

# Building Business Continuity for Health Care's Future

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## Presenter



**Shanley Miller**  
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Shanley Miller is the Business Continuity Manager with Mass General Brigham (MGB), Department of Emergency Preparedness and Continuity. In this role, she develops an emerging Continuity Program to serve the demands of a healthcare system while meeting the needs of its individual entities. Prior to joining MGB, Ms. Miller developed her passion for preparedness working within the United States federal government and biotechnology industry.

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## Disclosure of Relevant Financial Relationships

Shanley Miller has disclosed the following relevant financial relationships or relationships she has with ineligible companies of any amount during the past 24 months: External contractor for Moderna LLC (relationship has ended).



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## Recent Notable Events

**HEALTH IT**  
Channels Becker's Healthcare Websites Newsletters Events Virtual Events Webinars Partner Content Podcasts

**CrowdStrike outage expected to cost healthcare \$1.9B: Report**  
Naomi Diaz - Friday, July 26th, 2024

**Forbes**  
FORBES > INNOVATION > HEALTHCARE

**The Shortage Of Blood Culture Bottles Will Hurt Patients In Surprising Ways**  
Judy Stone Senior Contributor  
I am an Infectious Disease specialist and author of Resilience: One Family's Story of Hope and Triumph...

**AP**  
WORLD U.S. ELECTION 2024 POLITICS SPORTS ENTERTAINMENT BUSINESS SCIENCE FACT CHECK ODDITIES BE WELL  
Live updates: DNC Mike Lynch and carbon yacht Chicken nugget recall Deadly cholera outbreak Israel-Hamas war TEXAS SUPPORT

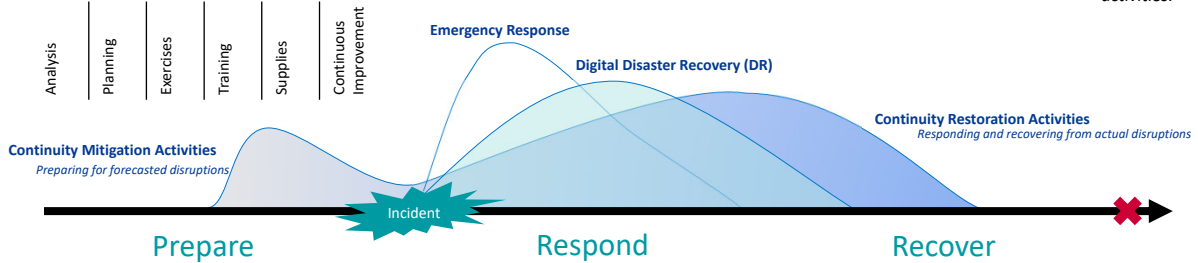
**Flooding at Boston hospital disrupts IVF services for 200 patients, leaving some devastated**

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# MGB Resilience Continuum



**Business continuity is the framework and *practice* of building continuity capabilities to maintain and restore continuity of operations.**



## Agenda

- Background on Mass General Brigham
- Identify major challenges with applying common business continuity practices within the healthcare system
- Describe MGB's process of developing a novel Business Continuity Program to meet a healthcare system's needs and operations
- Discuss how healthcare systems can utilize business continuity programs to effectively prepare for and respond to cyberattacks and unplanned downtimes of their digital systems



## About Mass General Brigham



Mass General Brigham (MGB) is an integrated academic health care system, uniting great minds to solve the hardest problems in medicine for our communities and the world. Mass General Brigham connects a full continuum of care across a system of **academic medical centers, community and specialty hospitals, a health insurance plan, physician networks, community health centers, home care, and long-term care services.**

Mass General Brigham is a nonprofit organization committed to patient care, research, teaching, and service to the community.

In addition, Mass General Brigham is one of the nation's leading biomedical research organizations with several Harvard Medical School teaching hospitals.

### Patient care

From routine care to the most complex cases, we offer comprehensive, full-circle clinical care to our patients, starting and ending at home.

### Research and discovery

Because we are built on a legacy of medical discovery, our researchers push the boundaries of knowledge and advance medicine in new and innovative ways.

### Teaching

We have over 100 accredited physician residency and fellowship programs, and over 2,000 trainees preparing to be the healers of tomorrow.

### Community

We have five licensed and 15 affiliated community health centers. We have diverse community partnerships to support our local residents.



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## Mass General Brigham At-A-Glance

January 2023  
FY22 summary data



**\$16 Billion**  
Total Operating  
Revenue



**\$2+ Billion**  
Over \$2.2 Billion  
in research  
activity with more  
than \$1 Billion in  
direct DHHS  
funding



**Mass General  
Brigham System**

- 12 Acute and Specialty Hospitals
- 5 Harvard-affiliated Teaching Hospitals
- 28 Rehabilitation Locations
- 4 Ambulatory Surgery Centers
- 22 Urgent Care Centers
- 5 Community Health Centers

**Largest Private Employer  
in Massachusetts**



**~7,000**  
Physicians &  
Fellows

**82,000**  
Employees



**2.5 Million**  
Unique Patients



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## MGB Department of Emergency Preparedness and Continuity

- MGB has benefited from strong collaboration on emergency preparedness efforts across the system for many years.
- The Department of Emergency Preparedness and Continuity (DEPC) was created to address variation in readiness programs across MGB, to identify and mitigate any gaps, to facilitate sharing of expertise and staff, reduce duplication of efforts, and to improve overall program quality.

Working as one department enables us to:



## MGB's Previous State of Continuity Practices

- MGB has formal Emergency Preparedness (EP) and Digital Disaster Recovery (DR) functions in place to prepare the organization to respond to a disaster and execute recovery processes.
- MGB emergency preparedness practices include continuity of operations elements.
- Business Continuity functions were inconsistent and largely out-of-date across all levels of the enterprise.
- Traditional business continuity practices have been considered and attempted but did not adequately meet MGB's needs.
- In January of 2024, MGB DEPC endeavored to develop a tailored and focused program.



# The Business Continuity Discipline



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## Business Continuity's Story

Business continuity is the practice of “developing a plan to deal with difficult situations, so your organization can continue to function with as little disruption as possible.”

### A Brief History of Business Continuity As Discipline



Business continuity practices typically follow a general process within most industries. As more industries evaluate their continuity practices, various industry experts are calling for more flexible and approachable forms of business continuity (i.e., Adaptive Business Continuity, etc.).

#### Business continuity for health care requires a different:

- *Kind of mission* that is focused on patient care and staff safety
- *Set of processes* that account for the demanding and time sensitive environment, and
- *Connection* to healthcare emergency management programs and staffing systems.



[Introduction to Business Continuity | The Business Continuity Institute \(BCI\) | BCI \(thebci.org\)](#)  
[Exploring the Evolution of Business Continuity Management \(denovo-us.com\)](#)

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## Business Continuity vs. Emergency Preparedness

### Business Continuity

- Assess essential functions
- Coordinate activities ensuring healthcare system can **preserve** continuity of operations
- Prioritize strategies for order of restoration operations

### Emergency Preparedness

- Assess hazards
- Coordinate activities ensuring healthcare system can **protect** operations and **respond** to specific hazards and threats
- Anticipate related impacts to healthcare operations

**Continuity capabilities** are the *means* to preserve healthcare systems' essential functions, maintaining the healthcare system's mission and back-of-house operations despite actual or potential operational disruptions.



## Drafting a Healthcare Continuity Framework



## Defining our Continuity Program

**MGB's Continuity Program** develops tools, standards, and resources to empower all levels of the enterprise to build *continuity capabilities*.

MGB's Continuity Program uses these four pillar activities to build continuity capabilities:

1. Identification of **essential functions** for every level of the Enterprise,
2. Identification of the **dependencies** and unique vulnerabilities in maintaining essential functions,
3. Development of **actionable plans**, complementary to emergency response plans, that preserve and re-establish essential functions in the face of an actual or potential emergency,
4. Execution of **training and exercise** activities to validate plans, test mitigation solutions, and solidify knowledge of continuity plans and resources.



## Developing a Capability-Based Continuity Approach

We shaped the development of MGB's Continuity Program through a series of white board sessions with a multidisciplinary leadership team.

Observation	Goal
MGB emergency preparedness practices include continuity of operations elements.	<b>Our program needs to enhance and align with emergency preparedness capabilities and resources.</b>
Traditional business continuity practices (BIAs, etc.) were ill received by clinical partners and broader enterprise stakeholders.	<b>Our program needs to be easily digestible and minimally invasive for all levels of our enterprise.</b>
Continuity is a learned skill that uses data actively for mitigation and response. Plans and data cannot sit stagnant on a shelf.	<b>Our program must have live and assessable interactive data across our response teams.</b>
Continuity is a bridge between digital/technical teams and operational team activities.	<b>Our program must coordinate with digital response teams to link tools and develop clear definitions.</b>
Our continuity program has significant executive support.	<b>Our program needs to gain buy in from the departments/divisions and function owners.</b>





# Preparing to Gather the Data

**Essential functions** are the specific workflows conducted by a department/division to uphold MGB’s four-part mission and business operations within the time parameters of the *MGB Continuity Matrix*.

How do we ...

- ... standardize what our stakeholders understand as “essential”?
- ... prioritize essential functions?
- ... account for our multiple enterprise missions?



## MGB Continuity Matrix -

Bucket	Mass General Brigham Continuity Matrix				
	Continuity Risk Tiers				
	1	2	3	4	5
<b>Patient Care</b>	Disruption between 0-8 hours creates a risk of significant patient* harm or death	Disruption between 8-24 hours creates a risk of significant patient* harm or death	Disruption between 24-72 hours creates a risk of significant patient* harm or death	Disruption between 72 hours-2 weeks creates a risk of significant patient* harm or death	Disruption between 2 weeks-1 month creates a risk of significant patient* harm or death
<b>Research</b>	Disruption between 0-8 hours creates a risk of unacceptable harm to study subject(s), deviation from study protocol, inability to maintain regulatory compliance, or loss of data, research animals, reagents, and/or samples.	Disruption between 8-24 hours creates a risk of unacceptable harm to study subject(s), deviation from study protocol, inability to maintain regulatory compliance, or loss of data, research animals, reagents, and/or samples.	Disruption between 24-72 hours creates a risk of unacceptable harm to study subject(s), deviation from study protocol, inability to maintain regulatory compliance, or loss of data, research animals, reagents, and/or samples.	Disruption between 72 hours-2 weeks creates a risk of unacceptable harm to study subject(s), deviation from study protocol, inability to maintain regulatory compliance, or loss of data, research animals, reagents, and/or samples.	Disruption between 2 weeks-1 month creates a risk of unacceptable harm to study subject(s), deviation from study protocol, inability to maintain regulatory compliance, or loss of data, research animals, reagents, and/or samples.
<b>Education</b>	Disruption between 0-8 hours creates risks that unacceptably interfere with trainees’ abilities to complete their assigned work duties safely and/or maintain compliance with usual standards	Disruption between 8-24 hours creates risks that unacceptably interfere with trainees’ abilities to complete their assigned work duties safely and/or maintain compliance with usual standards	Disruption between 24-72 hours creates risks that unacceptably interfere with trainees’ abilities to complete their assigned work duties safely and/or maintain compliance with usual standards	Disruption between 72 hours-2 weeks creates risks that unacceptably interfere with trainees’ abilities to complete their assigned work duties safely and/or maintain compliance with usual standards	Disruption between 2 weeks-1 month creates risks that unacceptably interfere with trainees’ abilities to complete their assigned work duties safely and/or maintain compliance with usual standards
<b>Community</b>	Disruption between 0-8 hours creates risks that threaten the enterprise’s ability to deliver essential and uninterrupted community support resources	Disruption between 8-24 hours creates risks that threaten the enterprise’s ability to deliver essential and uninterrupted community support resources	Disruption between 24-72 hours creates risks that threaten the enterprise’s ability to deliver essential and uninterrupted community support resources	Disruption between 72 hours-2 weeks creates risks that threaten the enterprise’s ability to deliver essential and uninterrupted community support resources	Disruption between 2 weeks-1 month creates risks that threaten the enterprise’s ability to deliver essential and uninterrupted community support resources
<b>Other Departmental Services</b>	Disruption between 0-8 hours creates unacceptable risks to the financial, compliance / accreditation or reputational stability of the enterprise	Disruption between 8-24 hours creates unacceptable risks to the financial, compliance / accreditation or reputational stability of the enterprise	Disruption between 24-72 hours creates unacceptable risks to the financial, compliance / accreditation or reputational stability of the enterprise	Disruption between 72 hours-2 weeks creates unacceptable risks to the financial, compliance / accreditation or reputational stability of the enterprise	Disruption between 2 weeks-1 month creates unacceptable risks to the financial, compliance / accreditation or reputational stability of the enterprise

\*The term patient refers to those receiving medical care or monitoring by all MGB entities and programs, inclusive of clinical research.



# MGB Continuity Matrix – (cont.)

Mass General Brigham Continuity Matrix					
Bucket	Continuity Risk Tiers				
	1	2	3	4	5
Patient Care	Disruption <b>between 0-8 hours</b> creates a risk of significant patient* harm or death	Disruption <b>between 8-24 hours</b> creates a risk of significant patient* harm or death	Disruption <b>between 24-72 hours</b> creates a risk of significant patient* harm or death	Disruption <b>between 72 hours-2 weeks</b> creates a risk of significant patient* harm or death	Disruption <b>between 2 weeks-1 month</b> creates a risk of significant patient* harm or death



## Structuring Data Gathering and Plan Development

*Departments/divisions have the subject matter expertise and operational knowledge.*

### Standard Downtime Continuity Project Structure

Step 1: Define Scope	Step 2: Identify Essential Functions	Step 3: Conduct Department Impact and Gap Assessment	Step 4: Document Department Continuity Plan
<ul style="list-style-type: none"> <li>• Confirm scope</li> <li>• Identify department / division functions within scope (e.g., are any functions split with other departments?)</li> <li>• Identify departmental team members who will complete project activities</li> </ul>	<ul style="list-style-type: none"> <li>• Discuss what “function” means</li> <li>• Review <b>Essential Function Tracker</b> and related definitions (e.g., dependencies, volume, etc.)</li> <li>• Confirm departmental workflow and rhetoric</li> <li>• Tier all essential functions using the <b>MGB Continuity Matrix</b></li> </ul>	<ul style="list-style-type: none"> <li>• Quantify the volume of essential function activities performed in continuity risk tier timeframe</li> <li>• Identify gaps and challenges in the workflow to sustain essential function volumes by tier</li> <li>• Identify possible resources and redundancies to sustain workflow</li> </ul>	<ul style="list-style-type: none"> <li>• Develop plans and processes that support department within appropriate timeframes</li> <li>• Where necessary, develop plans for delaying or reducing lower criticality tiers to sustain essential function volumes</li> <li>• Document continuity plan with MGB DEPC templates</li> </ul>



## Dynamic Data Collection

	Essential Function	Workflow Steps	Short Description	Continuity Risk Tier	Volume	Do Mitigation Strategies Exist?	Mitigation Notes	Department
1								
2								
-								

- **Supplies:** Physical equipment, tools, or resources used to conduct the essential function.
- **Staff:** Specific types and approximate numbers of technician/MD etc.
- **Space:** Entities or locations this essential function occurs at (based on the corresponding Continuity Risk Tier)
- **Digital Systems:** A list of digital applications Digital maintains in our CMDB for the department/division
- **Other Systems:** Any non-digital MGB systems (departmental essential functions or MGB programs)
- **External Services:** Third-Party services, please just list as “vendor – service”



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## Healthcare Continuity and Digital Downtime



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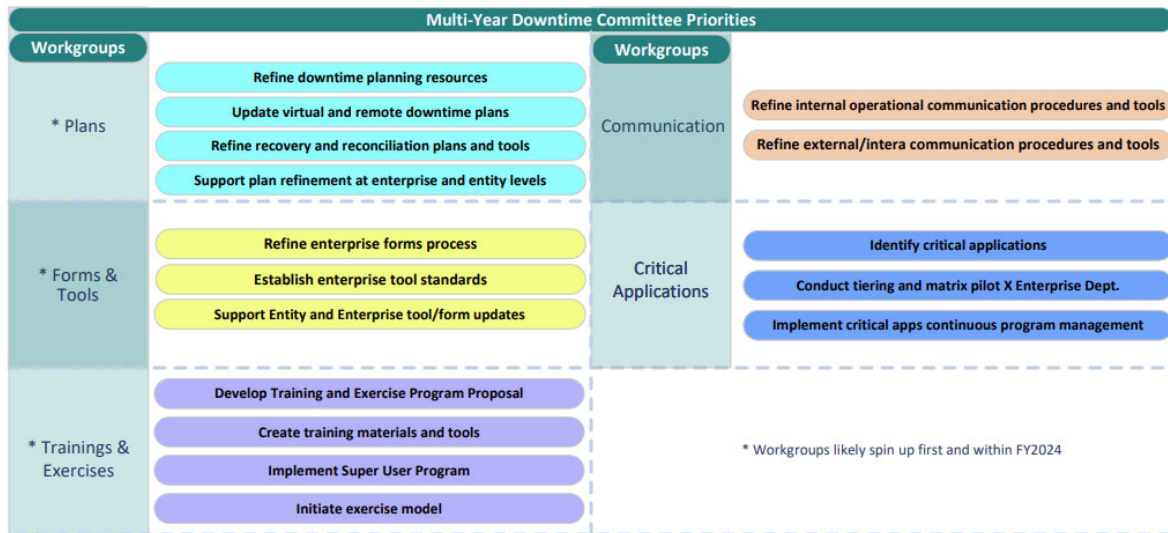
# MGB Digital Downtime Readiness Governance Committee Framework

	Entity	Enterprise	Executive
Meeting Frequency	Monthly	Bimonthly	Triennially
Committee Chair(s)	COO Designated	Emergency Preparedness, Digital and Operations	Emergency Preparedness and Digital
Primary Membership	<ul style="list-style-type: none"> <li>Entity Digital</li> <li>Emergency Preparedness</li> <li>Clinical Operations</li> <li>Quality and Safety</li> <li>Nursing Informatics</li> <li>Chief Medical Information Officer</li> <li>Others as deemed appropriate by facility leadership</li> </ul>	<ul style="list-style-type: none"> <li>Representative from each Entity Downtime Committee</li> <li>Digital, InfoSec, CMIO, and EHR representatives</li> <li>Emergency Preparedness</li> <li>Office of the Chief Quality Officer</li> <li>Telecom</li> <li>Communications</li> <li>Health Information Management</li> <li>Capacity or Enterprise Asset Management</li> </ul>	<ul style="list-style-type: none"> <li>Deputy Chief Operating Officer</li> <li>Chief Preparedness &amp; Continuity Officer</li> <li>Chief Information &amp; Digital Officer</li> <li>Chief Information Officer</li> <li>Chief Information Security Officer</li> <li>Chief Quality Officer</li> <li>VP for Compliance</li> <li>Chief Academic Officer (Research)</li> </ul>
Purpose	<ul style="list-style-type: none"> <li>Identify frontline operational issues and needs</li> <li>Review and implement system protocols, procedures</li> <li>Facilitate local trainings and exercises</li> <li>Facilitate local downtime equipment checks</li> <li>Plan for scheduled downtime events</li> <li>Conduct local follow up after incidents and events</li> </ul>	<ul style="list-style-type: none"> <li>Discuss readiness and response standards</li> <li>Collect and respond to frontline downtime needs and issues affecting the system</li> <li>Support the development of toolkits, resources, exercises</li> <li>Facilitate continuous improvement processes for the system</li> <li>Coordinate mitigation efforts</li> <li>Assist with prioritization of the enterprise downtime initiatives</li> </ul>	<ul style="list-style-type: none"> <li>Ensure accountability for downtime readiness</li> <li>Approve major system downtime policy and priorities</li> <li>Approve initiatives requiring major funding or that may cause disruption to operations (such as downtime training and exercise programs)</li> </ul>



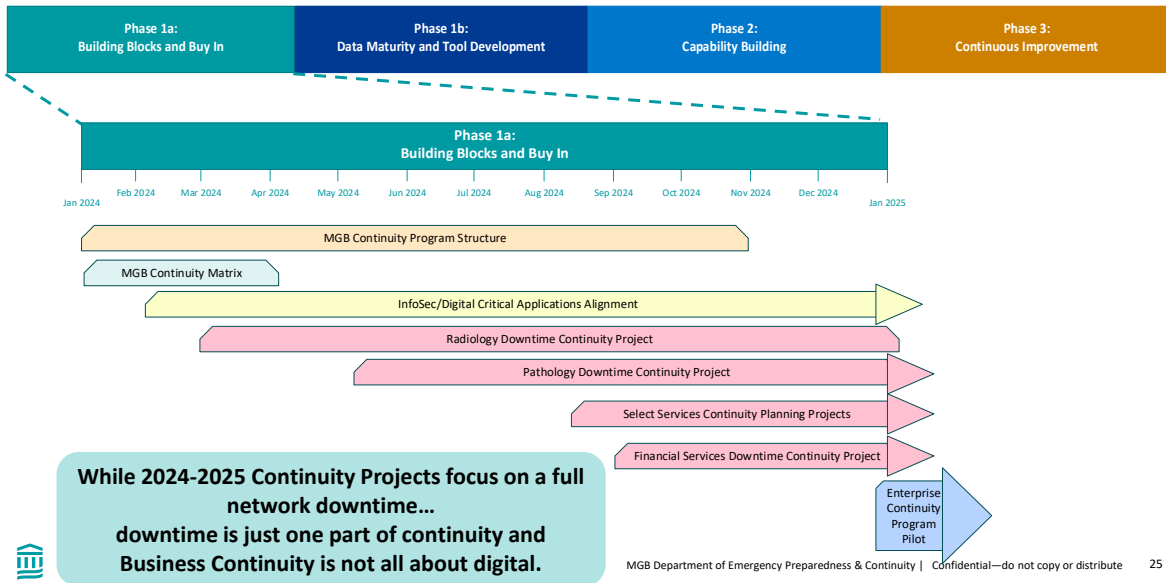
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# High Level Digital Downtime Committee Roadmap



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## Program Timeline and Initial Milestones



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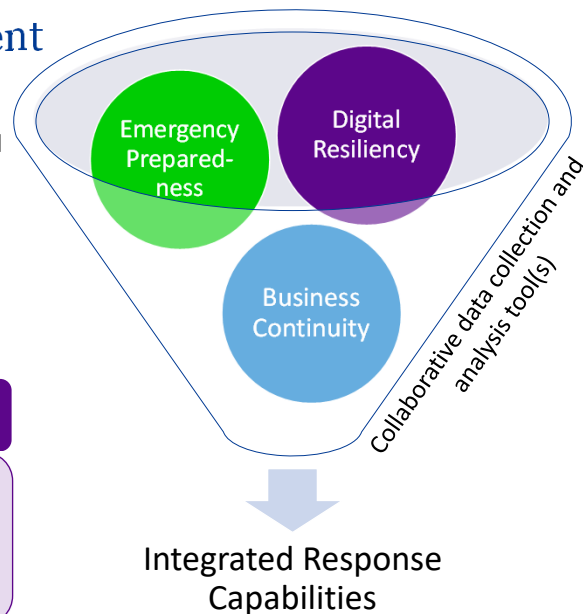
## Critical Applications Alignment

Continuity programs can improve restoration from digital events by ensuring operational and digital data is integrated through dependency mapping.

Collaborative data collection and analysis tools are critical to improving response and restoration continuity capabilities.

### Digital Resiliency includes:

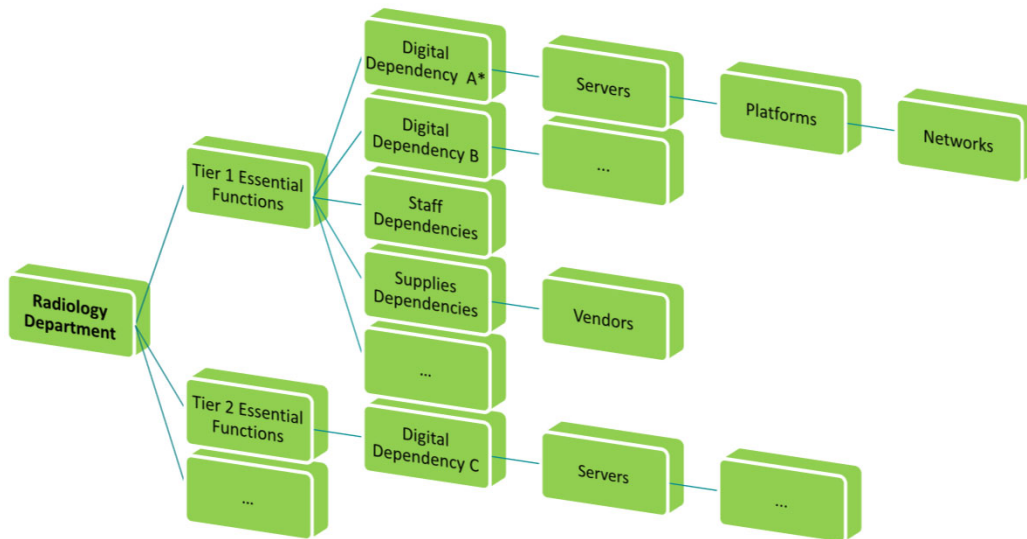
- Digital Disaster Recovery
- Information Security
- Major Incidents Program
- Other observation and visibility tools and capabilities



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## Integrated and Accessible Data: Dependency Mapping



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## In Closing

**A customized approach to business continuity, focused on building continuity capabilities and using clinically-aligned terminology, supports a healthcare system's mission to protect patient care and staff safety. A finance or tech industry model does not work when a life is on the line.**

### Key Takeaways

- Traditional business continuity practices struggle to keep patient care and staff safety front of mind.
- Building an iterative continuity program focused on capability building will improve continuity of operations across a healthcare system.
- A common understanding of “essential” creates a vital baseline for continuity programs and integration with other programs.
- Considering increased downtime and cyber attacks, it is critical that healthcare systems invest in creative continuity solutions to continue operations.



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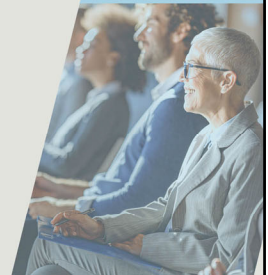


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Questions?



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## Thank you

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