Project Consortium

Fraunhofer Institute for Applied Information Technology (DE) – Project coordinator

CNet Svenska AB (SE)

In-JeT ApS (DK)

Research Institute Fondazione Inuit Tor Vergata (IT)

Technical Universtiy of Kosice (SK)

Vrije Universiteit Brussel (BE)

University of Rome "Tor Vergata" Hospital (IT)

Heinrich-Heine-University Düsseldorf, Universitätsklinik Düsseldorf (DE)

The aim of the PICASO project is to develop an ICT platform which will support the coordination of care plans across different sectors for people diagnosed with multiple chronic diseases.

The PICASO project also aims to strengthen the evidence based on health outcomes, quality of life and care efficiency gains from the use of ICT in integrated care. It will further stimulate the independence and empowerment of patients, reduced admissions and days spent in care institutions and thus positively impact the sustainability of European health and care systems.

In this way, the PICASO project addresses three main challenges in Europe's healthcare systems: managing multi-morbidities; coordinating care and treatment across organisational silos and adapting ehealth solutions to existing care models and plans.

Visit us at: www.picaso-project.eu or contact the Project Coordinator, Dr. Carlos A Velasco at carlos.velasco(at)fit.fraunhofer.de

PICASO

A Personalised Integrated Care Approach for Service Organisations and Care Models for Patients with Multi-Morbidity and Chronic Conditions
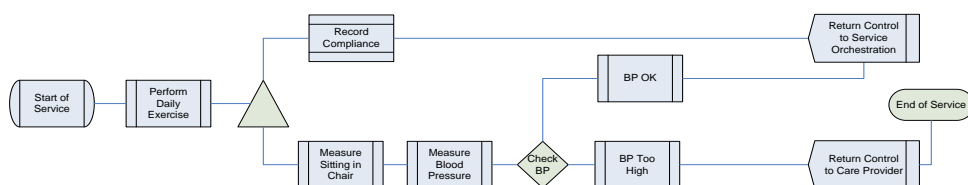

To transcend from today's fragmented, silo-contained care systems, PICASO provides a digital platform for the concept of "Continuum of Care"
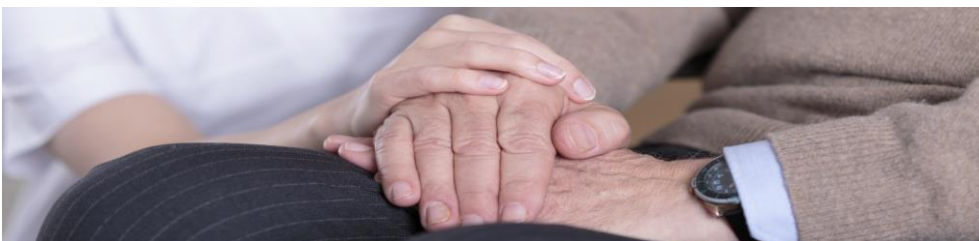
Integration and sharing of care plans

An all encompassing and cost effective care delivery for patients in tomorrow's care system presents a huge challenge in terms of coordination of care and treatment across many isolated care organisations involved. To transcend from today's fragmented, silo-contained care systems, the concept of "Continuum of Care" is gaining momentum as a care concept involving an integrated view with a system of care that guides and tracks patients over time through a comprehensive array of personalised, health and social services spanning all levels and intensity of care. The PICASO platform will allow efficient creation and roll-out of personalised services that integrate and coordinate collaboration of different care organisations and enable patients to become active participants in their own care together with their families. The definition and execution of services will be implemented with personalised dynamic narratives and service orchestration across distributed care spaces.

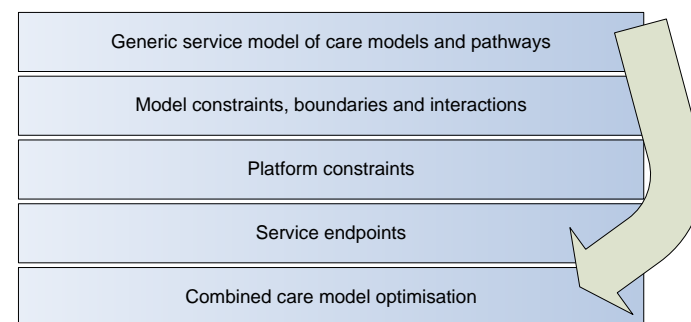A representation of the logic workflow (narrative) of a care plan

Secure exchange of patient data

The growing volume of data, combined with an ever-growing demand for sharing information, has created a virtual care information space that is insufficiently integrated with the distributed physical care space, thus leading to the necessary information not being available at the right place at the right time. The PICASO platform will provide a method for securely sharing patient information across all relevant formal and informal care providers, using a unique, trust federated solution to the problem of data privacy in cloud based health systems.

Managing patients with multi-morbidities

Patients with multiple chronic conditions comprise a significant and increasing burden on the healthcare systems worldwide. Due to the complexity and severity of their diseases, these patients require substantially more resources and still have a markedly lower quality of life than most patients with just one chronic disease. Hence there is an urge to develop new care models for management of multi-morbidity; and to make them personalised and patient-centred. Although individual care models and guidelines exist for single morbidity chronic diseases, there is still no agreed and evidenced care models that take into account how the treatment of one chronic condition can have negative implication on another. PICASO will offer a decision support system for management of co-morbidities that allows carers to analyse the cross-effect of conflicting care plans in order to design personalised, integrated care pathways supported by risk assessment for dynamic update of the pathway based on the immediate status of the patient.

A constraints model for a multi-morbidity care plan

Narratives can be tested and optimised for goal efficacy using the Goal Optimiser, a heuristic goal-seeking tool that provides decision support for the narrator.

Socio-economic framework

The PICASO platform environment will be complemented by sociological and economic research aimed at understanding ethical, social and business aspects of the integrated care platform. The research will provide insight into ethical localism focusing on opportunities in patient empowerment and issues such as autonomy, privacy, fear of surveillance and stigmatisation. Aspects of health economics and organisational implementation will also be studied in the context of migration of the platforms into real life care systems.