



## **SEVENTH FRAMEWORK PROGRAMME**

FP7-ICT-2013-10



**DEEP-ER**

**DEEP Extended Reach**

Grant Agreement Number: 610476

**D2.3**

**Second report on dissemination and training**

*Approved*

**Version:** 2.0  
**Author(s):** S. Eisenreich (BADW-LRZ)  
**Date:** 09.12.2015

## Project and Deliverable Information Sheet

DEEP-ER Project	Project Ref. №: 610476	
	Project Title: DEEP Extended Reach	
	Project Web Site: <a href="http://www.deep-er.eu">http://www.deep-er.eu</a>	
	Deliverable ID: D2.3	
	Deliverable Nature: Report	
	Deliverable Level:  PU*	Contractual Date of Delivery:  30/09/2015
		Actual Date of Delivery:  30/09/2015
		EC Project Officer: Panagiotis Tsarchopoulos

\* - The dissemination levels are indicated as follows: **PU** – Public, **PP** – Restricted to other 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 Control Sheet

<b>Document</b>	<b>Title:</b> Second report on dissemination and training	
	<b>ID:</b> D2.3	
	<b>Version:</b> 2.0	<b>Status:</b> Approved
	<b>Available at:</b> <a href="http://www.deep-er.eu">http://www.deep-er.eu</a>	
	<b>Software Tool:</b> Microsoft Word	
	<b>File(s):</b> DEEP-ER_D2.3_Second_report_dissemination_and_training_v2.0-ECapproved	
<b>Authorship</b>	<b>Written by:</b>	S. Eisenreich (BADW-LRZ)
	<b>Contributors:</b>	D. Alvarez Mallon (JUELICH) M. Ott (BAdW-LRZ) G. Mattiusi (Eurotech) A. Somma (Eurotech)
	<b>Reviewed by:</b>	G. Congiu (Seagate) I. Schmitz (ParTec)
	<b>Approved by:</b>	BoP/PMT

**Document Status Sheet**

<b>Version</b>	<b>Date</b>	<b>Status</b>	<b>Comments</b>
1.0	30/September/2015	Final	EC Submission
2.0	09/December/2015	Approved	EC approved

## Document Keywords

<b>Keywords:</b>	DEEP-ER, HPC, Exascale, dissemination, PR, website, social media, Twitter, LinkedIn, European Exascale Projects (EEP), ETP4HPC
------------------	--------------------------------------------------------------------------------------------------------------------------------

### Copyright notice:

© 2013-2015 DEEP-ER Consortium Partners. All rights reserved. This document is a project document of the DEEP-ER project. All contents are reserved by default and may not be disclosed to third parties without the written consent of the DEEP-ER partners, except as mandated by the European Commission contract 610476 for reviewing and dissemination purposes.

All trademarks and other rights on third party products mentioned in this document are acknowledged as own by the respective holders.

## Table of Contents

Project and Deliverable Information Sheet.....	1
Document Control Sheet .....	1
Document Status Sheet .....	2
Document Keywords.....	3
Table of Contents .....	4
List of Figures.....	5
Executive Summary .....	6
<b>1 Introduction .....</b>	<b>7</b>
<b>2 Task 2.1: Dissemination activities.....</b>	<b>7</b>
2.1 Dissemination Strategy – Update .....	7
2.2 Website.....	10
2.3 Social Media.....	13
2.4 Events and Conferences.....	16
2.5 Materials .....	17
2.6 DEEP-ER News & Media Relations .....	20
2.7 Publications & Proceedings.....	21
2.8 Cooperation European Exascale Projects .....	21
<b>3 Task 2.2: Industry and business cooperation .....</b>	<b>22</b>
<b>4 Task 2.3: Training.....</b>	<b>23</b>
<b>5 Outlook .....</b>	<b>23</b>
<b>Annex A.....</b>	<b>24</b>
Presentations & Peer-Reviewed Publications .....	24
Media Coverage .....	25
Plan Industry and Business Relations .....	26
List of Acronyms and Abbreviations .....	28

## List of Figures

Figure 1: Same look and feel for DEEP/-ER and EEP Flyer .....	8
Figure 2: DEEP-ER website and Twitter handle in the new style .....	8
Figure 3: European Exascale booth with matching design.....	8
Figure 4: Start page <a href="http://www.deep-er.eu">www.deep-er.eu</a> .....	10
Figure 5: New imagery for DEEP-ER website.....	11
Figure 6: DEEP-ER web statistics second project year.....	12
Figure 7: DEEP-ER web statistics around launch date .....	12
Figure 8: DEEP-ER web statistics per country.....	13
Figure 9: @DEEP projects follower increase in the last 90 days.....	14
Figure 10: Tweet impressions over last 91 days .....	14
Figure 11: Tweet activity over the last 90 days .....	14
Figure 12: Recent posts DEEP-ER LinkedIn group .....	15
Figure 13: European Exascale Booth at ISC'15.....	16
Figure 14: DEEP-ER project flyer .....	17
Figure 15: Joint flyer European Exascale Projects.....	18
Figure 16: Overview audio-visual content on DEEP/-ER .....	19
Figure 17: Magic circle of key HPC Media. ....	20
Figure 18: Overview on EEP joint activities .....	21
Figure 19: Promotional flyer dedicated at potential users of the DEEP/-ER systems .....	22

## Executive Summary

This deliverable reports on the activities and achievements of Work Package 2 “Dissemination, outreach and training” of the DEEP-ER project during the second project year (October 2014 to September 2015).

Taking into consideration the recommendations from the last project review, we have been working mainly on the following aspects throughout the last year:

- Performing a face-lift of the DEEP-ER project website including SEO optimisation
- Working on a better joint branding with the predecessor DEEP project
- Updating and refining key messages for DEEP-ER
- Continuing community building together with the other European Exascale Projects (CRESTA, EPiGRAM, EXA2CT, Mont-Blanc and Numexas)
- Fostering outreach to industry contacts
- Offering trainings and workshops with a focus on making these accessible to interested audiences outside the project

Overall, good progress has been made on all the aforementioned aspects. The face-lift of the website has resulted in a modern and appealing design with the new website going live right before ISC’15. We have further intensified the cooperation and community building with the other European Exascale Projects (EEP). The training program is kept continuously aligned with the partners’ needs. Progress has also been made regarding the refinement of DEEP-ER key messages as well as the fostering of business and industry relations.

Concerning the latter, we now have a well-established plan to be carried out over the remaining one and a half years of the project. Concrete tasks will be derived from prior analyses and the resulting outcomes will be matched to the overall marketing and communication activities.

As far as the key communication messages are concerned, implemented actions already resonate in media relations and in our own channels. However, we must underline that this is still work in progress, and it has to be continuously reviewed throughout the remaining project time.

For the future we will seamlessly continue with our dissemination efforts. The clear aim is to further push the project’s visibility (along with the key messages), increasing outreach to business and industry, as well as to continue building the European Exascale community and to further developing our social media channels.

## 1 Introduction

Informing the various target audiences about the progresses, outcomes, results and lessons learned from the DEEP-ER project, especially concerning the hardware and software work carried out on the DEEP-ER Prototype, is a major objective of this work package.

Therefore, here follows an update on how we have been working towards achieving these goals in the second project year. This document describes how the communication strategy has been refined and further developed over the considered timeframe, the improvements and updates to our own dissemination channels (website and social media handles), the dissemination material created, the events and conferences attended as well as our relations to media.

Closely integrated with the dissemination strategy and activities are the tasks for industry and business co-operation (Section 3). An update on these initiatives can be found below. This also includes a plan on how to proceed during the second half of the project.

Before an outlook is given on future activities in Section 5, a short overview on training activities concludes the description of our accomplishments in WP2 during the reporting period.

## 2 Task 2.1: Dissemination activities

### 2.1 Dissemination Strategy – Update

Following the strategic approach outlined in D2.2, we have continued focusing on a communication mix of owned, earned and paid media – see below for details on the corresponding activities in Sections 2.2 (website), 2.3 (social media) and 2.6 (media relations). At the same time we have been further developing our communication strategy as recommended in the last review. This has been done in respect to the joint branding with the predecessor DEEP project and the refinement of the key messages.

As far as the joint branding is concerned, we have realized various actions to build a more stringent and unified appearance towards our target communities. These include three main aspects: unified design, joint communication channels (see for details Sections 2.2 and 2.3) and closer co-operation on a content level basis.

Regarding the look and feel, we hired a graphic design agency to develop new graphical contents for us – close to what would be called corporate design for enterprises. We have completely re-done our DEEP and DEEP-ER project flyer, the DEEP-ER website underwent a face-lift complying to the new guidelines, the Twitter icon and header pictures have been adapted, and last but not least, the graphic design for the European Exascale Projects booths and flyers has been re-done following our DEEP and DEEP-ER design.

The recurring themes are now circular lines. Circles are the dominant form in graphics and presented pictures (e.g. application pictures). Circles are also used to highlight keywords and/or Unique Sell Points (USP). Dominant colours are the blue of the DEEP and DEEP-ER logos (and its different shades) and the grey. Orange and green are used to add more colour variety.





Figure 1: Same look and feel for DEEP-ER and EEP Flyer

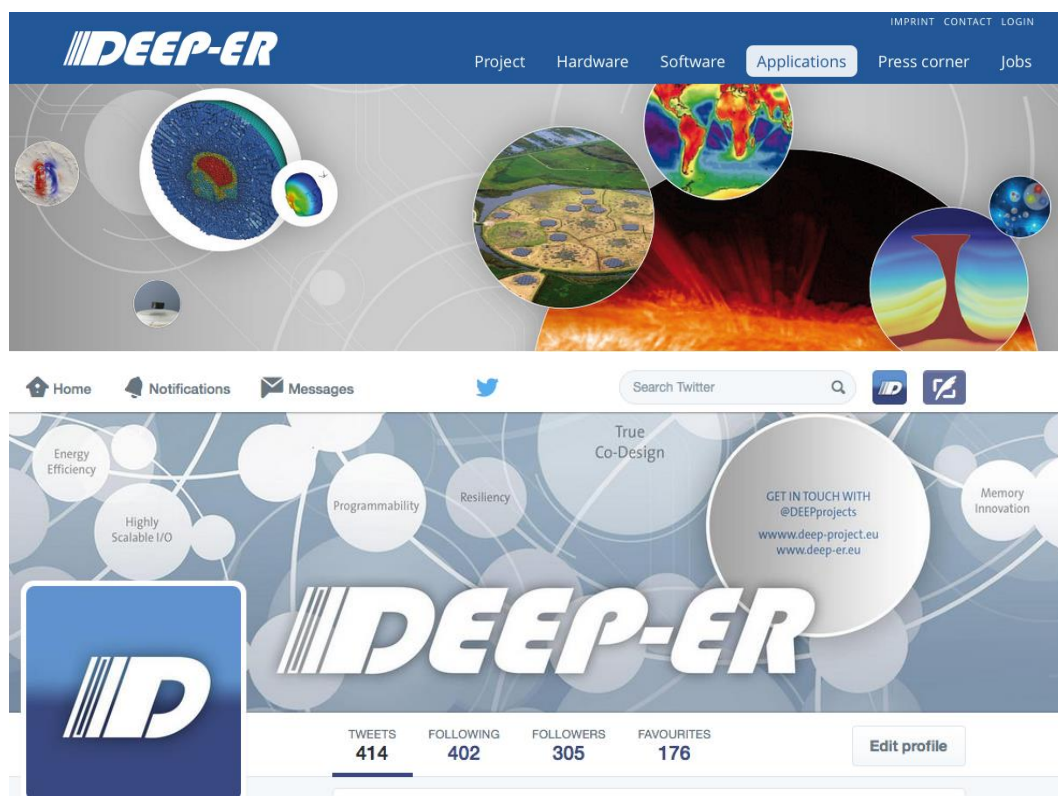


Figure 2: DEEP-ER website and Twitter handle in the new style



8 Figure 3: European Exascale booth with matching design

Regarding the content creation, we generally promoted DEEP and DEEP-ER as one project – obviously taking into consideration nuances when it comes to key messages and USPs. This was reflected in very diverse content formats starting from news pieces for the project website(s), the content for the booth panels or the flyer we have created, targeting potential users of a DEEP and DEEP-ER system.

In terms of key messages and USPs, as it can be seen in the dissemination material created (Figures 1 and 2), we have focused on a handful of USPs and placed these very prominently, e.g., on the cover of the project flyer or in the header image of the Twitter channel. Additionally, we have refined the key messages targeting the HPC community. The two basic USPs / key messages of DEEP can be completely transferred to DEEP-ER. The third and fourth are DEEP-ER specific.

- **DEEP-ER USP (Unique Sell Point):** ‘True’ Co-Design that reaches from hardware to middleware/systemware to tools to applications
  - **Key message deriving from the USP:** Only via ‘true’ Co-Design it is possible to achieve Exascale performance on an application level.

Comment: Co-Design – as we understand it in the DEEP and DEEP-ER projects – is still something that sets the project apart from other (European) projects in the Exascale research area. Furthermore, Co-Design is applied even more rigorously in DEEP-ER.

- **DEEP-ER USP:** Cluster-Booster-Concept
  - **Key message deriving from the USP:** The Cluster-Booster concept is the only feasible approach of mapping the inherent heterogeneity of applications on to the hardware system.

Comment: The Cluster-Booster architecture remains a unique approach to heterogeneous computing and forms the basis DEEP-ER builds on.

- **DEEP-ER USP:** highly scalable, efficient, and user-friendly I/O system
  - **Key message deriving from the USP:** Memory is a key challenge to be addressed at Exascale. Only with the help of a highly scalable, user-friendly I/O system it will be possible to fully exploit complex memory hierarchies.
- **DEEP-ER USP:** dual-approach resiliency concept
  - **Key message deriving from the USP:** Keeping Exascale (-ready) machines programmable and manageable is key for developing a functioning machine. The DEEP-ER resiliency concept marks a leap forward in this respect.

Examples like the image video or the “user flyer” (see Section 3) demonstrate how we have refined the key messages within the second project year and how we adapt or emphasise different messages according to target groups. This is also reflected in the plan for industry and business relations (see Section 3). Additionally, it has to be highlighted that throughout the timeframe of the whole project these will be refined and adapted. At the beginning of the project, for example, it was more important to emphasise the differences between the DEEP and DEEP-ER architecture and convey how DEEP-ER develops DEEP further. Towards the end of the project it will become more and more important to stir interest with HPC application developers by actually testing the prototype.

## 2.2 Website

Following the recommendation from the last review and in line with the joint branding efforts, we have done a complete face-lift of the DEEP-ER project website. The process of creating this new website was guided by the following key aspects: the new design had to be modern, yet from a technological point of view barrier-free. It had to incorporate features that support Search Engine Optimisation (SEO) optimisation. Finally, we wanted it to stand for the project and the team working on it – the idea was to create something more personal and very original to the project.

Of course, the web address stayed the same: [www.deep-er.eu](http://www.deep-er.eu).

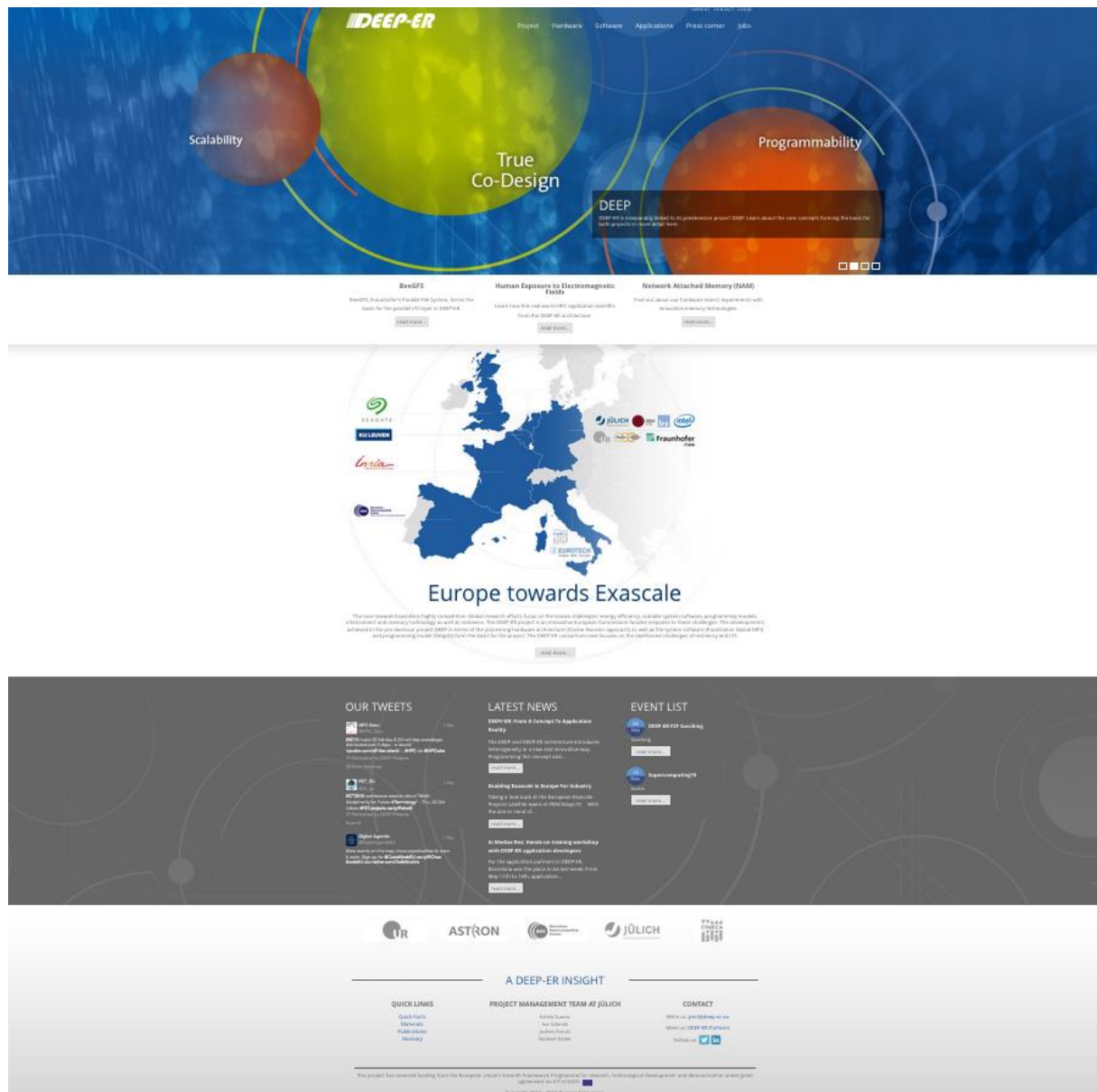


Figure 4: Start page [www.deep-er.eu](http://www.deep-er.eu)

Regarding the technological aspects, we decided to go for a full-screen modern web design format that is fully responsive – meaning the website adapts automatically to the size of the screen, no matter if it is a large screen or a smartphone screen, and additionally it does not use flash.



Additionally, a SEO component is integrated in the backend that allows for relatively easy SEO adaptation of the website. In this regard, we also use another component, a glossary component (<http://www.deep-er.eu/press-corner/glossary.html>) that automatically links to different articles internally to the website – which is an important element in SEO optimisation. Furthermore, we adhere to basic SEO guidelines when creating new texts: use headlines and sub-headlines, mark words in bold, use bullet lists and the like.

In terms of content and structure of the website, it is quite similar to the first version. However, we took the opportunity to refine and improve some elements:

- In the start page we have changing slides in the slideshow and changing focus topics that allow us to direct visitors' attention to different aspects of the project at different points in time.
- The content was updated and the new website features the partners more prominently.
- We have not only paid attention to modern web design per se, but also to modern imagery. In alignment with the graphical makeover of other project materials we have re-done all the graphics. We have given a lot of importance to the header pictures of each page using only project internal material and avoiding stock images.

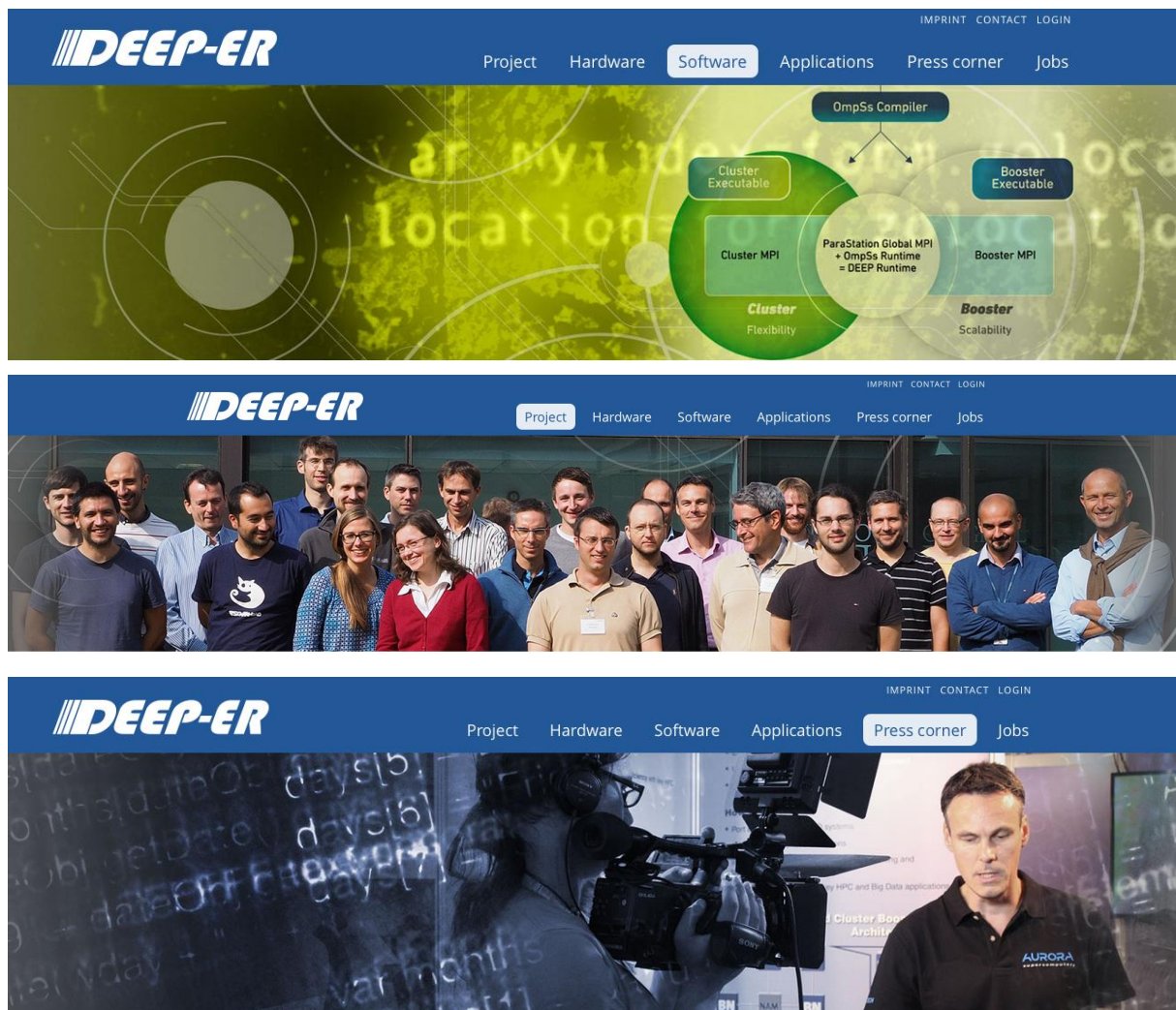


Figure 5: New imagery for DEEP-ER website

### Web Statistics

By taking a look at the “visits” and “unique visitors” diagrams below it can be seen that the numbers have varied significantly throughout the second project year. However, the peaks and lows can be easily explained. The high in November 2014 is related to the SC14 conference that took place the same month. Moreover, at the same time we also launched our project video (one of the best clicked content on the website). From April to June 2015 the face-lift of the website was on-going and thus little was updated on the old website. This explains the low numbers in the corresponding period.

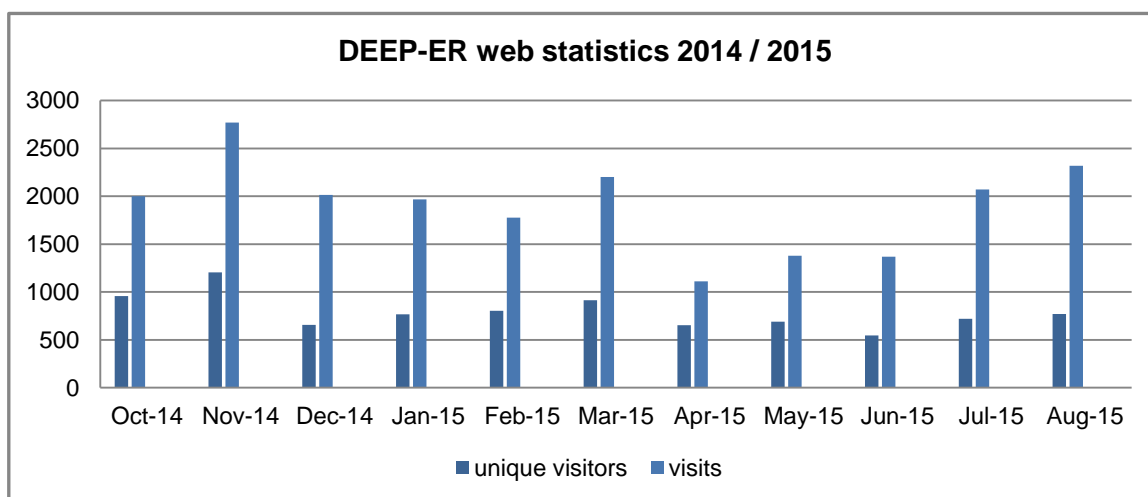


Figure 6: DEEP-ER web statistics second project year

For the launch of the new website it also makes sense to look at the pure number of hits in Figure 7. Here it can be clearly seen that the launch in July, shortly before ISC'15, and some new content in August caught the visitors' attention.

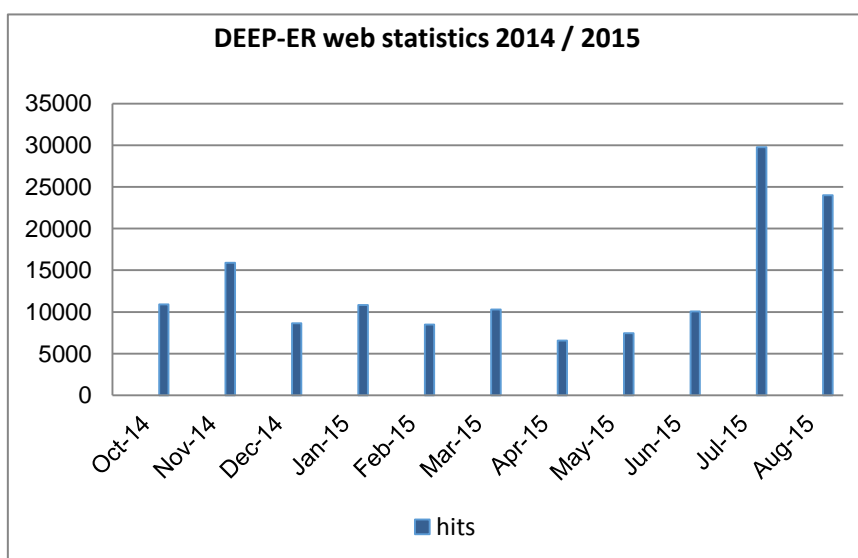


Figure 7: DEEP-ER web statistics around launch date

Generally speaking, there has also been a consistent increase in visits and unique visitors when comparing project year one and two. Whereas from October 2013 to September 2014 we had 7582 visits and 4459 unique visitors, we had a dramatic increase from October 2014 to August 2015 with 21.000 visits and 9000 unique visitors. Moreover, the numbers indicate

that this trend is sustained. Seen across calendar years, in August 2015 we have already had more visits to the website than in the whole of 2014.

We can conclude that investing in the face-lift of the website was a worthwhile exercise. However, comparing the numbers for the first half and the second half of the second project year we can infer that the PR and marketing saying “content is king” still holds true. Making the website more appealing for visitors was an important step, but this is only one aspect. It is highly important to regularly create new, and interesting, content and keep the website up-to-date. This was the key in order to induce the increase in numbers from project year one to project year two. Obviously, this will also be the key to keep numbers increasing now that we have the new and modern website.

Another interesting statistic worth mentioning is that the US and China are among the top 10 countries from which our website is accessed. Meaning that we do not only get traffic from Europe or the project partner countries but also, comparatively, large attention from overseas. This is most probably related to the fact that we are present at SC as well as to our presence in social media.

Countries (Top 10) - Full list					
Countries			Pages	Hits	Bandwidth
	Germany	de	9,998	28,864	7.26 GB
	China	cn	6,522	13,090	2.94 GB
	United States	us	6,354	12,692	4.16 GB

Figure 8: DEEP-ER web statistics per country

## 2.3 Social Media

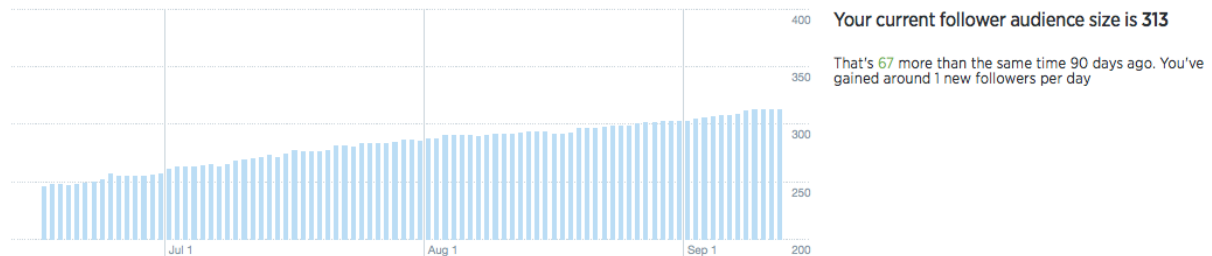
Before diving into the details, as a quick reminder: we maintain social media handles on Twitter and LinkedIn. Both are joint handles for the DEEP and DEEP-ER projects together (reasons given in D2.2). As mentioned before, we aim at portraying both projects as a seamless effort towards our audiences in terms of joint branding. To the audience it does not matter in which project what topics are more in focus. However, for our internal content creation this makes a difference. During the time the projects overlapped (December 2013 to August 2015), sometimes focus shifted between more DEEP related topics (e.g. energy efficiency) and more DEEP-ER related topics (e.g. NAM, I/O or resiliency). With the end of the DEEP project we will now focus more on exclusive DEEP-ER topics, next to central key messages applying for both projects.

### 2.3.1 Twitter

We still monitor the following Key Performance Indicators (KPI) for our Twitter handle:

- Absolute numbers of followers
- Mentions and re-tweets
- Interactions

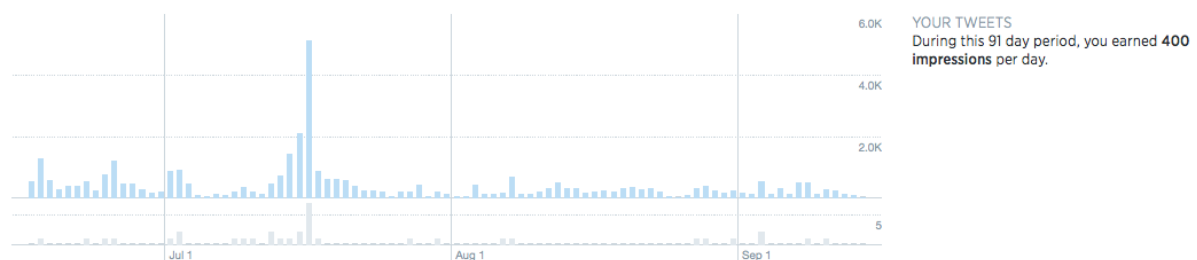
Absolute numbers are not as high as we would like them to be. As of September 14<sup>th</sup>, we have 313 followers. However, the statistics show a very steady increase in follower numbers: roughly one new follower per day (see Figure 9 for a 90 day summary from beginning of July 2015 to mid September 2015).



**Figure 9: @DEEP projects follower increase in the last 90 days**

The tweet activity charts for the last 90 days (from end of June 2015 to mid September 2015) shown in Figure 10 and 11, illustrate well that we reach a huge audience on Twitter (more than 36K impressions in the respective time-frame) and that interaction in terms of link clicks, retweets and favourites is considerable.

Your Tweets earned **36.6K impressions** over this **91 day** period



**Figure 10: Tweet impressions over last 91 days**



**Figure 11: Tweet activity over the last 90 days**

Overall, we have invested considerable resources and effort into establishing this social media channel. The numbers prove that the effort is definitely worthwhile, and that we are on the right track. Furthermore, we regularly watch other statistics at hand to determine which kind of content works best.

You can find our Twitter channel at this link: <https://twitter.com/DEEPprojects>

### 2.3.2 LinkedIn

Again, as a short reminder, we track the following KPIs for LinkedIn:

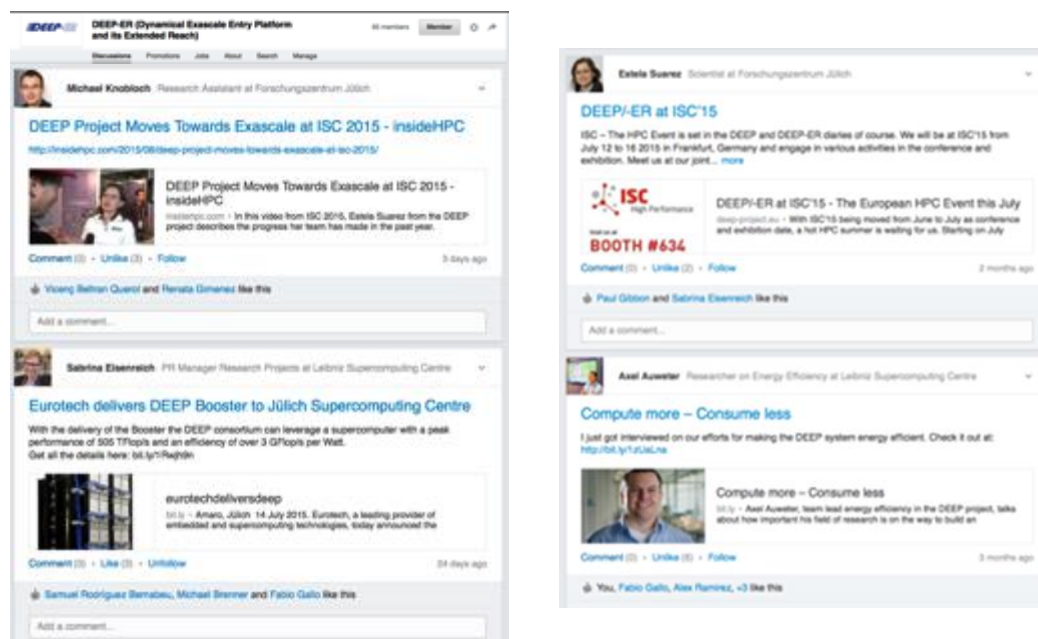
- Absolute number of group members
- Interactions
  - Discussions resulting from posts
  - Variety of people posting to the group

It has to be admitted that first efforts have not been entirely fruitful and that it is still challenging and not as straightforward as Twitter to leverage this channel for our communication activities. There are various reasons for this. Due to the nature of LinkedIn compared to Twitter we need more diverse and, above all, original content. Hence, increasing the number of posts has been challenging, but has improved recently as more authors started contributing (see Figure 12).

So far, the group mainly consists of people that are involved in the project, whereas having external people commenting and participating would probably increase the impact a lot more.

However, the number of external people has been on the rise and the engagement of group members has increased in the reporting period. Especially, the likes and shares increase the group's reach across the whole LinkedIn community.

Still, it is clear that some aspects have to be improved, and we are currently working on them.



**Figure 12: Recent posts DEEP-ER LinkedIn group**

To this end, it is most important to invite key influencers to take part in our group directly. This could be improved by growing the participation of the project members into existing HPC and Exascale groups with higher numbers of followers, to raise awareness for DEEP/-ER.

You can find the LinkedIn group at this link: <http://linkd.in/1q2A8Tj>



## 2.4 Events and Conferences

Taking part in the most important HPC conferences, such as ISC and SC, is a key outreach activity for the DEEP-ER project. Within the reporting period, DEEP-ER has been present at SC14 and ISC'15. Currently we are preparing for SC15.

Apart from that, DEEP-ER co-hosted a satellite event at PRACEdays15. This event however, was directed at an industry audience; please refer to Section 3 for more details.

Generally speaking, the outreach activities at public events followed a dual approach:

- Joint activities together with the other European Exascale Projects as, for instance, sharing the booth, having joint give-aways, applying for and hosting BoFs together or conference workshops
- Activities specific to DEEP-ER (and the sibling project DEEP). Next to the give-aways (see Section 2.5.2), we provided up-to-date information material (see Section 2.5), showcased DEEP-ER hardware (NAM + live demo), actively engaged in social media around all events, presented a poster at the Emerging Tech track of SC14 on the DEEP-ER I/O model as well as arranged various interviews with press at both events (see Section 2.6).



**Figure 13: European Exascale Booth at ISC'15**

Overall, it can be stated that participating in those kinds of events has helped DEEP-ER tremendously in reaching out to key audiences and communicating about the project, increasing visibility, but to also receiving feedback, especially in the one-to-one talks held at the booth.

## 2.5 Materials

### 2.5.1 Flyers

Along with defining the DEEP-ER key messages and USPs as well as developing a joint branding for DEEP and DEEP-ER, we have updated the project flyer and created new information material.

The project flyer is the most important information leaflet on the project. It is meant to be rather generic and to explain the basic concepts and main research topics of DEEP-ER, conveying the key messages. Cross referencing to the DEEP-ER website, the DEEP-ER social media channels and stating direct contacts to the project team, makes it easy for readers to find more in-depth information or get in touch personally.

The flyer was last updated for ISC'15 and is available for download at this link: <http://tinyurl.com/ppk73kd>



Figure 14: DEEP-ER project flyer

Furthermore, we have developed a flyer specifically dedicated to potential users of a DEEP-ER system – since both prototypes will be made available for testing after the official end of the projects. It contains basic information on the prototype (hardware and software) for users to get an idea of the machine, provides a use-case with detailed information on how to port an application to the system, and explains the advantages of the DEEP-ER machines.

The flyer was last updated in June 2015 and is available for download at this link: <http://tinyurl.com/paurv2k> (see also Section 3 for details on usage and a screenshot)

Last but not least, we have created a flyer for the European Exascale Projects with the aim of supporting our joint outreach activities. The flyer can be found at this link: <http://tinyurl.com/p96bxq4> (last updated in November 2014, since then only re-printed).



Figure 15: Joint flyer European Exascale Projects

### 2.5.2 Promotional Items

For our outreach activities around SC14 and ISC'15 we have had promotional items produced. These included either the branding for DEEP-ER (and DEEP) or the European Exascale Projects. Below a selection of those items:

#### DEEP-ER give-aways



Tumbler



Yoyo



T-Shirt

#### European Exascale Project give-aways



Beach ball



Sports armband



Beach towel

### 2.5.3 Audio-visual material

One of the major tasks regarding outreach activities in the reporting period was to create a DEEP and DEEP-ER image video. It should be highlighted that the video is a prime example of how we conveyed our key messages and USPs to a wider public and how these key messages are adapted to different audiences. Producing the video required considerable effort, but was definitely worthwhile: It is one of the best-clicked content on the website and considerably it was picked by traditional media and social media.

It is worth highlighting that throughout the project, more audio-visual material had been created. Whenever it is possible, interviews with press are arranged as video interviews to increase audio-visual material on DEEP-ER. Finally, audio-visual content was also produced leveraging the co-operation with the European Exascale Projects. This resulted in a total of 13 videos related to the project so far.

An interview done by insideHPC at ISC'14 serves as a brilliant example for this: <https://www.youtube.com/watch?v=fIO-KOn3qKE>

Owner	Title	Link
DEEP-ER Project	Image Video	<a href="http://www.deep-project.eu/deep-project/EN/News/Multimedia/Videos/_node.html">http://www.deep-project.eu/deep-project/EN/News/Multimedia/Videos/_node.html</a>
Primeur Magazine	Six European Exascale Projects are Dealing with the Hardware and Software Challenges in Exascale	<a href="http://primeurmagazine.com/weekly/AE-PR-08-14-37.html">http://primeurmagazine.com/weekly/AE-PR-08-14-37.html</a>
InsideHPC	Applications for the DEEP and DEEP-ER Project	<a href="https://www.youtube.com/watch?v=oKwKuulwrwA">https://www.youtube.com/watch?v=oKwKuulwrwA</a>
InsideHPC	DEEP and DEEP-ER Project Updates	<a href="https://www.youtube.com/watch?v=fIO-KOn3qKE">https://www.youtube.com/watch?v=fIO-KOn3qKE</a>
insideHPC	Space Weather Simulation on Intel Xeon Phi	<a href="http://insidehpc.com/2013/06/video-space-weather-simulation-on-intel-xeon-phi/">http://insidehpc.com/2013/06/video-space-weather-simulation-on-intel-xeon-phi/</a>
insideHPC	DEEP Moves Towards Exascale	<a href="http://insidehpc.com/2015/08/deep-project-moves-towards-exascale-at-isc-2015/">http://insidehpc.com/2015/08/deep-project-moves-towards-exascale-at-isc-2015/</a>
insideHPC	The DEEP Project: Developing a Novel, Exascale-enabling Supercomputing Platform	<a href="http://insidehpc.com/2013/03/the-deep-project-developing-a-novel-exascale-enabling-supercomputing-platform/">http://insidehpc.com/2013/03/the-deep-project-developing-a-novel-exascale-enabling-supercomputing-platform/</a>
Mont-Blanc	European Exascale Projects at ISC'15	<a href="https://www.youtube.com/watch?v=ZP4uUzG7GJc&amp;feature=youtu.be">https://www.youtube.com/watch?v=ZP4uUzG7GJc&amp;feature=youtu.be</a>
iSGTW	Working to Make Exascale Supercomputing A Reality	<a href="http://www.isgtw.org/visualization/working-make-exascale-supercomputing-reality">http://www.isgtw.org/visualization/working-make-exascale-supercomputing-reality</a>
Primeur Magazine	European exascale projects DEEP-ER and Mont-Blanc to investigate new Exascale technologies	<a href="https://www.youtube.com/watch?v=tr_co6vu-4s">https://www.youtube.com/watch?v=tr_co6vu-4s</a>
Primeur Magazine	Technology Developments of the Exascale Project DEEP-ER	<a href="https://www.youtube.com/watch?v=aA42Me4s-nl">https://www.youtube.com/watch?v=aA42Me4s-nl</a>
Primeur Magazine	Video on EEP Workshop at ISC15	under preparation
Euro Exa Projects	Highlight Video PRACEdays15	under preparation

**Figure 16: Overview audio-visual content on DEEP-ER**



## 2.6 DEEP-ER News & Media Relations

Throughout the second project year, the team continued to reach out very actively to media, especially key HPC titles. This aims at nurturing an on-going relationship with the journalists in this area, to keep them up-to-date and increase the visibility and impact of our key messages.



**Figure 17: Magic circle of key HPC Media.**

In the reporting period we had overall 4 interviews – both face to face and via phone. On top, media were separately invited to our events (e. g. PRACEdays15 or the workshop at ISC'15) and reported from those events as well.

Last but not least, we have created numerous pieces of written content, which were picked-up by the media. These pieces included two press releases (main focus on DEEP with DEEP-ER mentioned) and short blog entries as well as longer “behind-the-scenes” interviews on the project.

### *Press Releases:*

- [Eurotech delivers the Booster system to Jülich to complete DEEP supercomputer](#)
- [Extoll introduces the HPC network chip Tourmalet](#)

### *Website content (picked-up by media):*

Apart from the press releases, we have created short announcement (or soft news) and interviews for the press to keep the news flow steady and constant. Usually, these pieces were first published on our own website – a full list can be found at this link: <http://www.deep-er.eu/press-corner/news.html>

Highlight pieces receiving lots of attention in social media and getting picked-up or cited by traditional media include:

### *Experimenting with Innovative Memory Technology*

<http://www.deep-er.eu/press-corner/news/50-hmc.html>

In total, we have achieved 16 pieces of coverage throughout the second project year.

## 2.7 Publications & Proceedings

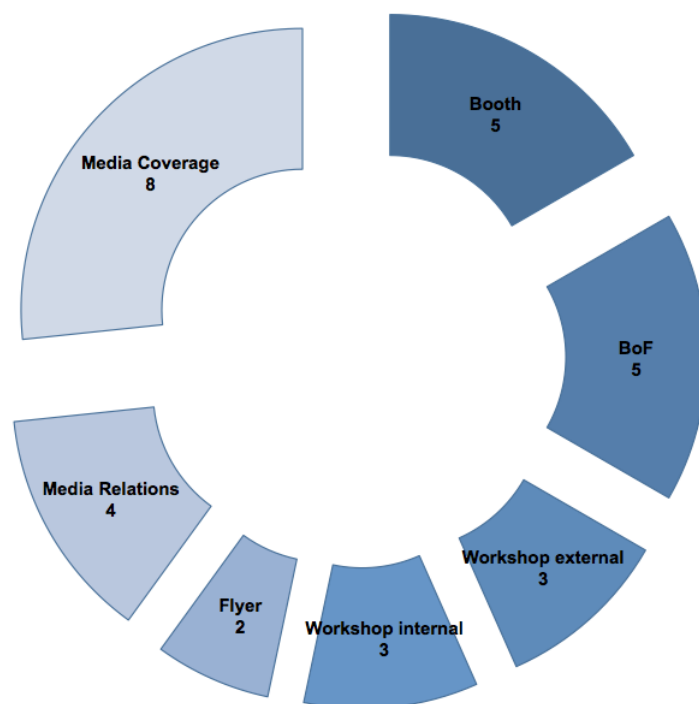
Naturally, at the beginning of the project, there are not too many peer-reviewed publications as it takes a while to produce publishable results. First articles are under review at the moment. Nevertheless, the team was very eager to present the DEEP-ER project at various conferences. In the reporting period DEEP-ER colleagues gave presentations at 18 conferences.

A full list of DEEP-ER related peer-reviewed publications and presentations can be found in the annex to this document.

Overall, it can be stated that the presentations at conferences and events are extremely helpful in promoting the DEEP-ER project and creating visibility in the scientific community – both in IT and in domain sciences. Moreover, the impact that the Q&A feedback sessions had at these events cannot be neglected.

## 2.8 Cooperation European Exascale Projects

Reading through all previous subsections in Section 2 it is clear that cooperation with the other European Exascale Projects (EEP) has been intensified tremendously. Usually, the co-operation takes place first and foremost in preparing the usual trade shows. Further, the projects have also started co-operating for workshops and trainings (see below).



**Figure 18: Overview on EEP joint activities**

We think that we can speak for all projects when stating that these joint efforts continue to be extremely fruitful in establishing a European Exascale community and increasing the impact of our public outreach. We will for sure continue with this cooperation among the FP7 projects. It deserves special mention that the DEEP/-ER projects are taking a lead role here in organising the joint teleconferences and actively co-ordinating and implementing the joint efforts.

### 3 Task 2.2: Industry and business cooperation

Within task 2.2, the aim for the second year of the project was to continue building relationships with relevant industrial and business partners via our engagement in ETP4HPC, PROSPECT, and the TER@TEC forum.

Overview of lobbying meetings:

- ETP4HPC Working Group on Extreme Scale Demonstrators EsD, Brussels, Belgium, January 14, 2015
- ETP4HPC Steering Board, Teleconference, February 18, 2015
- ETP4HPC Steering Board, Barcelona, Spain, March 5, 2015
- ETP4HPC General Assembly, Barcelona, Spain, March 5, 2015
- PROSPECT General Assembly, Munich, Germany, March 25, 2015
- ETP4HPC Steering Board, Teleconference, February 18, 2015
- ETP4HPC Steering Board, Barcelona, Spain, March 5, 2015
- ETP4HPC General Assembly, Barcelona, Spain, March 5, 2015
- PROSPECT General Assembly, Munich, Germany, March 25, 2015
- ETP4HPC Steering Board, Barcelona, Spain, September 7, 2015
- ETP4HPC General Assembly, Rome, Italy, September 29, 2015



Figure 19: Promotional flyer dedicated at potential users of the DEEP/-ER systems

The most important activity in the reporting period however was a satellite event hosted at this year's PRACEdays15 – Enable Science, Foster Industry (<http://www.prace-ri.eu/pracedays15/>) – taking place on May 26, 2015 in Dublin, Ireland.

The event was held in cooperation with PRACE and the European Exascale Projects. We were able to put together a convincing program with a clear industry focus: “Enabling Exascale in Europe for Industry”. It included, e.g., a keynote speaker from Airbus (Dr. Eric Chaput). Concerning DEEP-ER and the partner project DEEP, a focus was put on the project applications that have closest links with the industry. The goal was to convey the key message that the DEEP/-ER systems are not only ideal for academic but also for industrial users. Next to a presentation specifically developed for this purpose featuring two application partners to act as testimonials, a dedicated flyer for potential users of a DEEP/-ER System was produced. This material is meant to be more long lasting and stir interest in testing the prototypes as it is planned to make the prototypes available to external audiences after the official project end. The flyer is available for download at this link: <http://tinyurl.com/paurv2k>

A full report on the event is available at this link: <http://tinyurl.com/oyzlsot>

Finally, in the last quarter we have been working on a more detailed plan for industry and business cooperation to broaden the scope of activities and further intensify cooperation. The detailed plan can be found in Annex A.

## 4 Task 2.3: Training

Whereas in the first project year the aim was to get all partners up to speed and familiarise the partners that were not part of DEEP with the Cluster-Booster concept, in the second project year focus was on resiliency and performance optimisation as well as on starting to offer workshops and trainings for external audiences. Last but not least, DEEP-ER members represented the project at workshops organised by external people.

An overview of the trainings offered in the reporting period:

- DEEP-ER internal:
  - DEEP-ER Application Developer Training, May 11<sup>th</sup> – 13<sup>th</sup> 2015, Barcelona (Spain), organised by WP 5 and 6
- DEEP-ER / EEP External:
  - European Exascale Projects workshop, 16<sup>th</sup> July 2015, held at ISC'15 in Frankfurt, Germany
- External workshops:
  - Intel Parallel Computing Workshop, 11<sup>th</sup> November 2014, Jülich, Germany – training day organised by Intel at JSC open to DEEP-ER partners
  - N. Eicker held presentation at SUMA (Supermassive Computations in Theoretical Physics) Workshop, Trento (Italy), 11 February 2015
  - E. Suarez held presentation at Big Data and Extreme Scaling (BDEC) Workshop, Barcelona (Spain), 28 January 2015

## 5 Outlook

Until the end of 2015, focus will lie on preparations for SC15 as well as further enhancing the DEEP-ER project website.

Within the third project year as a whole, the aims are as follows:

- Continue with the creation of quality content and disseminating it via the different channels (owned, earned and paid) – special attention is paid to regularly updating the DEEP-ER website and further SEO optimisation activities.
- Further enhance existing social media channels (Twitter and LinkedIn).
- Strengthen the relationships to key influencers in industry and business according to the plan developed.
- Keep up and continue the excellent co-operation with the other EEP projects. Next joint activities include outreach around SC15, taking place from November 15 to 20 2015 in Austin, USA as well as participating at PRACEdays16 from May 10 to 12 in Prague, Czech Republic.



## Annex A

## Presentations &amp; Peer-Reviewed Publications

Type of activities	Main leader Presenter Name	Event	Title	Date	Place
Presentation	E. Suarez (JUELICH)	JUELICH-JSC meeting (Visit C.Aubley)	DEEP and DEEP-ER	19/01/2015	Jülich, Germany
Presentation	E. Suarez (JUELICH)	ECL Meeting Jülich	DEEP and DEEP-ER: Status Update	13/05/2015	Jülich, Germany
Presentation	B. Mohr (JUELICH)	2nd International HPC Forum	Jülich On The Way To Exascale	20/05/2015	Tianjin, China
Presentation	N. Eicker (JUELICH)	JSC-LBL meeting (Visit S.Dosanji)	DEEP and DEEP-ER	22/05/2015	Jülich, Germany
Presentation	E. Suarez (JUELICH); M. Tchiboudkjian (CGG); G.	PRACEdays15	DEEP and DEEP-ER: Innovative Exascale architectures in the light of user requirements	26/05/2015	Dublin, Ireland
Presentation	E. Suarez (JUELICH)	NorduGrid Conference	The DEEP-ER way towards exascale I/O and resilience	04/06/2015	Bern, Switzerland
Presentation	G. Lapenta (KU Leuven)	Astronom 2015	Using HPC Kinetic Simulations to Help the MMS Mission Find its Target: Reconnection Diffusion Regions	08/06/2015	Avignon, France
Presentation	D. Alvarez Mallon (JUELICH)	ISC'15	DEEP and DEEP-ER: From a Concept to Application Reality	01/07/2015	Jülich, Germany
Presentation	D. Alvarez Mallon (JUELICH)	Third NESUS Working Groups Meeting	DEEP & DEEP-ER: European HW and SW Innovations on the Way to Exascale	02/07/2015	Leuven, Belgium
Presentation	J. Amaya (KU Leuven)	12th International School/Symposium for Space Simulations (ISSS-12)	The Numerical Magnetosphere: Fully Kinetic Simulations of the Solar Wind-Magnetosphere Interaction	03/07/2015	Prague,
Presentation	M. E. Innocenti (KU Leuven)	12th International School/Symposium for Space Simulations (ISSS-12)	Performance Analysis of the Multi-level Multi-domain Approach on Emerging Computing Architectures	03/07/2015	Prague,
Presentation	F. Bacchini (KU Leuven)	12th International School/Symposium for Space Simulations (ISSS-12)	New Approaches to Large Scale Particle in Cell Simulations based on Fluid Methods Applied to Emerging Hybrid Architectures	03/07/2015	Prague,
Presentation	H.-CH. Hoppe (INTEL) + D. Alvarez Mallon (JUELICH)	ISC'15	Presentation + Demo at the Intel booth	13/07/2015	Frankfurt, Germany
Presentation	E. Suarez (JUELICH)	ISC'15	Architecture Innovation with Intel Xeon Phi - presentation held at the Intel Booth	13/07/2015	Frankfurt, Germany
Presentation	N. Eicker (JUELICH)	ISC'15	Taming Heterogeneity by Segregation – An Innovative Approach to Heterogeneous Exascale Architectures	16/07/2015	Frankfurt, Germany
Presentation	V. Beltran (BSC)	13th US National Conference on Computational Mechanics	Enabling Complex Applications on Heterogeneous Clusters with OmpSs MPI Offloading	30/07/2015	San Diego, USA
Presentation	G. Lapenta (KU Leuven)	International Conference on Numerical Simulation of Plasmas	Using HPC Kinetic Simulations to help the MMS mission find its target: reconnection diffusion regions	11/08/2015	Golden (Colorado), US
Presentation	R. Leger (INRIA)	ParCo 2015	Assessing the DEEP-ER Cluster/Booster Architecture with a Finite-Element Type Solver for Bioelectromagnetics	01/09/2015	Edinburgh, Scotland

## Media Coverage

Main leader Presenter Name	Name of Publication	Event	Title	Date	Link
BADW-LRZ	ISGTW		Working to Make Exascale Supercomputing A Reality (Image Video)	25/02/2015	<a href="http://www.isgtw.org/visualization/working-make-exascale-supercomputing-reality">http://www.isgtw.org/visualization/working-make-exascale-supercomputing-reality</a>
European Exascale Projects	Scientific Computing World	PRACEDays15	Europe's Exascale on Display	01/04/2015	<a href="http://www.scientific-computing.com/news/news_story.php?news_id=2650">http://www.scientific-computing.com/news/news_story.php?news_id=2650</a>
European Exascale Projects	insideHPC	PRACEDays15	Europe's Exascale on Display	05/04/2015	<a href="http://insidehpc.com/2015/04/european-exascale-display-may/">http://insidehpc.com/2015/04/european-exascale-display-may/</a>
European Exascale Projects	Scientific Computing World	ISC'15	ISC'15 High Performance Show Preview	01/06/2015	<a href="http://www.scientific-computing.com/show/show.php?show_id=28">http://www.scientific-computing.com/show/show.php?show_id=28</a>
BADW-LRZ	Primeur Magazine	ISC'15	DEEP-ER at ISC'15	11/06/2015	<a href="http://primeurmagazine.com/flash/AE-PF-05-15-30.html">http://primeurmagazine.com/flash/AE-PF-05-15-30.html</a>
J. Labarta (BSC)	ISC'15 Blog	ISC'15	Survival Machine and Surviving the Machine	23/06/2015	<a href="http://www.isc-hpc.com/blog/the-survival-machine-and-surviving-the-machines.html">http://www.isc-hpc.com/blog/the-survival-machine-and-surviving-the-machines.html</a>
Eurotech	idw Online	ISC'15	Eurotech delivers the "Booster" system to Jülich to complete the DEEP supercomputer	14/07/2015	<a href="https://idw-online.de/en/news634748">https://idw-online.de/en/news634748</a>
Eurotech	insideHPC	ISC'15	Eurotech Delivers Booster to DEEP Project	16/07/2015	<a href="http://insidehpc.com/2015/07/eurotech-delivers-booster-to-deep-project/">http://insidehpc.com/2015/07/eurotech-delivers-booster-to-deep-project/</a>
Eurotech	HPCwire	ISC'15	Eurotech Delivers "Booster" System to Jülich to Complete DEEP Supercomputer	16/07/2015	<a href="http://www.hpcwire.com/off-the-wire/eurotech-delivers-booster-system-to-julich-to-complete-deep-supercomputer/">http://www.hpcwire.com/off-the-wire/eurotech-delivers-booster-system-to-julich-to-complete-deep-supercomputer/</a>
Eurotech	Scientific Computing	ISC'15	Booster System Installed at Jülich, Completes DEEP Supercomputer	17/07/2015	<a href="http://www.scientificcomputing.com/news/2015/07/booster-system-installed-j%C3%BClich-completes-deep-supercomputer">http://www.scientificcomputing.com/news/2015/07/booster-system-installed-j%C3%BClich-completes-deep-supercomputer</a>
UHEI / Extoll	insideHPC	ISC'15	Extoll rolls out Tourmalet Network Chip at ISC'15	22/07/2015	<a href="http://insidehpc.com/2015/07/extoll-rolls-out-tourmalet-network-chip-at-isc-2015/">http://insidehpc.com/2015/07/extoll-rolls-out-tourmalet-network-chip-at-isc-2015/</a>
UHEI / Extoll	Innovations Report	ISC'15	Extoll Introduces HPC Network Chip Tourmalet	22/07/2015	<a href="http://www.innovations-report.com/html/reports/information-technology/extoll-introduces-the-hpc-network-chip-tourmalet.html">http://www.innovations-report.com/html/reports/information-technology/extoll-introduces-the-hpc-network-chip-tourmalet.html</a>
E. Suarez (JUELICH)	insideHPC	ISC'15	DEEP Moves Towards Exascale	03/08/2015	<a href="http://insidehpc.com/2015/08/deep-project-moves-towards-exascale-at-isc-2015/">http://insidehpc.com/2015/08/deep-project-moves-towards-exascale-at-isc-2015/</a>
E. Suarez (JUELICH)	Primeur Magazine	ISC'15	European Exascale Projects DEEP-ER and Mont-Blanc to Investigate New Exascale Technologies (VIDEO)	10/08/2015	<a href="https://www.youtube.com/watch?t=16&amp;v=tr_co6vu-4s">https://www.youtube.com/watch?t=16&amp;v=tr_co6vu-4s</a>
E. Suarez (JUELICH)	Primeur Magazine	ISC'15	European Exascale Projects DEEP-ER and Mont-Blanc to Investigate New Programming and Network-attached Memory technologies	10/08/2015	<a href="http://primeurmagazine.com/weekly/AE-PR-09-15-48.html">http://primeurmagazine.com/weekly/AE-PR-09-15-48.html</a>
J. Schmidt (UHEI)	Primeur Magazine	ISC'15	Demonstration: technology developments of the exascale project DEEP-ER	10/08/2015	<a href="https://www.youtube.com/watch?v=aA42Me4s-nl">https://www.youtube.com/watch?v=aA42Me4s-nl</a>

## Plan Industry and Business Relations

### DEEP-ER PROJECT

---

#### WP2: Dissemination, outreach and training

##### Task 2.2: PLAN INDUSTRY AND BUSINESS COOPERATION (task leader: Eurotech)

In order to develop an effective liaison programme between the DEEP-ER project and relevant industrial and business partners, this task will:

1. Research and analyze which applications might be relevant to industrial/business users, as well as which markets could leverage the project results.
2. Execute a proper communication strategy and create adequate marketing deliverables accordingly. Some of these materials will also promote the opportunity, for industrial users, to use test installations.

Considering that Eurotech has been assigned 3PM for this task, the total effort needed for carrying out all the activities has been tuned accordingly, reaching a total of 90 days (Full Time Equivalent).

Approximately 1/3 of the effort will be employed for outlining an industrial market strategy:

- Identification of potential industrial application fields of project technology as well as products and services that can leverage such technology. Examples include applications and software in fields related to Oil Exploration and High Temperature Superconductivity.
- Identification of market targets and their competitive landscape. From applications which have potential for industrial usage, the analysis focuses on the relevant markets in order to understand commercial opportunities.
- Development of a communication strategy and identification of an appropriate marketing communication mix (participation to tradeshow and events, social media marketing, print and online advertisement). The communication strategy will result in an operative plan built considering the budget assigned to each dissemination activity.

The execution of the communication plan will result in a series of activities which we call “operative marketing” and which comprises approximately 2/3 of the total effort (58 full time days). Adequate marketing deliverables will be created, both for online and offline distribution. Flyers and brochures with a more general target (i.e. how DEEP-ER applications can support simulation and R&D activities in different industrial sectors) will keep on being distributed on the DEEP-ER website (same as general DEEP-ER brochures) and during events and tradeshow. In addition, depending on the findings of the study carried out in the first part of this task, deliverables specific to different industrial sectors will be produced. An example of this activity can be the creation of articles and advertorials on specialized journals (i.e. *Oil & Gas Journal*).

Also, a number of appropriate events will be selected so that we can participate with an on-site presence to promote the project results to industrial users. These events can be mainstream supercomputing events, like SC in the US or ISC in Germany, or more specialized events targeting different vertical markets (i.e. Oil & Gas). The results of the market analysis carried out in the first part of the task will tell us on which market sectors and events to concentrate our efforts. Since it will not always be possible for us to have an independent booth/space, our participation to some events (especially those related to vertical markets), will be dependent on whether one of the

industrial partners (i.e. Eurotech) decides to take part in these shows and, in that occasion, promote DEEP-ER and its industrial applications as well.

As anticipated in the Dissemination Plan, the collaboration with the ETP4HPC (European Technology Platform for High Performance Computing) will be key. ETP4HPC, being an industry-led forum, already has access to a wide database of industrial users. We expect that some of them might benefit from the DEEP-ER project results and therefore, we plan on initiating synergies through:

- The identification of such companies and the development of marketing activities specifically targeted to them.
- The promotion of DEEP-ER results at ETP4HPC events and meetings leveraging the ETP4HPC membership of the industrial partners in the project.
- The promotion of the opportunity to perform test installations/activities on the DEEP-ER machine.

Moreover, we plan on working with ETP4HPC in order to identify the needs of industrial users in terms of HPC applications and to share such findings with the other WPs within the project so to strengthen the collaboration between research endeavors and industrial applications.

The table below specifies in more detail each action planned for this task, together with the number of days (in FTE) currently planned to complete it.

<b>Industrial market strategy</b>	<b>EFFORT FTE (days)</b>	<b>START (date)</b>	<b>END (date)</b>
Identification of industrial application fields of the project technology	7	01.10.2015	30.10.2015
Identification of products/services that leverage the project technology and can be used in industrial applications	5	01.10.2015	16.10.2015
Identification of market targets for the industrial applications of the project and evaluation of their potential	7	19.10.2015	20.11.2015
Study of the competitive landscape related to the identified markets	4	02.11.2015	13.11.2015
Identification of targets and suitable positioning	6	23.11.2015	18.12.2015
Structure of the communication strategy – identification of the marketing communication mix and preparation of the communication plan, including the evaluation of the budget	3	10.12.2015	18.12.2015
<b>Total marketing strategy</b>	<b>32</b>		
<b>Operative marketing</b>	<b>EFFORT FTE (days)</b>		
Create adequate marketing deliverables/content leveraging the objectives/results of the project	15	01.01.2016	31.03.2017
Execution of the communication plan, including events participation, liaison with HPC industrial users, PR, Web, Social media and other activities	43	01.01.2016	31.03.2017
<b>Total operative marketing</b>	<b>58</b>		
<b>TOTAL</b>	<b>90</b>		

## List of Acronyms and Abbreviations

### A

### B

- BADW-LRZ:** Leibniz-Rechenzentrum der Bayerischen Akademie der Wissenschaften.  
Computing Centre, Garching, Germany
- BoF:** Birds of a Feather Session
- BoP:** Board of Partners for the DEEP-ER project
- BSC:** Barcelona Supercomputing Centre, Spain
- BSCW:** Basic Support for Cooperative Work, Software package developed by the Fraunhofer Society used to create a collaborative workspace for collaboration over the web

### C

- CD:** Corporate Design
- CI:** Corporate Identity
- CRESTA:** Collaborative Research into Exascale Systemware Tools & Applications: EU-funded Exascale project.

### D

- DEEP:** Dynamical Exascale Entry Platform
- DEEP-ER:** DEEP Extended Reach: this project

### E

- EC:** European Commission
- EC-GA:** EC-Grant Agreement
- EEP:** European Exascale Projects
- EESI:** European Exascale Software Initiative (FP7)
- EPiGRAM:** Exascale ProGRAMming Models
- ETP4HPC:** European Technology Platform for High Performance Computing
- EU:** European Union
- Eurotech:** Eurotech S.p.A., Amaro, Italy
- Exaflop:**  $10^{18}$  Floating point operations per second
- Exascale:** Computer systems or Applications, which are able to run with a performance above  $10^{18}$  Floating point operations per second
- EXA2CT:** EXascale Algorithms and Advanced Computational Techniques

### F

- FP7:** European Commission 7th Framework Programme.

### G

## H

**HPC:** High Performance Computing  
**HW:** Hardware

## I

**ICT:** Information and Communication Technologies  
**Intel:** Intel Germany GmbH Feldkirchen,  
**I/O:** Input/Output. May describe the respective logical function of a computer system or a certain physical instantiation  
**ISC:** International Supercomputing Conference, Yearly conference on supercomputing which has been held in Europe since 1986

## J

**JUELICH:** Forschungszentrum Jülich GmbH, Jülich, Germany

## K

**KPI:** Key Performance Indicator

## L

## M

**Mont-Blanc:** European scalable and power efficient HPC platform based on low-power embedded technology

**Mont-Blanc 2:** Follow-up project of Mont-Blanc

## N

**NAM:** Network Attached Memory, nodes connected by the DEEP-ER network to the DEEP-ER BN and CN providing shared memory buffers/caches, one of the extensions to the DEEP Architecture proposed by DEEP-ER

**NIC:** Network Interface Card, Hardware component that connects a computer to a computer network

**Numexas:** NUMerical Methods and Tools for Key EXAScale Computing Challenges in Engineering and Applied Sciences

**NVM:** Non-Volatile Memory. Used to describe a physical technology or the use of such technology in a non-block-oriented way in a computer system

## O

**OmpSs:** BSC's Superscalar (Ss) for OpenMP

**OpenMP:** Open Multi-Processing, Application programming interface that support multiplatform shared memory multiprocessing

**P**

**ParaStationMPI:** Software for cluster management and control developed by ParTec

**ParTec:** ParTec Cluster Competence Center GmbH, Munich, Germany

**PM:** Person Month or Project Manager of the DEEP-ER project (depending on the context)

**PMT:** Project Management Team of the DEEP-ER project

**PR:** Public Relations

**PRACE:** Partnership for Advanced Computing in Europe (EU project, European HPC infrastructure)

**Project Coordinator:** Leading scientist coordinating and representing the DEEP-ER project

**PROSPECT:** Promotion of Supercomputing Partnerships for European Competitiveness and Technology (registered association, Germany)

**Q****R**

**R&D:** Research and Development

**RTD:** Research and Technological Development

**S**

**SEO:** Search Engine Optimisation

**SME:** Small and Medium Enterprises

**T**

**TCO:** Total Cost of Ownership

**TER@TEC:** A European industrial initiative federating industrial users, technology providers and research centres to harness HPC technologies and enlarge their usage

**ToW:** Team of Work Package leaders within the DEEP-ER project

**U**

**UHEI:** University of Heidelberg, Germany

**USP:** Unique Selling Point

**V****W**

**WP:** Work Package

**X**

**Y**

**Z**