



Project Profile

SYMPHONY

An ecosystem for true value-based healthcare

The ITEA project SYMPHONY (An Orchestrated Open IT Eco-System enabling End-to-End Solutions for Disease-Specific Clinical Decision Support) will create an open healthcare IT ecosystem, integrating information for diagnosis, treatment selection and follow-up via breakthroughs in semantic interoperability, explainable AI and medical guideline automation.

Addressing the challenge

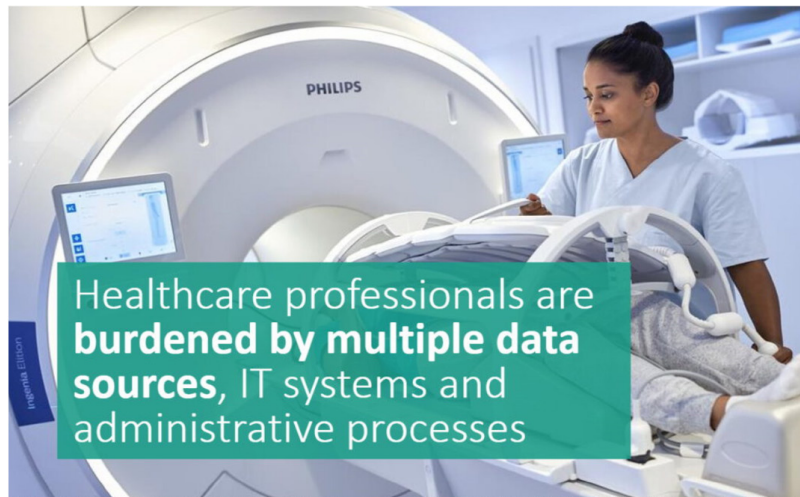
Demand for healthcare is increasing while staff capacity is declining, making it harder to improve patient outcomes and work cost-effectively. A solution lies in greater access to medical data, which could assist specialists in decision-making according to clinical guidelines. However, the lack of structure, the heterogeneity of data sources and the amount of data (often found in separate silos with vendor lock-in) make it difficult to select the right information in time.

Proposed solutions

With a focus on the digital architecture of health systems, SYMPHONY will build an open IT ecosystem that runs on infrastructures such as on-premises or cloud infrastructures and in which applications and services can be integrated by third parties. This will present clinical information in a comprehensive overview based on the decision that needs to be made at any point in a care path, such as through the development of explainable AI and information extraction pipelines that use natural language processing on unstructured patient medical diagnostic imaging reports and clinician consultation notes to automate the extraction of summative information. The system can also relieve caregivers from administrative tasks for which data and events can be communicated automatically from health IT systems to a patient's smartphone. To address data fragmentation with proper security and privacy measures, data will be ingested

in repositories that expose standardised interfaces, while the 'pluggability' of the algorithms and applications will provide openness to avoid vendor lock-in. The solution will then be verified against use-cases on prostate cancer, aortic aneurysm (diagnostic intervention), atrial fibrillation and multiple sclerosis.

treatment decisions, patients will also benefit in terms of recovery and quality of life. The project's shared clinical intelligence assets, for instance, aim to reduce hospital visits by 20%. In turn, this will reduce the costs of healthcare and of lost productivity throughout society. In terms of business, SYMPHONY promotes a Software-as-a-Service approach in which third parties can leverage the platform via subscription/pay-per-use, relieving clients of hosting and operation costs. This provides the consortium with opportunities to grow within the European eHealth market, worth USD 7.1 billion in 2023 at a compound annual



Healthcare professionals are burdened by multiple data sources, IT systems and administrative processes

^ SYMPHONY will create an ecosystem that empowers medical professionals to have all relevant data for a particular patient at their disposal based on disease-centric and intuitive applications

Projected results and impact

SYMPHONY's major innovation is vendor-agnostic integration and the interoperability of all relevant applications along the care path, providing practitioners with the ability to compose disease-centric workflows in one easy-to-use IT system. With the improved effectiveness and efficiency of

growth rate of 15.94%, and represents the shift in healthcare value from devices to digitalisation. As a result, SYMPHONY aims to enable and drive the transition from a fee-per-service reimbursement model by healthcare insurance companies towards true value-based healthcare.



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Project leader
Saurav Kumar Baidya, Philips

Project website
<https://symphony-iteaproject.eu/>

Project end
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Project email
saurav.baidya@philips.com

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