Expert Group Charter

Name: Data-Driven Predictive Maintenance of Industrial Assets
(choose a specific, crisp title)

Academic leader: ___Olga Fink, ZHAW (fink@zhaw.ch)___
(Name, affiliation, email)

Industrial leader: ___Thomas Palmé, General Electric (thomas.palme@ge.com)___
(Name, affiliation, email)

Abstract: _____

The field of predictive maintenance has been progressing in the last years with the decreasing cost of sensors and the increasing availability of condition monitoring data from components and systems. Despite the substantial progress made in this field in the last years, there are still a lot of challenges to be solved, particularly in transferring new scientific research on features, algorithms and models to real-world industrial applications properly interfacing the different disciplines involved.

There is a gap between the scientific advances on algorithm development and their applicability in the real-world due to the limited clarification of assumptions and prerequisites in each method and a lack of a clear guidance of how and when to use the specific algorithms.

In a modern industrial asset, data-driven predictive maintenance approaches comprise merging of different data sources and balancing system availability, safety and economical risk against maintenance costs.

Due to the novelty and diversity of the data-driven predictive maintenance field, the applied methods are very broad and diverse, and clear guidelines and recommendations on the suitability of the different approaches are missing.

The mission of the group "Data-driven Predictive Maintenance of Industrial Assets" is to bring together experts in the field of condition-based and predictive maintenance in order to
-Define the most promising gap where predictive maintenance has not yet been leveraged due to missing data analytics processes
-Define specific use cases where industry still struggles to successfully leverage data analytics
-Define industrial requirements with industrial partners, develop guidelines and recommendations on how and when different methods can be used to solve industrial use cases relying on different assumptions
-Share experience in applying data-driven approaches to predictive maintenance problems, case studies, success stories etc.
-Facilitate the transfer of research results to industrial applications by organizing workshops with international experts
-Ensure knowledge transfer between different application fields through regular meetings, workshops and publications

First meeting: December, 2nd 2016, 14:00-16:00h, Place: ETH Zurich HG F 33.1(Rämistr. 101): Goal: Identify objectives and expectations and next steps.

Intended schedule: ___Quarterly meetings / workshops will consist of a presentation of 1-2 use cases with a subsequent___
(e.g., quarterly)   discussion (presentations from international experts will also be invited)

Prospective members: _____

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(already known or anticipated participants among the data+service members)