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niCE-life

LIAISON WITH OTHER EU-INITIATIVES

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Contents

1. Smart Age-friendly Living and Working Environment

Programme(s):

H2020-EU.3.1.4.1. - Active ageing, independent and assisted living

H2020-EU.3.1.4.2. - Individual awareness and empowerment for self-management of health

Topic(s):

SC1-DTH-03-2018 - Adaptive smart working and living environments supporting active and healthy ageing

Duration of the project:

1/1/2019 – 31/12/2021

Objectives of the project

The design and realization of age-friendly living and working environments is a huge challenge that we have just only started to address as the number of older citizens who are and want to continue being active members of society and live independently is constantly increasing. SmartWork builds a worker-centric AI system for work ability sustainability, integrating unobtrusive sensing and modelling of the worker state with a suite of novel services for context and worker-aware adaptive work support. The unobtrusive and pervasive monitoring of health, behaviour, cognitive and emotional status of the worker enables the functional and cognitive decline risk assessment. The holistic approach for work ability modelling captures the attitudes and abilities of the ageing worker and enables decision support for personalized interventions for maintenance/improvement of the work ability. The evolving work requirements are translated into required abilities and capabilities, and the adaptive work environment supports the older office worker with optimized services for on-the-fly work flexibility coordination, seamless transfer of the work environment between different devices and different environments (home, office, on the move), and on-demand personalized training. The SmartWork services and modules also empower the employer with AI decision support tools for efficient task completion and work team optimization through flexible work practices. Optimization of team formation, driven by the semantic modelling of the work tasks, along with training needs prioritization at team level to identify unmet needs, allow employers to optimize tasks (e.g. needed resources), shifting focus on increased job satisfaction for increased productivity. Formal and informal carers are able to continuously monitor the overall health status and risks of the people they care for, thus providing full support to the older office worker for sustainable, active and healthy ageing.

2. CO-ADAPT: Adaptive Environments and Conversational Agent Based approaches for Healthy Ageing and Work Ability

Programme(s)

H2020-EU.3.1.4.1. - Active ageing, independent and assisted living

H2020-EU.3.1.4.2. - Individual awareness and empowerment for self-management of health

Topic(s)

SC1-DTH-03-2018 - Adaptive smart working and living environments supporting active and healthy ageing

Duration of the project:

1/12/2018 – 31/5/2022

Coordinator of the project:

HELSINGIN YLIOPISTO - Finland

Objectives of the project

Active ageing along with work ability frameworks contributed mostly to inform policies and development of research methods rather than concrete solutions such as technologies and applications. Ageing citizen face particular difficulties in remaining active if having reduced capabilities due to age-related conditions and challenges posed by knowledge digitalization, the accessibility of digital channels, digital interfaces and digital socialization. CO-ADAPT proposes a framework that provides principles for a two-way adaptation in support of ageing citizens. 1) Human Adaptation Support: CO-ADAPT empowers ageing citizen to adapt to changed conditions through a personalised Artificial Intelligence (AI) conversational agent providing comprehensive change support based on language and physiological analytics. 2) Work Systems Adaptations: CO-ADAPT defines three types of smart adaptations in work systems with different level of technology sophistication to age thresholds in smart shift scheduling tools, to individual capabilities considering cognitive workload in assembly stations, adaptations to work tasks in contextually recommending people, documents and applications for cognitive augmentation. The evaluation approach is focussed on quantifying economical benefits in terms of improved work ability. It includes a comparative trial of the Human Adaptation Support, the personalised conversational agent application, in north and south Europe for investigating cultural applicability. The Work Systems Adaptations are trialled in real environments with an extensive pilot for the smart shift scheduling tools in Finland (N=20 000), and more focused trials with sophisticated prototypes for the assembly station adaptations in Italy and contextual entity recommender in Finland. The consortium includes comprehensively stakeholders and disciplines geared for a participatory design approach, compliance with ethical and data directives, and effective exploitation of results.

Project website:

https://coadapt-project.eu/

3. Certified smart and integrated living environments for ageing well

Programme

H2020-EU.3.1.4.1. - Active ageing, independent and assisted living

Topic

SC1-HCC-01-2018 - Supporting investment in smart living environments for ageing well through certification

Coordinator of the project:

FUNDACION TECNALIA RESEARCH & INNOVATION – Spain

Project duration:

1/12/2018 – 28/2/2021

Objectives of the project

Age-friendly environments are one of the most effective approaches for responding to demographic ageing and increasing the Healthy Life Year indicator. However, there is still a huge building stock not adapted to the needs of older people. Even today, new buildings don´t yet properly address the need for creating smart living environments for ageing well.

Homes4Life addresses this challenge by contributing to the development of a common European framework for age friendly living environments and defining the Homes4Life certification scheme to tackle end-users' needs and requirements through a holistic and life-course approach integrating Construction and ICT solutions. The different socio-economic conditions (housing ownership, family structure, health system, etc) and building typologies among the EU member states will be analysed in detail to provide the necessary flexibility to map the Homes4Life certification scheme to the specificities of each country with a user-centric approach. The scope of Homes4Life scheme will cover both new and existing buildings.

The strategy to define the certification scheme will be: i) analyzing the main difficulties and needs faced by older people to age at home, ii) identifying the physical and digital solutions that increase their quality of life and wellbeing, iii) assessing the availability, functionality and quality of service of the existing solutions on a specific home.

Homes4Life scheme aims to foster (public and private) investment making explicit the benefits for each stakeholder of transforming the building stock into a smart and integrated age friendly living environment.

Considering the need for social consensus for the development of this certification scheme the consortium will be supported by an expert board that includes 14 key players in aging at home domain, covering

complementary disciplines (investment, standardization, e-health, building and design, public social services) and a Stakeholders Community.

Project website:

http://www.homes4life.eu/

4. Smart environments for person-centered sustainable work and well-being

Programme(s)

H2020-EU.3.1.4.1. - Active ageing, independent and assisted living

H2020-EU.3.1.6.2. - Optimising the efficiency and effectiveness of healthcare provision and reducing inequalities by evidence based decision making and dissemination of best practice, and innovative technologies and approaches

Topic

SC1-DTH-11-2019 - Large Scale pilots of personalised & outcome based integrated care

Coordinator of the project:

ASOCIACIÓN INSTITUTO DE INVESTIGACIÓN EN SERVICIOS DE SALUD-KRONIKGUNE - Spain

Project duration:

1/1/2020 – 31/12/2023

Objectives of the project

Medical breakthroughs significantly increased life expectancy. According to the World Health Organisation, global average life expectancy increased by 5.5 years between 2000 and 2016, the fastest increase since the 1960s. This major success in public health also highlights the need for guaranteeing a good quality of life to the longer-living elderly with chronic diseases. The EU-funded ADLIFE project will develop an innovative solution. Their toolbox will contain a personalised care management platform, clinical decision support services and a patient empowerment platform. The integration of therapies and approaches in supportive care aims to reduce suffering and speed-up patients' recovery. This system will be tested on hundreds of patients in 75 hospitals across Europe.

5. Pilots for Healthy and Active Ageing

Programme(s)

H2020-EU.3.1.4.1. - Active ageing, independent and assisted living

H2020-EU.2.1.1.3. - Future Internet: Software, hardware, Infrastructures, technologies and services

Topic(s)

DT-TDS-01-2019 - Smart and healthy living at home

Coordinator of the project:

SCUOLA SUPERIORE DI STUDI UNIVERSITARI E DI PERFEZIONAMENTO S ANNA - Italy

Project duration:

1/12/2019 – 30/11/2023

Objectives of the project

By 2080, one in three Europeans will be over 65, increasing the demand for healthcare services. The demand for smart connected homes to support active aging and independent living solutions is also rapidly growing. The EU-funded PHArA-ON project will maximise the use of advanced services, devices, and tools – from IoT, artificial intelligence and robotics to cloud computing, smart wearables, Big Data and intelligent analytics. Its aim is to create a set of integrated and highly customisable interoperable open platforms. Platform interoperability will be implemented within Pharaon ecosystems and platforms, which will be validated in two stages: pre-validation and large-scale pilots (LSPs) conducted at pilot sites in Italy, Netherlands, Portugal, Slovenia and Spain (Murcia and Andalusia).

6. Smart Big Data Platform to Offer Evidence-based Personalised Support for Healthy and Independent Living at Home

Programme(s)

H2020-EU.3.1.4.1. - Active ageing, independent and assisted living

H2020-EU.2.1.1.3. - Future Internet: Software, hardware, Infrastructures, technologies and services

Topic

DT-TDS-01-2019 - Smart and healthy living at home

Coordinator of the project:

CONSIGLIO NAZIONALE DELLE RICERCHE - Italy

Project duration:

1/9/2019 – 31/8/2023

Project objectives

Ageing is a central challenge for EU societies as the number of elderlies is on the rise. Ageing has significant social and financial impacts due to higher incidence of health disturbances such as hearing loss, cardiovascular diseases, mental and balance disorders. The trend in elderly care is to search for solutions for the prevention and effective treatment of age-related ailments. The EU-funded SMART BEAR project will develop a platform based on a variety of sensors and mobile instruments that will permanently collect data on their daily life and analyse these to provide personalised interventions. The SMART BEAR solution will be tested in large-scale pilots involving 5 000 elderly people living at home in France, Greece, Italy, Romania and Spain.

7. PeRsOnalized Integrated CARE Solution for Elderly facing several short or long term conditions and enabling a better quality of LIFE

Programme(s)

H2020-EU.3.1.4.1. - Active ageing, independent and assisted living

H2020-EU.3.1.6.2. - Optimising the efficiency and effectiveness of healthcare provision and reducing inequalities by evidence based decision making and dissemination of best practice, and innovative technologies and approaches

Topic

SC1-DTH-11-2019 - Large Scale pilots of personalised & outcome based integrated care

Project duration:

1/1/2020 – 31/12/2022

Project coordinator:

KINETIKOS-DRIVEN SOLUTIONS LDA

he existing care ecosystem cannot effectively address all problems due to several chronic diseases. As such, there is a need for a flexible and modern ecosystem that targets the benefit of both patients and healthcare personnel. The EU-funded PROCareLife project proposes an integrated scalable and interactive care ecosystem. It will focus on neurodegenerative disorders, seeking the best actions to improve quality of life, understanding and care management as well as to offer personalised proposals that can ameliorate health conditions. The project will implement multidisciplinary communication between involved stakeholders, aiming to complete a cost-affordable, flexible and adaptable to other chronic diseases solution.

8. affecTive basEd iNtegrateD carE for betteR Quality of Life

Programme(s)

H2020-EU.3.1.4.1. - Active ageing, independent and assisted living

H2020-EU.3.1.6.2. - Optimising the efficiency and effectiveness of healthcare provision and reducing inequalities by evidence based decision making and dissemination of best practice, and innovative technologies and approaches

Topic

SC1-DTH-11-2019 - Large Scale pilots of personalised & outcome based integrated care

Project duration:

1/11/2019 – 31/10/2022

Project coordinator:

UNIVERSIDAD POLITECNICA DE MADRID – Spain

Project objective

Europe's growing population faces serious social and health challenges especially where cognitive impairments and heart diseases are concerned. With this in mind, the EU-funded TeNDER project aims to create an integrated care ecosystem to assist people with Alzheimer's, Parkinson's and cardiovascular comorbidities. It will achieve this through the use of affect-based micro-tools that will recognise a person's mood, adapt the system's probes to his or her needs and match them with clinical and clerical patient information. Interactive communication and social services will further strengthen elderly support. The project will help to increase the quality of life of people suffering from these diseases.

With an increasingly growing population in Europe, cognitive impairments as well as heart diseases are a major social and health issue. 1.2 million people in Europe are affected by Parkinson's disease (PD) while Alzheimer's disease remains one of the biggest global public health challenges our generation is facing, while Cardiovascular disease represented the 31% of all global deaths in 2016.

Based on these facts, the affecTive basEd iNtegrateD carE for betteR Quality of Life TeNDER project will create an integrated care ecosystem for assisting people with chronic diseases of Alzheimer's (AD), Parkinson's (PD) and comorbidity with Cardiovascular Diseases (CVD) through the use of affect based micro tools. These microservices will recognise the mood of a person and thus adapt the system's probes to the person's needs via a multi-sensorial system, even in the most severe cases, and match with clinical (from Electronic Health Records EHRs) and clerical patient information, while preserving privacy, monitoring the ethical principles, providing data protection and security, with the result of an increased Quality of Life

(QoL). In addition, interactive communication and social services will strength the elderly support, extending their autonomy and care supply chain.

9. SMART LIVING HOMES - WHOLE INTERVENTIONS DEMONSTRATOR FOR PEOPLE AT HEALTH AND SOCIAL RISKS

Programme(s)

H2020-EU.3.1.4.1. - Active ageing, independent and assisted living

H2020-EU.2.1.1.3. - Future Internet: Software, hardware, Infrastructures, technologies and services

Topic

DT-TDS-01-2019 - Smart and healthy living at home

Project duration:

1/10/2019 – 31/3/2023

Project coordinator:

MEDTRONIC IBERICA SA – Spain

Project duration:

The rising population of elderly in the EU member states is giving rise to new challenges in relation to independent living. The EU-funded GATEKEEPER project aims to ensure healthier independent lives for the ageing populations. It will connect healthcare providers, businesses, entrepreneurs, elderly citizens and the communities they live in. The goal is to create an open, trust-based arena for matching ideas, technologies, user needs and processes. The project will also incorporate data protection while underpinning value creation using advanced marketing patterns. The solutions deployed will involve 40 000 elderly citizens, as well as authorities, institutions, companies, associations and academics, and 8 regional communities from 7 EU member states.

The main objective of the Project is to create a GATEKEEPER, that connects healthcare providers, businesses, entrepreneurs, elderly citizens and the communities they live in, in order to originate an open, trust-based arena for matching ideas, technologies, user needs and processes, aimed at ensuring healthier independent lives for the ageing populations. By 2022, GATEKEEPER will be embodied in an open source, European, standard-based, interoperable and secure framework available to all developers, for creating combined digital solutions for personalised early detection and interventions that (i) harness the next generation of healthcare and wellness innovations; (ii) cover the whole care continuum for elderly citizens, including primary, secondary and tertiary prevention, chronic diseases and co-morbidities; (iii) straightforwardly fit “by design” with European regulations, on data protection, consumer protection and

patient protection (iv) are subjected to trustable certification processes; (iv) support value generation through the deployment of advanced business models based on the VBHC paradigm.

GATEKEEPER will demonstrate its value by scaling up, during a 42-months work plan, towards the deployment of solutions that will involve ca 40.000 elderly citizens, supply and demand side (authorities, institutions, companies, associations, academies) in 8 regional communities, from 7 EU member states.

10. Assessing the State of the Art and Supporting an Evidence-Based Uptake and Evolution of Open Service Platforms in the Active and Healthy Ageing Domain

Programme(s)

H2020-EU.3.1.4.1. - Active ageing, independent and assisted living

H2020-EU.3.1.5.1. - Improving halth information and better use of health data

Topic

SC1-HCC-02-2019 - Support for the large scale uptake of open service platforms in the Active and Healthy Ageing domain

Project duration:

1/1/2020 – 28/2/2022

Project coordinator:

SYNYO GmbH

Project objectives:

Ageing is one of the biggest socioeconomic challenges of this century. In the European Union alone, 20 % of the population will be over 65 by 2025. The EU-funded PlatformUptake.eu project aims to observe, analyse and understand the whole range of open service platforms and their related networks. This in turn will help generate synergies among them. For a span of 26 months, PlatformUptake.eu will assess the impact of existing platforms on society, create monitoring and evaluation toolkits, collect successful user stories and best practices, while promoting interoperability and defining guidelines for the common evolution of such platforms.

Ageing presents one of the greatest socio-economic challenges of the 21st century. According to estimates more than 20% of Europeans will be 65 or older by 2025. Reacting to related puzzlements of demographic shifts and ageing in general, and guaranteeing the availability of the required structure to help Europe utilise the active and healthy ageing sector’s opportunities, the EU has devoted a high level of resources to ICT projects in the field of active and healthy ageing. As such a considerable number of open source platforms for the development of innovative solutions in the AHA domain have been created. These

platforms, such as universAAL and FIWARE and several others, are operational on similar services within the same domain, either competing or complementing each-other, urging for more interoperability among them.

Responding to the numerous critical voices that have been raised due to the persisting fragmentation of the active and healthy ageing market; and the lack of interoperability of the various solutions deployed or difficulties with the large scale uptake of the platforms by their targeted users, the aim of the PlatformUptake.eu project is to observe, analyse and understand the whole ecosystem of open service platforms and their related networks, and depict a picture describing the whole ecosystem with its achievements and potentials, targeting all user groups while also generating synergies among platforms and their related projects in the AHA and IoT domain. For a period of 26 months, the PlatformUptake.eu project will assess the societal impact of existing platforms, create monitoring and evaluation toolkits, collect successful user stories and best practices, promote interoperability and define guidelines for a common evolution of such platforms within existing policy frameworks and initiatives. Seeking to support the large-scale uptake of the platforms, PlatformUptake.eu proposes the creation of an online information hub which provides descriptive and support materials on all existing platforms, the organisation of several stakeholder events, as well as a Massive Open Online Course for promoting synergies, knowledge exchange and a common understanding among all stakeholders in the Active and Healthy Ageing market.

11. VALUE-BASED METHODOLOGY FOR INTEGRATED CARE SUPPORTED BY ICT

Programme(s)

H2020-EU.3.1.4.1. - Active ageing, independent and assisted living

H2020-EU.3.1.6.2. - Optimising the efficiency and effectiveness of healthcare provision and reducing inequalities by evidence, based decision making and dissemination of best practice, and innovative technologies and approaches

Topic

SC1-DTH-11-2019 - Large Scale pilots of personalised & outcome based integrated care

Project coordinator:

ERASMUS UNIVERSITAIR MEDISCH CENTRUM ROTTERDAM – Netherlands

Project duration:

1/12/2019 – 30/11/2023

The increasingly ageing population in Europe are highlighting challenges related to ensuring healthy ageing and independent living. The elderly need to be able to participate in their care and maintain their autonomy. The EU-funded VALUECARE project intends to deliver efficient outcome-based integrated care to the elderly who are suffering from cognitive impairment, frailty and multiple chronic

health conditions. The principles of 'value-based care' will be applied. This approach will be supported by a robust, secure and scalable digital solution that will be tested and evaluated in seven large-scale pilots in Europe. The goal is to improve the quality of life of the elderly and their families, while also making European health and social care systems more sustainable.

Healthy ageing along with independent living have become key challenges for Europe as countries are experiencing growth in the number of older persons in their population. Several international organisations have stressed the importance of the independence, participation and autonomy of older people to remain healthy and, consequently, to ensure their quality of life. VALUECARE will deliver efficient outcome-based integrated (health and social) care to older people facing cognitive impairment, frailty and multiple chronic health conditions in order to improve their quality of life (and of their families) as well as the sustainability of the health and social care systems in Europe. It will also take into account the job satisfaction and the wellbeing of the health and social service providers, thus moving from the "Triple" to the "Quadruple Aim". The project's vision of integrated value-based care will be supported by a robust, secure and scalable digital solution that will be tested and evaluated in 7 large-scale pilots in Europe following a sound methodology developed by the project partners together with the end-users. VALUECARE proposes greater efficiency in the use of resources and coordination of care in a setting that ensures trust of users and policy makers about data access, protection and sharing and standardisation that can be replicated in EU. The consortium, made up of 17 partners from 8 EU countries, led by the Erasmus Medical Centre, has been built to guarantee the full coverage of the scientific, technological, clinical and social competencies, and to gather the viewpoint of different actors necessary to develop, test and evaluate the concepts, paradigms, protocols and interventions related to VALUECARE. The project's multidisciplinary consortium includes stakeholders from the whole supply chain of the digital health and social care environment in order to maximize its chances of success.

12. Smart and Healthy Ageing through People Engaging in Supportive Systems

Programme(s)

H2020-EU.3.1.4.1. - Active ageing, independent and assisted living

H2020-EU.2.1.1.3. - Future Internet: Software, hardware, Infrastructures, technologies and services

Topic

DT-TDS-01-2019 - Smart and healthy living at home

Project duration:

1/11/2019 – 31/12/2023

Project coordinator:

NATIONAL UNIVERSITY OF IRELAND MAYNOOTH - Ireland

Throughout Europe, many people are handicapped by reduced capabilities that are either permanent or temporary. The EU-funded SHAPES project aims to create the first European open Ecosystem enabling the large-scale deployment of a broad range of digital solutions for supporting and extending healthy and independent living for such older individuals. SHAPES builds an interoperable platform integrating smart digital solutions to collect and analyse older individuals' health, environmental and lifestyle information, identify their needs and provide personalised solutions that uphold the individuals' data protection and trust.

SHAPES aims to create the first European open Ecosystem enabling the large-scale deployment of a broad range of digital solutions for supporting and extending healthy and independent living for older individuals who are facing permanently or temporarily reduced functionality and capabilities. SHAPES builds an interoperable Platform integrating smart digital solutions to collect and analyse older individuals' health, environmental and lifestyle information, identify their needs and provide personalised solutions that uphold the individuals' data protection and trust. Standardisation, interoperability and scalability of SHAPES Platform sustain increased efficiency gains in health and care delivery across Europe, bringing improved quality of life to older individuals, their families, caregivers and care service providers. SHAPES Large-scale Piloting campaign engages +2k older individuals in 15 pilot sites in 10 EU Member States, including 6 EIP on AHA Reference Sites, and involves hundreds of key stakeholders to bring forth solutions to improve the health, wellbeing, independence and autonomy of older individuals, while enhancing the long-term sustainability of health and care systems in Europe. SHAPES's multidisciplinary approach to large-scale piloting is reflected across 7 themes that, together, provide a clear understanding of the reality of European health and care systems and enable the validation of cost-efficient, interoperable and reliable innovations capable of effectively supporting healthy and independent living of older individuals within and outside the home. Building an ecosystem attractive to European industry and policy-makers, SHAPES develops value-based business models to open and scale-up the market for AHA-focused digital solutions and provides key recommendations for the far-reaching deployment of innovative digital health and care solutions and services supporting and extending healthy and independent living of older population in Europe.

13. International Digital Health Cooperation for Preventive, Integrated, Independent and Inclusive Living

Programme(s)

H2020-EU.3.1.4.1. - Active ageing, independent and assisted living

H2020-EU.3.1.5.1. - Improving health information and better use of health data

H2020-EU.3.1.4.2. - Individual awareness and empowerment for self-management of health

Topic

SC1-HCC-03-2018 - Support to further development of international cooperation in digital transformation of health and care

Project coordinator:

STEINBEIS 2I GMBH - Germany

Project duration:

1/5/2019 – 30/4/2022

Project objectives

Building international cooperation in the field of digital health is necessary to keep up with latest innovations and technological advancements in the field of healthy ageing. The EU-funded IDIH project aims to organise a Digital Health Transformation Forum to serve as a catalyst to encourage close collaboration with experts, agencies and RTI stakeholders from Canada, China, Japan, South Korea and the US with EU. The consortium (involving experts in healthcare and digital health, IT) will formulate priorities and find contributions for works in four groups: preventive care, integrated care, independent and connected living and inclusive living. New collaborations will be established for digital solutions in healthcare, society and the health industry.

The aim of the IDIH project is to promote and increase international cooperation to advance digital health in the EU and key strategic countries to support active and healthy ageing through innovation.

IDIH will identify shared priorities and set up a Digital Health Transformation Forum as a long-lasting and expert-driven catalyst to foster collaboration between the EU and five strategic third countries, i.e. Canada, China, Japan, South Korea and the USA.

Overall, the IDIH project sets 4 targeted objectives. First, to support the definition of common priorities to enhance strategic international cooperation in digital health in line with policy orientations through a thorough analysis of priorities in Europe and each of the strategic third countries and close involvement of the relevant funding agencies. Secondly, to provide specific contributions to the international dialogue in digital health with the creation of a Digital Health Transformation Forum acting as umbrella for high-level experts in four thematic groups (Preventive care, Integrated care, Independent and connected living and Inclusive living). Thirdly, to facilitate the exchanges between RTI stakeholders from the EU and strategic third countries in digital health through international workshops, promotion of cooperation opportunities (guidebook, webinars, helpdesk) and joining forces with other initiatives. Fourthly, to foster international collaboration for digital solutions for health care benefitting the society and industry through networking and co-creation sessions in RTI workshops.

The consortium partners have complimentary expertise, including healthcare & digital health, IT, H2020 project management, technology transfer etc. The consortium has close links to funding authorities and

actors in the Digital Health Industry in all countries/regions and have wide networks in the community. As such, the consortium possesses expertise and tools to successfully realise the objectives of the project.