



**EMPOWER**

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## **Deliverable D2.3.1**

### **Project Presentation**

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Project title:	Support of Patient Empowerment by an intelligent self-management pathway for patients
Project acronym:	EMPOWER
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Project instrument:	STREP
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## Document History

<b>Version</b>	<b>Name</b>	<b>Date</b>	<b>Remarks</b>
V0.1	SRFG	2012-02-10	Initial version
V0.2	SRFG	2012-02-27	Final version including partner comments

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## Abbreviations

EHR	Electronic Health Record
HL7	Health Level Seven
IHE	Integrating the Healthcare Enterprise
ODL	Observation of Daily Living
PHR	Personal Health Record
SMP	Self-Management Pathway

# 1 Summary

The deliverable D2.3.1 “Project Presentation” comprises descriptions about the EMPOWER project for different purposes:

1. EMPOWER facts – summarizing the main figures for EMPOWER
2. EMPOWER in a nutshell – which will be used as an introductory section for the deliverables in EMPOWER
3. EMPOWER public website
4. EMPOWER factsheet – describing the project as a 2-page-factsheet

## 2 EMPOWER facts

Project identifier:	FP7-ICT-2011-288209
Project acronym:	EMPOWER
Project full title:	Support of Patient Empowerment by an intelligent self-management pathway for patients
Work programme topic:	Objective ICT-2011.5.3a Patient Guidance Services (PGS), Safety and Healthcare record information reuse
Funding scheme:	Small or medium-scale focused research project (STREP)
Project budget:	4.276.946 Euro
Commission Funding:	3.024.340 Euro
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End date:	2015-01-31
Duration:	36 months

### Project Participants:

No	Name	Short name	Country	Role in EMPOWER
1	Salzburg Research Forschungsgesellschaft m.b.H. (Coordinator)	SRFG	AT	<ul style="list-style-type: none"> <li>– Project coordination</li> <li>– Self-Management Pathways and Action Plan</li> </ul>
2	Helmholtz Zentrum München - Institute for Biological and Medical Imaging, AG: Medical Information Systems	HMGU	DE	<ul style="list-style-type: none"> <li>– Models and monitoring services for patterns of daily life</li> <li>– Technical coordination of the Pilot Application in Germany</li> </ul>
3	GO IN Integrationsmanagement- und Beteiligungs-GmbH	GOIN	DE	<ul style="list-style-type: none"> <li>– Requirement specifications for the Pilot Application in Germany</li> <li>– Validation of the Pilot Application in Germany</li> </ul>
4	Università della Svizzera italiana - Institute of Communication and Health	USI	CH	<ul style="list-style-type: none"> <li>– Pre-study about self-management strategies</li> <li>– Quality criteria and information material for self-management</li> </ul>
5	Software Research and Development and Consultancy Ltd.	SRDC	TR	<ul style="list-style-type: none"> <li>– Recommender Engine</li> <li>– Technical coordination of the Pilot Application in Turkey</li> </ul>
6	Intracom Telecom	ICOM	GR	<ul style="list-style-type: none"> <li>– Services for patterns of daily life and multimodal Interfaces</li> <li>– Interoperability of the SMP framework with</li> </ul>

				Observation of Daily Living services provided by its own EHR solution
7	Ministry of Health	MoH	TR	<ul style="list-style-type: none"> <li>- Requirement specifications for the Pilot Application in Turkey</li> <li>- Validation of the Pilot Application in Turkey</li> </ul>

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## 3 EMPOWER in a Nutshell

Patient Empowerment involves patients to a greater extent in their own healthcare process and disease management becomes an integrated part of their daily lives. The capability of self-management opens to them the possibility for patients not only to contribute to their own healthcare but also to be more in control of their disease. EMPOWER develops a modular and standard-based Patient Empowerment Framework which facilitates the self-management of diabetes patients based on PHRs and on context-aware, personalised services. EMPOWER focuses the research and development efforts on a patient-centric perspective that also involves healthcare professionals. EMPOWER provides knowledge-based Self-Management Pathways for diabetes patients. This includes

- (1) Services for the specification and execution of actions to change behaviour according to diabetes-specific health care needs. Patients can develop personalised action plans which include recommendations from the treating physicians and patients' preferences
- (2) Services for monitoring of vital, physical, mental parameters as well as physical and lifestyle activities based on health standards.



EMPOWER semantically integrates multiple information sources (EHR/PHR, diabetes guidelines, patterns of daily living) for a shared knowledge model. The Self-Management Pathways facilitate the specification of recommendations that allow specifying individual goals for the patient. Based on these goals, relevant information and their preferences patients can specify their individual diabetes-specific actions. The Self-Management

Pathways are an iterative process where executed actions and reported patterns of daily life can be evaluated. Recommendations, goals and actions can be updated iteratively according to current needs and preferences. Finally, the services in EMPOWER will embrace semantic interoperability based on health standards such as HL7<sup>1</sup> and IHE<sup>2</sup> profiles.

EMPOWER addresses long-term goals and short-term activities in order to facilitate the self-management of patients with diabetes and thus the treatment of chronic diseases. The pilot applications in Germany and Turkey will demonstrate that the holistic and patient-centric approach of EMPOWER can improve disease management by personalised self-management services helping diabetes patients to cope better with their condition.

## 4 EMPOWER website

The EMPOWER website ([www.empower-fp7.eu](http://www.empower-fp7.eu)) will be available by the end of March, 2012. Basically, the EMPOWER website will consist of

- a public part – describing among others the objectives, the expected results and the partner consortium. Additionally, public deliverables and dissemination material such as scientific papers, presentations or public relations material will be available.
- an area for the EMPOWER partners – aiming to support the consortium partners by offering a wiki. This will allow improving collaboration activities for the partners who are distributed through several countries. Additionally, this partner area will be a repository for EMPOWER documents such as templates, minutes and other relevant documents.

A detailed description of the EMPOWER website can be found in deliverable D2.3.2 Project Web Site.

## 5 EMPOWER factsheet

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<sup>1</sup> <http://www.hl7.org>

<sup>2</sup> <http://www.ihe.net>

# EMPOWER



## Support of Patient Empowerment by an intelligent self-management pathway for patients

EMPOWER supports the self-management of diabetes patients through a modular and standards-based Patient Empowerment Framework. It helps sufferers of diabetes with observing daily patterns of living and with managing personalised action plans.

Looking at the current challenges in healthcare (e.g. increasing age of the population, increasing costs, demands for new treatment) it becomes clear that most healthcare systems must evolve from the doctor-centric production system of today to a more holistic, integrated person-centred system of the future. We must realise that we ourselves, are our own primary healthcare provider. Self-management of Diabetes patients not only contributes to their own healthcare but also enables them to be more in control of their disease. Patient empowerment is seen as an essential aspect of patient-centric care and identified as a main element of change for improved quality and safety in healthcare.

EMPOWER addresses the following challenges:

- **Adaptive and secure patient pathways**  
The patient's self-management competences and preferences are adapted and improved iteratively.
- **Supporting behaviour changes**  
Patients can develop personalised action plans which include recommendations from the treating physicians and patients' preferences
- **Collecting observations of daily living**  
EMPOWER will help to collect data on vital, physical and mental parameters, concerning physical and lifestyle activities and medication compliance
- **Semantic interoperability with existing Personal Health Applications**  
The EMPOWER system will be based on established interoperability standards, aiming at integration with existing Personal Health solutions.

## Project Description

Patient empowerment involves patients to a greater extent in their own healthcare process so that disease management becomes an integrated part of their daily life.



EMPOWER will develop a modular and standards-based Patient Empowerment Framework which facilitates the self-management of diabetes patients based on Personal Health Records (PHR) and on context-aware, personalised services. EMPOWER focuses on a patient-centric perspective that also involves healthcare professionals.

### PILOT APPLICATION

EMPOWER will model patient self-management pathways by supporting both the patient-physician communication and the tasks which support the patients in their daily life. The self-management workflow will be evaluated by two pilot applications for diabetes patients in two countries (Germany, Turkey) with their different national settings. Each pilot application will cover several scenarios, e.g. supporting young people with diabetes Type 1 or supporting elderly people with diabetes Type 2.

Figure 1 - EMPOWER factsheet, page 1





EMPOWER semantically integrates multiple information sources (patient records, diabetes guidelines, patterns of daily living) for a shared knowledge model. The Self-Management Pathways facilitate the specification of recommendations that allow specifying individual goals for the patient. Based on these goals, relevant information and their preferences patients can specify their individual diabetes-specific actions. The Self-Management Pathways are an iterative process where executed actions and reported patterns of daily life can be evaluated. Recommendations, goals and actions can be updated iteratively according to current needs and preferences. Finally, the services in EMPOWER will embrace semantic interoperability based on health standards such as HL7 and IHE profiles in order to interoperate with existing health applications.

### Expected Results & Impact

From a socio-economic point of view EMPOWER will enhance the quality of life for diabetes patients by a more effective self-management of diabetes and contribute to a reduction of the severity and therefore the cost of diabetes in Europe. Fostering self-management provides economic benefits such as reduced necessary diabetes care, fewer cases of co-morbidity (e.g. heart attack) and reduced hospitalisation. EMPOWER supports the decision making process by deriving individual recommendations from diabetes guidelines, relevant information material, from the patient's history and results and hence, reduces the workload of treating physicians in diabetes care by suggesting patient-specific recommendations.

EMPOWER addresses long-term goals and short-term activities in order to facilitate the self-management of patients with diabetes and thus the treatment of chronic diseases. The pilot applications in Germany and Turkey will demonstrate that the holistic and patient-centric approach of EMPOWER can improve disease management by personalised self-management services helping diabetes patients to cope better with their condition.



### EMPOWER

**Support of Patient Empowerment by an intelligent self-management pathway for patients**

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- Helmholtz Zentrum München (Germany)
- GO IN Integrationsmanagement- und Beteiligungs-GmbH (Germany)
- Università della Svizzera italiana (Switzerland)
- Software Research and Development and Consultancy Ltd. (Turkey)
- Intracom Telecom (Greece)
- Ministry of Health (Turkey)

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**Total costs:** Euro 4.276.946

**EC funding:** Euro 3.024.340

**Instrument:** STREP

**Project Identifier:** FP7-ICT-2011-288209

**KEYWORDS**

Patient Empowerment, Self Management, Personalised Health, Semantic Interoperability

Figure 2 - EMPOWER factsheet, page 2