



KONGSBERG

# KONGSBERG

STIAN ELIASSEN,  
*Senior Vice President Finance*  
*Kongsberg Digital*

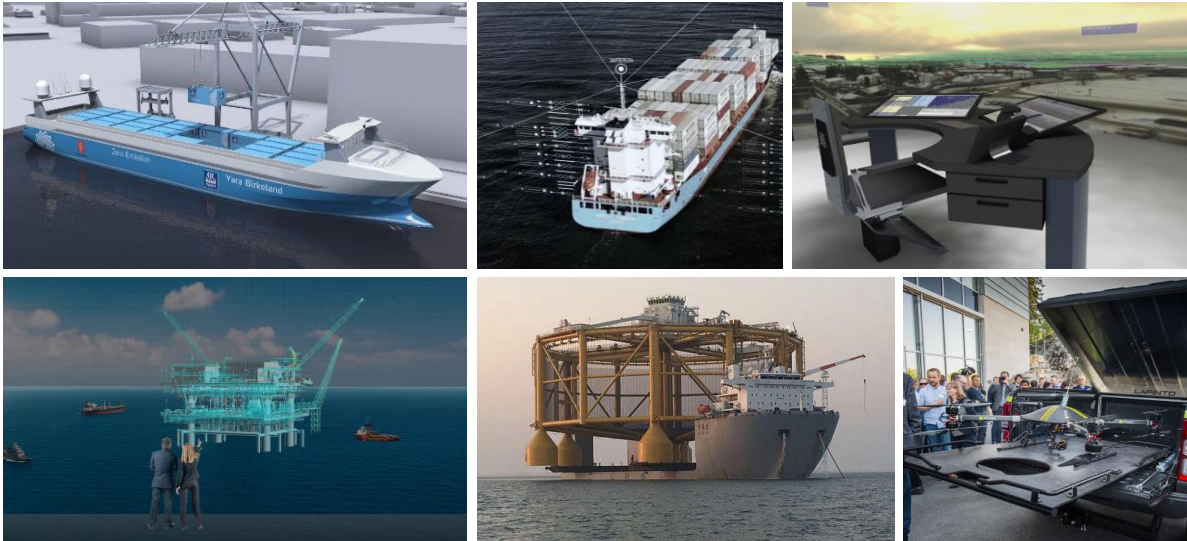
CMD<sup>20</sup><sub>17</sub>  
CAPITAL MARKETS DAY

# KEY TAKEAWAYS



KONGSBERG

- Well positioned to become a key player in digital transformation across our industries
- 25% investment of annual turnover in R&D 2017/18
- Taking important positions with our digital platform Kognifai and key application areas



# KONGSBERG DIGITAL | AS IS



KONGSBERG

~ 750 MNOK

489 FTE

11 Locations



## Maritime Simulations

Market leading simulator solutions, supporting everything from mandatory STCW training to advanced integrated crew training for maritime, naval and offshore industries.

 NOK ~ 400 mill

Note: Total FTE inc. 11 admin



## Oil&Gas

Real-time data aggregation, visualization and advisory solutions for all phases of well construction.

Multiphase flow simulation solutions for engineering studies, operator training, and real-time production and flow assurance.

 NOK ~ 300 mill



## Renewables & Utilities

Products and services to the renewable energy sector in cooperation with eSmart Systems AS.

Kongsberg *EmPower* - open platform with full integration of sensors and systems providing smart data and decision support.

 NOK ~ 20 mill



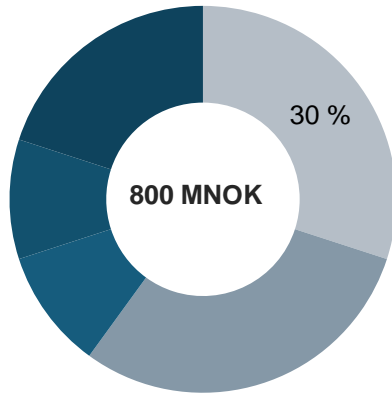
## Digital Platform

**Kognifai** – KONGSBERGS digital ecosystem. The ecosystem supports collaboration and knowledge-sharing between all companies that are part of it; customers, partners, KONGSBERG applications and 3<sup>rd</sup> party applications.

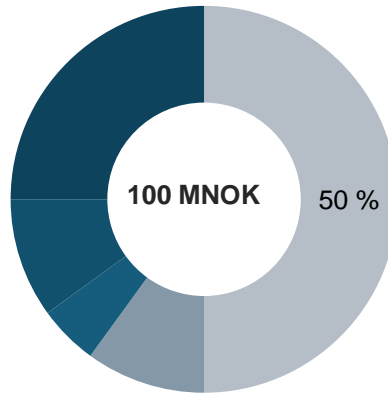
 NOK ~ 30 mill

# MARITIME SIMULATIONS | MARKET POSITION

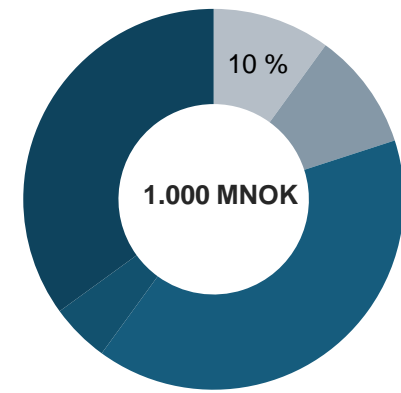
## MERCHANT




## OFFSHORE



## NAVY & COAST GUARD



 Kongsberg     Others

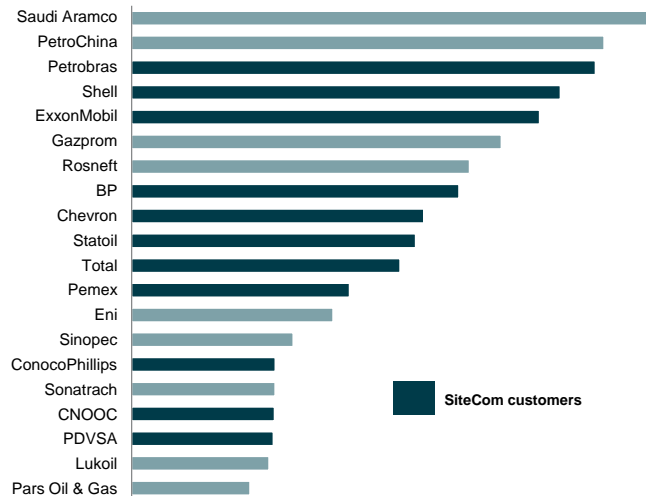
# OIL & GAS | MARKET POSITION



KONGSBERG

## DRILLING & WELLS

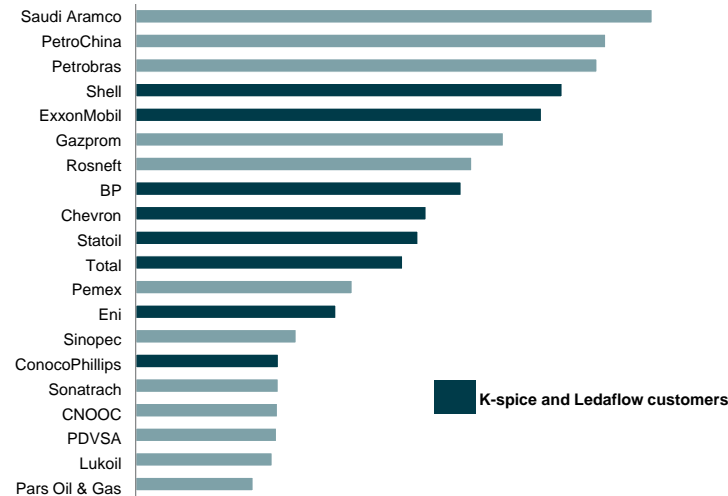
Top 20 operators by E&P spending 2017



- 11 out of the top 20 E&P companies by spending are SiteCom customers
- Over 10.000 drilling operations
- 40-50 large customers and 10.000 users

## PRODUCTION ASSURANCE

Top 20 operators by E&P spending 2017



- 8 out of the top 20 E&P companies by spending are K-Spice and/or LedaFlow customers
- Over 400 installations
- Stronghold in the North Sea and the GoM

# ANALYTICS MATURITY MODEL



KONGSBERG

	descriptive reporting	diagnostic discover & explore	predictive forecast	prescriptive anticipate
question	<b>what</b> happened? <b>what</b> is happening?	<b>why</b> is it happening? <b>where</b> is the problem? <b>what</b> are the trends?	<b>what</b> is likely to happen next?	<b>what</b> should I do? what is the next best action?
technique	business reporting scorecard	agile dashboards cause and effects	predictive modeling regression analysis	artificial intelligence machine learning simulation
example	financial results staff performance scorecard	risk analysis workforce analytics	strategy & growth analysis customer analytics	analytical applications with simulated outcome

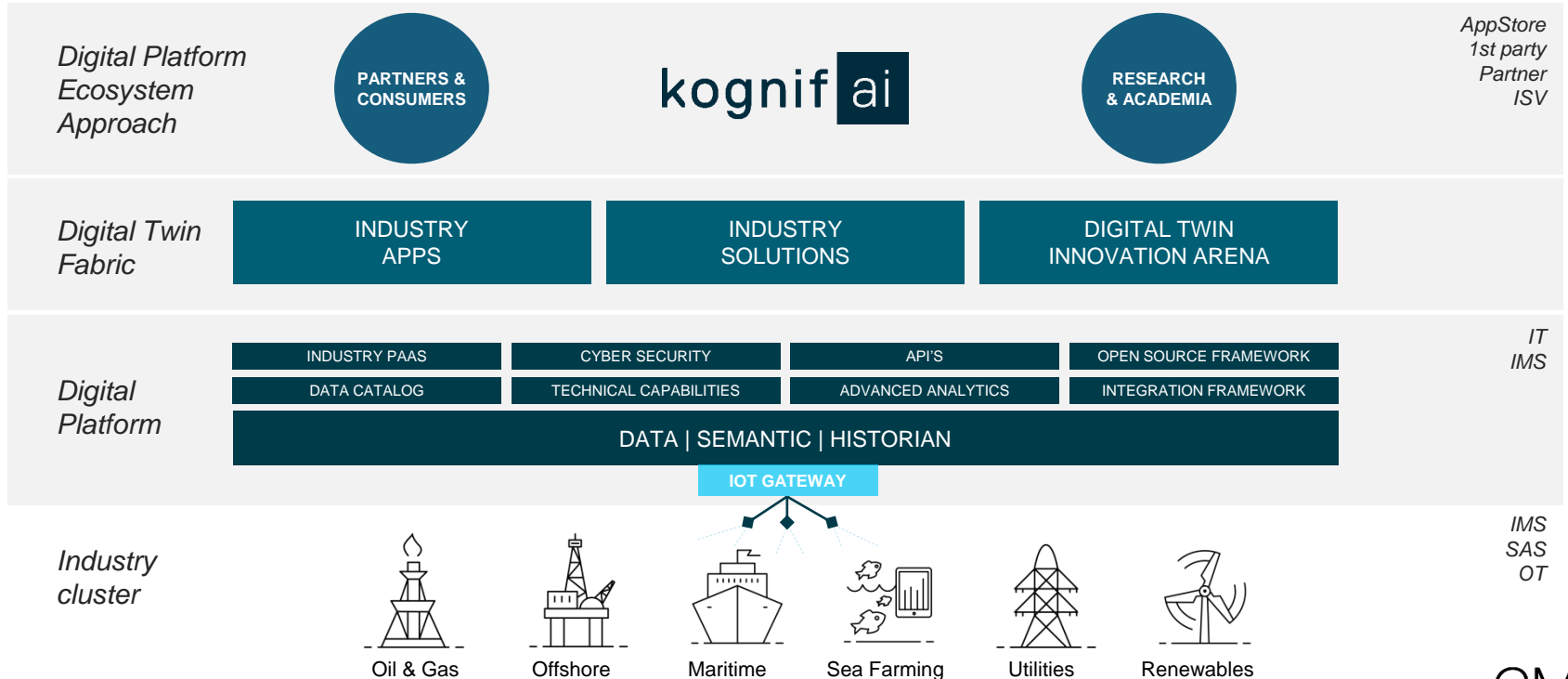


the increasing value of analytics



KONGSBERG

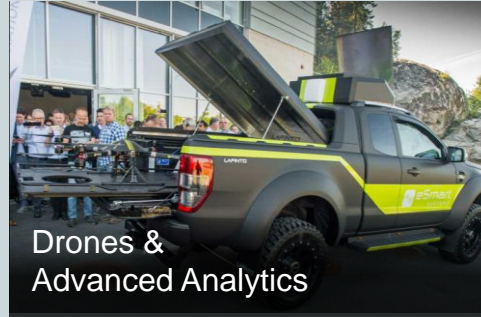
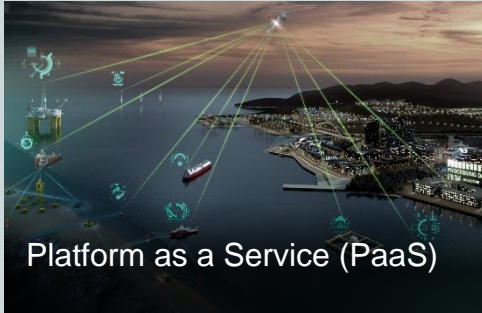
# KOGNIFAI CROSS INDUSTRIAL OPEN ECO SYSTEM



# APPLICATION AREAS

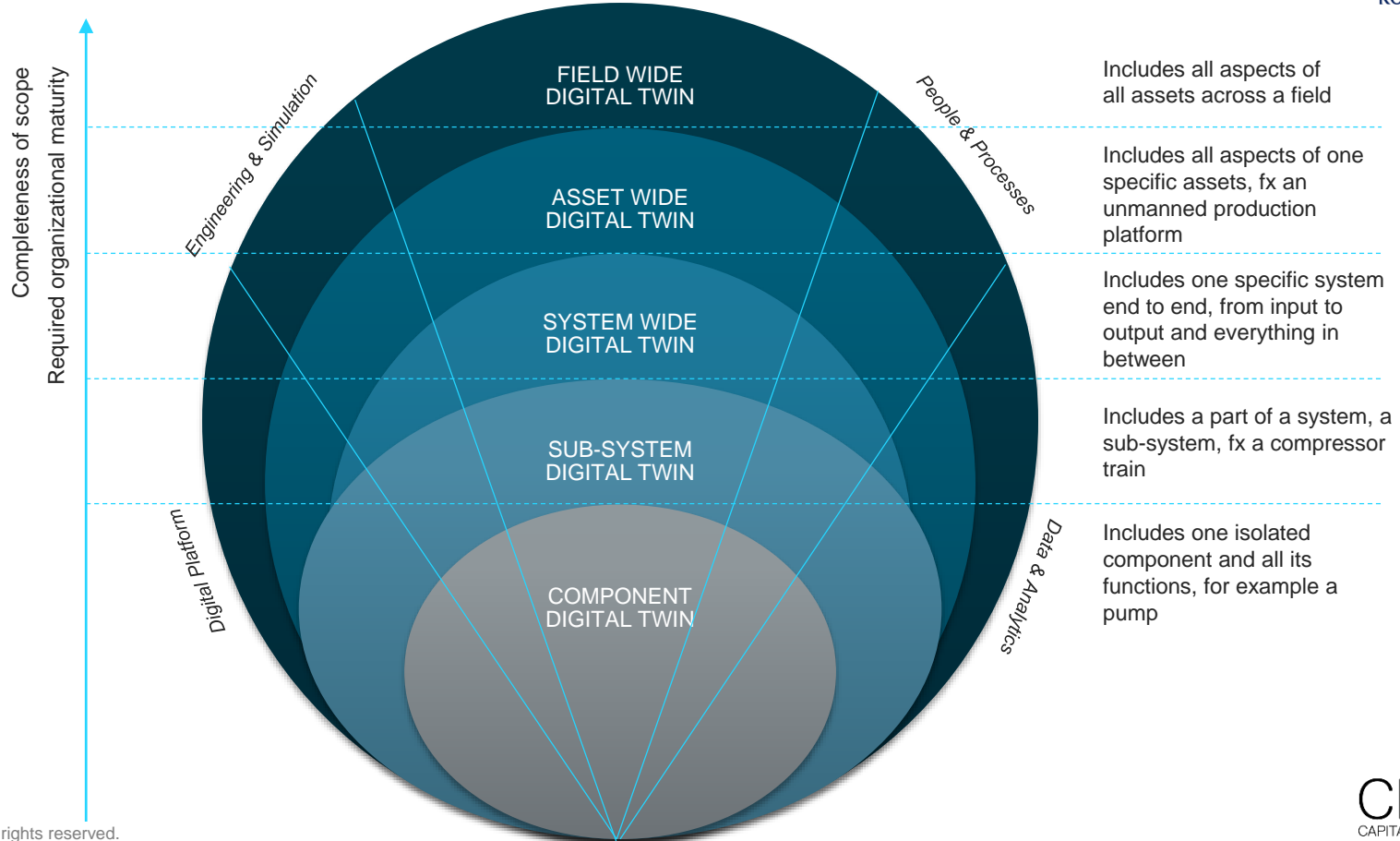


KONGSBERG





# DIGITAL TWIN CONCEPT Visualization & Interaction





# OUR DIGITAL TWIN CONCEPT INCLUDES

Documentation of all equipments, design parameters and executed jobs on the asset

Maritime Operations

The full 3D representation of structure and piping

Overview of procurement, logistics, supplier and cost items  
– enabling planning and budgeting



3D representation, exact location and meta information about individual equipment / features

A dynamic view of interdependencies and linkages between all tags on the asset - enabling simulation and optimization of key processes

Overview of the process facility, its linkages and key performance parameters

# HIGHLIGHTS | 2017



KONGSBERG

**kognif ai**

One open ecosystem that accelerates your business transformation

Signed contracts and partnerships  
~100 MNOK

Digital Twin & Production  
Optimization Projects

Maritime Operations  
Offshore Wind Farms

eSmart launched ThunderCloud

SimWave Contract Awarded  
87 MNOK

Fred. Olsen SCADA Project

Organization Build Up

(KM/KDI)





KONGSBERG

# WORLD CLASS

THROUGH PEOPLE, TECHNOLOGY AND DEDICATION