Innovation:
Disruptive Technology
Software as a Service

Information Resources and Technology

John A. Bielec, Ph.D.

VP/CIO

April 2012

Are You Caught in the Circle of Mediocrity?

WE'VE ALWAYS DONE IT THAT WAY

IT'S OUR CULTURE – THE FOUNDERS WOULD "ROLL OVER"

"CHANGE HAPPENS HERE ONE FUNERAL AT A TIME" – UNNAMED PROVOST

IF IT'S NOT BROKEN WHY FIX IT

TEN YEARS OF EXPERIENCE OR ONE YEAR TEN TIMES

What Drives Change and Innovation?

NECESSITY

INSTITUTIONAL CRISIS

- Often Financial
- We must change to survive

NEW LEADERSHIP – NEW BLOOD

EXTRANEOUS EVENTS

GOVERNMENT AND LEGAL MANDATES

- eDiscovery

TECHNOLOGY

- Internet Time – 6 months is 3 years
- IT is often disruptive - becomes a change agent

Planning, Innovation & the Status Quo

EVERY TIME AN INSTITUTION …. STARTS A NEW PROGRAM OR CURTAILS AN OLD ONE, DECIDES TO RECRUIT STUDENTS OR STAFF IN ONE WAY OR ANOTHER, IT IS CREATING A STRATEGIC PLAN THROUGH ITS ACTIONS. (BALDRIDGE AND OKIMI 1982)

CUMULATIVE, EVERYDAY DECISIONS CAN HAVE A LOT MORE IMPACT ON AN INSTITUTION'S DESTINY THAN ANY MASTER PLAN. THESE DECISIONS ….CREATE 'EMERGENT STRATEGIES' (MINTZBERG 1994)

OUTSIDE THE BOX, "DO IT NOW" DECISIONS DISRUPT THE STATUS QUO AND FOSTER INNOVATION(BIELEC 2009)

Drexel Outside the Box, “Do it Now” Disruption and Innovation

COLLEGE OF MEDICINE

NURSING AND PUBLIC HEALTH

SCHOOL OF LAW

THE DREXEL NETWORK – SACRAMENTO

DREXEL ELEARNING

THE ACADEMY OF NATURAL SCIENCES

TECHNOLOGY– WIRELESS, MOBILE, FREE, CONSUMER DRIVEN

TECHNOLOGY– SOFTWARE AS A SERVICE (SAAS)

Technology as a Disruptive Force

NEW IDEAS – NOT INCREMENTAL CHANGE

OUTSIDE THE BOX – NEW ORGANIZATIONS

ASSETS/CAPITAL NOT REQUIRED

TIME IS CRITICAL – LEAP FROG AHEAD

80/20 RULE – NEVER PERFECT – 3 NINES

AFFORDABLE, CONVENIENT AND SIMPLE

BOTTOM UP USER GENERATED CONTENT

SUSTAINABLE USER GENERATED NETWORKS

CONSUMER DICTATES WINNERS AND LOSERS

Today's Technology Disruptive Forces

MOBILITY

- Access anywhere, anytime
- Always connected

MOVE FROM COMPUTING TO PERSONAL ELECTRONICS

- Smart phones, iPads', Net books

APPS AND CONTENT EASILY AVAILABLE

- Downloadable; free; inexpensive
- Video; Location based services

THE CLOUD

- Move from owning Assets to Access
- Provide Software as a Service - SaaS

Disruptive Technology: “Access” is Where it’s At!

BILLIONAIRES BEFORE THEY’RE 30 – INTERNET WHIZ “KIDS” UNDERSTAND ACCESS

- Jeff Bezos – Amazon
- Sergey Brin/Larry Page – Google
  - Google + with 13 million users in 10 days
- Steven Chen – YouTube
- Shawn Fanning – Napster
- David Filo/Jerry Yang – Yahoo
- Mark Zuckerberg – Facebook
  - Founded 2004 with 750 million users in 6 years

Disruption is happening in our institutions today!

HAVE YOU EVER USED EXPEDIA, ORBITZ OR TRAVELOCITY TO BOOK TRAVEL?

HAVE YOU EVER BOOKED A HOTEL OR RENTAL CAR ONLINE?

HAVE YOU EVER PURCHASED OFFICE SUPPLIES ONLINE?

HAVE YOU EVER BOUGHT A BOOK ONLINE FROM AMAZON, BORDERS OR BARNES AND NOBEL?

HAVE YOU EVER USED HOTMAIL, YAHOO, GOOGLE OR OTHERS SERVICES FOR EMAIL?

HAVE YOU EVER USED GOOGLE TO RESEARCH A TOPIC?

HAVE YOU EVER USED FACEBOOK OR TWITTER?

If you answered “Yes”

YOU HAVE USED DISRUPTIVE TECHNOLOGY AND ENGAGED OUTSOURCED IT SOFTWARE SERVICES

YOU DID NOT HAVE AN SLA FROM THE PROVIDER

**IN FACT, YOU PROBABLY HAD NO FORMAL CONTRACT
OR AGREEMENT WITH THE PROVIDER**

INSTEAD, “YOU” MAY HAVE AGREED TO SOME ACCEPTABLE USE TERMS

CAMPUS GENERAL COUNSEL WAS NOT INVOLVED – NO PAPER OR FILES EXIST

SO…WHO’S IN CHARGE? THE INDIVIDUAL “YOU!”

Technology and access puts the individual in charge, not the institution

Institutional **Individual**

Asset Selection and Costs →

Control of Transaction Time →

Location of Service Delivery →

Choice, Choice, Choice →

Choice, Choice, Choice!

SERVICES A "CLICK" AWAY

- Anywhere (Flex Space), Anytime (Flex Time)

FREE OR MONTHLY SUBSCRIPTION

- Easy In, Easy Out

UNDER THE INSTITUTION'S RADAR

A PERSONAL OR LOCAL (DEPARTMENTAL) DECISION

CAPITAL ASSETS, SERVERS, STORAGE NOT REQUIRED

NO NEED FOR PURCHASING APPROVAL

NO NEED FOR LEGAL REVIEW

NO NEED TO INVOLVE THE CIO

SaaS in the “Cloud” Opens the Door and Accelerates Individual Choice

INSTITUTIONAL RESOURCE LIMITATIONS IMPACT THE ROLLOUT OF NEW SERVICES AND BUSINESS PROCESSES FOR BOTH THE ADMINISTRATIVE AND ACADEMIC ENTERPRISE,

WHILE SAAS PROVIDES A QUICK PATH AND WORK AROUND FOR NEW SERVICES AND INNOVATION AT LOWER COST, BUT

INSTITUTIONAL “BUREAUCRACY” OFTEN GETS IN THE WAY IN A FUTILE REACTION TO CONTROL,

OFTEN RESULTING IN INCREASED COST AND “WORK AROUNDS” – A PATH TO CHAOS?

Enterprise Services a “Click” Away

SERVICES	HE PROVIDER/SERVICE
CRM	RIGHTNOW, SALESFORCE
EMPLOYMENT	HR SMART, CRAIG’S LIST
TAXES	TURBO TAX
PURCHASING	PCARD, PAYMENTNET
BENEFIT SERVICES	ENROLLONLINE
STUDY ABROAD	STUDIO ABROAD
CAREER SERVICES	SIMPLICITY
ERP/PORTAL/LMS	DREXEL UNIVERSITY SAAS
RESUME SERVICES	REALRESUME
BOOKSTORE	AMAZON, BN
TRAVEL	EXPEDIA, HOTWIRE
ECOMMERCE	TOUCHNET
EMAIL	HOTMAIL, GMAIL
LEARNING MANAGEMENT	R SMART, MOODLE, BB

The Leadership Challenge!

CONTROLLING CHAOS WHILE FOSTERING INNOVATION IN THE INSTITUTION, AS

SERVICES MOVE FROM ASSETS TO ACCESS, AND

INSTITUTIONS "CHOOSE" SERVICES OVER THE INTERNET RATHER THAN OWNING THEIR OWN HARDWARE, SOFTWARE OR OTHER ASSETS

- Your Next IT Strategy; Hagel & Brown; HBR

FURTHER REINFORCEMENT

- *The Innovator's Dilemma*; Christensen
- *IT Doesn't Matter*; Carr; HBR
- *The Big Switch*; Carr; W.W. Norton
- *Disrupting Class*; Christensen

The CIO's Role Changes?

A SHIFT TO CHIEF INFORMATION STRATEGIST (CIS)

DEVELOP AN INSTITUTIONAL IT STRATEGIC AGENDA

PROVIDE AN ENVIRONMENT TO FOSTER INNOVATION

IDENTIFY "BEST OF BREED" SERVICE PROVIDERS

FOCUS ON INTEGRATION WITH REMAINING IN-HOUSE ERP APPLICATIONS

MANAGE CONTRACTS AND SERVICE LEVELS

NETWORK MANAGEMENT AND CLIENT SERVICES

IDENTITY AND ROLE MANAGEMENT

SECURITY

Enterprise and Vendor Changes?

THE DATA CENTER SLOWLY DISAPPEARS

“APPLICATIONS” & TRADITIONAL VENDORS DISAPPEAR

VENDORS THAT SURVIVE REINVENT THEMSELVES

- New organizational model
- Sales force particularly vulnerable
- New financial models required
  - Compensation, Maintenance, Professional Services
  - Move to Subscriptions

SERVICES - SAAS, ITAAS, S+S DOMINATE

CLIENT FUNDING MOVES TO “PAY AS YOU GO”

LMS DISINTEGRATES INTO A “FRAMEWORK” TO ACCESS DISTRIBUTED LEARNING OBJECTS

- The Personal Learning Environment (PLE) evolves

Academic Changes?

FACULTY PRICE THEMSELVES OUT OF THE MARKET

- Course development moves to Wikipedia model
  - University of the People; Peer 2 Peer University
- 40% of all students take the same 25 courses
- Academic expert owner/moderator
- Contributors provide content inexpensively
- Courses become franchised

ON-LINE COURSES BECOME A "COMMODITY"

- Academic "Reputation" differentiates value
- Blended and hybrid strategy
- Increased productivity – Labor costs shift
- Students Teaching Students
- Classroom experience becomes less important

Academic Changes?

NEW BUSINESS MODELS

- Direct Consumer Marketing Challenge Traditional Financial Models
- Free Courses with Charges for Premium Services - Coursera
- “Certificates of Completion” - MITx
- Demonstrating Competency
  - Modules, Widgets and Badges
- The “Flipped Classroom” – Khan Academy
  - Lectures on line; homework in class

Academic Changes?

STUDENT FLEXIBILITY A MUST

- Courses
- Majors/Degrees
- Format – Start and Stop
- Flex Time – Asynchronous
- Flex Billing
- Self Advising

SERIAL PROCESSES ARE OUT – MULTI-TASKING IS IN

- Mixing work, school, mobility and Life

STUDENT LIFE AND THE RESIDENTIAL EXPERIENCE ADDS INCREASING VALUE FOR TRADITIONAL STUDENTS

- Differentiates institutions – learning environment
- “The total student experience”

Drexel UNIVERSITY

Are you ready?

How will your HE institution handle the move from Assets to Access?

STRATEGIC ADVANTAGE OR DISADVANTAGE

PROVIDER, CONSUMER OR BOTH

IMPACT ON STRUCTURE AND GOVERNANCE

- Administration, course delivery, faculty, IT

STUDENT POPULATIONS

- Digital divide with the institution
- Institutional vs. individual IT based services

IMPACT ON REVENUE AND EXPENDITURES

- Facilities, technology, cost avoidance opportunities

Where Will You be in 5 Years?

A LEADER IN MAKING THINGS HAPPEN?

- “Skate to where the puck will be” – Wayne Gretzky
- Recognizing the Software as a Service move
- Leading the charge from Assets to Access by developing a multi faceted IT service strategy

WATCHING THINGS HAPPEN?

- Fighting to maintain the status quo
- We’re unique! If it’s NIH it won’t work!
- We can’t trust others with our information

WONDERING, WHAT HAPPENED?

Information Resources and Technology

Disruptive Technology

Questions?