.
Funding	2	There is a consolidated innovation funding available through competitions/grants for individual care providers and small-scale implementation. There is a national Integrated Care Fund which replaced the Change Fund. There are also some EU funding supporting integration and TEC Programme funding.	2	External funding is most often limited to pilot innovational projects rather than up-scaling. Internally, within the organisation, the budget is set for a year. Sometimes there is an opportunity to receive funding for early phases of the projects externally and internally but mostly for testing and piloting of the services.	No; the transferability is not feasible. There is a limited funding available for the implementation of innovative solutions.
Removal of Inhibitors	3	Implementation Plan and process for removing inhibitors have started being implemented. There is some vision embedded in the integration legislation on how to remove the barriers. Other incentives include investments in local agencies and local support to implement services. Innovation centres were created as part of the Plan. Lot of training for different professions to change towards integration.	1	There is no specific model or existing project in Norrbotten with a clear mandate to remove inhibitors; there are different models used with different results.	No; the transferability is not feasible. There is no strategy or plan in place for the removal of inhibitors in innovation management. The dedication and continuous training of healthcare professionals seem to be crucial inhibitor in the Norrbotten's local context.

Dimension	Score Scotland	Feature(s) of Scotland's healthcare system	Score Norrbotten	Feature(s) of Norrbotten's healthcare system	Feasibility of transfer and rationale
Population Approach	2	SPARRA is the most common risk stratification tool used which looks at responses through health and social care integration for patients who are at risk of re-admission. However, the tool only looks at patients at risks. The Integrated Resource Framework captures both health and social care data, with a focus on frequent service users.	2	Models to identify patients at risks are applied in Norrbotten and standardised care plans are implemented for some categories of patients. Both the population health unit as well as care divisions in the Region continuously perform certain risk analysis, followed by statistics and particular types of actions.	Yes; the transferability is feasible with no need for major adaptation. The stratification process has been initiated in Norrbotten.
Citizen Empowerment	2	Citizen empowerment is recognised as an important part of integrated care provision, effective policies to support citizen empowerment are in place but citizens do not have access to health data. There are only small examples of where patients have access to their data e.g. for diabetes, younger cancer patients. There is an option for online GP appointment, but it is not being widely marketed and used.	4	Citizens do have access to health information and health data through "Health care in numbers and open comparisons', but this solution is not used systematically for decision-making. Not all data is made available yet.	Yes; the transferability is feasible with some efforts. Citizens have access to their health data; the involvement of patients and citizens organisations needs to be better recognised in Norrbotten's local context.
Evaluation Methods	2	Evaluation of integrated care services exists, but not as part of a systematic approach. The third sector services are evaluated according to a common model through a coordinated approach. Unless there is a need to motivate continuous investments, a very systematic evaluation is not performed.	1	No common evaluation model or innovation management is used in Region Norrbotten. There are some evaluations methods applied, but not as a part of a systematic approach.	Yes; the transferability is feasible with lot of efforts. In order to successfully implement innovation management, there needs to be a system that supports a systematic evaluation.
Breadth of Ambition	4	Improved coordination of social care services and healthcare needs is introduced. The ambition is the full integration of health and social care. There is an integrated budget and integrated governance.	4	There are fully integrated health and care services but the collaboration and services between different health and social care providers can still improve.	Yes; the transferability is feasible with no need for major adaptation. There is an integration between primary and hospital care levels established in the region.

Dimension	Score Scotland	Feature(s) of Scotland's healthcare system	Score Norrbotten	Feature(s) of Norrbotten's healthcare system	Feasibility of transfer and rationale
Innovation Management	3	Formalised innovation management process is planned and partially implemented, including investment in technology innovation.	2	Innovation is encouraged but there is no overall plan to formalise innovation processes. Procurement remains a challenge.	Yes; the transferability is feasible with some efforts. There needs to be some improvement in developing mechanisms to support innovations and transfer knowledge as necessary.
Capacity Building	3	Learning about integrated care and change management is in place but not widely implemented. The National Quality Strategy is focused on health only. However, a lot of money was invested in training management on integrated care over years.	2	There is still at the point where we need better support for creating a learning organisation and supporting "change managers" continuously.	Yes; the transferability is feasible with lot of effort. The need for continuous learning needs to be embedded in the routine practice.

5.4   *Priority areas for the transferability of learning*

Receiving region: List of the prioritised features to be considered for the transferability of learning in order to improve innovation management in Norrbotten Region is outlined in the Table below:

List of the prioritised features of Scotland's healthcare system for improvement of innovation management
Readiness to Change • Recognised need for change • A defined plan for implementation of innovation • A clear leadership to promote the implementation of new innovations Innovation management • An overall plan • Formalised innovation management process

6.   *Adaptation of local environment to enable transferability of learning*

Receiving region: List of suggested changes to enable the creation of conditions for the improvement of innovation management in Norrbotten Region, informed by the learning about the features of Scotland's healthcare system is outlined in the Table below:

Features of Scotland's healthcare system	Adaptation of features to Norrbotten's context
Readiness to Change • Recognised need for change • A defined plan for implementation of innovation • A clear leadership to promote the implementation of new innovations	• Develop implementation plan for the adoption of innovation, endorsed by the policy-makers, including the clear assignments of roles and leaderships of all stakeholders involved in the implementation of new innovation processes. • Raise awareness about the benefits of innovations to leaders and implementers.
Innovation management • An overall plan • Formalised innovation management process.	• Raise awareness about the need for innovation and new way of working. • Develop instruments to support innovations.

7. *Priority actions to enable conditions for the transferability of learning*

Receiving region: List of the proposed actions to enable conditions for improvement of innovation management in Norrbotten Region, including objectives, anticipated outcomes and policy implications is outlined in the Table below:

Priority Action	Objective of the Action	Anticipated outcomes	Policy implications, including the responsible actor and anticipated duration
Develop an implementation plan for innovation management	Stimulate innovations that extend the current organisational barriers, including organisation of responsible actors, leadership, processes and anticipated duration.	Clear leadership in implementing innovation	In order to improve innovation management, the following policy actions need to be considered: • Guidelines and a strategy for innovation management needs to be embedded in the existing policies and strategies related to development of methods and technologies in order to secure the leadership for implementation. The innovation management could be integrated as a part of new Strategy for Future Health Care in Region Norrbotten. • Adaptation of the innovation management at a regional level. New guidelines and standards are required for the entire nation, to facilitate regional decisions on implementation of innovation management.
Improve education of leaders	Join the efforts in providing the same level of education to all leaders involved in innovation management.	Common vision, skills and support to implement innovation management	Strategies and guidelines for training on the use of innovative methods need to be developed and implemented in e-learning platforms.
Visualise good examples of innovation to workforce and wider citizens	Improve citizen empowerment and engagement in the decision-making processes in the planning and implementation of health and social care interventions.	Implementation of person-centred, coordinated health and social care interventions	Documents and policies that statutes how the dissemination of innovative solutions need to be visualised.

8. *Contact details for the receiving region – Norrbotten Region*

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