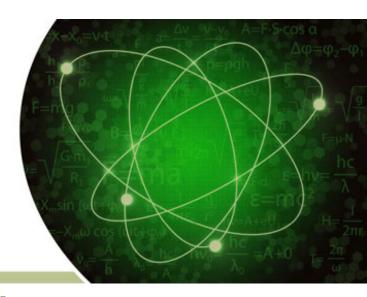
ANS Annual Meeting 2019 THE VALUE OF NUCLEAR



Rejuvenate Nuclear Technology Infrastructure and Facilities

Christopher Crefeld
Director, Instrumentation & Controls
Westinghouse Electric Company, LLC



About Westinghouse

WESTINGHOUSE GLOBAL HEADQUARTERS Cranberry Township, Pennsylvania, U.S.



Approximately
9,300
Employees

Located in 19 Countries

Serving
Customers in
26
Countries

Comprised of

4

Business Units

AMERICAS OPERATING PLANT SERVICES

ASIA OPERATING PLANT SERVICES

EMEA OPERATING PLANT SERVICES

> PLANT SOLUTIONS





Global Portfolio of Products & Services









Nuclear Industry Partnership



































Apply New Plant Technology to Operating Plants (Industry is moving to Digitalization)



Advance Training & Learning (Mind, Brain & Education)







MCR Evolution & Advances 30 Year Evolutionary Change

Conventional
Hardware Control

Hybrid
Hard + Soft control

AP1000®

Software Control Minimum Safety Hardware





Digitalization and the Nuclear Workforce

Digital Solutions within Nuclear

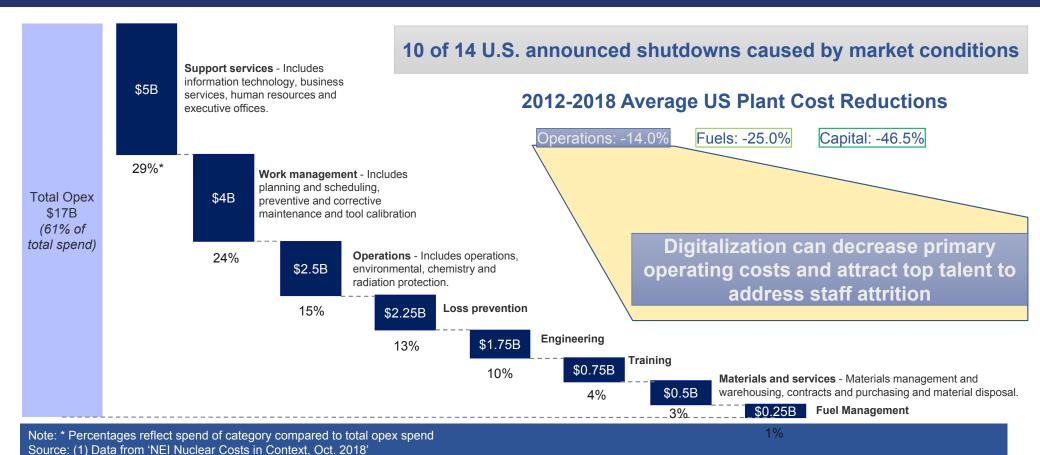
- Data Science & Artificial Intelligence
- Internet of Things
- Augmented Reality & Virtual Reality
- Predictive Maintenance
- Electronic Work Procedures
- Smart Worker
- Automation & Robotics
- Digital Twins

(W) Westinghouse

Workforce Benefit

- Top talent is drawn to solving unique digital challenges within the nuclear industry and developing innovative solutions
- Digital solutions lead to improved user experience, job satisfaction, and talent retention

Digitalization Business Case Nuclear Industry Operations Cost (\$B)



(2) Definitions as defined EUCG, the Institute for Nuclear Power Operations, the Electric Power Research Institute, and the Nuclear Energy Institute (NEI)

New Methods & Technology for Learning MBE – Mind Brain & Education

















Arts- Emotional Significance Learning Integration Engagement Learning Outcomes



New Reactor Technology

Westinghouse eVinci™ Micro Reactor



- Transportable energy generator
- · Fully factory built, fueled and assembled
- Up to 10-year fuel life
- < 1 month onsite installation
- Inherent safety
- Near Zero EPZ

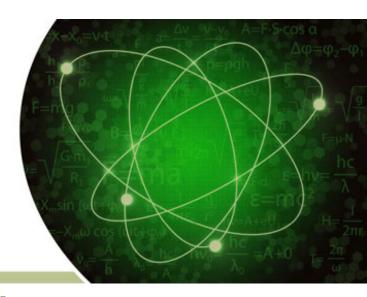
- Physics-based with no operator action or mechanical actuations
- · Autonomous load-follow capability
- Heat pipe technology
- Solid monolithic core block
- · Greenfield decommissioning
- Small footprint







ANS Annual Meeting 2019 THE VALUE OF NUCLEAR



Rejuvenate Nuclear Technology Infrastructure and Facilities

Christopher Crefeld
Director, Instrumentation & Controls
Westinghouse Electric Company, LLC

