

# D-HOUSE. The co-management of diabetic patients

Technologies and process-centred approach are facilitators to enable better diagnosis, treatment and management for Patients Across the Continuum of Care



## Contact information

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## Technological Offers type

Technological solutions

## Research and innovation areas

- [Health and Wellbeing](#)

## ODS



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## Where?

[Center for Biomedical Technology Life Support Technologies](#)

Keywords: | [diabetes](#) | [Health](#)

## Brief description of the technology solution and the added value it provides

Life Supporting Technologies group of the Technical University of Madrid (UPM) has developed an innovative solution that supports the integrated management of diabetes, in collaboration with the Technical University of Valencia and Medtronic Iberica. The solution was tested in a clinical exploratory study, in 4 clinical centres with 51 patients and 24 care professionals. It focuses on the improvement of diabetes disease management by providing patients and medical doctors with a technological platform to help them handle and analyze all information related to diabetes treatment, integrating it with patients' lifestyle data. The platform is arranged for interoperability and data transfer among different monitoring devices, based on shared semantics. Applications are running in Smartphone, Tablet and Home PC and are personalized to different profiles, supporting monitoring, education and HC communication functionalities. The added value and effectiveness of the integrated system as a whole is more performing than its beyond the use of its components separately, in terms of detection, delivery of care and adopted strategy.

## Description of the technological base

The solution provides a framework for diabetes disease management implemented in a technological platform. Professionals and patients are provided with applications running in multiple platforms and with multiple levels of interaction, depending on their profile. Population triage and stratification are implemented.

American Diabetes Association guidelines have been transformed in a structured Professional Control Panel for patient monitoring, education, treatment prescription and follow-up activities. T1D and T2D patients are provided with tools to enable self-management, disease and healthy habits awareness.

Few solutions are as much as comprehensive as the proposed one and the healthcare sector (the private, especially) is now demanding these tools.

***“D-House addresses the need of health practitioners to implement more effective care provision, and empower patients in being co-producers of their own care”***

## Market demands

- Healthcare Sector (HC sector)
- Diabetes is one of the most important disease. By 2030 550M people will suffer diabetes (WHO)
- The HC sector is evolving to new models where private-public collaborations, patient-centric care, prevention of onset and complication and health education are needed.
- Investments in HC technologies and consumer electronics including HC-like services have been exponentially growing  
Mobile health monitoring is one of the ten top applications in 2012 (Gartner)

***“Health is a process not just an outcome: Diabetic patients must be followed along all the whole process and must recognize their role and that of the healthcare system in each stage”***

## Competitive advantages

- Completeness and at the same time the adaptability of the solutions
- Clear and assessed scientific background
- Independence from proprietary solutions in favor of interoperable developments
- Low costs SW application
- Validated in a exploratory study with 51 patients and 24 care professionals. Usability, User Acceptance and Satisfaction, Technical Feasibility have been assessed (more than satisfactory results). Clinical trends have been detected at a preliminary stage.
- Depending on the user and on level of the disease, we offer specific tools and solutions, encompassing education, monitoring and follow-up in “light” and “deep” modalities.

- Positive feedback was received when the paradigm and its application have been presented to potential clients and stakeholders.

### **Previous references**

- The project was evaluated with the maximum note ("Excellent") by the expert panel nominated by the European Commission.
- Top level multidisciplinary collaboration in healthcare and technology: Medtronic, Healthcare Agency of Modena, Univeristy Hospital of Parma, Hospital Clínico de Madrid and Charles University Hospital of Prague.

### **Development stage**

- Concept
- R&D
- **Lab-Prototype**
- Industrial Prototype
- Production

### **Contact**

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