CRANE

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POSITIONING PAPER · OPEN DISSEMINATION

Citizen-Centred Digital Health in Europe

Evidence and recommendations from the CRANE Pre-Commercial Procurement

A positioning paper from the CRANE consortium

THE CHALLENGE

People living with chronic conditions could manage their health far better if their own health data were within reach and able to flow securely between the services that care for them. For most Europeans this is still not the case: health data stays fragmented across incompatible systems, and citizens have little effective control over their own information. The problem is felt most acutely in rural regions, where populations are dispersed, ageing is pronounced, and specialist care sits far from where people live.

The CRANE Pre-Commercial Procurement launched in 2021 to address this across three European rural regions — **Region Västerbotten** (Sweden), **Extremadura** (Spain) and **Agder** (Norway). No off-the-shelf solution placed the citizen at the centre of their own health data, so the regions used competitive research and development to bring viable solutions into being.

€5M	3	3	2
R&D PROCUREMENT	RURAL REGIONS	COMPETITIVE PHASES	VALIDATED SOLUTIONS

DESIGNED WITH CITIZENS, NOT FOR THEM

Before any supplier was contracted, CRANE asked the people it was meant to serve. Across the three regions, patients living with chronic conditions sat down with nurses, doctors and care coordinators to answer one question: if the technology existed, where would the value be, and where the risks?

Their answers were strikingly consistent. Five years later the project's results confirmed both sides: the value is real, and so are the conditions attached to it.

THE VALUE

Better quality of life, real involvement in one's own care, awareness of one's condition, prevention over reaction, freedom for patients and professionals.

THE RISKS

Stress from watching one's own data, responsibility shifting onto the patient, and the fear of losing the human contact that care depends on.

WHAT CRANE DID

Over five years, a €5M R&D procurement ran a three-phase competition that progressively narrowed the field while raising the maturity of each solution — from design, through working prototypes, to validation with real users in real care settings.

PHASE 1 · 2022–23

Design

Solution design and feasibility. Final design solutions delivered.

SUPPLIERS **5**

PHASE 2 · 2023–24

Prototype

Prototype development. Working prototypes built and tested.

SUPPLIERS **3**

PHASE 3 · 2024–26

Validate

Validation and field testing in real care settings. Validation concluded.

SUPPLIERS **2**

5 → 3 → 2 validated solutions, field-tested with citizens and the professionals who support them

WHAT CRANE DELIVERED

CITIZEN-CONTROLLED DATA

Data for Care

Built around citizen-controlled data governance and privacy-preserving sharing — placing the citizen at the centre as the party who decides how their data moves between organisations.

STANDARDS-BASED INFRASTRUCTURE

dHDSI

A standards-based, decentralised health-data infrastructure, designed for interoperability with European regulatory frameworks.

THE COMMON INSIGHT

Giving citizens rights over their data is not enough; rights need institutions to make them real. Both solutions build the **trusted, citizen-side layer** through which consent is managed, control is exercised, and data is used without being surrendered. CRANE showed this layer can be built and validated — and that it is the part of the system **no one currently funds or buys.**

WHAT WE LEARNED

The project's most policy-relevant lessons reach beyond the technology.

1 Technology readiness is necessary but not sufficient

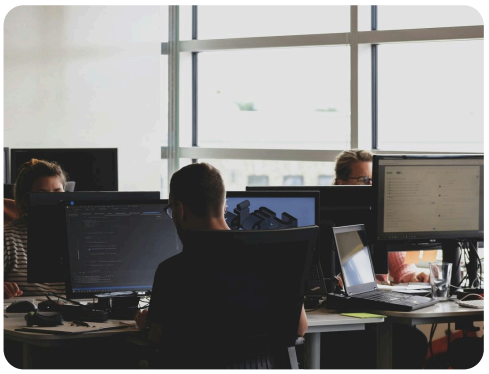
Successful adoption depends on citizen engagement, professional acceptance, digital literacy, organisational change and integration with existing systems — and each demands investment of its own.

2 Europe is local

Running the same solutions in three countries meant working across different languages, healthcare practices and organisational cultures; what worked in one region could not simply be copied to the next. Adoption happens locally, one region at a time — and any policy to deploy digital health across Europe will face the same reality.

⚖ The legal dimension told the same story

Three countries meant three ethics and data-protection paths: what needed formal approval in one fell outside another's rules. The project kept personal data within each country rather than move it across borders. A project built to demonstrate citizen-controlled data sharing found cross-border sharing was still, in practice, a complexity to avoid. **Few findings make the case for European harmonisation more plainly.**



3 CRANE leaves behind a practical toolkit

A complete value-based evaluation method: citizens and professionals defined together what a solution had to deliver, those values became measurable indicators — including quality of life and strict data-protection compliance as a non-negotiable — and every solution was assessed against them. For any public buyer preparing to procure citizen-centred digital health, that method is ready to reuse.

4 Validation is not the same as market readiness

At the project's close the solutions — despite demonstrated value — had not reached the maturity wide deployment requires. The shortfall lies not with the project but with a structural gap in how Europe carries innovation from pilot to practice. It is the single most important lesson CRANE has to offer, and it motivates the recommendations that follow.

> “ The suppliers reached the same conclusion independently. In their final reports, the consortia that completed validation argued that reaching real-world use needs a **dedicated implementation project of two to three years**, with proper budget for the human side: training, change management, integration, communication. Buyers and suppliers sat on opposite sides of this procurement for five years and ended up asking for the same missing instrument. **That is worth listening to.**

SIX RECOMMENDATIONS FOR EUROPEAN POLICY

Drawing on its experience, the CRANE consortium offers six forward-looking recommendations to the European Commission and to policymakers shaping the future of innovation procurement in digital health. Each addresses a specific gap the project ran into.

1 Build flexibility into the PCP instrument

Long, multi-country projects outlive the context they were planned in. The instrument should absorb change — through structured dialogue with the funding authority and proportionate monitoring — rather than demand rigid adherence to an initial plan.

THE GAP IT ADDRESSES

Long multi-country PCPs outlive the context they were planned in.

2 Align payments with the timing of suppliers' costs

Much of a supplier's effort falls in the final validation phase. More frequent payment milestones, or partial pre-payment, would support the small and medium-sized enterprises the instrument is designed to attract.

THE GAP IT ADDRESSES

Validation-phase costs strain the SMEs the instrument is meant to attract.

3 Add a market-readiness stage between PCP and PPI

Promising solutions too often stall between a successful pilot and deployment. A dedicated, modestly funded stage — twelve to eighteen months, one contracted supplier per solution — would complete certification, integration and the adoption package, ending with a solution ready to be bought. The research is already paid for; this stage buys deployability.

THE GAP IT ADDRESSES

Validation is not market readiness; solutions stall in the gap.

4 Fund the full innovation cycle, including the non-technical work

R&D funding, readiness support and procurement instruments should be sequenced so a validated solution is never left without support — and funding should explicitly cover the organisational work of adoption, not only the technology.

THE GAP IT ADDRESSES

Non-technical adoption work goes unfunded; support breaks off after validation.

5 Develop multi-stakeholder business models early

Who buys, operates and sustains a citizen-centred digital health service should be answered during the innovation process, with all stakeholders at the table — not left open at its end.

THE GAP IT ADDRESSES

“Who is the buyer?” remains unanswered at the close of the PCP.

6 Fund and procure the trust layer itself

The citizen-side governance everything depends on — the institutions through which consent is managed and control exercised — has no owner and no funding route. Both validated solutions had to build it themselves before anything else could work, and neither found a market to sustain it. Europe should recognise it as a procurable public capability.

THE GAP IT ADDRESSES

The citizen-side governance layer has no owner and no funding route.

LOOKING AHEAD

The CRANE solutions are maturing through the suppliers' own routes to market, and the evaluation toolkit is available to any public buyer in Europe. The timing is favourable: as the **European Health Data Space** moves into implementation, public buyers across the Union will need exactly the citizen-centred, consent-based capabilities CRANE has shown can be built. With the right procurement and funding conditions in place, the evidence can end up where it belongs: **in services that citizens and health systems actually use.**

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