

Lessons Learned from Implementation of a Risk Mitigation Assessment Program

Presentation Team

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- Learn how to integrate a risk mitigation assessment program into your ERM program
- Leverage lessons learned from the implementation of a risk mitigation assessment program
- Evaluate how a risk mitigation assessment program can enhance your ERM Program

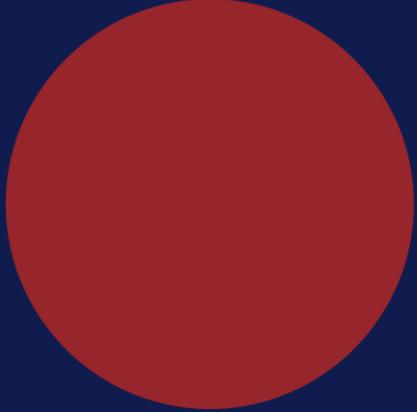


Agenda



- University of Massachusetts System Overview
- Systemwide Enterprise Risk Management Program Overview
- Risk Assessment Process and Systemwide Risk Registry
 - Using Risk Assessment Data
- Risk Mitigation Assessment and MATRX
 - Stakeholder Engagement
 - Mitigation Assessment Data
 - Triumphs and Turbulences
- Influence of Mitigation Assessment Data
- Conclusion and Take Aways
- Questions?



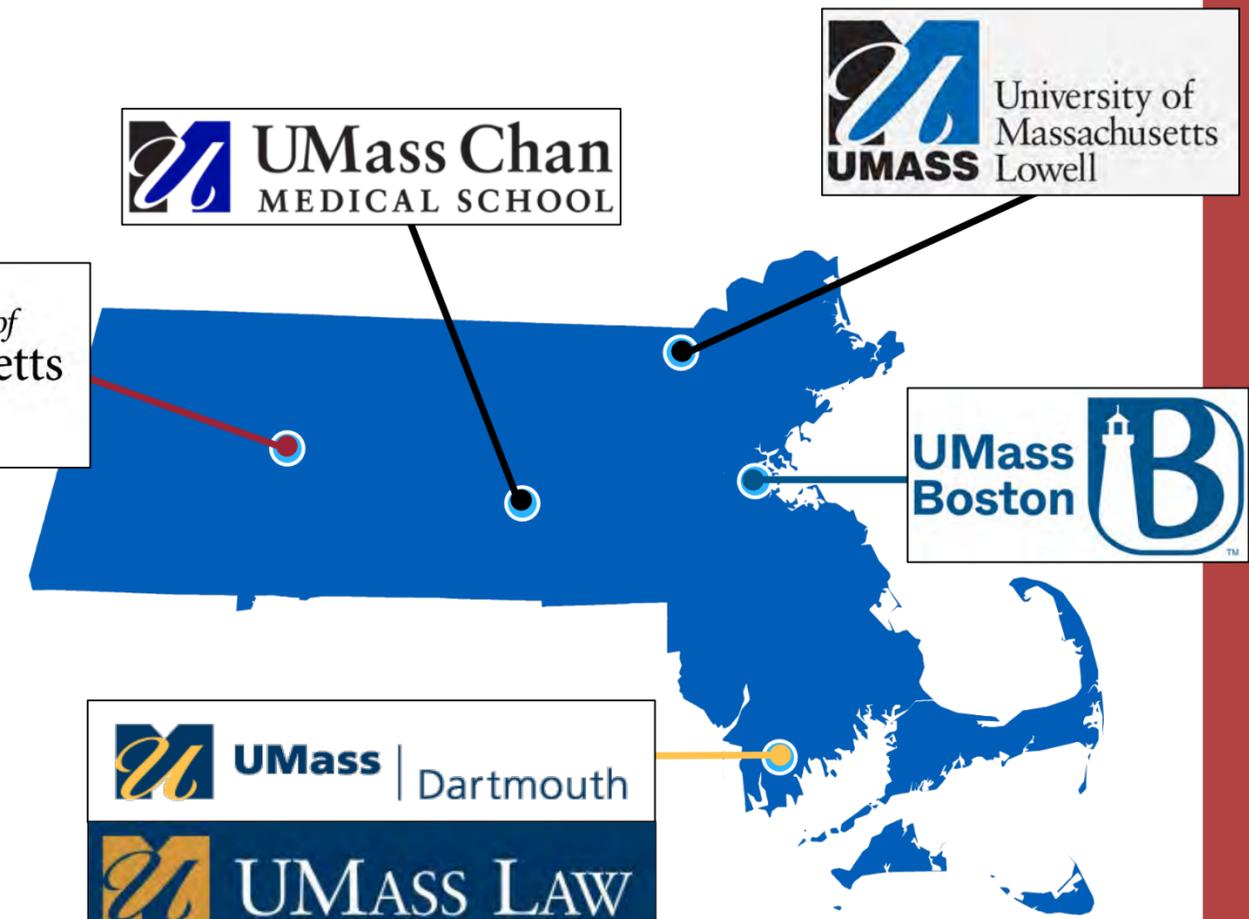
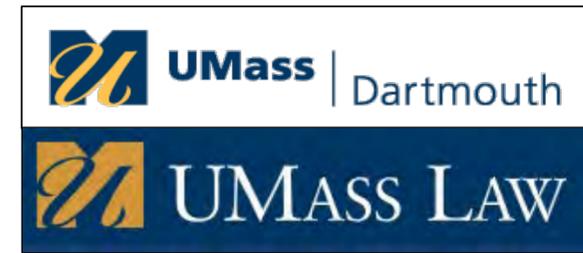
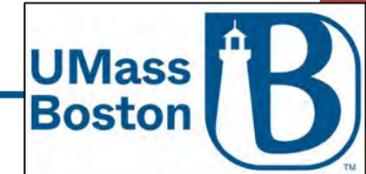


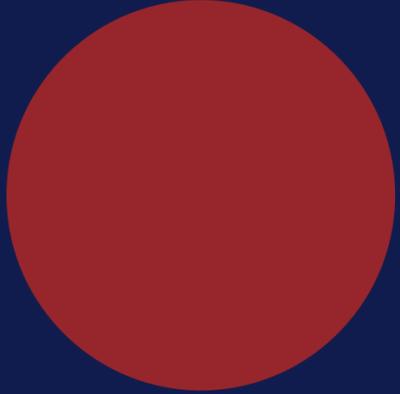
Overview: University of Massachusetts System



ABOUT UMASS

Ranking	#1 Public University in New England
Campuses	Five undergraduate & graduate
Students	74,000 students
New Graduates	19,000 annually
Alumni	<ul style="list-style-type: none">• 330,000 in MA• 530,000 worldwide
Employees	<ul style="list-style-type: none">• 24,000 employees• 3rd largest employer in MA
Research	\$752M <ul style="list-style-type: none">• 3rd largest in MA• 4th largest in New England
Budget	\$3.8B annually
Economic Impact	\$7.5B across Massachusetts

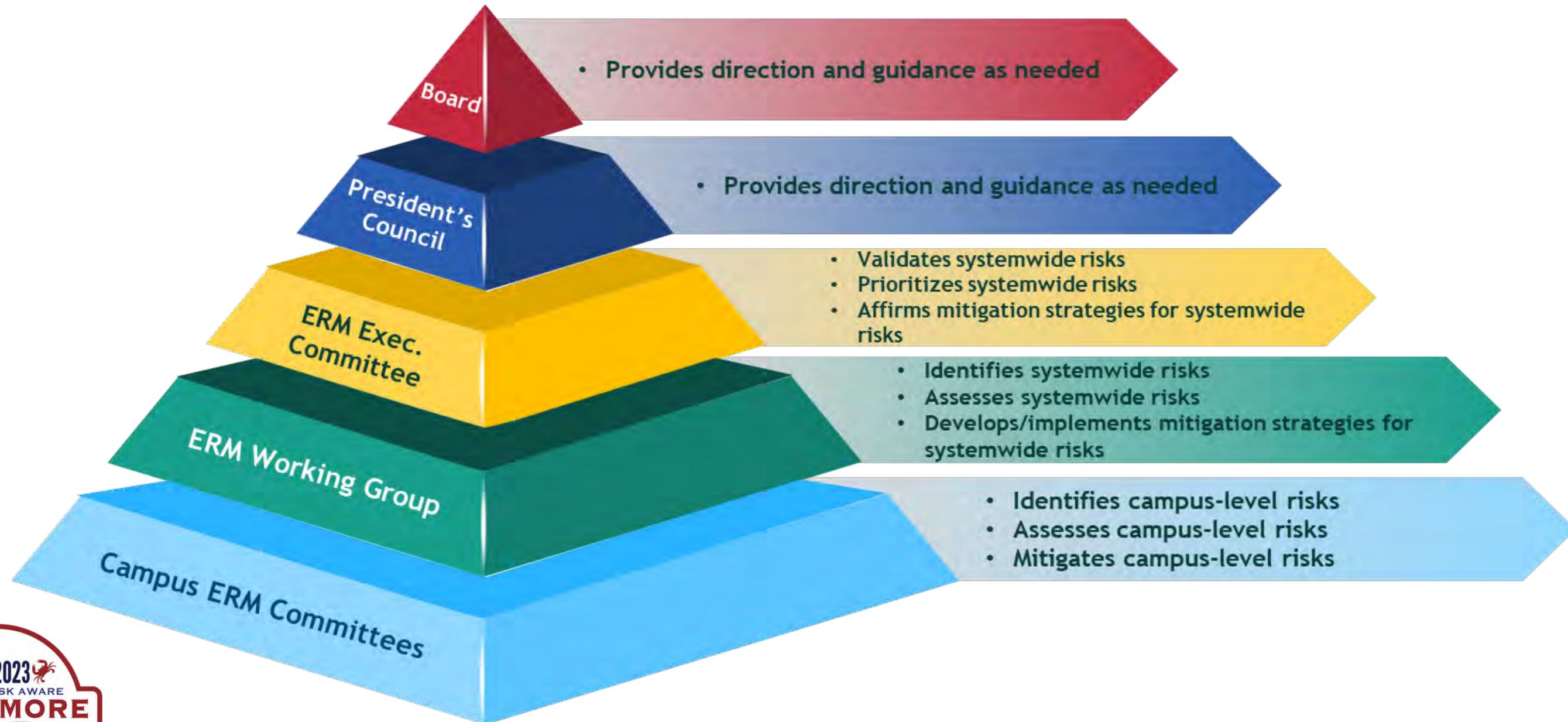




Systemwide Enterprise Risk Management Program



Systemwide ERM Governance Structure



Two-Year Systemwide ERM Program Cycle

Our ERM Program continues to evolve – each phase of the program cycle impacts other phases

FY24 Q4
Typically issued at the end of the FY in which report is due.

FY24 Q2-Q3
Preparing for FY24 Risk Assessment

- Start during October Working Group Meeting
- Will use information from Mitigation Assessment Program to inform Risk Assessment

FY24 Q1
First assessment of mitigation strategies for Top 10 risks complete



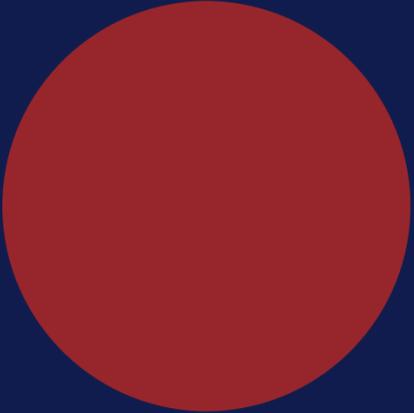
How the Systemwide Enterprise Risk Management Program Functions at the University of Massachusetts



- Identify and assess risks with systemwide implications
- Support informed decision-making
 - Transparency of information/activity
 - Normalized review/prioritization of risk
- Facilitate systemwide coordination on risk identification and assessment
- Assist in identifying risk owners
- Facilitate coordination of mitigation activities for crisis response
- Facilitate the assessment of effectiveness of mitigation activities on risk



- Own risk
- Own risk mitigation strategies
- Implement risk mitigation strategies
- Own compliance review or monitoring
- Own campus ERM programs or plans



Risk Assessment Process & Systemwide Risk Registry



Risk Assessment Process

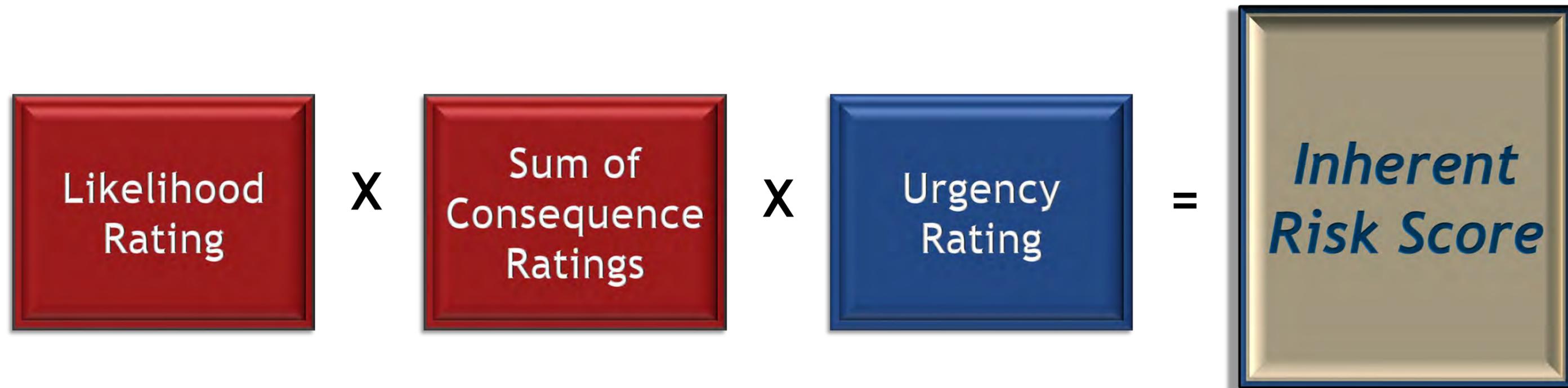
- Focused on systemwide impacts
- Evaluates inherent exposure* of the University to the risk
 - Risk assessment does not account for mitigation strategies for likelihood and consequence
- Rates risks across three factors
 - Likelihood*: Could the University system experience this risk?
 - Consequence*: How much would the University system be impacted by this risk?
 - *Service/Operations Disruptions*
 - *Financial*
 - *Legal/Compliance*
 - *Workforce*
 - *Reputation*
 - *Life Safety*
 - Urgency: How soon does the University system need to prioritize this risk?
 - Values (1-4) are assigned to each rating
- Generates and Inherent Risk Score for each risk

Working Group

Exec. Cmte



Inherent Risk Score Calculation



- Assessed by ERM Working Group
- Assessed by ERM Executive Committee

FY2022 Systemwide Risk Registry

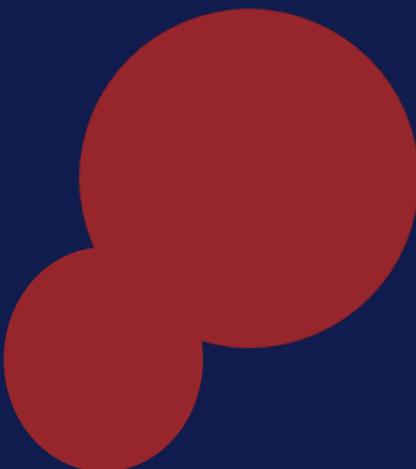
■ Priority Risks

Rank	Risk
1	Enrollment
2	Information Security
3	Financial Sustainability
4	Facilities and Deferred Maintenance
5	Student Health & Mental Health Support
6	Vendor Risk Management
7	Attract, Recruit, Retain Faculty and Staff
8	International Activities
9	Information Privacy
10	Diversity, Equity, Inclusion and Accessibility

Rank	Risk
11	All Hazards Planning & Response Capabilities
12	Multi-State Payroll Tax
13	Labor Relations
14	Data Management
15	Research
16	Multi-State Business Tax
17	Sexual Assault Policies & Response Procedures
18	IT Disaster Recovery
19	Continuity Planning
20	Environmental Health, Public Health, & Safety Regulations

Rank	Risk
21	Alcohol and Substance Abuse
22	Crisis Communications
23	Immigration Rules and Regulations
24	Fraud, Waste, and Abuse
25	Uninsured Loss
26	Employment Laws and Regulations
27	NCAA Regulations
28	Policies and Procedures Regarding Minors on Campus
29	Academic Quality and Standards
30	Oversight of Student Organizations





Using Risk Assessment Data



FY22 Risks Ranked Based on Highest Legal/Compliance Exposure

Listed by highest legal/compliance exposure, and then by Inherent Risk Score

- Information Security**
- International Activities**
- Research**
- Employment Laws & Regulations**
- Academic Quality & Standards**

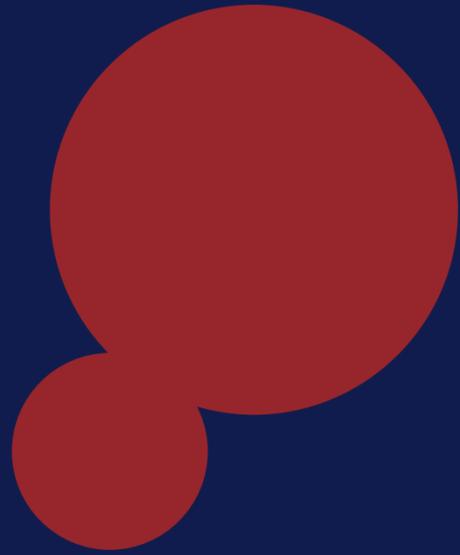
- Facilities & Def. Maintenance
- Student Hlth & Mental Hlth Support
- Vendor Risk Management
- Information Privacy
- DEIA
- All Hazards Plans & Response Cap.
- Multi-State Payroll Tax
- Multi-State Business Tax
- Sex. Assault Policies & Rspns
Proced.
- Env. Hlth, Pub. Hlth, & Safety Regs
- Alcohol and Substance Abuse
- Immigration Rules and Regulations
- Fraud, Waste, and Abuse
- NCAA Regulations

- Financial Sustainability
- Attract, Recruit, Retain Faculty/Staff
- Labor Relations
- IT Disaster Recovery
- Continuity Planning
- Crisis Communications
- Policies/Proced. Minors on Campus
- Oversight of Student Organizations
- Enrollment
- Data Management
- Uninsured Loss

Key

- Highest Legal/Compliance Exposure
- Medium Legal/Compliance Exposure
- Lower Legal/Compliance Exposure





Risk Mitigation Assessment



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GOALS OF THE MITIGATION ASSESSMENT PROGRAM

- Document risk mitigation strategies for *transparency*
- *Correlate* assessment of risk mitigation strategies to a risk's assessed inherent risk exposure
- Demonstrate *impact* of mitigation strategies on risk exposure

TRANSPARENCY

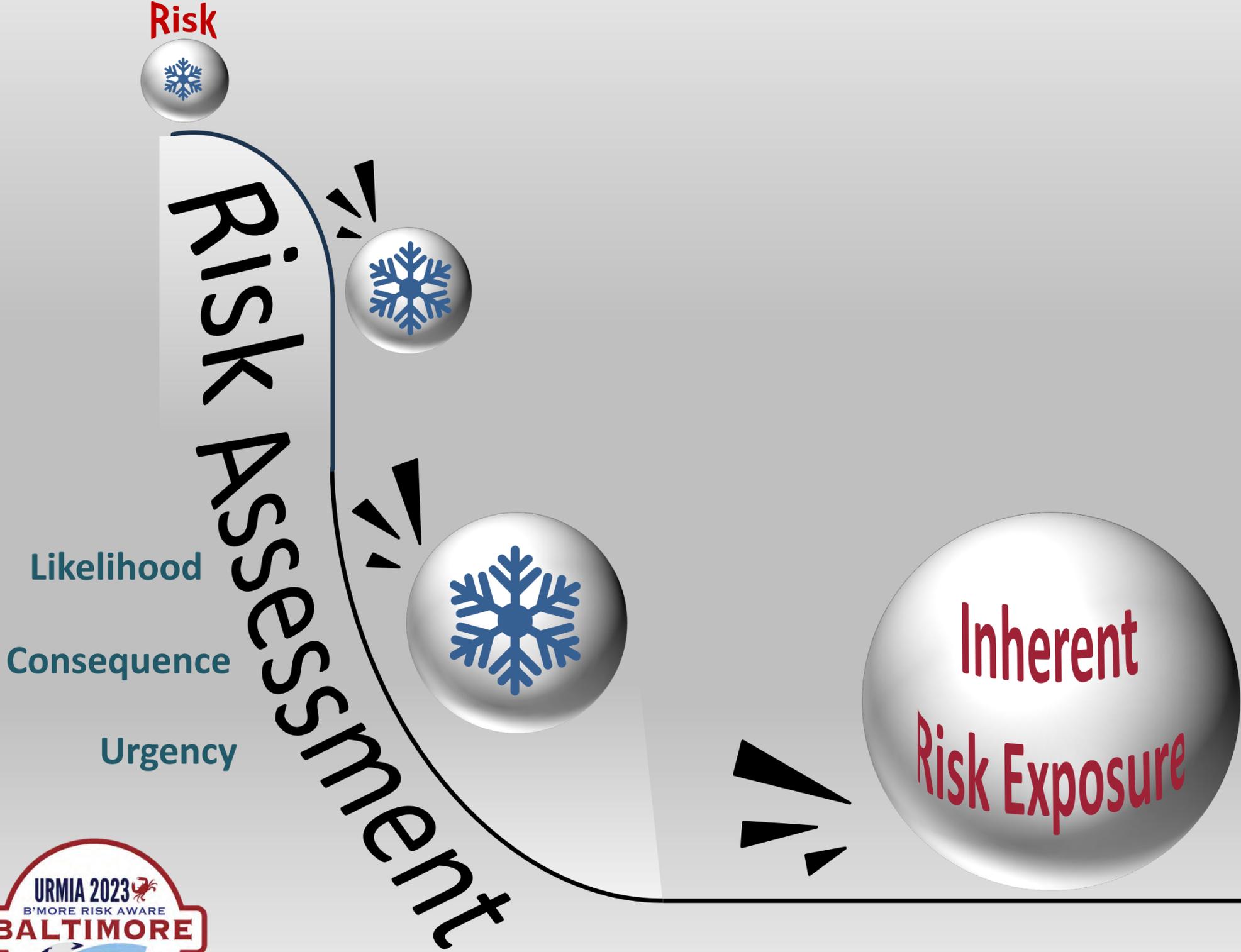
- Create a common operating picture for the University system
- Increase awareness of risk and risk mitigation
- Ground-truth the degree of risk exposure

CORRELATION

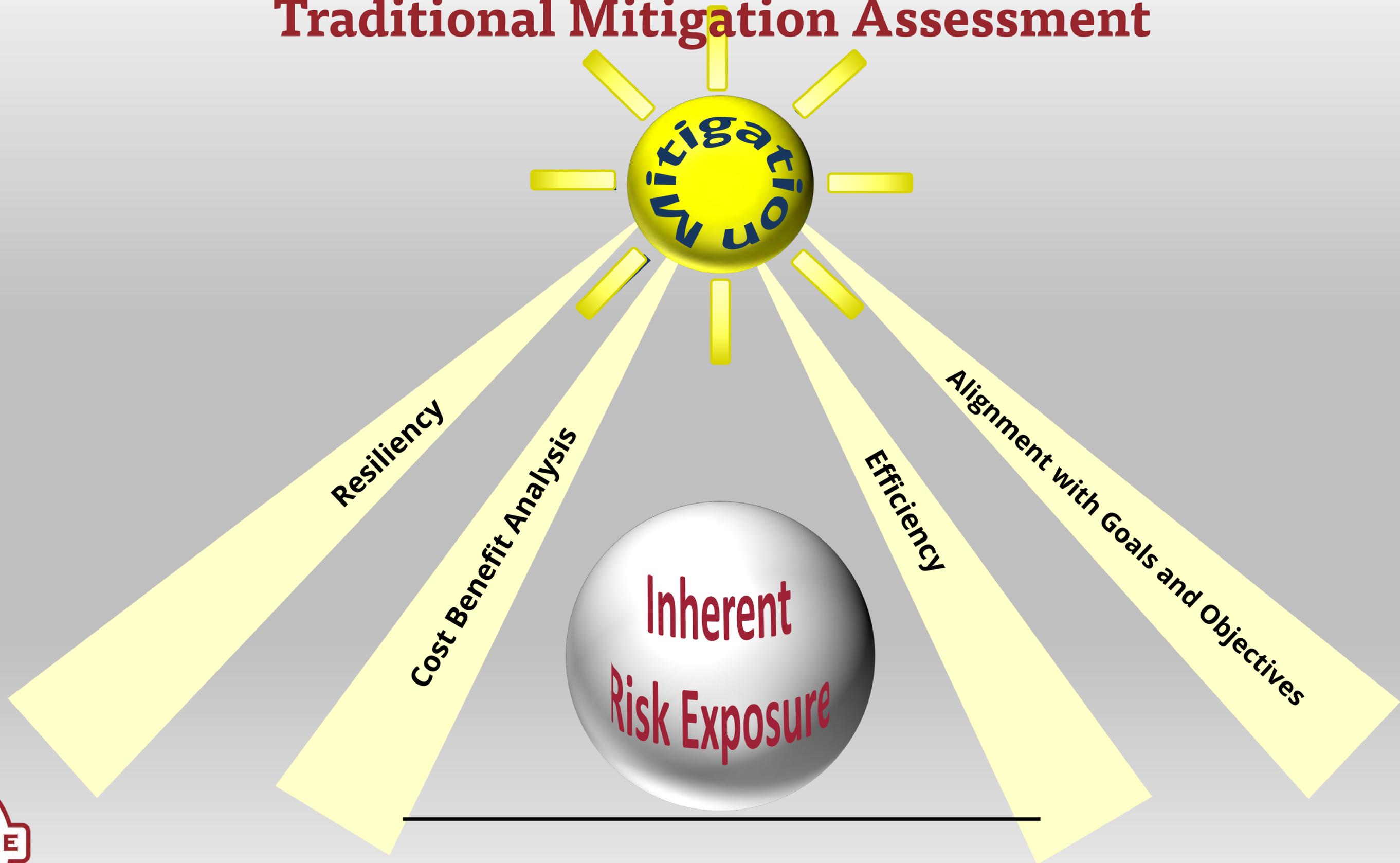
- Traditional mitigation assessment considers important organizational factors, but these factors do not directly correlate to risk exposure
- Needed to identify the impacts mitigation measures have in reducing the exposures identified in the risk assessment process



Assessment of Risk Exposure



Traditional Mitigation Assessment



Correlation of UMass Risk Assessment and Mitigation Assessment



Demonstrate Impact of Mitigation Strategies

Individual Effectiveness

Measure the effectiveness of an *individual* mitigation strategy on reducing risk exposure

Comparative Effectiveness

Compare the effectiveness of *multiple* mitigation strategies on reducing risk exposure

Aggregate Effectiveness

Measure the *aggregate* effectiveness of all risk mitigation strategies on reducing risk exposure





UMass Mitigation Assessment Tool for Reducing Risk Exposure



Initial Data Capture

- All data is provided by risk mitigation partner(s) conducting the mitigation assessment
- Members of the ERM Governance Structure help identify partners for each risk

Data Point	Description	Why
Title	Title of mitigation strategy being documented/assessed	Unique Identifier
Description	Brief description of mitigation strategy	Understand what the strategy is and does
Type	<ul style="list-style-type: none"> • Operational: Everyday or regularly occurring activity • Project-based: Initiative or project with finite timeframe 	Understand if strategy is ongoing or timebound
Status	<ul style="list-style-type: none"> • Proposed: Strategy is not yet approved/funded • Planned: Strategy is approved/funded, but not yet implemented • Ongoing: Strategy is underway • Complete: Strategy has concluded 	Determines whether strategy is included in the mitigation assessment calculation
Implementation Level	<ul style="list-style-type: none"> • Fully: Mitigation strategy is fully implemented • Partially: Mitigation strategy is not yet implemented at full capacity • N/A: Not applicable or not yet implemented 	Determines whether weightings are applied to the mitigation assessment calculation



Consequence

What effect does or would the mitigation strategy have on each of the following risk consequence categories*?

- Service Disruption, Process Impact on Operations
- Finance
- Legal/Compliance
- Workforce
- Reputation
- Life Safety

Rating	Description
Significant Effect	Greatly reduces the University's exposure in this risk category.
Moderate Effect	Somewhat reduces the University's exposure in this risk category.
Little to No Effect	Neutral - barely or does not reduce the University's exposure in the risk category.
Adverse Effect	Creates additional/increases exposure in the risk category.

* Consequence categories align with the consequence categories used in the [risk assessment process](#).



Likelihood

Does or would this risk mitigation strategy impact the likelihood of the risk occurring?

Rating	Description
Decreases Likelihood	Improves: Mitigation strategy has decreased the likelihood that the risk will occur
No Impact	Neutral: Mitigation strategy has made no impact on the likelihood that the risk will occur
Increases Likelihood	Worsens: Mitigation strategy has increased the likelihood that the risk will occur.



Individual Effectiveness Score Calculation

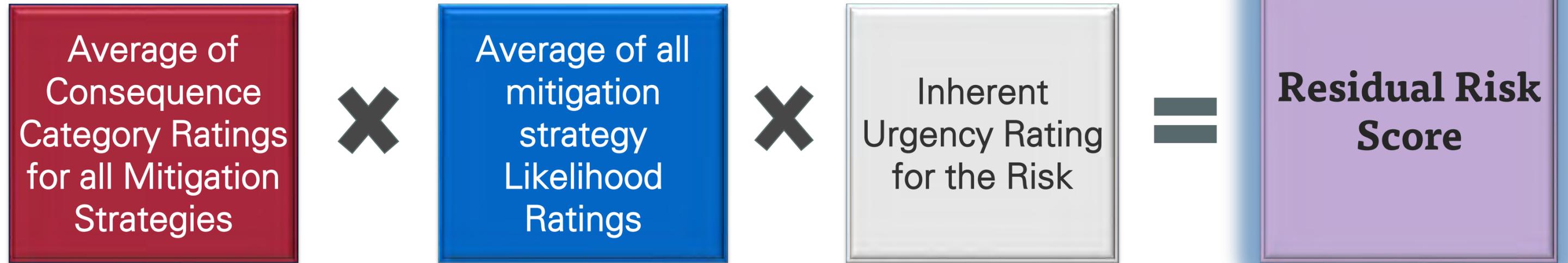


- Consequence rating value is assigned based on level
- Consequence ratings are then weighted based on Implementation Level
- Consequence ratings are then added

- Likelihood rating value is relative to the inherent likelihood rating
- Likelihood ratings is weighted based on Implementation Level

- Proposed strategies are not calculated or ranked
- Individual effectiveness score is used to rank mitigation strategies

Residual Risk Score Calculation



- Consequence rating values for each mitigation strategy are relative to the Inherent consequence rating values for the risk
- Consequence ratings for are then weighted based on Implementation Level
- Ratings for all consequence categories for all mitigation strategies is then averaged

- Likelihood rating value for each mitigation strategy is relative to the inherent likelihood rating for the risk
- Likelihood ratings for are then weighted based on Implementation Level
- Likelihood ratings for all mitigation strategies are then averaged

Urgency Rating Value for the mitigation assessment is the same value as the Inherent Urgency Rating

Planned and proposed strategies are not included in the calculation because benefits of strategies are not yet realized.

Demo of MATRX

Risk Data	
Risk Name	Financial Sustainability
Risk Rank	3
Risk Description	Inability to adapt the University's business model to ensure financial sustainability, mitigate risk, and adjust to changing circumstances that influence funding or revenue.

Responsible Department(s)	A&F (UMPO and campuses) Budget Controllers HR
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Risk Score Data	
Inherent Risk Score	144
Residual Risk Score	96

Quick Links	
A. Table of Contents	C. Reference - Consequence Assessment
B. Instructions	D. Reference - Likelihood Rating

Screenshot

Risk Mitigation Strategy Assessment Table

Mitigation Strategy Reference Number	Mitigation Strategy Title	Mitigation Strategy Description	Mitigation Strategy Type	Mitigation Strategy Status	Implementation Level	Consequence Ratings						Mitigation Strategy Likelihood Rating	Individual Effectiveness Score	Individual Mitigation Strategy Rank
						Service Disruption, Process Impact on Operations	Financial	Legal/ Compliance	Workforce	Reputation	Life Safety			
						Inherent Risk Rating: Medium	Inherent Risk Rating: Medium	Inherent Risk Rating: Low	Inherent Risk Rating: Medium	Inherent Risk Rating: High	Inherent Risk Rating: Negligible			
11	State Financial Support	Continual advocacy to state Legislature and Administration regarding state appropriation by developing and providing rational budget requests and ensuring fiscal transparency	Project-Based	Ongoing	Fully	Significant Effect	Significant Effect	Little to No Effect	Significant Effect	Moderate Effect	Little to No Effect	Decreased	57	1
13	State Funding of CBA Increases	Monitor and ensure state funding for CBA increases wages/salary	Project-Based	Completed	Fully	Significant Effect	Significant Effect	Little to No Effect	Significant Effect	Moderate Effect	Little to No Effect	Decreased	57	1
7	Reporting - Quarterly Budget Projections and Annual Budget Reporting	Quarterly report assesses budget to actuals and completing projection to year end, and develop strategies to ensure budget stay on plan; annual budget sets plan for upcoming fiscal year to achieve a balanced budget at minimum, and progress toward achieving 2% operating margin by FY25	Operational	Ongoing	Fully	Significant Effect	Significant Effect	Moderate Effect	Little to No Effect	Moderate Effect	Little to No Effect	Decreased	54	3
9	Reporting - Quarterly Capital Reporting and Biennial Capital Plan	Quarterly report assesses capital plan to actuals, reports on any changes and how changes impact overall long-term financial plan; biennial capital plan sets plan for capital investments while preserving a debt service burden of less than 8%	Operational	Ongoing	Fully	Significant Effect	Significant Effect	Moderate Effect	Little to No Effect	Moderate Effect	Little to No Effect	Decreased	54	3
	Cash Flow Modeling and Projections	Implemented planning tool to show actuals, trends, and historical data on cash flow.	Operational	Ongoing	Fully	Significant Effect	Moderate Effect	Little to No Effect	Little to No Effect	Little to No Effect	Little to No Effect	Decreased	45	5

What effect does or would this risk mitigation strategy have on reducing the University system's exposure to actual or potential service disruptions, impacts associated with service disruptions, and/or impacts to operations?



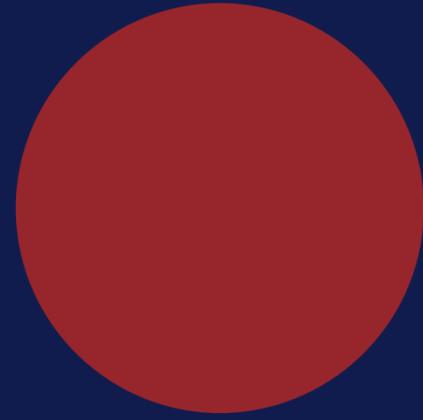
What MATRX Does and Does Not Accomplish



- Provides transparency on risk mitigation strategies
- Demonstrates progress on mitigating risk or depicts areas that may require additional attention
- Enables more robust discussions on risk and risk mitigation
- Demonstrates movement in addressing risk



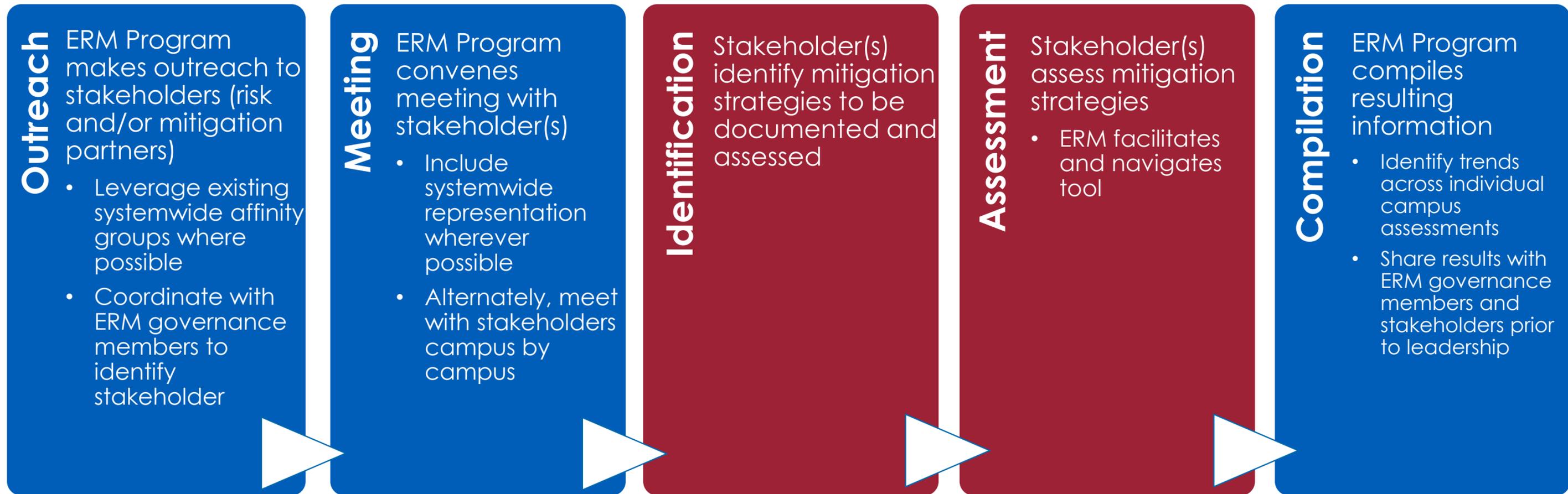
- Does not track key performance indicators
- Does not define risk tolerance
- Does not define specific follow-on actions needed
- Does not conclude satisfaction or dissatisfaction with status of addressing risk



Stakeholder Engagement



Mitigation Assessment – Stakeholder Engagement Process



ERM

Stakeholders



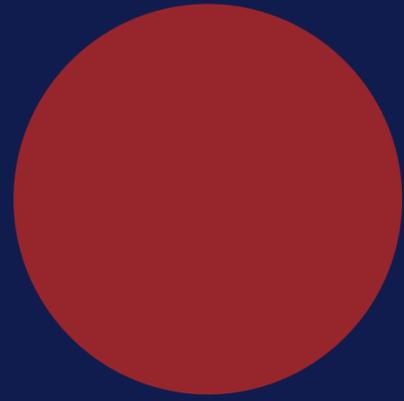
Mitigation Assessment Program Triumphs & Turbulences

Triumphs

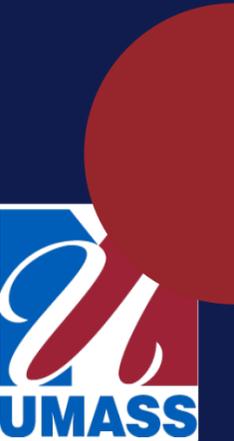
- MATRX has been well received by both internal and external stakeholders
- Results to date have been shared with leadership and our Board of Trustees
- Results have driven additional discussion around priority risks
- Adaptability of the tool to capture additional detail on mitigation strategies

Turbulences

- Lengthier process than originally anticipated
- Challenges in identifying stakeholders and mitigation strategies for risks that do not have existing affinity groups



Mitigation Assessment Data



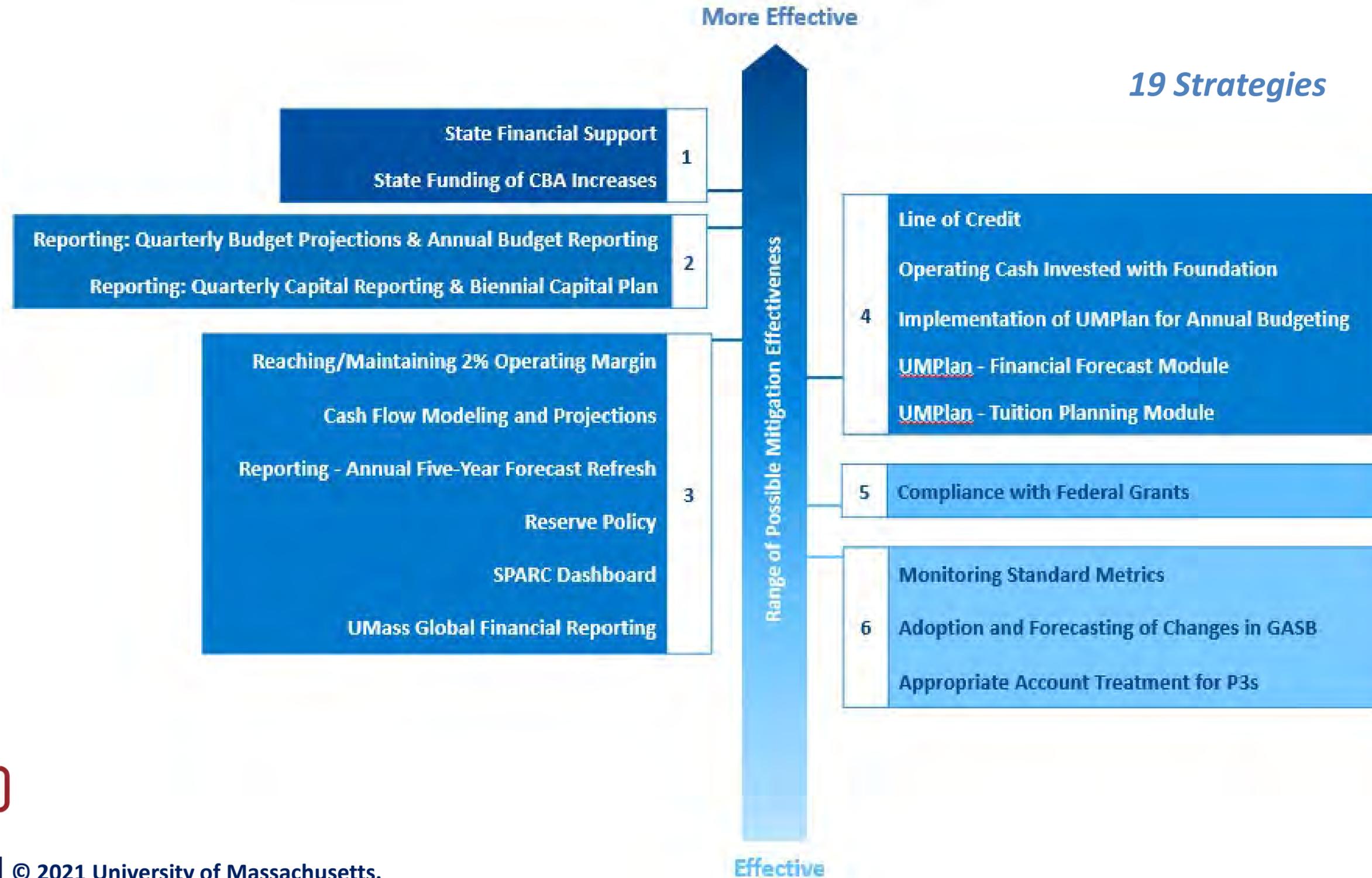
Preliminary Individual and Comparative Mitigation Strategy Assessment



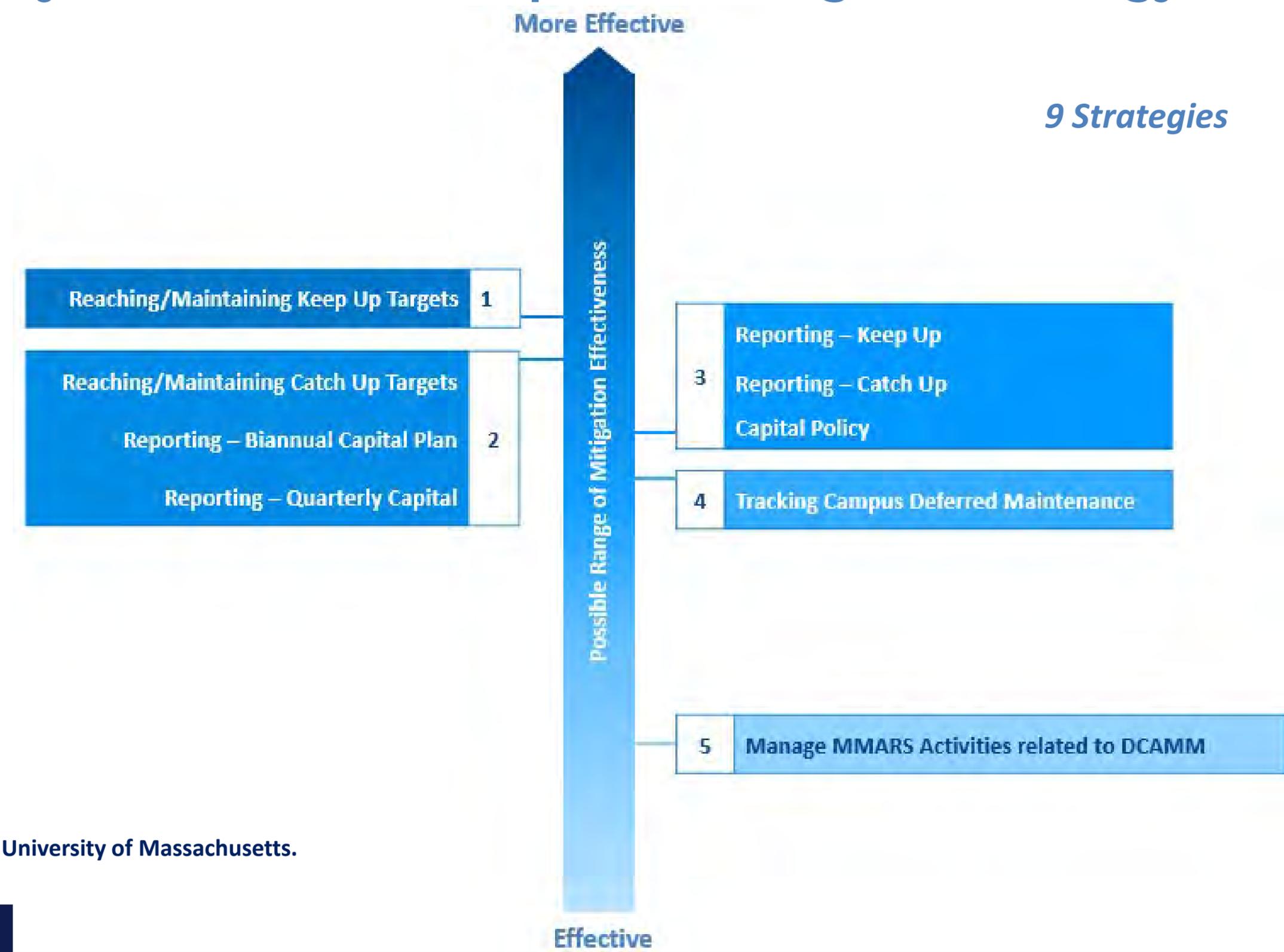
17 Strategies



Preliminary Individual and Comparative Mitigation Strategy Assessment

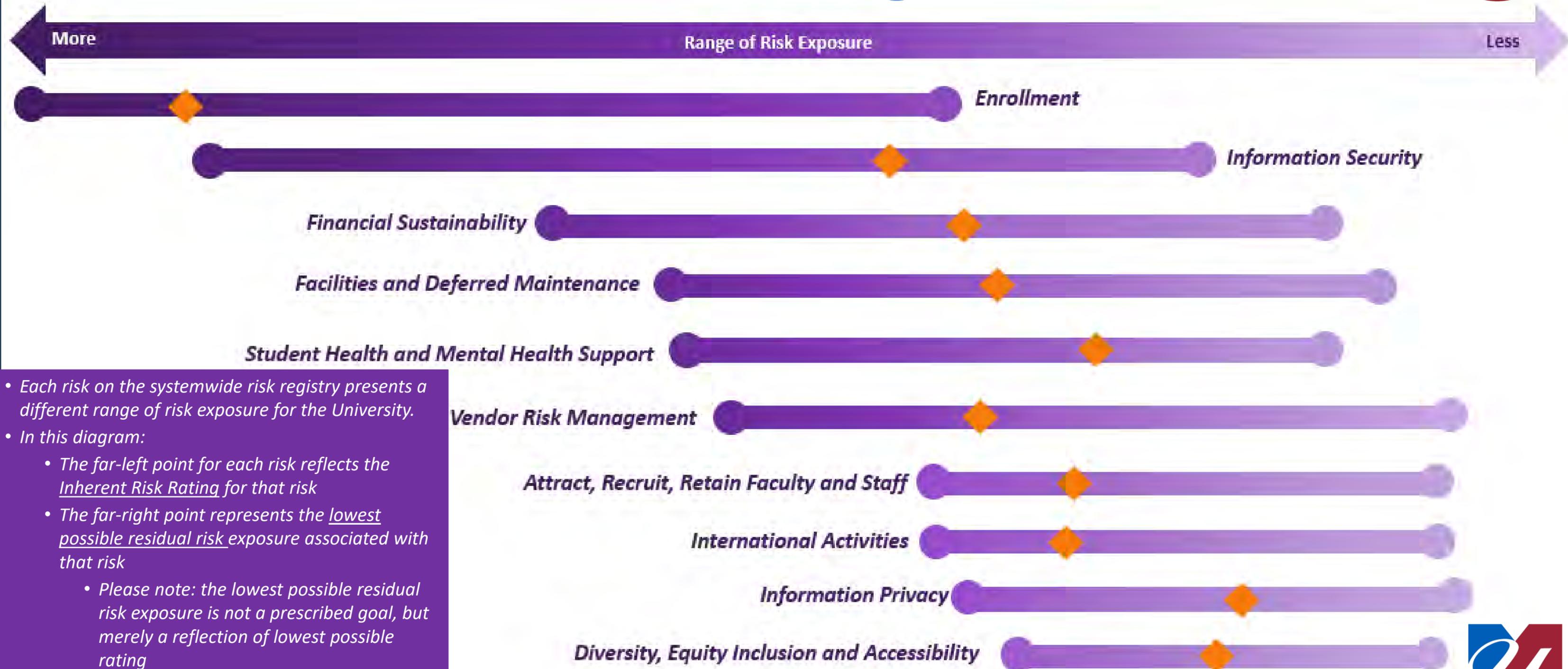


Preliminary Individual and Comparative Mitigation Strategy Assessment





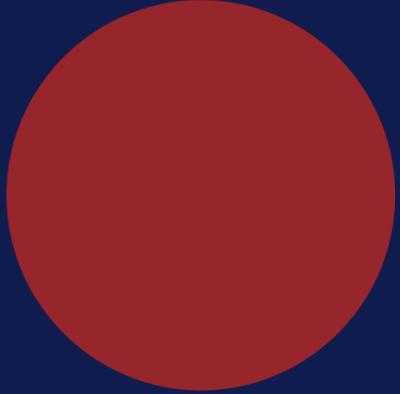
Movement in Reducing Risk Exposure



- Each risk on the systemwide risk registry presents a different range of risk exposure for the University.
- In this diagram:
 - The far-left point for each risk reflects the Inherent Risk Rating for that risk
 - The far-right point represents the lowest possible residual risk exposure associated with that risk
 - Please note: the lowest possible residual risk exposure is not a prescribed goal, but merely a reflection of lowest possible rating
 - The orange diamond reflects the current residual risk having accounted for existing mitigation strategies.

◆ Residual Risk





Influence of Mitigation Assessment Data

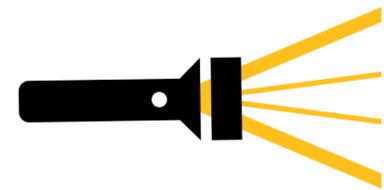


INFLUENCE ON RISK ASSESSMENT PROCESS

- Influence Urgency Rating
 - Are we satisfied with where we are, or do we need to continue to prioritize?
 - Does not mean mitigation stops
- Identify risks that need to be reviewed with more granularity

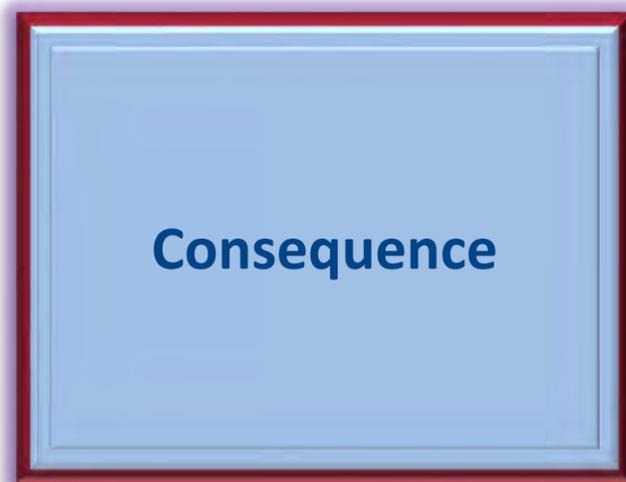
ERM Data Empowers UMass to Better Understand & Prioritize Risk

Data gathered through the assessment of both risk and risk mitigation strategies enables UMass to contemplate risk through multiple viewpoints.



Spotlight: Consequence Categories

Consequence categories assists UMass in understanding how risk affects the University and how effective mitigation strategies are in reducing exposure. These are evaluated for six categories of impact:



- **Operations/Service Disruption**
- Financial
- **Legal/Compliance**
- Workforce
- **Reputation**
- Life Safety



Operations Consequence Category

Risk	FY22 Risk Assessment Assessed Rating	FY23 Mitigation Assessment Assessed Rating (Average)
Enrollment	High	Neutral
Information Security	Medium	Moderate
Financial Sustainability	Medium	Moderate
Facilities and Deferred Maintenance	Medium	Moderate
Student Health & Mental Health Support	Negligible	Neutral
Vendor Risk Management	Medium	Moderate
Attract, Recruit, Retain Faculty & Staff	Medium	Neutral
International Activities	Medium	Neutral
Information Privacy	Medium	Moderate
Diversity, Equity, Inclusion & Accessibility	Negligible	Neutral



Risk Exposure	Mitigation Strat. Impact
Negligible	Significant
Low	Moderate
Medium	Neutral
High	Adverse

Better

Worse





Financial Consequence Category

Risk	FY22 Assessed Financial Risk Exposure	Impact of Assessed Mitigation Strategies on Financial Exposure
Enrollment	High	Moderate
Information Security	Low	Moderate
Financial Sustainability	Medium	Moderate
Facilities and Deferred Maintenance	High	Moderate
Student Health & Mental Health Support	Negligible	Neutral
Vendor Risk Management	Low	Neutral
Attract, Recruit, Retain Faculty & Staff	Low	Neutral
International Activities	Low	Neutral
Information Privacy	Low	Moderate
Diversity, Equity, Inclusion & Accessibility	Negligible	Neutral



Risk Exposure	Mitigation Strat. Impact
Negligible	Significant
Low	Moderate
Medium	Neutral
High	Adverse

Better

Worse





Reputation Consequence Category

Risk	Assessed Reputation Risk Exposure	Impact of Assessed Mitigation Strategies on Reputation Exposure
Enrollment	High	Neutral
Information Security	Medium	Moderate
Financial Sustainability	High	Neutral
Facilities and Deferred Maintenance	Low	Neutral
Student Health & Mental Health Support	Medium	Moderate
Vendor Risk Management	Low	Neutral
Attract, Recruit, Retain Faculty & Staff	Medium	Moderate
International Activities	Medium	Neutral
Information Privacy	Medium	Moderate
Diversity, Equity, Inclusion & Accessibility	Medium	Moderate



Risk Exposure	Mitigation Strat. Impact
Negligible	Significant
Low	Moderate
Medium	Neutral
High	Adverse

Better

Worse



CONSIDERATIONS FOR FY24 RISK ASSESSMENT

- Enrollment – Distinguish between recruitment and retention
- International Activities – Distinguish among travel, business operations, employment and immigration

CONSIDERATIONS FOR FUTURE ERM PROGRAM

- Increase emphasis and understanding around risk appetite and risk tolerance



Conclusion & Take Aways

- Aligning assessment of risk mitigation strategies to risk assessment methodology allows for contextual comparison of risk exposure and risk mitigation
- Transparency on risk mitigation strategies and visibility on progress in reducing risk exposure is empowering
- Volume of mitigation strategies have intuitively been implemented around highest areas of risk exposure
- ERM can be a cornerstone for creating risk-informed priorities and strategies



Thank you for attending!
Please contact us with follow-up:

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