Embracing Digitalisation in LNG Projects

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Energy Challenge 2050
Anticipate, Adapt & Accelerate: Powering the Future
Natural gas will play a prominent role in the Energy Transition

Global population 9 BILLION
Energy demand +100%
People in cities 75%
Ambition to halve carbon footprint by 2050
Shell, a pioneer in LNG for more than 50 years
New supply investment needed to meet long-term demand growth

- LNG Plants have increased in size & complexity; cost increased.
- Economy of scale no longer sufficient.
- Evolution of Digital technology an opportunity to make a step change in the way we design, execute and operate LNG projects and plants.
Digital is not new … but availability of technology, data and capabilities is growing at exponential rate.

Technology is becoming faster and cheaper over the past ten years.

Data is growing exponentially.

- Volume of data generated (zettabytes).
- ~90% of all data was created in last 2 years; much more sophisticated tools to extract value from data.
Shell’s vision: Build intelligent LNG plants of the future that are fully digital, agile and optimised, enabling real-time, flawless operations.
Digitalisation is delivering value today

- Autonomous robots for surveillance
- Efficient execution of projects
- Field mobility solutions enabling data anywhere anytime
- ROAVs reducing HSSE exposure
- Real Time Production Optimisation
Technology and data are the table stakes

Insights, actions and speed of replication at scale as well as the ability to embrace the culture change effectively, are the differentiators.

• Engineers need to become digitally literate to acquire, process and interact with data in new ways.
• Continued compliance with regulation and legislation is a must.
• Cyber security, data export and data localisation requirements, data security and personal data protection are potential challenges.
• Greater collaboration within and outside the industry is essential.
Thank you

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