Establishing the value and business model for sustainable eHealth services in Europe

The project in a nutshell

 VaLUeHEALTH is a Research and Development project within the Horizon 2020 Framework Programme and is funded by the European Union. The project will demonstrate how interoperability of health information can consistently create, deliver, and capture value for all stakeholders, in order to justify sustainable investments in scaling up interoperability across Europe.

 VaLUeHEALTH will establish how eHealth interoperability can create, deliver, and capture value for all stakeholders, to justify a sustainable market in scaling up cross-border interoperability. We will develop an evidence-based business plan for sustainable interoperability, with sustainable revenue streams for developing and operating self-funding priority pan-European eHealth Services beyond 2020. VALUeHEALTH comprises a rich multi-stakeholder consortium of experienced partners and funded experts, to bring together many essential viewpoints to undertake the work plan and - importantly - to endorse and champion its results.

 Starting with those already approved by the eHealth Network for the Connecting Europe Facility (CEF)\(^1\), we will work with multiple stakeholders through a robust methodology to prioritise use cases relevant to Member States for cross-border and also within border health service business needs. We will design an over-arching business model and multiple stakeholder Value Propositions for European scale interoperability, define the multisided market needed to sustain investments in interoperability services, perform state of the art Cost Benefit Assessment and risk assessments, and from this develop a strategic plan for sustainability. We will define the interfaces, standards and platform services and tools needed to deliver the prioritised use cases, and from this derive a design and deployment roadmap for the essential generic and healthcare specific services. We will provide a gap analysis of standards, specifications and translations plus their urgency of need and estimated costs. We will collate European experience of success strategies for promoting high-quality structured and coded Electronic Health Records (EHRs), and of organisational changes needed to capitalise on richly interoperable health records, to produce a roadmap of scale-up adoption strategies, recommended incentives and who should fund them.

 Finally, we will integrate and validate these results to produce a definitive Business Plan and Strategy for taking forward public-private investment in digital eHealth services, as clear guidance to the CEF on how it may

construct its digital service infrastructure Building Blocks for health, to ensure maximum value and optimal sustainability beyond 2020. This will not only include the costs and revenues, and their timelines, but the strategies needed to derive value from them - which is vital to justify sustainability.

One important context is substantial investment in Europe through the CEF in establishing a pan-European digital services infrastructure covering multiple public sectors. This investment provides a unique opportunity and momentum to define and deliver a more strategically sound, value driven, business plan to realize sustainable eHealth interoperability. The CEF will offer a time window of European funding in generic services, and for some specialized eHealth specific services, that eHealth can take advantage of. CEF (public) funding is not a long-term solution, but an important enabler. The permanent solution is to construct a value chain that maintains a perpetual cycle of investments in interoperability, that become embedded within the larger ecosystem of the health care delivery and health ICT sectors, and indeed bring sufficient benefit to enhance those sectors. VALUeHEALTH will demonstrate how this critical value chain can be constructed and optimized by developing an evidence-based business plan for sustainable pan-European services.

The VALUeHEALTH work plan

The work plan will deliver five key results, which respond to these challenge areas, respond to the call text and correspond to our objectives.

- The project will produce a prioritised list of use cases, whose relevance has been determined by Member States on the basis of cross-border and within border health service priorities and business needs.
- It will use a business model reference framework to define multiple stakeholder Value Propositions for European scale interoperability, define the multisided market which needs to sustain investments in interoperability services, perform state of the art Cost Benefit Assessment and from this develop a strategic plan for sustainability.
- VALUeHEALTH will collate the experience gained so far across Europe in success strategies for promoting the adoption (creation and use) of high-quality structured and coded health records, and of organisational changes needed to capitalise on the benefit of richly interoperable, computable health information, to produce a roadmap of scale-up adoption strategies including recommended incentives and who should fund them.
- It will examine the European digital services that are needed to deliver the prioritised use cases, the interfaces, standards and platform services and tools to deliver them, and from this derive a design and deployment roadmap which prioritises the key services needed for the prioritised use cases. We will
differentiate generic services from those specifically needed by health care, by tracking the evolution of the digital service infrastructure (DSI) specifications. We will include a gap analysis of standards, technical specifications and translations together with an indication of their urgency and estimated costs.

Finally, the project will pull all of these results together to create a definitive business plan and sustainability strategy for taking forward public and private investment in digital eHealth services, to provide clear guidance to the CEF on how it may construct its DSI in relation to health, in order to ensure maximum value and optimal sustainability. This will be detailed, and not only include the costs and revenues, and their timelines, but the strategies needed to derive value from them - which is vital to justify their sustainability.

Prioritised eHealth Services and Use Cases

The project approach as a whole is strongly use case driven, and leverages a rich multi-stakeholder consortium of partners and experts to ensure the MS and multi-stakeholder representativeness and relevance of the use case definition and prioritisation process. These prioritised use cases will provide the scope for the implementation and adoption (scale up) roadmaps and eventually the input for the elaboration of a strategic plan and business plan for CEF, which is our final deliverable. Starting from today’s best knowledge of MS priorities for the CEF, WP1 will identify and agree on a roadmap of use cases that should be deployed on large scale. Whilst the focus of the CEF is on cross-border use cases, as stated earlier Member States will wish to implement other use cases as well.

A responsive, learning-fed, evidence-based methodology will be applied. The initial prioritisation of use cases will be based on prior knowledge and desk research followed by an iterative process in which the use cases with the best prior knowledge business plans are validated (in cooperation with WP2 and WP5), data is gathered to test and revise assumptions. By defining a list of selection criteria (e.g. probability of success, level of investment, risks, European priority, level of evidence, geographies, etc.), a multi-criteria assessment taking into account quantitative and qualitative criteria to assist decision-making will be conducted. It will enable
prioritizing different options using a scientific, robust and standardised approach which considers both the strategic aspects and the financial value in order to decide and prioritize the best business opportunities.

The initial use cases that we will start with, whilst new Member State use cases are being constructed, are summarised below, grouped according to their origin.

**The four potential eHealth services eligible for CEF funding identified as follows:**

- Cross-border ePrescription and eDispensation service
- Cross-border patient summary service
- eHealth services for European Reference Networks (virtual communication tools and telemedicine services for low prevalence, rare and complex diseases)
- Infrastructure services for interoperable Patient Registries

**Strategic priorities: eHN, eHGI Multi-Annual Work Programme and Health priorities such as:**

- Integrated person centred care
- Chronic disease management
- Population health and research

**Use cases input from the eHealth Interoperability Framework study**

- a) Cross-border: e-Prescription and e-Dispensation, patient summaries, for cross-border information sharing and for direction patient access
- b) National/Regional: request and results (imaging, laboratory), ambulatory specialist referral, acute care discharge
- c) Intra-Hospital: request and results (imaging, laboratory)
- d) Citizens at home and on the move: documentation of his/her specific chronic disease, use of mobile and monitoring devices, sensor devices to monitor activity e.g. of elderly people

**Roadmaps: CALLIOPE, SemanticHEALTH and projects such as Antilope and Trillium Bridge**

This methodology will enable identifying and prioritizing the biggest business opportunities for the deployment of eHealth services in Europe, thus contributing to optimizing resources and to maximizing business success and sustainability of CEF investments.

Each work package has two co-leads:

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More information is available at [http://www.valuehealth.eu](http://www.valuehealth.eu)

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