



Research for a
better future

Human Factors
in Control

19th October
2021

How understanding human-technology interaction in Small Modular Reactors can support the green shift

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Technology may be the
key to the green shift



Technology is already
changing the way we do
things



There is a growing trend towards centralisation of control, using technology to remotely monitor and operate systems



What impact does new technology have on the people interacting with it?



IFE has been researching human-technology interaction in the Halden Project



1958 - 2020



HALDEN PROJECT

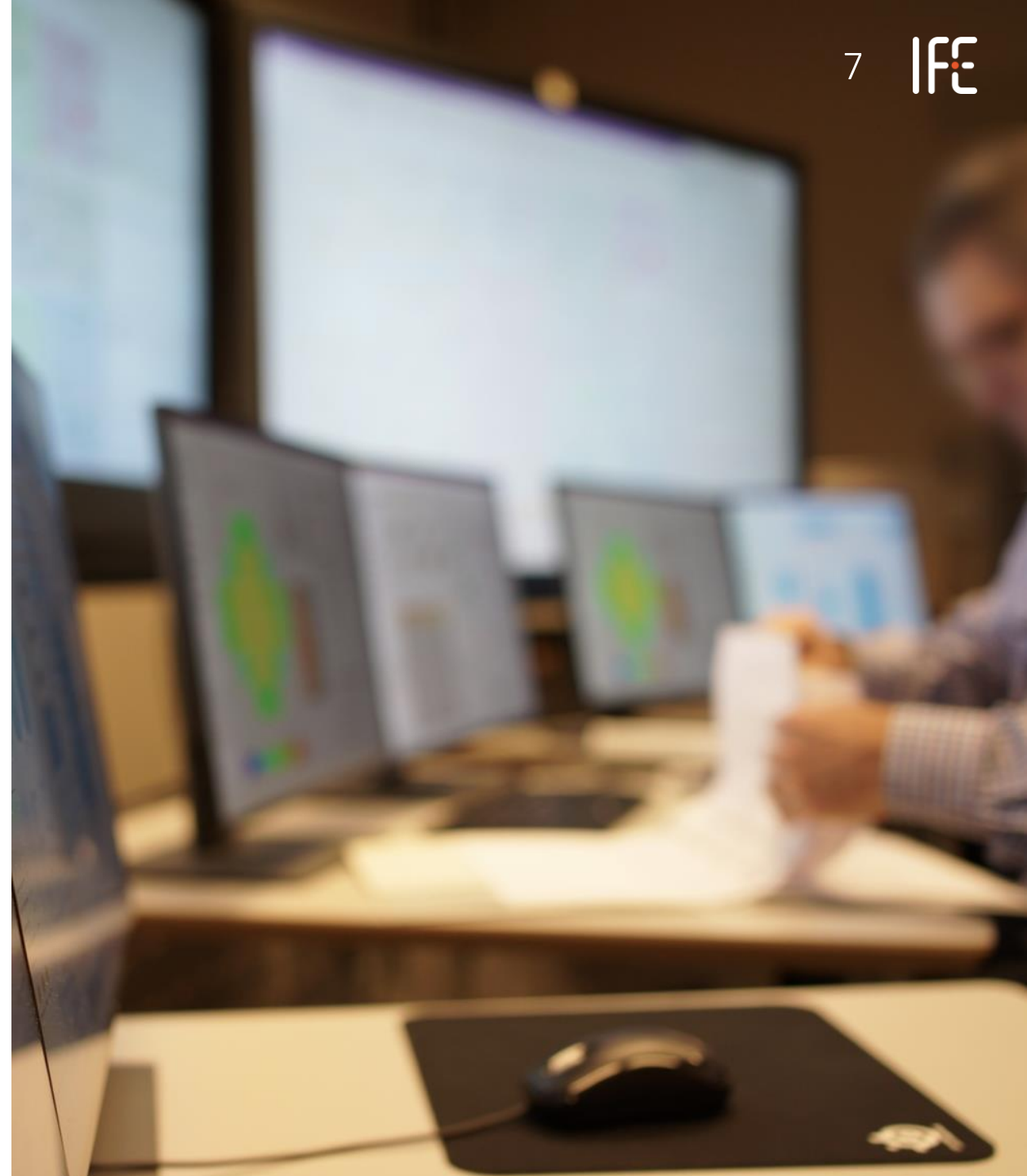
HTO

Established 2021

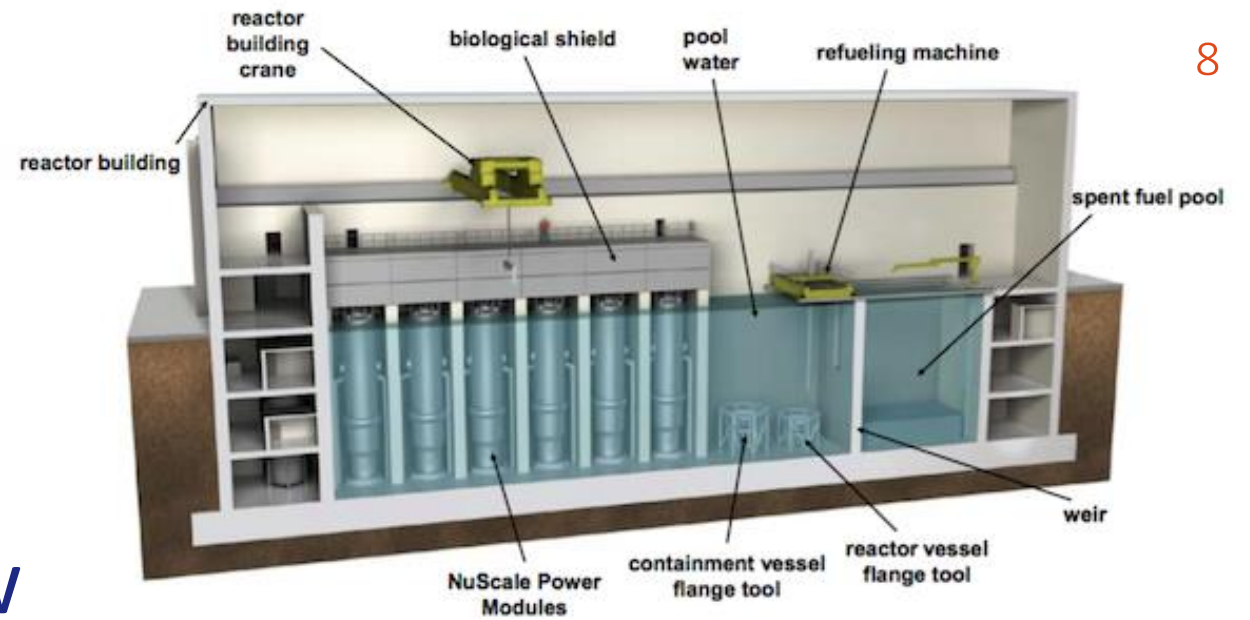
2021 – 2023 HTO Topic 4 Human-Automation Collaboration

- Activity 4.1: Human Performance in Operation of Small Modular Reactors
- Activity 4.2: Operator Performance in Highly Automated Plants
- Activity 4.3: Effects of Adaptive Automation on Operator Performance in Future Plants

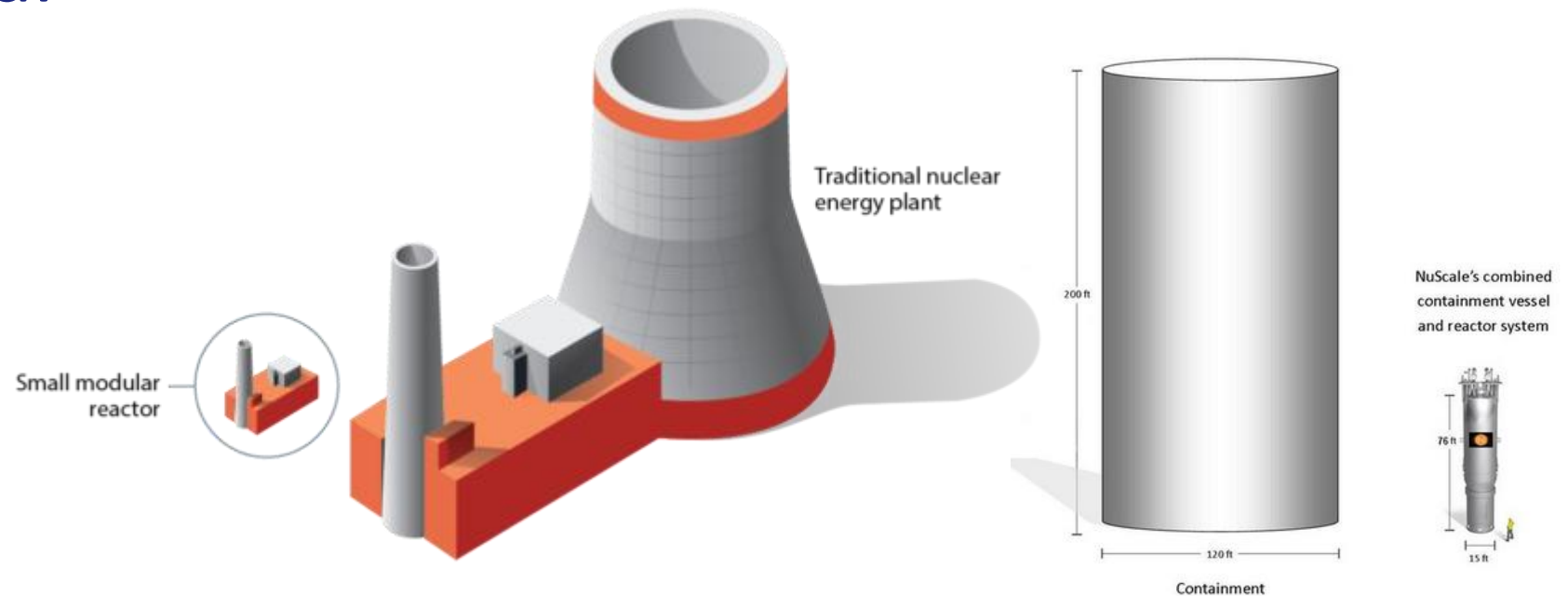
Technology Advancement



A (very) quick overview of Small Modular Reactors (SMR)



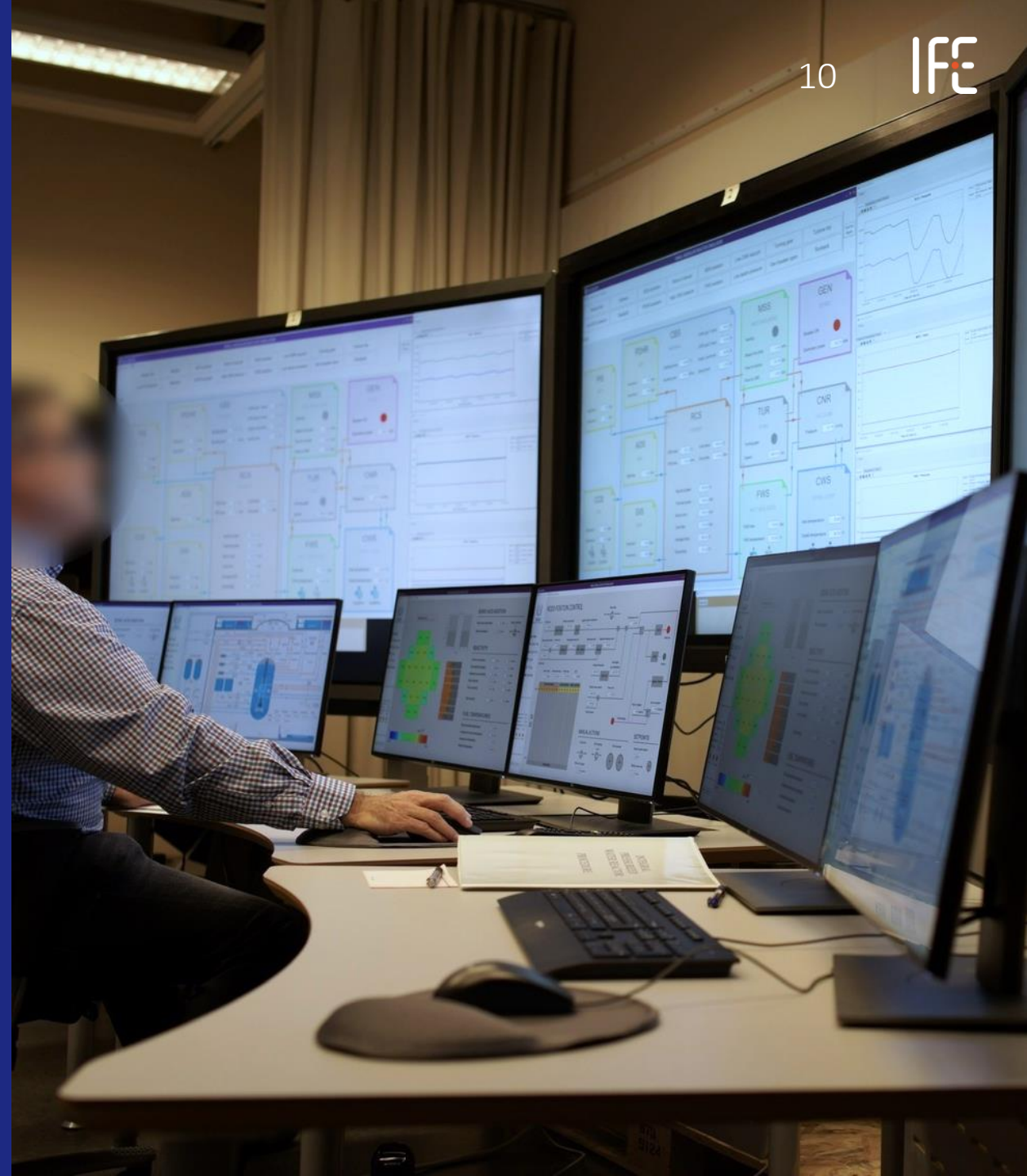
Comparison size envelope of new nuclear plants currently under construction in the United States



Design goals: centralised control and higher levels of automation for control & monitoring of SMRs



What are the potential effects on human performance and plant safety?



Why is understanding
human-technology
interaction important for
the green shift?





Thank you

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