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Exploring the Information Frontier

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“IT Impact and Management: 1960-2020”

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INTRODUCTION

- Started in 1958 (of course antecedents much earlier)
- Radically different technologies ~ astonishingly similar management challenges
- Impact technology grew and grew
- An applied discipline
- A story told by 13 cases ~ all relevant and real life

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CASE 1

Harmony Life of Hartford

- Glenn Overman, University of Arizona
- Issue – Central controls, standards, priorities
Versus user revenue driven priority
- Change management and CEO leadership critical
- Heller AVP DP vs. York-District sales office
- C.P. Snow – 2 culture
- A timeless classic

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CASE 2

J.L. Carver (A), (B) – 1964

- Automation sales and accounting processes warehouse
- Benefits – Consistent, timely, accurate information
- Benefits - Not easily auditable
- New technologies, disruptive to processes, large
 - High implementation risk – Justification hard
- Fundamental but not soul stirring

“Airlines, oil reservoir models, and big back paper-driven offices the exception at this time”

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CASES 3 and 4

William Carter Company (A), (B) – 1962

Li and Fung – 2002

- Leading manufacturer pajamas for babies and 1 year olds
- Factories: Springfield, MA; Barnesville, GA; Senatobia, Miss.
- Automation factory, scheduling processes 1962
Just like J.L. Carver

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CASE 3 and 4 ~ continued

William Carter Company (A), (B) – 1962

Li and Fung – 2002

BUT

- 2002: Carter's USA factories gone
- Li & Fung third party supply-chain orchestrator ~ 15,000 Chinese plants, 2,000 customers, 15,000 staff, 41 countries
- Telecom deliverers Chinese costs (initially 20 to 1 advantage) to USA market

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CASE 3 and 4 ~ continued

William Carter Company (A), (B) – 1962

Li and Fung – 2002

BUT

- Carter second largest customer Li & Fung
- USA generates an order. It then sends fulfillment request to China where Li & Fung allocates it to appropriate plants
- A case of radical transformation ~

“The bookends of an IT career”

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CASE 5

The Encyclopedia Britannica - 2012

- The authoritative printed compendium of knowledge
 - First edition 1770
- 2010 last printed issue
- The product remains but in a completely online form

“Radical Transformation of both product and customer base”

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CASE 6

UBER - 2014

- Disintermediation existing system of medallions and taxis
- Economics and service from iphone ordered cabs overwhelming ~ traditional cabs and companies struggle to survive
- Example: 1/3 rides in Boston
50% rides in San Francisco

“Radical transformation of the industry”

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Strategic Impact- Applications Development Portfolio

High	Factory	Strategic
Strategic Dependence Existing Operating Systems	Support	Turnaround
Low		High

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STRATEGIC GRID

- Encyclopedia Britannica, William Carter, and UBER are all examples of disruptive innovation at top right-hand corner of strategic quadrant
- All three examples enabled by IT ~ all examples at center of firms' strategic processes
- In each case, payoff discontinuously greater than J.L. Carver (a support quadrant company) or Harmony Life (primarily a factory quadrant company)

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CASE 7

Frontier Airlines (A) - 1984

- Issue: Importance of controlling the screen placement of your flights on a travel agent's office screen
- An emotionally gripping case showing how control of a joint product distribution system can impact market share

“IT as a competitive weapon”

“IT Changes the Way You Compete” (HBR 1983)

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CASE 8

Otisline - 1988

- Issue: IT enables new ways of designing and organizing work in elevator service/repair company
- Top down, bottoms-up, virtual, matrix power rebalancing ~ all made possible by IT if you want it – Key issue is do you want it?
- CEO role critical

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CASE 9

Otis Transformation by IT - 2005

- Issue: IT enables demand-driven production (Replaces level production with inventory taking up slack)
- Massive infrastructure transformation (strategic quadrant)
- \$2 billion inventory eliminated
- CEO driven

Again, massive changes, massive resistance, CEO critical

“IT and the Board of Directors” (HBR 2005)

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CASES 10 and 11

IBM/Kodak – 1988

General Dynamics - 1991

- Issue: Outsourcing IT
- Not only company structure changed by IT but the very delivery of IT services is also altered
- IT delivery service alternative shift
- Can outsource globally to India, etc.
- CEO driven

“Managing IT Services” course is relabeled “Delivering IT Services”

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CASE 12

Alibaba - 2014

- Issue: China now largest Internet country
- IT one of top eight national government priorities
very different IT penetration pattern
- China closed to Google et al for information control reasons

“China heavily IT literate”

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CASE 13

Providian Trust - 1997

- Issue: Possibility of project failure always present in systems implementation
- Projects are always hard!!
- Drivers of complexity are size, poorly understood technology and the amount of change in processes

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The Future (2016 to 2020)

- ❖ New technologies remain the norm
- ❖ A still vastly more digitized world
- ❖ A lot of non-electronic IT work
- ❖ Security/operation reliability key
- ❖ Privacy key
- ❖ Dark side social behavior ~ cyber bullying
- ❖ Project delivery challenges
- ❖ Societal resilience in case of blackout

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- **What it means for IT faculty**
 - Huge demand for deeply skilled IT professionals
 - Great demand for IT skills and perspectives
 - Continued crowding on IT domain by other functional areas