

Vice President Juha Kytölä, Wärtsilä Oyj Abp, Environmental Solutions

- Focus on environment will lead to more regulations for shipping
- A lot of leading products developed in Finland
- Products important but also new areas of customer support through digitalisation
- More investments to research & development needed

Emissions to air and water regulated more and more

CO₂

Global warming

EEDI (2013)
SEEMP (2013)

SO_x

Particulates

3.5% (2012)
0,5% (2020/25)
0.5% in EU (2020)
ECA 0.1% (2015)

NO_x

Acid rains

Tier II (2011)
US ECA Tier III (2016)
EU ECA?

Waste Water

Eutrophication

IMO (2016)

Ballast Water

Biodiversity

IMO 2016?

Bilge Water

Pollution

IMO 2005

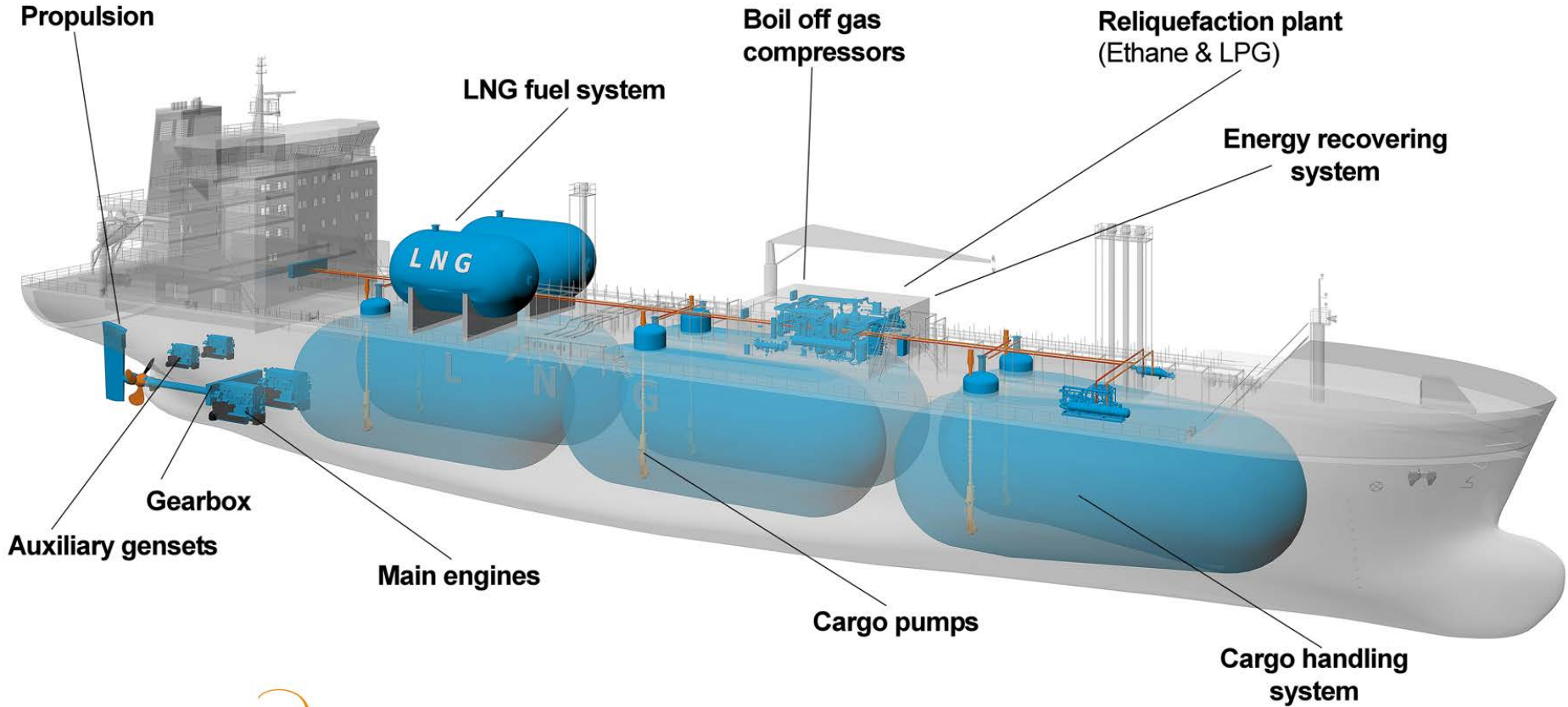
THE NEW WÄRTSILÄ 31 REDEFINES EFFICIENCY



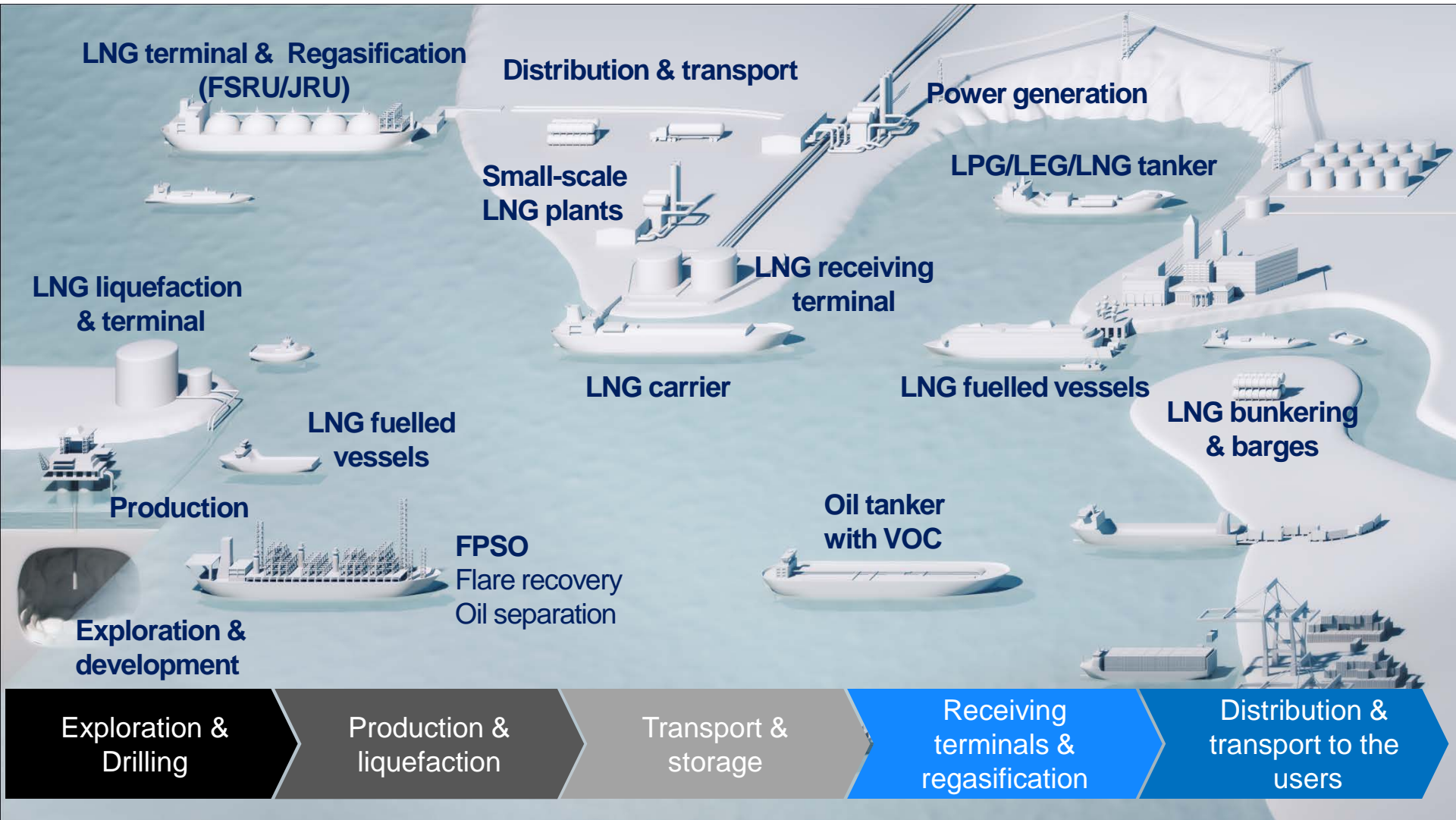


MOST EFFICIENT 4-STROKE DIESEL ENGINE

Use of gas creates opportunities



Opportunities in the whole value chain



Multiple products for Environmental compliance needed



Exhaust Gas Cleaning

Catalyst Systems

Ballast Water Management

Fresh Water Systems

Waste Water Systems

Oily Water Systems

Inert Gas Systems

Compressors



Digitalisation enables new businesses

- Interactive and real-time data
- Big data analysis, processing and prioritisation
- Predictive actions and optimisation
- Transparency of real-time data from order to invoicing.

Summary

Competition is global

The world is changing faster than we believe

Success is dependent on our ability to renew

Research & Development are of key importance



Thank You

ENERGY

ENVIRONMENT

ECONOMY

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