Readiness Precedes Action: An Academic Continuity Framework to Organic Resilience

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Learning Objectives

Readiness Precedes Action

Fundamentals of Continuity Planning
  Enhancing a Culture Of Higher Ed Organizational Resiliency

Path to University of Illinois Ready

Maintenance and Administration

Questions and Discussion
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Higher Education Not Immune

Threats

Vulnerabilities

Increasing Continuity Gap

Current level to academic continuity risk management

RISK

TIME

Technology-based (Network outage)

Geopolitical

Terrorism

Weather

Health pandemics
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“Foresight may well deny what hindsight must accept”

Put in place NOW the things that will enable us to:

- continue serving our constituents
- perform our fundamental mission
- preserve our reputation/image
- maintain accreditation
- reduce our operational risk

and minimize the duration of a serious disruption following a major adverse event.
Strategic Importance

Immediate Effects

- Possible loss of life
- Asset damage & loss
- Disruption of academic courses
- Legal/contractual penalties
- Operational productivity

Far Reaching Effects

- Funding/Grants/Revenue
- Lost research (existing and future)
- Reputation & profitability
- Damage to the brand or University image
- Psychological trauma
- Reduced value of assets
Case for Integrated Continuity Planning

- Support institutional risk reduction
- Support of campus interdependencies
- Enhance situational awareness
- Improve decision making
- Improve information sharing
  - Expand reach and access for communications efforts
- Provide the foundation for intra-campus and regional campus collaboration; and
- Support training and practice exercises
Two Ways to Address Regulatory Compliance

Responding to Regulation
Look at regulations individually
Treat each regulation as a mandate to act
Develop a response to meet each guideline

Adopting and Complying
Understand the intent of the regulation
Look at your processes and determine if they meet the intent
Modify your business or IT process to achieve the regulatory intent

The goal is to be in compliance. Achieving compliance through normal academic and business processes is preferred.
FUNDAMENTALS OF CONTINUITY PLANNING
Key Terms in Readiness Planning

Disaster Recovery
Technology Driven Response (Voice & Data Impact)
- Network Failure
- Physical Loss of Systems
- Sabotage
- Virus
- Data Confidentiality Compromised
- Etc.

Emergency Response
Event Driven Response (Site Impact)
- Contamination
- Bomb-threat
- Fire
- Earthquake
- Wind
- Etc.

Integration of all Plans

Academic / Business Continuity
Time Driven Response (Business, Image, $$ Impact)
- Infrastructure Disruptions
- Business Unit Disruptions
- Administrative Unit Disruptions
- Academic Unit Disruptions
- Supply Chain Disruptions
- Etc.
Linear Approach vs. Decentralized Model

- Business Continuity Planning
  - Well researched and broadly practiced concept in business enterprises.

- Academic Continuity Planning
  - Extends this concept to the education system
    - Teaching, Research, Public Service, etc.
  - Focus is on integrating Resources, Processes, and Information into the operational design of higher education
Path to University of Illinois Ready
University of Illinois at a glance…

77,731 Student Enrollment Fall 2013

- Chicago: 27,875
- Springfield: 5,046
- Urbana-Champaign: 44,520

$5.63b Operating Budget

20,958 FTEs

- Chicago: Faculty / Staff 1,960 / 7,938
- Springfield: 218 / 493
- Urbana-Champaign: 2,548 / 7,801

> 800 Buildings

Replacement cost $9.2b
Path to Resilience

ACADEMIC CONTINUITY PLANNING

- Initiate the Planning Process
- Identify Functional Requirements
- Design & Develop Recovery Strategies
- Test, Train, & Exercise
- Distribute, Maintain, & Update the Plan
- Implement the Plan
Governance

**STRATEGIC PLANNING**

Ongoing effort to:
- Learn
- Evaluate
- Refine
- Evolve
...the process

**Understand Campus-Level Recovery Priorities**

- Analyze Action Items (countermeasures)
- Implement Mitigation Programs

**Assess Functional-Level Recovery on Campus**

High Priority

**CRITICALITY SCREENING**

Department Level Self Assessments

President / Vice Presidents
Chancellor
Provost

Vice Chancellors
CIO
Deans

Top Down Approach

Bottom Up Approach

Measure & Improve

Measure & Improve
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Our Integrated DNA

- Experience
- Continuous Improvement
- Resilience Integration
- Metrics & Measures
- Emergency & Crisis Planning
- Solutions Action Items
- Supporting Processes
- Availability
- Governance
- Critical Systems
- Interdependencies
- Security
- Information
- Technology
- Faculty and Staff
- Equipment
- Facilities & Infrastructure
Key Tenets

• Designed as an ongoing process (not simply a project):
  • Best practices should be designed into all processes and systems

• Information is the cornerstone of readiness and response:
  • Intelligence for real-time decision-making
  • Supports automation of recovery response
  • Foundation for metrics & analytics
  • Information sharing across multiple units and campuses
Path to University of Illinois *Ready*

- **A common continuity tool** creates opportunities for dialog
- **Knowledge** transfer creates opportunities for program alignment and support
- **Dialog** creates opportunities for knowledge transfer

*Educational Session Photo*
Lessons Learned

Agreed to emulate methodology & approach
  Policy and framework
Agreed to use standardized continuity planning vocabulary
Agreed to use common criteria for criticality classification
  Tolerance for downtime and data loss
Agreed to share technical expertise
  e.g., shibboleth integration
Agreed to monthly meetings and mailing lists
Agreed to share system representation
  UIC as functional rep, Urbana as board member
Additional Challenges

Embed these responses into our University system model

Within services, systems, personnel, information, processes, etc.
Understanding of threats & risks endangering our system
Collaborative preparedness & response
Self-healing to disruption where possible
Loss of life and property damage is prevented or minimized
Kuali Ready is a new breed of service delivered “Above the Campus”

• Software-as-a-Service
• Delivered by hosting institutions to subscribing institutions through the Kuali Foundation
• Making it “consortium source”
How does Kuali Ready make continuity planning work for higher education?

- Focus on the needs of higher education
- Focus on actions, not plans
- Focus on usability
Continuity Planning Tool
University of Illinois Ready

Web-Based System ("Turbo-Tax" for continuity planning)

Adopted by all three campuses of the University of Illinois

Step by step guide to create a Continuity Plans that identifies:
  - Critical Functions
  - Information and Strategies
  - Action Items

Open Source Enterprise Software
  - Functional Buttons
  - Pull-Down Menus
  - Free-Form Entry Options
  - Hosted Application

Offered by Kuali Foundation
  - Not-For-Profit University Consortium

University of Illinois is a founding partner
  - Seat/Vote on Project Board
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Kuali Planning & Analysis

Standardized methodology enabling data consistency

200+ expertly designed questions built into 7 interfaces

Intelligent branching logic allows users to answer only the questions that are relevant to their operations

Reporting flexibility provides standard and customizable reports
If you haven’t tested it – don’t rely on it.
MAINTENANCE AND ADMINISTRATION
UI Ready M&A Objectives

**Maintenance**

Manage and administer changes to UI Ready plans and processes over an annual cycle:

- Organize, manage and coordinate effects of changes
- Establish UI Ready standards to incorporate changes on a routine schedule
- Clarify effects of change on recovery functions and other campus functions
- Communicate changes to relevant campus stakeholders

**Administration**

Coordinate changes across the College’s and Vice Chancellor units:

- Schedule plan updates and change reviews
- Assure secure access to pertinent stakeholders prior to and during an incident
- Manage detailed control of plan documents and files
  - Distribution
  - Format, storage and retrieval
UI Ready Change Management

- UI Ready plans must be kept current, up-to-date and usable
  - Reduces any surprises during plan use
- Keep pace with changes to our operating environment (academic/business/research), technology and systems, faculty and staff, locations, etc.
- Manifest into a formal, ongoing process
- Make the process timely, accurate and effective as possible
- Make the process as least burdensome as possible:
  - Streamlined, yet thorough
  - Automated (ready app, database and web capabilities)
Perfective Changes
In response to changes in requirements (operational, instructional, research), flaws, gaps (identified in TTX12, 13’, and 14’), etc.

Intended to correct problems with a process, system, or recovery response.

Adaptive Changes
In response to changes in interfacing processes, systems or campus environment

- In tune with technology; research protocols; facility upgrades; instructional design, methodology, and strategies (synchronous/asynchronous learning)

Prevent obsolescence
UI Ready Change Control Process

Triggers

- UI Ready Change Requests

No

Changes Adequate?

No

Evaluate Modifications

Record, Notify, Track & Monitor

Yes

Campus Unit Review

Change Feasible?

No

Identify Risks & Alternatives

Yes

Identify Modifications to UI Ready Plan

Dep./Unit Management Approve Modifications?

No

Incorporate Modifications

Yes

Evaluate Modifications

Dep./Unit Management Approve Modifications?
Change Control Architecture

Campus Processes & Systems

- Facilities
- Finance
- Human Resources
- Instruction
- Research
- Technology
- Operations

Aligned Change Cycles

UI Ready Plans & Documents
Who is Involved in the Change Process?

UI Ready Functional Leads
- Formalize well documented process (standardized validation matrix)
- Review, evaluate, govern change process for their respective campus
- Manage the schedule and specifies process revisions
- Follow and monitor change process (from end-to-end) within the Colleges and Vice Chancellor units
- Facilitate auditing, tracking, and University/campus compliance directives

College or Vice Chancellor Unit Continuity Coordinators
- Review, troubleshoot, govern change process for respective College or Vice Chancellor unit
- Prioritize and coordinate among other unit plan
  - Make recommendations to other related processes or academic/business/research functions that could be affected
  - Training programs, systems, documents, etc.
- Determine when effects of changes will be validated during next test cycle
- Provide feedback of changes to other unit and/or campus stakeholders (internal/external)
Who is Involved in the Change Process?

UI Ready Plan Owner
Person or unit responsible for triggering and requesting the change
Formally defines the change request and physically implements changes
Manages plan, tests, and verifies the change
Evaluate potential change impact
  Plan components affected
  Effects on systems, procedures
  Effects on roles & responsibilities
  Impacts and costs
    (High, medium, low)
Additional Auditing Considerations

Areas for UI Ready plan audit:

- **Structure**
  - Is the structure suitable for intended use

- **Completeness**
  - Is the plan complete in scope
  - Does it contain all the required components, data, information and document items

- **Contents**
  - Does it adequately address response & recovery
  - Are the provisions and procedures adequate

- **Usage**
  - When is the plan used and accessed

- **Access**
  - How can the plan be accessed in an emergency

- **Control**
  - Is the update process adequate and effective

- **Security**
  - Do you have a hard copy in a secure location
  - Are there secure backup copies available if needed

- **Users**
  - Is it available to the appropriate personnel
  - Are only authorized users allowed to access it
  - What is the distribution recipient list
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