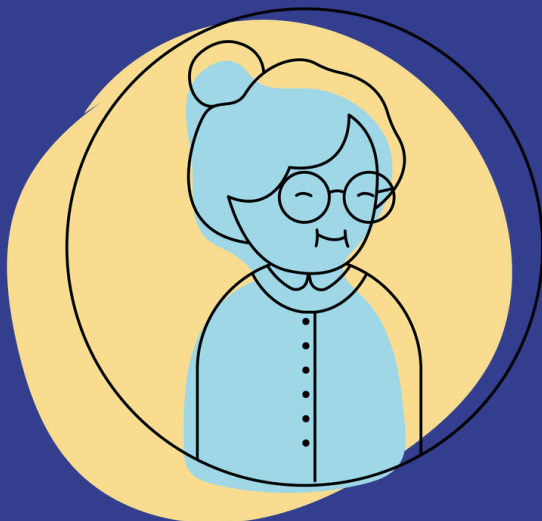




NSR HOME CARE INNOVATION STRATEGY

North Sea Region
2026–2030

This document has been produced as part of the ACE project — Accelerating the Home Care Innovation Ecosystem of the Future in the North Sea Region — co-funded by the European Regional Development Fund through the Interreg North Sea Programme 2021–2027. The content reflects the views of the project partners only and does not represent the official position of the Interreg North Sea Programme or the European Commission.

PREFACE

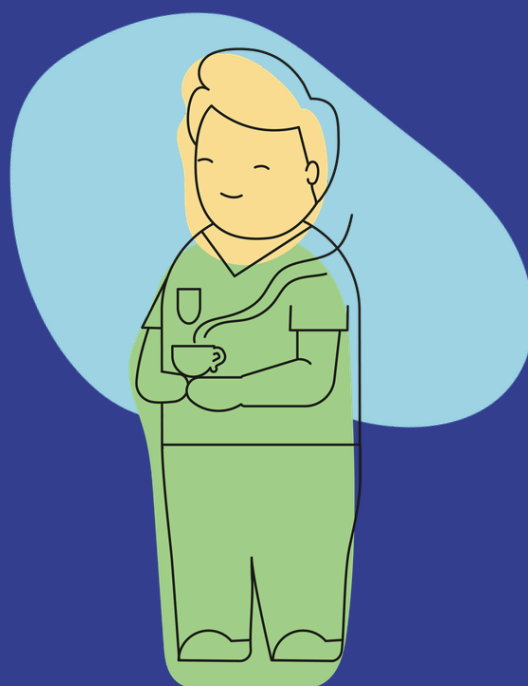
Home care ecosystems across the North Sea Region (NSR) are under pressure that existing models were not designed to handle.

Demographic change, workforce shortages, and growing care complexity are converging in ways that call for a different kind of response; a deliberate shift in how care systems are organised, resourced, and governed.

Digital and assistive technologies are part of that response. Used well, they create real possibilities for safer, more dignified, and more independent lives at home. But whether innovation spreads or stalls depends far less on the technology itself than on the conditions surrounding it: how organisations make decisions, how procurement works, what regulators allow, how staff are trained, and how infrastructure is built.

The evidence behind this NSR Home Care Innovation Strategy is bottom-up. It comes from workshops, pilots, and real implementation efforts across six countries, from the adaptations that care organisations, frontline staff, older adults, and solution providers made in practice, often under pressure and without ideal conditions. Those adaptations, in governance, workflows, training, and decision-making, are what the ACE partnership calls critical adaptations. They represent the gaps in the home care ecosystem, not what the technology was lacking. Taken together, they form a shared knowledge base about the real conditions of innovation in home care. That is what this Strategy is built on.

The ACE (Accelerating the Home Care Innovation Ecosystem of the Future in the North Sea Region), is a 42-month project co-funded by the Interreg North Sea Programme and led by RISE Research Institutes of Sweden. Thirteen partner organisations from Sweden, Denmark, the Netherlands, Belgium, France, and Germany have worked together since January 2023 to prepare home care providers across the region for the innovations that will define the future of home care. The project has built a stakeholder community of more than 350 organisations and individuals and scaled close to 30 innovations. This has been achieved through a combined approach consisting of quadruple-helix workshops, an assessment and definition of the sector needs, real-world pilots, and providing adaptation support to over 150 home care providers. This Strategy and its accompanying Action Plan carry those findings forward, into the policy and governance decisions that will shape home care across the North Sea Region long after the project concludes.



EXECUTIVE SUMMARY

As part of the ACE project, care organisations, frontline staff, older adults, and solution providers from the North Sea Region have spent years testing digital technologies in real home care settings. Across the six participating countries, their findings were consistent: lasting adoption depended less on the technologies themselves than on the governance and funding streams determining their usage. Pilots only became permanent practice when decision ownership was clear from the first needs assessment through to long-term operation, and where a credible funding pathway existed beyond the project period. Where either was absent, even well-functioning technologies were abandoned when the project ended. This finding was consistent across all six NSR countries regardless of how well the technology itself performed.

The implications of these findings differ between national and regional governments, NSR and European Union (EU) bodies, and municipalities and care organisations. National and regional governments hold the levers that determine what municipalities and care organisations can actually achieve. This includes reimbursement frameworks that recognise preventive and social wellbeing value alongside clinical outcomes, regulatory guidance on common home care use cases that is specific enough to act on, and investment in digital infrastructure as a care equity commitment. Funding more pilots without first reforming these frameworks will simply produce better-documented versions of the same outcome. Denmark's forthcoming National Strategy for Welfare Technology in Elderly Care and Germany's DiPA reimbursement framework are examples of actions and reforms that are already taking place at the national level in an attempt to improve these local frameworks.

The NSR and EU bodies have a different set of levers. This includes a shared interpretation of General Data Protection Regulation (GDPR) for the most common home care use cases, alongside cross-border recognition of evaluation evidence with agreed minimum standards. It also includes post-pilot funding pathway guidance that acknowledges the structural differences in who pays, and how, across the six countries. It is in these areas that cross-border coordination creates additional value that national action cannot deliver.

For municipalities and care organisations, the most directly actionable condition is governance: who owns the decision at every stage and which support functions are involved from the start rather than at contract time. They can also help provide more credible answers to questions surrounding what happens to a pilot after it ends.

This NSR Home Care Innovation Strategy identifies the ecosystem conditions needed for home care innovation to work, maps responsibility for those conditions across governance levels, and provides country-specific analysis of all six NSR countries. The accompanying Action Plan translates the same evidence into implementation guidance for municipalities, care organisations, and SMEs. Both documents draw on evidence generated by care workers, managers, older adults, and families who documented the changes needed in order for home care innovation to succeed across Europe's North Sea Region.

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1. PURPOSE AND STRATEGIC AMBITION

This document defines the conditions that are required, and the conditions that need to be adapted, within the home care ecosystem for innovative healthcare solutions to be implemented and to work at scale across the NSR.

The Strategy addresses why promising pilots so rarely become standard practice, rather than what makes the technologies themselves promising. The answer almost always lies in the ecosystem conditions surrounding the technology, such as unclear ownership, short funding cycles, regulatory ambiguity, and fragmented coordination between organisations.

The strategic ambition is to clearly identify those conditions, so that decision-makers at regional, national, and NSR levels can adapt the frameworks needed for existing and future home care innovation projects to operate and scale.

2. STRATEGIC CONTEXT AND SHARED NEEDS ACROSS THE NSR

Countries across the NSR face a shared set of pressures. Across the six NSR countries investigated in this project, more than 20% of the population is 65 or over. According to Eurostat, the old-age dependency ratio has risen from 26.8% in 2004 (fewer than four working-age adults per elderly person) to 37% today (fewer than three). This imbalance will continue to worsen through 2050, meaning fewer workers to deliver care, more people needing it, and a narrowing window for system change ([EU 2024 Ageing Report](#)).

This affects every aspect of health and home care, and partners working in contexts as contrasting as rural Sweden and urban Netherlands identify the same gaps and the same needs:

- Improved digital literacy among staff, older adults, and their families.
- Stronger social networks to reduce loneliness and isolation.
- Clearer communication pathways across care actors.
- Technologies that are genuinely easy to use.
- Affordable and sustainable access to home care innovations.
- Earlier preparation for ageing and care transitions.
- Greater involvement and support for caregivers.
- Culturally appropriate approaches in increasingly diverse workforces.
- Reliable digital infrastructure in all homes and communities, not just well-resourced ones.
- Consistent regulatory and GDPR guidance that does not require every organisation to interpret the rules from scratch.
- Solutions that fit people's actual living conditions, not how systems assume they live.
- Evidence that can support procurement and implementation decisions.

These recurring needs informed the conditions identified in this Strategy as currently lacking but critical for home care innovation solutions to be adopted and to succeed across the NSR.

3. VISION FOR HOME CARE IN THE NSR (2030)

Vision statement

People age at home, on their own terms, supported by care that fits their life — not the other way around. Across the North Sea Region, care providers, municipalities, regions, technology developers, and civil society act as a shared home care innovation ecosystem, jointly shaping adaptive and sustainable home care ecosystems grounded in the everyday realities of older adults and caregivers.

This vision emerged from workshops involving frontline care workers, older adults, families, managers, researchers, and technology providers across the NSR — the very people who encounter the gap between what home care is today and what it could be. They described a future in which older people can stay at home as long as they choose, in conditions they recognise as their own, without depending on home care ecosystems designed for someone else's convenience. They also shared that the staff who make this possible should work in conditions that are sustainable, not depleting.

“It is vital for us to explore new solutions and draw inspiration. We saw an excellent toilet seat that assists individuals in sitting down and standing up — crucial for promoting independence. We also noted several promising digital solutions, particularly in remote monitoring.”

Carina Nilsson
Höör Municipality (Höganäs)

Achieving this vision requires change at the home care ecosystem level. Rather than just incremental adjustments, this means a genuine shift in how care is organised, how innovation is governed, and how the relationship between technology, people, and institutions is understood. ACE partner organisations across six countries have tested the conditions required for this shift. By 2030, home care in the NSR should be:

- **Person-centred and self-determining:** Older adults shape their own care, on their own terms, in their own home, with technology that supports independence rather than managing dependency.
- **Digitally inclusive:** Accessible regardless of age, ability, language, or digital confidence, with no one excluded by a lack of infrastructure or by tools not designed around them.
- **Built on a sustainable workplace:** Care staff work in conditions that allow them to concentrate on people, not on administrative burden, and where technology genuinely reduces rather than adds to their workload.
- **Co-creative and interdisciplinary:** Older adults, families, frontline staff, researchers, SMEs, and communities are genuine partners in designing and improving care, rather than being consulted after decisions are made.
- **Continuously learning:** Innovation is an ongoing process embedded in daily practice, not a series of time-limited projects that end before their results take hold.
- **Governed by clear structures:** With defined roles and decision pathways that cover the full cycle from idea to long-term operation, at every level of the home care ecosystem.

- **Technically interoperable and legally clear:** With aligned data practices, open standards, and regulatory guidance that organisations can actually act on.
- **Sustainably and equitably financed:** With funding that outlasts pilots and reaches care organisations regardless of their size, geography, or resources.

4. STRATEGIC OBJECTIVES

OBJECTIVE 1: Align innovation conditions across the NSR

Reduce fragmentation in regulations, procurement, funding, data practices, skills requirements, and infrastructure.

OBJECTIVE 2: Strengthen home care ecosystem and organisational capacity

Ensure organisations have the governance structures, skills, co-creation time, and digital readiness to adopt innovations and keep them running.

OBJECTIVE 3: Enable sustainable adoption and scaling

Move beyond short pilots through evidence-based decision-making, outcome-focused financing, and funding models that survive project end dates.

OBJECTIVE 4: Foster equity and person-centred outcomes

Ensure that technologies support independence, empowerment, social wellbeing, and safety, and that they do not widen the gap between those who can access innovation and those who cannot.

OBJECTIVE 5: Support a thriving innovation ecosystem

Create conditions that enable involved stakeholders to adapt, scale, and contribute responsibly within NSR home care ecosystems.

4.1 Translating Objectives into Prioritised Effect Logic

Organisations were more likely to move beyond pilots when they knew what effect they were trying to achieve before they selected a technology, involved the right people from the start, and maintained clear ownership of decisions through to long-term operation, not just during the pilot phase. In this Strategy, this is called effect-driven decision-making.

Digitalisation is a means of achieving goals such as more independence for older adults, reduced isolation, safer daily living, better working conditions for staff, and more resilient services. Home care ecosystem conditions such as procurement, funding, and governance decisions should therefore be anchored to those goals, not to technology features.

To create these conditions in practice, NSR policymakers and funders should use funding programmes to reward outcome achievement rather than technology acquisition. They should also use procurement signals to emphasise evidence of impact rather than technical specifications. Changing these signals acts as a lever that reshapes behaviour across the region, and even beyond it.

4.2 Prioritisation Across Home Care Ecosystem Levels

The five Strategic Objectives address decision makers at multiple levels: national governments, regions, NSR bodies, and municipalities. These actors interact in complex ways, and the right entry point depends on who is in a position to make changes. Understanding this complexity is the starting point for deciding where and how to focus individual and shared efforts.

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ACE experience across six countries and thirteen partners points to two factors as the most consistent determinants of whether innovation uptake becomes scalable and sustainable. The first is unclear governance and ownership of what happens after a pilot ends. The second is the absence of a funding pathway beyond the project period. The implications of these findings differ by level.

For municipalities and care organisations, governance is the most directly addressable condition. Defining who owns decisions at every stage, assigning named roles, building cross-functional coordination, and ensuring that the function responsible for long-term operation is involved before a pilot ends are decisions that can be made without waiting for national policy change. Funding sustainability is harder, because municipalities operate within reimbursement frameworks that they do not always design and cannot unilaterally change. However, they can involve procurement earlier, apply lifecycle costing, and refuse to launch pilots without a credible answer to the question of what happens after.

For national governments and regions, the most direct levers are reimbursement architecture, regulatory interpretation, and infrastructure investment. ACE evidence shows that when these are absent or fragmented at the national level, municipalities cannot compensate for it regardless of how well they govern their own pilots. A municipality is structurally constrained even with excellent internal governance, if it operates under a funding framework that does not recognise preventive value, or under GDPR guidance that requires every organisation to develop its own legal interpretation from scratch. National governments that want to accelerate home care innovation should not wait for municipalities to solve these problems locally. The reimbursement frameworks, regulatory guidance, and digital infrastructure that determine the ceiling for what municipalities can achieve are national responsibilities.

Recent developments in Denmark and Germany show that national-level action can change local possibilities: Denmark has announced a National Strategy for Welfare Technology in Elderly Care, while Germany has established a new reimbursement framework for digital care solutions.

For NSR-level bodies and EU funders, the levers are shared regulatory interpretation across borders, common procurement standards, cross-border evaluation recognition, and funding mechanisms that support organisations in moving from pilot to permanent operation. These do not replace national action but create the conditions under which national and local efforts become more efficient and mutually reinforcing rather than running in parallel with limited cross-border learning.

Taken together, the evidence points to a working prioritisation for each level:

- **Municipalities and care organisations** establish governance and ownership structures first. They secure the post-pilot funding pathway before the pilot launches and use the home care ecosystem conditions framework to diagnose which dimensions are most constraining in their specific context.
- **National governments and regions** set reimbursement frameworks that recognise preventive and social wellbeing outcomes, not only clinical service hours. They provide regulatory guidance on common home care use cases that organisations can act on rather than interpret themselves. They invest in digital infrastructure as a care equity commitment, not a technology project.

- **NSR-level bodies and EU funders** prioritise the three areas where cross-border alignment creates value that national action cannot produce alone: shared GDPR interpretation for common home care use cases, cross-border evaluation recognition with agreed minimum evidence standards, and post-pilot funding pathway models adapted to different national funding structures.

Different actors hold different levers, and deploying each lever at the right level of the home care ecosystem is more effective than expecting municipalities to solve regulatory fragmentation or expecting NSR bodies to manage organisational change within individual care providers. Clarity about who is responsible for what, at which level, is what this Strategy aims to provide.

5. HOME CARE ECOSYSTEM CONDITIONS FOR INNOVATION UPTAKE

The five dimensions below capture the conditions that ACE experience shows must be addressed for innovation uptake to take hold and last. They should not be read in isolation: weakness in any one dimension creates drag across the others. Fragmented regulation undermines procurement, poor infrastructure limits what technology can do, and unclear governance blocks both.

5.1 Technology, Products and Processes

Relevant areas:

- User-centred design
- Adaptability for different target groups
- Ease of use for all stakeholders
- Ethical and social considerations
- Evidence generation
- Supplier product adaptation

Strategic requirements:

- Technology must be simple, intuitive, accessible, and adapted to the languages, culture and communication styles of its users, including staff and older adults whose first language may not be the dominant language of the care organisation.
- Solutions must be adaptable to individual routines, abilities, and preferences, including people with cognitive impairment or sensory differences.
- Improvement must be continuous and based on feedback from actual users in real settings.
- Procurement and selection should require evidence of real-world impact, usability, and cost–benefit, beyond technical specifications.
- Technology must support and not substitute human connection, particularly for people at significant risk of loneliness.
- Care technologies that generate data or alerts must be accompanied by clear protocols for interpretation and action. Who interprets system outputs, on what timeline, and with what authority to act, must be defined before deployment.

“One of the most striking findings is that 60% of care staff report they do not provide less personal care despite using digital tools. Screen visits, digital locks, and medicine dispensers allow staff to maintain, and sometimes even enhance, the quality of personalised care.”

Søren Aalykke
Aarhus Municipality

5.2 Business Models, Investments and Procurement

Relevant areas:

- Sustainable funding models
- Cross-country funding differences
- Market adaptation by SMEs
- Social cohesion considerations
- Evidence-based investment

Strategic requirements:

- Pilots need a path to permanent funding. Who pays (municipality, insurer or the citizen), must be settled before scaling begins, not after.
- The real cost of adoption is consistently underestimated. Procurement must account for training time, workflow changes, governance, and ongoing maintenance, as well as the technology itself.
- Financing models should reward outcomes and prevention, as well as activities or hours of care.
- Procurement signals should favour accessibility, interoperability, and evidence of effectiveness, not lowest price.
- Suppliers moving across NSR borders cannot assume that what works in one country will transfer directly to another. Market and context adaptation is a prerequisite, not an afterthought.

5.3 Policy and Regulation

Relevant areas:

- Aligned GDPR interpretation
- Technology compliance with national laws
- Policy support for innovation

Strategic requirements:

- GDPR interpretation for common home care use cases such as remote monitoring, communication platforms, and sensor-based safety systems, needs to be clearer and more consistent across the NSR. Requiring every care organisation to interpret the rules from scratch is expensive and creates unnecessary risk aversion.
- The EU's European Health Data Space Regulation (EHDS), in force since March 2025, establishes mandatory interoperability requirements for electronic health record systems across Member States and a cross-border data governance framework that will progressively shape the regulatory environment within which home care technology operates ([EHDS Regulation 2025/327](#)).

"It quickly became clear that the biggest challenges weren't technical, but about maintaining information security in line with GDPR. It's something all municipalities struggle with in many areas, and here it was brought to the fore."

"We didn't have that knowledge in-house, but management showed courage and decided to proceed anyway. For the time being, we brought in external expertise, but this also highlighted the need to strengthen skills within the municipality."

Linda Macke
Höganäs Kommun

- Regulators should provide guidance on data processing, cloud services, and cross-border compliance that is specific enough to be useful, not just a restatement of the regulation itself.
- Technologies must comply with national laws and cross-border data requirements. Suppliers have a responsibility to make this straightforward for care organisations to verify.
- Policy and funding programmes should explicitly support co-creation and organisational readiness and not only the purchase and installation of technology.

5.4 Behaviour, Culture and Values

Relevant areas:

- *Innovation governance roles*
- *Structured co-creation time*
- *Training and competence development*
- *Culture and mindset change*

Strategic requirements:

- Governance roles for innovation need to be defined and assigned before a pilot starts, covering the full cycle from needs identification through to long-term operation.
- Staff competence development must be structured and repeated, not a one-off induction. Peer learning matters as much as formal training.
- Time for co-creation with older adults, families, and staff must be allocated and protected, not squeezed into existing schedules.

- A culture where technology is a natural first consideration when it genuinely serves the person, takes time to build. Leadership should communicate why, and not just what.
- Change management is a planned component of adoption, not a response to resistance. Treating it as an afterthought is one of the most reliably cited reasons why pilots do not become practice.
- Innovation cannot depend on individual champions. It must be embedded as a structural function within organisations, with legal, finance, IT, HR involved from the needs identification stage, not called in when contracts are already being drafted.

“Collaboration is essential for innovation. Care organisations and solution providers cannot work in isolation. We should innovate through co-creation, starting from the patient's perspective.”

*Dorien Vandormael,
i-mens*

5.5 Infrastructure

Relevant areas:

- *Digital infrastructure readiness*
- *Wi-Fi stability and alternatives*

Strategic requirements:

- Reliable, fast, and secure connectivity is not optional. Without it, every other dimension is limited. This includes homes, not just care facilities.

- Infrastructure gaps between well-connected and under-served regions must be closed, not worked around. Digital inequality in care is an equity problem, not a technical inconvenience.
- Interoperability and open standards are necessary to prevent every organisation from building isolated technology environments that cannot communicate with each other.
- Maintenance, secure access, and readiness assessments should be part of strategic planning, not left to IT departments to handle as operational detail.

6. GOVERNING THE INNOVATION AGENDA AT THE HOME CARE ECOSYSTEM LEVEL

The home care ecosystem conditions described in Section 5 will not improve on their own. Someone with the authority and accountability to act must decide to make these improvements. At national, regional, and NSR level, this means treating home care innovation as a policy agenda to be actively governed with defined goals, transparent prioritisation, and the institutional capacity to learn and adjust over time.

The ACE experience shows that the organisations which moved furthest beyond the pilot stage were those where decision-making authority was clear, where effect goals were defined before solutions were selected, and where the governance structure covered the full cycle from need identification to long-term operation. The same principle applies at the home care ecosystem level.

National and regional actors that fund pilots without defining what success looks like, or that launch programmes without a plan for what happens after the pilot or project period, reproduce the exact pilot trap they are trying to escape but on a larger scale.

6.1 Effect-driven Programme Design

National and regional funding programmes for home care innovation uptake should be designed around explicit effect goals, not activity outputs. This means defining what outcomes are sought, how they will be measured, what level of evidence is required to demonstrate value, and what the pathway to permanent adaptation and scaling looks like if a funded initiative succeeds.

Programmes that define success as “technology deployed” or “organisations participating” systematically under-invest in the conditions that determine whether deployment produces lasting change and sustainable home care innovation. Those conditions, such as governance capacity, staff competence, procurement reform, infrastructure, or regulatory clarity, are often unglamorous and invisible in a project report. Effect-driven programme design makes them explicit and fundable.

At the NSR level, this principle applies to how the Interreg programme framework is designed and how EU structural funds are directed toward care innovation and innovation uptake. Programme criteria that reward evidence of organisational readiness, governance investment, and post-pilot transition planning produce different and better outcomes than criteria that count technology installations.

6.2 Portfolio Governance: Deciding What to Advance, Pause, or Stop

Governing an innovation agenda at the national or regional level requires the capacity to make portfolio decisions. This includes assessing a range of initiatives against shared criteria, allocating resources based on expected value and feasibility, and actively discontinuing efforts that are not producing results. This is not common practice in public sector innovation programmes, where the political cost of stopping a funded initiative often outweighs the strategic benefit of redirecting or repurposing those resources.

The consequence is a proliferation of parallel pilots, each with its own governance, evidence base, and set of actors, that rarely produce the ecosystem-level learning needed to justify the investment. National and regional governments that want to move beyond this pattern need governance structures that explicitly include portfolio review: a regular, transparent assessment of what is working across a funded portfolio, with the decision authority required to act on those findings.

For NSR-level bodies, this means building shared review mechanisms into any joint programme structures, so that they not only satisfy Interreg reporting requirements but also generate the cross-country learning that justifies a transnational approach. Evidence from one country that a particular approach does not work under certain conditions is as valuable as evidence that something succeeded, if it is captured and shared in time to inform decisions elsewhere.

7. CROSS-BORDER POLICY COORDINATION

The five home care ecosystem dimensions cannot be fully addressed by any single country acting alone: regulatory fragmentation affects suppliers trying to operate across borders, inconsistent evidence standards prevent learning from travelling, and infrastructure investment in one region creates competitive disadvantage for others if not matched. The NSR is not a single policy jurisdiction, but it is a shared context in which national policy decisions have cross-border consequences. Coordinating those decisions, even partially or selectively, produces better outcomes than each country acting in isolation.

This is not a call for regulatory uniformity or the subordination of national policy to NSR consensus. It is a practical observation that there are specific, identifiable areas where the cost of coordination is low relative to the benefit it produces, and where coordination at the NSR or EU level creates value that national action cannot produce alone.

7.1 What Requires Coordination, and Why

The highest-return areas for cross-border coordination, based on ACE evidence, are:

- **Regulatory interpretation:** GDPR guidance for the most common home care use cases is currently developed by every care organisation and supplier in the NSR separately. A shared interpretation, even a non-binding one, reduces that cost across the entire region and lowers risk aversion in smaller organisations that cannot afford specialist legal advice for every deployment decision.

- **Evidence standards:** When evaluation formats, outcome definitions, and quality standards differ across countries, evidence from one context cannot inform decisions in another. Minimum common standards for what constitutes adequate proof of value in home care technology, covering both quantitative and qualitative outcomes, would allow the NSR to function as a collective learning ecosystem rather than six parallel national experiments.
- **Procurement signals:** When NSR countries send consistent signals through procurement criteria by requiring outcome evidence, interoperability, usability documentation, and lifecycle costing, they reshape the market for home care technology across the region. Suppliers adapt to what buyers consistently require. Coordinated procurement requirements are one of the most direct levers available to national and regional actors for improving the technology landscape without regulatory intervention.
- **Workforce and competence frameworks:** Home care workforces are increasingly mobile across NSR borders. A digital skills framework that is recognised across countries reduces the friction of cross-border employment and makes it possible for staff training investments in one country to be valued in another.



7.2 How Coordination Should Work in Practice

Effective coordination at the NSR level should not require a permanent secretariat or a new institutional layer. It requires three things:

1. **A shared forum** where relevant national actors meet regularly enough to build working relationships.
2. **A shared agenda** that focuses effort on the areas of highest cross-border value rather than attempting comprehensive policy alignment.
3. **A shared evidence base** (principally what ACE has produced) that grounds coordination in documented practice rather than aspiration.

National representatives responsible for elderly care policy, digital health regulation, and long-term care financing are the natural participants in such a forum. Their counterparts in other NSR countries are familiar with these challenges: they are dealing with variations of the same problems under different national conditions. Structured exchange around shared lessons and what each country plans to try is the most direct route to the cross-country learning that justifies transnational investment.

For EU funders and Interreg programme bodies, the implication is that programme design should actively support this kind of policy-level knowledge exchange, not only project-level implementation. Funding streams that bring national policy officials into structured dialogue around shared evidence, and that create explicit incentives for cross-border evaluation recognition and procurement alignment, would address the home care ecosystem conditions in Section 5 more directly than another round of technology pilots.

7.3 The Relationship between National Policy and NSR Alignment

NSR-level coordination works best when it is aligned with, rather than in tension with, national policy development cycles. Denmark's Strategy for Welfare Technology in Elderly Care, Germany's evolution of the DiPA reimbursement framework and the Netherlands' ongoing work on digital health infrastructure are national processes that will happen regardless of NSR coordination. The question is whether NSR-level learning influences them, or whether they proceed in isolation.

The most practical form of NSR coordination is structured engagement with national strategy processes at moments when they are open to external evidence and alignment. This requires NSR-level actors to track national policy calendars, identify the points at which cross-country learning is most likely to be useful, and ensure that the ACE evidence base is available in forms that national policy officials can use.

This Strategy is itself an attempt to do exactly that: to present what the NSR has collectively learned in a form that is legible to national decision makers, timed to coincide with the period in which several NSR countries are actively developing their own digital care and welfare technology strategies.

8. COUNTRY-SPECIFIC ADAPTATION AS A STRATEGIC REQUIREMENT

There is no neutral context for home care innovation. A remote monitoring solution that a Danish municipality deploys as routine practice may face a completely different regulatory and funding situation in Belgium.

There is no neutral context for home care innovation. A remote monitoring solution that a Danish municipality deploys as routine practice may face a completely different regulatory and funding situation in Belgium. A co-creation approach that works within the flat organisational culture of a Dutch home care provider may need significant adjustment in a French home care ecosystem with more hierarchical professional structures. ACE partners have experienced this across every part of the project. Country-specific adaptation is not an implementation detail; it is a necessary precondition for innovation to work.

Three axes consistently differentiate national contexts across the NSR evidence base. Understanding them is the starting point for knowing what can be aligned across borders and what must be adapted locally:

1. **Funding and payment logics:** Who pays for care and whether preventive value is recognised in how money flows.
2. **Regulatory interpretation:** How GDPR and national law are applied in practice to common home care use cases, which diverges significantly across the NSR even within the same EU framework.
3. **Distribution of responsibility:** How care duties are divided between public authorities, families, informal caregivers, and private actors. This determines who the natural innovation partner is in each country.

“What turned out to be a common thread everywhere was just how important local context really is. No matter how promising a technology looked on paper, if it didn’t fit easily into each country’s specific care ecosystem or regulatory environment, it just didn’t stick. The idea that ‘one size fits all’ fell apart really quickly once the matching process got underway.”

Coosje Hammink
HAN University of Applied Sciences

NSR-level coordination works best when it is aligned with, rather than in tension with, national policy development cycles. Denmark’s Strategy for Welfare Technology in Elderly Care, Germany’s evolution of the DiPA reimbursement framework and the Netherlands’ ongoing work on digital health infrastructure are national processes that will happen regardless of NSR coordination. The question is whether NSR-level learning influences them, or whether they proceed in isolation.

The most practical form of NSR coordination is structured engagement with national strategy processes at moments when they are open to external evidence and alignment. This requires NSR-level actors to track national policy calendars, identify the points at which cross-country learning is most likely to be useful, and ensure that the ACE evidence base is available in forms that national policy officials can use.

This Strategy is itself an attempt to do exactly that: to present what the NSR has collectively learned in a form that is legible to national decision makers, timed to coincide with the period in which several NSR countries are actively developing their own digital care and welfare technology strategies.

The NSR-level alignment does not mean making national ecosystems the same. That is neither achievable nor desirable. Its purpose is to make learning and collaboration across different ecosystems easier.

Different national contexts have produced different strengths. This includes Denmark’s institutional maturity with welfare technology, Sweden’s co-creation tradition at the municipal level, the Netherlands’ experience with public-private health innovation, Belgium’s living lab infrastructure, France’s pragmatic technology-adoption culture, and Germany’s structured reimbursement pathway for digital care applications. The NSR partnership offers the opportunity to unite these diverse contexts around shared principles, common outcome goals, and minimum standards, particularly where fragmentation creates cost without a corresponding benefit.

The country profiles below describe the home care ecosystem context that ACE partners encountered in each country, the specific conditions that shaped how innovation unfolded in practice, and the priority actions at the NSR and national level that would most directly strengthen each context. They are starting points for deeper national dialogue and not comprehensive analyses.



8.1 Sweden

Sweden’s home care system is organised at the municipal level, with municipalities responsible for both funding and delivery. This creates a relatively direct path from political decision-making to operational change. When a municipality decides to adopt a technology or governance approach, it has the institutional authority to do so without navigating complex multi-payer arrangements.

Welfare technology has been part of Sweden's elderly care system for over a decade, supported by national investment programmes through the National Board of Health and Welfare (Socialstyrelsen) and innovation funding through Sweden's innovation agency, Vinnova.

Within ACE, Höganäs Municipality and Innovation Skåne are two project partners where the basic governance infrastructure for innovation is already in place. The challenge is not whether to adopt but how to ensure that adoption is equitable across municipalities of different sizes, resources, and rural or urban character. A small municipality in northern Sweden faces fundamentally different conditions from a well-resourced urban municipality in Skåne, yet both operate within the same national framework. In practice, the technologies used, the structure of co-creation, and the budget available for ongoing support vary considerably from one municipality to the next.

ACE experience from Sweden confirms that municipal leadership and structured implementation plans are among the strongest predictors of adoption success. Where management communicated clearly about why change was needed and allocated protected time for staff training and co-creation, technology became integrated into normal practice. Where it did not, pilots produced results that did not outlast the project.

Sweden's ongoing national development of welfare technology guidance and digital inclusion standards provide a policy platform that this NSR Strategy can build on. The priority at the NSR level is to ensure that the knowledge Sweden has generated through extended welfare technology experience is documented and shared in forms that other NSR countries can use: particularly on governance models, co-creation with older adults, and lifecycle cost management.



8.2 Denmark

Denmark has integrated welfare technology into its long-term care system more deeply and for longer than any other NSR country. Municipalities are the primary funders and providers of home care, and digital tools such as remote monitoring, medicine dispensers, digital locks, and screen visits are used at scale in many Danish municipalities. The Danish government is preparing a nationwide welfare technology strategy for 2026, developed in consultation with municipalities, unions, and digital experts. The National Board for Digitisation and Data in the Health and Elderly Sector (Nationale bestyrelse for digitalisering og data på sundheds- og ældreområdet) was established in 2024 to provide national governance for digital decisions in health and elderly care.

Within ACE, the municipalities of Aarhus and Vesthimmerland represent two contrasting Danish contexts: Aarhus as a large urban municipality with significant internal capacity for innovation governance, and Vesthimmerland as a smaller, more rural municipality where the organisational and staffing conditions are different. ACE's cross-country report confirmed that in Denmark municipal leadership, structured implementation plans, staff training, and engagement were the decisive factors determining adoption success.

The challenge Denmark faces is less about whether to adopt and more about how to govern adoption at scale. That means ensuring consistent quality across 98 municipalities with very different capacities, moving from technology procurement to outcome procurement, and building the evidence infrastructure that allows different municipalities to learn from each other's experience rather than repeat the same evaluations independently. The pilot trap is real in Denmark too, where well-functioning local implementations do not automatically become regional or national practice.

Denmark's forthcoming National Strategy for Welfare Technology in Elderly Care could create a significant opportunity for NSR alignment. If that strategy incorporates NSR-level principles on outcome-based procurement, shared GDPR interpretation, and cross-border evaluation recognition, it will benefit not only Danish municipalities but also set a standard that other NSR countries can reference and adapt. The NSR partnership should actively engage with the Danish strategy development process.



8.3 The Netherlands

The Netherlands presents the most structurally complex funding environment of the six ACE countries. Long-term care is divided across three legislative frameworks: the Health Insurance Act (Zorgverzekeringswet) covers medical home care, the Social Support Act (Wmo) covers social support and is administered by municipalities, and the Long-Term Care Act (Wlz) covers intensive long-term care. Responsibilities are divided between municipalities, health insurers, and the national government, with different budget owners, different incentive structures, and often different views on what constitutes value.

This fragmentation has ended more than one promising Dutch care innovation programme. The Embrace integrated care model, a well-evaluated programme for older adults with complex needs in northern Netherlands, was discontinued when its innovation funding expired in 2017. None of the funders within the home care ecosystem were incentivised to absorb the ongoing costs, because the expected cost savings fell under a different funding scheme than the one that bore the costs. This pattern is not unique to Embrace: it represents a structural feature of the Dutch home care ecosystem that technology adoption strategies must explicitly address.

Within ACE, Brabantse Ontwikkelings Maatschappij (BOM), Oost NL, and HAN University bring Dutch perspectives on ecosystem development and living lab methodology. The Netherlands has significant strengths in public-private partnership infrastructure, including a network of health innovation hubs, the National eHealth Living Lab (NeLL) ecosystem cluster, and strong quadruple-helix collaboration traditions. The gap is not in innovation capacity but in the post-pilot pathway from successful experiment to sustainable service.

The NSR priority for the Netherlands is clear: post-pilot funding pathway guidance must address the multi-payer structure. Outcome-based procurement frameworks that define which funder benefits from which outcome, and that create shared accountability for scaling decisions, are the most obvious tools available at the NSR level. The Netherlands is also the NSR country where interoperability failures are most documented: the absence of a shared national digital infrastructure has created an environment in which each care institution operates its own IT approach. This makes data exchange, and therefore cross-provider care coordination, significantly more difficult than in the Scandinavian municipal model.

In the Dutch context, the main implication for scaling is that the multi-payer structure and fragmented responsibilities create a structural misalignment between costs and benefits. This means that individual organisations are often unable to scale innovations independently, even when outcomes are positive, as no single actor is responsible or incentivised to carry the full business case.

Therefore, progress depends on cross-organisational coordination and aligned funding arrangements, often at regional level, where municipalities, insurers, and care providers can jointly organise scaling decisions. Cross-border collaboration, as facilitated through ACE, can partly mitigate this by enabling SMEs to access markets where scaling conditions are more favourable. Without structural alignment in the Dutch system itself, however, pilots are likely to remain isolated and time-limited, regardless of their demonstrated value.



8.4 Belgium

Belgium's home care innovation context is shaped by a combination of complex federal governance, high care costs relative to budget, and a vibrant but under-resourced civil society and living lab sector. The country's federal structure divides health and social care responsibilities between the federal government, the three regions (Flanders, Wallonia, Brussels), and the linguistic communities. This creates a regulatory environment that is more fragmented than in the Scandinavian countries and more difficult for technology suppliers to navigate.

Within ACE, Thomas More University's Living & Care Lab (LiCaLab) in Geel represents the Belgian context. LiCaLab provides a structured living-lab environment, aligning potential solutions with end-user needs and co-organising ACE's quadruple-helix workshops. It exemplifies a broader Belgian strength in co-creation methodology and user-centred testing, even as the country continues to face persistent structural barriers to large-scale adoption of innovative healthcare solutions.

ACE findings from Belgium are consistent: high costs, complex funding structures, and reliance on municipal or organisational approval limit the pace of adoption. Refresher training and the involvement of real users improve outcomes markedly when they happen but are often under-resourced.

Belgium also has a higher proportion of informal caregivers than many of the other NSR countries, meaning technologies that support both professional staff and family carers, rather than focusing exclusively on the clinical care encounter, are better suited to the Belgian context.

The most valuable NSR contribution to Belgium is regulatory clarity, particularly shared GDPR interpretations for common home care use cases, alongside funding pathway guidance that acknowledges the regional approval requirement rather than assuming a single national decision-making point. Belgium's living lab infrastructure and co-creation methodology are genuine assets for the NSR partnership: the challenge is ensuring that lessons from the Belgian pilots are documented in ways that can travel across national and linguistic boundaries.



8.5 France

France's home care context is characterised by a pragmatic, use-driven adoption culture, where technologies that are reliable, relevant, and genuinely useful get used and those that are not get abandoned. ACE findings from France revealed the greatest variation within a single country, reflecting a care system in which provider type, regional context, and available budget create significantly different conditions from one organisation to the next. Cost and technical reliability were the primary barriers cited in French contexts, particularly for older populations with lower digital confidence.

Within ACE, Biotech Santé Bretagne (BSB) and CoWork'HIT Innovation Centre represent the Bretagne region, which has been positioning itself as a European digital health hub. BSB's primary role in ACE is to facilitate SME and service provider engagement for testing and showcasing innovative solutions.

ACE

The Bretagne region's September 2024 showcase at the Kerpape Rehabilitation Centre in Ploemeur demonstrated a range of both French and NSR innovations, connecting care professionals, occupational therapists, and older adults with solution providers in a structured evaluation setting.

France's regulatory environment for digital health is evolving. The healthcare system's structure, in which both public hospitals and private providers play a significant role and reimbursement is determined by a national health insurance system, means that procurement decisions often require multiple layers of approval and evidence. Preventive care and social wellbeing outcomes are less embedded in reimbursement logic than clinical outcomes, which limits the business case for some of the most relevant home care technologies. This is a structural barrier shared with several other NSR countries, but it is particularly acute in France, where the clinical-social divide in funding is more pronounced.

The NSR contribution to France is most valuable in two areas. The first is shared evidence frameworks that document value beyond clinical outcomes, including quality of life, staff working conditions, and prevention of care escalation. The second is cross-border testing infrastructure that allows French SMEs and care organisations to evaluate solutions from other NSR countries in their own context before committing to procurement. France's engagement with Interreg through the ACE project reflects a deliberate regional commitment to European health innovation collaboration; sustaining and deepening that engagement beyond ACE will be a priority.



8.6 Germany

Germany is the country in the ACE partnership where the gap between policy intent and operational implementation is most visible. Germany faces severe care workforce shortages: the Federal Employment Agency estimated a shortfall of several hundred thousand care workers in recent years, a gap that is projected to widen significantly with demographic change. At the same time, the use of assistive technologies in German home care remains limited relative to the country's overall technological capacity, and the national strategy for integrating assistive technology into home care governance has historically been fragmented across federal ministries with varying and sometimes conflicting objectives.

Germany has, however, created the most structured reimbursement pathway for digital care applications of any NSR country. The DiPA framework (Digitale Pflegeanwendungen, introduced in 2022) provides a specific regulatory pathway for digital applications that support care recipients at home, with reimbursement available under the statutory long-term care insurance. This is structurally similar to the DiGA pathway for medical apps (Digitale Gesundheitsanwendungen), which has been in operation since 2020 and was expanded under the Digital Act of March 2024. For suppliers who successfully navigate these pathways, Germany offers a clear and reimbursable route to market. Within ACE, the Hamburg University of Technology (TUHH) contributes research and technology development expertise in robotics, image guidance, and deep learning in medicine and healthcare. TUHH's contributions include AI-based home care planning systems and VR exergame prototypes, developed and demonstrated within the ACE showcases. Germany's contribution to ACE is therefore primarily one of technological and methodological expertise rather than care system implementation.

More broadly, Germany is strong on research and on reimbursement frameworks that support innovation adoption, but is still developing the operational infrastructure and cultural readiness needed for widespread adoption in care settings.

Three structural prerequisites for successful assistive technology integration in German home care have been identified in the research literature:

1. Nationwide fast and reliable internet access (still uneven, particularly in rural areas)
2. A clear central government strategy for integrating assistive technology into social care legislation
3. The genuine co-creation of solutions with care recipients, families, and frontline staff

Progress on all three would significantly expand Germany's capacity to benefit from and contribute to NSR-level innovation. The DiPA framework is a meaningful first step on the second of these prerequisites. The NSR partnership is most directly relevant to the third.

8.7 What Alignment Can and Cannot Achieve

Cross-NSR alignment should focus on what creates value at the shared level that individual countries cannot create alone. Based on the six country contexts above, three areas stand out as offering the highest return on NSR-level coordination effort.

1. Shared GDPR interpretation for the most common home care use cases:

Remote monitoring, digital communication, automated medication management, and sensor-based safety systems. Every care organisation and supplier in all six countries currently resolves these questions independently, at significant legal cost and with inconsistent results. A shared NSR interpretation framework, even a non-binding one, would immediately reduce this burden.

2. Post-pilot funding pathway models that acknowledge the structural variation in who pays and how:

The Dutch multi-payer problem, the Belgian regional approval requirement, and the German reimbursement pathway logic are all different. But the underlying problem is a common one: namely that pilots end with no arrangements for what comes next. Shared guidance on how to structure the transition from innovation funding to permanent operation, adapted to different national funding structures, would address the most common cause of pilot failure across all six countries.

3. Cross-border evaluation recognition:

The ability to use evidence generated in one NSR country to inform procurement decisions in another. Currently this rarely happens, because evidence formats, evaluation methodologies, and quality standards differ across countries. Developing shared minimum standards for what constitutes adequate evidence of value and creating the platform infrastructure for sharing it, would dramatically accelerate the pace at which successful solutions scale across the NSR.

The diversity within the NSR is not a problem. It is the source of the partnership's value. Six different national contexts test solutions in six different ways. What survives and creates value across all of them is more robustly understood than what succeeds in only one. The goal of NSR-level alignment is not convergence but the efficient transfer of learning across these different contexts.

9. CROSS-BORDER ALIGNMENT MECHANISMS

This Strategy contains a set of conceptual frameworks and tools that can support alignment across the NSR. Implementing them requires leadership and investment at the NSR, national, or regional level from the actors it addresses.

This work contributes to the implementation of the European Care Strategy (European Commission, 2022), the EU's first initiative dedicated to care. It calls on Member States to invest in innovative digital care solutions, improve care workforce conditions, and present national long-term care action plans ([European Care Strategy](#)).

The accompanying Council Recommendation on long-term care explicitly calls on Member States to roll out digital care solutions, making the system conditions defined here a direct operational contribution to its implementation.

9.1 Mechanisms that ACE Supplies Conceptually

- NSR Innovation Readiness Index (framework and maturity domains)
- Procurement & Compliance Toolkit (recommended structure)
- GDPR Interpretation Guidance Framework
- NSR Living Labs Network concept
- Common Skills Framework

9.2 Mechanisms Requiring NSR-Level Implementation

- Regulatory alignment and shared interpretations for the most common home care use cases.
- Infrastructure investment to reduce the connectivity gap between well-connected and under-served regions.
- Shared funding models that support organisations in moving beyond pilots.
- Procurement standards that prioritise outcomes and interoperability over price alone.
- Cross-country recognition of evaluation results, so that evidence from one context can inform decisions in another.
- Shared interpretation guidance for the EU AI Act as it applies to common home care AI use cases, covering risk classification, conformity assessment requirements, and human oversight obligations.
- Cross-border data governance framework enabling small municipalities to share anonymised training data for AI model development, with appropriate legal and ethical safeguards.
- Common communication frameworks addressing surveillance anxiety and public trust in AI-powered home care tools, adapted to national cultural contexts across the NSR

9.3 Artificial Intelligence: A Shared Governance Challenge

A growing share of home care technologies incorporate artificial intelligence, in acoustic monitoring, care planning, real-time translation, fall detection, and decision support. AI-powered tools were part of the ACE pilot set, and their use will expand significantly moving forward. They create governance challenges that cut across national borders and that existing NSR coordination frameworks were not designed to handle.

The EU AI Act (Regulation 2024/1689) enters full application in August 2026. AI tools that assess, monitor, or support decisions about care recipients are likely to qualify as high-risk systems under the Act, triggering conformity assessments, transparency requirements, and human oversight obligations that are distinct from and additional to GDPR. Every care organisation and supplier across all six NSR countries will need to navigate this simultaneously. As with GDPR, the cost and risk of each organisation interpreting these requirements independently is high. Shared NSR guidance on how the AI Act applies to the most common home care AI use cases, acoustic monitoring, care planning systems, decision support tools, would reduce that cost significantly and reduce the regulatory uncertainty that currently creates risk aversion among smaller care organisations and SMEs.

AI tools also raise a specific cultural barrier that deserves acknowledgement at strategic level. In European care settings, resistance to AI frequently centres on surveillance anxiety, the concern that systems collect more personal information than necessary and that they create a monitored environment incompatible with dignity and autonomy at home. This is backed by politically embedded values and law, and it varies in character across NSR countries.

Addressing it requires suppliers to be transparent about exactly what their systems capture and analyse, and care organisations to communicate clearly that AI tools exist to support care. NSR-level shared communication frameworks and terminology, analogous to what Section 11 describes for technology in general, would help create consistent and credible public messaging across borders.

A third challenge specific to AI is data. AI models require training data that represents the population they will serve, and small municipalities often cannot generate sufficient volume locally to train or adapt a model reliably. Cross-municipal and cross-border data sharing, with appropriate governance, anonymisation, and legal framework, is a practical solution that requires coordination at a level above individual organisations. This is an NSR-level opportunity that no existing mechanism currently addresses.

These three challenges, regulatory interpretation, cultural communication, and data governance for AI, are added to the list of mechanisms requiring NSR-level implementation in Section 9.2.

10. THE ROLE OF SMES IN NSR INNOVATION

SMEs are not peripheral to home care innovation. On the contrary, they are often the ones building the solutions. But their ability to contribute depends on the conditions public home care ecosystems create. This chapter covers what each side of that relationship owes the other.

What **SMEs** must do:

- Adapt products and value propositions to the cultural, regulatory, infrastructural, and funding realities of each market that they enter.
- Engage in co-creation as a genuine practice, not a sales tactic.
- Provide procurement evidence packages that demonstrate usability, safety, and relevance in comparable real-world settings, not only controlled trials.
- Ensure onboarding processes and communication materials are adapted to the languages and literacy levels of the people using their products.
- Investigate national contexts before expanding into them.

What **policymakers and care organisations** must provide in return:

- Predictable regulatory conditions and GDPR guidance that does not require SMEs to hire a lawyer in every country they enter.
- Interoperability standards that make it possible to build a solution once and deploy across contexts, rather than rebuilding for each home care ecosystem.
- Cross-border testing environments and Living Lab infrastructure that SMEs can access
- Procurement processes that reward quality, evidence, and accessibility, not lowest bid.
- Coordinated requirements that reduce the entry cost for smaller suppliers who cannot afford to navigate different procurement frameworks.
- Funding mechanisms that include early-stage and cross-border innovation, not only large established players.

Without this reciprocal commitment, home care innovation across the NSR will increasingly default to a small number of large incumbents. That is bad for care organisations, bad for older adults, and bad for the innovation ecosystem the region is trying to build.

11. COMMUNICATION AS A SHARED ENABLER

Communication is a structural condition for innovation uptake, not a communications task. When NSR-level guidance is absent, inconsistent, or arrives too late, organisations fill the gap with their own interpretations. This results in fragmentation at precisely the moment when alignment is most valuable.

At the strategic level, NSR policymakers and home care ecosystem leaders should:

- Develop shared terminology for home care technology across the NSR, so that terms like “monitoring” or “co-creation” are not defined differently in every country.
- Be explicit about the rationale at the home care ecosystem level: what problem is being solved, what value is expected, and how human dignity and connection are being protected, not traded away.
- Communicate clearly about which regulatory interpretations apply across borders, so that organisations are not each paying to get the same legal question answered.
- Give adequate notice of major decisions, for example on procurement standards, interoperability requirements, and funding model changes, so organisations can adapt their own planning before the change takes effect.

“As part of ACE, we organised workshops to identify the needs and challenges in home care. We learned that many people are unaware of available home care innovations. Therefore, the showcase is a crucial first step in bringing innovations closer to the public and connecting different stakeholders across the home care ecosystem.”

Annouck De Cat
LiCaLab

Communication failures at the strategic level have practical consequences downstream. When guidance does not arrive, or arrives after decisions have already been made, the cost is borne by frontline organisations, their staff, and ultimately by the people receiving care.

12. MEASURING IMPACT AND LEARNING (STRATEGY LEVEL)

The effect logic underlying this Strategy runs as follows: when the five home care ecosystem dimensions are adequately addressed, organisations become capable of adopting and sustaining innovation. The five dimensions are usable technology, sustainable funding, clear regulations, a culture that supports adoption, and reliable infrastructure. In turn, sustained adoption produces the outcomes that matter: greater independence for older adults, safer daily living, less isolation, better workforce conditions, and more resilient services. Fixing the home care ecosystem conditions is not the goal, it is the pathway to achieving that goal.

For this logic to be testable rather than merely asserted, national governments, regions, and NSR bodies need to be able to track whether their own actions are producing the home care ecosystem-level changes that make sustained adoption possible.

That is a different question from tracking whether individual pilots succeed; it asks whether the conditions for success are improving across the ecosystem as a whole. this logic to be testable rather than merely asserted, national governments, regions, and NSR bodies need to be able to track whether their own actions are producing the home care ecosystem-level changes that make sustained adoption possible. That is a different question from tracking whether individual pilots succeed; it asks whether the conditions for success are improving across the ecosystem as a whole.

12.1 What the End Stage Looks Like

The 2030 vision translates into a set of observable ecosystem-level outcomes that should be visible if this Strategy is working:

- Increased digital literacy and confidence among care staff, older adults, and families across the NSR, including in under-resourced and rural areas.
- More older adults living safely and independently at home for longer, with improved perceived autonomy and social wellbeing.
- Reduced fragmentation in regulatory interpretation, procurement standards, and interoperability practice across NSR countries.
- Growing proportion of care technology deployments that transition to permanent operation with defined ongoing funding, rather than ending with the project.
- A more diverse and capable SME ecosystem operating across NSR borders, with documented market adaptation and evidence packages.
- Stronger governance capacity at the organisational and home care ecosystem level, including more initiatives with clear ownership, defined decision pathways, and cross-functional coordination from the start.

12.2 What National Governments and Regions Should Track

National and regional actors implementing this Strategy need indicators that tell them whether their own policy actions are working, not only whether funded projects are completing their deliverables. The following categories are relevant for this purpose:

- **Reimbursement framework reach:** What proportion of home care technology deployments are covered by sustainable reimbursement, rather than dependent on project or grant funding? Is the gap between pilot funding and permanent operation narrowing over time?
- **Regulatory clarity:** Are care organisations and suppliers reporting reduced uncertainty in GDPR interpretation and data compliance for common use cases? Are legal interpretation costs per deployment falling as shared guidance becomes available?
- **Infrastructure parity:** Is the connectivity gap between best-served and least-served municipalities narrowing? Are rural and smaller municipalities gaining access to the digital infrastructure required for care technology deployment on terms comparable to urban municipalities?
- **Procurement reform:** What proportion of public home care technology procurements include outcome requirements, lifecycle costing, and usability evidence? Is the share of lowest-price-only procurement declining?
- **Post-pilot transition rate:** From the publicly-funded home care technology pilots reaching the end of their project period, what proportion transition to permanent operation? Tracking this over time is the most direct indicator of whether the pilot trap is being addressed.

12.3 What NSR-Level Bodies Should Track

For NSR-level coordination to be accountable, the partnership needs shared indicators of whether cross-border alignment is actually happening and not only whether Interreg deliverables are being completed. Relevant indicators include:

- **Number of shared GDPR interpretations for common home care use cases formalised and adopted across NSR countries,** and the proportion of care organisations and suppliers reporting that they use them.
- **Number of Living Lab evaluations with documented cross-country recognition** where evidence generated in one NSR country is explicitly used to inform procurement or policy decisions in another.
- **Progress toward common procurement standards:** how many NSR countries have incorporated outcome evidence requirements and interoperability criteria into standard public procurement frameworks for home care technology.
- **Cross-border knowledge exchange volume:** documented sharing of micro-cases, evaluation findings, and governance lessons across NSR partner organisations, with a measure of whether that knowledge is being acted on.
- **SME cross-border scaling with documented adaptation:** number of SMEs successfully operating in more than one NSR country with documented evidence of market and regulatory adaptation.

Section 13 of the accompanying Action Plan (“on monitoring”), covers indicators at the organisational level and includes the measurement principles that care organisations and municipalities should apply when evaluating their own initiatives. The two measurement levels are designed to be complementary: what national and NSR actors track through policy indicators should be visible in the aggregate of what organisations report through their own monitoring.

13. CONCLUSION

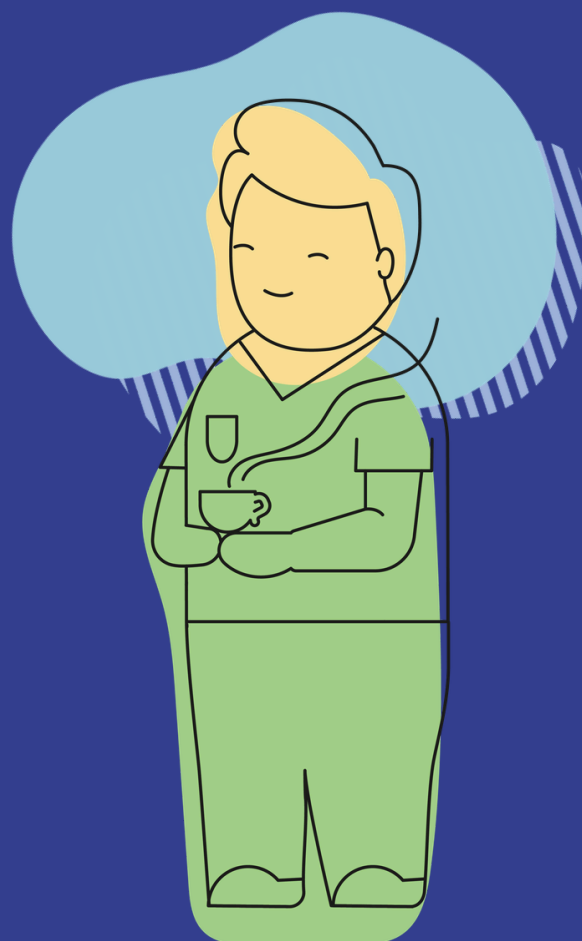
The North Sea Region has a genuine opportunity. The challenges impeding the development of Europe’s home care ecosystem are shared. The evidence base, built across thirteen partners and multiple national contexts, is real. And the actors this Strategy is addressed to hold exactly the structural levers needed to create real and long-lasting change across funding frameworks, regulatory guidance, procurement standards, and infrastructure investment.

What this Strategy asks for is not more pilots, but rather, for the conditions in which successful pilots can become standard practice. To achieve this, it requires:

- **Policymakers and funders** to anchor future programmes in the five home care ecosystem dimensions, to move beyond technology-only frameworks, and invest in the governance and regulatory conditions that make adoption last.
- **NSR-level leadership** to take the cross-border alignment mechanisms described in Section 9 and formalise them beyond the ACE project lifecycle. This includes GDPR alignment, shared procurement standards, interoperability and shared funding models. These should not be rebuilt from scratch by every future initiative.

- **Regions and national governments** to treat digital infrastructure parity as an equity commitment, and to close the regulatory fragmentation that currently prevents innovation from moving across NSR borders.
- **All home care ecosystem actors** to adopt effect-driven governance: to define what outcomes they are working toward, measure whether they are achieving them, and make decisions, including difficult ones about what to stop, on that basis.

The **Action Plan** that accompanies this Strategy provides the operational details to translate these commitments into practice at the municipal and organisational level.



APPENDIX

The 20 Critical Adaptation Areas identified by NSR Care Organisations

- 1 **Digital infrastructure readiness:** Stable, fast, and secure internet access across care settings, including homes, with fallback options where needed.
- 2 **Alignment and clarity of regulations (including GDPR):** Clear, shared interpretations of legal requirements that organisations can act on, rather than each having to develop their own understanding.
- 3 **Policy support for innovation and co-creation in care:** Funding programmes and policy frameworks that explicitly support co-creation and organisational readiness, not only technology purchase.
- 4 **Structured local implementation governance:** Defined roles, responsibilities, and coordination processes that cover the full innovation cycle, not just the pilot phase.
- 5 **Time and structures for co-creation and stakeholder involvement:** Allocated time and formal processes for collaboration with staff, citizens, informal caregivers, and partners, rather than squeezing this into whatever time is left over.
- 6 **Organisational training and competence development:** Structured, repeated training combined with systematic peer learning to ensure that competencies are consistent across teams and professions and do not depend on individual motivation, informal champions, staff change, workloads increase, or attention shifts.
- 7 **Culture and mindset change toward technology use:** A working culture in which technology is genuinely considered as a first option when it supports independence, not as an exception requiring special justification.
- 8 **Market adaptation and contextualisation by suppliers:** Suppliers adapting to the specific economic conditions, funding structures, and regulatory requirements of each country and organisation they work in.
- 9 **User-centred design and adaptability of technology:** Technologies designed around how people actually live and work, adapted continuously based on real user feedback.
- 10 **Evidence generation and evaluation:** Evidence used before implementation to inform decisions and collected throughout to track whether outcomes are being achieved.
- 11 **Sustainable funding and financing models:** Funding that covers the full operational lifespan of a solution, with clear payer responsibilities defined from the outset.
- 12 **Ethical and social considerations in technology use:** Technologies that strengthen empowerment, independence, and social connection and that do not erode the human relationships that make care work.
- 13 **User training for appropriate care practice:** Care staff and relevant stakeholders (including citizens where applicable) must receive structured onboarding, practical training, and continuous competency development to ensure confident, correct, and consistent use of the solution in daily care practice.
- 14 **Management engagement and leadership:** Active leadership of implementation, with clear communication of purpose ("why"), defined expectations, allocated resources, and support for staff to act on insights generated by the solution.

- 15 Workflow alignment:** Integration of the solution into existing care workflows and planning processes, with defined procedures for how data is used, acted upon, and built into daily operations and decision-making.
- 16 Interpretation and decision support:** Clear roles, responsibilities, and guidance for healthcare professionals to interpret system outputs and translate them into appropriate, timely, and actionable care interventions.
- 17 Inclusion of relatives and caregivers:** Systematic information, involvement, and support for relatives and informal caregivers when technologies are implemented in the home, ensuring transparency, trust, and alignment with care practices.
- 18 Data governance and privacy handling:** Compliance with data protection regulations and appropriate data handling (for example, anonymisation where possible), while minimising administrative and legal barriers to implementation.
- 19 Technical adaptation to real-life environments:** Configuration, training, and validation of the technology to function reliably in real-life home environments, accounting for variations in physical settings, user behaviour, and data availability.
- 20 Language and communication alignment:** Communication, user interfaces, and supporting materials adapted to the relevant languages and contexts of stakeholders, ensuring effective collaboration and correct use of the solution.

