



POR Calabria
2014-2020
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Abstract

The effects of Covid-19 on healthcare facilities go far beyond the overload of intensive care units. Actually, a significant decrease in ordinary hospitalizations, diagnostic tests, and interventions has been observed, in the last year, owing to the almost total commitment of medical personnel to care of patients with Sars-CoV-2 infection. This implies that the “indirect deaths”, caused by the lack of care for all patients suffering from diseases other than Covid-19, are also attributable to the ongoing pandemic. From this comes the drive to improve the resilience of hospital structures in order to protect the health of the entire population by ensuring the essential levels of medical assistance even in emergency situations, such as that induced by the spread of the Sars-CoV-2 virus. To this end, new treatment paradigms must be found, and technological progress should be exploited in favor of health. Our proposal precisely fits this context since it aims to create a health services management system, mainly addressed to Calabria hospitals and oriented towards achieving the following objectives:

- strengthening of research infrastructures engaged in identifying innovative technological solutions for the protection of health through the provision of multidisciplinary and international know-how, data and equipment;
- Research and development activities for the definition of technical solutions in the field of counteracting the COVID19 pandemic and for solving health issues;
- resolution of the critical issues in target contexts, especially those that emerged following the onset of the health emergency caused by the Covid-19 spread;
- supply chain digitization of health, bureaucratic and administrative processes, through telemedicine modules able to increase the resilience of local hospitals and to counteract the effects that Covid-19 has had on the regional health system.

In order to respond effectively to all the needs described above, the project activities have been appropriately spilt into different phases: 1 - Management, 2 - Design, 3 - Innovation, 4 - Implementation, 5 - Experimentation.

- **Phase 1** will last the entire life cycle of the project (18 months) to manage, monitor and finalize the project proposal from an administrative and coordination perspective. The Management Team will conduct this activity in collaboration with external consultants.
- **Phase 2** (months 1-6) will carry out the iCare system requirements and design. This activity will see the Research Team's collaboration with the experts in hospital health and software architectures and platforms.
- **Phase 3** (months 7-18) will see the seven postdocs developing highly innovative solutions to be integrated into the iCare system. These activities will be carried out under the Research Team supervision and in collaboration with the international network operating in Computer, Management and Telecommunications Engineering, Artificial Intelligence, Administrative Law, Business and Health Economics.
- **Phase 4** (months 7-18) in the same period, will carry out the implementation and validation of the iCare system.
- **Phase 5** (months 13-18) will see the training of healthcare personnel and the test and optimization of iCare system functionalities. The workload will be equally distributed between the Research Team and the group of external consultants.



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The postdocs will work for 24 months in multidisciplinary areas to realize the iCare platform and carry out research and development activities. Furthermore, they will collaborate with the international network for creating increasingly iCare innovative modules.