DNV-GL



ENERGY

Bringing trust to the Internet of Things

Valuable insights from data to support critical decisions in industry Marte Riiber de Picciotto, Scott George DNV GL

20 January 2017

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Digital transformation of the largest man made system on earth



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Toward data-driven decision making, rules and standards



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The value of combined data sets

YOUR DATA data from: Shared data platform cost >20% of world fleet Richer insights and analytics >65% of offshore pipelines >70% of offshore wind farms Benchmarking >80,000 customers Aggregate your data Thousands of associated suppliers Manage sharing of your data >1 million software user

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Open platform for trusted data

We provide trusted integration, profiling, benchmarking, quality assurance and management of data between providers and consumers

OUR UNIQUE PLATFORM ELEMENTS



ASSET DATA
Ingest, storage and
integration

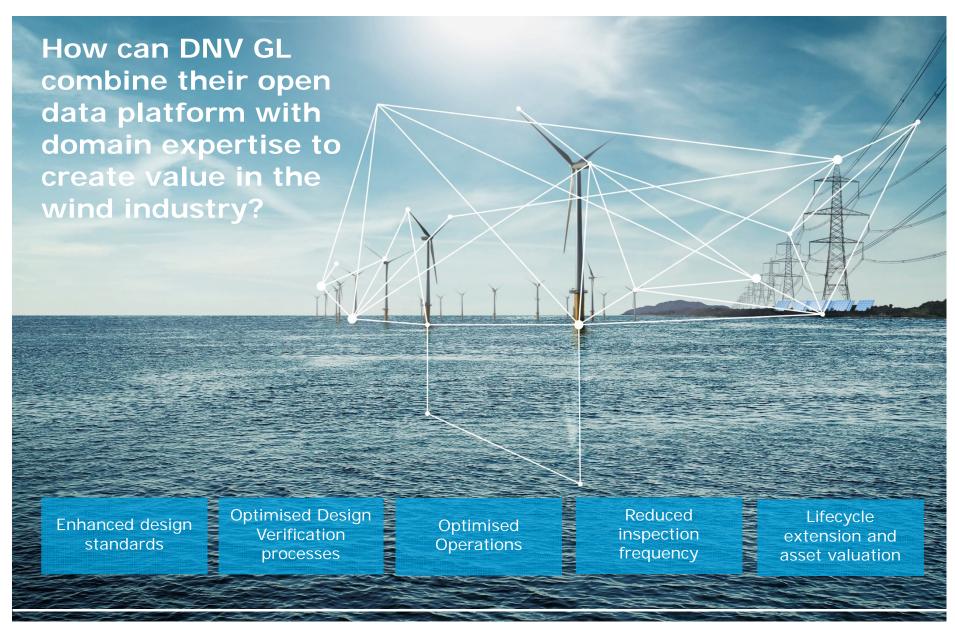


DATA QUALITY
Assessment



ANALYTICS
DNV GL and third-party
analytics providers

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Enhanced Design Standards



OFFSHORE STANDARD
DNV-OS-J103

Design of Floating Wind Turbine Structures

JUNE 2013

The electronic pdf version of this document found through http://www.dnv.com is the officially binding ver-

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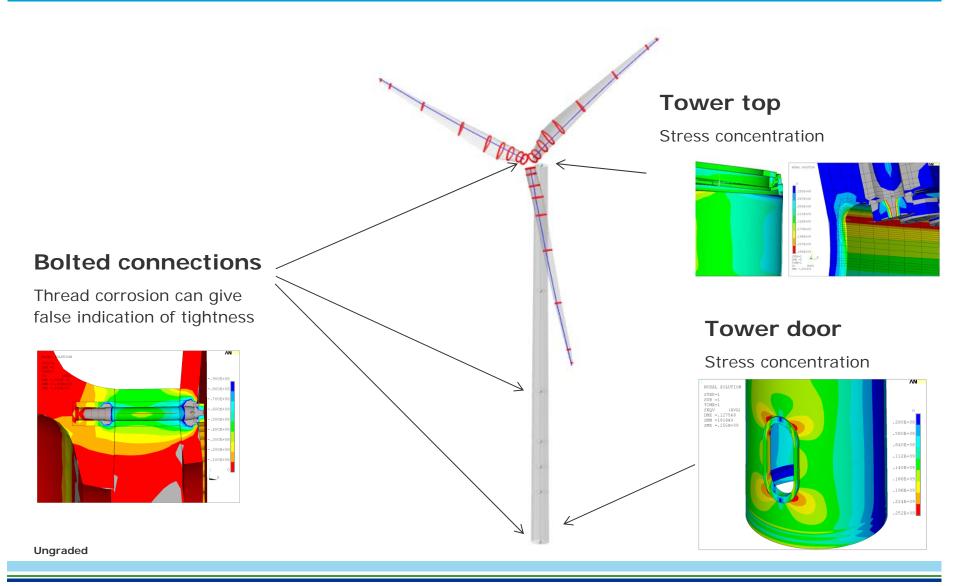


Digital twin for "what if?" analysis



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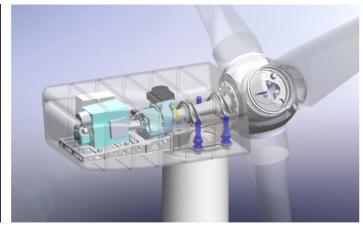
Risk Based Inspections: Informed by Modelling

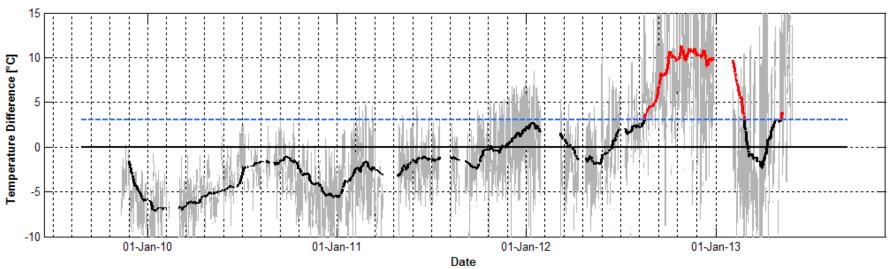


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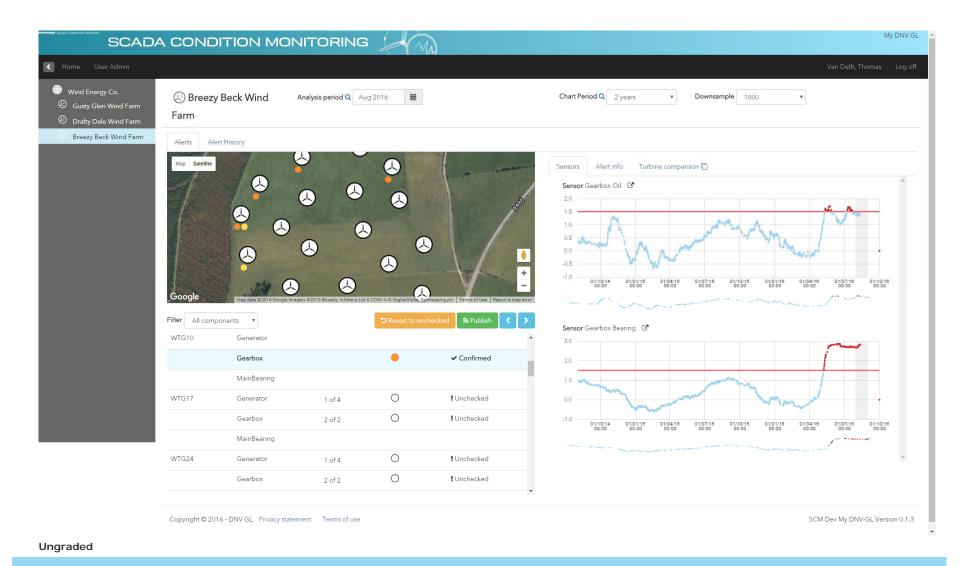
Lifetime extension; Evaluating asset health from data





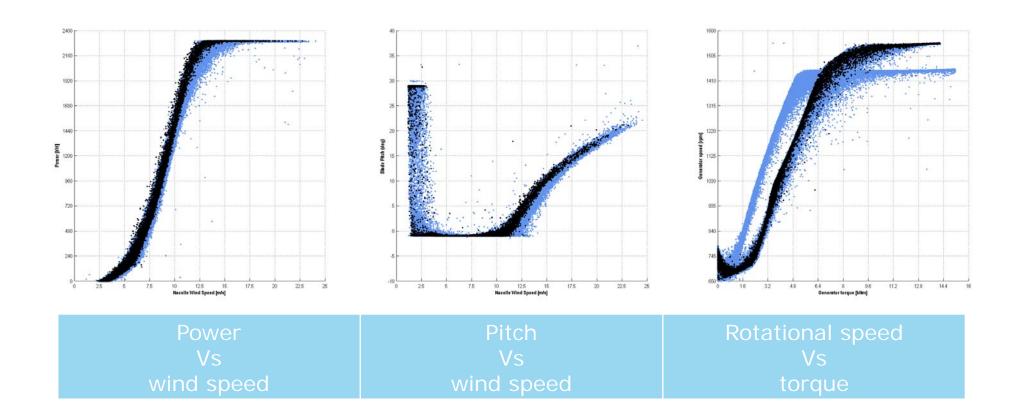


Operations



Optimizing performance

• 3 years of 10 minute average data for a commercial MW scale turbine



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Asset and data life cycle



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SAFER, SMARTER, GREENER

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