Welcome to the HFC meeting 15-16/10

Safe, reliable and trustworthy AI systems

- What do we have now and what needs to be in place in the future?
- A Human Factors perspective on AI.

Program Day 1 – 15/10

(Format:Presentation 25 minutes – questions 5 minutes)

- 09:00-11:00 SINTEF Course: Introduction to general AI; from 9-11 at IFE
- 11:00-12:00 Lunch
- 12:00-12:30 Welcome IFE and HFC and presentation of participants round the table
- **12:30-13:00 B. Schütte/Univ. Lapland: Human Oversight and AI**
- 13:00-13:30 Break/Discussions and coffee/Refreshments
- **13:30-14:00 J. Skøld/UAS - EU AI regulations design and operations for the wider industry**
- **14:00-14:30 A. Madsen/NTNU: Human Centered Design in autonomous collision avoidance**
- 14:30-15:00 Break/Discussions and coffee/Refreshments
- **15:00-15:30 L.I.V. Bergh/Havtil: Status - follow-up of AI/AI and Human Oversight**
- **15:30-16:00 C. Markussen/DnV: Responsible use of AI in the petroleum industry**
- 16:00-16:30 Break/Discussions and coffee/Refreshments
- **16:30-17:00 R. Fannemel/Equinor: Responsible AI in Equinor – a human-centered approach**
- **17:00-17:30 J. Lilleby/Aker BP: AI and HF in Aker BP – status and reflections**
- 19:00 Dinner at Haldens Klub (5 minutes walking distance from the hotel)

Program Day 2 – 16/10

- 08:00-08:10 Summary/Reflections from day 1

- **08:10-08:40 T. Arnason/CGI: AI – Capabilities and risks**
- **08:40-09:10 A. J. Ringstad/Equinor: AI, HF and technology qualification**
- 09:10-09:30 Break/Discussions and coffee/Refreshments
- **09:30-10:00 M. C. Leva/TU Dublin: Collaborative Intelligence for Safety Critical Systems**
- **10:00-10:30 G. Skraaning/IFE: Operator Performance in Highly Automated Nuclear Plants**
- 10:30-11:00 Break/Discussions and coffee/Refreshments
- **11:00-11:30 I. Gumnishka/HIP: Human-in-the-loop pipelines for remote operators**
- **11:30-12:00 Summary - what do we have now - what do we need in the future?**
- 12:00-13:00 Lunch
- **13:00-13:30 Tour IFE lab**

Participants is groups – 1...6

Gr	Email Address	Navn/Name:
1	jasmine.lilleby@akerbp.com	Jasmine Lilleby
2	thordur.arnason@capgemini.com	Thordur Arnason
3	christian.markussen@dnv.com	Christian Markussen
4	erlend.erstad@dnv.com	Erlend Erstad
5	eskil.kjemperud@dnv.com	Eskil Kjemperud
6	koen.van.de.merwe@dnv.com	Koen van de Merwe
1	**marius.fernander@dnv.com**	**Marius Fernander**

Idustrial system using AI

(Yara Birkeland, Tesla, Brønnøy Kalk)

AI challenges - Human-ai Teaming: State-of-the-art

(National Security Commission on Artificial Intelligence, 2021),

Brittleness: AI will only be capable of performing well in situations that are covered by its programming or its training data

Perceptual limitations: many AI algorithms continue to struggle with reliable object recognition

Hidden biases: AI software may incorporate many hidden biases that can result from being created using a limited set of training data

No model of causation: ML-based AI is based on simple pattern recognition; the underlying systemhas no causal mode

Automation confusion: "Poor operator understanding of system functioning is a common problem with automation

Irony of automation: When automation is working people can easily become bored and fail to attend well to automation performance.

Poor SA and out-of-the-loop performance degradation: People working with automation can become slower to identify a problem with system performance

Degradation of manual skills: To effectively oversee automation, people need to remain highly skilled at performing tasks manually, including understanding the cues important for decision making. However, these skills can atrophy if they are not used when tasks become automated

Safe, reliable and trustworthy AI systems

- - What do we have now ?

- What needs to be in place in the future?

Safe, reliable and trustworthy AI systems (A user centered approach)

- **What does the speakers prioritize?**
  - B. Schütte/Univ. Lapland; J. Skøld/UAS; A. Madsen/NTN; L.I.V. Bergh/Havtil; C. Markussen/DnV; R. Fannemel/Equinor; J. Lilleby/Aker BP; T. Arnason/CGI; A. J. Ringstad/Equinor; M. C. Leva/TU Dublin; G. Skraaning/IFE; I. Gumnishka/HIP

- **What do you prioritize**
  - Aker BP, Capgemini, DNV, Equinor, FMV (Försvarets Materielverk), Halogen AS, Havindustritilsynet, HCD-Human Centred Design, Humans in the Loop, IFE, Kongsberg Maritime AS, Luftfartstilsynet, Marine Institute/HFC Canada, National Research Council Canada, NTNU, NTNU Samfunnsforskning AS, Safetec, SINTEF, Sjøfartsdirektoratet, Saab Aeronautics (HFN), Technological University Dublin, TØI, University of Lapland, VTI (Statens väg- och transportforskningsinstitut), Vysus Group.

Evaluation of presentations

Tema (Evaluation of presentation)	Evaluation	Utdypende kommentarer (Comments)		
0) SINTEF Kurs: Innføring i generell AI, B.-M. Mathisen, B. Tapley	+	0	-	
1) Human Oversight and AI B. Schütte	+	0	-	
2) EU AI regulations design and operations for the wider industry J. Skøld	+	0	-	
3) Human Centred Design in autonomous collision avoidance A. Madsen	+	0	-	
4) Status - oppfølging av KI/AI og Human Oversight L. I. V. Bergh	+	0	-	
5) Forsvarlig bruk av KI i petroleumsvirksomheten C. Markussen	+	0	-	