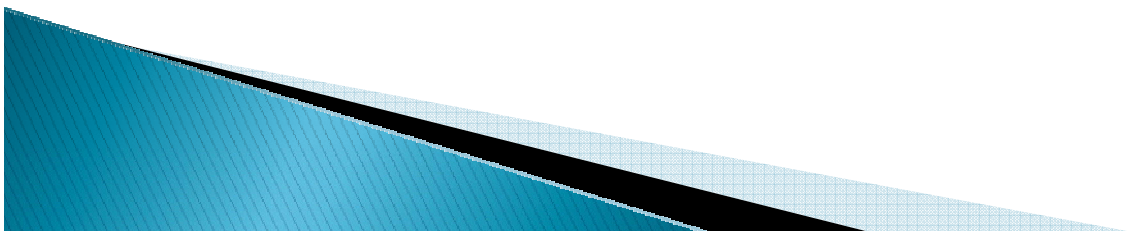




BRIGHAM AND
WOMEN'S HOSPITAL

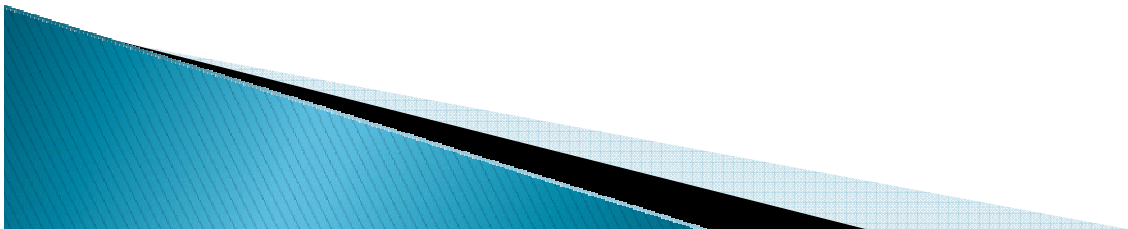
Technology Acquisition Planning *(What does it really cost?)*

Michael Fraai, M.S., CCE
Director, Biomedical Engineering
Brigham & Women's Hospital



Agenda

- ▶ Capital Planning Process
- ▶ A Model for Capital Replacement
- ▶ Total Cost of Ownership
- ▶ Scenario of a Ubiquitous Technology Replacement



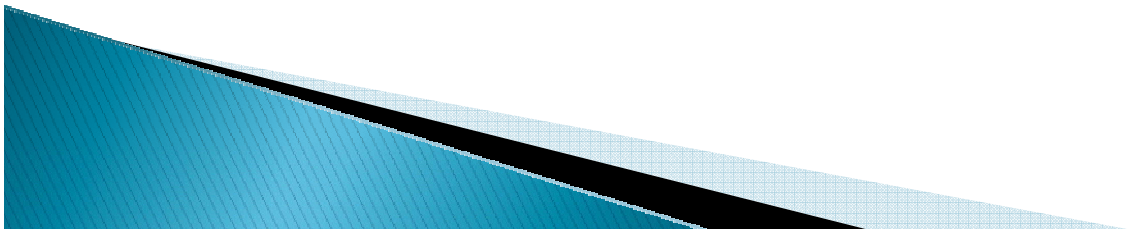
Brigham and Women's Hospital



- 777 Licensed beds
- 146 ICU beds
- ~46,000 Inpatient admissions
- 43 Operating rooms

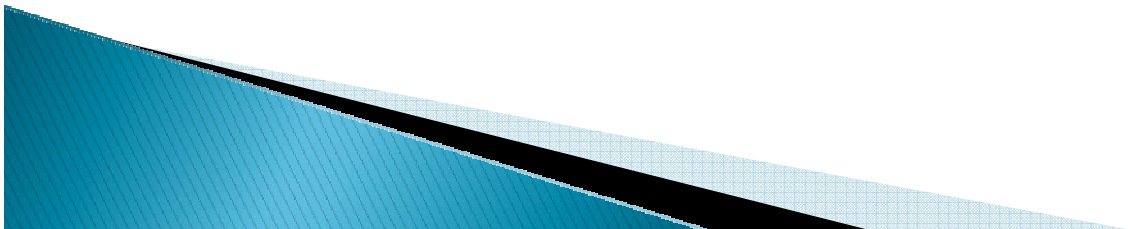
Capital Planning Process

- ▶ Clinical needs
- ▶ Safety concerns
- ▶ Age (obsolescence)
- ▶ Assessment of failure rates (lemons)
- ▶ Technology capability to achieve hospital-wide initiatives
- ▶ Clinical practice change
- ▶ Incorporate in multi-year technology replacement plan



Model for Capital Replacement

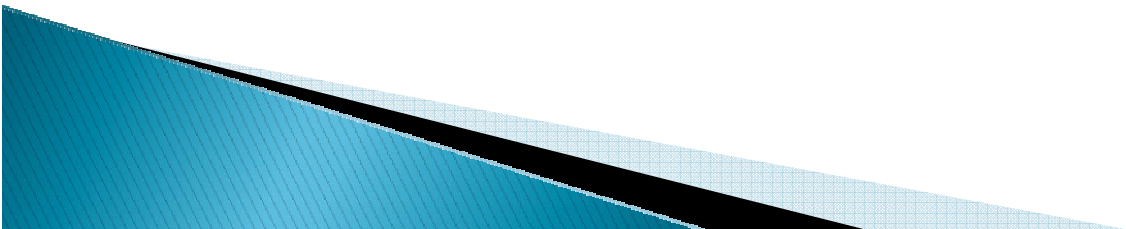
- ▶ Establish the patient care technology replacement value based on the inventory
- ▶ Establish the timeline to replace the technology
 - Originally 8 years
 - Ideally closer to 7 years due to the rapid rate of technology changes
- ▶ Derive the capital funds needed per year
- ▶ Benefits
 - ↓ Surprises in capital expense (financial aspect)
 - Structured approach for technology replacement



Spending Projections & Trends

- ▶ Budgetary pressures
- ▶ Other strategic goals
 - ACOs
 - Center of Excellence
 - Renovations
- ▶ Reimbursement
- ▶ EHR**

Why Capital \$\$ are even more precious!



Technology Purchasing Process

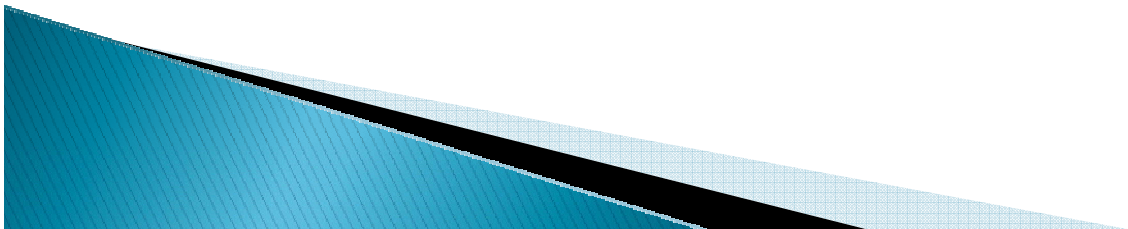
▶ Previously

- Cost driven (Materials Management)
- Coolness factor

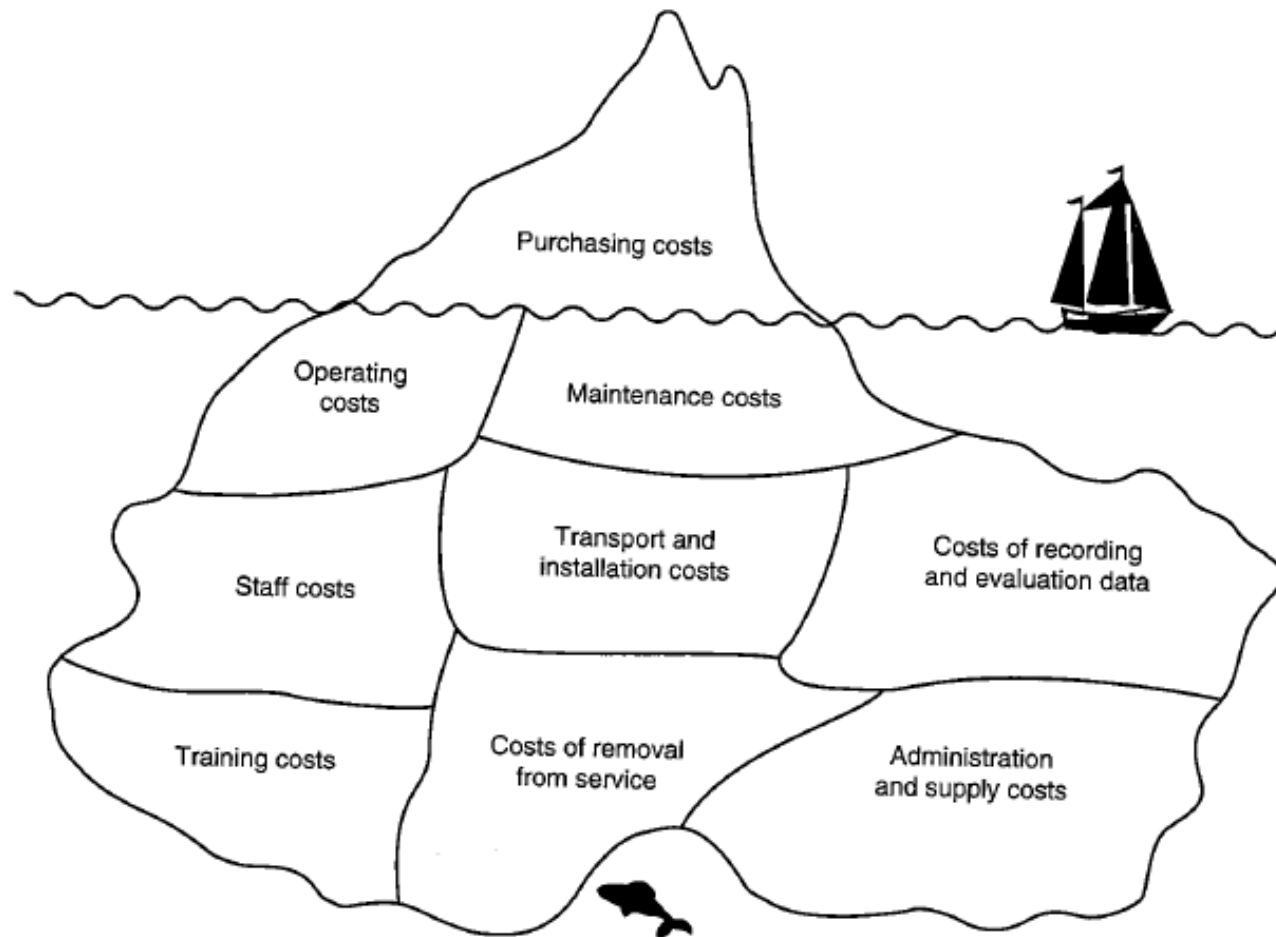
▶ Now

- Collaborative Process
 - Clinician (Outcome driven, Quality of patient care)
 - Biomedical Engineering (TCO, technology use models and safety)
 - IT (Data security)
 - Materials Management (Contract)

Years

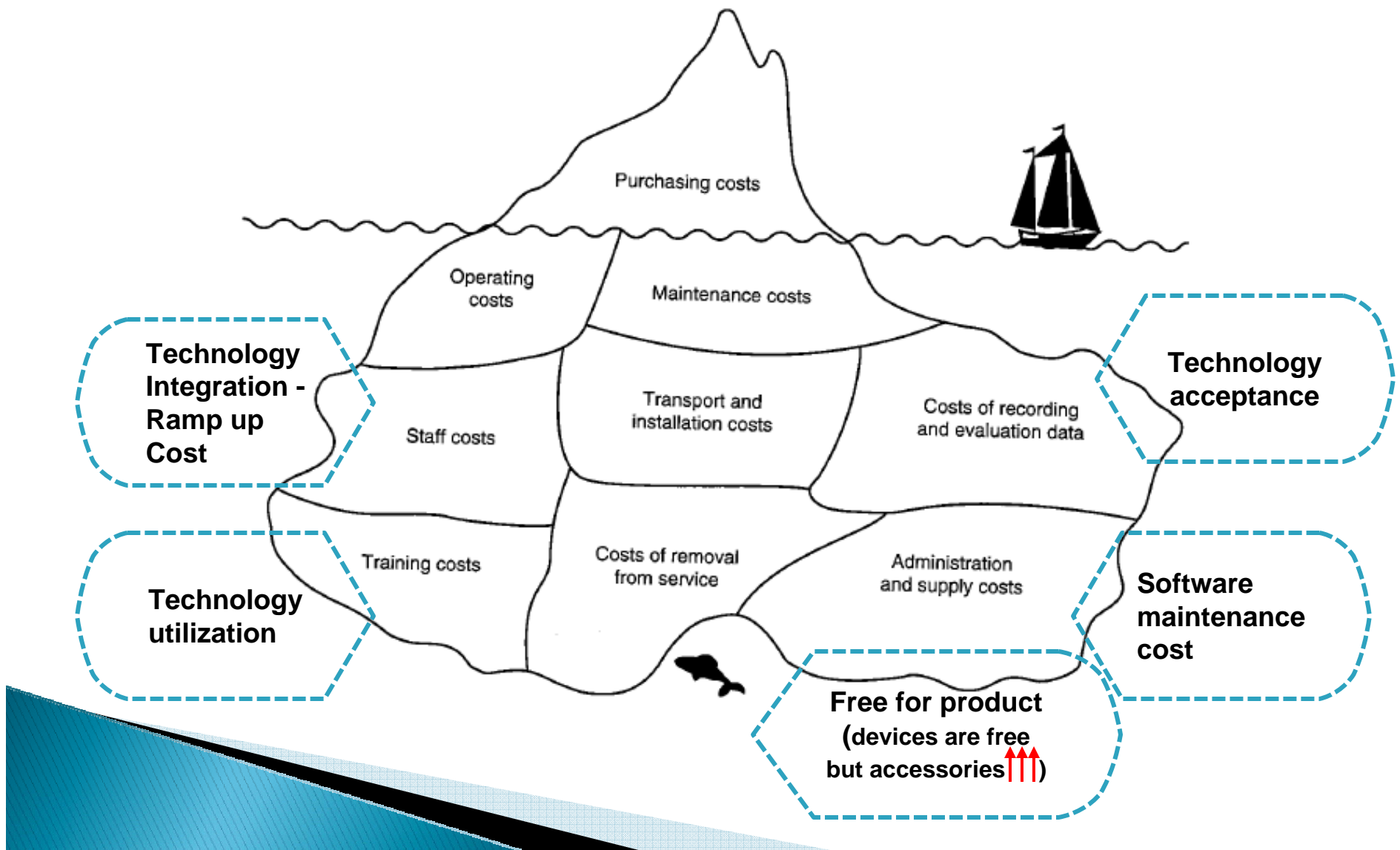


Total Cost of Ownership



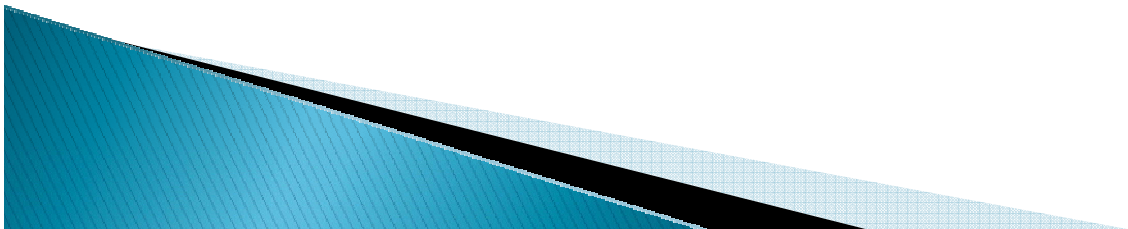
The iceberg syndrome in life-cycle costs of health care equipment

Total Cost of Ownership - Today



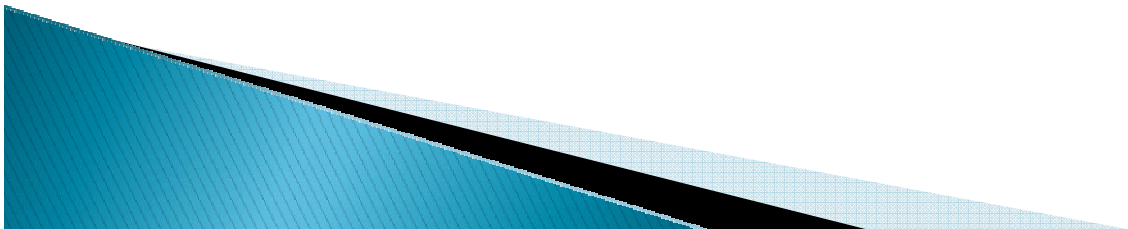
Replacement of a ubiquitous technology

- ▶ Vendor A
- ▶ Collaborative negotiation process
 - Significant savings in capital purchases & operational budget
 - Device connectivity goals achieved
 - S/W upgrades included
 - Total Cost:
 - \$4.7M Capital (includes connectivity)
 - Estimated \$413K in operational expenses over 6 years
- ▶ Vendor B
- ▶ Product offered as “Free” with a buy out option after 5 years
- ▶ After analysis:
 - Cost of “free”: ~\$3.3M due to related replacement of other technologies
 - Estimated \$434K in yearly operational expenses
 - Time to achieve use comfort could be long



Summary

- ▶ Technology acquisition is a collaborative process to increase value for the institution
- ▶ Technology may have initial increased upfront costs but TCO still makes it more cost effective over time
- ▶ There are many more criteria today to consider in making cost conscious decisions in a market with increasing budgetary pressures and/or precious capital funds



Questions

