SusChem 2017 Brokerage Event

Project Proposal

PR-IN-DOT-COM
Need for digitalisation of the process industry

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RISE SICS Västerås consists of a flexible group of researchers with a very strong knowledge in several areas including:

- embedded systems, the future of internet and services, industrial efficiency, optimisation, systems and software engineering, future energy, innovation and product realisation.

RISE SICS has close relationships with several of the strongest players in Mälardalen, including ABB and Bombardier but also with smaller and medium sized companies as well as with the cities of Västerås and Eskilstuna.

The SICS establishment in Västerås strengthens the innovation system in the whole region, primarily in contract research. The venture is in close collaboration with Mälardalen University and in collaboration with the network Automation Region.

RISE SICS Västerås hosts the strategic innovation program PiiA (processindustrial IT & automation).
Mälardalen University (MDH) is one of Sweden’s large institutes of higher education. MDH is characterised by close partnerships with businesses and the public sector in the region.

The research direction Embedded Systems operates in computer science related to computers running parts of systems, entire systems or systems of systems often with a demand for real-time operation, in industrial setting from telecom to process industry. The largest research groups are

- **Software engineering** with focus on methods, processes and tools for development of large-scale industrial software.

- **Dependable systems** focussing on techniques and technologies to build dependable software systems.

- **Verification and validation** with focus on model-based testing and model-checking of timed and architectural models.

- **Real-time systems** with focus on methods and algorithms to construct predictable real-time software.

Embedded Systems hosts the advocacy project HoPiiA+ which focusses on better H2020 calls in the area of **IT and Automation for the Process Industry.**
PRIND(ot)COM (PRocess INdustry Data analysis platform for COnnected sMart factories) will bring new and disruptive methods for data analytics to the core of the process industry across Europe. The inclusion of Big data technologies within the process industry will enable continuous resource productivity and considerable efficiency gains in terms of quality of products, energy, reliability, or even profit margins for EU manufacturing industry.

A Big Data based technological common platform will be designed to support a heterogeneous catalogue of data analytics applications and services in order to cope with common as well as specific analytics problems related to the process industry sector in general and those targeted subsectors. Pilots will be fully validated.

The addressed H2020 call is:


Furthermore we might later also address:

DT-SPIRE-06-2019: Digital technologies for improved performance in cognitive production plants (IA)
EXPECTED IMPACT

- Significant increase in the options for SMEs and mid-caps to integrate different technologies, unlock the value of their data, deploy complementary applications, and to become a more responsive link in changing supply and value networks.

- Strengthened competitive position of European platform providers.
  - The project will improve the position of technology providers through an innovative platform and larger visibility

- Increased cooperation between industrial and academic communities; increased synergy and collaboration between projects.
  - The project is a product of the industrial community of process industry and technology providers, at one hand and the academic community of big data and Artificial Intelligence researchers at the other.
  - The project foresee collaboration with projects as FUDIPO...
EXISTING PROJECT CONSORTIUM/ or LOOKING FOR PARTNERS

Mälardalen University (SW) - RTD
RISE (SW) - RTD
Gradiant (ES) - RTD
Deusto (ES) - RTD
The Basque Cluster of Food (ES) - OTH
Sidenor (ES) - LE (Steel)
RapidMiner (GE) - SME (Technology provider)
CINI (IT) – RTD

Small and Medium sized Process industry within different subdomains as e.g.
1. Chemicals
2. Iron&Steel
3. Mining
4. Pulp&Paper
5. Food
6. Pharmacies
Competences and experiences

- Research funding
- Proposals, agreements and negotiations
- Project management and advocacy
- Networking and match making

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School of Innovation, Design and Engineering (IDT), Division of Networked and Embedded Systems
- Fitting funding and the creation of new consortia and new research projects.
- IPMA-certified project manager, with experience from managing and evaluation of projects.
- PM for MegaM@Rt² (ECSEL), HoPiiA (VINNOVA’s advocacy platform for process industry) & SafeCOP (ECSEL).
- Expert evaluator at REA (EC)