CONTROL IN STEEL

Deliverable 3.2:
Website

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Updated: 2022-03-04
Former D9

1. Concept of the website

Project web address

For the ControlInSteel web representation, we registered the address

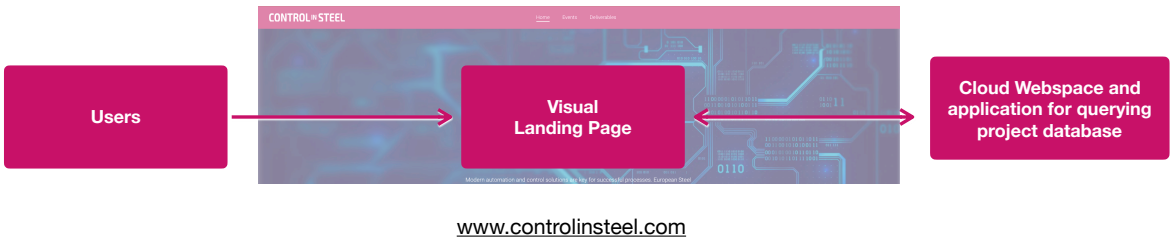
www.controlinsteel.com

to have an internationally recognizable and easy to remember page name that underlines the dissemination mission of the project. The deliverable was ready right in time at the end of January 2020, following the planned schedule. This document was compiled later for having a delivered item in the EU Portal.

Objective

The objectives that are addressed by the ControlInSteel website are:

- Simple and easy understandable project description
- Announcements for workshops
- Registration for workshops
- References to public deliverables
- Links to publications

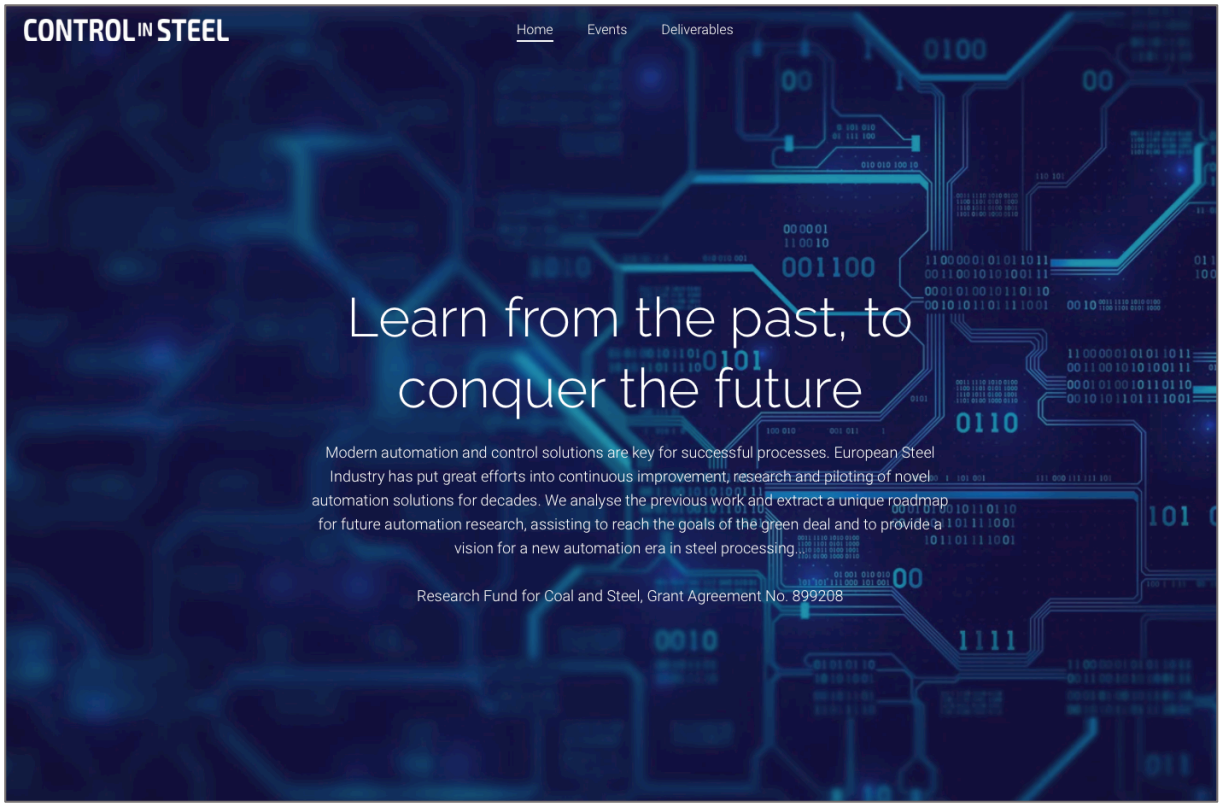


Concept of the web representation of the project ControlInSteel.

Although not foreseen in the original plan, the project team began works on items of WP3 earlier than originally planned. One item concerned the creation of a project website.

In the end of January, we launched a visual landing page www.controlinsteel.com, which is hosted by Jimdo. The webpage is made with a simple building kit and acts as representation of the project within the web. In the above figure, the idea behind the webpage is shown. It will communicate with a linked page on a Cloud webspace. This cloud webspace is maintained within the Microsoft Azure Framework.

Snapshots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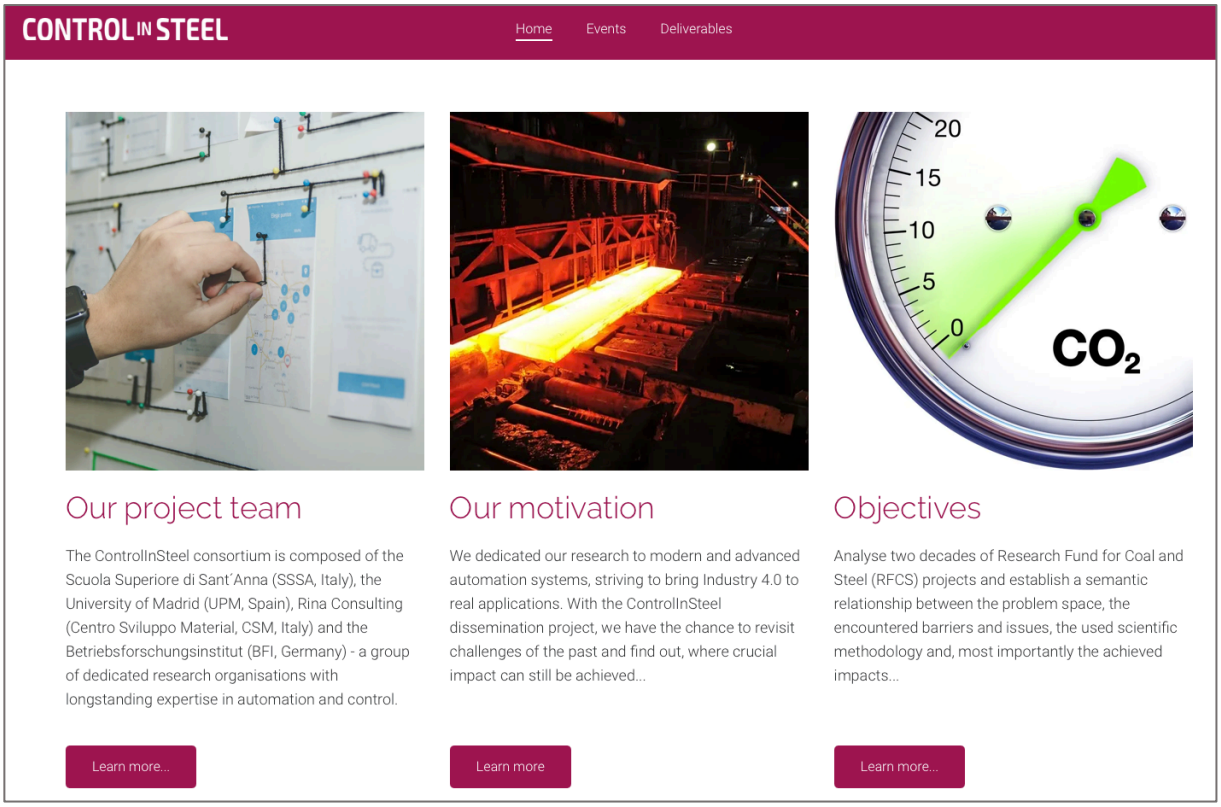
Learn from the past, to conquer the future
Modern automation and control solutions are key for successful processes. European Steel Industry has put great efforts into continuous improvement, research and piloting of novel automation solutions for decades. We analyse the previous work and extract a unique roadmap for future automation research, assisting to reach the goals of the green deal and to provide a vision for a new automation era in steel processing.
Research Fund for Coal and Steel, Grant Agreement No. 899208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Our project team
The ControlInSteel consortium is composed of the Scuola Superiore di Sant´Anna (SSSA, Italy), the University of Madrid (UPM, Spain), Rina Consulting (Centro Sviluppo Material, CSM, Italy) and the Betriebsforschungsinstitut (BFI, Germany) - a group of dedicated research organisations with longstanding expertise in automation and control.
Learn more...
Our motivation
We dedicated our research to modern and advanced automation systems, striving to bring Industry 4.0 to real applications. With the ControlInSteel dissemination project, we have the chance to revisit challenges of the past and find out, where crucial impact can still be achieved...
Learn more
Objectives
Analyse two decades of Research Fund for Coal and Steel (RFCS) projects and establish a semantic relationship between the problem space, the encountered barriers and issues, the used scientific methodology and, most importantly the achieved impacts...
Learn more...
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CO2

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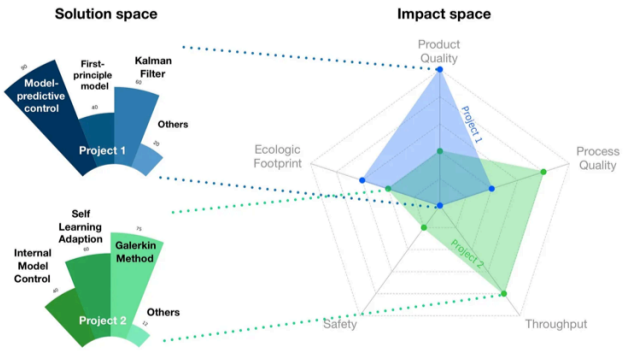
Our method

How to analyse research and science projects in a structured and logical way? We use so-called controlled vocabularies of the most important dimensions: a) the problem space, b) the barriers and issues space, c) the solution space and d) the impact space. The following figure depicts an example of the relationship between solution and impact space. With out approach, we can systematically relate project outcomes with success, problems and benefits.



The extracted semantic data is used to construct taxonomies and based on these taxonomies with establish ontologies for the relationships. The systems will then not only allow to analyse past results but essentially also help us to predict future demand and the potential solutions considering a specific challenging impact that should be generated. The project just started, but we will report here also about our work and our results.

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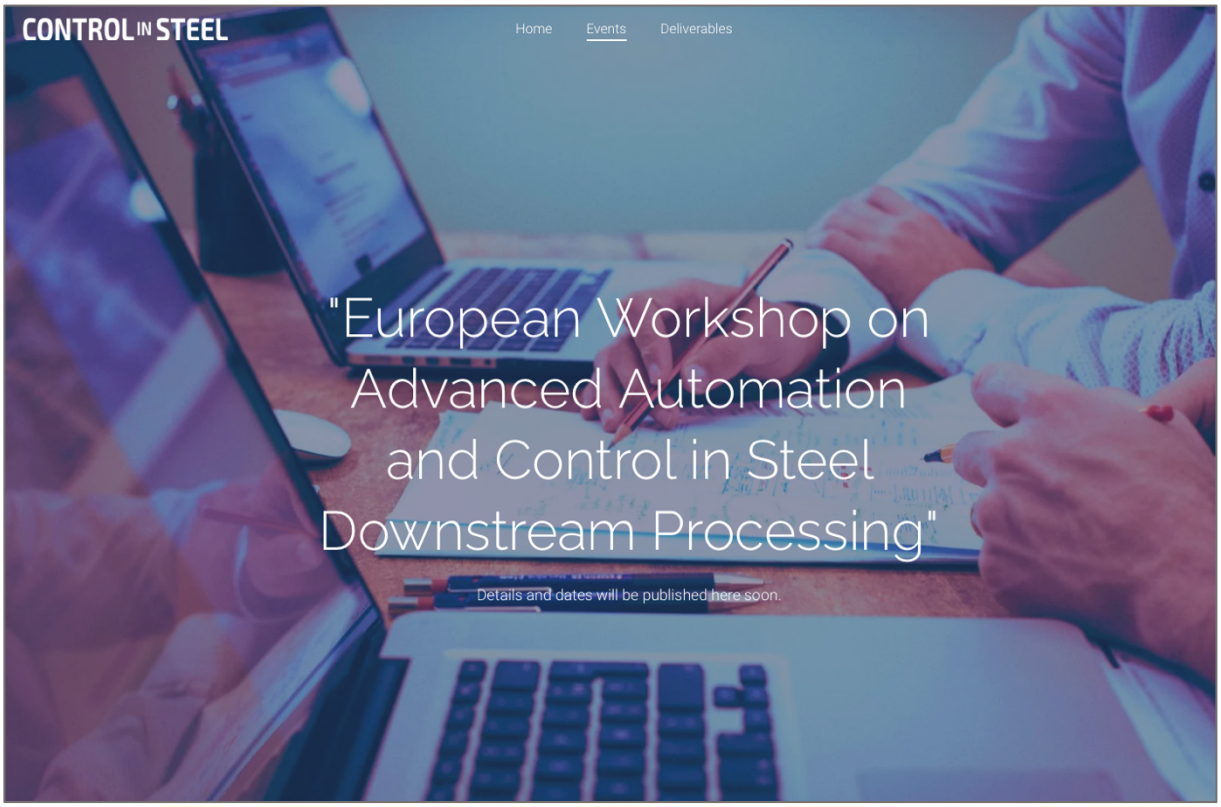
Machine Learning Control (MLC)

General machine learning control is a rising topic, driven by the hype for artificial intelligence. In machine learning control, models applied by the internal model controller or the model-predictive control are based on trained paradigms like neural networks, decision trees or Bayesian networks. Especially neural networks feature tremendous potential for application in control context, as they allow for structured approach to reach the so-called Koopman space. The latter can be used to find naturally linear projections of complex control problems.

Objectives of the ControlInSteel project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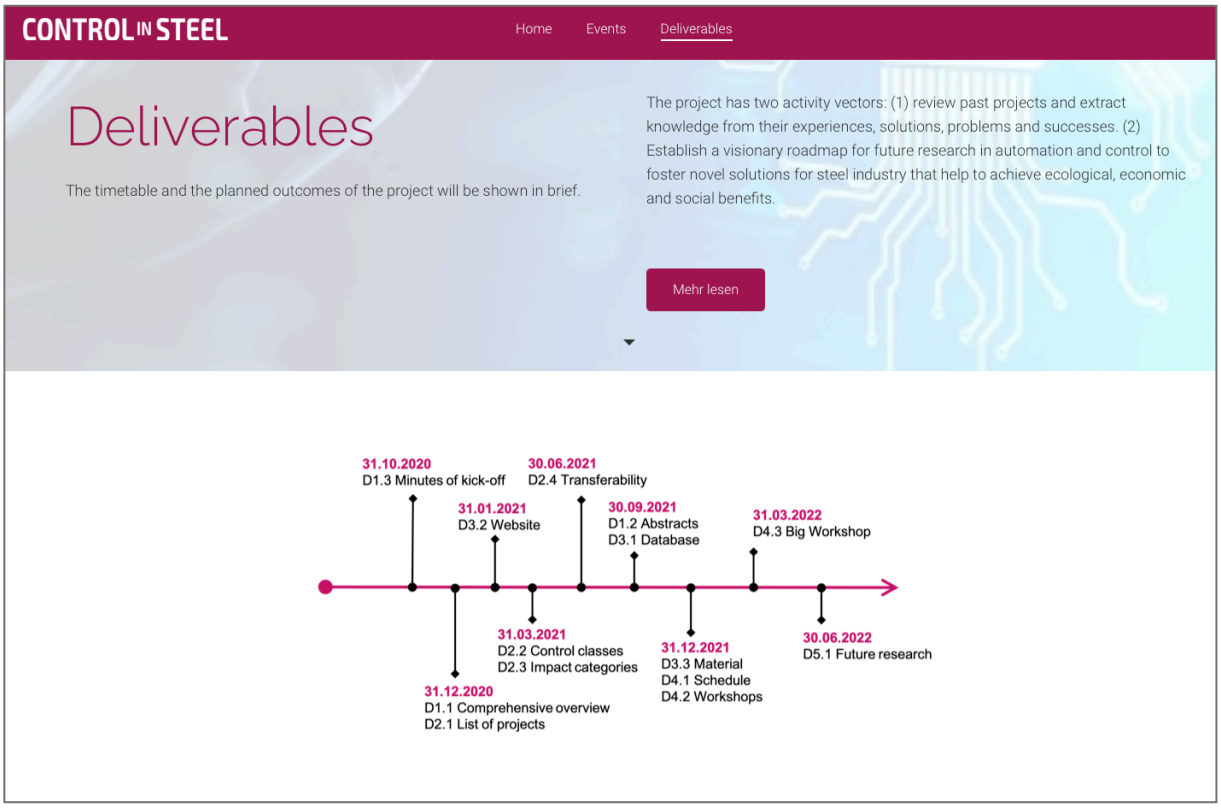
"European Workshop on Advanced Automation and Control in Steel Downstream Processing"
Details and dates will be published here soon.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The timetable and the planned outcomes of the project will be shown in brief.
The project has two activity vectors: (1) review past projects and extract knowledge from their experiences, solutions, problems and successes. (2) Establish a visionary roadmap for future research in automation and control to foster novel solutions for steel industry that help to achieve ecological, economic and social benefits.
Mehr lesen
31.10.2020
D1.3 Minutes of kick-off
30.06.2021
D2.4 Transferability
31.01.2021
D3.2 Website
30.09.2021
D1.2 Abstracts
D3.1 Database
31.03.2022
D4.3 Big Workshop
31.03.2021
D2.2 Control classes
D2.3 Impact categories
31.12.2021
D3.3 Material
D4.1 Schedule
D4.2 Workshops
30.06.2022
D5.1 Future research
31.12.2020
D1.1 Comprehensive overview
D2.1 List of projects