



## MORSE: Model-based Optimisation for efficient use of ResourceS and Energy

Project type:	Innovation action
Start date of project:	01/10/2017
Duration:	48 months

### D6.2 Dissemination plan

WP:	WP6 – Dissemination and cross-sectorial exploitation
Due date:	31/01/2018
Actual submission date:	31/01/2018
Responsible Author(s):	Martin Schlautmann (BFI)
Contributor(s):	BFI, CYB, SSAB, OUKU, MFL, GRI, SWD, IDE, VTT
Comments:	
Dissemination level:	PU

## DELIVERABLE ADMINISTRATION

Deliverable administration											
No & name	<b>D6.2 Dissemination plan</b>										
Status	Proposal	Due	M04	Date	2018-01-31						
Author(s)	Martin Schlautmann (BFI)										
Description of the related task and the deliverable. Extract from DoA	<p><b>T6.3 Dissemination (M01 – M48)</b></p> <p>The consortium aims to publish the results of the project when this is compatible with the IPR protection strategies. During this task, dissemination perspectives and channels are investigated and listed in the dissemination plan. These activities will include:</p> <ul style="list-style-type: none"> <li>- Scientific publications</li> <li>- Presentations at scientific events such as conferences</li> <li>- Scientific magazines and other scientific oriented activities and events</li> </ul> <p>The dissemination plan is to be constantly monitored and updated if new opportunities emerge. The effectiveness of the dissemination is monitored to achieve the maximum impact for knowledge sharing. As part of the dissemination activities, at the end of the project a public deliverable on the methodology and lessons learned will be released.</p> <p><b>D6.2 Dissemination plan</b></p> <p>Plan for dissemination activities to make the project outcomes visible and accessible to the different target stakeholders.</p>										
Planned task resources	VTT	SSAB	OUKU	BFI	SWD	CYB	MFL	GRI	IDE	Total	
	2	1	0.5	1.5	1	1	1.5	1	6	15.5	
Comments											
V	Date	Authors	Description								
1.0	2017-12-19	BFI	Initial version of dissemination plan								
1.1	2018-01-18	BFI	Updated according to comments from partners								
1.2	2018-01-31	VTT	Finalisation of the deliverable								

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## About Morse

Morse (Model-based Optimisation for efficient use of ResourceS and Energy) project is developing more precise tools for managing complex processes in steel industry. European steel industry is continuously looking for new ways to improve resource efficiency due to high dependence on resources (energy, raw materials and utilities). In large-scale production, even small changes in using raw materials and in energy can significantly improve process efficiency.

Morse project aims to further develop and to integrate a set of software tools that have partly already been validated in different process steps in steel industries. These software prototype tools and models were developed and evaluated by six R&D partners of the consortium in collaboration with three process industry partners. With the enhanced Morse tools companies of the process industry will be enabled to optimise the use of raw materials and energy by coordinated prediction and control of resource input and product quality along the entire process route from raw material and energy intake to customer delivery.

The mission of the Morse project is to develop model-based, predictive raw material and energy optimisation tools for the whole process route. This approach will be demonstrated in steel industry, to increase yield and product quality in production of high-strength carbon steels, stainless steels and cast steels.

## Partners



## EXECUTIVE SUMMARY

All dissemination activities support the project by ensuring maximum visibility, accessibility and impact. Tailored dissemination activities will be carried out to support objectives regarding

- exploitation of the project results
- validation of results
- awareness and endorsements by potential customers
- commitments of partners for further development and market uptake.

The scheduled dissemination actions can be assigned to

- internet based communication
- publications in journals, scientific conferences and technical committees
- workshops in cooperation with other projects

These actions are described within related chapters. The current status of dissemination regarding the different activities is given at the end of each chapter and will be updated throughout the project.

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## 1 INTRODUCTION

The consortium will spread the information about the new methods for integration of automation systems, insights from the research work, and its validation results within the use cases to the European process industry, scientific community and other stakeholders for promoting exploitation possibilities in industry and marketing. The dissemination work will support the promotion of research results and innovations coming out of the project to be carried forward into further development and commercialisation.

The scientific dissemination activities include publishing and presenting scientific results in the international and domestic premium conferences and journals, scientific magazines and other scientific oriented activities and events. Used dissemination channels includes also internet based communication instruments, such as website, social media accounts and digital newsletters, that reaches the wide audience from industrial stakeholders and research institutes to general public.

The dissemination activities support objectives set to achieve and prepare exploitation of the project results and lead to validation of results, awareness and endorsements by potential customers, exploitation plans, commitments of partners for further development and market uptake. In this way the impact can be spread outside the consortium and also gain market and sales opportunities for partners in large scale.

The dissemination activities within the project are dedicated to three main objectives:

1. Creating awareness about the MORSE results among the European energy- and resource-intensive batch-producing process industries and related stakeholders;
2. Promoting the importance and opportunities for energy and resource savings as well as product quality improvements in the European process industry with focus on steel industry;
3. Stimulating the market uptake by showing the positive impacts on the European steel industry.

The dissemination of the project is conducted on multiple levels and is carried out by all partners. The planned dissemination activities of the different project partners are summarized in Table 1.

*Table 1. Planned dissemination activities of MORSE partners*

Partner	Dissemination activities
BFI	BFI will disseminate the project results to the whole European steelmaking industry via technical conferences and journals. Furthermore, they will be presented and discussed in the technical committees “Steelmaking” and “Automation” of the Steel Institute VDEh, where most of the steelmaking companies in Germany and Austria as well as the related plant suppliers are members.
CYB	Cybernetica will participate at relevant conferences and scientific forums to present our products. In addition, direct marketing and personal networks will be used to promote our new solutions.
GRI	GRIPS will participate in dissemination activities via scientific conferences and journals as well as partnership forums like the Steel Institute VDEh and BDG foundry industry technical committees.
IDE	IDENER will disseminate the project’s objectives and its main achievements through its commercial network as well as through the different research initiatives and associations in which the company is participating. IDENER will also contribute to the production of the scientific literature foreseen in the project.
MFL	MFL participates in presentations at scientific conferences, publications in journal articles and discussions in partnership forums, e.g. the Steel Institute VDEh and BDG foundry industry technical committees.
OUKU	Outokumpu participates in presentations that are published in the scientific forums, conferences and papers related to Outokumpu's field of industry.
SSAB	SSAB participates to presentations at scientific events such as conferences and also journal articles. Suitable presentations in partnership forums such as Jernkontoret and VDEh.
SWD	SWD will further develop and commercialise the cost-optimisation system. Methods are direct marketing and sales activities and publications and presentations in scientific/industrial forums and magazines.
VTT	VTT will disseminate project results for further development and marketing purposes. The competence about project results will be exploited in research and commercial projects in addition to consulting. Online quality monitoring tool for integrated process predictive quality control will be further developed and marketed in order to achieve industrial exploitation in large scale in future. VTT’s main scientific dissemination channels are journal papers and conferences. In addition to this also non-scientific channels will be used for dissemination of the project results.

This dissemination plan will be continuously updated and adapted during the project, depending on the project results and achievements. Dissemination achievements are monitored and reported at the end of the related chapters **Error! Reference source not found. - Error! Reference source not found.** in this document as well as in annual reports. Dissemination activities may be intensified, modified or restructured in order to obtain maximum effect in the respective markets and policy domains. Once the project comes to an end, continuity of the project impacts will be ensured by establishment of a durable stakeholder network.

## 2 INTERNET BASED COMMUNICATION

In order to create a general visibility of the project, internet based tools and platforms shall be utilised. The related dissemination instruments to be applied in the project are summarised in Table 2 with their relevance for different sectors, expected impacts and measures. The different activities of each partner in this area are coordinated by Idener as leader of WP 6 with support of VTT as project coordinator and leader of Task 6.1 dealing with planning and implementation of different communication actions. Table 3 monitors the current status of the running and completed activities.

*Table 2. Dissemination instruments for internet based communication*

Instrument	Industry	Academia, research institutes	General public	Expected impact	Measure / Target
Project website	x	x	x	<ul style="list-style-type: none"> <li>- Efficient marketing material</li> <li>- Contacts from interested parties and leads for sales</li> <li>- Awareness created for the project, its expected results and benefits</li> <li>- Knowledge of the project disseminated to the public</li> <li>- Promoting industrial exploitation of the results</li> </ul>	<ul style="list-style-type: none"> <li>- Website ready at M2, continuous updates, 6000 visitors expected during the project</li> <li>- Contacts, co-operation and sales opportunities.</li> <li>- Industrial exploitation planning of the results in large scale</li> </ul>
Brochures, Newsletters, posters	x	x	x	<ul style="list-style-type: none"> <li>- Efficient marketing material and leads for sales opportunities</li> <li>- Awareness added, updated information about the project, general visibility</li> <li>- Promoting industrial exploitation of the results</li> </ul>	<ul style="list-style-type: none"> <li>- Project will have recognizable logo, posters and marketing material</li> <li>- Contacts, co-operation and sales opportunities</li> <li>- Industrial exploitation planning of the results in large scale</li> </ul>
Twitter, LinkedIn and ResearchGate Groups	x	x	x	<ul style="list-style-type: none"> <li>- Gaining visibility and interest also in social media</li> <li>- Contacts from interested parties and leads for sales opportunities</li> </ul>	<ul style="list-style-type: none"> <li>- Twitter account has over 100 followers and over 100 members in LinkedIn and ResearchGate groups</li> <li>- Contacts, co-operation and sales opportunities</li> </ul>



To make the Twitter and LinkedIn accounts continuously updated, the consortium members will be asked by e-mail once per month to give feedback about potential news for the social media posts: attendance to events, publications, participation in journals, congresses, meetings, etc. one post at least is planned in Twitter and LinkedIn accounts with gathered information from the consortium.

Concerning newsletters, one internal newsletter is planned to be published every three months, to inform the consortium about project development: meetings, publications, study cases development, etc. These newsletters are private and are sent only to consortium members. On the other hand, one public newsletter will be sent at the end of every project year, aimed to inform the public and potential stakeholders about the project development and related issues. The public newsletter will be sent by e-mail to all consortium members, so they can also distribute it, and it will be posted on the LinkedIn and Twitter accounts. The content of both internal and public newsletter is gathered from partners monthly e-mails and from day-to-day project management. Stakeholders will be able of directly subscribing to the yearly newsletter through a dedicated section on the project webpage. This link will be available during the next month.

*Table 3. Current status of activities*

Activity	Responsibility	Target/ completion date	Links / References
Project website	VTT	31.10.2017	<a href="https://www.spire2030.eu/morse">https://www.spire2030.eu/morse</a>
LinkedIn account	IDE	31.10.2017	<a href="https://fi.linkedin.com/in/morse-eu-352bb6154">https://fi.linkedin.com/in/morse-eu-352bb6154</a> Five posts already published
MORSE logo	IDE	31.12.2017	 The logo consists of three overlapping rectangular shapes in shades of blue and green, followed by the word "morse" in a bold, lowercase, sans-serif font.
Leaflet	IDE	31.12.2017	<a href="https://twitter.com/eu_morse/status/948221708430954499">https://twitter.com/eu_morse/status/948221708430954499</a> , <a href="https://www.linkedin.com/feed/update/urn:li:activity:6353988057774981120/">https://www.linkedin.com/feed/update/urn:li:activity:6353988057774981120/</a>
First Internal newsletter	IDE	20.12.2017	Appendix 0
Twitter account	IDE	31.12.2017	<a href="https://twitter.com/eu_morse">https://twitter.com/eu_morse</a> , Five tweets already published

### 3 PUBLICATIONS IN JOURNALS, SCIENTIFIC CONFERENCES AND TECHNICAL COMMITTEES

The stakeholders and potential users of model-based resource and energy optimisation in the process industry are reached via publications in scientific and technical magazines and conferences. Table 4 lists possible publications in different kinds of journals and magazines as well as scientific conferences and technical committees with their relevance for different sectors, expected impacts and measures. Each partner or group of partners planning such a publication has to inform the other partners and to obtain their permission. Table 5 monitors the current status of the running and completed activities in this area.

*Table 4. Dissemination by publication in journals, scientific conferences and technical committees*

Instrument	Industry	Academia, research institutes	General public	Expected impact	Measure / Target
Press Releases	x	x	x	<ul style="list-style-type: none"> <li>- Reaching a high volume of potential users for developed technology</li> <li>- Contacts from technology domain leads to co-operation possibilities</li> </ul>	<ul style="list-style-type: none"> <li>- At least one published press release in technology oriented magazine</li> <li>- Contacts and co-operation</li> </ul>
Industrial magazines	x	x	x	<ul style="list-style-type: none"> <li>- Reaching a high volume of potential users for developed technology</li> <li>- Contacts from industrial domain leads to sales opportunities</li> <li>- Promoting industrial exploitation of the results</li> </ul>	<ul style="list-style-type: none"> <li>- Three articles published in main industrial magazines</li> <li>- Contacts, co-operation and sales opportunities</li> <li>- Industrial exploitation planning of the results in large scale</li> </ul>
Scientific journals	x	x		<ul style="list-style-type: none"> <li>- Creating new scientific knowledge and present. developed solutions for plant-wide optimization</li> <li>- Recognized and credible proof of scientific competence in domain</li> </ul>	<ul style="list-style-type: none"> <li>- At least 10 publications in technical journals</li> <li>- Scientific co-operation</li> <li>- New opportunities to exploit gained competence and results in research and commercial projects</li> </ul>
Scientific conferences and technical committees	x	x		<ul style="list-style-type: none"> <li>- Awareness of project vision and impacts in scientific domain</li> <li>- Co-operation possibilities in research</li> </ul>	<ul style="list-style-type: none"> <li>- At least 10 presentations of results in international conferences</li> <li>- Scientific co-operation</li> </ul>

Relevant journals and magazines for publication of MORSE activities and results are

- International Journal of Control, Automation and Systems
- Optimization and engineering, Springer
- Journal of Systems and Software, Computers in Industry
- Journal on control and optimization, Siam publications
- Journal of Industrial and Management Optimization, American institute of mathematical sciences
- International Journal of Control, Automation and Systems
- Intelligent Data Analysis, IOS press
- Journal of Industrial Engineering International
- KES-Journal, IOS press
- Metallurgical Plant Technology, stahl & eisen, steel research, Stahleisen-Verlag
- IEEE Transactions on Automation Science and Engineering
- Customer magazine "PSI Production Manager"
- ISA Transactions: The Journal of Automation
- Applied soft computing, Springer

At least the following conferences and committees where a cross section of stakeholders is present to achieve effective visibility will be targeted during the project:

- 12th European Electric Steelmaking Conference (EEC) 2019
- 8th European Oxygen Steelmaking Conference (EOSC) & 4th Clean Technologies in the Steel Industry 2018
- KES International Conference on Knowledge-Based and Intelligent Information & Engineering Systems
- IFAC Management and control of production and logistics
- UKSim-AMSS European Modelling Symposium on Mathematical Modelling and Computer Simulation (possibility of special session and workshops)
- International Conference on Intelligent Systems Design and Applications ISDA
- European Steelmaking conferences
- IFAC MMM (IFAC Symposium on Control, Optimization and Automation in Mining, Mineral and Metal Processing)
- ESTAD (European Steel Technology and Application Days)
- APC|M (European Advanced Process Control and Manufacturing Conference)
- Technical committees of Steel Institute VDEh for Steelmaking and Automation
- Technical committees of Bund Deutscher Gießereien (BDG), an industrial sector association for foundry industry
- Gesamtverband der Aluminiumindustrie e.V. (GDA). An industrial sector association of aluminium producing companies
- OPC Foundation

Table 5. Current status of activities

Activity	Responsibility	Target/ completion date	Links / References
Press release	VTT	22.11.2017	Examples of published press releases in different forums: <ul style="list-style-type: none"> <li>- EurekAlert, Public Release: 22-Nov-2017: <a href="https://www.eurekalert.org/pub_releases/2017-11/vtrc-ncf112217.php">https://www.eurekalert.org/pub_releases/2017-11/vtrc-ncf112217.php</a></li> <li>- The Daily Telescope, New competitiveness for the European steel industry, Wed, Nov 22, 2017: <a href="http://dailytelescope.com/pr/new-competitiveness-for-the-european-steel-industry/16616">http://dailytelescope.com/pr/new-competitiveness-for-the-european-steel-industry/16616</a></li> </ul>
Industrial magazines	VTT	1.1.2018	Boosting steel efficiency by Ellis Davies, Materials World magazine: <a href="http://www.iom3.org/materials-world-magazine/news/2018/jan/01/boosting-steel-efficiency">http://www.iom3.org/materials-world-magazine/news/2018/jan/01/boosting-steel-efficiency</a>

## 4 WORKSHOPS IN COOPERATION WITH OTHER PROJECTS

A knowledge exchange with other projects dealing with optimisation for efficient use of resources and energy shall be organised through joint workshops or meetings. Two such events shall be arranged within the project to demonstrate and promote the developed technology within the European process industry as well as to enable learning from others and sharing competences. These events will take part in the frame of large events at the premises of the industrial partners or at collaborating organisations and shall be managed by VTT as project coordinator. Table 6 monitors the current status of the running and completed activities in this area.

*Table 6. Current status of activities*

Activity	Responsibility	Target/ completion date	Links / References
No activity started at this early stage of the project			

APPENDICES

NON-PUBLIC PUBLISHED INFORMATION

FIRST INTERNAL NEWSLETTER

MORSE: Model-based Optimisation for efficient use of Resources and Energy



1st Internal newsletter

December 2017

Dear MORSE members,

Welcome to the first internal newsletter of MORSE project! We will launch one internal newsletter every three months, to keep all of you up-to-date with the project development. So, take some minutes to read the newsletters and STAY TUNED!

In this first newsletter, a general overview of the beginnings of the project during these first months is given, do not miss anything!

Deliverables up to now

- D6.1. Project Website
- D7.1. Project content management system

Milestones

No milestones achieved yet

Physical meetings

Kick off meeting, 19th October 2017, in Brussels

In addition to the consortium members, the meeting was attended by the project officer, who aligned the project with the EU Objectives. In WP1, a roadmap was settled to define the specifications of the "multilayered control" to be developed.



Press release

- Tekniikka&Talous "Suomeen 6 miljoonan euron tutkimuksen vetovastuu - Euroopan terästeollisuudelle etsitään uutta kilpailukykyä", Wed, Nov 22, 2017

- Eurakalart "New competitiveness for the European steel industry", Wed, Nov 22, 2017

- Daily Telescope "New competitiveness for the European steel industry" , Wed, Nov 22, 2017

- Fluid Finland "Euroopan terästeollisuuteen uutta kilpailukykyä", Wed, Nov 22, 2017

- Svensk VERSTAD "SSAB Europe ska öka den europeiska stålindustrins konkurrenskraft", Wed, Nov 22, 2017

- Uusimaa | sivu 7 "Terästeollisuutta uudistetaan", Wed, Nov 29, 2017

- Konekuriri, "Euroopan terästeollisuuteen uutta kilpailukykyä", 23.11.2017

- Green Car congress, "€5.7M MORSE project seeks to improve European steel industry with software tools", November 28, 2017

- Outokumpu web page

- News cision

Social media

MORSE is now in Twitter and LinkedIn! Please, follow the links, and share information you deem of interest!



Visit to SSAB, 28th November, Raahе (Finland)

SSAB, BFI, IDENER, SWD, CYBERNETICA and VTT gathered at SSAB facilities and defined the SSAB different use cases. The project researchers presented their potentials developments for SSAB. The meeting concluded with a visit to SSAB production plant, centred mostly on the secondary metallurgy steps.



Visit to OUTOKUMPU, 29h November, Tornio (Finland)

OUTOKUMPU, BFI, IDENER, SWD, CYBERNETICA and VTT gathered at OUTOKUMPU facilities and defined the OUTOKUMPU different needs. One important topic of discussion was the target of homogenising the solutions developed for SSAB and OUTOKUMPU cases, in order to make the tools the most generic as possible. Also, it concluded with a visit to the OUTOKUMPU production plant.



Communications through share point

- VTT Sharepoint for information sharing now in use
- Morse project handbook available at Sharepoint

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