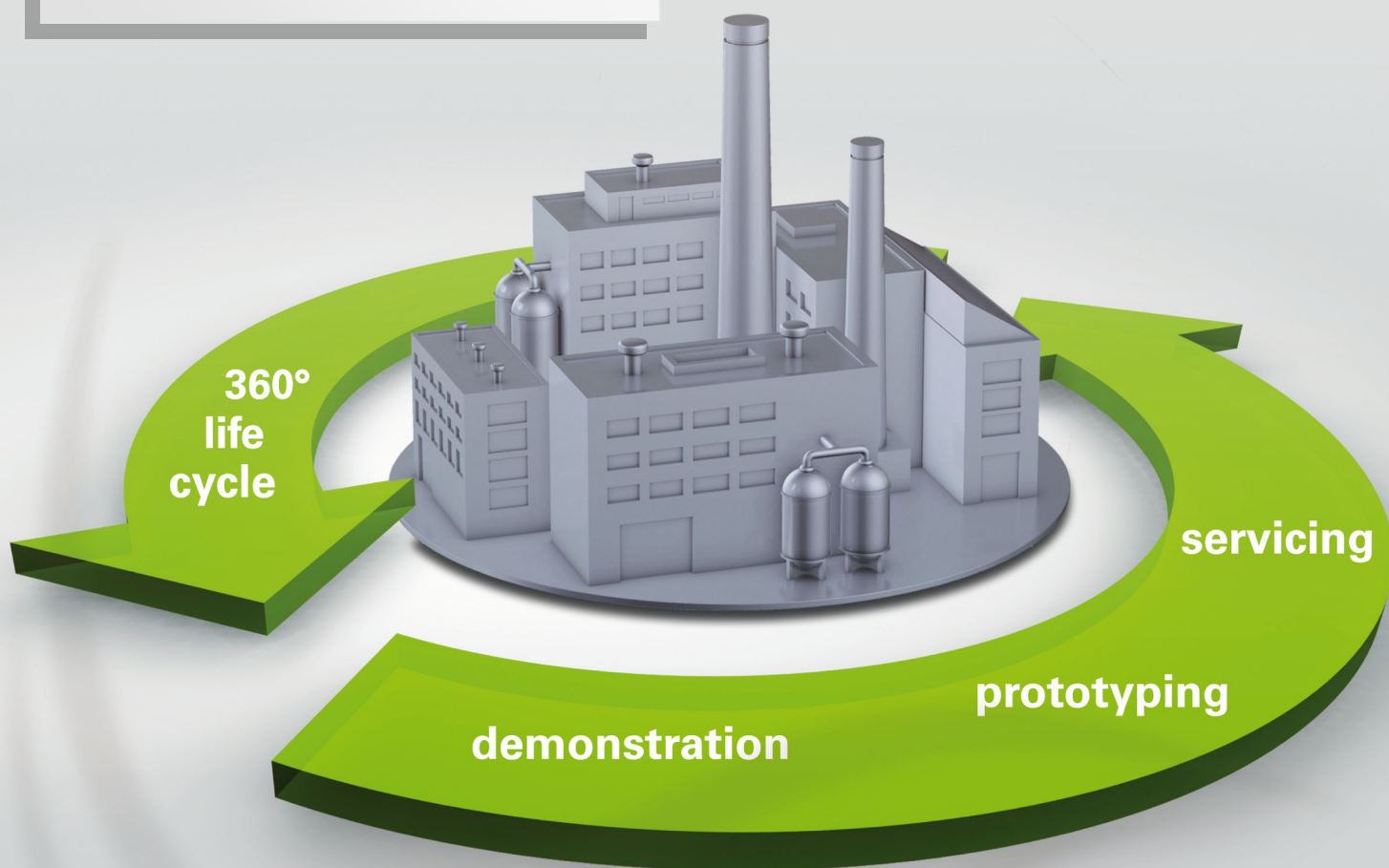**Project duration:**
01/09/2013 – 30/08/2016

Full project title:
Innovative Reuse of modular knowledge Based devices
and technologies for Old, Renewed and New factories

Grant Agreement no:
609223

Partner countries:
Finland, France, Germany, Hungary, Italy, Switzerland,
Portugal, Spain, United Kingdom

Organizations:
HWH, Fagor, CMF, CRF, IEF, FhG, SEZ, HSKA, Uoulu,
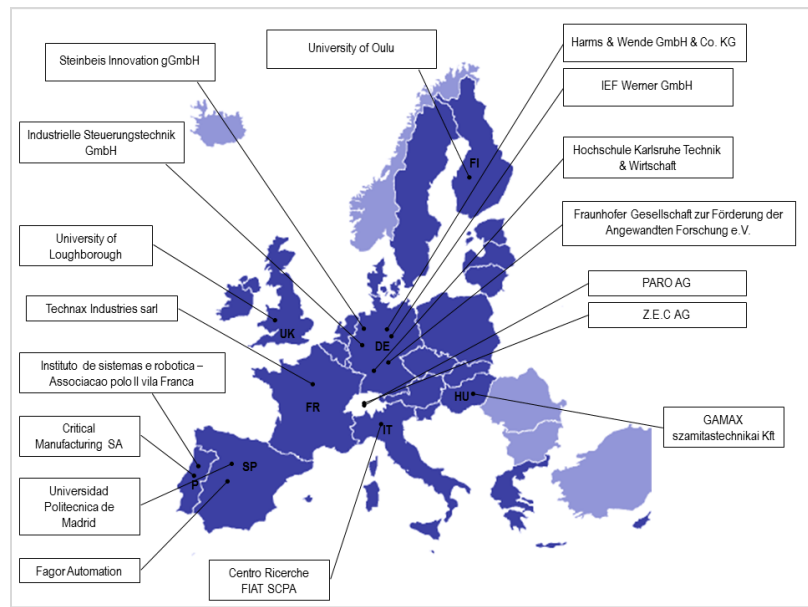GMX, ISR, ISG, UPM, PARO, ZEC, TNX, LU

eRBorn
Innovative Reuse

360°
life
cycle

servicing

prototyping

demonstration

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Steinbeis Innovation gGmbH

University of Oulu

Harms & Wende GmbH & Co. KG

IEF Werner GmbH

Industrielle Steuerungstechnik GmbH

Hochschule Karlsruhe Technik & Wirtschaft

Fraunhofer Gesellschaft zur Förderung der Angewandten Forschung e.V.

University of Loughborough

PARO AG

Z.E.C AG

Technax Industries sarl

Instituto de sistemas e robotica – Associacao polo II vila Franca

GAMAX szamitastechnikai Kft

Critical Manufacturing SA

Universidad Politecnica de Madrid

Fagor Automation

Centro Ricerche FIAT SCPA

Dear Reader,

the ReBorn consortium is proud to present you the first issue of the project newsletter! The newsletter will regularly provide you with interesting facts on the project's development and demonstration. A subscription option is available on the **project website,** too. Furthermore, the newsletters will collect and present information on relevant events within and outside of ReBorn and provide you with featured news from the field of advanced manufacturing and intelligent and sustainable production.

Today in our first issue it's time to

Get to know ReBorn - What is it about?

While ever increasing demands on flexibility, adaptability and low life-cycle costs of machines arise, rather little attention is still paid to the considerable drop in production efficiency and equipment decommissioning and substitution. In fact, putative old-fashioned machines are mostly decommissioned and replaced by new ones; the level of equipment reuse is rather small. In a modern economy, however, that strives for sustainability at various levels a reasonable solution is desirable...

...wouldn't it be fantastic to get hold of specific strategies and approaches, which contribute to sustainable, resource-friendly and green manufacturing and, at the

same time, deliver economic and competitive advantages for the manufacturing sector?!

That's what ReBorn aims at to provide!

The vision of ReBorn is to demonstrate strategies and technologies that support a new paradigm for the re-use of production equipment in factories, which will give new life to decommissioned production systems and equipment, making their *"reborn"* in new production lines possible. As a *demonstration* oriented project, ReBorn aims at delivering *prototypes proven for industrial environments*.

Now, we invite you to dive in into the interesting world of ReBorn and to get to know the big consortium, consisting of 17 partners from all over Europe!
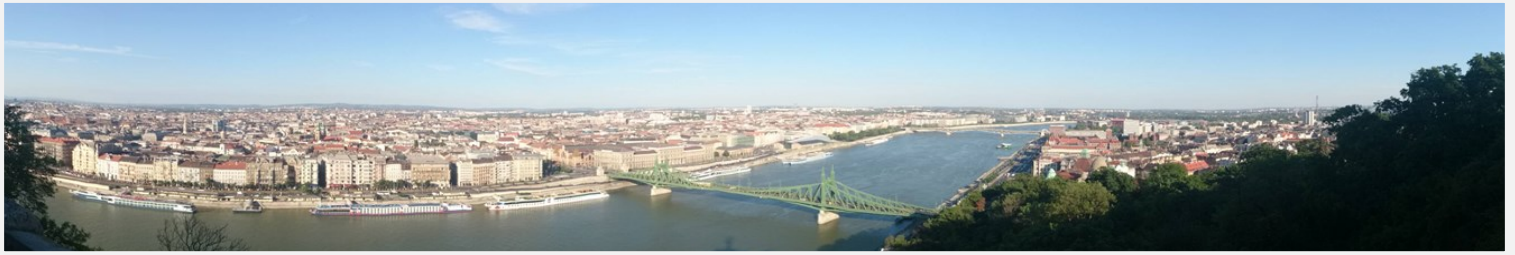
Welcome to ReBorn and enjoy reading our Newsletter!

Your ReBorn team

To learn more about the project's background, approach and objectives, please visit our LinkedIn profile and the project website:
LinkedIn Profile - ReBorn

http://www.reborn-eu-project.org/

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http://www.reborn-eu-project.org/

Re**Born** 9 month partner meeting in Budapest - second project assembly meeting

From the 11th – 13th of June 2014, the entire Re**Born** consortium came together for the second time after the kick-off meeting in Brussels in September 2013. Re**Born** partners met in beautiful Budapest, Hungary, where they were perfectly hosted by our partner GAMAX.

Although here had been several technical meetings and workshops during the first 9 months of the project, the general assembly of the entire consortium is a unique chance to bring together all partners in one place. Especially for a consortium as large as the Re**Born** group, which comprises 17 partners, the get-together is vital to promote close and fruitful collaboration.

The Project Technical Adviser (PTA) of the European Commission Mr. Vincenzo Nicolò joined the meeting in order to observe project developments and first results achieved so far. On this basis, the PTA assesses the project progress for the first time and provides feedback to the European Commission but also to the consortium.

Due to the over-average size of the consortium, day 1 was organized as an internal and interactive meeting including group work and lively discussions. The day covered three main topics. These were the presenting of the promotional kit for the use in future dissemination, organizational and administrative project procedures and work-package related workshops to elicitate the demonstrator roadmap.

During the course of the second day, partners gave an overview on the project progress in each work package, the performed core activities, achieved results, possible deviations and remedy actions and the planned activities for the upcoming six months. Having in mind that Re**Born** is a demo-oriented project, emphasis was put on the planning of the demo phase and to illustrate how the future demo work packages relate to the precedent activities in RTD.

Finally, day 3 was dedicated for another consortium internal workshop aiming at the specification of internal intellectual property issues as well as initiating and defining the consortium's exploitation strategy.

The general feedback of Mr. Nicolò was overwhelming and he emphasized the good progress consortium has already achieved in such a short period. Moreover he stressed the good collaboration in such a big consortium, everybody's involvement in the project and the partners' clear vision. Also internally the resonance was highly positive both about the collaboration spirit and the progress achieved. Motivated and eager to tackle upcoming tasks all partners are looking forward to their next activities and, obviously to the next joint project meeting!

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Interview with the coordinator, Mr. Michael Peschl (HWH)

Short profile

Michael Peschl is an experienced manager and a leading member of the research and development department of Harms&Wende with extensive knowledge in the field of software development. He obtained his degree in ICT from the University of Applied Science, Karlsruhe. Since January 2009 he is the branch manager of Harms&Wende Karlsruhe and responsible for the coordination of all international research projects.

Which is Harms&Wende main area of activities?

The parent company Harms&Wende (HWH) supplies resistance welding equipment in form of control devices, quality assurance systems and also complete packages. HWH customers are automotive manufacturers such as Daimler, Volkswagen, BMW, Volvo and Ford as well as customers in the areas industrial solutions and micro welding.

What is exactly the role of your department at HWH?

HWH Karlsruhe has 2 main areas of activity. First, it is specialized in software development for user interfaces of the entire HWH welding equipment portfolio, but also delivers custom specific software. On the other hand, HWH Karlsruhe coordinates the company's research and innovation projects. This is partly due to the long-lasting relationship and the proximity to the University of Applied Sciences in Karlsruhe, at which the subsidiary is located. Apart from coordinating the ReBorn project, I am coordinator of the project I-Ramp³ and involved in the project SelSus.

Is HWH actively seeking innovative developments? Do you have an internal R&D department? How does HWH use results from former projects?

Indeed, there is a demand for research and innovation. HWH has an internal development department, whereas research is mostly conducted in the research project we participate in. The latter allows us on the one hand, to continuously follow ongoing research efforts in the area and, on the other hand to make new interesting and strategic contacts through the consortia. From a middle and long-term perspective, it is, of course, essential to also be able to implement such innovative developments.

How did the idea of ReBorn emerge? What are the advantages provided by the solutions proposed by ReBorn ? What kind of solutions for ReBorn are developed by and for HWH?

First of all it is important to know if there is and if so how much "life" is still in the equipment in order to know if it is adaptable but also if it still possible to build up a whole new production line with this old equipment. Behind all this are the ideas of *life time extension* and *reuse of equipment*.

So two important issues do we have to consider:

1. Is it worthwhile to use the old equipment in terms of life expectancy and performance?

2. Is the old equipment able to adapt according to new upcoming circumstances and requirements?

Within the project HWH develops life time control systems for welding machines (in order to answer question 1 and 2 above) and secondly HWH develops software solutions which are flexible and adaptable.

Follow the interview on the next page!

Interview with the coordinator, Mr. Michael Peschl (HWH)

Within the ReBorn project you are the coordinator. What are your main non-technical tasks as a coordinator?

My main non-technical task is the project coordination, aiming on a smooth collaboration within the overall consortium. I am responsible for all kinds of administrative activities and tasks for instance budget management, taking care of reporting deadlines, so ensuring the timely delivery of reports in good quality to the European Commission (EC). I always have to be aware about projects progress, monitor the entire process and, if required, interrupt in case something is not running well or the way it was planned.

Further, I would also see myself as the interface and contact person between the consortium and the EC.

According to your opinion, how long would it take to implement the project's expected results within a company? Do you think that the ReBorn approach will be easily adopted by the manufacturing industry?

I think it will take approximately 2 years to implement the project results within a company. In order to make the manufacturing industry adopt the ReBorn concept we have to ensure that our concept works with legacy equipment which means that nobody has to buy new equipment in order to implement our ReBorn concept. For us this precondition is of utmost importance.

I really profit from the technical experience made by former EU projects (e.g. XPRESS, TRANSPARENCY) and it allows us to combine this knowledge in ReBorn. However during projects runtime the consortium identified further thematically related projects we would probably like to cooperate with or at least get in contact with and exchange ideas and experiences.

With 17 partners in total the consortium is quite big. Do you have experience in working with such a big consortium? Where do you see advantages and challenges of such a high number of participants?

In a former project where I have been coordinator as well, project XPRESS, the consortium consisted out of 19 partners. So I gained already experience in working with so many partners. Having access to a lot of experience and enormous knowledge through a large consortium are the main advantages for me. When the people work well together you can convert many ideas into a lot of valuable output.

However involving every partner, assigning tasks and make them realize their benefits apart from the overall project goal is definitely a challenge when collaborating in a big consortium. Additionally the general effort of coordination is much higher when working with more people.

For me it is always important to find and to keep the right balance for the partners between realizing own partners benefits and reaching the overall project goal.

What is unique about the ReBorn project or what makes ReBorn special for you?

I have never worked in a demonstration oriented project before, so here the focus is clearly on the proof of concept, which means the commercial exploitation of the results. So, in the end we want to have a tangible result which will hopefully be a working demonstrator.

Also, working with this consortium makes the project special for me because the partners have a lot of experience gained in former research projects. In some projects we worked together in a similar constellation / combination in some not. However looking retrospectively at former collaborations with them we always collaborated really well and produced already a lot of valuable results together. In this joint project we now have the chance to bring different results from former projects together and make them industrially tangible.

Thank you very much, Michael!

http://www.reborn-eu-project.org/

Project SelSus - Innovative strategies for Renovation and Repair in Manufacturing systems

The project SelSus – „Health Monitoring and Life-Long Management for **SEL**f-**SUS**taining Manufacturing Systems" – started on the 1st of September 2013. It is a four-year project with a consortium of 15 partners from 6 European countries.

Like ReBorn focuses on the upcoming industrial needs of equipment re-usage at the end of the production lifecycle SelSus intends to improve the resilience and long term sustainability during the production lifecycle. In areas of high automated assembly systems the costs of each product is mainly influenced by the output. Loss of production due to system downtimes resulting from planned and unplanned maintenance highly reduces company efficiency.

This as well as increased costs due to higher energy usage and quality loss through wear, labour and spare part costs for maintenance are directly affecting the competitiveness of an enterprise. Sensors embedded in components and systems are nowadays often used to meter sub-functionalities and can detect malfunctions of the monitored elements.

To really ensure that the system will not head into non-functionality, additional concepts must be introduced to not only determine where and when partial damage occurs, but to predict the availability of single components and the overall system. So servicing can be accomplished before unplanned downtimes occur.

It is the key objective of SelSus to build an approach for systematic knowledge gathering and refining in the usage phase of the assembly station. This knowledge can be integrated in an assembly system and the

knowledge transfer can be offered as added value to the end-user of the machine. Distributed diagnostic and predictive repair and renovation models will be embedded into smart devices to early prognosis failure modes and component degradations. Self-aware devices will built on self-adaptive control models and maintain synergetic relationship with their human operators and maintenance personnel through continuous pro-active communication enabling an optimal human machine interaction.

Therefore the overall full awareness of the condition and history of all machine components as well as distributed diagnostic and predictive repair and renovation models are one of the main key factors for the vision of SelSus.

For further information, please contact: info@selsus.eu

NEWS FROM THE FIELD - Upcoming events

Motek, International trade fair for automation in production and assembly, 3rd - 6th of October 2014, Stuttgart, Germany

Motek is a leading event in the fields of production, assembly automation, streamlining through handling technology and industrial handling. It clearly focuses on all aspects of mechanical engineering, automation and on the presentation of entire process chains.

Further information: [Motek Fair](#)

LET`S 2014, 29th of September - 1st of October 2014, Bologna, Italy

The LET`S conference is an official event of the 2014 Italian presidency of the Council of the EU. The conference will bring together delegates from across Europe and the wider world in order to discuss how Europe can support growth, job creation and face societal challenges through new products, processes and services. LET'S 2014 will focus on the fields of advanced manufacturing, nanotechnologies, advanced materials, processing and biotechnology. Discussions will take place in themed sessions, topical workshops and a dedicated brokerage session will take place.

Further information: [LETS conference](#)

SEMICON Europe 2014, October 7th - 9th 2014, Grenoble, France

With more than 4000 industry experts, professionals and executives attended SEMICON is the largest industry event in Europe. Visitors get the opportunity to meet key decision makers from the global semiconductor, microelectronics and related industries.

Further information: [SEMICON Europe](#)

Research Partnerships Info Day, 21st of October 2014, Brussels, Belgium

This event offers the possibility for organisations interested in the 2015 call to find out more information from EC experts and to gain an overview of ongoing activities. The experts will provide additional information on the 2015 'Factories of the Future' call topics and potential project partners will have the opportunity to meet.

Further information: [Research Partnerships Info Day](#)

BEST NMP Brokerage Event, 13th of November 2014, Brussels, Belgium

BEST, is a brokerage event for science and technology in Horizon 2020's NMPB and will be organized around a number of panels corresponding to each of the NMBP topics open under the 2015 calls. Participants will have the option of either briefly presenting their project idea or operating a 'brokerage booth' where they can display the relevant call topic and meet potential collaborators. Interested participants need to apply to participate.

Further information: [BEST NMPB Brokerage Event](#)

SWISSTECH, 18th - 21st of November, 2014 in Basel, Switzerland

SWISSTECH is an international trade fair for materials, components and system assembly and provides an ideal combination of new products, trends and prototypes for a complete overview of the subcontracting industry.

Further information: [SWISSTECH Fair](#)

SPS IPC Drives, 25th - 27th of November 2014, Nurnberg Germany

SPS IPC Drives is a leading exhibition for electric automation technology. It covers all components down to complete systems and integrated automation solutions. Combined with a conference it is the ideal platform for networking, exchange on products, and current trends within the electric automation industry.

Further information: [SPS IPC Drives Fair](#)

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