SOUNDCAST
VACUUM-ASSISTED HIGH PRESSURE DIE CASTINGS WITH REDUCED POROSITY AT LOW COST

D6.1: Web Page

www.soundcastproject.eu

Instrument	Collaborative Project – Research for the benefit of SME		
Grant Agreement no.	315506	Call identifier	FP7-SME-2012-1
Start date of project	1/11/2012	Duration	24 month
Prepared by	Francesc Bonada	Company	ASCAMM

DISSEMINATION LEVEL

Dissemination Level (choose the suitable option)	
X	**PU** Public
	PP Restricted to other programme participants (including the Commission Services)
	RE Restricted to a group specified by the consortium (including the Commission Services)
	CO Confidential, only for members of the consortium (including the Commission Services)

DOCUMENT MODIFICATIONS CONTROL

Issue/Review	Date	Modified Pages	Comments

TABLE OF CONTENTS

1 Introduction

The project web page (www.soundcastproject.eu) will be the tool for centralizing the dissemination of the SOUNDCAST project to the wider community. For this reason a user friendly website has been designed, focusing on the main key points of the project.
In order to attract a wider spectrum of visitors, the website is not focusing on complex technical details but on the real applications and expected outcomes of the project.

The webpage has been divided in 5 sections:

- Home: webpage cover.
- Objectives: describes the objectives and impacts of the project.
- Workplan: shows the workplan of the project and the workpackage structure.
- Partners: describes the project consortium
- Contact

If it is required during the project development, a few more sections will be added, for sharing with the community the public events, news and press releases.

2 Home

The web page has 4 main elements:

- Banner with SOUNDCAST logo and leitmotiv
- Menu Bar for navigation
- Main body containing the information of each section
- Footer with grant agreement details

A picture slider has been included so the pictures change automatically after few seconds. Different pictures are displayed and the user can change between with the navigation arrows (see Figure 2.1).

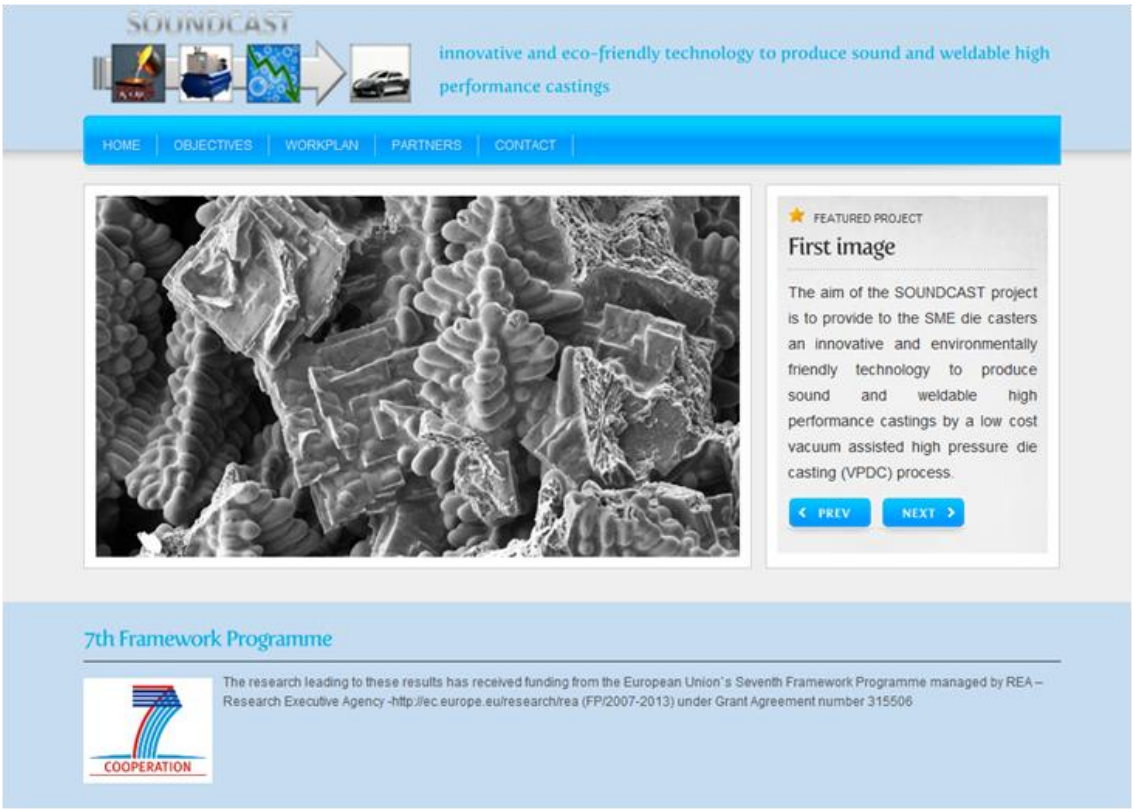

Figure 2.1 Screen Caption cover page with the picture slider

The aim of the SOUNDCAST project is to provide to the SME die casters an innovative and environmentally friendly technology to produce sound and weldable high performance castings by a low cost vacuum assisted high pressure die casting (VPDC) process.

3 Objectives

This section details the objectives of the project and the expected impacts:

Objectives and targets:

- To develop the know-how for producing sound and weldable high performance aluminum components by low cost vacuum assisted HPDC process (VPDC) taking into account the whole fabrication process.

- *SOUNDCAST technology package for the whole fabrication process (numerical simulation, die design, melt and heat treatment, die lubrication, HPDC process, vacuum system, welding process, quality control system)*

- Development of new secondary alloy(s) with high mechanical properties optimized by micro-addition of alloying elements with environmental friendly and economical heat treatments.

- *Formulation of recycled aluminum alloy(s) with high mechanical properties*
- *Methodology for melt and heat treatment of the new recycled alloy(s)*

- A quality control system will be developed in order to assure the mechanical properties of the VPDC components.

- *New software for melt quality control based on thermal analysis*
- *New software for VPDC process control based on statistical analysis*

- Development of a new welding process for VPDC components made by this new alloy(s) and optimization of die lubrication for welding or heat treatment applications.

- *New laser welding process at reduced pressure*

Figure 3.1 Screen Caption of the Objectives page.

4 Work Plan

Given that this project is centered on a technological need and challenge that is experienced by a large community of European SMEs, the work plan has been based on a **bottom-up, industry driven approach**

WP1 (Coordination and management).

This WP covers all those aspects of project management and control, which will ensure that the project successfully achieves its stated objectives on time and within budget.

WP2 (System modelling and porosity reduction).

This WP focuses on the VPDC parameters that can be directly related to porosity formation and development of good practices to avoid its formation (numerical simulation, HPDC process parameter, lubrication). Statistical methods will be used for identifying the main parameters affecting porosity formation.

WP3 (Mechanical property improvement).

In this WP all aspects of mechanical properties that are not related to porosity will be optimized: the new recycled alloy(s) composition, the melt and heat treatment and a suitable control for the new melt treatments (Si modification and degassing) developed. HPDC process parameters have to be adapted to the new recycled alloy.

WP4 (Welding process optimization).

The objective of this WP is to establish an appropriate lubrication technique and welding process that allows using the new recycled alloy(s) for structural applications in vehicles

WP5 (Demonstration).

The objective of this WP is to demonstrate the effectiveness of the new VPDC technologies and new recycled alloy(s) developed in the project in each participating SME foundry under industrial conditions. The demonstrators will be validated by x-ray tomography, metallographic analysis, tensile testing and welding test.

WP6 (Dissemination and exploitation of project results).

An important part of the proposed project is the dissemination and exploitation of the results reached within the project. Training activities for the SME foundry personnel are also foreseen.

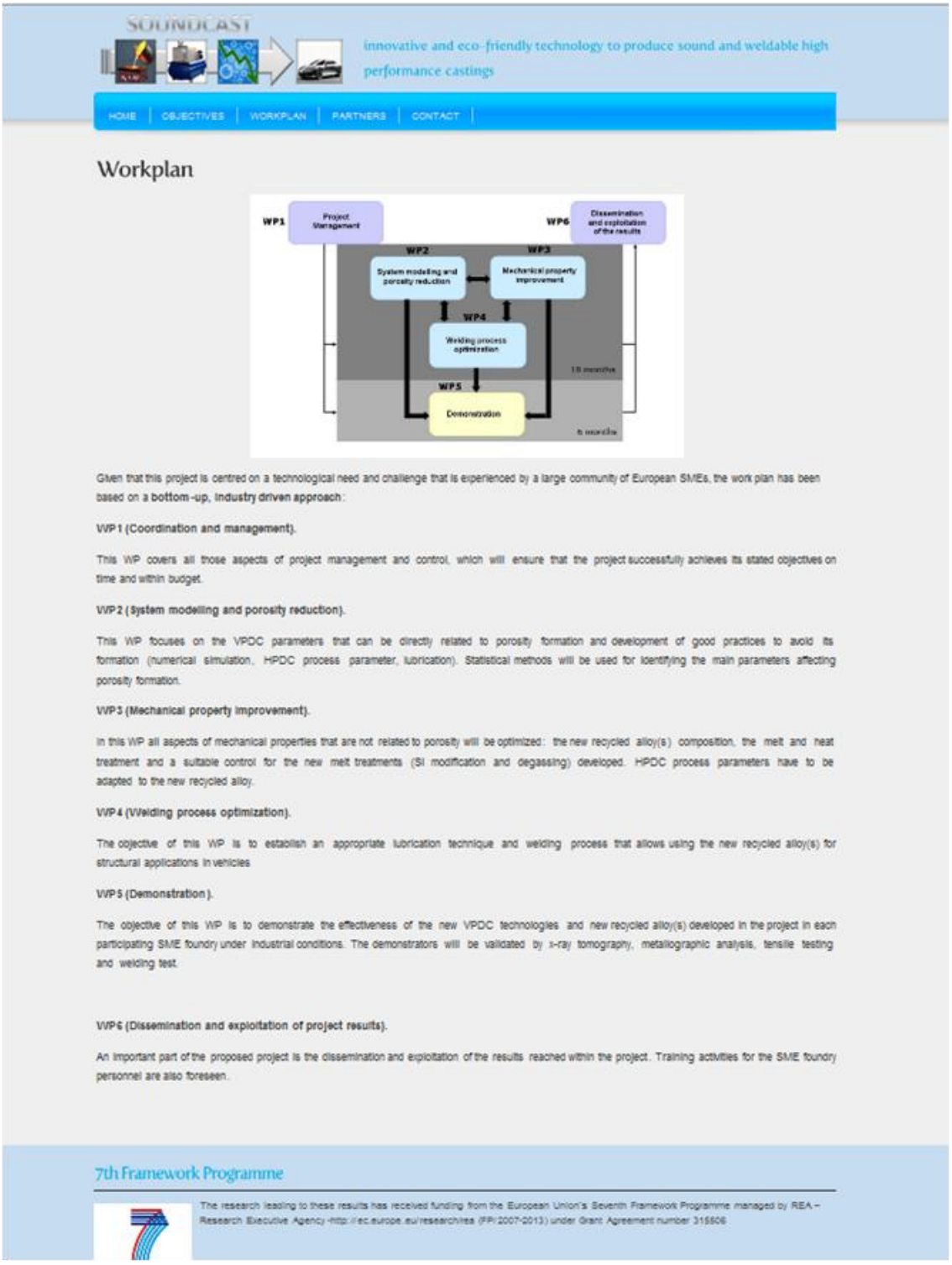

Figure 4.1 Screen Caption of the Workplan page.

5 Partners

SOUNDCAST project has powerful consortium. This section is devoted to present the partners and direct links to their WebPages.

The project consortium comprises 7 partners from 4 European countries, 3 of which are SME and 3 are RTD.

SMEs

ALIASA (Spain): The project coordinator manufactures aluminium high pressure die-casting (HPDC) mainly for automotive applications. ALIASA is the end-user of the technologies to be developed in the project

Diace (France): falta info

VDS (Switzerland) manufactures highly innovative vacuum valves and supplies complete vacuum equipments to the HPDC industry, its participation and technological advice will guarantee the success of the project.

HI

ChemTrend (Germany) is the worlds leading release agent company, specialized in low gassing lubricants. Its technological advice in all aspects of die lubrication is considered as absolutely necessary for the success of the project with regard to the application of heat treatment and welding.

RTD PARTNERS

AZTERLAN (Spain) is a metallurgical research centre highly specialised in casting technologies. RTD activities are focused on solidification in casting process, new techniques for predictive metallurgical quality control, development of new alloys with improved performance and intelligent control of casting processes.

ASCAMM (Spain) is an RTD focused on design and industrial production technologies. The Light Alloys Unit is equipped with 2 HPDC machines and has an experience of more than 7 years on this technology with and without vacuum. ICT department of Ascamm has a strong expertise in statistical analysis and KBR techniques, that has applied to different technologies, mainly plastic injection moulding.

TU-BS (Germany) has been selected for the specific and extended expertise in lubricant application in HPDC and in developing new welding technologies for HPDC components.

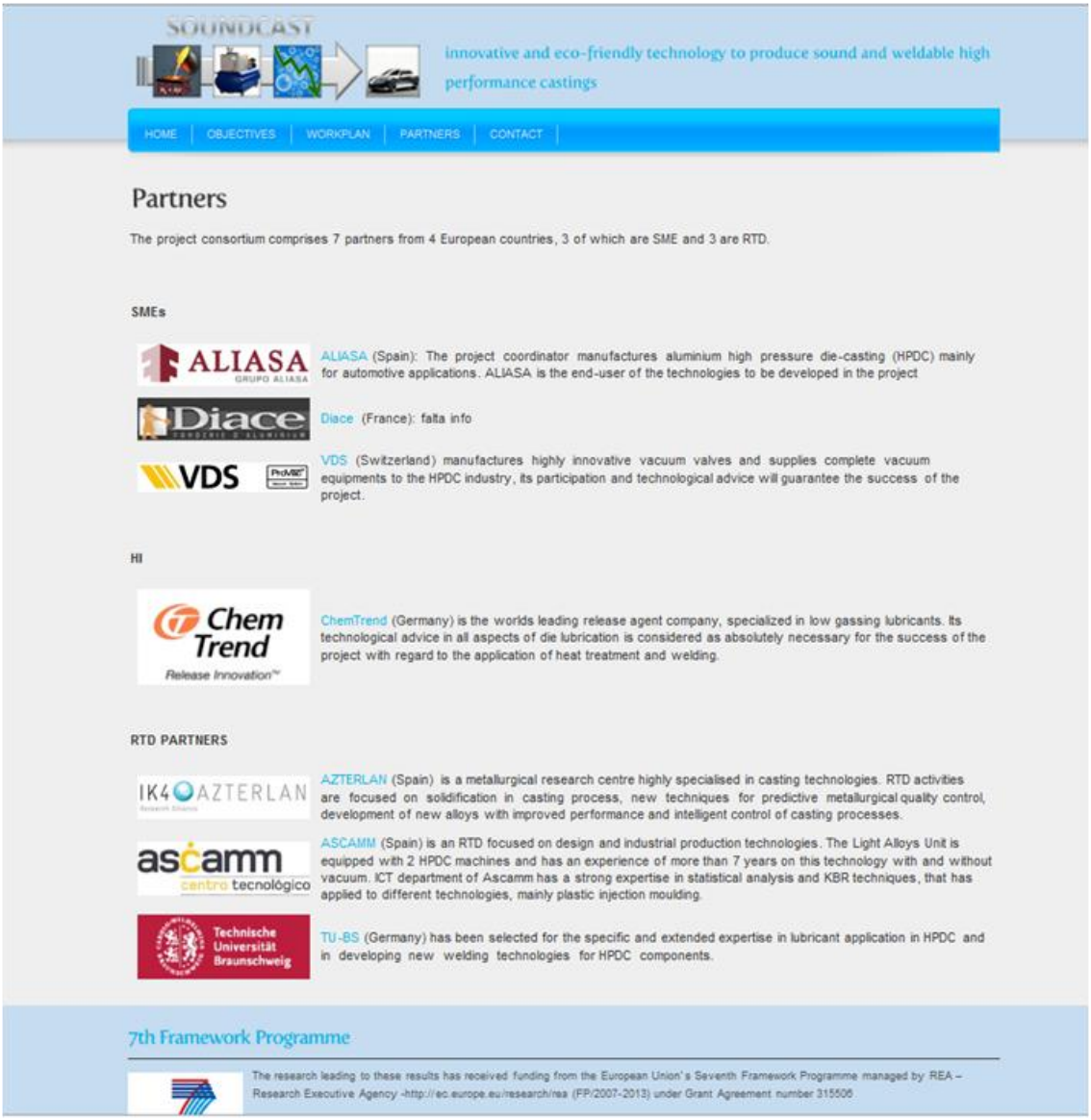

Figure 5.1 Screen Caption of the Partners page.

6 Contact

This section contains the contact information of the Project Coordinator.

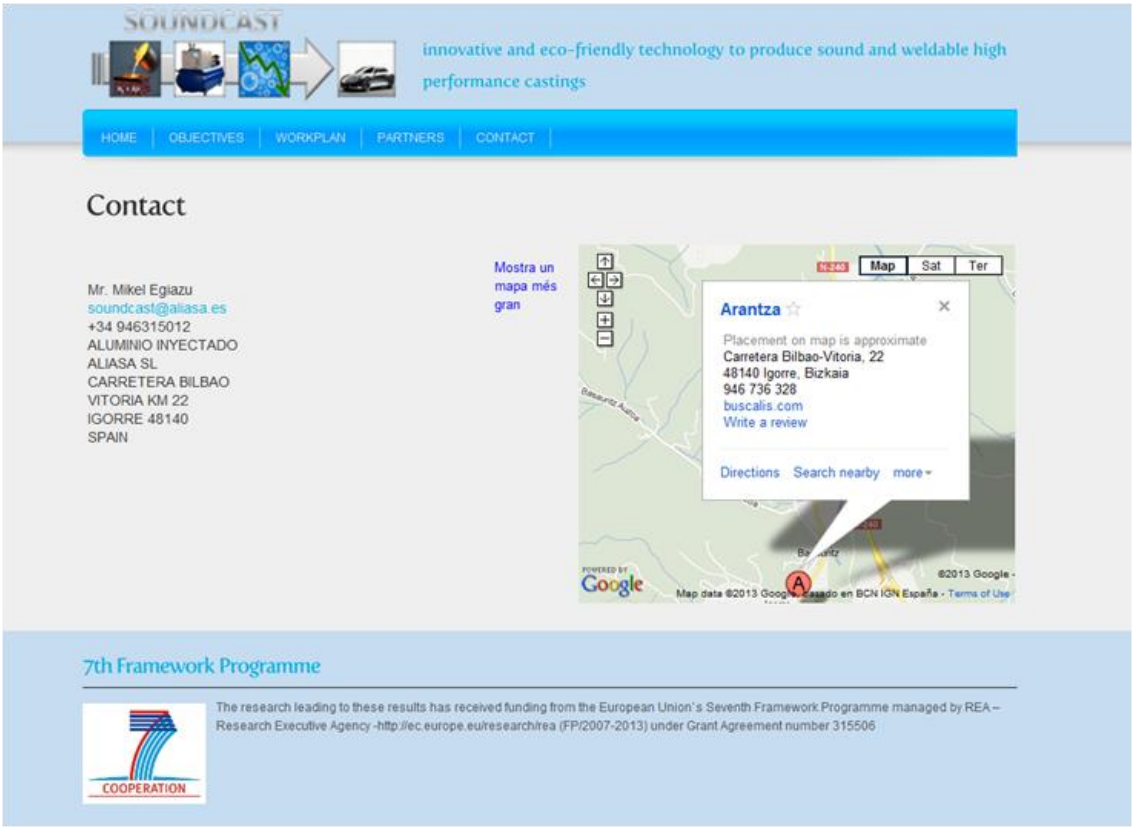

Figure 6.1 Screen Caption of the Contact page.

7 Maintenance and Updates

Keeping the website updated it is a must nowadays because the information flows are faster than ever. For this reason any new releases, events, participations in fairs etc, are going to be reported and updated in the website.