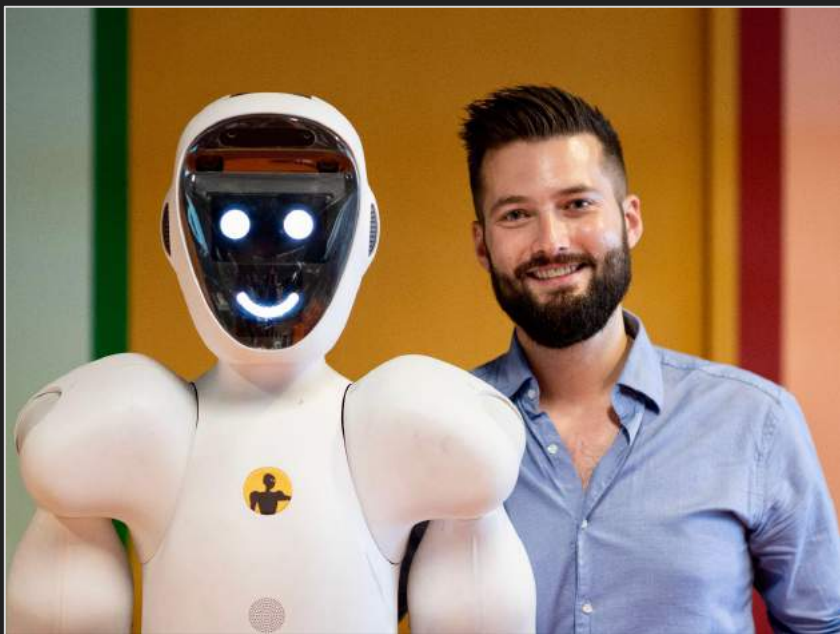
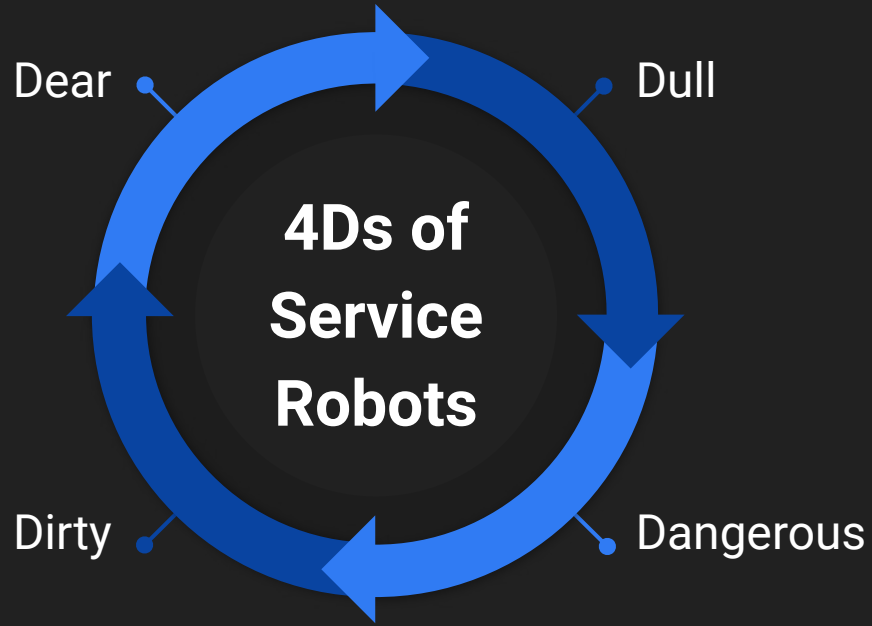


Robotics and Innovation in Service and Postoperative Care

Dr. Nicholas Nadeau, Ph.D., P.Eng.







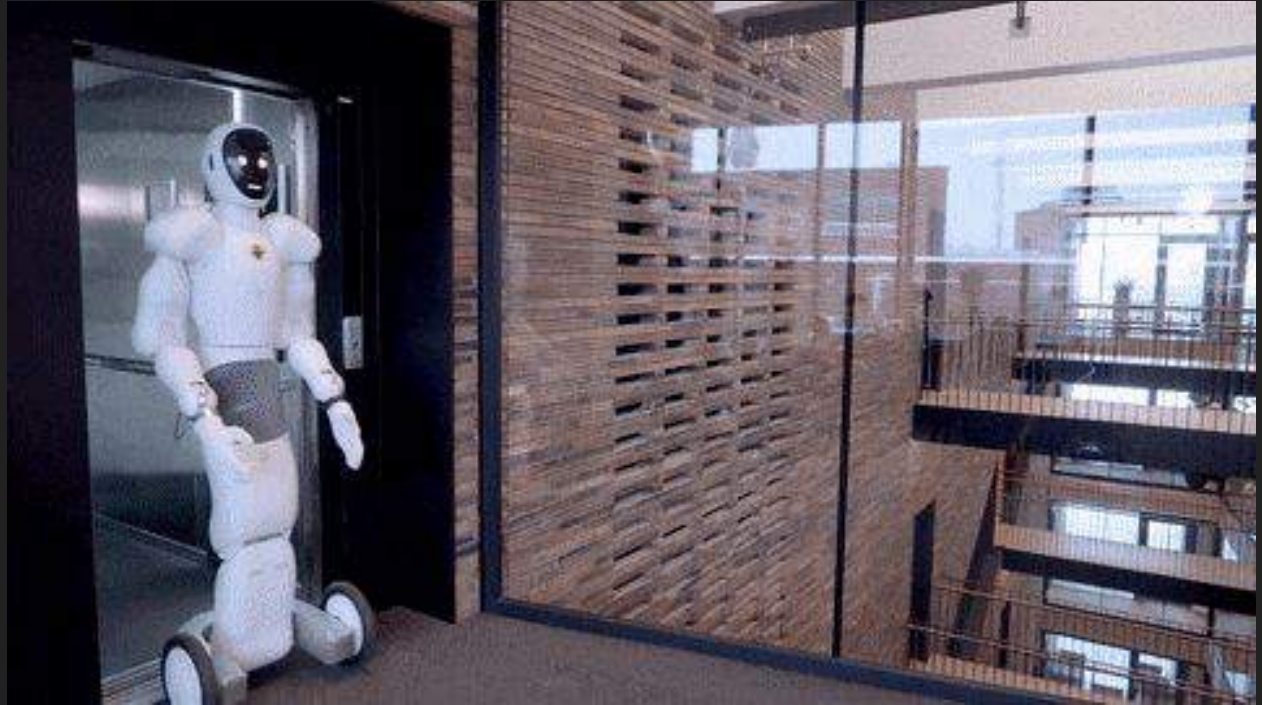
Dull

Tasks that are repetitive
and tedious



Dangerous

Tasks with health and safety concerns



Dirty

Tasks that have an icky or
filth factor

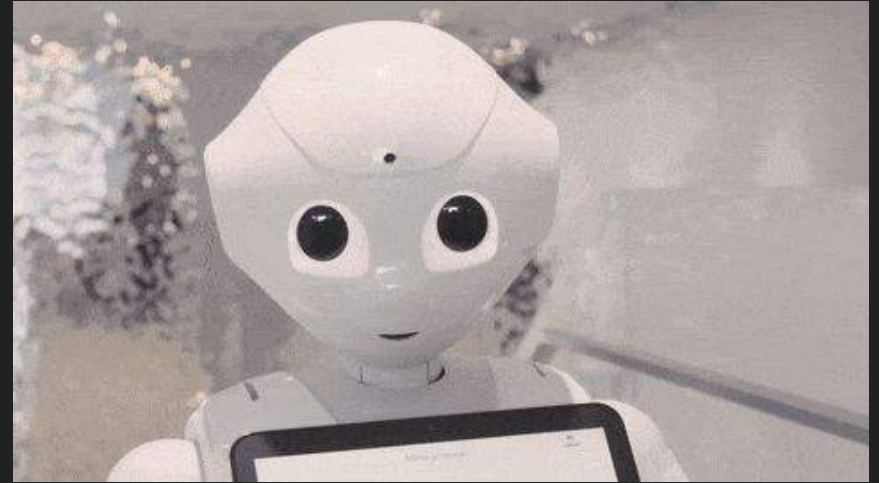


Dear

Tasks that have strict
quality requirements or
cost savings



Indirect: More Efficient Hospitals Through Robotics



Direct: More Effective Care Through Innovation



Key Drivers

Declining and Aging Population

Fewer people able to work and more people needing support



Job Market Fluctuations

Labour market tightening and labour shortages since the onset of the pandemic



Human Environments

Most jobs are in unstructured environments

A growing worker shortage gap will require new technology

Staffing shortages to
cost U.S. care facilities
\$19.5B this year

Case Study: Cleveland Clinic

- Purchased 81 service robots when it expanded in 2008
 - \$100K per robot
 - \$300K per year service contract
- Replaced the need for 120 employees
 - \$5M per year in savings
- Two year payback period



Value and Vision

“Robots can work around the clock to disinfect areas, thus relieving healthcare staff and reducing person-to-person contact.”

– *Service Robots in the Healthcare Sector* (Holland et al., 2021)

“Robots are not to replace nurses but to augment and empower the nursing profession.”

– *Robotics And The Impact On Nursing Practice* (Tietze & McBride, 2020)

“Study from UCLA finds a visit from human-controlled robot encourages a positive outlook and improves medical interactions for hospitalized children”

— UCLA Health, 2021

“[Child life specialists] reported significant [...] benefits of the social robot for patients, [including a] greater display of intimacy and interactivity during play, increased control over their hospital experience, and the formation of a new, trusting friendship.”

— *Robot Telepresence Operated by Child Life Specialists in Healthcare Settings* (Wertz et al., 2022)

“Social robots like Robin may improve the hospital experience among pediatric patients.”

— *Robot Telepresence for Children in Healthcare Settings* (Oland et al., 2022)



Thank You!

www.NadeauInnovations.com