



Grant Agreement 723600

LASIMM

Large Additive Subtractive Integrated Modular Machine

Deliverable 6.1

Project graphic identity and website



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 723600.

Grant Agreement Number: 723600	
Project Title: Large Additive Subtractive Integrated Modular Machine	
Project Acronym: LASIMM	Funding Scheme: Research and Innovation action
Start Date: October 2016	Project Website Address: http://lasimm.eu/
EC Project Officer: Barry Robertson	Email: Barry.Robertson@ec.europa.eu
Deliverable Number: D6.1	Deliverable Name: Project graphic identity and website
Work Package Number: WP6	
Date of Delivery: M3	
Status:	Draft <input type="checkbox"/> Final <input checked="" type="checkbox"/>
Deliverable Type:	Report <input checked="" type="checkbox"/>
	Other <input type="checkbox"/>
Distribution Type:	Public <input checked="" type="checkbox"/> Consortium <input type="checkbox"/>
Authoring Partner: EWF	
Contact Person: André Cereja	
Email: afcereja@ewf.be	Phone: (+351) 215 815 204
Abstract (for dissemination):	n/a
Keywords:	n/a
Name of the Scientific Representative of the Project's Co-ordinator, Title and Organisation:	Name: Dr. Eurico Assunção Tel: (+351) 214 228 113 E-mail: egassuncao@ewf.be

Document status		
Version	Date	Description
1	02/01/2017	First draft circulated for comments
Final	30/01/2017	Final version

1 Table of contents

- 2 Executive summary 4
- 3 Introduction..... 5
- 4 Description of work 6
 - 4.1 Project graphic identity 6
 - 4.2 Project website 8
 - 4.2.1 Disclaimer 8
 - 4.2.2 Home 8
 - 4.2.3 About..... 10
 - 4.2.4 Objectives 11
 - 4.2.5 Documents 12
 - 4.2.6 Partners 13
 - 4.2.7 Contact Us 16
- 5 Conclusions..... 17
- Annex A 18

2 Executive summary

The LASIMM project aim is to develop a large scale flexible hybrid additive/subtractive machine based on a modular architecture which is easily scalable. The machine will feature capabilities for additive manufacture, machining, cold-work, metrology and inspection that will provide the optimum solution for the hybrid manufacturing of large engineering parts of high integrity, with cost benefits of more than 50% compared to conventional machining processes.

This deliverable 6.1 is created in accordance with the description of work of Work Package 6 of LASIMM, particularly Task 6.1, Dissemination. Amongst others, this task specifies the need to develop the LASIMM graphical identity, together with a project logo and its associated colours. The created colour scheme and logo will accompany the project during its entirety, as an harmonised way of transmitting the project image to the public.

Together with this, a project website is also created at the beginning of the project. The website is hosted in the www.lasimm.eu domain. The website will act as the main information repository regarding the project. It contains several sections, each one dedicated to a specific set of information. The objective is to keep the most updated information about the project developments available both for all the project stakeholders.

The work package leader is EWF (contact details: André Cereja, afcereja@ewf.be).



Figure 1 – Project Logo

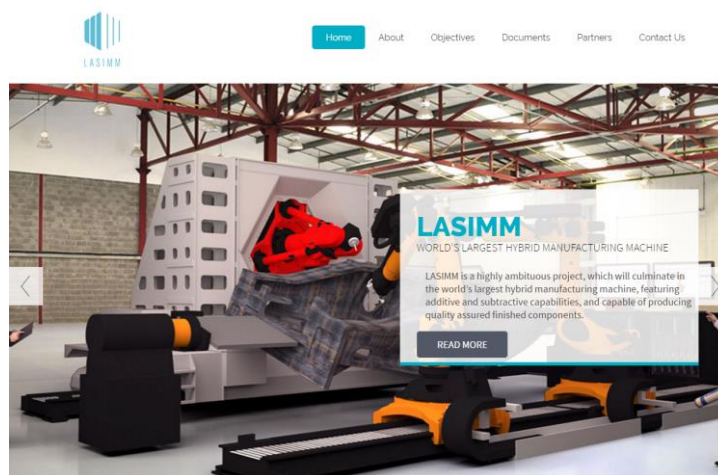


Figure 2 – Website homepage

3 Introduction

This document contains the description of the work performed in the creation of the LASIMM project graphical identity, as well as the project website.

The creation of a project logo and colour scheme helps in assuring that all the materials created during the project feature the same visual identity. This is an important step in disseminating the LASIMM brand to the public.

The main objective of this website is to serve as a vehicle for the dissemination of the project activities and results. The project website was planned to be delivered in the initial stage of the project, to help the information sharing among the consortium members and between the consortium and the public. This document also summarizes the design, creation and maintenance of the LASIMM project website, available at www.lasimm.eu. The website is part of *Work Package 6 – Dissemination, exploitation, standardisation and training*, which aims at ensuring that the project results reach a wider audience beyond the consortium. The website serves as an efficient and effective information and communication system for the consortium members and other project stakeholders.

4 Description of work

4.1 Project graphic identity

For the LASIMM consortium, it was important to have a clearly defined, unique visual identity, available from the very start of the project, which can be used both in printed and digital media. During the proposal preparation stage, a draft logo was developed, to support the proposal writing. After the approval of the project, it was decided to discard this initial design, and to re-think the logo to better suit the dissemination needs of the project, as well as the machine concept.

The LASIMM branding is to be easily recognized and remembered. It should also match the machine concept, particularly its fabrication capabilities (additive and subtractive manufacturing).

A team of designers from Foster + Partners produced a set of branding options, which were circulated by the WP leader for reviewing and approval inside the entire consortium. The full details of the various branding versions can be seen in Annex A.

After the comments were received and the partners casted their vote, a final version of the logo was agreed upon. The LASIMM logo is shown next:



Figure 3 – LASIMM logo

This logo is meant to be simple, clear, and relatable to the project. This logo showcases the main features of LASIMM: the additive and subtractive components of the machine concept. The layering of verticals illustrates the additive process, while the sharp edged right hand verticals show the subtractive process in contrast to the rounded left hand side. The logo also gives an idea of the three-dimensional production of components.

The logo is available in two other colours (black and grey), to match different applications and backgrounds. Variants of blue are also to be used, thus making the full colour pallet of LASIMM’s visual identity. The minimum logo size is specified as well. This information is displayed next, in Figure 4 and Figure 5:



Figure 4 – Logo colour variants

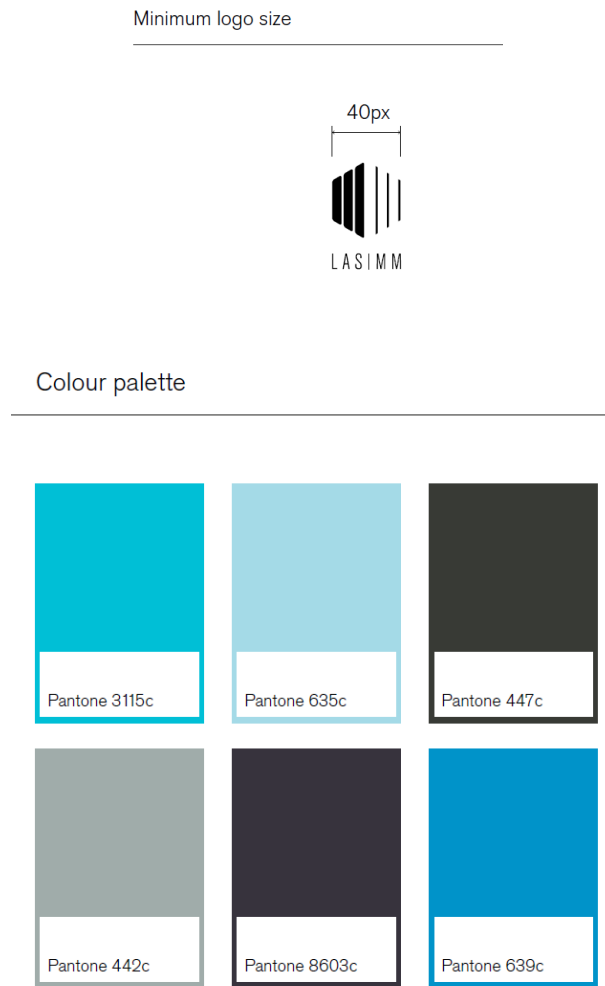


Figure 5 – Minimum logo size and colour palette

4.2 Project website

The project website is available for the following URL: www.lasimm.eu. The website is structured in six main tabs: Home, About, Objectives, Documents, Partners and Contact Us.

The aim is to have a continuous updating of the information on the website with the progress and public results, meetings, events and any useful links.

The website development and updating is the responsibility of EWF.

4.2.1 Disclaimer

The Disclaimer is always available in the bottom of the page in every tab available.

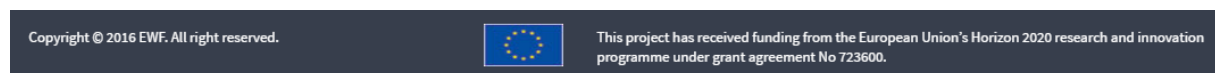


Figure 6 - Disclaimer

4.2.2 Home

The Home tab is the one presented when a visitor enters the website.

There, a banner contains 2 images that appeal to the visitor, one related to the WAAM process, another to the machine concept. Below, a list of four icons together with short sentences list different project aspects.

The news feed is then located at the bottom of the Home page, to be continuously updated during the project. At the creation of this document, three news are featured:

- Article regarding the project kick off meeting, hosted by the co-ordinator;
- Article on the project presentation made in the Additive Manufacturing European Forum, in Brussels;
- Article on the meeting that took place in London, to discuss the end-user requirements.

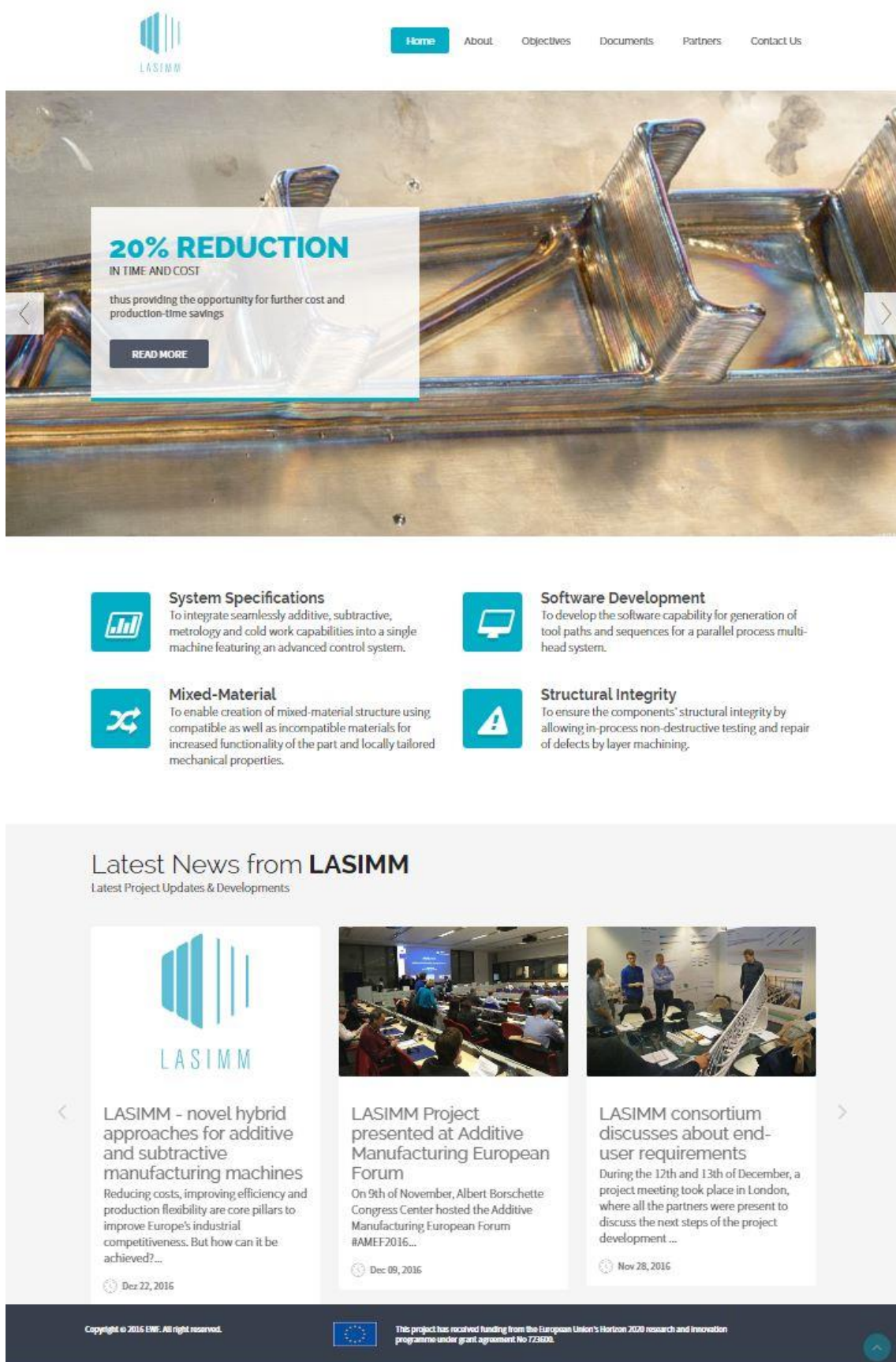


Figure 7 – Home page

4.2.3 About

The About tab contains a summary of the LASIMM project scope, and main features.



Figure 8 – About tab

4.2.4 Objectives

The Objectives tab lists the main expected results of LASIMM, together with the Benefits and project Impact. A rolling set of images of related to the industrial sectors of the three end users is also featured.

Home About **Objectives** Documents Partners Contact Us

Objectives

Home - Objectives

The LASIMM Project Objectives

The project aim is to develop a Large Additive/Subtractive Integrated Modular Machine (LASIMM) based on a scalable open architecture framework with associated software enabling full parallel manufacturing.

The objectives are based on the major research challenges and are:

- To integrate seamlessly additive, subtractive, metrology and cold work capability into a single machine featuring an advanced control system;
- To produce functional parts with the final desired accuracy, surface finish, tolerances and material efficiency;
- To develop the software capability for generation of tool paths and sequences for a parallel process multi-head system;
- To produce components with mechanical properties better than forged material thanks to the unique and innovative adoption of in-process cold work during additive operations;
- To ensure the components' structural integrity by allowing in-process non-destructive testing and repair of defects by layer machining;
- To demonstrate the machines capability by production of test pieces defined by industrial requirements;
- To enable creation of mixed-material structure using compatible as well as incompatible materials for increased functionality of the part and locally tailored mechanical properties

Benefits

LASIMM offers a perfect opportunity to automate and fully integrate the two additive and subtractive aspects. The specific benefits compared to current practice in metal AM are:

- Production of finished parts ready for use;
- Reduced production costs and time by:
 - Eliminating transfer and repositioning of the component between machines;
 - Parallel manufacturing;
 - Avoidance of post-build NDT;
 - Elimination of scrap;
 - Scaling to larger parts avoiding the need for post-build fabrication steps to make larger structures;
- Improved material properties superior to that of forged materials by inclusion for the first time of cold work into an additive manufacture machine;
- Capability to produce mixed material components.

The LASIMM project will also contribute to overcoming the "valley of death" regarding the industrial implementation of Hybrid (AM-SM) processes. This will be supported by the development of activities related to:

- Standardization:** LASIMM partners will work, during the project duration (and after its end), in close collaboration with standardization bodies (e.g. CEN and ISO) with objective of identifying "gaps" in existing standards and addressing them, by reviewing existing standards or by support the development of new standards.
- Training/Qualification of personnel:** LASIMM partners will also look at identifying the training needs related to the LASIMM project, this will ensure that, at the end of the project, the necessary "tools" for training the LASIMM workforce will be in place.

LASIMM Impact

Ubiquitous use of computational design and simulation has not fully penetrated medium scale fabrication and large scale construction. There is a gap between the capabilities of modern design tools to generate increasingly complex products and buildings, and fabrication techniques that are not fully automated direct from CAD. Improvements are sought with new assembly techniques and new materials to increase performance and reduce costs.

LASIMM will provide additive and subtractive capability leading to major cost and production savings compared to multiple separate machines. Furthermore, the modular approach enables the addition of other processes, extending the system capability, thus providing the opportunity for further cost and production-time savings. Therefore, the expected impact of this project consists in:

- 20% reduction in time and cost, with respect to the current additive and subtractive processes.
- 15% increase in productivity for high-volume AM production, with respect to the current additive and subtractive processes.
- More flexibility and robustness of the machines to adapt with customisation and changing market needs.
- Reduction of inventory because of the making of products on-demand.
- Reduction of work floor space
- Create localised manufacturing environments and reduce supply chains length
- Contributions to standardisation and certification for new hybrid procedures.

Copyright © 2015 LASIMM. All rights reserved. The project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 723600.

Figure 9 – Objectives tab

4.2.5 Documents

The Documents tab is still in development at the moment. Its main point is to share documents with the public, being possible their downloads

Currently, it contains 2 publicly available files, the project Press Release and a short Project Presentation. As the project progresses, this section will be populated with more contents.

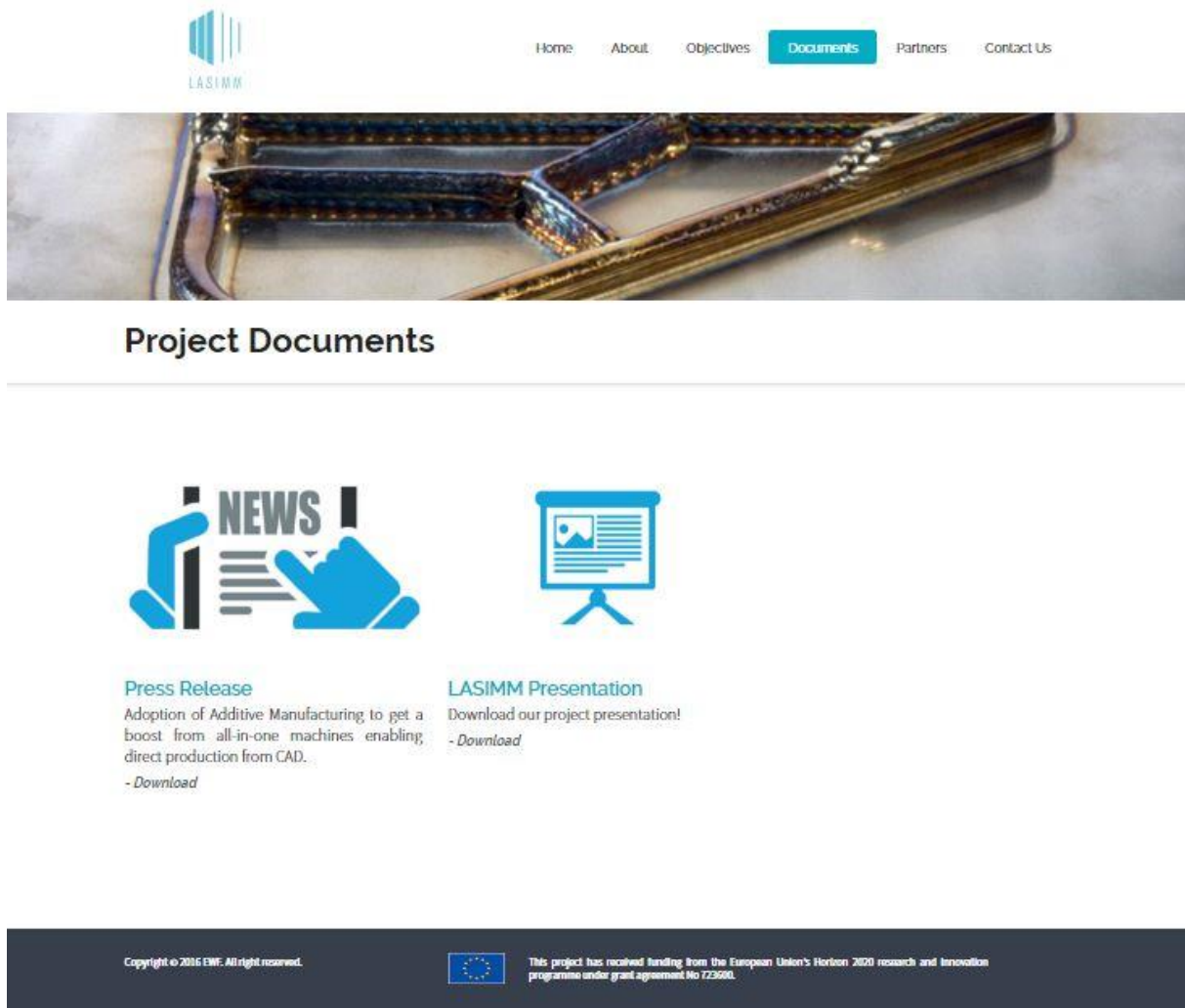
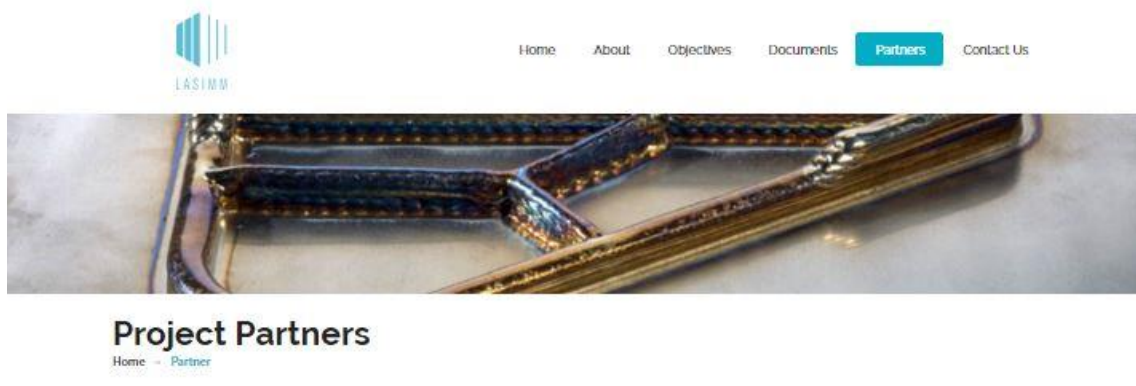


Figure 10 - Documents tab

4.2.6 Partners

In the Partners tab it is possible to see all the partners involved in the project along with a brief description on their own companies and links to their websites.



Meet Our Partners

The LASIMM project aim is to develop a large scale flexible hybrid additive/subtractive machine based on a modular architecture which is easily scalable. The machine will feature capabilities for additive manufacture, machining, cold-work, metrology and inspection that will provide the optimum solution for the hybrid manufacturing of large engineering parts of high integrity, with cost benefits of more than 50% compared to conventional machining processes.

A key part of this project is the development of ICT infrastructure and toolboxes needed to programme and run the machine. The implementation of parallel manufacturing is extremely challenging from a software perspective and this will be a major activity within the project.

To deliver this extremely demanding and ambitious project a well-balanced expert team has been brought together.

There are **ten partners** comprising six companies, two Universities and two research institutes. Two of the companies are SMEs and there are three end users from the renewable energy, construction and aerospace sectors. The consortium also features the whole of the supply chain needed to produce such a machine.



EWF

About

EWF – European Federation for Welding, Joining and Cutting is an International non-profit association aiming at the collaboration in the study and solution of welding-related problems encountered within its fields of competence and in the removal of technical barriers. The exchange of scientific and technical information, the preparation of harmonised rules for the education and training of personnel involved in welding, joining and related technologies, and the encouragement of projects for co-operative research, enable EWF to act as the representative of the welding community in Europe.

Contacts www.ewf.be

BAE

About

BAE Systems is a global defence, aerospace and security company employing around 82,500 people worldwide. Our wide-ranging products and services cover air, land and naval forces, as well as advanced electronics, security, information technology, and support services. Working with customers and local partners, we develop, engineer, manufacture and support products and systems to deliver military capability, protect national security and people and keep critical information and infrastructure secure.

Contacts www.baesystems.com



Foster + Partners

About

Foster + Partners is one of the most innovative architecture and integrated design practices in the world. Over the past four decades the practice has pioneered a sustainable approach to architecture through a strikingly wide range of work, from urban masterplans, public infrastructure, airports, civic and cultural buildings, offices and workplaces to private houses and product design. Based in London, with offices worldwide, the practice has an international reputation, with buildings in six continents.

Contacts www.fosterandpartners.com

Foster + Partners



- Home
- About
- Objectives
- Documents
- Partners**
- Contact Us



Vestas

About Vestas is a global energy company dedicated exclusively to wind energy - improving business case certainty and reducing the cost of energy for our customers. Vestas works in close partnership with customers to offer the most effective solutions towards energy independence. Our core business is the development, manufacturing, sale and maintenance of wind power plants - with competencies that cover every aspect of the value chain from site studies to service and maintenance.

Contacts www.vestas.com



Cranfield University

About At the forefront of aerospace and manufacturing technology for over 60 years, Cranfield University (CU) takes a practical and holistic approach to research. Pan-university collaboration delivers multi-disciplinary solutions to the complex challenges facing the aviation and manufacturing industries. The University one of the largest academic centres in Western Europe for strategic applied research, and have decades of experience working closely with partners across the globe including governments, regulatory agencies, research councils and other academic collaborators. The excellence of the manufacturing department is widely recognised: the manufacturing department was ranked Top 2 in the UK for research power. The Welding Engineering and Laser Processing Centre (WELPC) which is within the manufacturing department specialises in fundamental, strategic and applied research in the area of advanced fusion joining processes, laser processing and high deposition rate additively manufactured structures.

Contacts www.cranfield.ac.uk

Global Robots Ltd

About Global Robots Ltd is a company based in the UK that buys, refurbishes and sells new and used industrial robots and robot spare parts. We started in 2004 with the goal of making robots affordable to a far wider market than ever before by supplying high quality, used robotic equipment at low prices. We buy and sell robots in large numbers enabling us to keep prices competitive. We have over 600 robots in stock here in Bedfordshire with many more located at our facilities in The Netherlands and India. Focusing on the supply of robots rather than their installation we sell robots from all the main manufacturers including ABB, Fanuc, Motoman and Kuka. We also build robotic systems for welding, handling, milling etc and supply to customers all around the world.

Contacts www.globalrobots.com



The screenshot displays the 'Partners' tab of the LASIMM website. At the top, a navigation menu includes 'Home', 'About', 'Objectives', 'Documents', 'Partners' (highlighted), and 'Contact Us'. Below the navigation, the 'Partners' section is organized into four entries, each with a logo, an 'About' section, and a 'Contacts' link.

- LOXIN**: The logo features a blue arrow pointing right above the word 'LOXIN'. The 'About' text describes it as an industrial technological group providing tailored automation solutions. The 'Contacts' link is www.globalrobots.com.
- Helmholtz-Zentrum Geesthacht**: The logo consists of a grid of blue squares followed by the text 'Helmholtz-Zentrum Geesthacht' and 'Zentrum für Material- und Küstenforschung'. The 'About' text identifies it as a non-profit research institute. The 'Contacts' link is www.hzg.de.
- AUTODESK**: The logo shows a stylized 'A' followed by 'AUTODESK'. The 'About' text describes it as a world-leading developer of CAD/CAM software. The 'Contacts' link is www.autodesk.com.
- IST**: The logo features a blue shield with 'if' and 'TÉCNICO LISBOA'. The 'About' text describes Instituto Superior Técnico (IST) as the largest engineering school in Portugal. The 'Contacts' link is www.ist.utl.pt.

At the bottom of the page, a dark footer contains the copyright notice 'Copyright © 2016 EWF. All rights reserved.', the European Union flag, and a text box stating: 'This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 723600.' A small blue circular icon with an upward arrow is located in the bottom right corner of the footer.

Figure 11 – Partners tab

4.2.7 Contact Us

The Contact Us tab main objective is to allow the public in general that can be interested in the project results to know, or to have a direct contact with the consortium.

This contact form is received by the project coordinator, EWF.

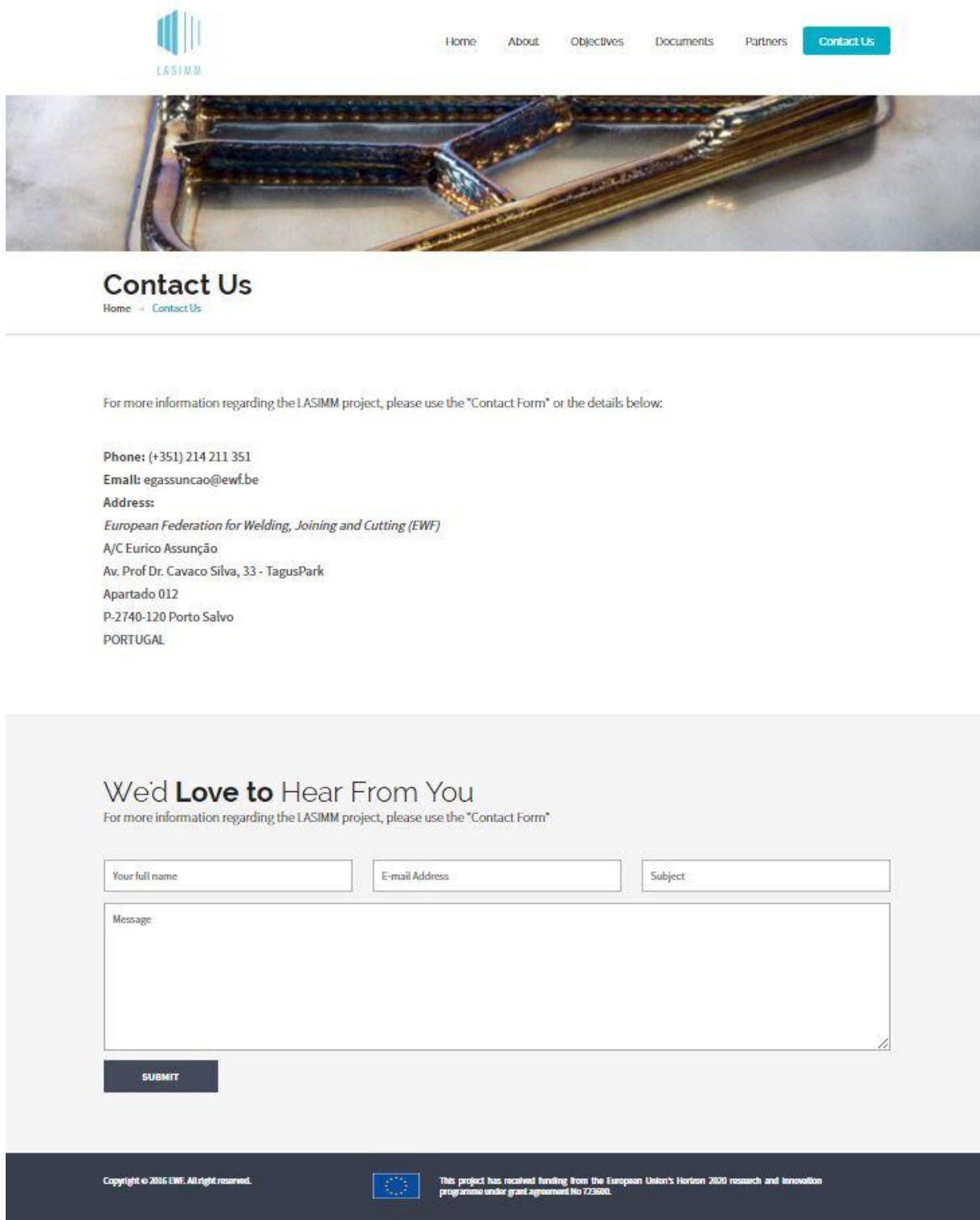


Figure 12 – Contact Us tab

5 Conclusions

This document contains the information related to the LASIMM project selected graphic identity (logo and colour scheme), together with an overview of the project public website.

Screen captures are provided for the several webpages of the website (www.lasimm.eu).

As mentioned before, the website will be constantly updated throughout the project duration, to provide accurate, up to date information to the project stakeholders.

Annex A

Route 1

Clean/elegant/muted/corporate.
Applicable across print and digital media
Defined visual language and art direction.

Logotype lockup 1.0



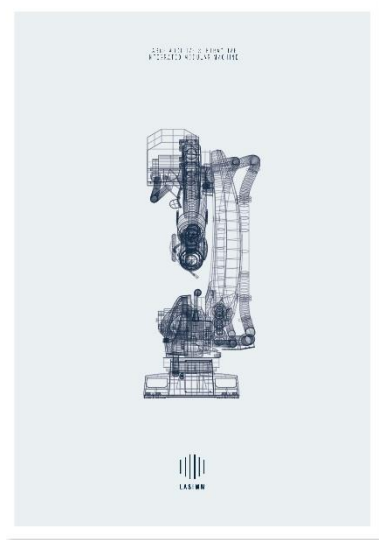
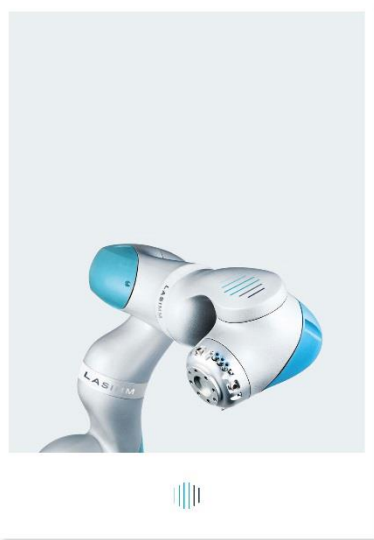


LASIMM Branding Presentation - November 2016

5

Foster + Partners

Brand adaptable for print



LASIMM Branding Presentation - November 2016

6

Foster + Partners

Adaptable for digital applications



Route 1 (Alternatives)

Clean/elegant/muted/corporate.

Reflective of both additive and subtractive processes

Logotype lockup 1.1

Layering of verticals illustrates additive process, whilst reduction of line weights illustrates subtractive process



Adaptable for digital applications





Logotype lockup 1.2

Indicative of 3D production
Layering of verticals illustrates additive process, whilst the positive verticals are removed and negative left illustrates the subtractive process.



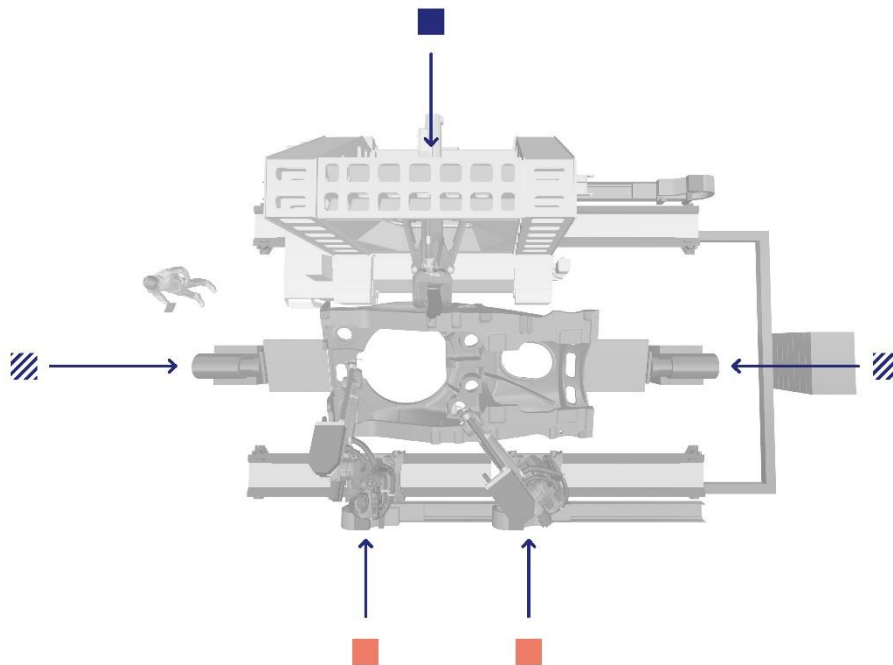
Logotype lockup 1.3

Indicative of 3D production
Layering of verticals illustrates additive process, the sharp edged right hand verticals show the subtractive process in contrast to the rounded left hand side.

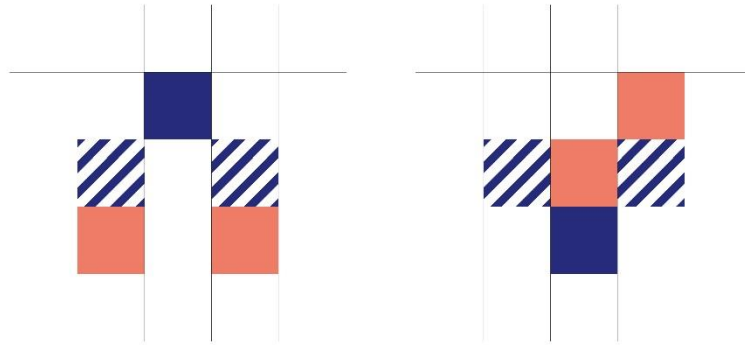




5 key points allow full range of movement

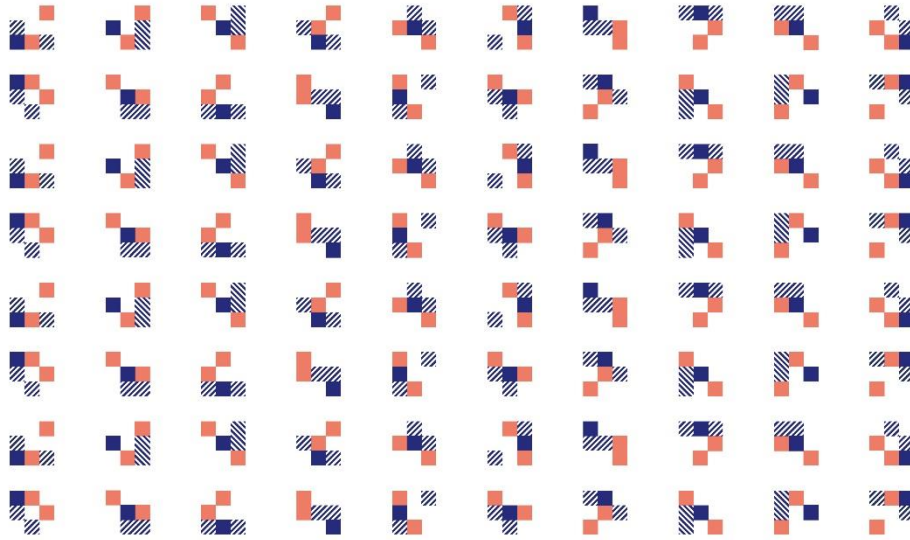


Multiple combinations of movement



Unique identities under the same brand





Example business card visual

