# Decision Support System for Patient-Driven Monitoring Of Cognitive Decline through Computer Aided Personal Support for Cognitive Resources

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Title of project or programme

Decision Support System for Patient-Driven Monitoring Of Cognitive Decline through Computer Aided Personal Support for Cognitive Resources

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**RCN** 

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€ 7,804

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01/07/2015

Total duration of award in years

1.5

## **Keywords**

### Research Abstract

PROBLEM: The economic burden of cognitive decline is staggering. Beyond the immense financial and social cost associated with dementia, healthy cognitive decline exacts a massive toll on quality of life, productivity and healthcare services for the European Union. Individual

patients are currently unable to track their cognitive decline or self manage the best approaches during the decline.

SOLUTION: This project, the Computer Aided Personal Support for Cognitive Resources (CAPS-CORE), will develop a Decision Support System (DSS) for mitigating the effects of cognitive decline on individuals, and, at a national level, provide a vehicle for advancing early detection of dementias and improving health economics.

PROJECT OUTPUTS: The principal output of this project will be a computer modelling-based monitoring and self-management system that will evaluate an individual's cognitive state in the moment using advanced bio-behavioral analysis of speech and response time with user feedback. Additional outputs include models for estimating the health economic impact for the DSS system.

IMPACTS: The DSS will help maximize cognitive functioning and resilience by encouraging individually-tailored lifestyle plans. It will improve the participation of patients in the care process, improving management of the disease and reducing the number of severe episodes and complications. This will reduce the economic burden on individuals and on EU healthcare services.

THE CONSORTIUM TO ACHIEVE THE IMPACTS: The CAPS-CORE consortium is a five-country multinational effort with world-leading expertise in clinical neuropsychology, cognitive neuroscience, healthcare informatics, machine learning, health economics, software development, and commercial exploitation. During this four-year project, we will develop the CAPS-CORE platform, validate it with both healthy and clinical populations and their family and medical support teams, and release a commercially viable product for public use.

### **Further information available at:**

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