

MAY 8 + 10, 2017

SERVICE

AUTOMATION CASES

3 CASES OF SERVICE AUTOMATION

TECHNO-OPTIMISM + 24/7 MONITORING

- San Francisco Airport - security badging
- Pharmacy dispensing in Intensive Care Units
- Internet of Things
- First two are incremental/ancillary functions in large organizations
 - Low chance of job displacement
 - Not strategic to organization
 - Lots of non-quantifiable effects
- IoT is vague & polymorphous

OBJECTIVES

- Introduce family of technology IoT
 - Specific applications to integrate into Work + Automation frame
- Broad definition of automation
- How companies *do* make decisions
- How companies *should* make decisions
- Option value of investments

IOT: "BRAVE NEW WORLD"

- Smart devices + cloud networking
- Millions of devices, sending real-time data. Define "real time"
- Examples
 - Monitor cold chains (vaccines, foods, etc.). Qualcomm start
 - Smart grid = users and generators respond real time to needs
 - Smart bridge monitoring
 - Adjusting HVAC and lights for occupancy in buildings
 - Track customers in shopping malls (low freq. sound)

HOME APPLICATIONS

- Smart home = nanny-cam from Bermuda
- Personalized automobile services. "The customer value propositions are appropriately integrated ... to provide another revenue stream for Ford." Google's response?
- Intelligent toothbrush
- modes of use:
 - Rare events = fast warning. Separate signal from noise
 - Decentralized but smart operation (e.g. thermostat linked to car)
 - Ongoing stream of info for later analysis. Terabytes

IOT SIMILAR TO IT INVESTMENTS

- High initial investment, low salvage value
- High technical uncertainty? (Depends on novelty)
- High uncertainty about use case = market uncertainty (novelty)
- Multi-stage development (esp. when well managed)

OPTIONS TO CHANGE

Table 2. Types of real option approaches

Type of Option	Description
Option to Abandon/Switch	This option gives management the option to abandon a project that is operating at a loss and sell or redeploy the assets.
Option to Contract	Similar to the option to abandon, this gives management the option to scale back a project that is operating at a loss.
Option to Defer/Postpone	This gives management the option to wait/learn more to see if a project will be profitable.
Option to Expand	This gives management the option to expand/scale up the project based on its success.

