



3DEXPERIENCE

Energy Process & Utilities

Strategy & Solutions for
Sustainable Development

Stéphane Declée
VP, Energy Process & Utilities

Agenda

1

3DS 3DEXPERIENCE

- Who we are, Our Strategy, 3DEXPERIENCE Business Platform

2

Customer Cases

- Who: Emerging and Developed Countries
- What: Business Transformation, from Paper to Digital

3

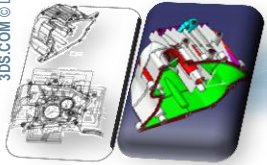
Demonstration & Wrap-up

Our Customers... from Discrete Products to Capital Projects

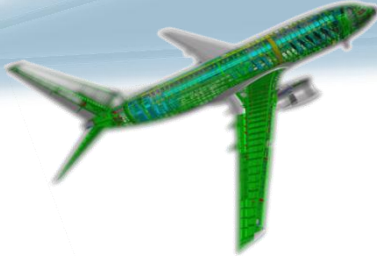
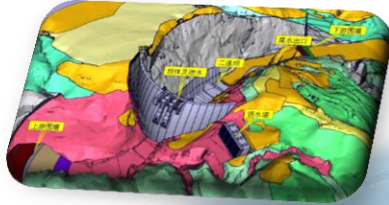
	TRANSPORTATION & MOBILITY	     
	AEROSPACE & DEFENSE	    
	MARINE & OFFSHORE	   
	INDUSTRIAL EQUIPMENT	    
	HIGH-TECH	     
	CONSUMER GOODS - RETAIL	     
	CONSUMER PACKAGED GOODS - RETAIL	    
	LIFE SCIENCES	    
	ENERGY, PROCESS & UTILITIES	  
	ARCHITECTURE, ENGINEERING & CONSTRUCTION	    
	FINANCIAL & BUSINESS SERVICES	   
	NATURAL RESOURCES	     

Opening new horizons with 3DEXPERIENCE

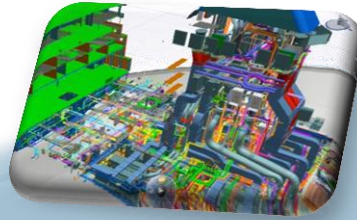
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Changing
3D
Design



3D DMU
Digital Mock-up



3D PLM
Product Lifecycle
Management



3DEXPERIENCE

3DEXPERIENCE Powers our Brand Applications for 12 Industries



Brand Applications




Industry Solution Experiences


All Industries are in the Experience Economy



TRANSPORTATION
& MOBILITY
**"Match-making
Experience"**



AEROSPACE &
DEFENSE
**"Travelling
Experience"**



MARINE &
OFFSHORE
**"Destination
Experience"**



INDUSTRIAL
EQUIPMENT
**"Harvesting
Experience"**



HIGH-TECH
**"Entertainment
Experience"**




CONSUMER GOODS
RETAIL
**"Lifestyle
Experience"**




CPG
RETAIL
**"Shopping
Experience"**



LIFE
SCIENCES
**"Patient
Experience"**




ENERGY, PROCESS
& UTILITIES
**"No stop
Experience"**




ARCHITECTURE,
ENG. & CONSTRUCTION
**"Lifetime
Experience"**



FINANCIAL &
BUSINESS SERVICES
**"Peace of mind
Experience"**

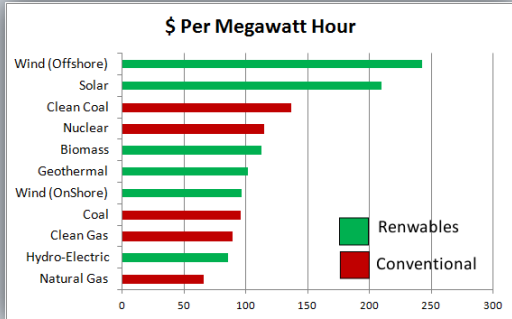


NATURAL
RESOURCES
**"Productivity
Experience"**



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Industry Landscape | Market Challenges



Portfolio Cost Competitiveness



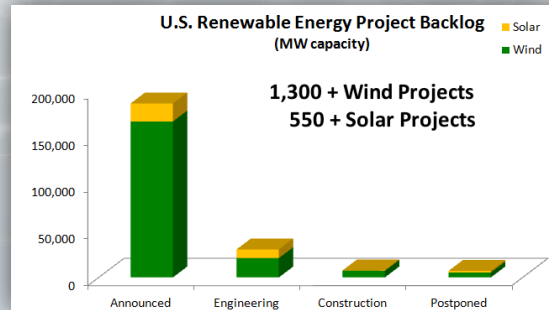
IP and Knowledge Transfer



Increased Regulations



Supply Chain Complexity



Project Backlog



Safety & Risk Management

Capital Projects Market Transformations

Unique 3DEXPERIENCE Opportunity

AS-IS	TO BE
from “E” “P” “C”	to “EPC Collaboration”
from “EPC” + “O”	to “EPCO with Digital Handover”
from “paper based”	to “full digital plant mock-up”
from “manual ad-hoc report”	to “integrated dynamic dash boarding”
from “project by project”	to “project portfolio” optimization
from “One Off”	to “standardization”



3DEXPERIENCE Platform | Digital Continuity for Safety & Compliance

Test It for Safety



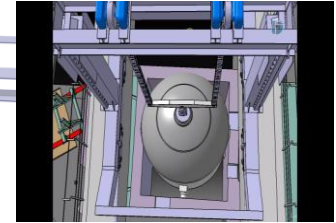
Build It On Time



Operate It for Efficiency



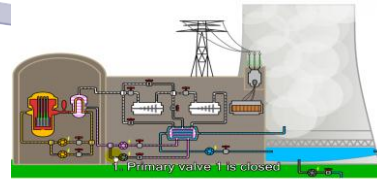
Decommission It for Environment



Design It for Compliancy



Specify It for Safety



Plan it for Consumers



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Demonstration & Wrap-up

Summarizing Plant Operation Challenges



Comply with Regulations

Using incorrect, confidential or outdated information causes personal and business risk



How to securely control, configure and manage plant information?



Minimize Outages

Availability of facilities is directly linked to top-line



How to optimize planned outages and minimize unplanned extensions?



Work Safely and Efficiently

Knowledgeable workers are safer and more productive

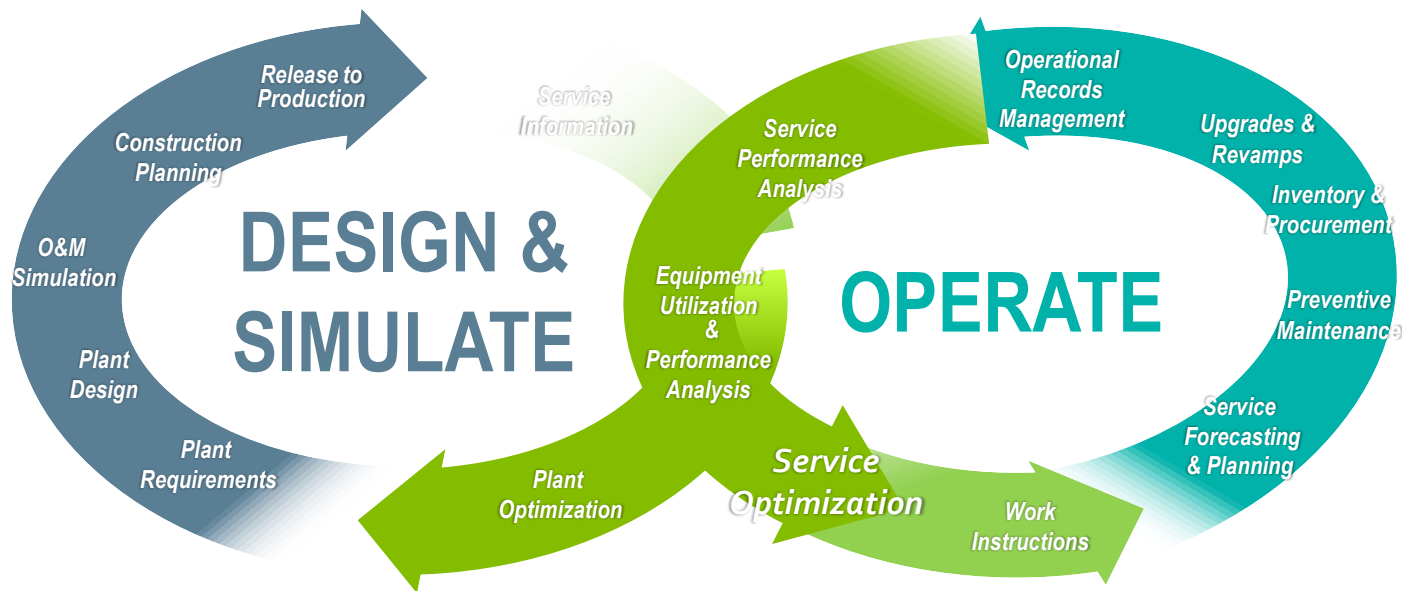


How to improve operation personnel's safety and performance?

Integrated Virtual & Real for Operation Excellence

Drives Continual Plant Performance Improvement & Reduced TCO

- **Single Point of Reference** for **Engineering** and **Operations** activities
- **3D Simulation** for **Maintenance instructions** and **outage planning**





Nizhny Novgorod ATOMENERGOPROJECT

▶ NIAEP Summary

- ❑ Russian leading Engineering Procurement & Construction in the Nuclear industry with over 4000 employees
- ❑ Executing currently 20 projects in Russia and abroad.
- ❑ Focusing more and more on international opportunities

▶ Business Challenges

- ❑ Reduce Nuclear Power Plant construction time & cost
- ❑ Accelerate international development

▶ Key Values:

- ❑ Zero defect plant engineering thanks to Plant Digital Mockup and change process management
- ❑ Standardization of nuclear plant construction process
- ❑ Reduce construction duration through resource utilization optimization (10 months reduction targeted)



CNPE Adopts Optimized Plant Construction 3DEXPERIENCE Solution

CNPE

- ▶ CNPE is the EPC company who major focus on NPP construction



Part of



Business Value

- ▶ A single business platform with integration the legacy systems, ERP, P6, etc to have the real-time comprehensive project information
- ▶ Longer term ability to expand the system to manage the lifecycle of NPP from engineering, construction to operation support

Solution

- ▶ 3DEXPERIENCE Platform
- ▶ Optimized Plant Construction 3DEXPERIENCE Solution

ENVISION Adopts 3DEXPERIENCE Platform

ENVISION

- ▶ Leading innovative wind power company headquartered in China



Business Value

- ▶ Design process optimization to sustain the Chinese ambition in renewable energies
- ▶ Support transformation from onshore to offshore wind projects

Solution

- ▶ Energy, Process & Utilities – Sustainable Wind Turbine
- ▶ Powered by 3DEXPERIENCE Platform with ENOVIA

3DEXPERIENCE Platform | Digital Continuity for Safety & Compliance

6 | Maintain it for Operational Efficiency



7 | Refurbish it for Profitability



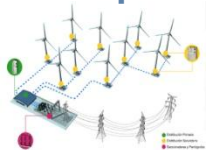
8 | Predict and Monitor it for optimal distribution



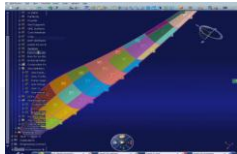
5 | Build It On Time & Budget



4 | Engineer it for Safety & Compliance



3 | Design and Manufacture it for Quality & Efficiency



2 | Plan it for Consumers and Environment



1 | Bid to Win Projects



CREATORS

PARTNERS

SOCIETY

SOCIAL INNOVATION

COLLABORATIVE INNOVATION

COLLABORATIVE CREATION

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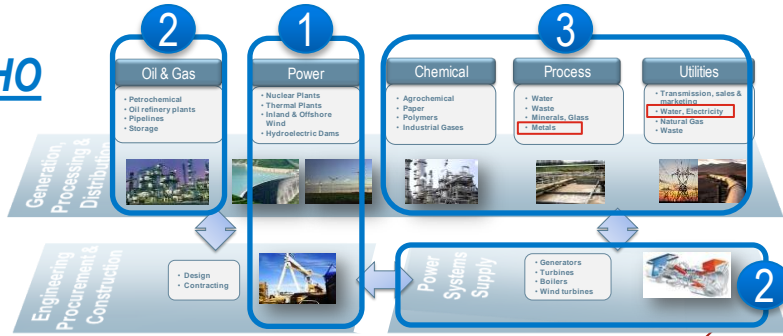
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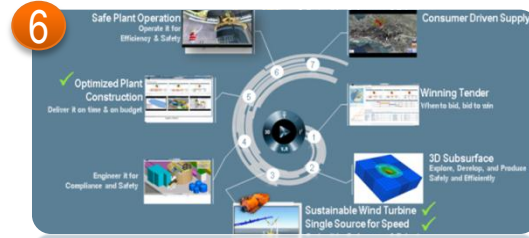
Demonstration & Wrap-up

Energy Process & Utilities Growth Drivers

WHO



WHAT



Accelerating Growth in Energy, Process & Utilities

WHERE



HOW

