

Co-creating a Digital Process Industry



Data Analytics



Digitalisation



Augmented Reality



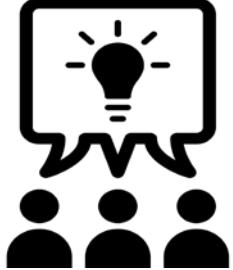
Artificial Intelligence



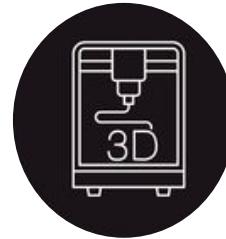
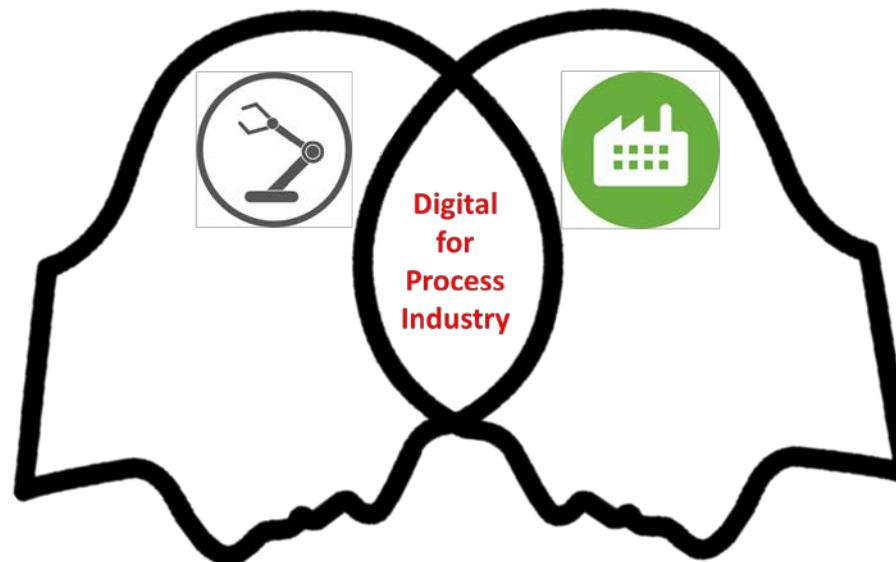
Automation



Advanced Process control



Co-Creation



Additive manufacturing

Herøya Industrial Park -

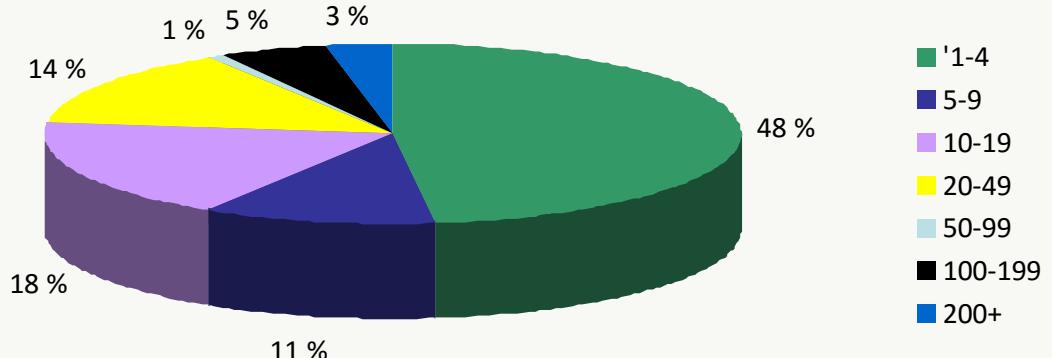
Facts and figures

- Site 1 500 000 m²
- Industrial buildings 294 000 m²
- Service buildings 90 500 m²
- Stores 130 000 m²
- Temporary storage 10 000 m²
- Office premises 20 500 m²
- Quay 1 600 m quayside
- Rail link
- Ro-Ro ramp and container placement area
- Integrated municipal fire-station



80 different companies represent a large resource «pool»

- Process industry
- Chemical industry
- Research & development
- Engineering
- Maintenance center
- Industrial support
- Offices/Building
- ICT



- Total sales 2016
- Export rate
- Purchase of goods and services locally
- Investments 2000 – 2016

ca. 13 Bill NOK

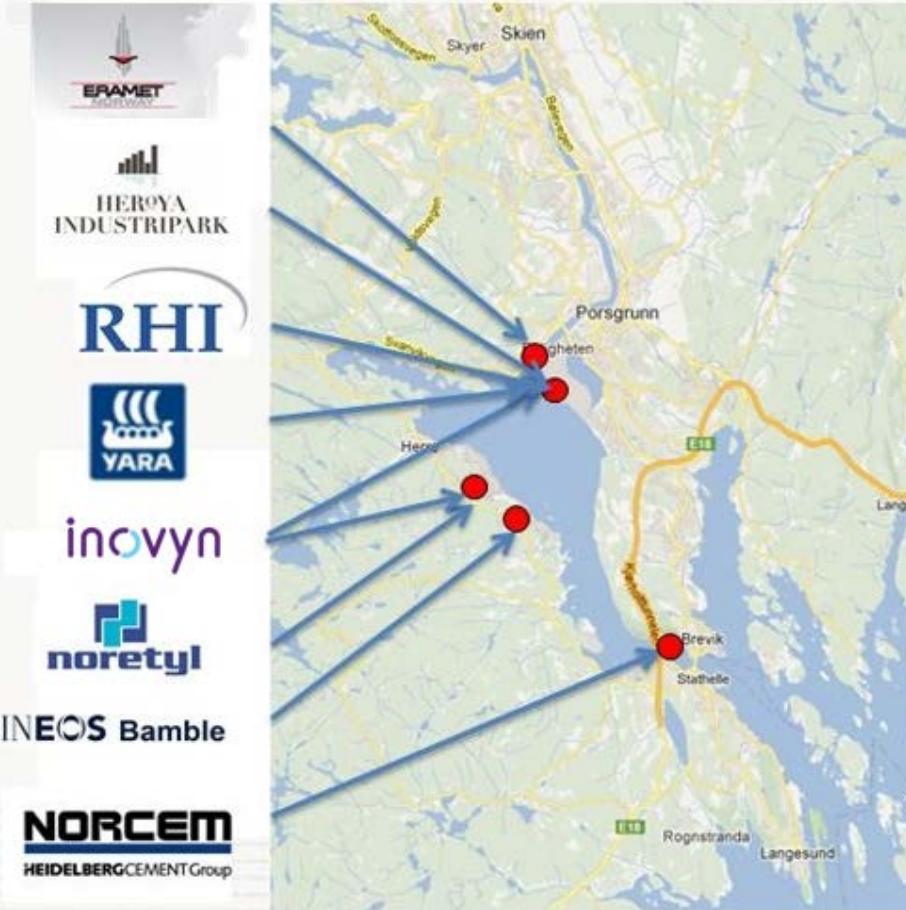
85 %

ca. 1,5-2 Bill NOK

ca. 16 Bill NOK

Grenland is the most important industrial cluster in Norway

- Excellent infrastructure for transportation / logistics
- Good public infrastructure
- International airport
- The region has an "industrial attitude"
 - Highly competent technological staff
 - Strong supplier-network
- Available industrial premises ready for operations
- The region is looked upon as an attractive residential area



Practical information

- Rest rooms
- Drinks, food
- Wifi, plugs for PCs etc
- Transport

Co-creating a Digital Process Industry

30th November 2017, Herøya Industrial Park



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Digitalisation



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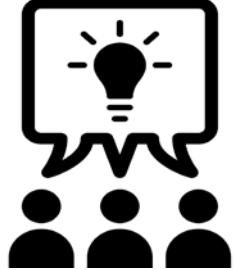
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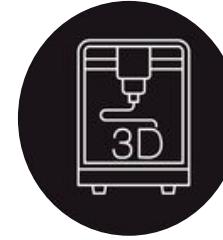
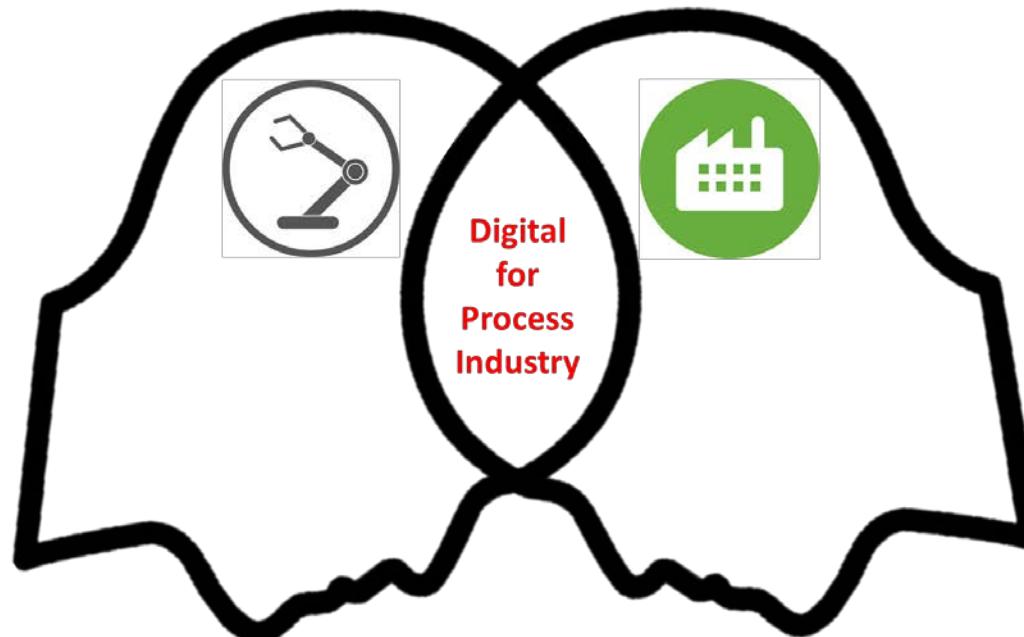
Automation



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Additive manufacturing

Future's advanced process industry

Date: 7. February 2017

Time: 10:30 – 15:00

Place: Herøya Industri Park

Duncan Akporiaye/Rolf Olav Larsen

SINTEF Materialer og kjemi, i samarbeid med Digital Norge og Mo Industripark

Miniseminar – "Det grønne og digitale skiftet – industriell symbiose"

Onsdag 19 April – Mo Industripark/Blåbygget

- 1100-1140; Felles lunch (baguette style)
- 1140-1145; Velkommen
- 1145-1220; Innledning Mo Industripark/SINTEF Helgeland (presentasjon av MIP + MIP Bærekraft)
- 1220-1255; Presentasjon Digital Norge (Toppindustrisenteret): "Digital Norway og kobling til prosessindustri"
- 1255-1330; Presentasjon SINTEF: "Digitalisering i prosess- og vareproduserende industri"
- 1330-1400; Diskusjon (nye muligheter - paradigmeskifter for industrien – behov for FoU, behov for pilotering, fellessatsingsområder/bedriftsspesifikke behov)
- 1400-1415; Kaffepause (avreise til flyplass for Digital Norges representanter)
- 1415-1430; Presentasjon Celsa*
- 1430-1445; Presentasjon Glencore*
- 1445-1500; Presentasjon Elkem*
- 1500-1515; Presentasjon SINTEF: "Grønn omstilling – grønn konkurranseskraft"
- 1515-1600; Diskusjon (utfordringer fra bedriftene til SINTEF - paradigmeskifter for industrien – behov for FoU, behov for pilotering, felles satsingsområder/bedriftsspesifikke behov)

* ikke endelig bekreftet ennå





Sustainable Process Industry through
Resource and Energy Efficiency

**20-21
SEP.**

2017 EU
PROCESS INDUSTRY
CONFERENCE:
**A LOOK
TO THE FUTURE**



Seizing the Opportunities of the Digital Transformation in the Process Industries

20th September - Session 3

Registered Participants



GE Healthcare



SIEMENS



Co-creating a Digital Process Industry

Ambitions for this Workshop

- Arena for dialogue across different sectors of Process Industries and Digital stakeholders
- Identify Opportunities and Challenges for a Digital Process Industry
- Use output from workshop as catalyst for next steps in a national initiative?

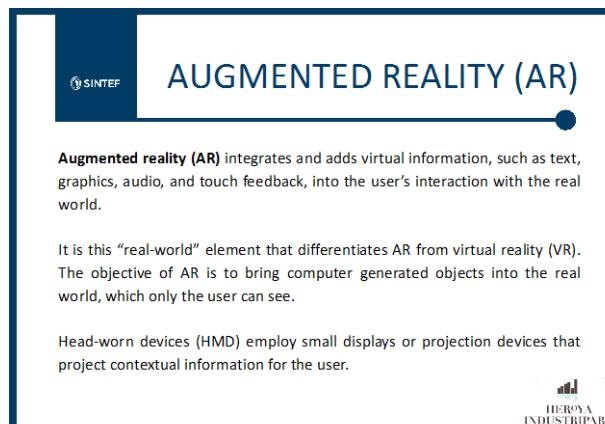
Program (1)

Time	Topic
09:00	Opening/Welcome (Duncan Akporiaye, Rolf Olav Larsen)
09:15	<i>Digital Innovation in the Chemical Industry</i> Martin Winter, European Chemical Industry Council
09:35	<i>"Digital transformation in the process industry" – perspective of a chemical player</i> Sibylle Mutschler, Head Digital4Clariant, Clariant
10:00	<i>Industry 4.0 in the Process Industry</i> Mikael Rudin, Global Product manager, ABB
10:25	Coffee Break
10:55	Trygve Hanssen, Elkem
11:15	<i>Applying Drones in Process Industry</i> Petr Lněnička, Managing Director, Vertical Images
11:35	Nicolas Spiegl, Digital Project Manager, Bilfinger SE

Program (2)

Time	Topic
13:00	Co-creation Discussion Session
14:30	Plenary Summary
15:00	Closing remarks and follow up
15:15	Close

Co-creation workshop



Opportunity / challenge

Planned solution

Implementation – relevant actors

Impact of solution

Implementation – success factors

Program (1)

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Next Steps

- Establishing a network across all sectors of the Process Industry
- Regional and National Competence development initiatives
- Regional "Kapasitetsløft" projects
- Centre's of excellence: SFI, Katapult
- Other?

Acknowledgements

Organising committee

- Rolf Olav Larsen, Herøya Industripark
- Klaus Schöffel, SINTEF Tel-Tek
- Andreas Amdahl Seim, SINTEF
- Duncan Akporiaye, SINTEF

Speakers

- Sibylle Mutschler, Martin Winther, Mikael Rudin, Nicolas Spiegl, Petr Lněnička, Trygve Hanssen

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- Telemark fylkeskommune