EAB

IT Pandemic Operations Assessment Toolkit

Tools to Evaluate, Enhance, and Communicate IT's Responsiveness to Pandemic Disruptions

IT Forum

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Higher Education's Ongoing Virtual Reality

After Saving the Day, IT Needs Tools to Stabilize and Move Forward

A Brief Introduction: Where Are We Now?

Months into the COVID-19 pandemic, higher education leaders must consider how to continuously improve their operations during these prolonged periods of disruption and social distancing.

At institutions across the country, many of the stop-gap measures deployed by the IT organization to save the Spring 2020 semester will prove insufficient for this extended timeline. IT will need to work closely with university leadership to develop more appropriate and effective remote processes and pedagogies.

What Comes Next?

The subject of this toolkit

IT Pandemic Operations Assessment

What has gone well? Where could we be stronger? What are the lessons learned?

As IT leaders continue to navigate operations amidst COVID-19, they must regularly reflect purposefully on the efficacy of their immediate response - what did we do well? Where could we have reacted more quickly or more efficiently? Answering these questions requires objectively reflecting as an organization and documenting key lessons learned.

IT Value Assessment

What metrics should we document? How do we tell our story to campus?

As most institutions face budget cuts in the next fiscal year, IT leaders must navigate an uncertain future where they may be asked to do more with less. Indeed, in times of austerity IT organizations generally have felt the brunt of cost-cutting efforts. IT organizations must therefore explain their value and continued vision for service to leaders across campus with a compelling narrative.

How to Use this Toolkit

- Facilitate team leadership discussion to reflect upon IT's COVID-19 response and operational endurance
- Document key lessons learned and actionable next steps to address operational vulnerabilities
- Determine quantifiable indicators that measure IT's impact on operational and academic continuity
- Craft a compelling narrative of IT's value during COVID-19 to share with the campus community and leadership

IT Pandemic Operations Assessment

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- IT Pandemic Operations Assessment Worksheet
- Score Tally Sheet
- Discussion Guide and Action Plan

COVID-19 IT Operations Assessment: Overview

Use the worksheets in this section to review the IT organization's response to the challenges of remote and hybrid operations amidst a pandemic. The worksheets divide IT's response into nine categories, each containing between three and 10 items. Items are rated both from a **past** perspective, to determine how well IT accomplished necessary goals during the most recent period of operations, and from a **future** perspective, to identify actions that ensure services remain viable.

Past: COVID-19 Response

Where has the COVID-19 response been especially strong or weak? What lessons can be learned about how to handle such crises in the future?

Scoring: Statement associated with the item describes my institution:

1. Not at all
2. Somewhat
3. Well

Future: Operational Sustainability

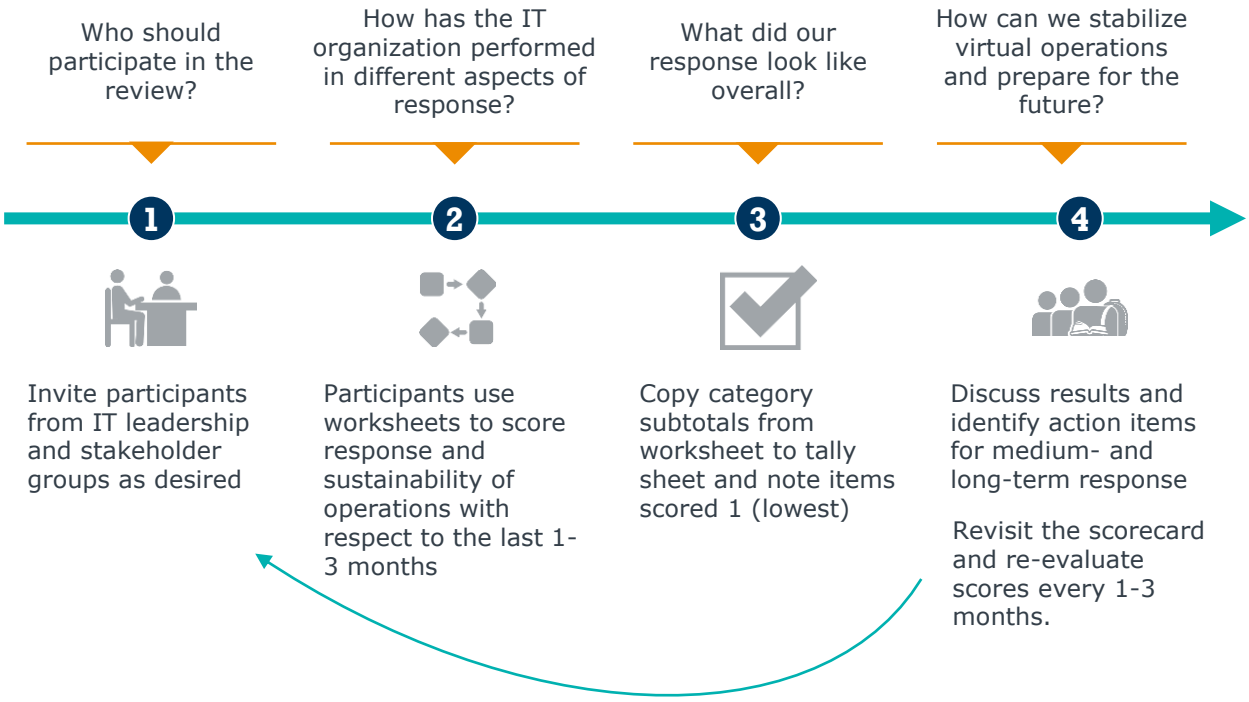
What aspects of the COVID-19 transition need to be upgraded to stay viable for the next six months? Where is minor maintenance enough?

Scoring: To meet required service levels for the next 6 months, item will need:

1. Major upgrade
2. Maintenance/enhancement
3. Minor or no action

Conducting the COVID-19 IT Operations Assessment

The review can be done by a single leader, but we advise making it an IT leadership team exercise, supplemented if desired by major stakeholders or IT governance participants. Use the results to surface differing perceptions as well as to identify action items.



IT Pandemic Operations Assessment Worksheet

Part I: Rate the statements below using these scales and add up the column totals in each section.

- **Response:** The statement describes our institution's pandemic operations: 1=Not at all, 2=Somewhat, 3=Well
- **Sustainability:** To meet needed service levels for the next six months, item will need: 1=Major upgrade, 2=Maintenance/enhancement, 3=Minor or no action

1. Remote and Hybrid Instruction

Item	Description	Response	Sustainability
Course availability	All active course and course materials are available online without significant delays or course interruptions		
LMS	Our learning management system can accommodate larger/changing loads without performance degradation		
Teaching & learning coordination	We collaborate effectively with teaching and learning staff to meet faculty pedagogical/course delivery and digital fluency needs		
Virtual desktops	We make computer lab desktops and specialty software available to students as needed		
Remote examinations	We make proctoring and secure examination delivery services available as needed		
Instructional and classroom tools	We provide the full range of synchronous and asynchronous, in-person and remote teaching tools that faculty needed		
Learning analytics	We can collect, analyze, and disseminate critical information about course delivery and student learning		
	Subtotals		

2. Digital Divide

Item	Description	Response	Sustainability
Laptop/PC loans for students	We collect, image, and distribute enough laptops or PCs to meet demand from disadvantaged students		
Connectivity for students	We provide connectivity options to all students who had inadequate Internet access (e.g., Wi-Fi hotspots, cellular discounts)		
eduroam	Our student body can use eduroam to log in to other institutions' Wi-Fi using our credentials		
	Subtotals		

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5. Work at Home Support

Item	Description	Response	Sustainability
VPN	We provide enough VPN connections to support remote business operations		
Collaboration tools	Our collaboration tools have sufficient functionality, security, and adoption to support all needed modes of work		
Webconferencing	We achieve sufficient scale and functionality in webconferencing to support remote work operations		
Faculty and staff support	We provide prompt and effective service desk support to staff for technology-related issues		
Hardware provision	We provision faculty and staff with hardware needed for work-at-home operations (e.g., computers, monitors, webcams, etc.).		
Staff training	We meet the need for training staff in basic tools needed to work effectively at home.		

Subtotals ☐ ☐

4. Containment and De-Densification

Item	Description	Response	Sustainability
Testing support	We provide technical support to schedule and administer COVID-19 testing (if applicable)		
Exposure notifications	At minimum, we provide technical support for contact tracers to track outreach to exposed persons; at most, we support out an exposure notification app (if applicable)		
Health checks	We help administer health check surveys to deter people with COVID-19 symptoms from participating in on-campus activities (if applicable)		
Quarantine administration	We provide technical support to update system data fields and/or support workflows to administer quarantining protocols (if applicable)		
COVID-19 dashboards	We maintain updated and accurate COVID-19 dashboards to communicate operating status, active cases, and testing rates		
Business intelligence	We effectively deliver data and analysis to support administrators' decision-making for pandemic operations		

Subtotals ☐ ☐

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5. Client Services

Item	Description	Response	Sustainability
Help desk	Our help desk meets demand while maintaining acceptable service quality		
User self-service	Our service catalog and/or knowledge base significantly assists users transitioning to remote operations		
COVID-19-related content	We can quickly provide effective user support resources specific to the pandemic response (web pages, social media, etc.)		
Service management system	We use our service management system effectively to respond to COVID-19/online operations challenges		
Integrated support	We work effectively with local IT and customer departments to hand off cross-unit service requests		
	Subtotals		

6. Cybersecurity

Item	Description	Response	Sustainability
User security awareness	Our user community demonstrates a good basic awareness of security practice during remote operations		
Security communications	We promptly and effectively reach out to appropriate communities about emerging security threats		
Threat detection	We maintain our ability to detect cybersecurity threats throughout the changing circumstances of the COVID-19 response		
Remote access	We can securely authenticate remote users and provide access to all essential systems		
BYOD	We have adequate protections in place to allow secure use of personally owned devices for business and academic purposes		
	Subtotals		

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7. IT Talent Management

Item	Description	Response	Sustainability
Skills portfolio	We have adequate internal or external access to the core skills needed to manage campus transitions between in-person and remote operations		
Staff reassignment	We reallocate staff and work priorities flexibly, based on skills and need		
Staff morale	We take steps to maintain IT staff morale and productivity under conditions of high stress		
Staff work at home	Our IT staff have the skills and tools they needed to work effectively from home where necessary		
Staff access to campus resources	Where necessary, staff can access and maintain on-campus resources without undue risk		
	Subtotals		

8. Core IT Functions

Item	Description	Response	Sustainability
Enterprise systems	Major enterprise systems remain operational and are accessible to users		
Network	Campus network availability remains high		
Infrastructure	We maintain high availability of on-campus infrastructure and can maintain and reconfigure systems as needed		
Vendor management	We communicate effectively with vendors to maintain service quality and upgrade functionality as needed		
Project portfolio management	We adjust the project portfolio as needed and maintain continuity on essential projects		
Business continuity management	Our business continuity plan proves valuable in responding to shifts in campus operating status		
	Subtotals		

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9. Campus Partnerships

Item	Description	Response	Sustainability
Academic stakeholder engagement	IT actively engage with academic unit stakeholders about service needs, project status, and other concerns		
Business stakeholder engagement	IT actively engage with business unit stakeholders about service needs, project status, and other concerns		
Coordination with distributed IT	Central and distributed IT coordinate their actions and performed complementary functions as needed		
IT brand communication	Communications from IT promote a positive and helpful image of the IT organization		
Emergency operations team	IT takes part in the institution's emergency operations team and maintains regular communication with it		
Executive leadership team	IT is in regular contact with executive leadership to understand campus needs and communicate technology actions		
IT governance	Our IT governance structure productively shapes our COVID-19 response and communications with campus		
	Subtotals		

Continue to Part II →

IT Pandemic Operations Assessment Tally Sheet

Part II: Copy the worksheet response and sustainability subtotals for each category into the table below. Identify items scored 1 for Response and/or Sustainability for each category in the column on the right.

Category	Response Score	Sustainability Score	Vulnerabilities (Items Scored 1)
1. Remote and Hybrid Instruction	/ 21	/ 21	
2. Digital Divide	/ 9	/ 9	
3. Work at Home Support	/ 18	/ 18	
4. Containment and De-Densification	/ 18	/ 18	
5. Client Services	/ 15	/ 15	
6. Cybersecurity	/ 15	/ 15	
7. IT Talent Management	/ 15	/ 15	
8. Core IT Functions	/ 18	/ 18	
9. IT Campus Partnerships	/ 21	/ 21	
TOTALS (Max 150)			

Continue to Part III →

IT Pandemic Operations Discussion Guide & Action Plan

Part III: Answer the questions in the boxes below.

Operations Assessment Debrief

What has the IT organization done well to maintain business and academic continuity, and where have operations been less successful?

Is there a root cause or common factor underlying most or all of the weaker areas of operations? What can be done to ameliorate this in the future?

Sustainability of Pandemic Operations

What are the most urgent items of the current environment to upgrade or reinforce in order to assure reliable operations for at least another six months?

What resources will be needed to address these issues?

What funding, approvals, or other resources will IT need from institutional leadership to assure continued reliable virtual operations?

IT Value Assessment

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- IT Performance Metrics
- IT Supporting Projects List
- IT Value Heuristic Worksheet

IT Value Assessment: Overview and Workflow

Measuring the Value of IT

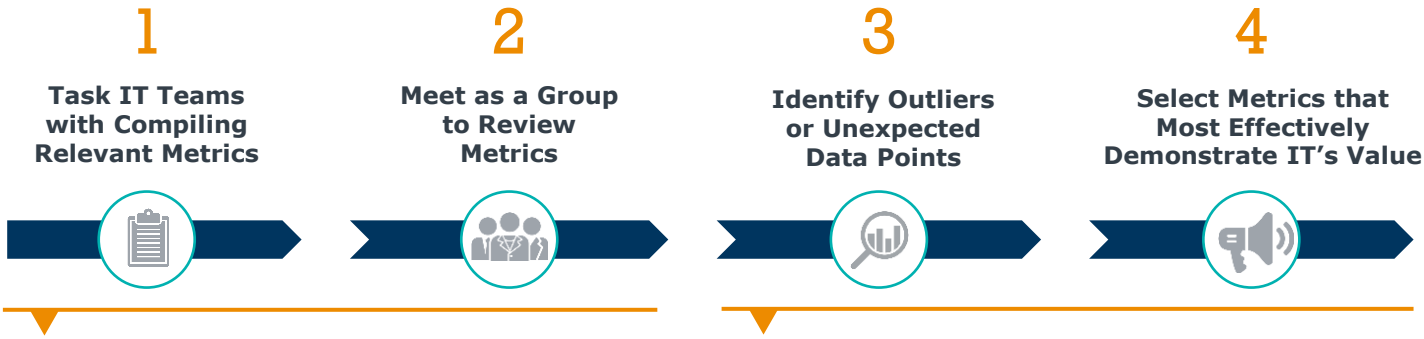
Upon assessing operations, IT organizations must turn to documenting their work and explaining their contribution. As universities cut budgets, IT will likely face an uphill challenge in demonstrating their value to campus leaders and maintaining needed funding levels. IT organizations should therefore ask: "What aspects of the COVID-19 response and transition most effectively communicate IT's value to campus? How did our previous work position us for success?

We recommend IT leaders use the proposed lists in this section as brainstorming devices to: (1) document the IT organization's responsiveness to pandemic operations (see pages 15-17); and (2) craft a compelling narrative of IT's role (see page 18).

> "After the transition to remote operations, we asked people how we did, and all they remembered was that we handed out laptops. It was so underwhelming."
>
> CIO
>
> Private University

Conducting the IT Value Assessment

This review should be completed first by IT staff collecting relevant data points and then as a group exercise led by IT leadership. Use the results to identify action items and to brainstorm how IT can most effectively communicate its role in sustaining pandemic operations to campus.



For consideration:

Before collecting metrics data, IT leaders must first decide on the appropriate *measurement type* for each metric. IT leaders might consider:

- **Comparative dates:** This involves selecting a date of "normal" operations (likely on or before March 1, 2020) and comparing to an appropriate reference point during the COVID-19 pandemic.
- **Cumulative to date:** This represents the total number relevant to each metric from the start of institutional response to COVID-19 through today. *Metrics identified with an asterisk (*) on pages 15-17 may present good candidates for cumulative assessment.*

For consideration:

When examining which data points are outliers or are otherwise unexpected, as well as which metrics most effectively demonstrate IT's value, IT leaders and staff should also consider the following:

- **Based on the data, where did IT perform well? Where could IT perform better?** IT organizations should use quantifiable data to supplement qualitative-based response reviews.
- **Which previously completed or ongoing projects allowed IT to respond well?** In explaining IT's value, IT leaders should highlight how IT's work across the last several years (intentionally or unintentionally) prepared the institution for the pandemic. *For more, see page 18.*

IT Metrics to Consider

Part I: Document metrics that compare IT operations during 'normal' and pandemic times. To start, consider the following:

Remote and Hybrid Instruction

Item	Relevant Metrics
Courses live on LMS*	• Count • Total SCH represented
Student LMS logins	• Count • Count per time zone
Instructor trainings completed*	• Count • Count per mode (F2F v. online)
Faculty help desk calls*	• Ticket count
Student help desk calls*	• Ticket count
Teaching and learning center calls*	• Ticket count as available
Virtual desktops*	• Concurrent users • Lab machines made available

Digital Divide

Item	Relevant Metrics
Laptop/PC loans*	• Machines repurposed • Machines loaned out to students
Cellular hot spot loans*	• Devices distributed to constituents
Relocated WiFi Aps (parking lots, etc.)*	• Devices relocated • Total traffic conducted
EDUROAM*	• Non-institutional logins supported

Work at Home

Item	Relevant Metrics
VPN use*	• Concurrent users
Devices loaned	• Laptops • Monitors
Staff help desk calls*	• Ticket count
Web conferences (Zoom, Webex, etc.)*	• Meetings count • Traffic
Staff trainings completed*	• Count • Count per mode (F2F v. online)
Staff messaging platform usage	• Logins • Message count • Traffic

Containment and De-Densification

Item	Relevant Metrics
COVID-19 testing	• Uptime of platforms
Exposure notifications*	• Adoption of apps • Count of exposure notifications
Health check surveys	• Completion rates across eligible participants
COVID-19 Dashboards	• Frequency of updates • Number of views • Accuracy of data • Availability of testing data • Ability to view data by historical trends, constituent group

Security

Item	Relevant Metrics
Security trainings completed*	• Count • Count per mode (F2F v. online)
Logins denied	• Count
Malicious executables blocked*	• Count
MFA logins*	• Count

Client Services

Item	Relevant Metrics
Ticket volume*	• Count • Count per faculty/staff/students • Count per mode (phone, email, chat) • Count per tier
Time to ticket resolution	• Mean time per ticket
Knowledge base usage	• Article hits as available

*Note: EAB suggests conducting "cumulative to date" analyses for these metrics.

Continue to Part II →

IT Metrics to Consider cont.

Document metrics that compare IT operations during 'normal' and pandemic times. To start, consider the following:

IT Staff

Item	Relevant Metrics
Total FTE available for transition	• FTE
IT staff working remotely	• FTE • Percentage of total
IT staff reassigned to transition-related duties	• FTE • Percentage of total

Projects

Item	Relevant Metrics
Transition related technical projects*	• Project count, FTEs assigned
Non-transition projects continued	• Project count, FTEs assigned

Network

Item	Relevant Metrics
Total traffic	• Traffic volume
Uptime	• Percentage of network availability

*Note: EAB suggests conducting "cumulative to date" analyses for these metrics.

Continue to Part II →

Supporting IT Projects and Initiatives

Part II: IT leaders recognize that IT's ability to support remote and hybrid operations benefited from projects and initiatives completed pre-COVID-19. However, it's critical that IT organizations effectively share that message with university leadership to demonstrate value.

Brainstorm which pre-COVID-19 IT projects strengthened the institutional response, including completed projects and in-flight implementations that were expedited to accommodate COVID-19 operations. The following list of illustrative IT projects and initiatives are aligned with specific metric areas proposed in Part I. To start, consider the relevant categories and IT initiatives below.

In doing so, also consider:
- *Project duration* – When was this project completed? How long did it take to implement?
- *IT contribution* – How much work did this require from IT staff?
- *Project sponsors* – Who led this implementation?

Category	***Supporting IT Projects and Initiatives***
Remote instruction	*LMS implementation and upgrades*
	IT service management system and practices
	Virtual desktop infrastructure, computer lab management software
Work at home	*VPN*
	Web conferencing tools
	Collaboration tools: Slack, Teams, etc.
	Office 365/Teams/Google G Suite
Digital divide	*Laptop loan programs, disk imaging tools, desktop support organization*
	Wifi infrastructure
Projects	*Project management office and best practices*
Client services	*Service management system*
	Knowledge base
IT staff	*IT talent management: recruiting, hiring, training*

> "For the past 5 years we were preparing for the pandemic without realizing that we were preparing."
>
> CIO
> Regional Private University

Continue to Part III →

IT Value Heuristic Worksheet

Part III: Use this guide to compile IT metrics on services and projects and craft a compelling narrative about IT's contributions to operational and academic continuity during the pandemic.

Begin with an area of strategic concern, then list the strategic objectives of the institution or major stakeholder unit during the COVID-19 pandemic. As a team, then examine the ways that IT has contributed to that objective either through more recent projects or pre-COVID-19 initiatives and pair relevant metrics to demonstrate IT's value.

1 **Choose an area of strategic concern in which you wish to demonstrate IT value.**

- ☐ Teaching and Learning
- ☐ Research
- ☐ Community Service
- ☐ Enrollment Growth
- ☐ Student Experience
- ☐ Campus Health and Safety
- ☐ Administration
- ☐ Diversity and Inclusion
- ☐ Other: _____

2 **List strategic objectives of the institution or major stakeholder unit within this area.**

_____

3 **Consider ways in which your IT unit has recently contributed to the strategic objectives above:**

- Added a capability that was not previously available.
- Expanded access to an existing capability.
- Helped increase institutional revenues.
- Made a workflow or process faster, easier, or cheaper to deliver.
- Improved security or compliance of a process.
- Improved the institution's ability to measure, assess, or manage a process.

List up to three initiatives that made one or more contributions like these. Initiatives may be projects, services, organizational changes, or other supporting activities.

Initiative	IT Claimable	Quantifiable	External Validation
A)	☐	☐	☐
B)	☐	☐	☐
C)	☐	☐	☐

4 **For each initiative in the table above, check the appropriate box if:**

- **IT Claimable:** IT can claim most or all of the credit for the contribution.
- **Quantifiable:** IT's contribution can be quantified with reasonable accuracy (within 20%).
- **External Validation:** A customer, consultant, or other non-IT party will confirm IT's value claim.

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