Procure 4Health

ACTIONPLAN

Funded by the European Union

GA nº 101057209

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List of abbreviations

AI	Artificial Intelligence
AP	Action Plan
CROM	Clinician-Reported Outcome Measures
CSRD	Corporate Sustainability Reporting Directive
EHR	Electronic Health Record
EMAS	Eco Management and Audit Scheme
ESG	Environmental, Social, and Governance
GDPR	General Data Protection Regulation
HL7	Health Level Seven
ICHOM	International Consortium for Health Outcomes Measurements
FHIR	Fast Healthcare Interoperability Resources
FSC	Forest Stewardship Council
ICT	Information and Communication Technology
ISO	International Organisation for Standardisation
IT	Information Technology
PCP	Pre-Commercial Procurement
PPI	Public Procurement of Innovation
PPM	Predictive and Precision Medicine
PROM	Patient-Reported Outcome Measures
RESAH	Réseau des Acheteurs Hospitaliers
RFAR	Label Relations fournisseurs et achats responsables (Responsible supplier Relations and Purchasing Label)
VBP	Value-Based Procurement

Executive summary

This Action Plan offers practical recommendations and steps to support innovation procurement in health and care organisations, helping to address challenges and improve services and outcomes. It is primarily aimed at operational decision-makers in hospitals, primary care centres, community facilities, care homes, and procurement bodies, providing them with clear guidance on how to implement or enhance innovation procurement.

Strategic themes for innovation provurement

Action 1

Value-based Procurement

Introduce a Value-Based approach to procurement of health technologies and innovations

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Incentivise the adoption of innovation and cultivate an "impact first" mindset

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Action 4

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Integrated care

Design and implement shared innovation procurement approaches for integrated care service delivery improvements

Action 6

Predictive and Precision Medicine (PPM)

Develop and deploy strategies to promote the integration of innovative solutions in predictive and precision medicine into clinical practice

Figure 1: Overview: six actions for public procurers

Action 1

Value-Based Procurement (VBP)

Introduce a Value-Based approach to procurement of health technologies and innovations

VBP is a key theme across all four action areas. It encourages purchasing decisions based on measurable outcomes and overall impact on care quality and cost, rather than the lowest price alone. By focusing on value, VBP aims to improve both efficiency and service quality. Its implementation, however, requires systemic changes—ranging from skills and data infrastructure to incentives, complexity management, and professional culture.

Action 2

Impactful innovation

Incentivise the adoption of innovation and cultivate an "impact first" mindset

Many innovation projects stall in the so called, valley of death': the gap between successful pilots and full-scale implementation. This limits impact, wastes resources, and constrains the potential of European health and care systems. Key barriers include weak commitment, poor governance, and inadequate pilot evaluations, which result in insufficient evidence for broader adoption. To overcome this, clear strategies for scaling and integrating innovation into routine care are essential and should be considered from the earliest stages of pilot design and implementation. Strong leadership and cross-functional collaboration can also help address internal resistance and support sustained adoption.

Action 3

Sustainability

Implement a strategy and policy for sustainable procurement in health and care organisations

The goal of sustainable procurement in health and care is to purchase environmentally and socially responsible goods and services while staying within the organisation's economic limits. However, health and care providers face several barriers, including cost concerns, limited awareness of sustainability issues, complex supply chains, and the involvement of multiple stakeholders – particularly in large institutions like hospitals. Additional challenges include measuring the impact of sustainability strategies, evaluating suppliers, selecting relevant criteria, and the lack of clear standards and tools.

Action 4

Digital health and care

Establish a mechanism to procure innovative digital solutions meeting health and care stakeholder needs

Health and care organisations should establish mechanisms to procure digital technologies that align with stakeholder needs and improve service delivery. However, procuring innovative digital solutions presents several challenges. Many technologies are still immature, and existing systems often create compatibility and fragmentation issues. Information asymmetry between buyers and vendors further complicates decision-making. Additional barriers include risk-aversion, resistance to workflow changes, limited expertise in innovation procurement, and difficulties in monitoring contract performance.

Action 5

Integrated care

Design and implement shared innovation procurement approaches for integrated care service delivery improvements

Shared innovation procurement enables collaboration among health and care providers, enhances efficiency, and ensures that procured solutions support the goals of integrated care. However, several barriers must be addressed, including institutional fragmentation, a hospital-centric focus on acute care, and incentive systems or professional cultures that prioritise medical specialities over holistic care. Additional challenges include the complexity of patient needs, the non-linear nature of innovation, governance issues, and inconsistencies in the technologies used across organisations.

Action 6

Predictive and Precision Medicine (PPM)

Develop and deploy strategies to promote the integration of innovative solutions in predictive and precision medicine into clinical practice

PPM focuses on tailoring treatment to individual characteristics, including genetic, environmental, and lifestyle factors. Its primary goal is to prevent illness or minimise harm when it occurs. For public procurers, the challenge is to identify innovative solutions that support PPM objectives while managing costs and avoiding over-diagnosis or over-treatment. A key barrier is that implementing PPM often requires significant restructuring of health and care systems.

Reader's guide to the Action Plan

This document presents the Action Plan for public innovation procurement in health and care, developed by members of the Procure4Health project. It provides a framework to guide health and care organisations in implementing innovation procurement processes. The Action Plan is the result of collaborative work undertaken by project working groups, each focused on specific action areas and strategic themes detailed within the document.

Given the document's broad scope, the content has been structured for clarity and ease of navigation, allowing readers to focus on areas of most relevance to them. Whether you're new to innovation procurement or seeking specific insights, this guide is designed to help you quickly find the information you need.

The document opens with an overview of the Action Plan framework and its key components, followed by the strategic themes. For readers new to the topic, this Reader's guide section offers a useful introduction; for those more familiar, it serves as a helpful refresher.

The AP then explores four action areas for applying innovation procurement: sustainability, digital health and care, integrated care, and predictive and precision medicine. Each theme is presented in a separate chapter with a consistent structure. While terminology and focus differ to reflect each area's unique context, shared principles and strategies run throughout—meaning insights from one chapter can often be applied across others. Importantly, the approaches of VBP and impactful innovation serve as transversal enablers across all four areas. They provide the frameworks through which health and care systems can procure not only for cost efficiency, but for improved outcomes, sustainability, and long-term system transformation.

While we encourage reading the full document for a comprehensive understanding, you may choose to begin with the introduction and then explore the chapter most relevant to your interests. This approach offers practical guidance to start implementing innovation procurement strategies that drive meaningful change.

Action Plan framework and overall considerations

Innovation procurement has the potential to deliver more effective, efficient, and sustainable health and care services. However, despite increasing policy attention, pilot activity, and funding, the scaling and routine use of innovation procurement remains limited across Europe. Procurers face systemic challenges that go beyond technical complexity and touch on institutional readiness, governance, and culture.

Procurement can be perceived as a key and owerful tool supporting an organisation's strategy. It should be understood by all stakeholders that procurement does not end at the purchasing department — it involves continuous communication and feedback across clinical, administrative, and operational units.

Common obstacles and barriers

Based on stakeholder feedback and lessons from EU-funded projects, several recurring barriers limit the uptake of innovation procurement in practice. These include:

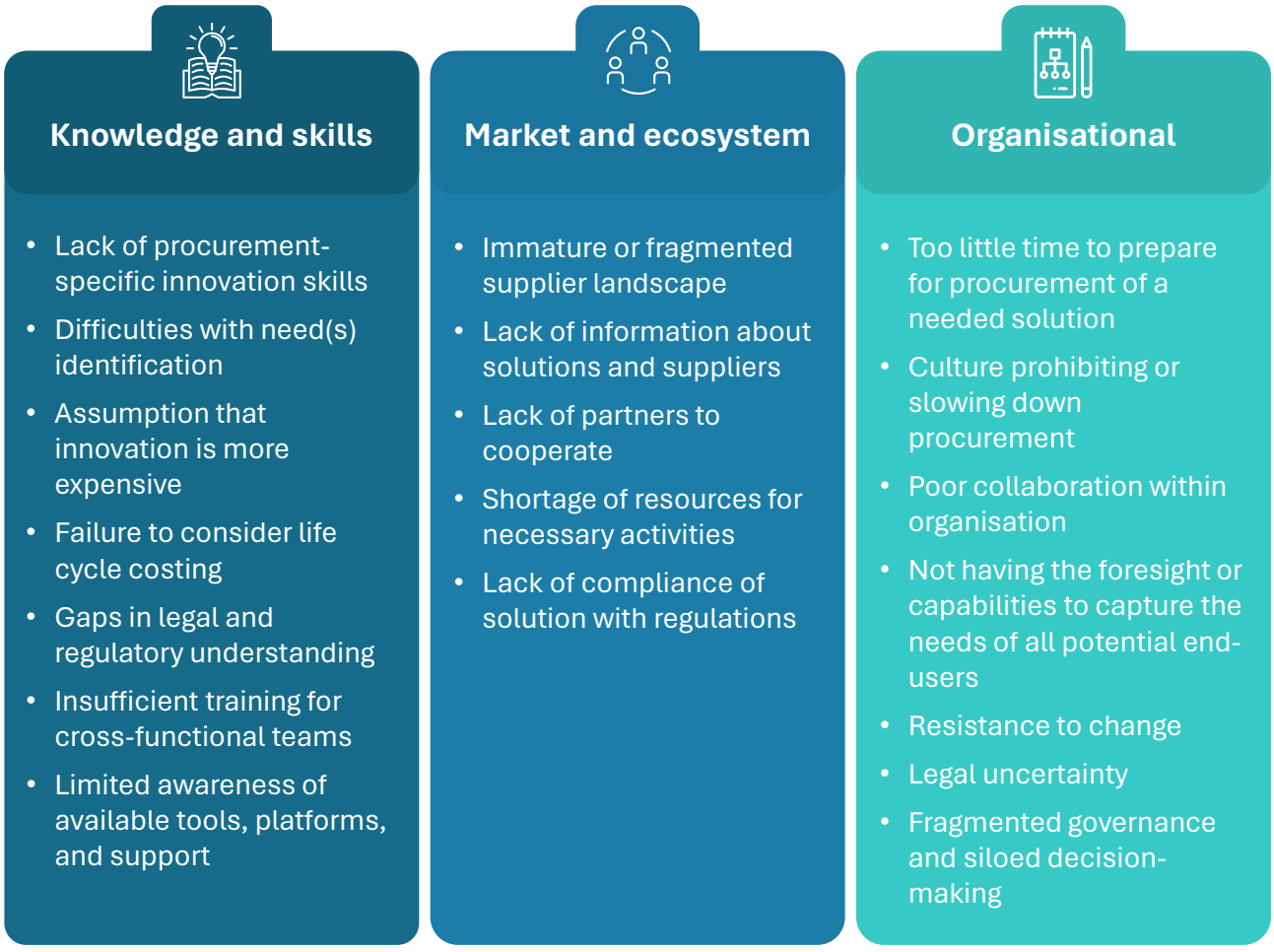

Figure 2: Innovation procurement barriers

Action Plan framework

The Action Plan framework consists of four components: 1) Vision and mission, 2) Action areas, 3) Strategic themes, 4) From needs to actionable implementation steps.

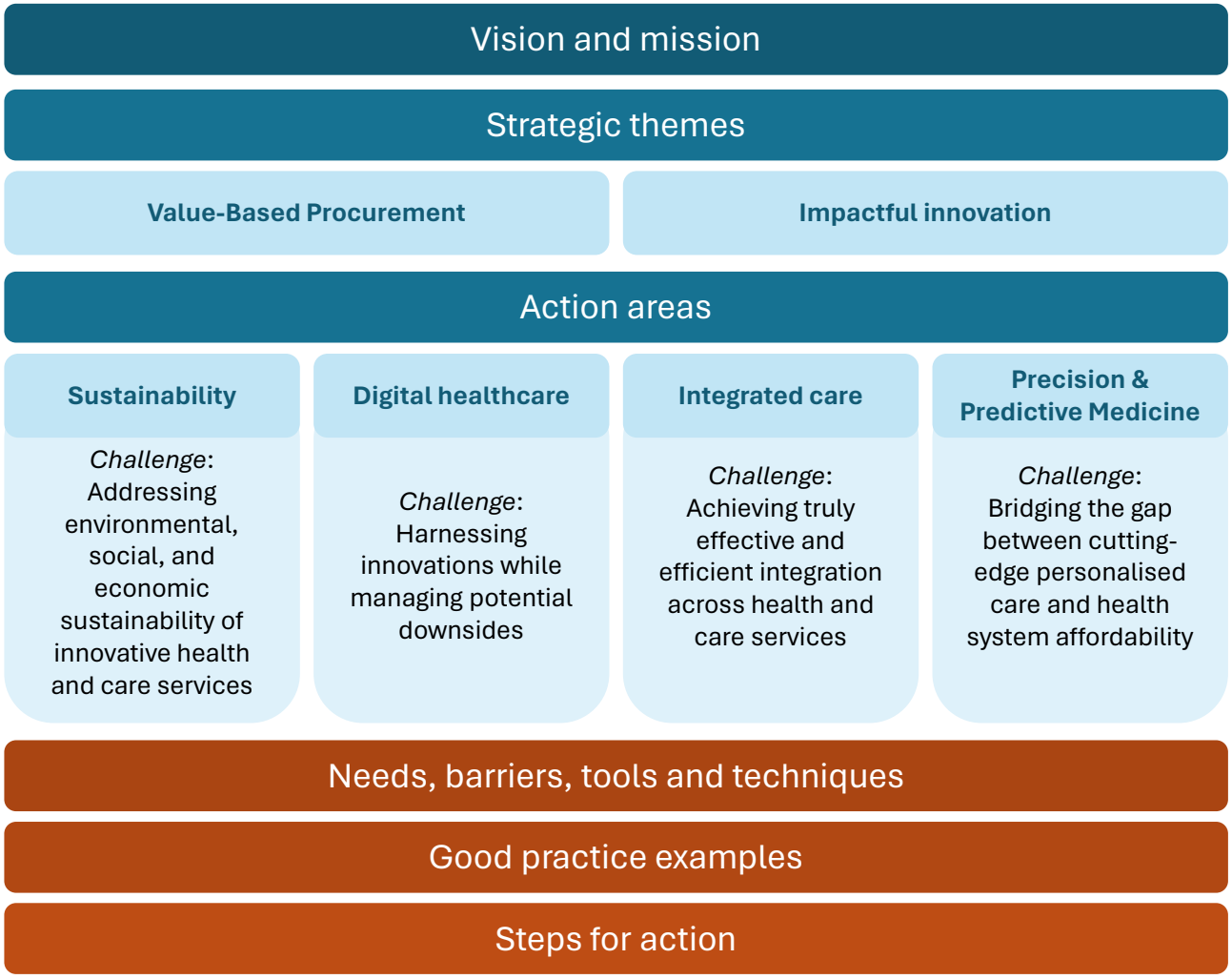

Figure 3: Action Plan framework

Vision and mission

The overall vision of the Action Plan is to enable health and care providers to deliver more efficient and effective health and care services and improvements to patient outcomes by procuring innovative solutions and adopting innovative procurement processes — referred to here as innovation procurement. Its mission is to define actions that build knowledge, expertise, and initiatives, helping providers better anticipate and address current and future health and care challenges across Europe.

Strategic themes and action areas

Two strategic themes run throughout the Action Plan. The first is VBP, which prioritises outcomes and long-term value over lowest-cost purchasing. The second is impactful innovation, which focuses on ensuring that innovations are not only piloted but successfully adopted and scaled to deliver real-world benefits. The Action Plan identifies four areas where innovation procurement can create system-level change. These are sustainability, digital healthcare, integrated care, and PPM.

From needs to implementation steps

Each action area includes a set of implementation steps to help public buyers put innovation procurement into practice.

System requirements and enablers for success

(Innovation) procurement in health and care involves a range of requirements—operational, technical, planning, business, environmental, legal, and social. The environmental, legal, and social aspects relate to sustainability and are addressed in the dedicated sustainability chapter. Sustainability is also treated as a cross-cutting theme throughout the other chapters.

Service/Operational requirements

To achieve optimal value, procurers must secure the highest possible quality of services and outcomes at a fair price. Key service and operational requirements identified by procurers include:

+ **Quality standards:** Solutions must meet high standards of quality, safety, and comply with all relevant regulations—particularly for medical devices and pharmaceuticals, where patient health is directly impacted. Above all, the solution should support, enhance, or help redesign care processes while contributing to better patient outcomes and experiences.
+ **Usability and accessibility:** The solution should be easy to use and accessible to all, considering language, cultural relevance, and the needs of people with disabilities.
+ **Timeliness:** Solutions should be delivered promptly to ensure continuity and efficiency in care.
+ **Integration:** New solutions should seamlessly share and store data within and across existing systems—such as electronic health records (EHRs) and hospital management software—to prevent fragmentation and support continuity of care.
+ **Scalability:** The solution should be scalable, able to expand as the organisation's needs grow or as patient volumes increase.
+ **Support and maintenance:** Vendors should offer ongoing support, regular updates, and maintenance to ensure the solution remains functional, secure and up to date.

Technical/digital requirements

An innovative solution should be technically mature for practical use – though, by nature, there may be limited prior experience with the solution. Key technical requirements in innovation procurement include:

+ **Functionality:** The solution must offer the core features and capabilities needed by health and care providers and patients. This includes customisability, support for workflow redesign, and system integration. Functionality is the baseline criterion—if a solution does not meet the defined unmet need, it is not suitable for procurement.
+ **User-friendliness:** The solution should feature an intuitive user interface that minimises training needs and enables health and care staff to use it effectively.
+ **Compliance with standards:** The solution must comply with industry standards, such as HL7 or FHIR, to ensure seamless integration with health and care digital solutions and maintain regulatory compliance.
+ **Data security and privacy:** The solution must follow strict security protocols—such as encryption and authentication—and comply with regulations like GDPR to protect patient data and ensure privacy.
+ **Interoperability:** Solutions must be compatible with existing systems, such as Electronic Health Records (EHRs), telehealth platforms, or laboratory information systems, to enable seamless data exchange and integration.
+ **Reliability and continuity:** The solution must ensure consistent performance with minimal downtime or disruptions, especially in acute and continuous care settings.

Planning requirements

Procurers must address challenges at each phase of the innovation procurement process. Effective planning ensures the process is well-structured, aligned with organisational goals, and supports successful implementation and long-term use. Key procurement phases include pre-tender market consultation, tendering, solution design, prototype testing, limited deployment, solution evaluation, and planning for large-scale procurement.

Business/Financial requirements

Business requirements of procurement relate mainly to costs – not only the initial price but also transaction costs associated with searching, negotiating, and monitoring contract fulfilment. Solutions must be cost-effective, with consideration for both initial and ongoing expenses, including maintenance. Procurers should also factor in applicable reimbursement models for medical devices and digital therapies, as well as the organisational changes needed for implementation. Aligned with VBP, decisions should prioritise long-term value, focusing on improved patient outcomes and overall care cost reduction, rather than the lowest upfront price.

Environmental/Societal impact requirements

Procurers should consider environmental impacts such as climate change, biodiversity loss, and pollution of soil, water, and air. Innovation procurement must promote environmentally sustainable production, delivery, and material use. Additionally, social responsibility is key—procurement practices should support ethical labour, social inclusion, the foundational economy, and the well-being of vulnerable populations.

Legal/Regulatory requirements

Procurers must carefully navigate the legal requirements of innovation procurement. Solutions must meet relevant regulatory standards, often requiring legal advice to clarify potential implications. Equally important is ensuring that the procurement process itself is legally sound. A survey of project partners revealed that many health and care organisations need legal support—particularly in interpreting procurement regulations and evaluating tenders. This need is especially pronounced in countries slower to adopt innovation, where legal risk aversion is more common. Three EU directives adopted in 2014 significantly reshaped public procurement: Directive 2014/23/EU on concession contracts, 2014/24/EU on public procurement, and 2014/25/EU on procurement in sectors such as water, energy, transport, and postal services. The Action Plan acknowledges the legal challenges providers face, especially in navigating these complex regulations, and calls for greater access to legal advisory services and clearer guidance to support compliance in innovation procurement.

Tools and techniques

Tools and techniques help overcome barriers and meet procurement needs by strengthening competencies through information, training, and awareness. They support innovation procurement by building skills, shifting mindsets, and providing methods for needs assessment, change readiness, and matchmaking. Often digital, these tools include software for analysing clinical needs and platforms for connecting stakeholders. The Action Plan outlines relevant tools for each action area to help procurers address key challenges.

Workforce and Capability Development

The successful implementation of innovation procurement relies on the availability of skilled and well-supported professionals across all stages of the process - from needs assessment to adoption. Procurers, clinicians, managers, and IT staff alike must develop new capabilities to engage with complex, cross-functional innovations that often demand new workflows, data competencies, and long-term planning. Key skill areas include:

+ **Financial literacy and strategic cost management.** Understanding total cost of care, life-cycle costing, and value-based budgeting enables more sustainable procurement decisions and long-term planning for innovation scale-up.

+ **Legal and regulatory understanding.** Early legal insight is essential to navigate complex procurement directives and compliance frameworks, particularly for emerging technologies like AI or medical devices.
+ **Stakeholder engagement and co-creation facilitation.** Building innovation collaboratively with users requires skills in facilitation, negotiation, and aligning diverse needs — from clinicians to patients to suppliers.
+ **Outcome monitoring and performance evaluation.** Teams must be able to define meaningful indicators, track impact over time, and use data to support decisions on adoption, adjustment, or scaling.
+ **Change management, addressing resistance to change.** Successfully embedding innovation requires the ability to lead through uncertainty, foster shared ownership, and build momentum among stakeholders at all levels.

Capacity and capability building must also address workforce shortages by ensuring that procurement strategies align with operational realities — and by supporting solutions that reduce pressure on limited human resources. Continuous learning, peer exchange, and access to curated tools and real-life examples are essential to foster a culture of innovation readiness. The Action Plan highlights opportunities to embed structured training, mentoring, and community-building into every stage of innovation procurement.

Good practice examples

Each action area highlights good practices in innovation procurement to guide procurers, expand the Procure4Health network, and showcase ways to foster innovation. While these practices are meant to inspire, differing regulations, reimbursement models, and approval processes often limit direct transfer between health systems.

Steps for action

Each action includes step-by-step guidance to help health and care providers, and procurement professionals implement innovative solutions[1].

[1] Note: Buying innovation is a process of change that often requires significant organisational transformation. This Action Plan aims to support those ready to embrace innovation in procurement. For deeper insight, readers are encouraged to consult additional change management resources to complement the guidance provided. (Kotter, J. P. (1995). Leading change: Why transformation efforts fail. Harvard Business Review, March–April. https://heeoe.hee.nhs.uk/sites/default/files/leading_change_why_transformation_efforts_fail.pdf).

Strategic theme
Value-Based Procurement

Definition

VBP means choosing solutions based on how well they deliver desired results and lower overall healthcare costs, rather than just picking the cheapest option. Value-based payment models (also called value-based agreements or value-based pricing) focus on paying for results instead of the number of solutions provided. These models tie payments to achieving better patient outcomes at lower costs for a specific group of people. Healthcare providers, along with patients and organisations, are responsible for meeting financial and health goals that are important to patients. These models encourage sharing risks and improving outcomes by working together across the pathway outcomes for both individuals and groups[2].

Background for VBP

Economic Sustainability. Healthcare systems are dealing with growing demand, more complex care needs, and limited money and staff to manage these challenges. Health outcomes for individuals and groups are not improving as quickly as the resources being spent, so health systems are adopting value-based methods to focus on achieving the results that matter most to patients within the available resources. Procuring technologies and services constitute a big part of healthcare spending, and new, costly innovations are being developed. It's essential that these purchases create more value for the healthcare system. VBP is not a separate effort but a key part of a value-based healthcare system, where all parties – patients, providers, procurers and policymakers – work together to improve health outcomes and get the best results from the resources available.

Effective and accelerated Innovation. VBP helps achieve important goals in at least two main ways. First, healthcare innovations must directly address real patient needs to be effective. By focusing on outcomes that matter to patients, VBP encourages the use of innovations that improve patient care while identifying and stopping investment in those providing little or no value. Second, introducing new, promising innovations can be slowed down by a lack of data or uncertainty about how well they work in the real world. Outcome-Based Agreements in VBP allow patients to access these innovations sooner by sharing the financial risks between suppliers and healthcare providers while collecting better data on how effective and beneficial they are.

Action 1

Value-Based Procurement

Introduce a Value-Based approach to procurement of health technologies and innovations

Aim

To get the most value from investments in medical technologies, devices, diagnostics, and innovations, partnerships with industry and VBP should be used when appropriate. As mentioned earlier, VBP does not always match the way healthcare funding works in practice. However, when it does, VBP can help bring new innovations into use earlier, even if there's less evidence of their effectiveness, by sharing the risk between the health system and the supplier. It can also encourage the better identification of patients who will benefit most from the solution, and those who are unlikely to benefit or have little benefit. While high-cost, low-volume products are usually linked to Outcomes-Based Agreements, there are examples where these agreements have been successful for high-volume, low-cost items too[3].

Requirements

Clinical

VBP relies on early and close collaboration between clinicians, procurement professionals and other relevant stakeholder / end user groups. Each group brings their own expertise to the relationship and collaboration. Establishing this partnership early in the potential procurement is critical. Clinicians, in particular, play a key role to:

+ **Define the clinical need.** Identifying where innovation is required based on patient and system needs.
+ **Define the target patient cohort.** Determining which patients will benefit most from the innovation to maximise value and establish a measurable baseline.
+ **Define key outcome measures and timelines.** Collaborating with patient advocacy groups to focus on meaningful clinical and patient-reported outcomes (CROMs and PROMs), using tools like ICHOM's outcome sets[4].
+ **Identify relevant data sources.** Specifying where outcome data will be collected and how it will be used to track contract performance.
+ **Monitor changes in care delivery.** Observing shifts in clinical processes that could impact outcome measures.

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[3] Cairns, C., Marshall, A., Cook, M., & Parker, D. (2024). Incontinence products: Value-based care, procurement and a pilot study in a single acute trust. Nursing Times 120: 9. www.nursingtimes.net

[4] International Consortium for Health Outcomes (ICHOM). Patient-centered outcome measures. https://www.ichom.org/patient-centered-outcome-measures/

+ **Track updates to inclusion criteria.** Keeping up with changes in eligibility that may affect implementation or impact.

Clinicians and health service managers need training to collaborate effectively with procurement teams, as this is not their usual role. They may be unfamiliar with procurement processes and laws. Joint learning with procurement teams can improve understanding, clear up misconceptions, and build trust.

Technical/Digital requirements

Creating and managing an Outcomes-Based Agreement requires extra data not typically used in procurement. These data must be sourced, shared, and interpreted, often requiring data-sharing agreements and collaboration between procurement teams and care providers. Systems must also enable performance data sharing with suppliers while ensuring GDPR compliance. Trusted third parties or specialised platforms can support this process. Ongoing performance monitoring is essential, with regular reviews to address unexpected outcomes, events, or risks.

Business/Financial requirements

Purchasing new solutions through Outcomes-Based Agreements requires clear and tailored business models from both demand and supply sides. For example, a pathway-wide proposal (rather than a narrow solution focus) may be desirable to optimise the value of an innovation and ensure the right patients have access to it. Drafting alternative business models that can be used and re-used may be helpful.

Environmental/Societal impact requirements

VBP not only aims at improving patient outcomes but also considers broader benefits. These include sustainability, social value, corporate responsibility, local economies, and technical value. It can also help achieve carbon net-zero goals and improve care efficiency.

Barriers and potential enablers

Implementing VBP requires change across the health system, its procurement teams and suppliers alike, and is often met with significant barriers.

Skills and knowledge

Procurement teams and clinicians often lack training in VBP and the collaborative mindset required for success. This gap extends beyond general awareness to include practical capabilities such as total cost of care analysis, outcome-based contracting, and value assessment. The following actions will help to address the gap:

→ Provide structured training on VBP concepts, outcome frameworks, life-cycle costing, and interdisciplinary teamwork.

- Develop and share practical tools, such as standard outcome templates, sample VBP contract clauses, and supplier engagement guides.
- Share best practices and case studies across health systems and procurement communities.

Complexity

VBP benefits all partners but can be more complex than traditional procurement. It requires extra resources, which could slow adoption. As VBP becomes more common, standard processes will help simplify it.

- Starting with smaller, simpler agreements can build confidence and improve understanding of outcome-based contracting, performance indicators, supplier relationships, and long-term value assessment within regulatory and financial frameworks.

Data

Designing and running VBP and outcomes-based agreements requires access to clinical and patient-reported data, which procurement teams usually do not use. Contract performance data must also be shared with suppliers while following the GDPR. This may require new data-sharing agreements and processes for pseudonymised data sharing.

- A trusted third party can help manage, analyse, and visualise data consistently, supported by a secure shared database with access logs and auditing to ensure data integrity and traceability.

  Perhaps the greater challenge is the availability and completeness of the outcomes data required for contract performance. This may limit the choice or number of outcomes that can be used in early procurements whilst outcomes data systems are being improved.
- Focus on outcomes with available, reliable data in early phases.

Incentives

Health suppliers need to understand the role of VBP and how it can help them to deliver better patient outcomes while making the most of available resources. VBP also allows suppliers to introduce innovative solutions earlier, while reducing spending on low-value treatments or technologies that do not improve health outcomes. A key and often missed idea behind VBP is looking beyond just the price of a solution and considering its long-term impact on patient care and overall healthcare costs – this is known as the total cost (life cycle costing) of care perspective. VBP thus requires a wider, total cost of care perspective that recognises that technologies and innovative services are just one part of the care pathway and can create value elsewhere.

- Educate financial and operational managers about total cost of care.
- Update incentive models to reward value creation and better patient outcomes.
- Promote life cycle costing in procurement decisions.

Cultural barriers

Shifting from price-based procurement to value and patient outcomes is a major change for both procurement teams and healthcare professionals.

→ Close collaboration is essential, and this transition should be acknowledged and supported.

Good practice example

Value-Based Procurement in RITMOCORE[5]

The RITMOCORE project offers a pioneering example of value-based procurement (VBP) applied to the treatment of patients with bradycardias needing pacemakers. Instead of purchasing medical devices based on unit price, RITMOCORE shifted to buying comprehensive care services. This approach incorporated remote monitoring, patient activation, coordinated care across health levels, and personalised treatment with a full pacemaker portfolio.

Procurement was structured through long-term, risk-sharing contracts that prioritise outcomes over activity, including pay-per-population and pay-per-service (not devices!) models. Clinical success was incentivised by tying a portion of supplier payments to key performance indicators aligned with patient-centred outcomes (e.g. ICHOM standards).

The initiative succeeded due to close collaboration between hospitals, suppliers, and knowledge partners, with strong change management and digital transformation support. Outcomes include improved patient experience, reduced complications, better clinical data use, and enhanced sustainability for healthcare systems. RITMOCORE demonstrates how value-based procurement can transform healthcare delivery by aligning the interests of all stakeholders toward long-term patient wellbeing and efficiency.

[5] https://ritmocore-ppi.eu/

Steps for action

Healthcare providers should develop and implement a VBP strategy led by procurement leaders, with early engagement of senior clinicians to shape the approach. Multi-disciplinary teams combining procurement and clinical expertise are key to implementation, supported by active executive leadership and dedicated resources.

1

Secure executive management support

Ensure directors, general managers, and senior clinical colleagues understand and endorse principles of VBP. Engage them in developing value-based tenders and monitoring contract performance.

2

Take stock - internally and externally

Assess the readiness of your procurement team and healthcare provider. Invest in training and education and share knowledge and good practice.

3

Check if suppliers are ready for VBP

Ensure that suppliers are prepared to work with VBP. Learn from those already applying VBP in other markets.

4

Decide when to use VBP

VBP may not always be appropriate. Start with simple tenders where outcome data are available and measurable.

5

Understand the process and tools required to create and outcome- based agreement

Engage with clinical and patient organisations, select outcomes, collect data, design the contract, and manage incentives and finances.

6

Evaluate and share learnings

Report on value-based approaches and share lessons with the procurement community.

Figure 4: Steps for action - VPB

Strategic theme
Impactful innovation

Motivation

Numerous successful innovations do not survive the 'valley of death' of pilots and never get adopted. This is not only a waste of time and money, but it also generates frustration or demotivation which can result in withdrawing participation in future initiatives and harms a positive problem-solving culture. Therefore, it is essential to increase the impact of innovation by systematically supporting the uptake and use of successful results.

Objective

Impactful innovation principles are designed to maximise the likelihood that successfully piloted innovations are deployed and achieve the greatest possible impact.

Challenges and opportunities

Current innovation management approaches often delay considerations of uptake and exploitation measures until the very late stages of the project. However, at that point, it is often too late to secure the commitment of decision makers, align key stakeholders, define the deployment governance, and secure the necessary (economic) resources for adopting the results. Procure4Health has collected methodologies and tools that help to design innovation projects so that they systematically foster the uptake of successful results. These resources are available at: https://procure4health.eu/resources/

Aim

The ultimate aim is to cultivate an 'impact first' mindset within the healthcare ecosystem, systemically increasing the returns of investment on innovation.
This aim is aligned with the European Commission's New European Innovation Agenda from 2022[6], which shapes the EU innovation strategy to develop new technologies to address the most pressing societal challenges and to bring them to market. Notably, the Agenda highlights the need to improve policy-making frameworks, emphasising that impactful innovation policies *"must keep pace with the changing nature of innovation"*[7].

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[6] European Commission. (2022). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. A New European Innovation Agenda (COM/2022/332 final). EUR-Lex. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52022DC0332

[7] European Commission (2022): A New European Innovation Agenda. {SWD(2022) 187 final}, p. 19

Action 2

Impactful innovation

Incentivise the adoption of innovation and cultivate an “impact first” mindset

Rationale and problem description

Innovation creates meaningful impact when it delivers value to its creators, end users, and society in general. However, when successful innovations are not adopted, they fail to deliver their full potential, resulting in wasted resources that is detrimental to everyone involved.

Figure 5: A scenario exemplifying a process of demand-driven co-creation of innovation.

Adoption refers to the process by which an organisation integrates an innovation into routine operations following a successful pilot. This stage is also known as deployment or uptake. To clarify the issue of limited adoption, the diagram below presents a simplified view of a demand-driven innovation procurement process.

+ **Ideation.** The healthcare provider identifies an unmet need or opportunity (*challenge*) that needs to be addressed.
+ **Matching.** A suitable technology supplier is selected through a competitive call.
+ **Co-creation.** The healthcare provider and the technology supplier collaborate to co-develop an innovative solution, possibly involving end-users. They may receive economic support from a third-party funding body like the European Commission or a national agency.
+ **Evaluation.** The healthcare provider assesses whether the solution effectively solves the challenge.

+ **Adoption.** If the solution effectively solves the challenge identified by the healthcare provider, it should logically be deployed within that organisation. Otherwise, the value of the effort and resources invested should be questioned.
+ **Commercialisation.** The technological supplier is expected to launch the solution on the market, which will help to improve it over time and delivering extra value back to the customers.

A common issue is the 'valley of death' that occurs during the transition between evaluation and adoption. Despite successfully passing the evaluation phase, the solution is often not deployed by the organisation initiating the challenge. This non-adoption is a kind of paradox, as it was the health and care provider that initiated the process by asking for a solution. Given the waste and frustration this creates, it seems illogical to continue suffering from "pilotitis"[8] - basically doing pilot after pilot without any uptake. To address this unhelpful outcome, it is crucial to understand why it occurs and to propose solutions that can prevent it.

Analysis of the reasons for the lack of adoption

There are numerous - and often interconnected - causes that explain the lack of adoption.

+ **Lack of governance.** Unclear ownership, responsibilities, and processes for bridging the 'valley of death' are common. Often, there is a lack of leadership and no pre-allocated financial or human resources for seamless deployment, as attention shifts to other projects. Without clear accountability, shared responsibility can lead to no one taking ownership of failed deployments.
+ **Absence of an organisational strategy** that guides proposers to focus on challenges aligned with key strategic organisational goals. There is an incentivised tendency to pursue external funding opportunities rather than addressing internal priorities. As a result, the innovation outputs are seen as nice-to-haves rather than musts by the decision-makers at the time of deciding over the uptake.
+ **Lack of strategic alignment.** Without an organisational strategy that guides teams to focus on challenges tied to key priorities, innovation efforts often chase external funding over internal needs. As a result, outputs may be viewed as nice-to-haves rather than essential when it comes time to adopt them.
+ **Contradictory incentives.** Innovation units over time often develop structures that are driven (incentivised) by the number of projects they participate in, rather than the organisation's ability to effectively utilise successful innovation results. Lack of latter incentives fosters 'pilotitis', where the focus remains on running projects rather than achieving meaningful deployment.
+ **Limited availability of resources.**[9] Although health and care providers manage large budgets, their spending on innovation outside standard allocations is limited, increasing the risk of adoption stagnation.

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[8] Kuipers, P., Humphreys, J. S., Wakerman, J., Wells, R., Jones, J., & Entwistle, P. (2008). Collaborative review of pilot projects to inform policy: A methodological remedy for pilotitis? Australia and New Zealand Health Policy, 5(1), 17. https://doi.org/10.1186/1743-8462-5-17

[9] https://killerinnovations.com/proven-strategies-to-scaling-innovations/

+ **Lack of top-level management commitment.**[10] Organisational leaders may lack awareness of the importance of fostering an innovative culture, which can hinder strategy development, stakeholder alignment, and the governance needed for successful change.

Proposed measures to increase adoption

Some recommendations include:

+ Anticipate adoption. Assume that the innovation will be successful and incorporate ´adoption touchpoints´ along the lifecycle of the innovation project. Do it from the very beginning, as for adoption you need anticipation.
+ **Establish governance structures.** Define clear roles, resources, and processes to support innovation. Assign experienced staff to manage the transition from pilot to rollout, ensuring accountability. Appoint a board-level champion to remove barriers and support implementation.
+ **Align innovation with organisational strategy.** Clearly communicate a shared strategy to align innovation with organisational priorities, focusing on core and long-term goals over external funding.
+ **Strengthen cross-departmental collaboration.** Use alignment tools like cross-departmental committees, joint selection processes, and regular stakeholder updates to encourage collaboration and gather feedback during co-creation, helping to remove deployment barriers.
+ **Redesign incentive structures for innovation units.** Shift KPIs to reward successful deployment, not just participation. This helps prevent 'pilotitis' and ensures resources are focused on high-potential projects.
+ **Resource allocation planning.** Reserve budget early for projects likely to succeed—often predictable before the evaluation phase. Timely allocation ensures a smooth transition from pilot to uptake, avoiding delays from resource constraints.
+ **Build top-management engagement.** Educate leadership on the strategic value of fostering innovation. Embedding successful outcomes reinforces a culture where innovation is recognised and rewarded.
+ **Plan for sustainable financing and long-term resource allocation.** Many pilots fail to scale due to limited follow-up funding. Plan for long-term resource needs from the outset and align innovation with internal budget cycles to ensure continuity.
+ **Strengthen organisational readiness and leadership for adoption.** Assign innovation leads and create cross-functional teams to drive alignment. Use readiness assessments to evaluate leadership commitment, risk tolerance, and capacity to implement change.
+ **Build role-specific skills and embed evaluation in scaling processes.** Develop targeted training programmes tailored to different roles and levels. Support these with tools such as templates, peer learning, and outcome tracking frameworks.

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[10] Leedham-Green, K., Knight, A., & Reedy, G. B. (2021). Success and limiting factors in health service innovation: A theory-generating mixed methods evaluation of UK projects. BMJ Open. 2021 May 25;11(5):e047943. doi: 10.1136/bmjopen-2020-047943. PMID: 34035107; PMCID: PMC8154942.

+ **Enable legal and procurement flexibility from the outset.** Engage legal and other relevant expert advisors early in the process to anticipate barriers. Use flexible procurement models—like framework agreements or phased contracts—to support scaling.

Finally, to improve long-term outcomes and reduce failure points, public buyers should actively anticipate adoption barriers during the research and innovation process—not supply chain fragility, and user training needs can all undermine the success of otherwise promising innovations. By identifying these risks early—through supplier engagement, stakeholder co-design, and needs-based specification development—procurement teams can adapt requirements to ensure smoother integration and reduce the likelihood of operational disruption. This approach aligns with value-based and outcome-driven procurement principles, shifting the focus from product features to long-term performance and usability. Tools such as adoption-readiness checklists, post-market scenario testing, and early impact assessments should be embedded into procurement workflows wherever possible.

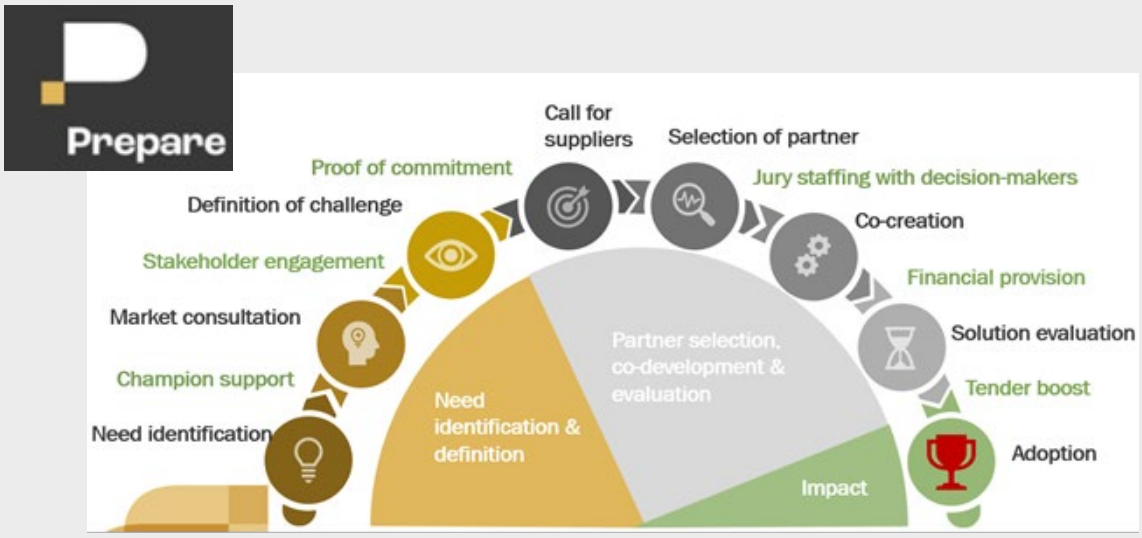
Overall recommendation

Promote an 'impact first' mindset. Successful transition from pilot to full deployment requires strong leadership, strategic commitment, proactive planning, sufficient resources, coordination, and clear communication. This remains a complex task, as many pilots fail to move beyond the 'valley of death'. To avoid waste and maximise impact, innovation efforts must be designed with adoption and long-term deployment in mind.

Good practice example

Prepare

The EU project PREPARE has developed innovation policies tailored to regional contexts. The project focuses on demand-driven innovation and proposes incorporating adoption-geared measures during the co-development phase between the healthcare provider and an external innovative company. Examples of those measures are presented in the graph below. Embedded in the typical steps of a demand-driven lifecycle in black, the measures in green are designed to increase the chances of adoption from the very beginning. They are an example of the ´adoption touchpoints´ mentioned above.
The Impactful innovation life cycle including PREPARE adoption touchpoints.



PREPARE has also created a library with 400+ resources on innovation adoption and procurement, including reports, projects, and videos. The resources are open and free to use.

Action area
Sustainability

Context for sustainable procurement

Sustainability means meeting "the needs of the present without compromising the ability of future generations to meet their own needs"[11]. It has three dimensions: environmental, social and economic. Environmental sustainability is directly linked to human health, as it means countering fundamental environmental problems such as climate change, loss of biodiversity, loss of ecosystem services, land degradation, and pollution - all of which have significant impacts on public health. In social terms, it means decent work and living, including employment opportunities, adequate earnings, decent working time, no forced labour, social security, and equal opportunities[12]. Economic sustainability means ensuring financial stability as well as ethical solidity, especially in terms of countering bribery and corruption.

Challenges and opportunities

Every healthcare solution affects sustainability across its lifecycle—touching on issues like antimicrobial resistance, chemical use, emissions, resource consumption, packaging, waste, and workers' rights. While factoring in environmental and social impacts may raise costs and challenge economic viability, the scale of healthcare procurement in Europe makes it a strategic opportunity to drive both sustainability and innovation.

Overall objectives

The goal of sustainable procurement in health and care is to purchase environmentally and socially responsible goods within the institution's economic limits. Environmentally, this involves reducing waste and pollution by prioritising circular solutions—like reusable or remanufactured devices, take-back schemes, and non-toxic materials—and cutting down on single-use plastics. Socially, it means ensuring fair working conditions both within the organisation and throughout the supply chain.

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[11] United Nations. (1987). Report of the World Commission on Environment and Development: Our common future (p. 41). Oxford University Press.

[12] International Labour Organization. (n.d.). Decent work. https://www.ilo.org/topics/decent-work

Action 3

Sustainability

Implement a strategy and policy for sustainable procurement in health and care organisations

Rationale and problem description

Hospitals and other health and care providers should develop and implement a strategy and policy for sustainable procurement, ideally through a comprehensive sustainability policy covering all departments of the institution. Such a strategy and policy may include the following:

+ **Aim.** Clearly define the aim for sustainable procurement, showing how it supports broader goals such as environmental protection, social responsibility, and economic efficiency.
+ **Strategic goals and objectives.** Set clear goals and translate them into actionable objectives, such as adopting lifecycle costing to ensure long-term economic sustainability.
+ **Environmental analysis.** Conduct a thorough assessment of current procurement practices and their sustainability impact, including a stocktake based on defined environmental and social criteria.
+ **Stakeholder engagement, awareness raising and training.** Implement methods to raise and sustain awareness of sustainability across the organisation. Create a strong narrative, provide targeted training for procurement staff, and actively engage suppliers to promote sustainable practices.
+ **Resource allocation and risk management.** Ensure adequate financial, human, and technical resources are in place, and incorporate risk management to mitigate impacts from unsustainable practices.
+ **Defining metrics and success indicators.** Develop a tracking system that integrates environmental and social criteria into procurement, uses certifications (e.g., SA8000, ISO 14001, ISO 50001), and applies dashboards to monitor and report progress.
+ **Action planning and implementation.** Define clear, step-by-step actions to guide sustainable procurement decisions and ensure effective execution.
+ **Continuous evaluation and adjustment.** Schedule regular reviews of procurement policies, supplier performance, and sustainability progress to adapt and improve over time.

[13] https://finance.ec.europa.eu/capital-markets-union-and-financial-markets/company-reporting-and-auditing/company-reporting_en

The European Commission adopted a Directive on Corporate Sustainability Reporting (CSRD) on 5 January 2023[13]. The Directive significantly impacts sustainability reporting in Europe, particularly for commercial enterprises. While it may not directly apply to public procurers in the Procure4Health project, it could still influence them indirectly through value chain partners or public expectations. Some members may adopt CSRD-aligned reporting voluntarily, and procurers may begin requesting such reports from suppliers. Therefore, aligning the Action Plan with CSRD standards—which cover environmental, social, and governance aspects—could be beneficial.

Aim

The aim is that by 2030, every hospital and healthcare provider in Europe will have a sustainable procurement strategy and a dedicated team to implement it. Larger institutions should have more specific and formalised strategies and policies.

Specific requirements

Healthcare providers must address the following sustainability requirements when developing and implementing related strategies and policies.

Service/Operational requirements

The healthcare provider must ensure quality of care and patient satisfaction above anything else. That means that sustainability and quality of care have to be fulfilled together. In some respect, sustainability is a precondition for quality of care; sometimes both can be targeted in parallel; and there are also instances where quality of care and sustainability may conflict with each other[14].

Technical/Digital requirements

Healthcare providers can orient their sustainability strategy towards the ISO 20400 standard for sustainable procurement, but also towards the RFAR label[15] which is based on the ISO 20400. Further relevant standards include ecolabels[16], ISO 50001 for energy management[17] ISO 14040/14044 for environmental management and lifecycle assessment[18] the Eco Management and Audit Scheme (EMAS)[19] and standards of the Forest Stewardship Council (FSC)[20].

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[14] For instance, single-use surgical instruments are typically pre-packaged and sterile, ensuring they maintain high sanitation standards. In contrast, reusable surgical instruments require thorough cleaning and sterilisation processes after each use, which, if not done correctly, can pose a risk of infection for patients.

[15] Suppliers Relations & Responsible Purchasing Label aims to distinguish French companies that have demonstrated sustainable and balanced relations with their suppliers

[16] Ecolabel Index. https://www.ecolabelindex.com/ecolabels/

[17] International Organization for Standardization. ISO 50001 energy management. https://www.iso.org/iso-50001-energy-management.html

[18] International Organization for Standardization. ISO 14044:2006 Environmental management — Life cycle assessment — Requirements and guidelines. https://www.iso.org/standard/38498.html

[19] European Commission. Eco-Management and Audit Scheme (EMAS). https://green-business.ec.europa.eu/emas_en

[20] https://fsc.org/en

Managerial/Planning Requirements

Procurers should ensure that sustainability is systematically integrated throughout all phases of the procurement process—from pre-tender market consultation to large-scale implementation. This includes identifying environmental and social risks early, defining sustainability criteria in tender specifications, incorporating lifecycle costing in solution design, and evaluating the sustainability performance of suppliers and solutions during and after deployment. Each phase offers a concrete opportunity to embed sustainability, and a proactive, structured approach is required to make it effective.

Business/Financial requirements

To develop sustainable business operations, healthcare providers must take stock of its current status of sustainability in procurement and operations. This should cover all relevant aspects, for example energy use and waste recycling.

Healthcare providers should also seek to find ways on how to save money with sustainable operations. New solutions may require higher upfront costs but often yield greater up-front value through reduced operation expenses and improved efficiency. It is important to consider lifecycle costs; some sustainable solutions may take time to amortise.

Source: the Sucha Beskidzka Hospital archives

Cooling patient rooms and saving energy costs in Sucha Beskidzka, Poland

The Hospital in Sucha Beskidzka, Poland, installed photovoltaic modules as awnings above all patient room windows. This solution served two purposes at the same time: Patient rooms do not heat up that much in summer, and the awnings collect sun energy that reduces the hospital's energy costs.

Legal/Regulatory requirements

Introducing sustainability strategies and policies must comply with European and national law. For example, European regulation stipulates that reprocessing single-use medical devices is possible in EU Member States, but only if national legislation authorises it. This European law is not applied, for example, in France. The following textbox outlines how France approaches sustainability in procurement.

Sustainability in procurement: The French approach

By 2025, France's **PNAD** (National Plan for Sustainable Purchasing) requires 100% of contracts to include at least one environmental consideration and 30% to include a social consideration (as a criterion, clause, or contract element). The **AGEC Law** (Anti-Waste for a Circular Economy) promotes waste reduction and aims to end single-use plastic packaging by 2040. Health and care providers must comply with sector-specific laws like **EGAlim**, which promotes sustainable food and balanced commercial relations. Since 2023, public purchasers with annual procurement over €50 million must publish a **SPASER** to support socially and environmentally responsible procurement.

National laws may prevent procurers to purchase any desired good. For example, Turkey has a Competition Protection Law and legal frameworks that incentivise the procurement of local and national products[21].

Needs

On developing and implementing a sustainability strategy and policy, procurers have to find out how sustainable solutions could replace existing non-sustainable solutions in healthcare provision. In this context, procurers' needs are related to:

+ **Care.** Procurers have to discuss with clinicians and other relevant care staff what properties a new solution should have to fulfil the solution's purpose at least as well as the existing one does.
+ **Market information.** Procurers need training to be able to adequately assess market information, that is above all information about sustainability properties of alternative solutions and vendors.

[21] https://cms.law/en/int/expert-guides/cms-expert-guide-to-public-procurement/turkey

+ **Harmonised sustainability requirements in action plans.** Procurers need more harmonised sustainability requirements in procurement action plans that can lead to more effective and efficient sustainable procurement practices. Harmonised requirements ensure that all procurers are working towards the same sustainability goals, regardless of their specific procurement categories[22]. It helps avoid greenwashing and ensures that the organisation can meet its sustainability targets[23].
+ **Cooperation.** Procurers should work together to make better-informed decisions about sustainability criteria and environmentally friendly solutions. Cooperation is not just a general need—it is a strategy to overcome barriers such as lack of data, unclear environmental impact assessments, and inconsistent sustainability standards. To make cooperation effective, procurers could e.g.:
  + Share knowledge – Use joint platforms or networks to exchange information on sustainability, solution performance, and supplier reliability.
  + Ask for carbon data – Request verified environmental impact reports from suppliers, including carbon emissions and energy use.
  + Work together on standards – Partner with other hospitals and health groups to set common environmental criteria for medical supplies.
  + Join a sustainability group – Create or join working groups to share knowledge and improve green procurement strategies.
  + Use group buying power – Team up with other buyers to push suppliers toward greener solutions and better deals.
+ **Funding and incentives.** Procurers need sufficient resources – above all funds and personnel with appropriate expertise – to be able to buy sustainable solutions. Purchasing or integrating sustainable innovative solutions will require significant funding investments.
+ **Navigate within the political framework.** Procurers operate within the constraints of government policies and regulations related to sustainability auditing and control processes. While they may not have the power to change the political framework, they need to understand, comply with, and adapt to these regulations to ensure effective sustainable procurement. To address this, procurers could e.g.:
  + Stay informed about relevant policies – Keep up with national and EU regulations on green procurement, carbon footprint reporting, and sustainability standards.
  + Train procurement teams on compliance – Ensure that procurement staff understand and can apply sustainability-related legal requirements in tenders and supplier evaluations.
  + Engage with policymakers – Where possible, procurers should advocate for clearer policies and better-defined sustainability criteria to improve alignment between procurement needs and regulatory frameworks.
  + Collaborate with legal and compliance experts – Work with in-house or external legal advisors to interpret policies correctly and avoid compliance risks.

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[22] ESG PRO, What is PPN06/21? Understanding the UK's Landmark Policy in Sustainable Procurement https://esgpro.co.uk/understanding-the-uks-landmark-policy-in-sustainable-procurement/

[23] https://sustainable.open-contracting.org/

- Use existing frameworks to drive change – Even within strict regulations, procurers can incorporate sustainability into evaluation criteria and choose suppliers who exceed minimum legal requirements for environmental responsibility.

+ **Centralised source of procurement knowledge.** An easily accessible source of knowledge about sustainable procurement will empower procurers, consolidate purchasing power, streamline the purchasing process and potentially create economies of scale through better collaboration and ultimately leading to more green impact and increased cost-efficiency.

Barriers

The implementation of a sustainability strategy and policy for procurement in healthcare faces numerous barriers.

Organisational

+ **Perceived higher costs.** Sustainable purchasing is often seen as more expensive. Healthcare managers frequently prioritise lowest-cost options, and estimating costs for environmental innovations is challenging.
+ **Organisational constraints.** Larger public healthcare institutions operate under strict procurement rules. Transitioning to sustainable procurement may require mindset shifts, process changes, and dedicated staff with sufficient authority and resources.
+ **Lack of knowledge.** Suppliers, staff, and procurers often lack understanding of sustainability and access to training. Fear of criticism or sanctions for departing from established norms can discourage change, leaving sustainability low on the strategic agenda.
+ **Stakeholder complexity.** Sustainable procurement involves engaging various internal and external stakeholders, including clinical and administrative staff. Coordination becomes more complex with larger institutions or systems.
+ **Complexity of solutions and channels.** Large healthcare providers, such as hospitals, procure a wide range of goods and services through multiple channels. Developing an all-encompassing sustainability strategy requires extensive coordination and effort.
+ **Challenges in adoption.** Fragmented purchasing channels, diverse procurement segments, and inconsistent regulations across EU countries hinder broad adoption of sustainable practices.
+ **Lack of standardised impact measures.** There is no consistent framework for evaluating suppliers' environmental performance, making it difficult to assess and compare sustainability across procurement activities.

Barriers related to standards and measurement

+ **Lack of evaluation tools and standards.** Procurers often struggle to assess suppliers, products, and solutions due to the absence of standardised tools—especially when facing a wide range of options and varying supplier influence.

+ **Unclear definitions and selection criteria.** It is difficult to determine which environmental and social criteria are relevant for each product or service. Procurers need clear, standardised criteria to ensure purchases align with sustainability goals.
+ **No standardised impact assessment.** Without widely accepted standards, evaluating the full environmental and social impact of solutions across their lifecycle is challenging. This hinders informed decision-making, reduces transparency, and limits comparability between suppliers.
+ **Difficulty measuring sustainability outcomes.** Assessing the effectiveness of a healthcare provider's sustainability strategy remains difficult due to the lack of standardised measurement tools. This makes it hard to compare the sustainability performance of different solutions or track progress over time.

Tools and techniques

General tools and techniques

+ **Build a comprehensive procurement strategy.** Develop a procurement strategy that embeds sustainability at every stage. This should include a catalogue of sustainable and socially responsible contracts, clear guidelines for integrating sustainability into procurement processes, and a defined set of obligations for suppliers.
+ **Adopt circular procurement practices.** Adopt a circular economy approach by considering the full lifecycle of products and services. Procurement contracts should include clauses that encourage suppliers to design for reuse, recyclability, and resource efficiency.
+ **Implement mandatory sustainability criteria.** Set a required minimum percentage of sustainability criteria in all tenders to ensure consistent prioritisation. Encourage hospitals and other organisations to align supplier practices with sustainability objectives[24].
+ **Apply a holistic evaluation.** Advocate for a holistic evaluation approach that considers economic, social, and environmental impacts of procurement decisions, prioritising long-term sustainability goals over short-term gains.
+ **Establish a centralised procurement database.** Create a centralised database that compiles procurement knowledge, including sustainability criteria, thematic guidelines, and best practices. This resource can support consistent, informed decision-making and benchmarking across institutions.
+ **Appoint a Single Point of Contact (SPOC).** Designate a dedicated sustainability expert as a SPOC to ensure sustainability criteria are effectively applied throughout the procurement process and to support alignment across departments[25].

[24] Check e.g. Sustainable Purchasing Scorecards (https://www.england.nhs.uk/nhs-commercial/sustainability/evergreen/)

[25] Schnitzer, J. (2024). Environmentally sustainable public procurement to strategically reshape markets and effect lasting change. McKinsey & Company. https://www.mckinsey.com/featured-insights/in-the-balance/environmentally-sustainable-public-procurement-to-strategically-reshape-markets-and-effect-lasting-change

+ **Optimise organisational set-up.** Decentralised departments and combined centralised and decentralised procurement units, as seen in the example of ATRYS[26], can help distribute workload and build expertise across the organisation.
+ **Structure and validate supplier sustainability data.** Define clear requirements for the type and format of sustainability data suppliers must provide, such as environmental certifications, emissions reports, or ethical sourcing evidence. Use standardised templates and validation checklists to ensure consistency and comparability across bids.
+ **Engage suppliers and manage the quality of sustainability information.** To support the integration of sustainability into procurement, public buyers should define the types of data required — such as adherence to recognised or lifecycle environmental impact metrics - and clarify how these will be assessed. Using structured evaluation templates, minimum documentation requirements, and scoring rubrics helps standardise assessments while ensuring equal treatment of bidders.
+ **Ensure supplier commitment to sustainability.** Go beyond self-declarations by requiring verifiable evidence such as third-party certifications, sustainability performance data, and documented long-term environmental or social strategies.

Training and capacity-building

+ **Provide training and capacity-building programmes.** Implement structured training programmes to equip procurers with the knowledge and skills to assess the environmental, social, and economic impacts of procurement decisions. Establish dedicated sustainability units within procurement departments to provide ongoing expertise, guidance, and support throughout the procurement cycle.
+ **Integrate ESG-based incentives.** Promote sustainability by integrating environmental, social, and governance (ESG) goals into performance evaluations and incentives. Link bonuses and departmental targets to measurable outcomes—such as lower carbon emissions, greater supplier diversity, or improved social responsibility—to align individual performance with organisational sustainability goals.

Collaboration

+ **Foster regional and European collaboration.** Encourage collaboration among organisations at regional and European levels to share good practices, tools, and resources for sustainable procurement. European projects can facilitate the exchange of expertise and experiences.
+ **Establish partnerships with academia.** Partner with universities and research institutions to identify innovative solutions and good practices in sustainable procurement, bridging gaps between procurers and suppliers and addressing language and knowledge barriers.

[26] Procure4Health, Atrys, a leader in oncology prevention, diagnosis and treatment. https://procure4health.eu/interviews/atrys-a-leader-in-oncology-prevention-diagnosis-and-treatment/

+ **Involve decision makers.** Highlight the long-term benefits of sustainability, such as cost savings, brand reputation, and risk reduction, to make sustainability more attractive to decision-makers.
+ **Advocate for legislative change.** Advocate for changes in legislation to prioritise sustainability criteria in procurement evaluations.
+ **Measure impact and savings.** Develop clear criteria for measuring the impact and savings of sustainability initiatives in procurement. Encourage the adoption of circular approaches and foster long-term relationships with suppliers to promote sustainability throughout the supply chain.
+ **Harmonise procurement practices.** Promote harmonised sustainable procurement practices across regions by developing shared tools, guidelines, and definitions through stakeholder consultation, ensuring a publicly grounded, collaborative framework[27].

Dissemination, marketing and communication

+ **Raise awareness.** Shift the mindset of procurers, suppliers, hospital managers, clinical staff, and policymakers toward embracing sustainability and supporting the development of related strategies. In France, the Réseaux des Acheteurs Hospitaliers web office plays a key role in building awareness among procurement stakeholders.
+ **Develop practical guidelines and tools.** Provide clear, operational documents to support procurement professionals in integrating sustainability into their processes. These should include guidance on structuring strategies, setting objectives, and defining performance indicators[28].
+ **Highlight sustainability frontrunners.** Recognise and promote organisations and initiatives that lead in sustainable development. Showcasing frontrunners encourages broader adoption and fosters a culture of continuous improvement.[29]
+ **Use sustainability labels.** Introduce and promote sustainability labels to help identify appropriate solutions. For example, the RFAR label in France supports consistent attention to sustainable procurement and supplier relations[30].
+ **Create a sustainability toolbox.** Develop a practical, user-friendly toolbox for procurers, including clear tender criteria, assessment tools, and real-life case studies that demonstrate sustainable procurement in action[31].

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[27] For example, how Resah is currently working on a catalogue which gathers its sustainable procurement contracts with a brief summary of the environmental, social and economic aspects in the contract.

[28] SRESAH takes validated information on sustainable development into account.

[29] United Nations. (2015). *Sustainable Development Goals.* https://sustainabledevelopment.un.org/content/documents/211617%20Goals%2017%20Partnerships.pdf

[30] RESAH communicates on its Supplier Relations and Sustainable Procurement label (RFAR).

[31] One Planet. (2018). Building sustainable procurement capacity through training. https://www.oneplanetnetwork.org/knowledge-centre/projects/building-sustainable-procurement-capacity-through-training

Good practice example

Phasing out chemicals of concern – The use of the European Healthcare's Phase-Out List for chemicals of concern (EPOL) and eco-labelled solutions in Norway

The European healthcare's phase-out list for chemicals of concern (EPOL) specifies chemicals that should be avoided and is endorsed by European healthcare organisations. The EPOL refers to the EU REACH candidate list but has an even stronger precautionary approach.

Several European regions are exploring EPOL for their tenders, with the Nordic Initiative for Ecolabelling of Medical Supplies (NIELS) expanding to Europe in 2025.

Nancy Hospital, France, pioneered the RFAR sustainability label[32]
In 2022, Nancy hospital was the first hospital to be awarded the RFAR label. It signed the RFAR charter in October 2021 and established a responsible purchasing policy. For 2024, the Nancy hospital plans to limit the risk of disruption by diversifying supplies and controlling risks. Nancy hospital is committed to integrating new, sustainability-related requirements and specifications into its public procurement contracts to enable more responsible purchasing.

The Label is recognised in France and a kind of the equivalent to ISO20400. RFAR is made for French organisations but guarantees the proper application of the international standard ISO 20400 'responsible purchasing'.

Additional education

Healthcare providers or large procurement bodies can offer sustainability training, including via digital platforms for health and care staff. A key training topic is lifecycle cost analysis for healthcare solutions in public tenders.

[32] Ministère de l'Économie et des Finances, Le Médiateur des entreprises. https://www.economie.gouv.fr/mediateur-des-entreprises

Good practice example

Developing a sustainability strategy at RESAH, France

RESAH - Réseaux des Acheteurs Hospitaliers (Network of Hospital Purchasers) is one of France's largest hospital purchasing organisations. Founded in 2013 for the Paris region and operating nationally since 2016, it has around 200 employees, is based in Paris, and is structured as a Public Interest Group. In 2022, RESAH served 2000 beneficiaries and purchased goods at a value of 2 billion euros. RESAH has a sustainable procurement strategy which aims to involve its beneficiaries and suppliers in sustainable procurement practices. RESAH has set up a dedicated department for "Environmental and Social Impact of Purchasing". RESAH is also a member of the PNAD, which is an action plan for national policy on sustainable procurement in France.

In 2021, RESAH was the first public healthcare actor to receive the label for sustainable procurement and supplier relations (RFAR) for three years. This label, based on ISO 20400 standards for sustainable procurement, is a certification from the Ministry of Economy, Finance and Recovery as well as the National Purchasing Council that is destined to become international. The RFAR label is RESAH's conceptual backbone, structuring all actions and seeking quality for beneficiaries. Also in 2021, RESAH set up a scheme to promote socially responsible and environmentally sustainable public procurement (SPASER). This operational document stems from French social and solidarity economy law. It promotes social responsibility—such as contracts for disabled-adapted companies and social economy SMEs—and environmental goals like waste reduction, eco-design, and low energy use.

In September 2023, RESAH launched the "Sustainable hospital buyer office" on its website (Guichet de l'acheteur hospitalier responsable). It aims to support the entire healthcare sector towards sustainable procurement. On this web office, stakeholders will find tools such as thematic guides, fact sheets, webinars, and training sessions.

Source: RESAH

Steps for action

Healthcare providers can follow these steps to develop and implement a sustainability strategy, with the procurement unit—typically the head or lead manager—playing a key role.cost analysis for healthcare solutions in public tenders.

1

Ensure high-level endorsement

Ensure that the highest decision levels of the healthcare provider – the directors or general managers – endorse the sustainability strategy from the beginning and disseminate it appropriately.

2

Take stock - internally and externally

Identify existing sustainability initiatives and key staff supporting them. Review sustainability strategies from other healthcare providers. Consult with experienced healthcare procurers on how they met their sustainability goals.

3

Mobilise resources

Appoint a dedicated lead for the strategy. Identify internal stakeholders. Develop a sustainability policy with clear objectives, milestones, tasks, and responsibilities. Allocate funding to support the strategy, such as for training initiatives.

4

Raise awareness

Publish and advertise the strategy and policy statement internally (for example through the intranet and posters in staffrooms) and externally (for example on the organisation's website).

5

Evaluate and modify the actions

Establish regular reporting on actions implemented and their impact. Evaluate and, if necessary, modify and adjust the actions implemented.

Figure 6: Steps for action - Sustainability

Action area
Digital healthcare

Digital health care defined

Digital healthcare means using digital technologies to provide health and care services to patients. Such technology includes for example: mobile therapeutic devices, diagnostic support tools, hospital information systems as well as remote medical monitoring and consultation. Moreover, digital technologies are helpful to support processes for procuring goods for healthcare providers.

Challenges and opportunities

Digital solutions in health and care are rapidly evolving, creating new opportunities to improve services. The key challenge is to harness these innovations while managing potential downsides—such as issues with interoperability, workflows, data protection, and balancing costs and benefits. These challenges apply to both new and existing technologies. Artificial intelligence (AI) is expected to play a major role in the future of healthcare. A Procure4Health survey conducted among the consortium members found great expectations related to digital technologies. It's hoped that they can support health and care needs by improving work efficiency (95%), quality of care (84%), staff integration (74%), and reducing errors (68%).

Overall objectives

The goal of innovation procurement in digital health is to help healthcare providers adopt advanced digital solutions that improve quality, accessibility, and efficiency of care. This means using procurement practices to implement interoperable, scalable, and secure technologies that enhance patient outcomes, streamline workflows, and strengthen system resilience. To achieve this, providers should establish clear mechanisms to assess the potential of digital technologies and guide the procurement of innovative solutions.

Action 4

Digital healthcare

Establish a mechanism to procure innovative digital solutions meeting stakeholder needs

Rationale and problem description

Procurement processes must be designed to align purchasing decisions with clinical needs. This demands strong (internal) coordination, clear procurement strategies, and active collaboration with healthcare professionals to ensure digital solutions truly enhance patient care and operational performance. To support this, public buyers should assess how digital technologies can improve healthcare delivery, what essential features they require, and how they can integrate with existing systems. This assessment should be part of a defined mechanism—a structured process for evaluating and agreeing on the procurement of innovative ICT.

Such a mechanism should include elements reflecting standard plan questions:

+ Defined personnel (who?) with assigned responsibilities (what?),
+ Identified institutions involved in the process (where?),
+ Established communication formats among stakeholders (how?),
+ Clear timelines for each stage (when?).

Effective implementation of this mechanism requires management and sufficient resources. In larger organisations, staff may be assigned exclusively to this role, while smaller institutions might form multidisciplinary task forces alongside other responsibilities. Such a mechanism is especially crucial for digital solutions, more so than for other innovations, due to their wide-reaching impact across the organisation. Implementing new digital tools often requires changes to staff workflows, integration with existing systems, and significant resource investment. Equally important is the consideration of existing digital infrastructure. Before adopting new solutions, procurers must ensure full interoperability with relevant current systems. A lack of interoperability can strain resources and lead to user dissatisfaction—particularly if staff are required to navigate multiple platforms with separate logins and inconsistent interfaces.

Artificial intelligence (AI) may be a striking example[33]. AI presents many promising opportunities for improving healthcare, such as self-care apps, online symptom checkers, and semi-automated discharge letters. However, as a rapidly evolving and relatively new technology, it poses challenges for healthcare decision-makers—especially public buyers, who often lack experience in this area. Developing appropriate AI-specific criteria,

[33] McKinsey (2020). The state of AI in 2020. https://www.mckinsey.com/capabilities/quantumblack/our-insights/global-survey-the-state-of-ai-in-2020?cid=other-soc-lkn-mip-mck-oth---&sid=4255306818&linkId=105722332

terms, and conditions for ethical and effective use can be complex. Additionally, patient acceptance may be a barrier, requiring effort to build trust and demonstrate the value of AI in care delivery. As a result, public buyers may struggle to clearly define their needs, identify suitable solutions and vendors, and engage effectively with innovative suppliers. Another increasingly important solution for healthcare is the Internet of Things (IoT). When planning changes to service delivery, organisations should consider incorporating IoT—provided it complies with the relevant legal framework, particularly regarding data security. The solution must also be accepted by health and care payers to ensure reimbursement for services delivered. To successfully procure innovative digital solutions like IoT, public buyers need a clear, strategic approach. This includes having a defined vision, a step-by-step roadmap, and a deep understanding of requirements, needs, potential barriers, and available support tools. Ultimately, this mechanism should be backed by policymakers. The following sections outline the necessary actions.

Aim

The aim is that most public buyers are motivated to procure innovative digital solutions that enhance healthcare, and that the majority will establish internal mechanisms and capacities to do so effectively. These mechanisms should prioritise the impact of digitalisation on professionals and, most importantly, on end-users—patients, relatives, and carers. Hospitals and other healthcare providers should only adopt ICT solutions that are safe and validated by those who will use them.

Requirements

Procurers need to meet the following requirements when implementing a mechanism to introduce innovative digital solutions for health and care.

Service/Operational requirements

Understanding the everyday realities of health and care professionals, patients, administrative staff, and other stakeholders, and to identify their key challenges is fundamental. Engagement strategies such as design thinking workshops, focus groups, and interviews can gather valuable input from clinicians, administrators, and patients. These methods help ensure procurement solutions reflect actual needs. End-users should be involved from the earliest stages and remain engaged throughout the entire procurement process.

Technical/Digital requirements

It is important to understand the role, potential, and risks of digital technologies, as well as the transition from the current state to a future scenario. This transition may involve changes in work processes and require a shift in mindset among staff and stakeholders to successfully adopt and integrate new digital solutions.

Business/Financial requirements

The expected costs and benefits of implementing digital technologies have to be analysed to ensure informed decision-making. The goal should be to minimise expenses while maximising the effectiveness and efficiency of healthcare services.

Managerial/Planning Requirements

The technical maturity of available market solutions has to be measured by evaluating their Technology Readiness Levels (TRL). This forms the foundation for choosing the appropriate procurement strategy—whether purchasing off-the-shelf solutions, testing existing prototypes, or investing in further research and development. It is also essential to select a suitable procurement procedure and to clearly define the selection and award criteria, along with the methods for evaluating offers and monitoring contract execution.

Legal/Regulatory requirements

The procurers have to be aware of and assess the legal provisions at EU, national, and regional levels, along with their practical implications. Any solution must comply with the relevant regulatory frameworks for new technologies, cybersecurity, and data protection—such as the GDPR, AI Act, and NIS I & II Directives. Additionally, certain solutions must comply with the requirements of the Medical Device Regulation (MDR 2017/745) or In Vitro Diagnostic Regulation (IVDR 2017/746) before entering the market.

Environmental/Societal impact requirements

Assess the potential environmental impact of the solutions and promote those with a positive effect. For example, telemedicine can reduce CO_2 emissions by lowering ambulance use, though increased reliance on data centres may offset some of these gains. Tender specifications should include criteria and contract performance clauses that prioritise environmentally sustainable solutions.

Needs

Procurers should identify and prioritise current and future needs of staff and patients early in the process. This requires continuous engagement with end-users and a clear understanding of available technologies and market trends. Planning should focus on which needs can be met through digital solutions. Clear specifications from healthcare leadership are essential to guide procurement of appropriate digital solutions.

+ **User needs.** Accurately identifying and translating user needs into clear, actionable requirements is critical. Involving end-users and stakeholders ensures that solutions are relevant and usable. Procurers play a key role in facilitating co-creation and bridging communication across clinical, technical, and administrative domains.

+ **Understanding.** Procurers must understand the full lifecycle of procuring digital health solutions—from assessing user needs and selecting the right procurement methodology, to contract negotiation and change management during adoption. As with any procurement, a well-structured, multi-stage process is essential.
+ **Horizon scanning.** Procurers need to analyse (emerging) innovative technologies and market conditions to select state-of-the art solutions in the bidding process for procurement. Procurers need tools and templates that can help them execute a digital health procurement based on good practice.

Barriers

General barriers that apply to procurement of any innovative solution include:

+ **Risk aversion.** Healthcare providers may be hesitant to adopt unproven or unfamiliar innovations.
+ **Lack of knowledge and expertise.** Limited knowledge of innovation procurement can hinder effective decision-making.
+ **Asymmetric information.** Buyers often have less information than suppliers about new technologies, making it hard to assess the best solution.
+ **Reluctance to change.** New solutions may disrupt existing workflows or habits, leading to reluctance among staff and stakeholders.
+ **Contract monitoring challenges.** Difficulties in overseeing contract execution can lead to poor implementation.

When seeking to buy innovative digital solutions, procurers often face the following specific barriers:

+ **Fear of digital transformation.** Concerns about losing human interaction may arise, as digital tools can be seen as replacing face-to-face contact between colleagues, managers and employees, or patients and their caregivers.
+ **Regulatory limitations.** Varying national regulations can restrict the ability to adopt digital solutions, especially clinical ones, depending on healthcare payment systems and policy frameworks.
+ **Immature technologies.** Many digital health tools are still in development, leading to unrealistic expectations from users—either too high, causing disappointment, or too low, reducing engagement.
+ **Lacking interoperability.** New solutions often fail to integrate with existing systems, creating technical and operational barriers. This is, probably, the most critical technical barrier in case of digital technologies.
+ **Funding.** Limited investment in IT infrastructure can prevent organisations from adopting or scaling digital innovations.

Tools and techniques

A solid methodology is essential for planning innovation procurement, designing contracts, and evaluating solutions. Procurers should apply value-based approaches to assess needs, define functional requirements, and evaluate offers using key performance indicators (KPIs) and benchmarks. For immature solutions, market insight is vital to ensure appropriate solutions and foster innovation. Public buyers also need the capacity to use tools like digital platforms or AI-based systems for vendor selection, risk assessment, and trend forecasting. AI-powered procurement tools can anticipate demand by analysing real-time data such as patient flows, seasonal patterns, and epidemiological trends. These systems help reduce waste, prevent shortages, and support more agile and responsive procurement cycles. Public buyers should consider investing in procurement platforms with built-in analytics and forecasting functions to support smarter decision-making[34].

Data visualisation tools can monitor KPIs in real time, including adoption rates, user satisfaction, and the impact of technology. Procurement should be managed by a multidisciplinary team with legal, procurement, and technical expertise. Collaboration with other public buyers can enhance market insight, share best practices, and stimulate innovation through demand aggregation—leading to better pricing and increased supplier engagement. A clear strategy is essential for integrating digital health solutions into existing workflows, covering change management, resource planning, and structured training to support smooth adoption and minimise disruption.

Blockchain-based solutions can support procurement by enhancing transparency, traceability, and trust across healthcare supply chains. Public buyers may consider blockchain-enabled platforms to verify the origin, handling, and ethical sourcing of goods - particularly in complex or global supply chains where verifiability is essential. These systems can help reduce fraud, ensure supplier accountability, and simplify audits. Where possible, procurers are encouraged to learn from real-world pilots in sectors such as pharmaceuticals, medical devices, or logistics, where blockchain has demonstrated value in supply chain traceability and quality assurance. Digital twin technologies can simulate real-world healthcare environments to support procurement planning, risk assessment, and resource optimisation. By creating virtual models of hospitals, supply chains, or clinical workflows, public buyers can test procurement scenarios, forecast operational impacts, and make more informed decisions before implementation. These tools are especially valuable for complex, high-cost procurements or during system redesign.

[34] Examples worth exploring include https://medreddie.com/buyers/, https://knowcarbon.com/ or https://osapiens.com/.

Good practice example

Pre-commercial procurement to improve quality and efficiency of public health service

The EU-funded project THALEA demonstrates how hospitals can build capacity to assess and procure innovative ICT solutions. THALEA ("Telemonitoring and Telemedicine for Hospitals Assisted by ICT for Life-saving Co-morbid Patients in Europe") brought together five hospitals from Germany, the Netherlands, Spain, Belgium, and Finland to launch a pre-commercial procurement (PCP) in 2014. They aimed to acquire a user-friendly, highly interoperable telemedicine platform for intensive care patients at high risk.

The project avoided fragmented, proprietary solutions by offering a unified system that provided a comprehensive patient overview accessible to physicians across Member States. The main goals were to reduce operational costs—such as costly patient and physician transfers—and to improve outcomes by enabling quicker access to specialised care.

THALEA showed promising results, with potential to cut costs and reduce mortality by at least 13%. The consortium gained four years of license-free use of the developed solutions, which were immediately adopted. The follow-up project, THALEA II, extended implementation and added two more hospitals from Austria[35].

[35] www.thalea-pcp.eu; https://www.ukaachen.de/kliniken-institute/innovationszentrum-digitale-medizin/projektuebersicht/thalea-1

Steps for action

The mechanism to introduce innovative ICT in healthcare may include the following steps.

1. **Understand end-user needs**
   Engage diverse stakeholders—clinicians, IT teams, and patients—in a co-creation process to identify and prioritise user needs. Focus on data accessibility, cybersecurity, system interoperability, and varying digital literacy levels.
2. **Define clear digital health outcomes**
   Focus on results rather than specific solutions. Involve stakeholders to translate needs into functional requirements, considering interoperability, usability, and integration with existing workflows.
3. **Align procurement activities with national and EU strategic priorities**
   Key references include the EU's digital health strategy, the European Health Data Space (EHDS), and compliance with EU standards such as the AI Act.
4. **Engage with the market**
   Assess available technologies, market maturity, patents, and standards. Use open market consultations to gather vendor input and evaluate their ability to meet requirements and integrate with existing systems.
5. **Cooperate with other procurers**
   Partner with other buyers to pool demand, lower costs, and enhance market influence. Jointly test and evaluate solutions in real-world settings to reduce procurement risks and support scalable implementation.
6. **Analyse costs, benefits and risks**
   Compare the current state with desired outcomes to assess solution viability. Consider financial, operational, and human impacts, along with compliance with data, cybersecurity, and AI regulations.
7. **Evaluate and modify the actions**
   Establish regular reporting on actions implemented and their impact. Evaluate and, if necessary, modify and adjust the actions implemented.
8. **Evaluate and modify the actions**
   Establish regular reporting on actions implemented and their impact. Evaluate and, if necessary, modify and adjust the actions implemented.

Figure 7: Steps for action - Digital healthcare

Action area
Integrated care

Integrated care defined

Integrated care coordinates services and providers along the continuum of care. This includes both horizontal integration (linking similar levels of health and care like multi-professional teams) and vertical integration (linking different levels of health and care like primary, secondary and tertiary care). It emphasises the patient's perspective on the health and care system. Integrated care is particularly important for service provision to specific groups of patients and health and care needs and problems: for example, older people, patients with multiple (chronic) conditions, patients with chronic heart failure, patients with mental health issues, and emergency medical services with a special need of continuous care.

Challenges and opportunities

Integrated care responds to a fragmented delivery of health and care services that is partly ineffective and inefficient. This is an acknowledged problem in many health and care systems. The European countries are at different stages in the development of integrated care.

Overall objectives

The overall aim of integrated care is to enhance patients' experience, improve population health, reduce costs and improve health providers' well-being (known as "quadruple aim"[36]). With this perspective, healthcare providers should identify priority areas of opportunity for improving healthcare through integrated care.

[36] Arnetz, B.B., Goetz, C.M., Arnetz, J.E., Sudan, S., vanSchagen, J., Piersma, K., & Reyelts, F. (2020). Enhancing healthcare efficiency to achieve the Quadruple Aim: an exploratory study. BMC Research Notes, 13(1), 362.

Action 5

Integrated care

Design and implement shared innovation procurement approaches for integrated care service delivery improvements

Rationale and problem description

Procuring innovative solutions for integrated care is essential to overcoming fragmented health and care services. Achieving effective integration requires a shared vision and strategy that enhances patient outcomes and experiences, while supporting the use of adaptable, interoperable technologies within existing systems. The goal thus has to aim at developing and applying joint procurement approaches that facilitate the adoption of innovative solutions across different levels and organisations. Collaboration among health and care providers, policymakers, and technology suppliers should be encouraged to streamline procurement and drive innovation in integrated care. Primary care professionals, particularly general practitioners and nurses, play are at the heart of integrated care teams. The ultimate goal is to deliver patient-centred care through personalised, coordinated plans that address major health conditions, with a focus on patients with multiple chronic illnesses. This approach aims to meet urgent health needs, improve care efficiency, and reduce costs.

The EU Expert panel on effective ways of investing in health (EXPH) mentions five trends of disruptive innovation[37] in health and care, each contributing to improved framework conditions for integrated care:

+ **Translational research.** Turning medical research into practice helps create person-centred, community-based care models.
+ **New technology.** Innovations support early diagnosis, personalised care, health promotion, and patient empowerment, with potential for curative treatments.
+ **Precision medicine.** Tailored care is increasingly used for people with chronic conditions, frailty, or decline—especially in diverse populations.
+ **Task transfer.** Shifting responsibilities to more broadly trained or lower-cost professionals—while maintaining quality—improves efficiency.
+ **Health promotion.** A focus on everyday health and well-being, supported by social, environmental, and political insights, offers a more holistic approach to care.

[37] European Commission. (2016). Report of the Expert Panel on Effective Ways of Investing in Health (EXPH) on access to health services in the European Union. Publications Office of the European Union.

Aim

The aim is to cultivate a health and care ecosystem in which integrated service delivery is enabled by innovative solutions and procurement practices. This approach encourages collaboration between healthcare providers, policymakers, and tech suppliers to create systems that are adaptive, patient-centred, and technologically advanced—ensuring solutions are scalable and work seamlessly across all levels of care. The strategy puts patients, especially those with long-term or multiple health issues, at the centre. It aims to improve coordination across care settings, including informal and self-care, for a more holistic approach. The aim also supports value-based, long-term procurement models that improve efficiency, reduce fragmentation, and lead to better outcomes and experiences for people with complex needs.

Requirements

To effectively implement shared procurement strategies for integrated care, several key requirements must be addressed across operational, technical, business and legal dimensions. These requirements help ensure that procured solutions support integrated service delivery, cross-professional collaboration, and patient-centred care across institutional and regional boundaries.

Service/Operational requirements

Integrated care involves complex clinical and non-clinical workflows. The primary operational need is to enable seamless information sharing and communication, which relies heavily on digital tools—primarily Electronic Health Records (EHRs)—but also includes shared clinical knowledge, processes, and decision-making frameworks.
Key operational requirements include:

+ **Sharing knowledge and clinical workflows.** Ensuring all care professionals—regardless of specialty—have access to up-to-date clinical guidelines, best practices, and integrated care pathways.
+ **Coordinating care and teamwork.** Integrated care relies on shared care plans that incorporate input from all relevant clinicians, care practitioners., informal caregivers, family and patient. Treating people with multiple conditions often requires collaboration across specialties, such as psychiatry, neurology, cardiology, and pulmonology. Strong coordination mechanisms are key to ensuring continuity and avoiding duplication or fragmentation in care.
+ **Strengthening primary care.** Integrated care models typically emphasise the role of primary care as a central coordinator, requiring targeted support, training, and system integration at this level.

Technical/Digital requirements

Technology plays a key role in making integrated care work. Procurers must ensure that digital systems support interoperability, standardisation, and real-time data exchange.
Important digital/technical requirements include:

+ **Shared health records.** Systems should allow different organisations and regions to access, update, and securely share electronic health records (EHRs).
+ **Interoperability.** Solutions must support seamless data sharing through both semantic and technical interoperability. Avoiding technological silos is crucial for effective integrated care.
+ **Support for communication and decision-making tools.** Integration with tools for telemedicine, clinical decision support, and shared care planning is also important.

Managerial/Planning requirements

Purchasing for integrated care is inherently complex and demands careful governance and strategic planning throughout each stage of the procurement cycle. Key points to consider include:

+ **Governance structures.** A team from different organisations should oversee the purchasing, implementation, and monitoring to make sure it aligns with integrated care goals.
+ **Procurement planning.** Set clear goals and performance measures that match the aims of integrated care. For shared purchases, coordinate timelines across providers or regions. Where suitable, consider risk-sharing or outcome-based models (see the Value-Based Procurement chapter for details).
+ **Stakeholder engagement.** Ensure early and continuous involvement of all relevant stakeholders—health professionals, IT departments, legal teams, and patients—in the procurement and implementation process.

Business/Financial requirements

For those buying solutions, it's important to ensure the financial environment supports long-term partnerships, outcome-focused services, and fair access. Key things to consider include:

+ **Development of new business and organisational models.** Integrated care often requires moving beyond traditional service delivery and financing models. Public authorities play a key role in creating business models and structures that support integrated planning and delivery. These changes have political, financial, and regulatory impacts, and require alignment with health policy, legal frameworks, and cooperation between sectors like health and social care.
+ **Public funding and institutional design.** Integrated care for chronic and complex conditions spans multiple providers and sectors, requiring stable, long-term public funding. Procurement strategies must be supported by systems that ensure accountability and stability across the entire care process. Procurers should advocate for funding structures that reflect the full scope and duration of integrated care programmes, not just short-term interventions.
+ **Value-based payment and financial incentives.** Traditional payment models (e.g. fee-for-service) often reward quantity over quality. For integrated care, procurers should explore or encourage value-based payment models that reward providers

based on patient outcomes, care quality, and coordination efforts. Further guidance on these models can be found in the chapter on VBP.

+ **Financial alignment across stakeholders.** Procuring shared solutions, especially digital platforms or service models, often involves multiple organisations with separate budgets. This requires joint financing mechanisms, such as pooled budgets or shared investment funds, and clear agreements on cost-sharing, benefits, and risks. Incentives should align the goals of clinical, administrative, and technical stakeholders to support collaboration.
+ **Supplier engagement and sustainability.** Vendors need to show they have business models that align with the long-term goals of integrated care. Procurers should engage suppliers who understand these objectives, offer scalable and interoperable solutions, and are open to partnership-based procurement models—such as outcome-based contracts or co-development approaches.

Legal/Regulatory requirements

Legal and regulatory compliance is essential for successful procurement in integrated care. As services and technologies cross organisational, regional, and national borders, those purchasing solutions must ensure they meet current legal requirements and are prepared for future regulatory challenges. A key concern is data protection, security, and privacy, as integrated care depends on sharing sensitive patient information. All purchased solutions must fully comply with data protection laws, such as the General Data Protection Regulation (GDPR) and other national regulations.

Needs

When buying digital solutions for integrated care for chronic patients, procurers have several key requirements:

+ **Holistic and integrated approach.** Procuring community-based, person-centred integrated care needs a holistic approach, meaning that all relevant service, technology, managerial and financial aspects have to be taken into account, while considering the whole process of care across different organisations and sectors (including social care).
+ **Mobilising expertise.** Procuring integrated care is complex and requires multidisciplinary input - spanning health strategies, operations, service design, technology, governance, finance, and regulation.
+ **Health and care system change.** Enabling integrated care means realigning service models, organisational relationships, regulatory frameworks, and financing mechanisms - including incentives. Success depends on regional strategies, a clear mandate, and strong political support.
+ **Integration and alignment.** Addressing system fragmentation requires integration across services, technology, governance, and financing—not just at the care level, but across the entire system.

+ **Seamless information sharing.** Integrated care relies on (digital) collaboration among multidisciplinary teams. Procuring such solutions is complex, as they must support multiple functions and require major investment.
+ **Capacity building and training.** Procurement teams need stronger skills in areas like VBP, digital health, data security, and tender evaluation. Providers also need tools to manage the full procurement cycle.
+ **Continuous monitoring and evaluation.** Ongoing performance tracking is vital. Procurement teams need tools to assess effectiveness in real time, enabling continuous improvement and data-driven decisions.

Barriers and potential enablers

Implementation of integrated care faces many barriers, related to complexity, institutions, incentives and professional culture:

+ **Complexity.** A fundamental barrier to integrated care is its complexity—stemming from both the complex needs of patients and the multidisciplinary, multilevel, and cross-organisational nature of care delivery. Innovation in healthcare is similarly complex and rarely follows a linear path. It requires a new form of public governance, which is often lacking in current systems.
+ **Lack of competences and knowledge.** Integrated care requires managing diverse patient populations and their comorbidities, demanding strong clinical, technical, and managerial competencies to achieve its goals. However, there is often a shortage of procurement professionals with the necessary skills, and many procurement departments are too small to handle complex initiatives that go beyond sourcing a single, standalone solution.
  → Professionals involved in such processes should possess a deep understanding of integrated care systems—their structure, function, and role in enhancing the efficiency, quality, and delivery of healthcare services[38].
+ **Institutional barriers.** The organisational structure of public health systems often acts as a barrier in itself. Rigid hierarchies, siloed departments, and lack of coordination between health and social care services hinder the seamless collaboration required for integrated care. These institutional divides often limit the ability to adopt holistic, patient-centred approaches and reduce opportunities for innovative procurement practices that span multiple domains.
+ **Lack of incentives.** Currently, health and care systems often lack adequate incentives to support the introduction of integrated care models or to motivate professionals to adopt new solutions. This applies both at the organisational level—where service providers may not prioritise integration—and at the individual level, where staff may resist change due to concerns about workload, compensation, or perceived inequities compared to peers.

[38] https://eoe.leadershipacademy.nhs.uk/

+ **Cultural barriers.** Professional cultures in healthcare can pose significant barriers to integrated care. Many medical specialties operate in silos and are not traditionally aligned with holistic, collaborative approaches. Communication challenges—linguistic, professional, and semantic—between patients, healthcare professionals, and regulators often further hinder person-centred care.

  → Transitioning to integrated digital systems also requires more than technological upgrades. It demands a shift in organisational and professional mindsets. Embracing integration involves changes in attitudes, workflows, and interprofessional collaboration, highlighting the importance of addressing cultural and human factors alongside technical ones.

+ **Technical barriers.** A lack of standardisation and certification for ICT solutions that support interoperability remains a key barrier to integrated care. Fragmented information systems hinder the delivery of coordinated, effective services.

  → To overcome this, relevant data must be digitally recorded, securely shared, properly managed and governed, and made accessible to users through interconnected applications and interfaces[39].

Tools and techniques

The following tools and techniques can help public procurers on implementing integrated care:

+ **Capacity building** is essential for the effective procurement of integrated care solutions. Procurement professionals need specialised skills to navigate this complex field. They must be skilled in strategic planning, including designing and implementing service delivery models that integrate multiple health and care service providers, along with the necessary enabling technologies and solutions. Additionally, strong data analysis skills are crucial to optimise procurement negotiations and enhance supplier competition outcomes.

+ **Transparent procurement processes.** A thorough understanding of procurement processes, with a strong emphasis on transparency, is essential. This involves utilising tools and techniques for assessing needs, analysing the supplier market, and scanning for emerging opportunities. Key aspects include evaluating the supplier landscape, developing a structured supplier portfolio, defining clear criteria and templates for requests for proposals, conducting effective negotiations, selecting suitable suppliers, and ensuring their seamless integration into existing processes.

+ **Lifecycle cost analysis tools.** These tools support procurement teams in evaluating the total cost of ownership (TCO) of a solution, moving beyond initial purchase price to consider long-term costs such as maintenance, operation, upgrades, energy consumption, and end-of-life disposal. Examples include TCO calculators,

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[39] Ibid.

[40] https://green-business.ec.europa.eu/environmental-footprint-methods_en

[41] https://circabc.europa.eu/ui/group/44278090-3fae-4515-bcc2-44fd57c1d0d1/library/1fac691f-005a-4396-b275-0c234ff55c4f?p=1&n=10&sort=modified_DESC

sustainability assessment tools like the EU's Product Environmental Footprint (PEF)[40], and software solutions such as LCC tools[41] integrated into e-procurement platforms. By using these tools, procurers can make more informed, value-driven decisions that align with sustainability and efficiency goals.

+ **Collaboration and sharing good practice.** Joint procurement and the exchange of best practices can enhance the efficiency and effectiveness of procurement processes. Organisations engaged in integrated care can benefit from sharing experiences via digital platforms, meetings, workshops, and conferences. Real-world examples offer valuable insights, while benchmarking against peers helps identify strengths and areas for improvement. Regular feedback and evaluation support continuous learning, enabling procurers to spot trends, address gaps, and make informed decisions.

+ **Linking elements of care.** To support integrated care, innovation procurement should focus on solutions that link different elements of care and enable both horizontal and vertical integration across primary, secondary, tertiary, and social care providers. Priority should be given to tools that enhance coordination for patients with complex or chronic conditions. This includes establishing personalised, shared care plans based on comprehensive assessments, accessible to all relevant providers, patients, and carers, and supported by clinical decision support systems. Additionally, clear pathways for integrated care and associated management tools should be designed and implemented.

+ **Promote cross-sectoral data-sharing alliances.** Effective integrated care requires more than coordinated service delivery — it relies on the ability to share meaningful data across clinical, social, and administrative domains. To support this, public buyers and health authorities should promote the creation of stakeholder clusters or regional data-sharing alliances, where multiple organisations can agree on data use cases, interoperability standards, and privacy protocols. Procurement frameworks should include requirements or incentives for suppliers to enable secure and standards-based data exchange, and public buyers should explore governance tools such as federated data models, data trusts, or cross-sectoral digital platforms that facilitate information flow without compromising compliance. Supporting structures for legal, ethical, and technical interoperability are essential to scale truly person-centred, integrated care models.

Good practice example

TELEA – an integrated care system of the Galician Health Service, Spain

Background: The Galician Health Service (SERGAS) launched Innovasaude and Hospital2050 in 2011 to modernise healthcare through innovation procurement, funded by the European Regional Development Fund. An internal needs assessment led to a demand map of 32 solutions, followed by an open market consultation on "Hospital at Home." In 2013, SERGAS awarded a €2.5M Public Procurement of Innovation (PPI) contract to Indra and Telefónica for TELEA, a telemonitoring pilot. After successful validation, TELEA was expanded to 13 health conditions and fully deployed across SERGAS by 2017. In 2020, it was adapted for COVID-19 patient monitoring.

Solution: TELEA is a home-assistance platform integrated with clinical information systems. It facilitates telematic patient access to various care services and assistance at home. Thus, TELEA improves management of chronic illnesses and reduces the cost of resources. It supports telehealth with features like videoconferencing, personal health records, and custom notifications. It adapts to any clinical protocol and is customisable for multi-pathological patients, allowing health professionals to monitor patients at home via tele-consultation with two-way communication. TELEA has significantly improved health outcomes and led to reductions in resources required by patients: 17% reduction of patients accessing hospital emergency and admissions, 91% reduction in care nursing visits and 32% reduction in primary care doctor visits.

Lessons learnt

Long-term commitment: Integrated care projects, like TELEA, require time and a bottom-up approach to build and sustain over several years.
Shared interests: Technology suppliers and healthcare providers should align their goals for patient benefit and broader market applicability, without interfering with each other's interests.
Consider adaptation costs: Public funding for PPI projects must cover adaptation costs for existing systems and the necessary change management when scaling beyond pilot phases.
Time and funding constraints: Project planning must account for time limitations, new procedures, and skill requirements, as funding mechanisms often impose execution deadlines.
Manage expectations: Healthcare providers should establish clear and aligned expectations around execution timelines, scalability, feasibility, and intellectual property considerations in innovation procurement.
Explore alternative contracts: PPI projects must be attractive to both suppliers and providers, considering simpler, non-PPI procurement options that may be easier to manage.

Steps for action

1

Diagnosis of situation

Public healthcare providers must first understand the complexity of integrated care by analysing system structures, care processes, outcomes, and reimbursement models. Developing shared terminology and engaging a multidisciplinary team or external experts can ensure alignment across stakeholders.

2

Prioritise health conditions and needs

After diagnosis, identify key health conditions where integrated care has the most impact. Engage professionals, patients, and caregivers to uncover unmet needs. Conduct stakeholder workshops and market surveys to explore available technologies and identify solution gaps.

3

Identify and prioritise technologies

Select innovative solutions—both existing and emerging—that meet identified needs. Engage vendors early to ensure interoperability and data-sharing compliance. Use criteria such as technology readiness levels (TRLs) to prioritise high-impact innovations.

4

Plan innovation procurement and coordinate stakeholders

Develop a procurement plan detailing stakeholders, processes, expected outcomes, and needed expertise. Review and adapt good practices. Establish strong governance to ensure effective implementation.

5

Contribute to purchasing plans and market readiness

Hospitals can support regional/ national procurement efforts by sharing insights to shape demand forecasts, helping inform the market. Explore funding options like PPPs, pooled budgets, and value-based procurement, coordinated at higher levels.

6

Foster cultural change and organisational support

Anticipate resistance to innovation and foster a culture of collaboration. Engage stakeholders through training, workshops, and early involvement in procurement. Strong engagement strategy supports technology adoption and alignment with workflows.

7

Evaluate and manage implementation

Use a multi-criteria framework to assess clinical impact, cost-effectiveness, and patient experience. Consider indirect effects like care coordination. A cross-functional team should oversee integration, monitor progress, and support continuous improvement.

Figure 8: Steps for action - Integrated care

Action area
Predictive and Precision Medicine

Context for Predictive and Precision Medicine

Predictive and Precision Medicine (PPM) focuses on personalising disease prevention and treatment based on individual risk factors. It typically involves using genomic analysis, genetic testing, and biomarkers as well the application of a molecular-based treatment that target a specific biologic mechanism underlying the disease and to assess the likelihood of diseases . This approach enhances the effectiveness of treatments while minimising side effects by addressing each patient's unique characteristics. However, PPM extends beyond diagnosis and treatment on a molecular level - it also integrates social, psychological, and physical elements of a patient. This holistic approach ensures that preventive, rehabilitative and recovery services are tailored to each individual's needs, leading to more effective and compassionate care. Digital Health Platforms can integrate various health data sources, offering a comprehensive view of a patient's health, thus facilitating personalised care plans and potentially improving patient outcomes .

Challenges and opportunities

While PPM offers clear benefits for patients and the health system, it also presents significant challenges. It can drive up costs without substantially improving outcomes and may contribute to over-diagnosis and over-treatment—especially as healthcare budgets shrink. It can also identify unmet need for which there is insufficient services supply to meet. Moreover, knowing one's risk for diseases that may never develop can negatively affect quality of life. Key challenges due to PPM's complexity include:

+ Aligning and integrating services to ensure truly personalised and effective care.
+ Ensuring medical technologies and data systems support seamless information access, sharing, and use across organisations for coordinated, data-driven decisions.
+ Multi-disciplinary and cross-organisational integrated care processes focused on people's needs require structured yet flexible coordination, management and governance.
+ Aligning regulations, policies, and funding at the system level to support comprehensive, local-level implementation.

Overall objectives

For public procurers, the goal is to identify innovative solutions that support effective PPM implementation. This involves considering the required services, biomedical technologies, and data infrastructure, while ensuring alignment with legal, regulatory, and financial frameworks. Managing such complex, high-tech projects also demands advanced skills, expertise, and governance capabilities.

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[42] García-Foncillas, J., Tabernero, J., Marcuello, E., Salazar, R., García-Alfonso, P., Cervantes, A., & Roselló, S. (2021). Milestones of precision medicine: An innovative, multidisciplinary overview. Molecular Diagnosis & Therapy, 25(5), 563–576.

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Action 6

Predictive and Precision Medicine

Develop and deploy strategies to promote the integration of innovative solutions in predictive and precision medicine into clinical practice

Rationale and problem description

The aim of PPM is to improve citizens' and patients' quality of life by preventing diseases or treating them more effectively. Researchers aim to identify diseases where PPM can be applied at reasonable costs and with sufficient accuracy, while public buyers need to identify innovative technologies to enable PPM. A clear methodology for identifying and prioritising innovation needs is essential.

Aim

The aim is to build health systems that deliver personalised, high-impact treatment and population-based preventive services. PPM is a promising approach towards this aim. By 2030, a standardised methodology should be established for identifying and prioritising diseases suitable for PPM, as well as for selecting appropriate PPM technologies. These methodologies should be readily accessible to hospitals and care providers across Europe.

Requirements

Service/Operational requirements

Clinical requirements for PPM vary according to the specific disease, treatment, or area of prevention. For example, the collection of biological samples requires better quality and less sample consumption[45]. In lung cancer treatment, PPM focuses on improved monitoring, optimisation of resources, and targeted therapies at cellular level. It also emphasises precise diagnostics using radiopharmaceuticals, particularly for poor prognosis cancer cases, and enhances surgical planning to achieve better outcomes.[46,47]

[45] NHS. (2023). Implementing a timed lung cancer diagnostic pathway. https://www.england.nhs.uk/long-read/implementing-a-timed-lung-cancer-diagnostic-pathway/

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Technical/Digital requirements

To begin with, hospitals and health care centres have to unify and anonymise patient data from multiple sources[48]. This is a complex and sensitive process, requiring strict adherence to data privacy regulations[49]. Health organisations must invest in secure and efficient data management systems that safeguard patient confidentiality while allowing the aggregation of data for customised research and treatment[50]. Moreover, Artificial Intelligence (AI) holds significant potential to personalise medical treatments. However, developing accurate and reliable AI models requires large volumes of high-quality data and rigorous testing[51]. Health organisations have to invest in the development of AI tools and platforms, prioritising validation and quality control to ensure they provide safe and effective assistance to healthcare professionals[52].

Procurement phase related requirements

When healthcare providers plan to procure PPM technologies, connecting with vendors of innovative solutions is essential. VBP facilitates this connection by shifting the focus from upfront costs to the overall value a solution delivers—considering patient outcomes, efficiency, and long-term impact. VBP encourages early dialogue between buyers and vendors, promoting a clear understanding of clinical and operational needs. This enables providers to thoroughly evaluate the benefits and limitations of each solution, ensuring alignment with organisational objectives and the specific demands of personalised care.

Business/Financial requirements

Reasonable cost, effectiveness, and efficiency are key business requirements for any new technology. Personalised medicine is often more expensive upfront due to the need for precise diagnostics, genetic sequencing, and advanced data analysis, as well as the development of specialised treatments. In contrast, conventional treatments benefit from economies of scale. However, PPM can improve long-term cost-effectiveness by targeting therapies more accurately, reducing side effects, and avoiding unnecessary treatments—ultimately offering a path to more efficient healthcare.

Environmental/Societal impact requirements

The core social objective of PPM is to place patients' individual needs at the centre of care, ensuring that personalised healthcare is delivered with the highest possible quality and equity. At the same time, it aims to drive the broader modernisation of health systems in line with PPM principles.

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Legal/Regulatory requirements

Healthcare providers must comply at least with General Data Protection Regulation (GDPR). GDPR is the fundamental framework for safeguarding patient data privacy and ethical data handling. It ensures confidentiality, consent and trust. In addition, some solutions that may be developed must comply with the Medical Device Regulation (MDR) 2017/745 or In Vitro Diagnostic Regulation (IVDR) 2017/746, before they can be placed on the market in the EU or associated countries).

Needs

In predictive and precision medicine, procurers have specific needs that must be addressed to ensure the successful implementation and adoption of these advanced healthcare approaches.

+ **Assessment.** When buying PPM solutions, procurers need clear information about what clinicians and patients need and a thorough understanding of how the solution functions. This involves integrating data from multiple sources, mapping the full care pathway, and the healthcare system's structure. Good coordination across stakeholders helps procurers make informed choices that ensure PPM solutions are well-integrated, relevant, and impactful within the healthcare setting.
+ **Support.** To design effective PPM projects, procurers must conduct thorough market research to understand available solutions. Those involved in PPI require greater technical support to develop effective solutions. This includes a deep understanding of PPM, covering enabling technologies, predictive biomarkers, and the process of delivering personalised care[53, 54].
+ **Innovation.** Procurers need access to innovative solutions that support the implementation of predictive and precision medicine, including advanced technologies like AI, machine learning and data analytics tools.
+ **Data sharing and regulatory compliance.** Procurers need to ensure that solutions they procure comply with data sharing regulations and ethical guidelines, especially given the sensitive nature of data used in PPM.
+ **Collaboration.** In PPM, collaboration among procurers is especially valuable. Sharing insights on available technologies, clinical utility, and implementation experiences helps identify the most effective solutions. Joint procurement can further enhance access to innovative technologies while improving cost-efficiency and scalability across healthcare systems.
+ **Financial resources.** Implementing PPM solutions requires substantial investment. Procurers must consider technology costs, potential savings from improved patient outcomes, and available funding opportunities. Securing financial support is essential to sustain pilot projects and scale them into long-term, impactful solutions.

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+ **Patient understanding and informed consent.** In precision medicine, patients must understand the purpose and implications of genetic testing, data use, and treatment decisions as well as being offered counselling services. Enhancing patient awareness and consent processes supports informed decision-making, ethical data use, and greater trust in personalised care pathways.

Barriers

When establishing PPM, healthcare organisations may encounter the following barriers:

+ **Limited support for alignment with public health systems.** Integrating PPM into public healthcare can be difficult due to financial, managerial, and resource constraints. Without adequate support, providers may struggle to align PPM initiatives with existing systems, making resource limitations a key barrier to implementation.
+ **Reservations from professionals.** When forming expert groups to procure PPM solutions, the perspectives of some healthcare professionals may be overlooked. This can reduce buy-in and motivation among staff who were not involved in the decision-making process[55].
+ **Lack of resources.** Successful development and implementation of PPM requires adequate facilities, skilled personnel, and financial resources. Among these, financial constraints are often the most significant barrier, depending on the use case.[56] Advanced infrastructure for research, data analysis, and patient care is essential, and its absence can severely hinder progress.
+ **Unequal distribution of costs and benefits.** PPM is based on the premise that personalised care leads to more effective and efficient treatment than a "one-size-fits-all" approach. However, the benefits—such as reduced healthcare utilisation—often become apparent only after treatment. As a result, the institution bearing the upfront costs may not directly receive the corresponding benefits.
+ **Identification of innovative solutions.** A key challenge in PPI is selecting solutions that meet the criteria for innovation. Healthcare clinicians may identify needs that require existing but unfamiliar solutions rather than truly innovative ones. This misalignment can pose a barrier to qualification of solutions for the PPI process.
+ **Minority needs.** A high priority in many healthcare systems are the interests and necessities of minority groups. Yet, these populations are often underrepresented in medical research and genomic biobanks, limiting the inclusivity and effectiveness of PPM.[57, 58]

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Tools and techniques

Public buyers can use the following tools and techniques to establish PPM in healthcare.

+ **Collaborative platforms.** Sharing experiences can greatly enhance the effectiveness of procurement in PPM by learning from each other's successes and challenges[59]. This can be achieved through collaborative platforms such as physical meetings, online forums and/or dedicated social networks. Case studies, best practices, and lessons learnt provide valuable insights. Partnerships, such as twinnings between procurers, promote the exchange of expertise and strategies for innovation adoption[60].
+ **Capacity building.** Structured training programs are essential to equip procurers and healthcare professionals with the skills needed for innovation procurement and data-driven care models. This includes familiarity with emerging technologies and AI-based tools, ensuring all stakeholders can adapt to evolving PPM workflows.
+ **Sustainable investments.** Investing in the development and modernisation of PPM infrastructure is key to overcoming structural barriers. Resources should also be allocated to education and training to build a skilled workforce. Equally important are investments in data and technology, which are crucial for the success of PPM, including funding for data collection and management systems, and the adoption of advanced technologies[61].
+ **Horizon scanning.** Horizon scanning is a systematic approach to identifying early signals of emerging developments, opportunities, and risks. It helps procurers anticipate innovations in services, technologies, and infrastructure[62]. For example, advances in genomics, AI, and machine learning—especially in predictive modelling and data analysis—are key drivers of PPM that can be identified through effective horizon scanning[63].
+ **Equity and data inclusivity.** Ensuring inclusive access to PPM starts with diverse, representative data. Procurement processes should require datasets that reflect variations in age, gender, ethnicity, and socioeconomic status to avoid bias in predictive tools. Equally important is supporting access to personalised care for underserved populations by including provisions for outreach, cultural and linguistic adaptation, and accessibility in procurement specifications.
+ **Secure access to anonymised data.** Regulatory barriers often limit access to health data needed for model development in PPM. Emerging frameworks such as the European Health Data Space (EHDS) aim to harmonise access and enable secure data reuse. Procurers can also explore regulatory sandboxes for real-world testing of AI tools and adopt data stewardship models—like health data hubs or trusted intermediaries—to ensure responsible, compliant access to anonymised datasets.

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Good practice example

The comprehensive care model at the Cancer Centre for Healing, Canada

An exemplary PPM practice for breast cancer treatment is the comprehensive care model at the Centre for Healing. This model integrates molecular techniques with a holistic approach, including psycho-social support and return-to-work services[64]. The Centre uses e.g. next-generation sequencing (NGS) and liquid biopsies to identify specific molecular subtypes and detect blood-based biomarkers such as circulating tumour cells (CTCs) and circulating tumour DNA[65]. Based on the results, personalised treatment plans are developed, including targeted therapies[66]. The Centre also provides comprehensive psycho-social support such as counselling, or mental health services, helping patients cope with the emotional burden of diagnosis and treatment[67]. Holistic therapies like acupuncture and nutritional counselling are integrated into the care plan to manage treatment side effects and promote overall wellbeing[68]. To support patients returning to work, the Centre offers rehabilitation services such as occupational therapy and vocational counselling, ensuring a smooth transition back into employment[69, 70]. This comprehensive model demonstrates how PPM can combine advanced molecular techniques with patient-centred care, ensuring personalised and effective treatment.

Early Demand Map of the Andalusian Health Service, Spain[71]

Since 2023, the Public Procurement of Innovation in Health Technical Office (PPI-TO) of Andalusia has coordinated the region's Early Demand Map (EDM). This tool is key to the Andalusian PPI in Health Programme, helping to identify and prioritise innovation needs within the healthcare system, with a focus on unmet needs. The EDM emphasises PPM and other priority areas, following a structured five-step process to guide the development of PPI projects.

1. Open workshops – needs identification: Healthcare professionals identify unmet needs in key areas such as digital health, precision medicine, biomedical engineering, and sustainability.
2. Description of needs: Experts from the Andalusian healthcare system further refine and develop the selected needs.
3. Mind workshops – external analysis: External experts from SMEs, research institutions, and universities assess market conditions and potential solutions.
4. Specifying challenges from needs: Needs are refined into actionable challenges.
5. Evaluation and prioritisation: A committee reviews and ranks challenges, guiding funding applications for pre-commercial procurement (PCP) or public procurement of innovation (PPI) projects.

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[65] Ultimescu, F. et al (2024). Impact of Molecular Profiling on Therapy Management in Breast Cancer. Journal of Clinical Medicine, 13(17).
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Steps for action

1

Identify and prioritise innovation needs

Establish a process to identify and prioritise innovation needs, involving clinical staff, patients, researchers, public health experts, and procurers.

2

Establish expert groups

Form two aligned groups: healthcare professionals to define needs, and procurement experts to handle business aspects. Ensure coordination through joint meetings, a liaison role, and shared evaluation of proposed solutions.

3

Analyse the market

Identify PPM technologies aligned with specific needs by mapping existing solutions, assessing readiness, engaging stakeholders, and spotting gaps. This supports informed, demand-driven procurement decisions.

4

Apply PCP or PPI methods as appropriate

Identify unmet PPM needs (e.g., diagnostics, personalised treatments), engage suppliers early, and use a phased, competitive approach to develop and test solutions. Share risks and benefits and ensure successful innovations can be scaled and commercialised.

5

Implement and evaluate

Integrate the selected PPM solution into workflows, train staff, and ensure IT compatibility. Use clear KPIs to track impact on outcomes, efficiency, and costs. Regularly review data and maintain close collaboration between clinicians, procurement, and tech providers to support smooth rollout and ongoing improvement.

Figure 9: Steps for action - PPM

Disclaimer

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Procure 4Health

Funded by
the European Union

GA nº 101057209