



# EFNMS Newsletter #10

## (December 2019)

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## Activities

### EFNMS says thank you to the Swedish Maintenance Society for hosting EFNMS Committee Meetings and the Fall General Assembly this year

This year the Swedish maintenance community celebrated the Swedish Maintenance Society's 50th Anniversary and hosted the EFNMS Committee Meetings and General Assembly. “You are of course warm welcome to celebrate with us”, explained **Torsten Ekström**, CEO of SvUH the Swedish member of EFNMS.

The organisation had been perfect. On Thursday the 3th October the Swedish Maintenance Society gave an Anniversary Conference in English so that

maintenance experts were able to take part in very interesting topics in the field of Maintenance, Reliability and Physical Asset Management before joining the EFNMS meetings.

In the evening of the 3rd October, an Anniversary Banquet offered the opportunity to meet Swedish and European maintenance experts. It was an unforgettable evening with delicious food and exclusive entertainment.

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## Events

### Call for speakers extended until 31.12.2019 – Asset Performance 4.0



After having organized the successful Euromaintenance 4.0 Conference, BEMAS has decided to initiate Asset Performance 4.0, a European Conference & Exhibition on digital transformation in the field of industrial manufacturing and infrastructure management.

The industrial landscape is currently right in the middle of the fourth industrial revolution with new technologies such as the Industrial Internet of Things (IIoT), big data, predictive analytics... The combination offers unseen possibilities for operations, maintenance and asset reliability with more diverse and affordable solutions to monitor and increase asset performance (equipment uptime, energy consumption, quality output,...).

The Asset Performance 4.0 Conference & Exhibition offers a unique opportunity to learn how new 4.0 technologies in operations, maintenance and asset management reinforce each other in order to achieve higher equipment reliability and cost performance in asset intensive industries.

#### **Who are we looking for?**

We are looking for speakers to give a 40 minutes presentation on their innovative projects in this field. Speakers can share the results and experiences with 4.0-solutions currently being implemented in (pilot) sites.

Furthermore, we're looking for workshop facilitators to teach the participants how to work with a certain technique, tool or application in the field of maintenance and operations.

Finally, the conference wants to help asset owners in finding a solution to recurring issues. That's why asset owners can post their hackathon ideas. A panel of experts will work to find a solution using predictive analytics, AI and IoT.

Topics:

- Predictive, Prescriptive & Prognostic Operations & Maintenance
- The Industrial Internet of Things (IIoT)
- Reliability 4.0
- Asset Management 4.0
- Asset Data Management
- The connected operator & maintenance technician
- Smart Maintenance Logistics
- Motor Systems 4.0

[More information >>](#)

**Chiara Van Steenberge**

BEMAS - Belgian Maintenance Association vzw-asbl

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## Good Physical Asset Management practices Seminar

**28th January 2020, Helsinki area, Finland**

- Introduction to maintenance within Physical Asset Management (PAM), Janez Tomažin
- Production and maintenance environment: Influencing factors, Kari Komonen
- Organizational view on Physical Asset Management, Janez Tomažin
- Life Cycle Management, Reinhard Korb
- Asset management case, TBD
- Maintenance processes and relations between them, Antoine Despujols

Price: 500 € + VAT

More information: [matti.niemela@ael.fi](mailto:matti.niemela@ael.fi)

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## News

### The Netherlands' Long-Term Offshore Wind R&D Agenda

Recently The Netherlands' Long-Term Offshore Wind R&D Agenda was presented at the Offshore Energy Exhibition & Conference in the RAI in Amsterdam. With the recent cost breakthroughs, offshore wind is now established as a crucial pillar of the Dutch energy transition. Developing an affordable, low-carbon energy system in the Netherlands necessitates a large-scale roll-out of offshore wind power capacity in the Dutch part of the North Sea – to potentially 35–75 GW by the year 2050.

The Netherlands' Long-Term Offshore Wind R&D Agenda proposes the development of the knowledge and technologies on the lower technology readiness levels (TRLs) that are considered indispensable to such a large capacity of offshore wind power. The agenda spans the R&D period 2020–2030.

**Ellen den Broeder-Ooijevaar**

NVDO

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## **Reliability 4.0 Revolution: Automatic Reliability Database as part of asset management process**

One of the big organizations challenges in the reliability and maintenance program as well as asset management is to have their own reliable reliability database based on their physical asset failure historical data that enable leaders to take decision in real time.

In the last decades, the process industry such as Oil and Gas and Chemical has been using generic reliability database as input to their reliability and maintenance as well as safety studies such as OREDA, AIChE and others.

Despite a very good effort to create such database, it's necessary to consider the one of the mains aspects that affect the reliability prediction is the operation conditions. Therefore, since such databases consider one specific environment condition, the first limitation arises.

In fact, the ideal situation is that each organization create their own reliability database based on their own equipment failure historical data. However, that's request an implementation of reliability program and proper reliability engineering methods and application and concepts since concepts phase that's not happen in many cases.

In addition, during the operation phase, the proper reliability index measurement becomes very important and need to be verified and validate. Unfortunately, the wrong reliability prediction has been leading many leaders to take wrong decisions during operation phase.

The reason for the wrong reliability prediction during operation are:

- Misunderstood of the Reliability concept;
- Wrong KPI's like MTTF and constant failure rate are used because the easy calculation;
- Lack of a proper Failure Report and Corrective Actions System (FRACAS);
- Lack of Reliability and Maintenance program implementation during concept and design phase;
- The necessity of high investment in reliability software and training to predict reliability properly,
- Heavy maintenance and operation routine and lack of time to perform proper equipment reliability analysis (Lifetime Data Analysis – Weibull Analysis).

In order to solve this problem, the reliability 4.0 revolution intends to deliver an automatic reliability database based on the online reliability prediction as part of asset management process as shows the *figure 1*.

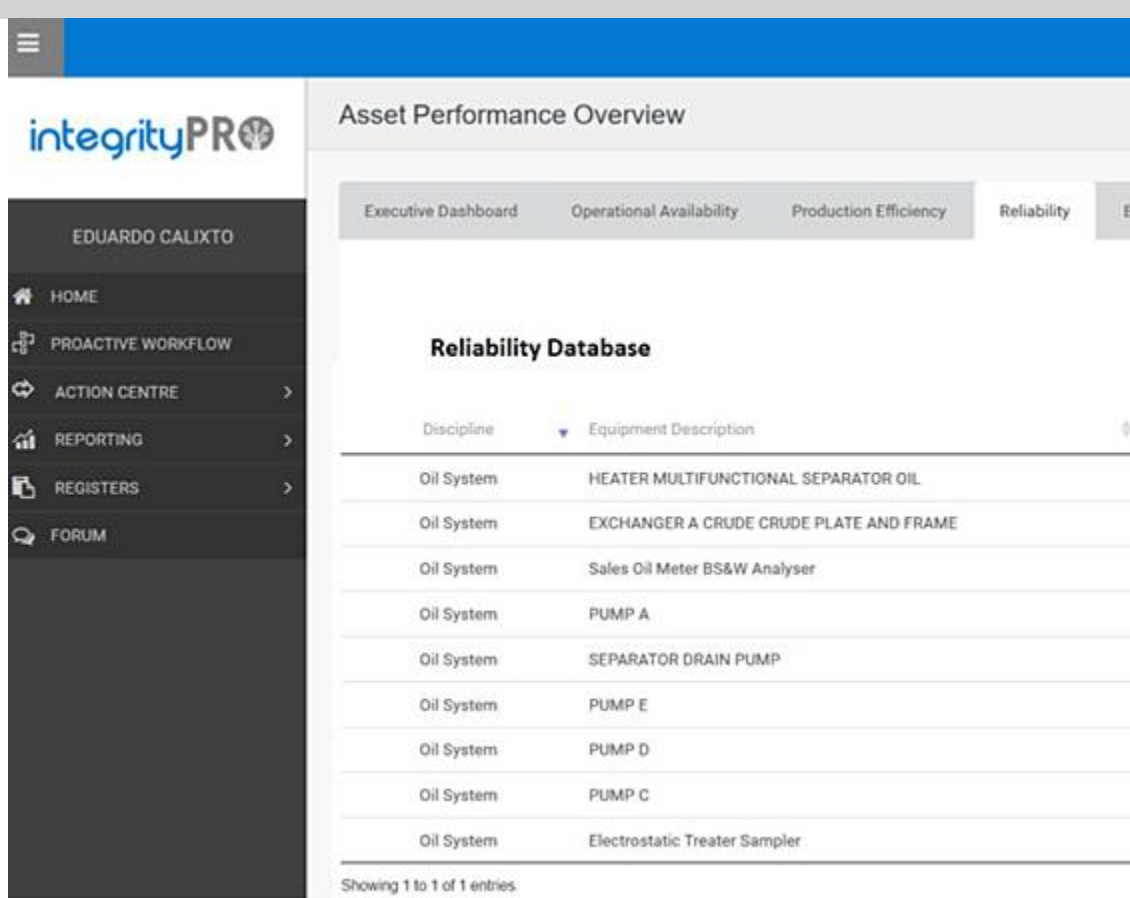


Figure 1 – Automatic Reliability Database.

The reliability 4.0 enables the automatic reliability prediction based on the FRACAS database as part of Physical Asset Management process flow.

To read the complete paper please [go to the link >>](#)

**Eduardo Calixto**

## Salveti Foundation participated in the Bulgarian conference “NO accidents”

**Hans van Selm**, board member of the Salvetti Foundation participated in the Bulgarian conference “NO accidents” in Plovdiv organized by ViaExpo.

EFNMS received a request from ViaExpo Bulgaria to support the conference “NO accidents” by selecting a person with a broad expertise in Maintenance and HSE. After consulting George Scroubelos, the EHSEC chairman, Hans presented the following topics.

### What did we learn from maintenance related accidents in the oil & gas industry?

**1) We learned that so called deep learning only will be achieved when we work together in an open and transparent accident investigation culture.** Also, small incidents are relevant. A dropped object which did not harm people can also be valuable to investigate. It could occur again with fatal consequences.

For major accidents we use the so-called Tripod analysis. A methodology developed to find different root causes. By reviewing multiple Tripod analysis, a number of root causes can be highlighted as new focus areas for further improvement. In order to support all learnings, the oil & gas industry established the HSElife platform. This platform, a strong alliance between leading O&G companies, service providers and government, proved to be very successful over the last 10 years.

A goal zero incident vision resulted in the long-term project, Saving Lives – Saving Millions. The 25.000 participants in the HSElife platform achieve substantial progress in safety behavior and related safety statistics. Harmonization of regulations proved to be an important key enabler.

## **2) Why it's worth investing in solutions for more safety and security reliability and what are the leading trends in this field?**

Goal Zero means no accidents. Investing in people is investing in your best asset. A new trend in organizations is identifying what went right instead of where they have failed, or where they might fail in the future. The big development in 2018 was the ISO 45001 which put greater focus on employee engagement, management commitment, organizational context and risk-based thinking.

We will also see that the capabilities of man and machine coming together due to increasing digitalization, drone and robot technology in maintenance. Finally, we still have time to think about mental health, which is quickly becoming a huge burden for all of us.

**Hans van Selm**

General Secretary, Salvetti Foundation

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Best regards,  
EFNMS Newsletter Team

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With Maintenance Greetings

**Cosmas Vamvalis    David Merbecks**  
EFNMS – European Federation of National Maintenance Societies

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Finnish Maintenance Society, Promaint



European Federation of National Maintenance Societies vzw

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