



## DECIDE

Diagnostic Enhancement of Confidence by an International Distributed Environment

Through the DECIDE project, Alzheimer Europe has benefited from European research funding.

### Enabling earlier diagnosis of dementia

**1** DECIDE stands for “Diagnostic Enhancement of Confidence by an International Distributed Environment”. This FP7 project brought together 13 partners from five European countries, with the Italian GARR Institute as leading partner. Its aim was to develop and launch an e-service that allows the early diagnosis of Alzheimer’s and other neurodegenerative diseases.

From the end-user perspective, the main advantages of the service developed by DECIDE are its reliability and user-friendliness. The treating physician needs only a computer with a web connection and a standard Internet browser to use the service. This is possible thanks to the so-called grid and cloud computational resources made available by the European Grid Initiative (EGI) and the high-bandwidth network connectivity provided by the European GEANT network, as well as other national research and higher education networks.

### Comparing scans to thousands of cases in a matter of minutes

The resources developed by this project fit into the everyday routine of doctors attending to patients affected by Alzheimer’s disease. To give a simple illustration, a neurologist can upload a Magnetic Resonance Imaging (MRI) scan of a patient who is showing signs of mild cognitive impairment. The DECIDE system then compares this scan with thousands of existing images in the system. Less than half an hour later, the neurologist receives a report comparing dozens of indicators of dementia within the scan. The physician is then able to make a more timely and accurate diagnosis than would have been

possible without this service. Patients also benefit, as early diagnosis means earlier access to therapy, including more appropriate inclusion in clinical trials.

Principal Investigator Dr Fulvio Galeazzi comments: "DECIDE enables a physician at any remote hospital to analyse an MRI or a Positron Emission Tomography (PET) scan in a few minutes, whereas the same task on a single computer might take weeks or months."

### Alzheimer Europe – connecting science and society

Even though Luxembourg-based Alzheimer Europe did not contribute to the scientific development per se, its equally important role was to communicate the project outcomes to relevant parties in society. It is important to patients with Alzheimer's disease and to their caregivers and families to learn about new treatment methods in their domain and to have access to this crucial information in a language they can understand. But science communication and the dissemination of research results are also endeavours close to the European policymakers' hearts.

Thanks to the contribution of project partners such as Alzheimer Europe, a wider non-scientific audience can be reached. Jean Georges, Executive Director of Alzheimer Europe, says: "We are pleased that our participation in FP7 projects has provided a new link between the scientists who seek a better understanding of dementia and the people who live with Alzheimer's disease and all other forms of dementia."

### DECIDE to set the scene for a wider commercial roll-out

Even though DECIDE ended in March 2013, the service will continue to operate. However, a proven track record is often needed by the medical community before it embraces a new technology such as DECIDE. Therefore, a commercial roll-out would now require a follow-up project. The Italian Ministry of Health has already approved funding for several such follow-up projects involving DECIDE technology. In addition, a group of leading European memory clinics has been approached as potential DECIDE users and the use of the service in other FP7 projects is also being studied.

Alzheimer Europe is also involved in other EU-funded projects in the field of dementia and neurodegenerative diseases, such as NILVAD and PACE, two FP7 projects, PharmaCog, EMIF and AETIONOMY, all funded under the Innovative Medicines Initiative (IMI).



 The Seventh European Framework Programme for Research and Technological Development (FP7) was the European Union's main financial instrument to support European research during the 2007-2013 period. The funding programme continues under Horizon 2020, the Framework Programme for Research and Innovation, supporting a wide range of research domains with a budget of € 79 billion (2014-2020).