BbWORLD®16

Risky Business: 100% Uptime

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Our Guiding Principles: Quality in…

User Experience

Data Integrity

Business Continuity

About Risk

- Event that could cause harm or loss, or affect the ability to achieve objectives.

- Measured by the Probability of a threat, the Vulnerability of the asset, and the Impact if occurred.
(Foundations of ITIL v3)

- A need for continuous awareness of risk potential and management of sources of risk:

  - Accept
  - Transfer
  - Reduce
  - Avoid

About this Presentation

Lessons learned and good practices for managing risk for supporting a complex learning environment
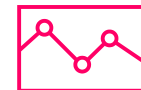
Service Vendor (Relationship) Management

IT Service Management (ITSM) Approach & ITIL™ Framework

IT Industry
Standards & Best Practices

*Application Lifecycle Management (ALM)/DevOps*

Application Administration & Support

Our Institution

- A fully-online and LMS-centric institution

- Centralized course development processes

- Extensive student outreach practices

- Decentralized student support model

- Robust data/reporting processes supporting operational, strategic, regulatory and compliance requirements

- 5- and 7- week overlapping course schedule tracks

- A rapidly-changing and integrated environment

- Managed Hosted (Diamond Engagement Plan) considering SaaS Advantage offering

A Complex Digital Learning Environment

- 10+ applications and partners

- 30+ points of failure

- Multiple internal customer groups

- Multiple internal support teams

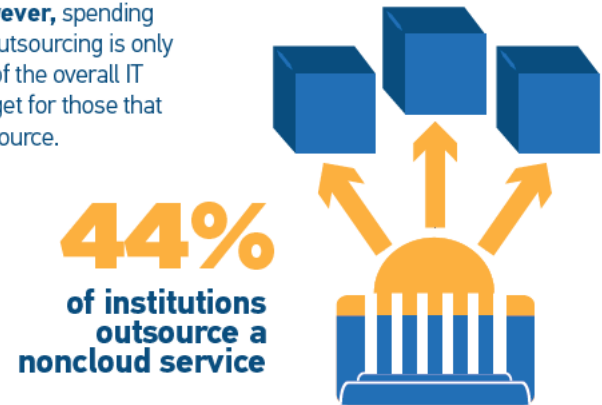- 5+ teams at Blackboard

- A small in-house support team
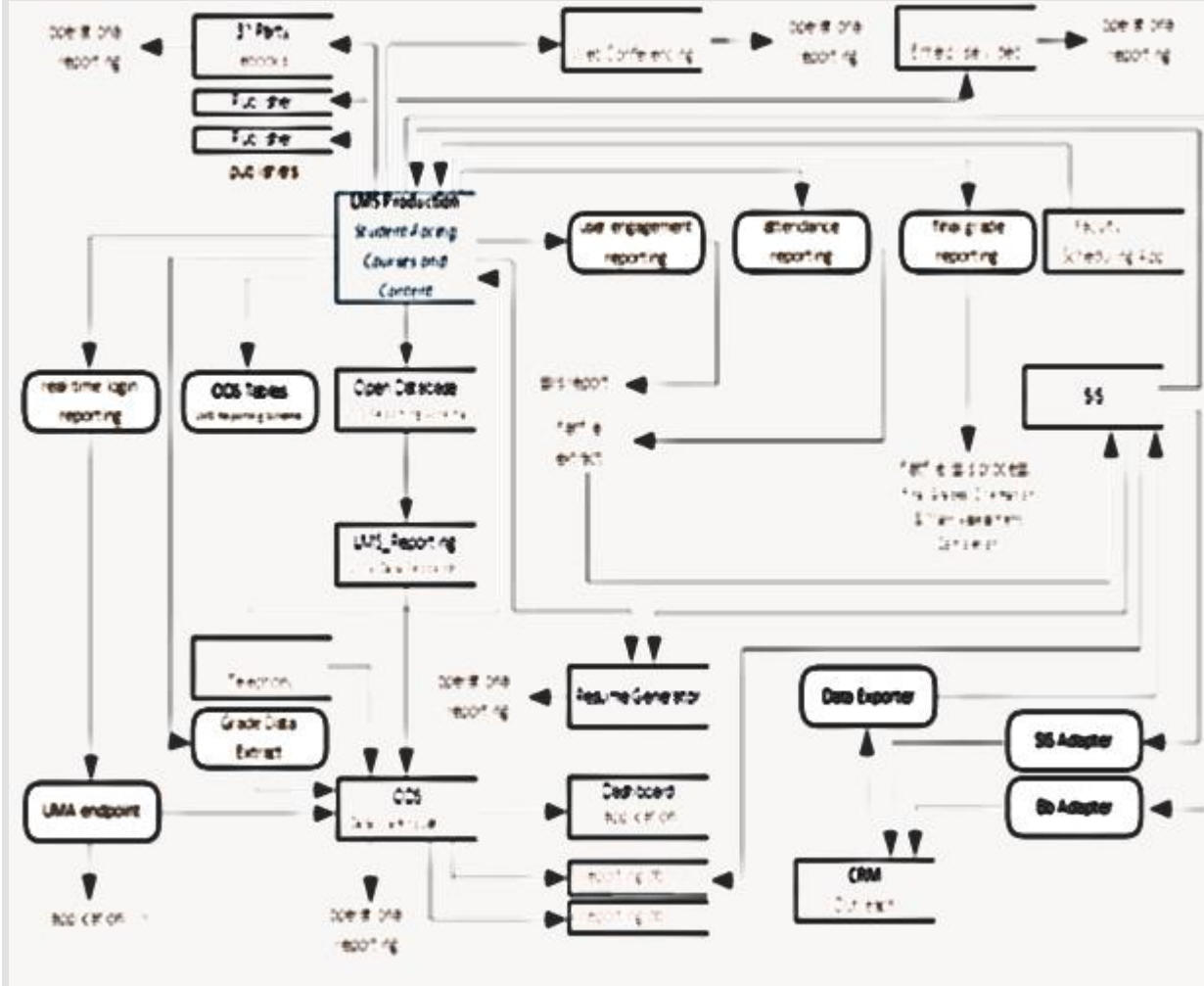
Great Timing

A switch in methods by which IT services are delivered – from the management of technologies to the management of services

EDUCAUSE (2015). IT Service Delivery in Higher Education: Current Methods and Future Directions: Infographic
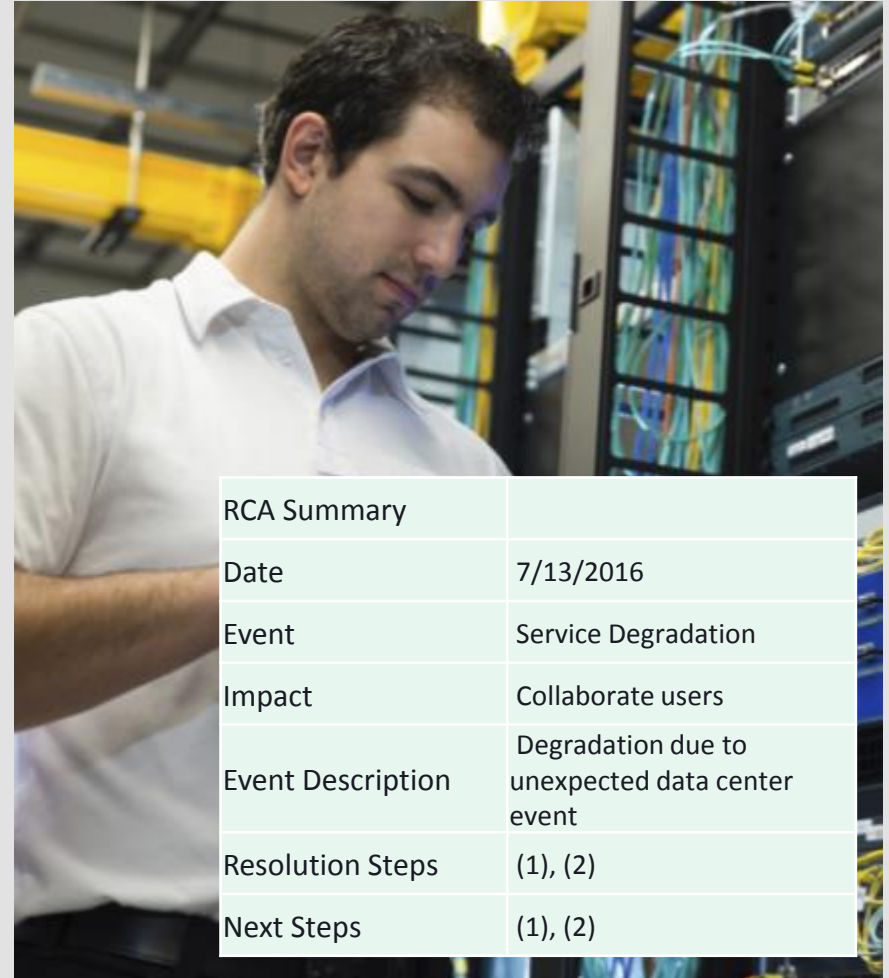
Our Method: Vendor Partnerships

- Multiple POCs within the vendor organization

- A proactive relationship beyond the transactional flow

- Bb Service Delivery Manager (SDM) as the main POC for the technical team

- POCs for Bb ICM, Consulting, and Student Services

- Bb Account Manager & Customer Success Advocate as POCs for business stakeholders

Our Method: Incident & Problem Management

- Root-Cause Analysis (RCA)/Incident Report preparation and review

- Information sharing about incidents, resolution, and lessons learned at

  - Weekly IT Leadership meetings

  - IT Council meetings

- From Incident Management to Problem Management

RCA Summary	
Date	7/13/2016
Event	Service Degradation
Impact	Collaborate users
Event Description	Degradation due to unexpected data center event
Resolution Steps	(1), (2)
Next Steps	(1), (2)

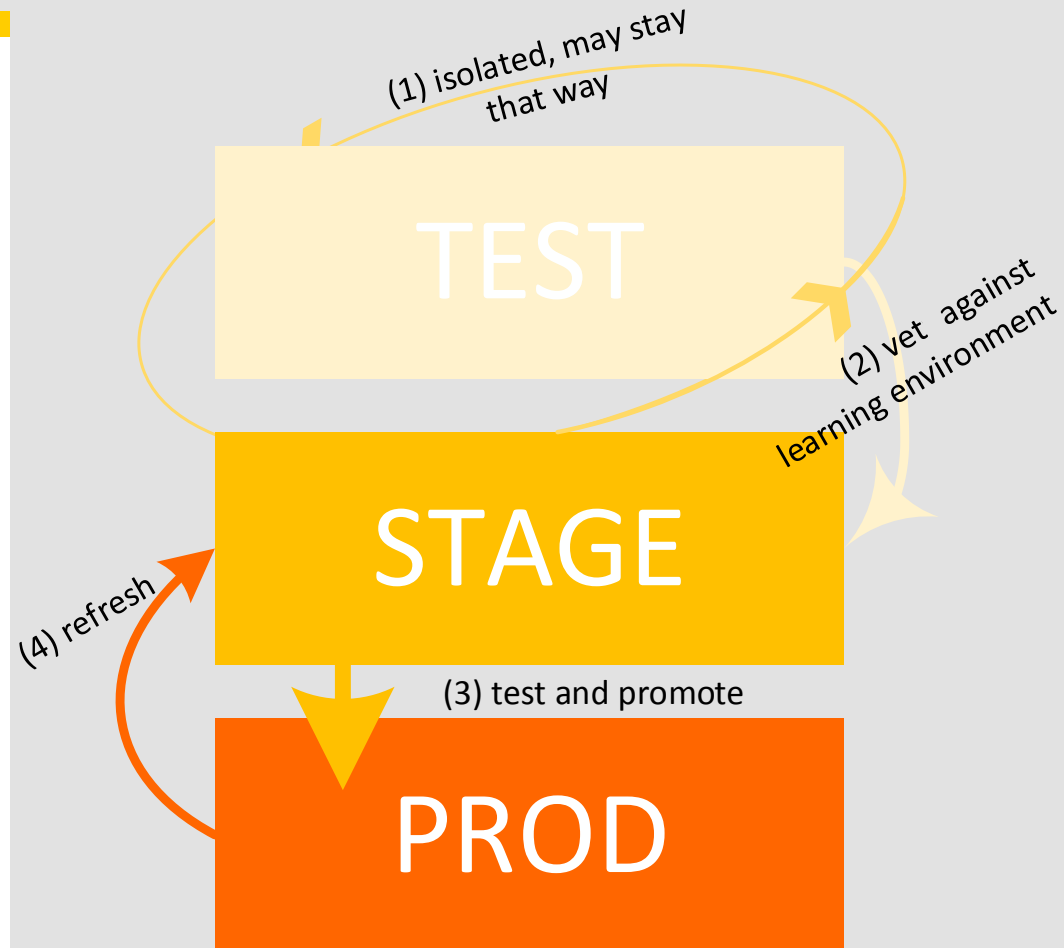# Our Method: Centralized IT Change Management

- Centralized, holistic approach to limit when and how changes occur

- A Change Advisory Board (CAB) that reviews/approves change requests

- Detailed Method of Procedure (MOP)

  - Preparation/Testing

  - Peer-review of changes

  - Communication plan

  - Deployment/Rollback plan

- Annual system upgrade window

- A bi-weekly maintenance window

Our Method: Reality Check

- A Test environment for discovery testing

- A Staging environment that mimics a real Production environment for pre-deployment testing, demonstration, and training

- SOP and Change Request (CR) template for Stage refreshes followed by Bb CHM and UMA

- Bb ICM review of customizations and data integration processes pre- and post-deployments to ensure continuity and data integrity

(1) isolated, may stay that way

TEST

(2) vet against learning environment

STAGE

(3) test and promote

(4) refresh

PROD

Our Method: Comprehensive Testing

- Quality Assurance (QA) Testing

    - Presentation/Responsive testing using [BrowserStack Live](#)

    - Functional Testing (from the end user's point of view)

    - Integration testing

    - Data validation

- User Acceptance Testing (UAT)

- Standard and new test cases

- Test case workbooks per user profile/group

Our Method: Comprehensive Testing

All workbooks:
- Discrete, goal-aligned test cases by use case
- Identifiable info: validation and replication (PKs, timestamps)

accountability

Testing Summary: Data Visualization Framework B2 & Custom Grade Extract Query.

Item	Testing Area	Description	Result	Completed	Point of Contact
1	Tool Configuration	Confirms ability to configure tool per expectations set in Admin Guide.	PASS	5/24/2016	Academic Tech. (RS)
2	Query Configuration	Confirms ability to configure and release new query per expectations set in Admin Guide.	PASS	5/24/2016	Academic Tech. (RS)
3	Report Configuration	Confirms ability to configure and release new report per expectations set in Admin Guide.	PASS	5/24/2016	Academic Tech. (RS)
4	Visualization Configuration	Confirms ability to configure and release new visualization per expectations set in Admin Guide.	PASS	6/28/2016	Academic Tech. (RS)
5	Custom Query Validation	Confirms accuracy and reliability of data returned in custom Grade Extract query developed by BbC.	PASS	6/27/2015	Academic Tech. (RS)
6	Call to API	Confirms complete and accurate data set returned upon call to API.	*pending*		App. Dev.

transparency   clarity

Our Method: Release Management

- Anticipating risk, knowing when to stop, preparing for the worst

- Rollout / Rollback Plan

    - Configuration checklists

    - Check points, peer review

    - Post-deployment testing

- Ongoing monitoring by UMA, Bb CHM, and Bb ICM

- Ongoing communication with internal stakeholders and external partners

INSTITUTION Activity B2 v[X.0.YZ2] Prod Rollout 6/15/2016

Description

Testing completed
Comprehensive QA completed by vendor development team.

Comprehensive UAT completed by INSTITUTION Academic Technologies team (attached).

Preparatory steps
UAT was completed in Staging environment by INSTITUTION and vendor teams.

Performance monitoring completed, and deployment plan developed.

Deployment plan
6/15 2:00 pm EST: Install to be completed by Blackboard Consulting with review by INSTITUTION Academic Tech.

6/15 2:30 pm EST: Post-install QA to be completed by Blackboard Consulting with review by INSTITUTION Academic Tech.

6/15 4:00 pm EST: B2 performance and quality monitoring period begins. Joint monitoring by Blackboard Consulting, Managed Hosting, and INSTITUTION Academic Tech.

6/16 9:00 am EST: Prod UAT begins, to be completed by INSTITUTION Academic Tech team.

Backout plan
In the event of unexpected behavior or performance degradation, the B2 will be made immediately UNAVAILABLE and DISABLED and a review of the environment will be requested by first responder (INSTITUTION Academic Tech or Blackboard Consulting). Root cause analysis will be performed by Blackboard Consulting, and next steps will be developed as appropriate.

Our Method: Communication Management

"Thanks."

context

| Source | → msg → | Encoding | → msg → | Channel | → msg → | Decoding | → msg → | Receiver |

feedback
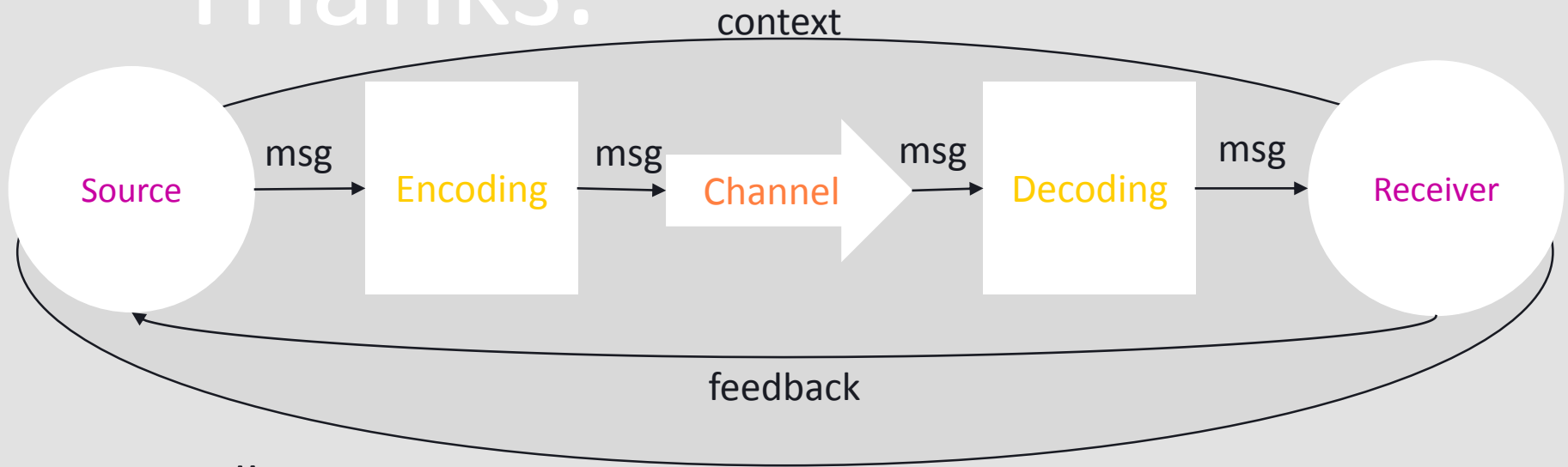
- Friendly
- Targeted
- Audience-centric
- Proactive where possible

A Mathematical Theory of Communication, C. E. Shannon

Our Method: Communication Management

- *Intake:* An email distribution list for members of the team

- *Audience:* Stakeholders identified

- *Expectations:* Standard communication plans – Bb Login Page, Bb Announcements, email, and social media; Familiar artifacts

- *Proactivity:*

  - Weekly: IT Leadership team meetings, IT Council meetings
  - Weekly: Calls with Bb CHM, ICM, and Consulting
  - Bi-annual on-site visits by Bb team

Our Method: Communication Management

Lifecycle	Request	Approval and Prioritization	Initiation	Planning			Execution		Closing	Handoff
Artifact	Business Case		Project Charter; Project Site	Business Reqs Document	Project Plan	Design Blueprint	Test Plan	Deployment Plan	Project Go Live Plan	Lessons Learned, Retrospective	Project Closure Document	Tool Overview, Support & KB
Meeting	Open Intake	Working Group	Project Kickoff	Reqs Gathering			Weekly AT Project Status		Go-Live Prep		Project Close

Audience:

| Owner: BA / Resource: SME / Attendees: Requestor | Owner: BA / Resource: SME / Attendees: Requestor | Owner: SME / Resource: BA / Attendees: Stakeholders Project Team | Owner: BA / Resource: / Attendees: Requestor Stakeholders | Owner: BA / Resource: SME | Owner: SME / Resource: BA | Owner: SME / Resource: BA | Owner: SME / Resource: BA / Attendees: Stakeholders | Owner: SME / Resource: / Attendees: Stakeholders Project Team | Owner: SME / Resource: / Attendees: | Owner: BA / Resource: SME / Attendees: Stakeholders Project Team |

Set expectations:

artifact → WHAT, WHEN, WHY, HOW, TO WHOM ← method

triggers (WHEN, WHY)   audience (TO WHOM)

Blackboard   BbWORLD 16   #BbWorld16

Our Method: Documenting, Documenting, Documenting

- Tool and System configuration settings for each environment

- Daily review and escalation of knowledge base articles

- Templates for BtBb standard requests

- Checklists for regular maintenance

- SOPs for troubleshooting common incidents

- SOPs completing manual processes

- New tool QuickStart handoff docs, walkthroughs and one-voice for training

Next Steps for Our Insitution

- Automating alerts/notifications for data integration processes

- Writing runbooks

- 24x7 monitoring by a Network Operations Center (NOC)

- Extending user education and scope of IT Change Management

- Establishing A more formal Problem Management process

- Developing Administration tools using the Bb Data Visualization Framework

- Defining our approach to fostering vendor partnerships

Next Steps for You

Grab Project Artifacts
tinyurl.com/j6gua5t

Ask Questions

Read About IT Industry Best Practices
tinyurl.com/j6gua5t

See Other Projects
tinyurl.com/j6gua5t