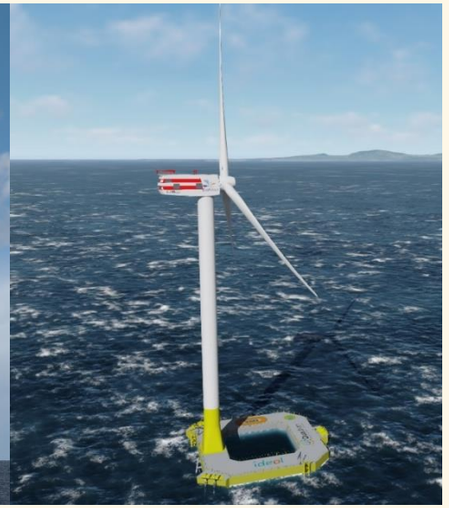
Atelier Normes et Réglementations Eolien en mer
1er avril 2021



Programme

Introduction 10h00-10h05

La filière éolien en mer flottant régionale et objectifs de l'atelier (Marie-Laure Barois, Wind'Occ / Julien Ciglar, AD'OCC) 10h05-10h15

Offshore Wind Turbine Certification (en anglais) (Susanne Landskröner, DNV / Kimon Argyriadis, DNV) 10h15-11h15

Questions et réponses 11h15 – 11h30

Certifications et formations, témoignages d'entreprises régionales :

- **Cameron / Schlumberger site de Béziers** (Luc Mas, Schlumberger / Benoît Jauzion, Schlumberger / Stéphane Henry, Schlumberger) 11h30 – 11h40
- **Dietsmann** (Cédric Fargues, Dietsmann) 11h40-11H45

Échanges participants et suites à donner 11h45 – 12h00

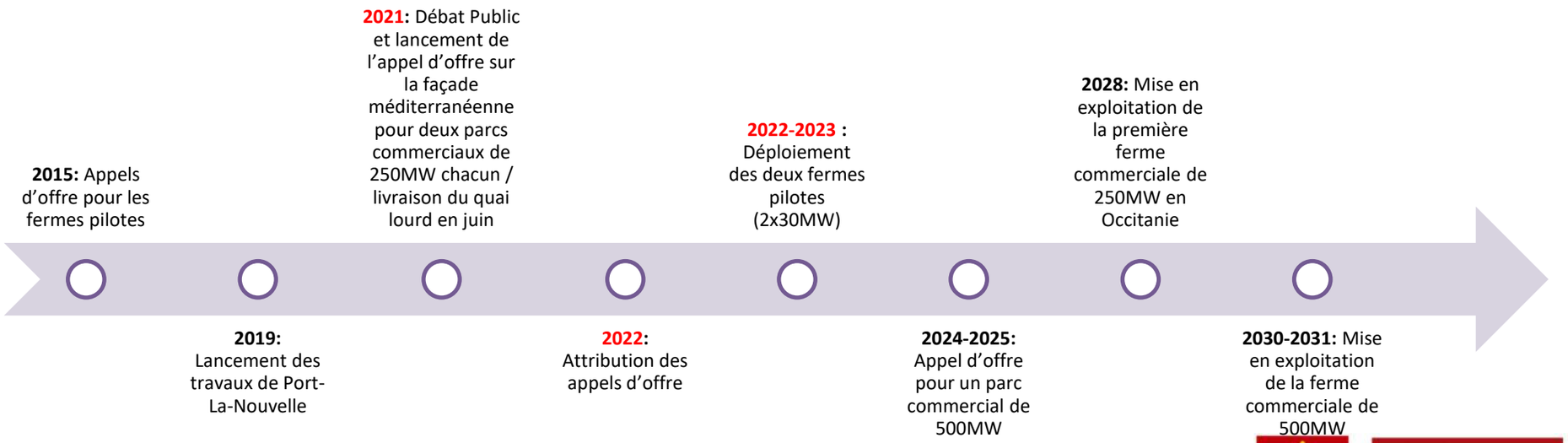
Conclusion

La filière éolien en mer flottant régionale et objectifs de l'atelier

(Marie-Laure Barois, Wind'Occ / Julien Ciglar, AD'OCC)

Le Calendrier en région Occitanie

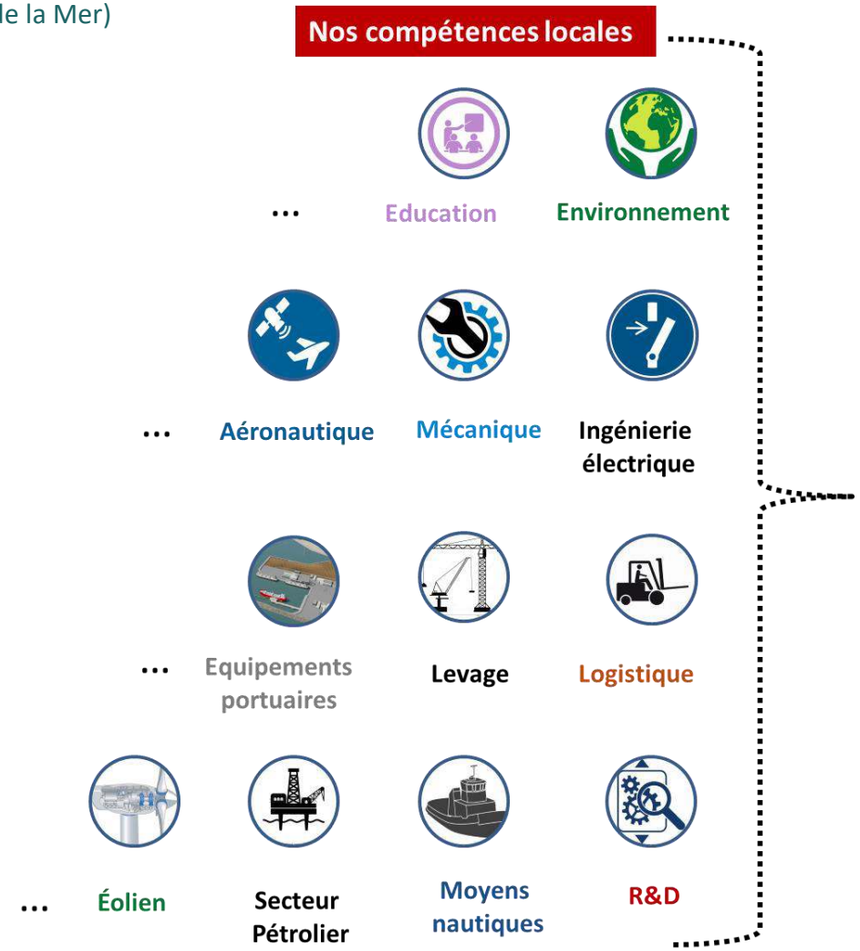
- **2015:** Appels d'offres pour les fermes pilotes
- **2019:** Lancement des travaux de Port-La-Nouvelle
- **2021:** Débat Public et lancement de l'appel d'offre sur la façade méditerranéenne pour deux parcs commerciaux de 250MW chacun / livraison du quai lourd en juin
- **2022:** Attribution des appels d'offres
- **2022-2023:** Déploiement des deux fermes pilotes (2x30MW)
- **2024-2025:** Appel d'offre pour un parc commercial de 500MW
- **2028:** Mise en exploitation de la première ferme commerciale de 250MW en Occitanie
- **2030-2031:** Mise en exploitation de la ferme commerciale de 500MW

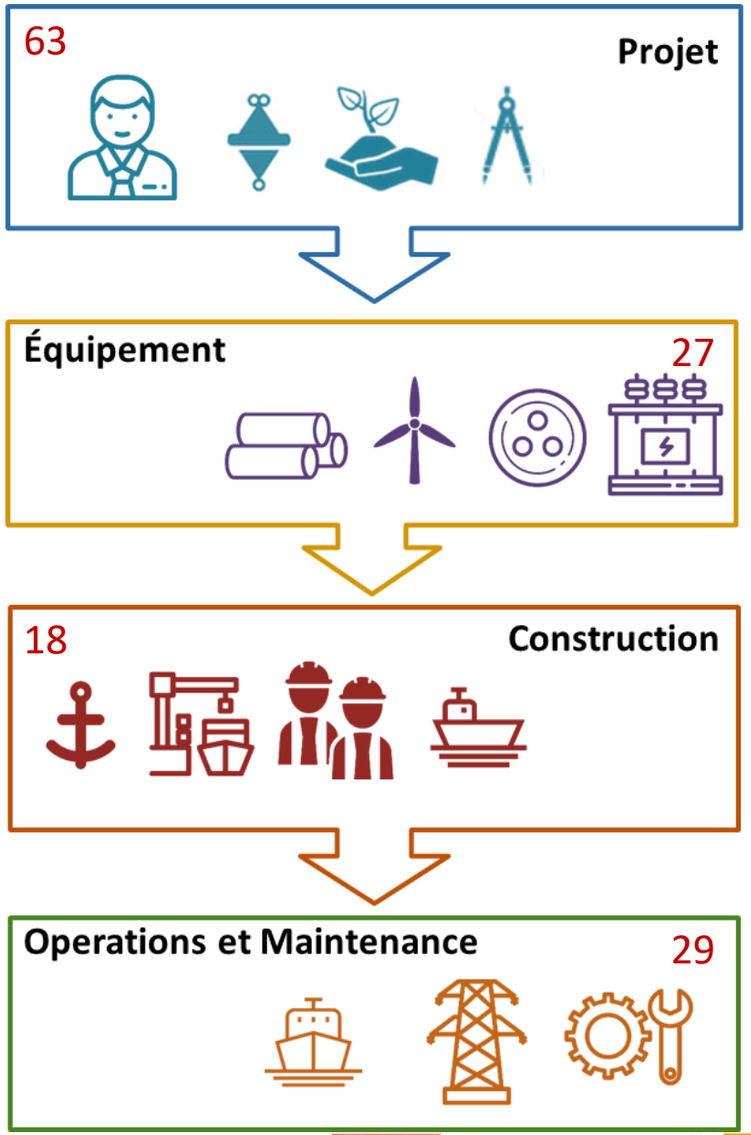


La filière régionale mobilisée

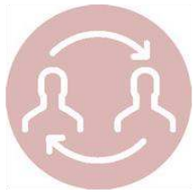
137 entreprises en Occitanie positionnées sur la chaîne de valeurs ou présentant un potentiel pour la filière

108 ETP en 2020 : +52% par rapport à 2019
(Observatoire des Energies de la Mer)





Structuration de la filière, la dynamique Wind'Occ



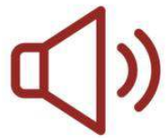
1. Échanger

2. Compétences

3. Visibilité

4. Communiquer

5. Développer



6. Appels d'offres

7. Se Structurer

8. R&D

9. Rayonner

Offshore Wind Turbine Certification

(Susanne Landskröner, DNV / Kimon Argyriadis, DNV)

WHEN TRUST MATTERS

Offshore Wind Turbine Certification

Éolien en Mer Flottant : Journée filière Wind'Occ 2021

Susanne Landskröner, Kimon Argyriadis

Jeudi 01 Avril 2021

A global assurance and risk management company

156	12,000	100,000	100+	5% R&D
years	employees	customers	countries	of annual revenue

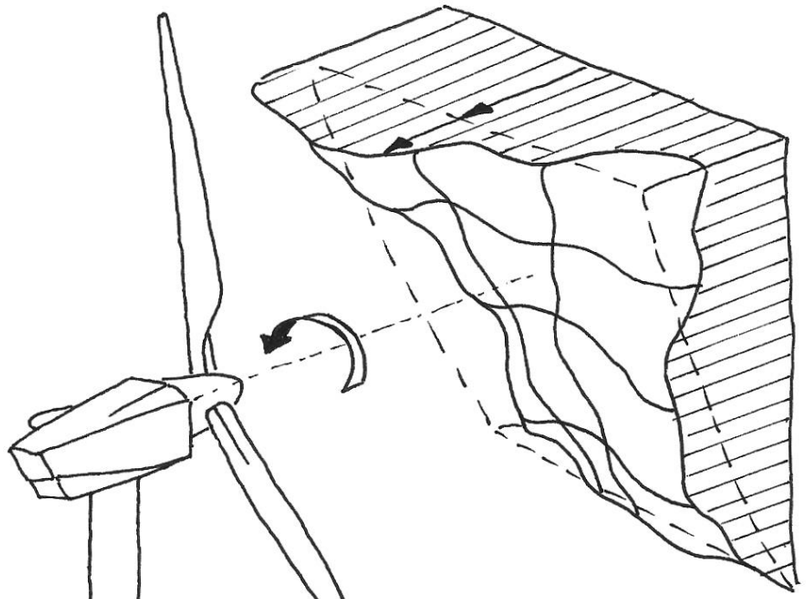
Ship and offshore classification and advisory

Energy advisory, certification, verification and monitoring

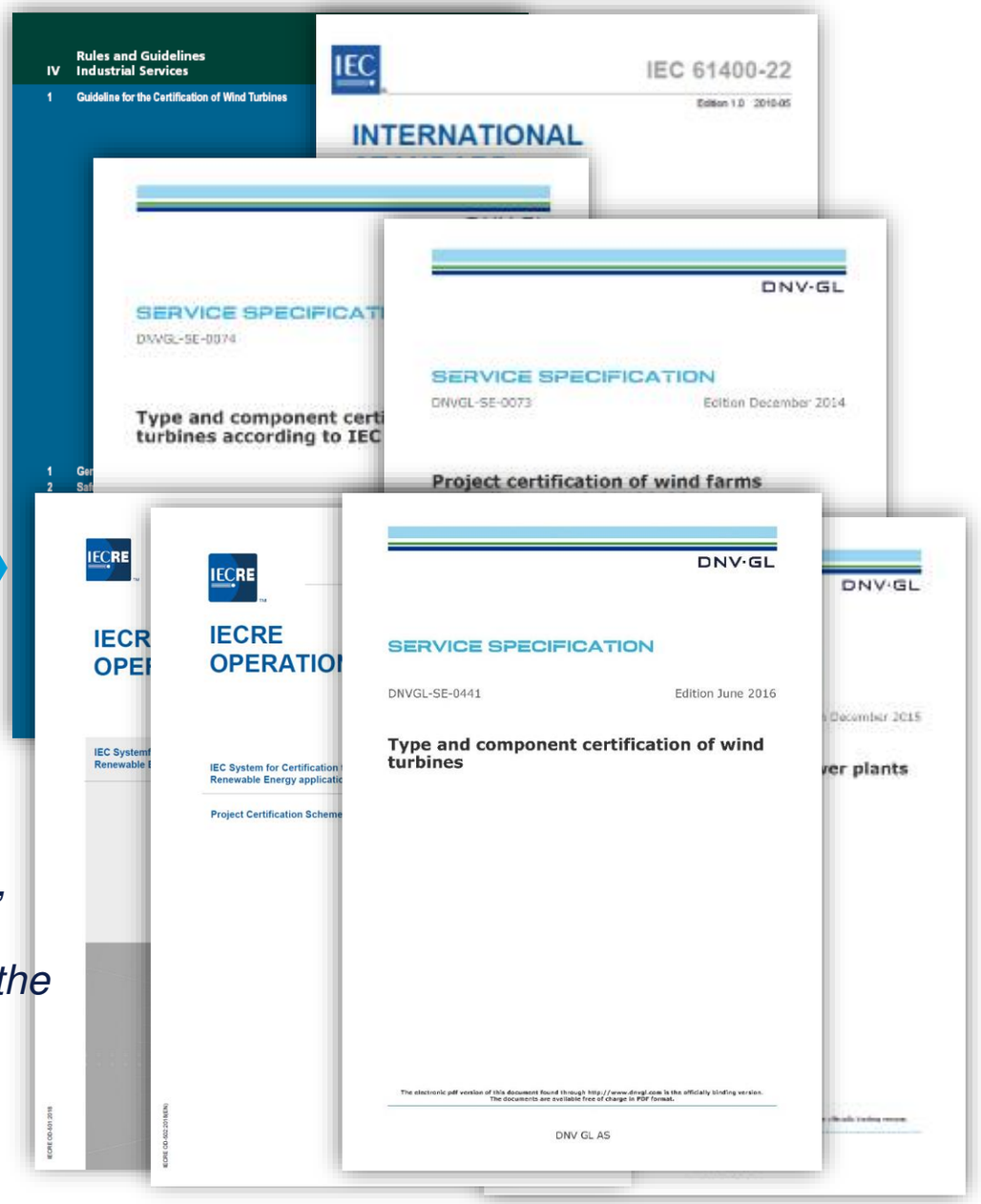
Software and digital solutions

Management system certification, supply chain and product assurance

What is Certification?



Do they match?



Definition of certification (ISO / IEC 17000)

Certification is a: *Third-party **attestation** related to products, processes, systems or persons*

Attestation means**:** *Issue of a statement, based on a decision following the **review**, that fulfilment of specified requirements has been demonstrated*

Review is done by**:** *Verification of the suitability, adequacy and effectiveness …*

Renewables certification – main services

Accredited certification of equipment (products), services and projects in renewable energy

- Component certification
- Prototype certification
- Type certification
- Project certification

DAkkS Deutsche Akkreditierungsstelle

Deutsche Akkreditierungsstelle GmbH

Entrusted according to Section 8 subsection 1 AkkStelleG in connection with Section 1 subsection 1 AkkStelleGBV
Signatory to the Multilateral Agreements of EA, ILAC and IAF for Mutual Recognition

Accreditation

The Deutsche Akkreditierungsstelle GmbH attests that the certification body

Germanischer Lloyd Industrial Services GmbH
DNV GL Renewables Certification

with the locations:

Brooktorkai 18, 20457 Hamburg, Germany
Gostritzer Straße 63, 01217 Dresden, Germany
Tuborg Parkvej 8, 2900 Hellerup, Denmark
30 Stamford Street Vivo Building, 4th floor, SE1 9LQ London, United Kingdom

is competent under the terms DIN EN ISO/IEC 17065:2013 to carry out certifications of products, processes and services in the following fields:

Wind turbines and their components, wind farm projects, wind power and photovoltaic plants, small wind turbines, ocean energy converters and related services and technologies; Grid connection of power generating units, generating plants and energy storage for wind energy, photovoltaics and other energies; Marking of offshore installations

The accreditation certificate shall only apply in connection with the notice of accreditation of 21.01.2020 with the accreditation number D-ZE-11053-01. It comprises the cover sheet, the reverse side of the cover sheet and the following annex with a total of 13 pages.

Registration number of the certificate: **D-ZE-11053-01-00**

Berlin, 21.01.2020

Dr. Heiko Minhel
Head of Division

The certificate together with its annex reflects the status at the time of the date of issue. The current status of the scope of accreditation can be found in the database of accredited bodies of Deutsche Akkreditierungsstelle GmbH.
https://www.dakks.de/en/content/accredited-bodies-dakks

- Onshore wind
- Offshore wind incl. floating
- Energy storage, solar/PV, wave and tidal

Certification is based upon:

- Internationally accepted standards
- Various national standards
- DNV service documents

Type Certification

- A wind turbine **type**
  - evaluated for compliance with applicable regulations and assumed conditions (e.g. wind turbine class)
- Selected design parameters and conditions
- Manufacturing process and type testing on a sample

VS.

Project Certification

- Power plant including wind turbines
  - evaluated for compliance with applicable regulations and **site-specific** conditions
- designed for a specific location
- manufactured for a specific project
- installed and commissioned under site-specific circumstances

Providing Project Certification experience to:

>130
offshore wind projects

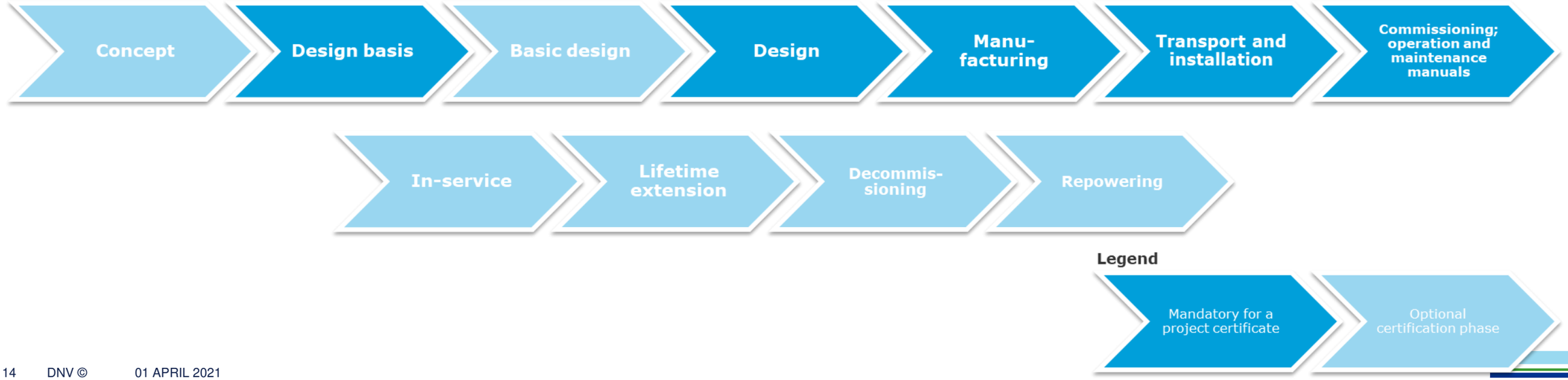
12
countries

21
Offshore projects in top emerging markets

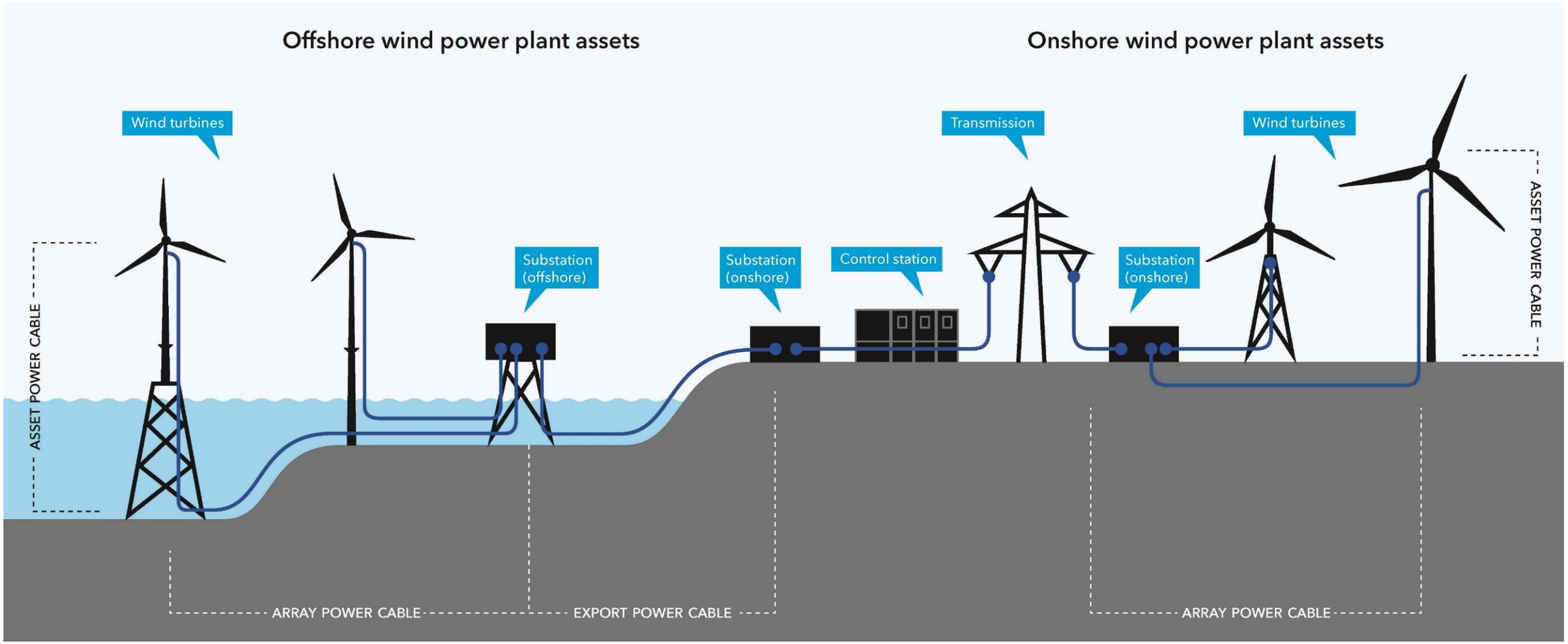
Project and certification - PHASES

- **Project phases - simplified phases**

- **Certification phases**



Wind power plant - ASSETS



Relevant standards and recommended practices – excerpt

DNVGL-ST-0437
Loads and site conditions wind for turbines

DNVGL-ST-0376
Rotor blades for wind turbines

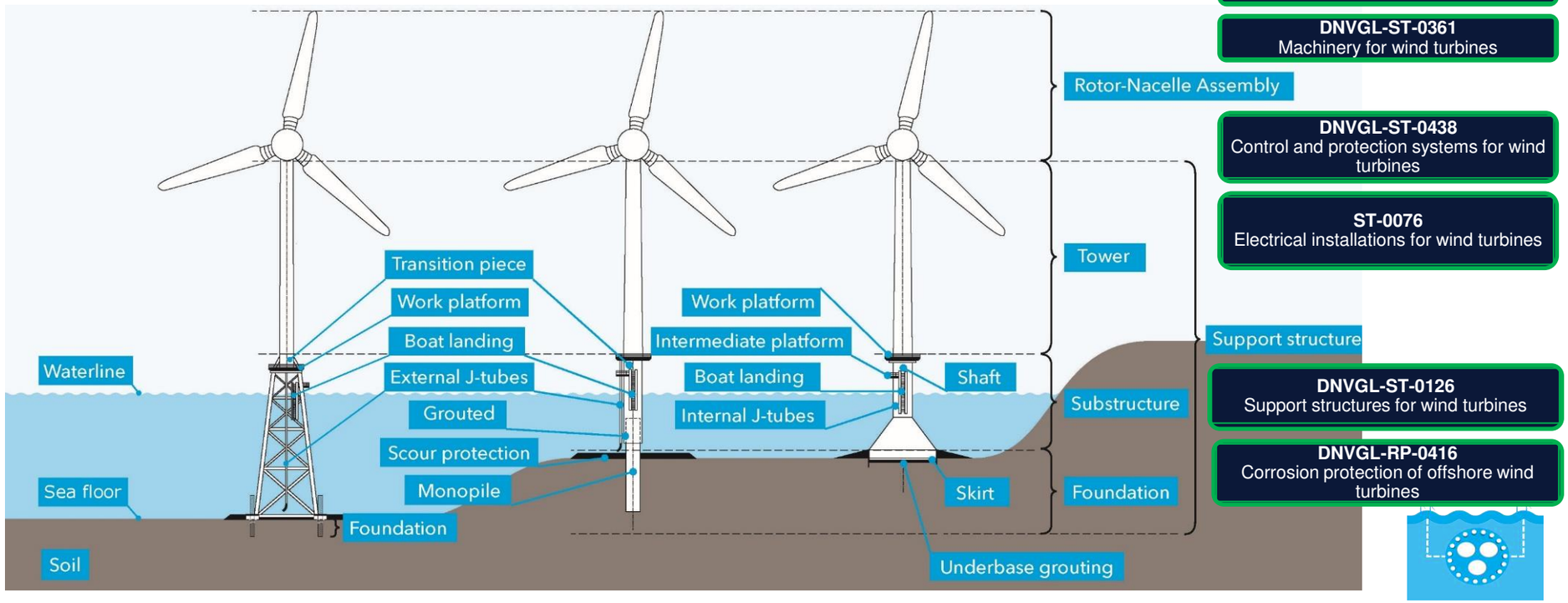
DNVGL-ST-0361
Machinery for wind turbines

DNVGL-ST-0438
Control and protection systems for wind turbines

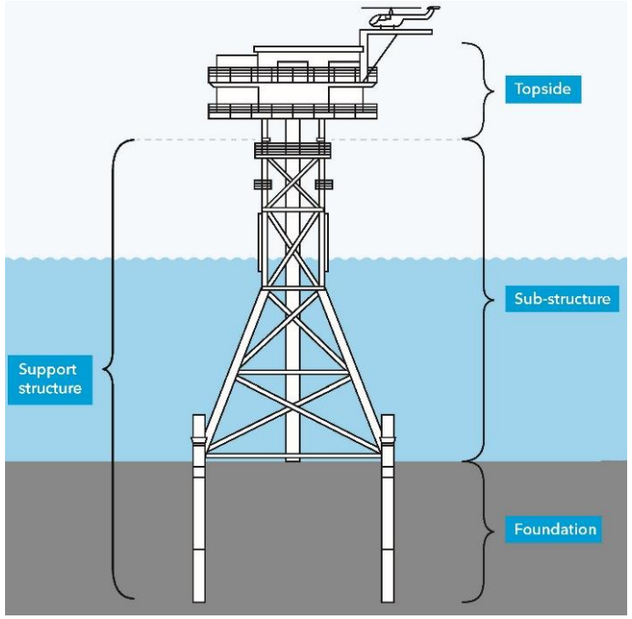
ST-0076
Electrical installations for wind turbines

DNVGL-ST-0126
Support structures for wind turbines

DNVGL-RP-0416
Corrosion protection of offshore wind turbines



DNVGL-ST-0145
Offshore substation



DNVGL-ST-0054
Transport and installation of offshore wind turbines

DNVGL-ST-0359
Subsea power cables

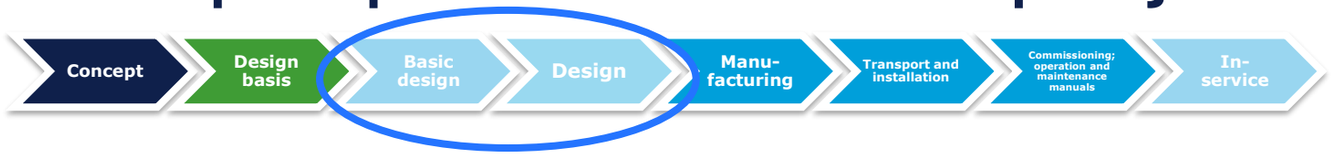
DNVGL-ST-0125
Grid Code Compliance

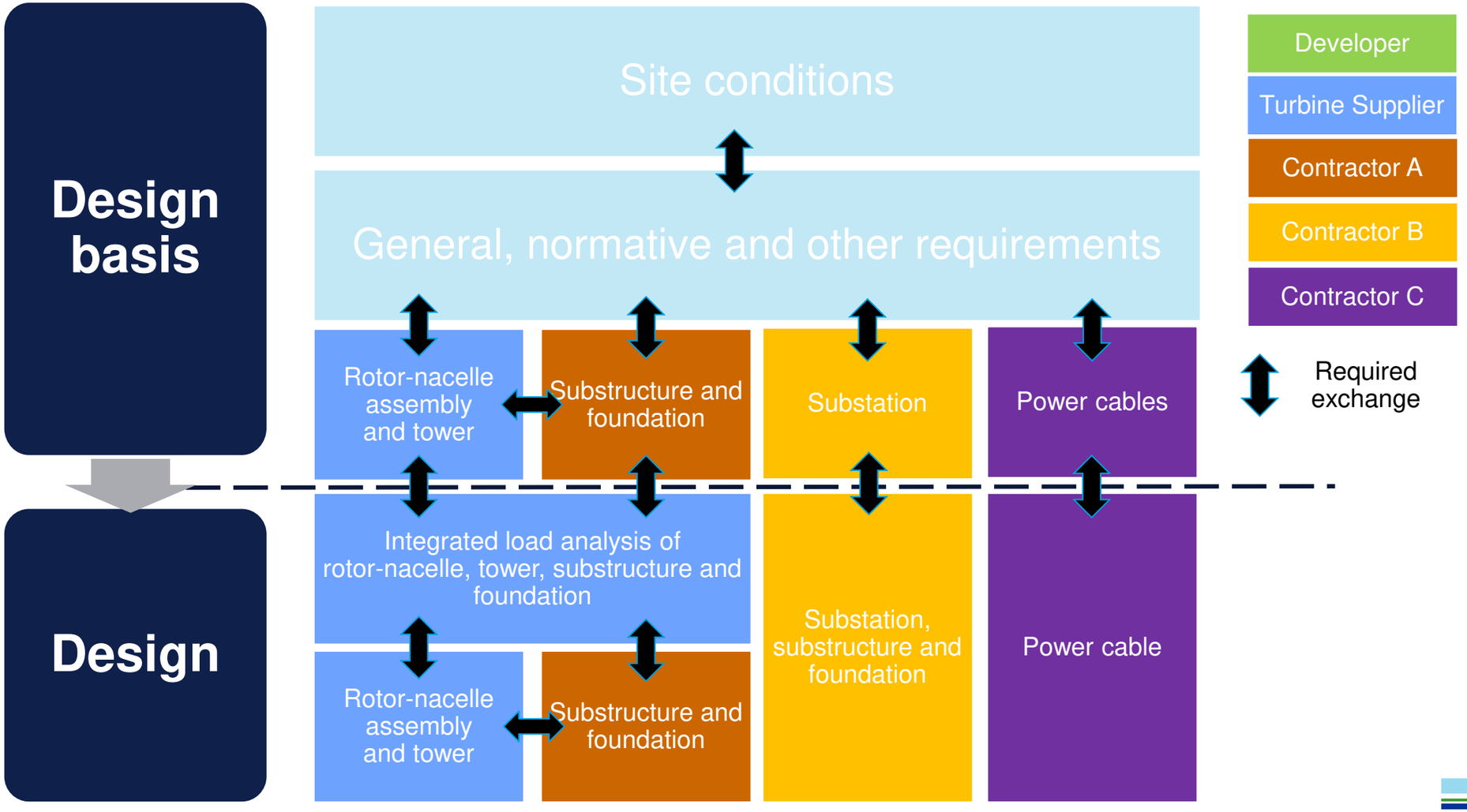
DNVGL-RP-0419
Analysis of grouted connections

DNVGL-RP-0423
Manufacturing and Commissioning of Offshore Substations (OSS)

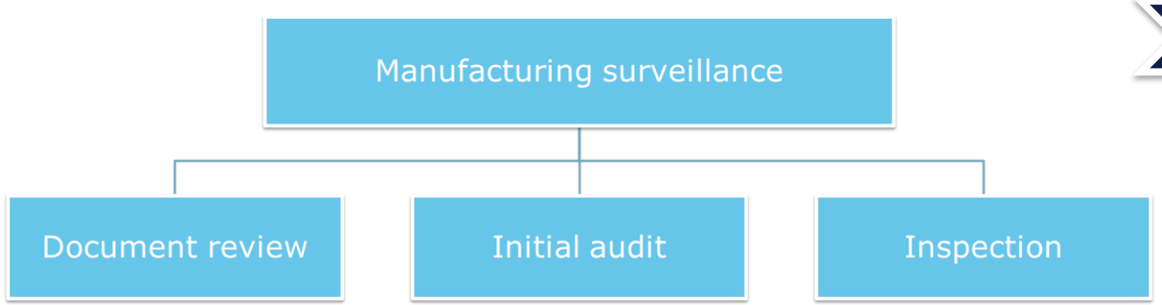
- DNV GL Energy documents are public available: https://rules.dnvgl.com/

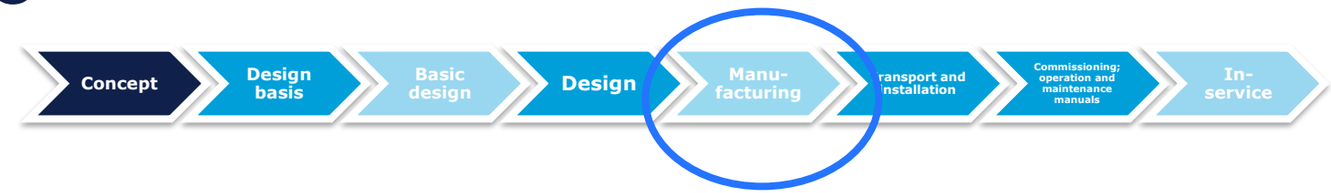
Multiple partners in the projects – communication lines





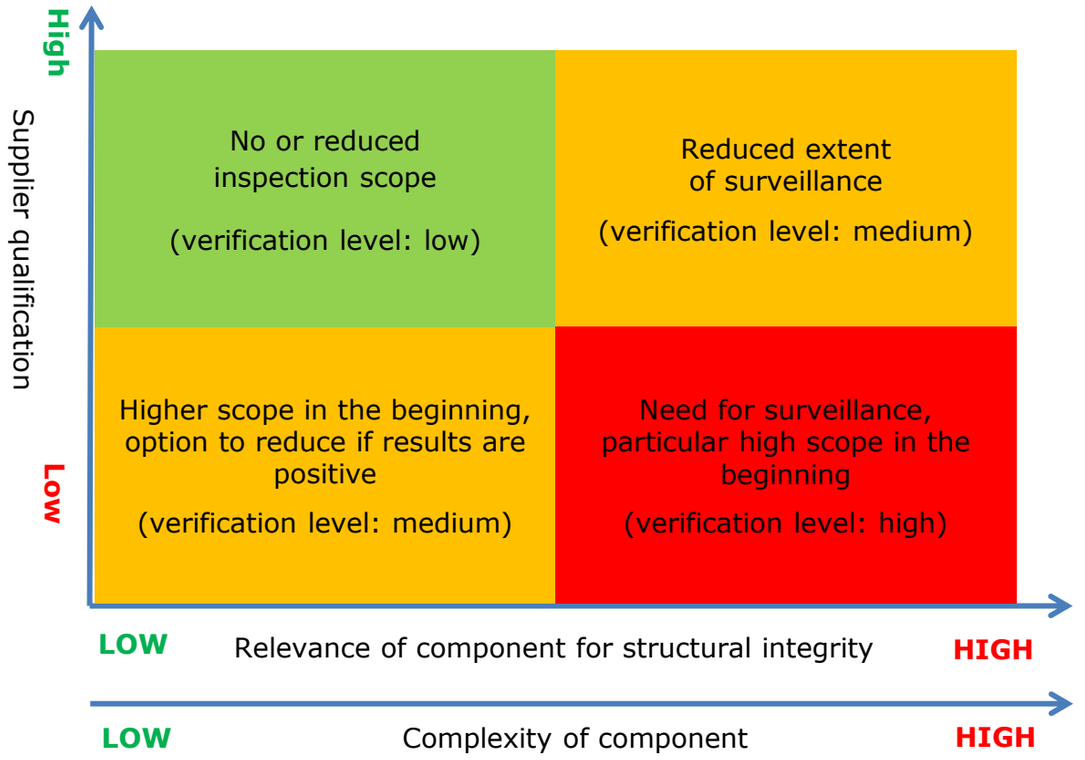
Manufacturing surveillance



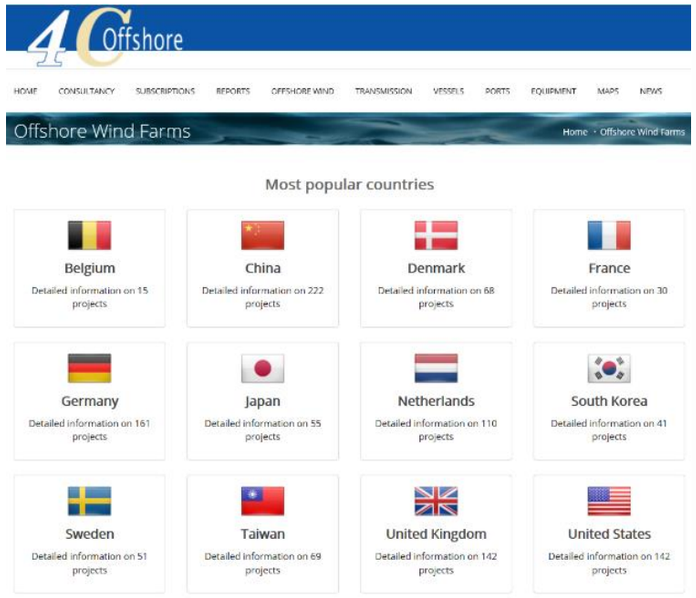


- survey of manufacturing
- evaluation of quality management system
- product related quality audits
- survey of contractor's quality management activities.

- The risk level is higher for a component (or an assembly) which failure leads to severe consequences.
- On the other hand a higher verification level will help to reduce the risk level.



Countries where typically certification for offshore wind is required



Required

Partly required

Offshore wind certification in France

- Responsible: Ministère de la Transition écologique
- NO legal framework or requirement for certification of offshore wind projects
  BUT: French offshore wind projects are applying project certification
  REASON: to reduce the liability risk in connection to the asset installed – Loi Spinetta (1978)
- Applied certification schemes for French offshore wind power plants:
  - IEC 61400-22 (withdrawn in 2018),
  - DNVGL-SE-0073 *Project certification of wind farms according to IEC 61400-22* DNVGL-SE-0190 *Project certification of wind power plants*
  - IECRE OD-502 *Project Certification Scheme*
- Project certification
  Project certification by an accredited certification body for offshore wind farms including the wind turbines is common practice.

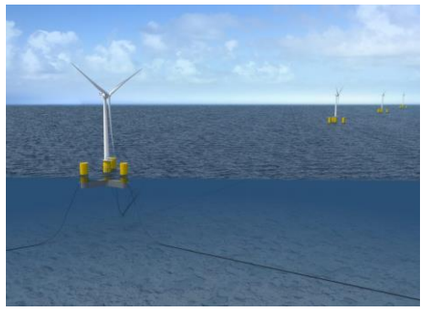
DNVGL Renewables Certification in France

Reference projects

LES EOLIENNES FLOTTANTES DE GROIX & BELLE-ILE

THREE 9,5 MW WIND TURBINES

28.5 MW — Capacity	20 YEARS — Operations & follow-up	22 KM — Distance from the french coast
230 M€ — Investment	2022 — Service	60 M — Water depth



Scope

Project Certification acc. to DNVGL-SE-0442

(ongoing)

Design Basis / Design Brief Certification for the floater acc. to DNVGL-SE-0442

Parc éolien en mer de Fécamp

71 wind turbines — Number of wind turbines	from 13 to 22 km — Distance from the coast	2023 — Provisional commissioning date

Scope

Certification of Design Basis

(2017-2021)

Parc éolien en mer du Calvados

64 wind turbines — Number of wind turbines	More than 10 km — Minimum distance from the coast	2024 — Provisional commissioning date

Scope

Certification of Design Basis

(2017-2020)

Parc éolien en mer de St-Nazaire

80 wind turbines — Number of wind turbines	More than 12 km — Minimum distance from the coast	2022 — Provisional commissioning date

Scope

Certification of Design Basis

(2017-2020)

Éoliennes en mer Dieppe Le Tréport

L'ÉNERGIE DU LARGE

- **62 wind turbines** manufactured by Siemens Gamesa Renewable Energy
- Power of each wind turbine: **8 MW**
- Total power of the park: **496 MW**
- Park located **15.5 km** from Le Tréport
- Park located **17 km** from Dieppe

Scope

Certification of Design Basis and Design

(ongoing)

Éoliennes en mer Yeu et Noirmoutier

L'ÉNERGIE DU LARGE

FOURNISSEUR OFFICIEL DU VENDÉE GLOBE 2020

- **62 éoliennes** fabriquées par Siemens Gamesa Renewable Energy
- Puissance de chaque éolienne : **8 MW**
- Puissance totale du parc : **496 MW**
- Parc situé à **11,7 km** de l'Île d'Yeu
- Parc situé à **16,5 km** de Noirmoutier

Scope

Certification of Design Basis and Design

(ongoing)

DNVGL Renewables Certification in France

Reference projects

Éoliennes en mer
Dieppe Le Tréport
L'ÉNERGIE DU LARGE

Project

62 Wind turbines, SGRE 8 MW Offshore turbine

1 offshore substation

Scope DNV

Certification Scheme: DNVGL-SE-0073

Design Basis / Design Brief Certification ongoing

Design Certification starting spring 2021

Éoliennes en mer
Yeu et Noirmoutier
L'ÉNERGIE DU LARGE

Project

62 Wind turbines, SGRE 8 MW Offshore turbine

1 offshore substation

Scope DNV

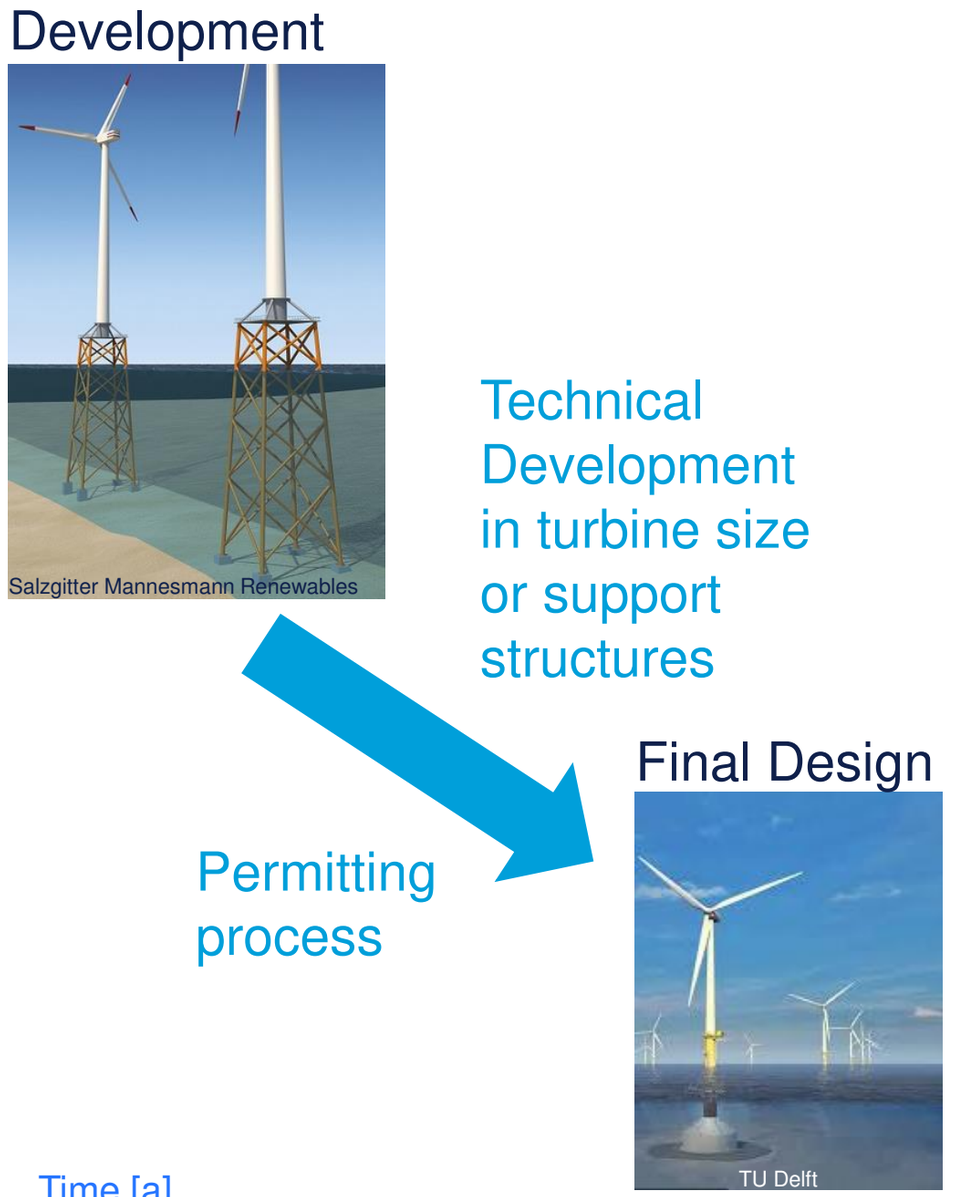
Certification Scheme: DNVGL-SE-0073

Design Basis / Design Brief Certification ongoing

Design Certification starting spring 2021

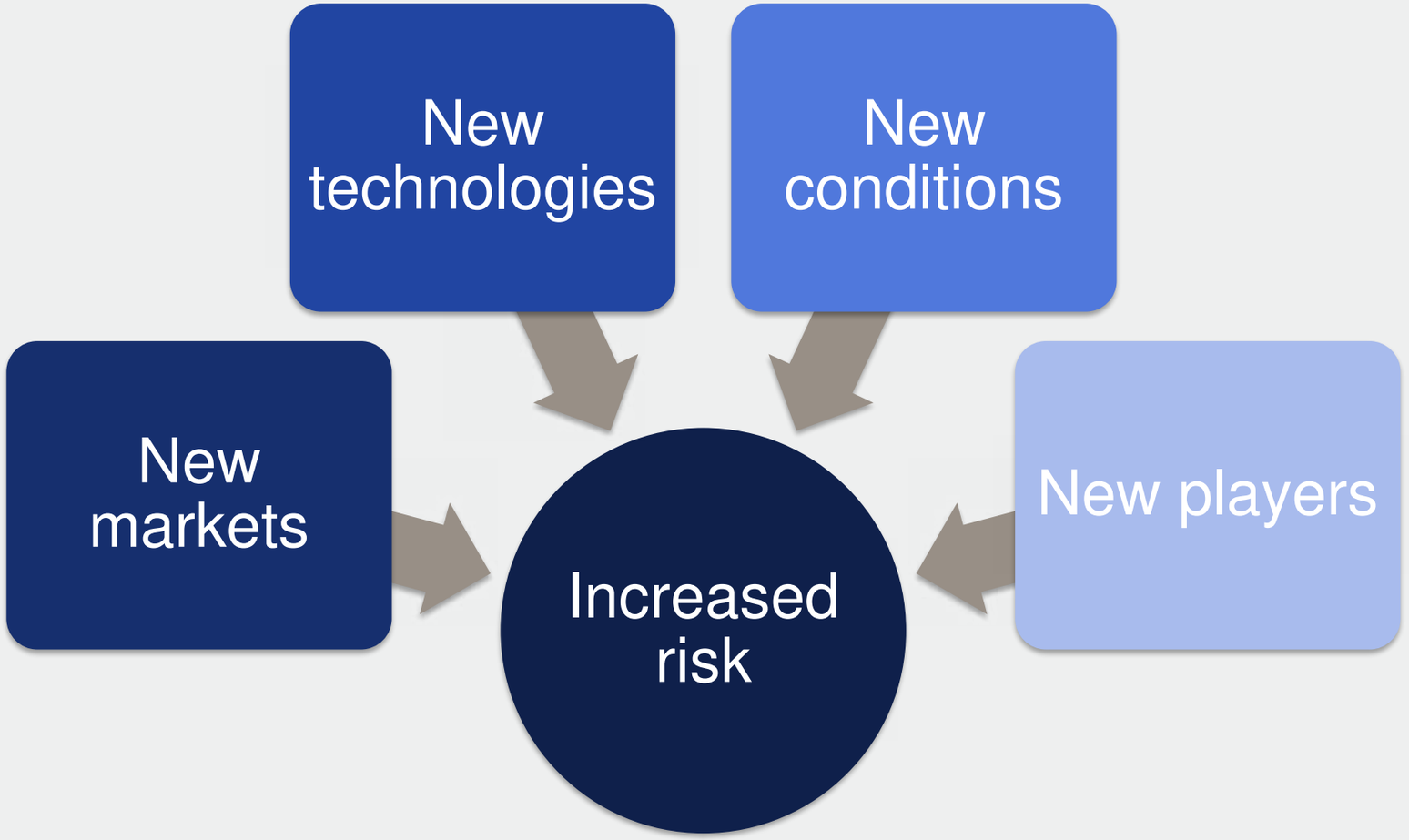
DNV’s experiences

- Acceptance within the population
- Extensive permitting process
- Static permission: No envelopes for turbines and support structures
  ⇒ Every changes requires an update of the permission
  ⇒ Extension of the planned timeline by around a year
- Requirements for local content
- Challenging environmental conditions in the Channel and on the Atlantic coast
  - Extreme tidal range on the Channel coast
  - Soil: rock on the Atlantic Coast
  - Water Depth especially on the Atlantic and Mediterranean coast

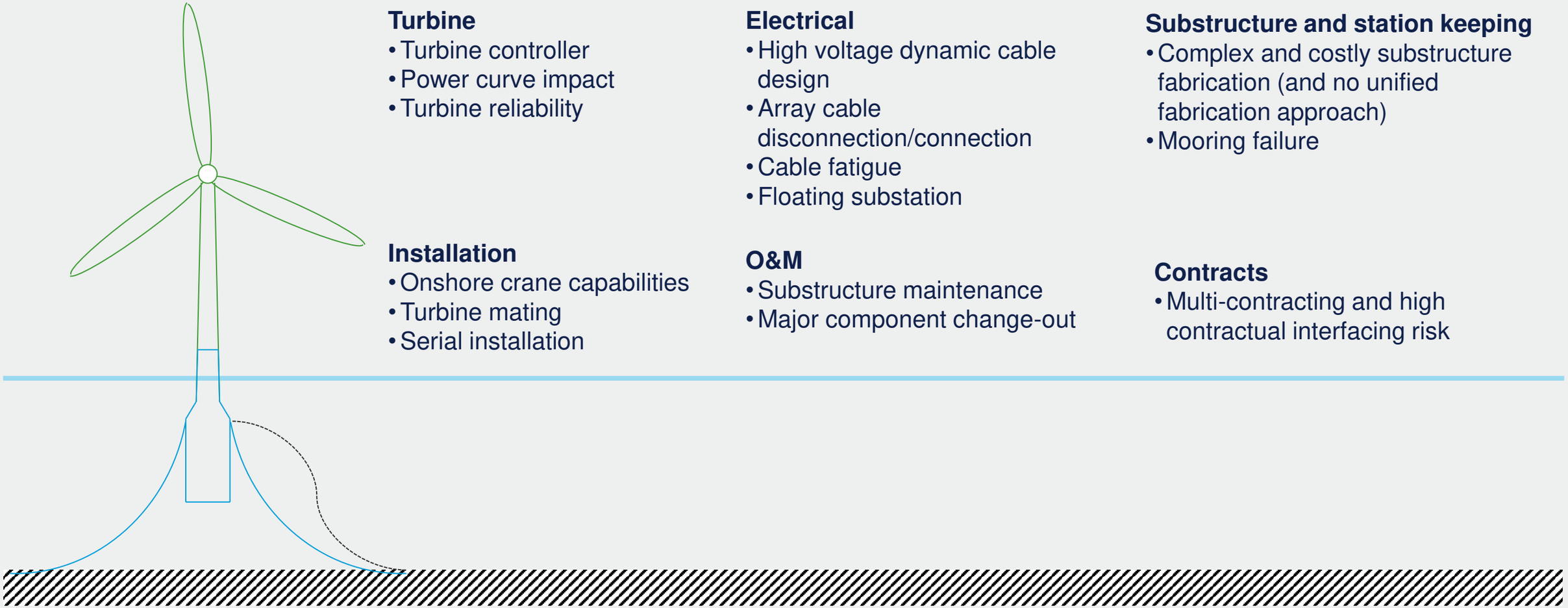


FWT Certification

New risks need to be managed



Floating wind projects – Specific challenges



Turbine
- Turbine controller
- Power curve impact
- Turbine reliability

Installation
- Onshore crane capabilities
- Turbine mating
- Serial installation

Electrical
- High voltage dynamic cable design
- Array cable disconnection/connection
- Cable fatigue
- Floating substation

O&M
- Substructure maintenance
- Major component change-out

Substructure and station keeping
- Complex and costly substructure fabrication (and no unified fabrication approach)
- Mooring failure

Contracts
- Multi-contracting and high contractual interfacing risk

Floating Wind standards, certification and classification

Selected reference projects

Hywind demo (2008)

Pelastar FEED (2013)

VolturnUS – concept (2014)

aerodyn SCD nezzy – concept (2014)

ACS - concept (2014-2015)

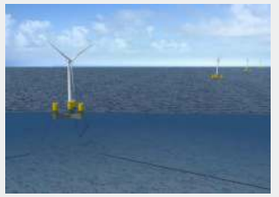
WindFloat Atlantic (2015- 2018)

Hywind Scotland (2015-2017)

Nautilus – concept (2017)

Hywind Tampen
selected reviews (ongoing)

Groix & Belle-Ile wind farm
Project Cert. (ongoing)



DNV Guideline
(2009)

JIP: Development of
DNV-OS-J103 Technical requirements
(2011-2013)

JIP: Development of
DNVGL-RP-0286 Coupled analysis
(2016-2019)

2018:
DNVGL-SE-0422 Certification procedure
DNVGL-ST-0119 Technical requirements
DNVGL-RP-0286 Guidance analysis (2019)

2020:
DNVGL-RU-OU-0512 Classification
Update of DNVGL-ST-0119 in 2021

INNWIND.EU
2012 - 2017

LIFES50+
2015 - 2019

FLAGSHIP
2020 - 2023

DNV

DNV service documents for floating offshore wind farms

PROCEDURAL REQUIREMENTS FOR WIND POWER PLANT*

PROJECT CERTIFICATION

- **DNVGL-SE-0190** Project certification of wind power plants

PROCEDURAL REQUIREMENTS FOR FLOATING WIND TURBINES

CERTIFICATION

- **DNVGL-SE-0422** Certification of floating wind turbines:
  - includes services for floating wind turbines, acknowledging the various development stages from concept, prototype to farm configuration
  - implements type certified turbines

CLASSIFICATION

- **DNVGL-RU-OU-0512** Floating offshore wind turbine installations:
  - includes rules for classification of hull and mooring system
  - turbine & tower may be covered by voluntary class notation

TECHNICAL REQUIREMENTS AND GUIDANCE FOR FLOATING WIND TURBINES

TECHNICAL REQUIREMENTS

- **DNVGL-ST-0119** Floating wind turbine structures:
  - provides principles, technical requirements and guidance for design, construction and in-service inspection of floating wind turbine structures, here defined as the support structures (tower and substructure) and station keeping systems for floating wind turbines

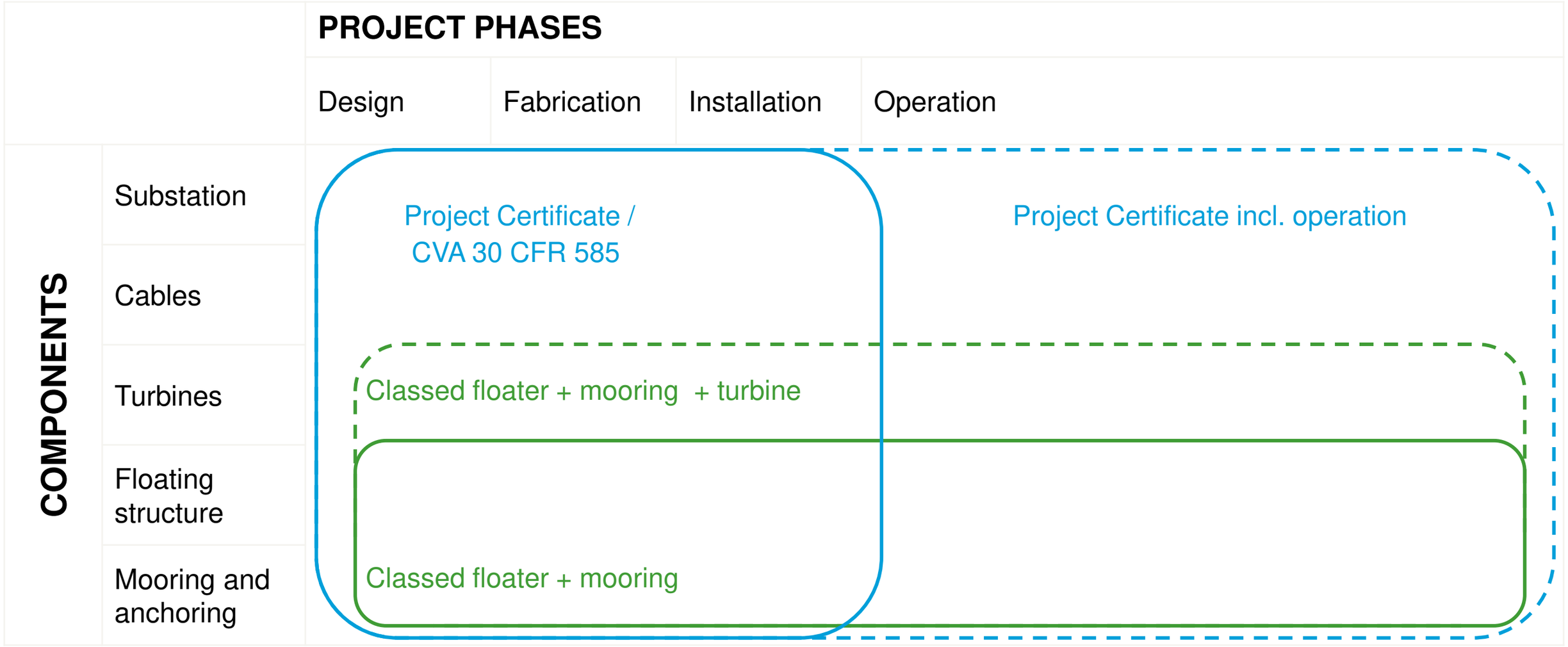
GUIDANCE / BEST PRACTICE

- **DNVGL-RP-0286** Coupled analysis of floating wind turbines:
  - provides gives guidance for modelling, load analysis and model testing of floating offshore wind turbines

*Particular relevant for developers and owners of wind power plants

DNV is an accredited certification/classification body for floating wind

Project Certification and Class rules



DNV GL-SE-0422 Certification of floating wind turbines

- Service description specific for floating installations - includes all development phases:


DNV·GL

SERVICE SPECIFICATION

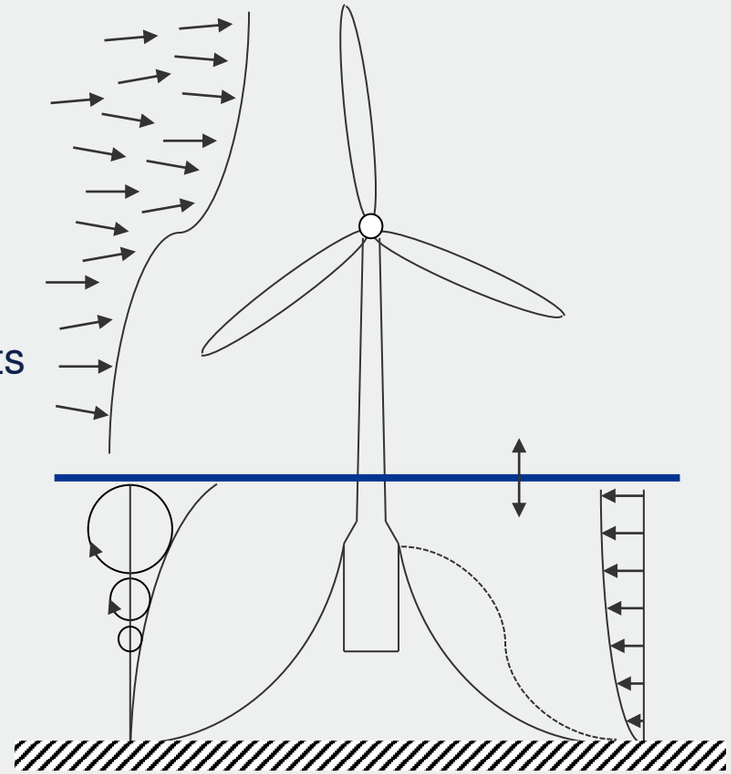
DNVGL-SE-0422 Edition July 2018

Certification of floating wind turbines

The electronic pdf version of this document, available free of charge from http://www.dnvgl.com, is the officially binding version.

DNV GL AS

- Applicable for components and complete systems
- Risk based approach
- Extension to DNV GL's existing service specifications:
  - DNVGL-SE-0190 Certification of wind power plants
  - DNVGL-SE-0441 Type and component certification of wind turbines
- IEC compatible



Consideration of changing floating elements

Loading, stability

Structure type

Mooring and anchors

Fabrication

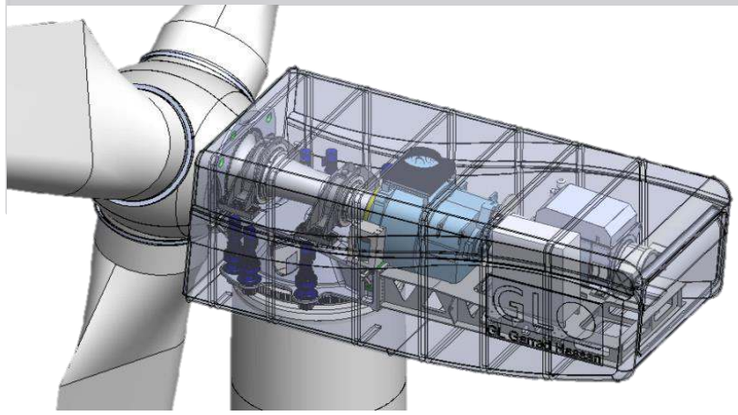
Installation and O&M

DNV

Basic renewables certification elements

Design Basis & Design Assessment

- Plausibility of the design
- Protection and safety
- Loading
- Structural analysis
- Mechanical & electrical installation
- Examination of drawings
- Examination of components



Test

- Model tests
- Component tests
- Test of the prototype
- Comparison of test results with assumptions

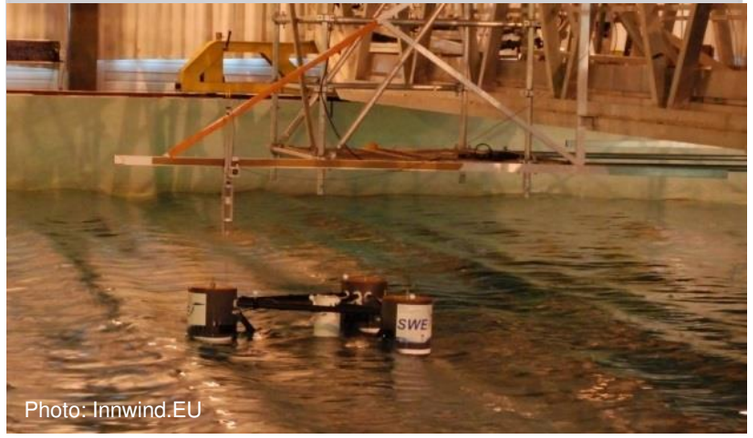


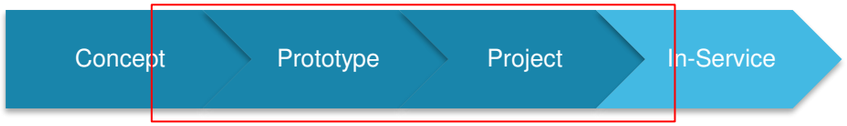
Photo: Innwind.EU

Survey and Quality Control

- Examination of fabrication quality
- Witnessing of installation
- Witnessing of commissioning


Photo: Scotrenewables

Prototype and Project certification



- **Objectives**

Ensure safety and integrity

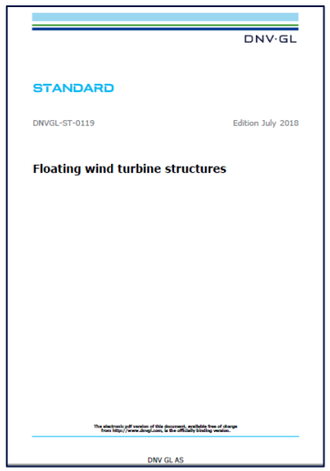
Provide independent review/analysis

Cover critical technical interfaces

Assure documentation is in order and complete

System level review

- **Scope of Work**
  - Site Conditions
  - Design Basis
  - *ILA (Independent Load Analysis)**
  - Design
  - Manufacturing
  - Testing
  - *Transportation & installation**
  - *Commissioning**
  - *Periodic monitoring**


DNV·GL

STANDARD

DNVGL-ST-0119 Edition July 2018

Floating wind turbine structures

DNV GL AS

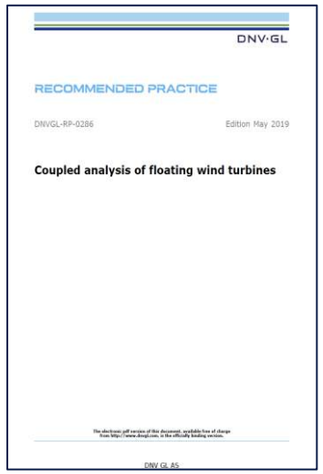

IEC

IEC TS 61400-3-2

Edition 1.0 2019-04

TECHNICAL SPECIFICATION

Wind energy generation systems – Part 3-2: Design requirements for floating offshore wind turbines

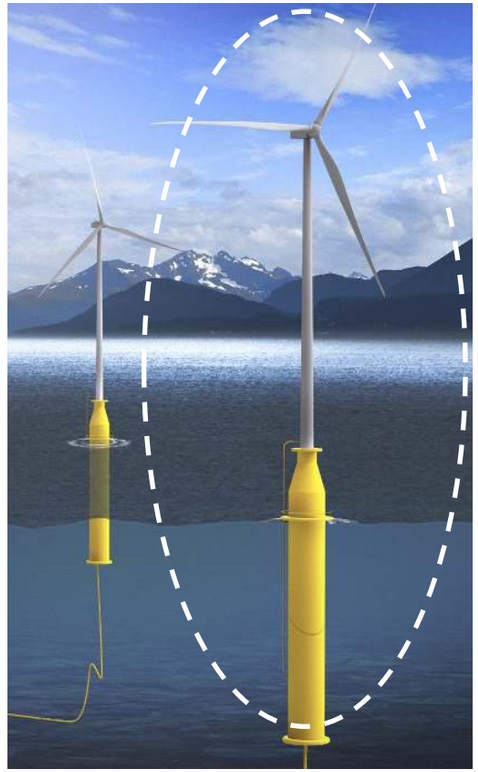

DNV·GL

RECOMMENDED PRACTICE

DNVGL-RP-0286 Edition May 2019

Coupled analysis of floating wind turbines

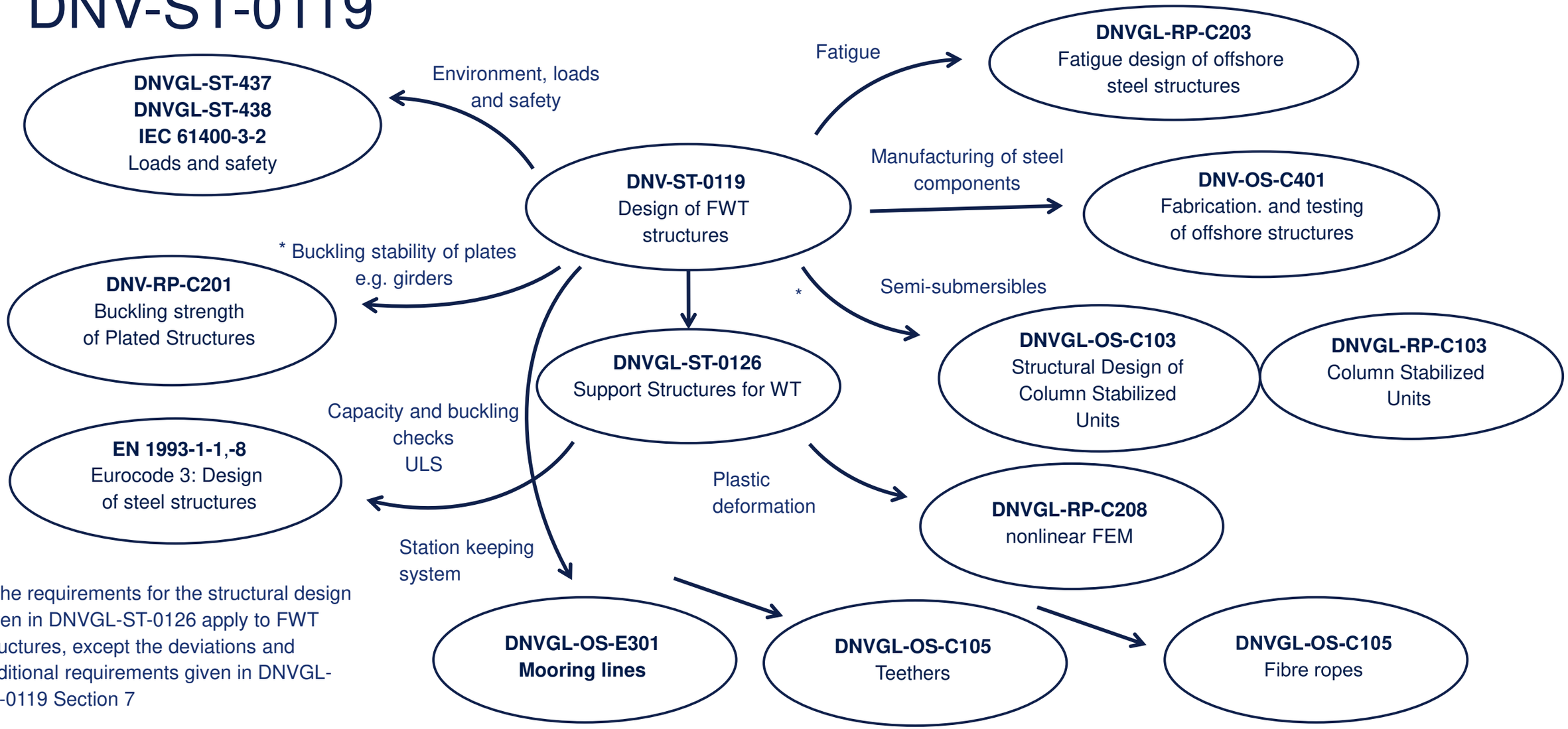
DNV GL AS



*Project certification only

DNV

References scheme for Floater Structural Verification in DNV-ST-0119



* The requirements for the structural design given in DNVGL-ST-0126 apply to FWT structures, except the deviations and additional requirements given in DNVGL-ST-0119 Section 7

Challenges = Opportunities

Offshore Wind Turbine Certification

Éolien en Mer Flottant : Journée filière Wind'Occ 2021

susanne.landskroener@dnv.com, kimon.argyriadis@dnv.com

www.dnv.com

Certifications et formations, témoignages d’entreprises régionales:
CAMERON / Schlumberger site de Béziers

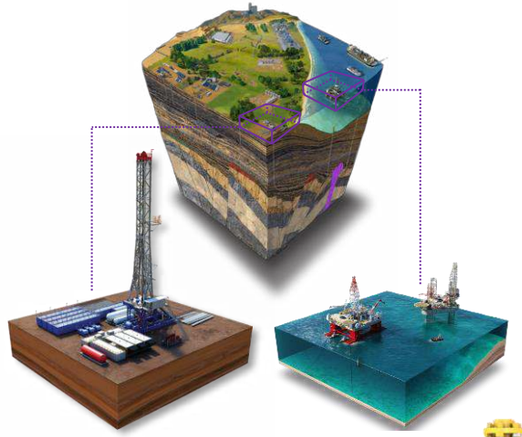
(Luc Mas, Schlumberger / Benoît Jauzion, Schlumberger / Stéphane Henry, Schlumberger)

WIND'OCC 2021

L. Mas / S. Henry / B. Jauzion

01 Avril 2021

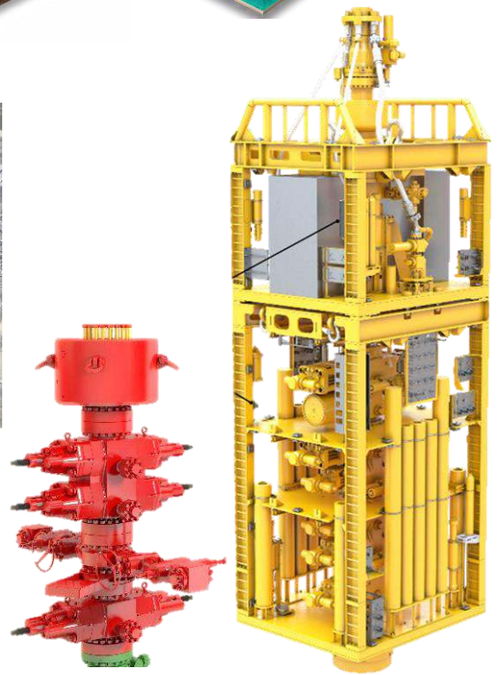
Cameron, a Schlumberger Company



- Fabricant d'équipements pour le secteur Oil & Gas destinés à la mise en sécurité de forages terrestres ou en mer.
- Division « New Energy » rassemblant différentes initiatives (électrolyseur H2, géothermie, lithium, éolien/photovoltaïque offshore)
- Site de production en Occitanie

Usine de Béziers: environ 10 Ha et 500 employés

Port de Sète: Zone d'assemblage final et d'expédition maritime



- Des produits réglementés et certifiés par des normes internationales API (American Petroleum Institute), NACE, ISO,…
- Une clientèle répartie sur tous les continents
- Des demandes permanentes de certification et d'inspection de nos produits par des organismes indépendants

DNV et nous, un partenariat quotidien

Nos activités communes

- Certification de **conformité de nos designs** aux exigences DNV
- **Inspection** des nos équipements en cours ou en fin de production selon les plans qualité
- Validation de nos **Certificats de Conformité**
- Validation de nos PV de tests de **qualification de nos produits** (incluant les prototypes)
- **Re-certification** des équipements revenants en usine après utilisation sur chantier pour une durée maximum de 5 ans

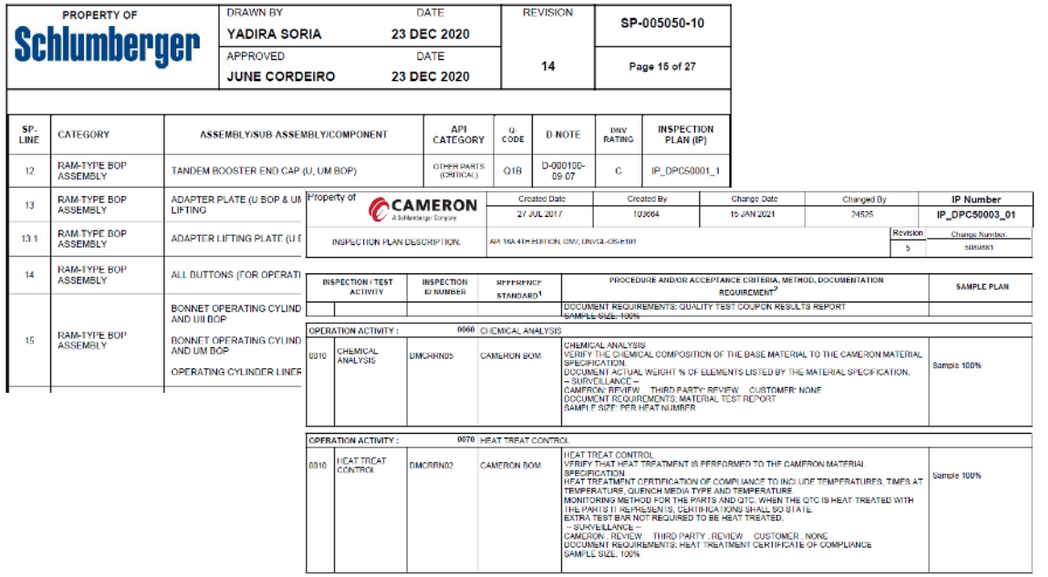
Nos contacts

- Entre les **bureaux d'études** Cameron et ceux de DNV basés à Oslo et Houston
- Entre les **services Qualité** de Cameron et de DNV, dont le bureau le plus proche est basé à Marseille
- Entre le service **contrôle qualité Cameron et les inspecteurs** DNV présents en permanence sur notre site

Exigence qualité

Normes

- Exigences qualité des spécifications DNV, par exemple DNV-OS-E101 (« drilling ou well intervention » équipements), standard 2.7-3 (« portable offshore unit »), standard 2.22 (« lifting appliances »)…
- Conversion en langage interne SP (spécification qualité générale) et IP (plan qualité individuel par type de pièce)



PROPERTY OF Schlumberger | DRAWN BY: YADIRA SORIA | DATE: 23 DEC 2020 | APPROVED: JUNE CORDEIRO | DATE: 23 DEC 2020 | REVISION: 14 | SP-005050-10 | Page 15 of 27

SP-LINE	CATEGORY	ASSEMBLY/SUB ASSEMBLY/COMPONENT	API CATEGORY	Q-CODE	D NOTE	DNV RATING	INSPECTION PLAN (IP)
12	RAM-TYPE BOP ASSEMBLY	TANDEM BOOSTER END CAP (U, UM BOP)	OTHER PARTS (CRITICAL)	Q1B	D-000100-09-07	C	IP_DPC50001_1
13	RAM-TYPE BOP ASSEMBLY	ADAPTER PLATE (U BOP & UM LIFTING					
13.1	RAM-TYPE BOP ASSEMBLY	ADAPTER LIFTING PLATE (U E					
14	RAM-TYPE BOP ASSEMBLY	ALL BUTTONS (FOR OPERATI					
15	RAM-TYPE BOP ASSEMBLY	BONNET OPERATING CYLIND AND UII BOP BONNET OPERATING CYLIND AND UM BOP OPERATING CYLINDER LINER					

Property of CAMERON (A Schlumberger Company)

Created Date	Created By	Change Date	Changed By	IP Number
27 JUL 2017	103664	15 JAN 2021	24525	IP_DPC50003_01

INSPECTION PLAN DESCRIPTION: API 16A 4TH EDITION, DNV, DNVGL-OS-E101 | Revision: 5 | Change Number: 5858883

INSPECTION / TEST ACTIVITY	INSPECTION ID NUMBER	REFERENCE STANDARD[1]	PROCEDURE AND/OR ACCEPTANCE CRITERIA, METHOD, DOCUMENTATION REQUIREMENT[2]	SAMPLE PLAN
			DOCUMENT REQUIREMENTS: QUALITY TEST COUPON RESULTS REPORT SAMPLE SIZE: 100%	
OPERATION ACTIVITY : 0060 CHEMICAL ANALYSIS				
0010 CHEMICAL ANALYSIS	DMCRN05	CAMERON BOM	CHEMICAL ANALYSIS VERIFY THE CHEMICAL COMPOSITION OF THE BASE MATERIAL TO THE CAMERON MATERIAL SPECIFICATION. DOCUMENT ACTUAL WEIGHT % OF ELEMENTS LISTED BY THE MATERIAL SPECIFICATION. – SURVEILLANCE – CAMERON: REVIEW THIRD PARTY: REVIEW CUSTOMER: NONE DOCUMENT REQUIREMENTS: MATERIAL TEST REPORT SAMPLE SIZE: PER HEAT NUMBER	Sample 100%
OPERATION ACTIVITY : 0070 HEAT TREAT CONTROL				
0010 HEAT TREAT CONTROL	DMCRN02	CAMERON BOM	HEAT TREAT CONTROL VERIFY THAT HEAT TREATMENT IS PERFORMED TO THE CAMERON MATERIAL SPECIFICATION. HEAT TREATMENT CERTIFICATION OF COMPLIANCE TO INCLUDE TEMPERATURES, TIMES AT TEMPERATURE, QUENCH MEDIA TYPE AND TEMPERATURE. MONITORING METHOD FOR THE PARTS AND QTC. WHEN THE QTC IS HEAT TREATED WITH THE PARTS IT REPRESENTS, CERTIFICATIONS SHALL SO STATE. EXTRA TEST BAR NOT REQUIRED TO BE HEAT TREATED. – SURVEILLANCE – CAMERON: REVIEW THIRD PARTY: REVIEW CUSTOMER: NONE DOCUMENT REQUIREMENTS: HEAT TREATMENT CERTIFICATE OF COMPLIANCE SAMPLE SIZE: 100%	Sample 100%

Fruit du partenariat

DAP: « Design Approval Package »
revue individuelle d'un de nos designs par le BE de DNV

TAP: « Type Approval Package »
revue globale de design par le BE de DNV afin de valider une famille de produits

SURVEY: surveillance de DNV d… nos ateliers

MSA: « Manufacturer Survey Arrangement »
délégation des droits de certification donnée par DNV à Cameron Béziers

Formation

- Formation et adaptation au poste de nos employés
- Réunion de Pré-Production avec nos fournisseurs
- Formation sur site d'étudiants de l'IFP (Institut Français du Pétrole)
- Formation sur site de nouveaux collaborateurs chez nos clients

Bilan du partenariat Cameron Béziers et DNV

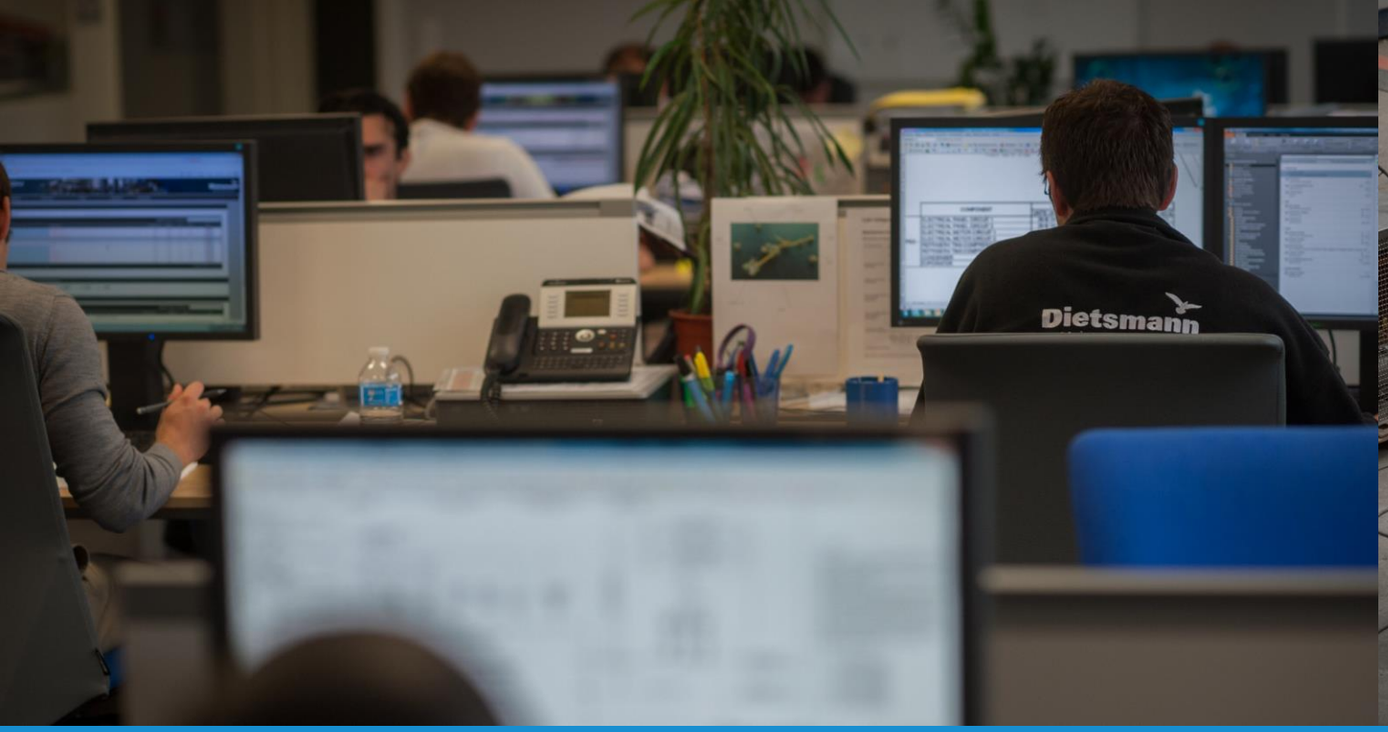
- Quelques chiffres:
  - **+30 années** de collaboration
  - 1 inspecteur au minimum présent sur site **tous les jours depuis 2014**
  - Environ **200 dossiers** de production signés par DNV **en 2020**
- Grande compréhension mutuelle de nos contraintes.
- Processus fluides et simplifiés = souplesse vis-à-vis du planning de production
- Garantie additionnelle pour nos clients.

Facteurs clés de succès

- Transparence et communication ouverte
- Intégration des exigences DNV à nos plans Qualité

Certifications et formations, témoignages d’entreprises régionales: Dietsmann

(Cédric Fargues, Dietsmann)



DIETSMANN TECHNOLOGIES FRANCE

INGÉNIERIE, CONSTRUCTION, ACHATS & FORMATIONS

SMART MAINTENANCE SOLUTIONS FOR CONTINUOUS PRODUCTION PLANT

Dietsmann
Maintaining Energy

DIETSMANN FRANCE

Basé à Salies-du-Salat, dans le sud-ouest de la France, 24000 m² répartis entre les bureaux d'ingénierie, le service achats et l'atelier de construction

NOS ACTIVITÉS :

- Ingénierie & Construction dans les domaines de l'Électricité, l'Instrumentation & le CVC
- Réalisation et tests de tableaux électriques BT
- Conception et réalisation de cabines techniques (shelters)
- Service Achat & Logistique
- Centre de formations techniques et règlementaires

NOS STANDARDS QHSE :

- Système de Gestion de la Qualité
- Charte & Politique QHSE
- Certificat ISO 9001
- Certificat ISO 14001
- Certificat ISO 45001
- Certification MASE
- Certification QUALIOPI

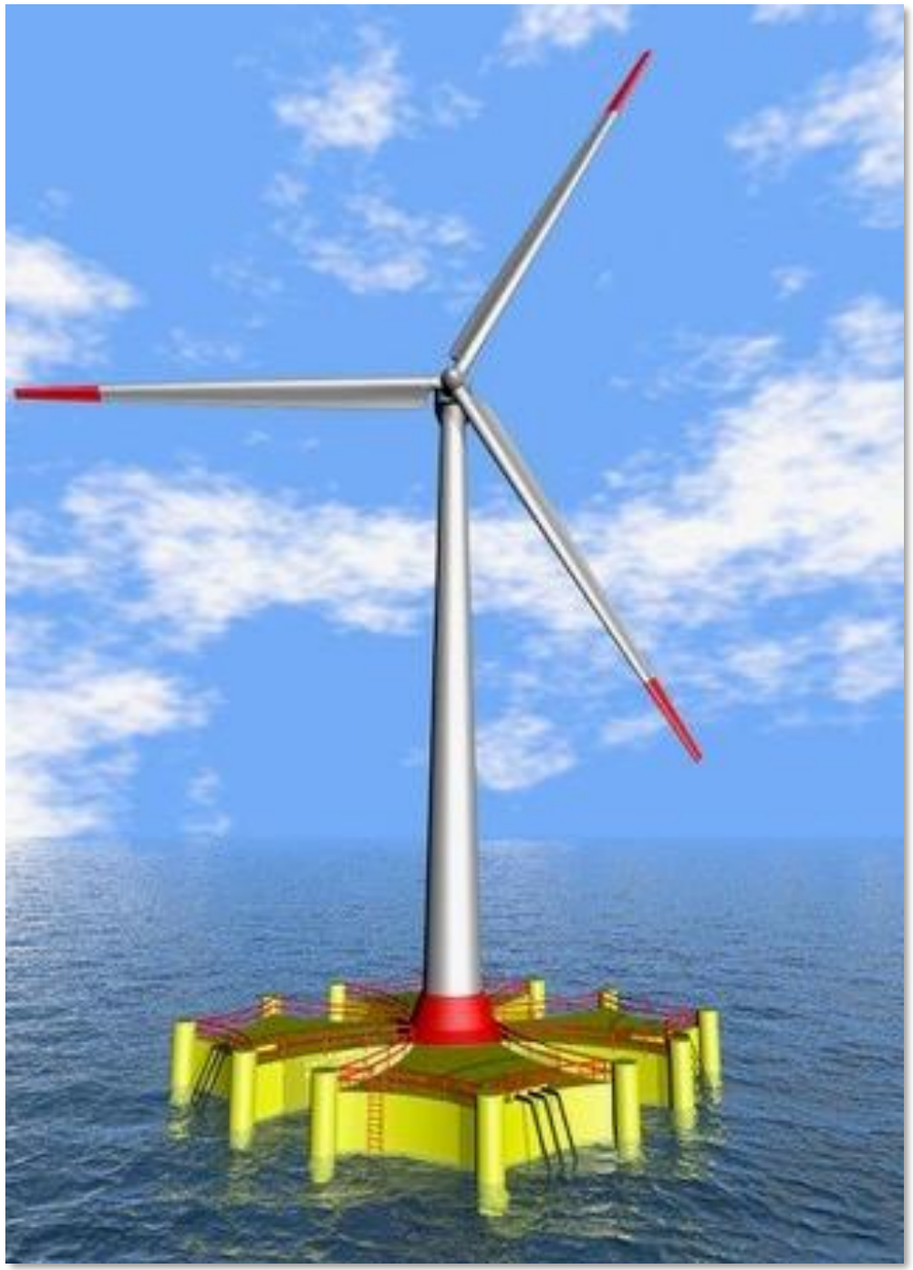
SMART MAINTENANCE SOLUTIONS FOR CONTINUOUS PRODUCTION PLANT

CENTRE DE FORMATIONS TECHNIQUES ET REGLEMENTAIRES

Nos formations :

- Formations réglementaires, Habilitation Électrique suivant la NFC18-510, Travaux sous Tension Batteries suivant la NFC18-505, Atmosphère Explosive (Ism_ATEX INERIS)
- Formations techniques dans les métiers de l'Électricité, la Mécanique, l'Instrumentation & le CVC
- Formations réalisées en présentiel ou en distanciel
- 1000m² dédiés à la formation dont 1 salle de Métrologie, 1 local de simulation salle électrique HT/BT, 2 salles de cours, 1 atelier mécanique de 400m², 1 salle spécifique à l'instrumentation et un local dédié aux Travaux sous Tension Batteries

Échanges participants et suites à donner



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