# PASCAL CHARLES VP EDF R&D, HEAD OF POWER GENERATION AND ENGINEERING RESEARCH ACTIVITIES

## Background

- 52 years old
- Graduated from engineer schools "Ecole Polytechnique", then "Ecole Nationale des Ponts et Chaussées"
- Civil Engineering for great bridges design and construction (10 years)
- Nuclear Engineering within EDF working on New Built (EPRs, mainly Flamanville 3, Taishan and Hinckley Point) (10 years)
- R&D for nuclear research since 2019

## **Actual Position**

- Head of Power Generation & Engineering R&D Activities
- Provide methods, tools, studies, products with an R&D and Innovative prospective to the different operational divisions of EDF Group
- Use R&D&I to address safety issues, increase performance of the nuclear power plant, work on Long Term Operation, address fuel cycle issues, develop R&D for new reactors (EPR, SMR, AMR) and work on transverse topics (numerical simulation, environment, experimental...).
- Management of 6 discipline department (roughly 900 people) and program team







### **NUCLEAR NEW BUILT**

## FROM THE LESSONS LEARNT OF THE PAST ...

Feedback from EPR "Family" (Flamanville3, Olkiluoto 3, Taishan 1&2, and Hinkley Point 1&2)









#### Main Lessons Learnt:

- Ensure a better readiness of the design
- ✓ Promote Series effect
- ✓ Organize and industrialize the Supply Chain (skills)
- Stabilize the safety case and simplify the design
- ✓ Ensure Constructability
- Improve some fragilities (welding skills...)

## ... TO A BETTER PERFORMANCE IN CONSTRUCTION

#### EPR2 ways to achieve success...



#### ... and benefits for other products

EPR, EPR 1200, nuward SMR