

# Moving Beyond Risk Assessment: Measuring the Effectiveness of Risk Mitigation Strategies

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Texas Tech University Health Sciences Center

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University of Massachusetts

Amherst • Boston • Dartmouth • Lowell • Medical • Law

# Agenda

- Overview of the University of Massachusetts System
- Overview of UMASS Systemwide ERM Program
- Moving Beyond Risk Assessment
- Overview of Mitigation Assessment
- Conclusion and Take Aways
- Questions?

# About UMass

Ranking #1 Public University in New England

Campuses Five undergraduate & graduate

Students 74,000 students

New Graduates 20,000 annually

Alumni

- 330,000 in MA
- 530,000 worldwide

Employees

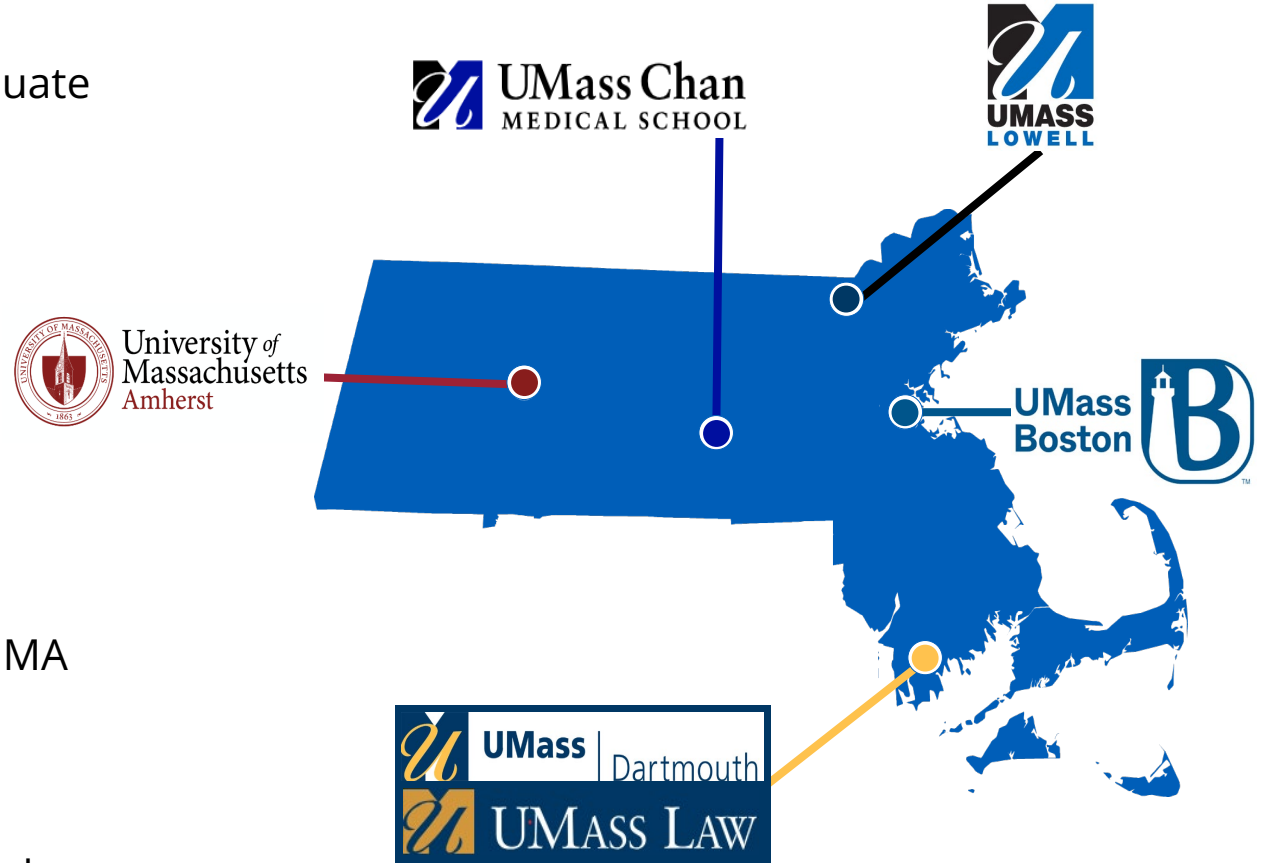
- 26,000 employees
- 3rd largest employer in MA

Research \$813M

- 3<sup>rd</sup> largest in MA
- 4<sup>th</sup> largest in New England

Budget \$4.3B annually

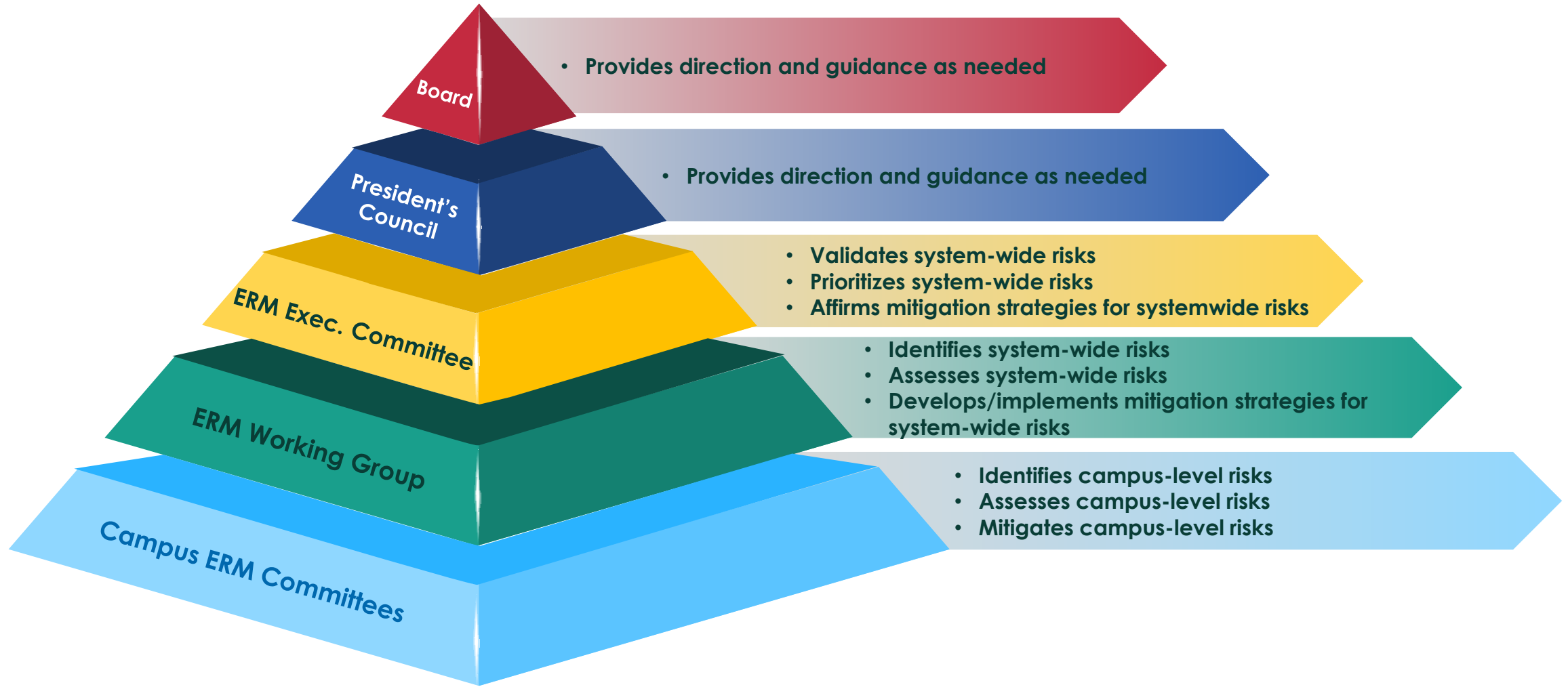
Economic Impact \$8.3B across Massachusetts



# UMass Systemwide Enterprise Risk Management Program

## Program Structure

# UMass ERM Governance Structure



# Two-Year ERM Program Cycle



# How the Systemwide ERM Program Functions



- Identify and assess risks with systemwide implications
- Support informed decision-making
- 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

# UMass Systemwide Enterprise Risk Management Program

## Risk Assessment Process



# Risk Assessment Process

- Focused on systemwide impacts
- Evaluates inherent exposure\* of the University to the risk
- 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 Disruption*
    - *Financial*
    - *Legal/Compliance*
    - *Workforce*
    - *Reputation*
    - *Life Safety*
  - Urgency: How soon does the University system need to prioritize this risk?
- Generates an Inherent Risk Score for each risk

*\*Risk assessment does not account for mitigation strategies in the evaluation of likelihood and consequence*

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# Likelihood Factor: Assessed by ERM Working Group

Could the UMass system experience this risk?

Rating Value	Rating	Description		Probability of Occurrence		Rate of Occurrence
4	Certain or Almost Certain	HIGH Almost certain to occur, expected in most circumstances	OR	>75%	OR	more than 2x per year
3	Likely	MEDIUM HIGH Likely to occur or will probably occur		50 to 75%		1-2x per year
2	Possible	MEDIUM Possible, this could occur		25 to 50%		once every 2-5 years
1	Unlikely	LOW Unlikely, not expected to occur		Up to 25%		more than 5 years

# Consequence Factor: Assessed by the ERM Working Group

How much would the UMass system be impacted by this risk?

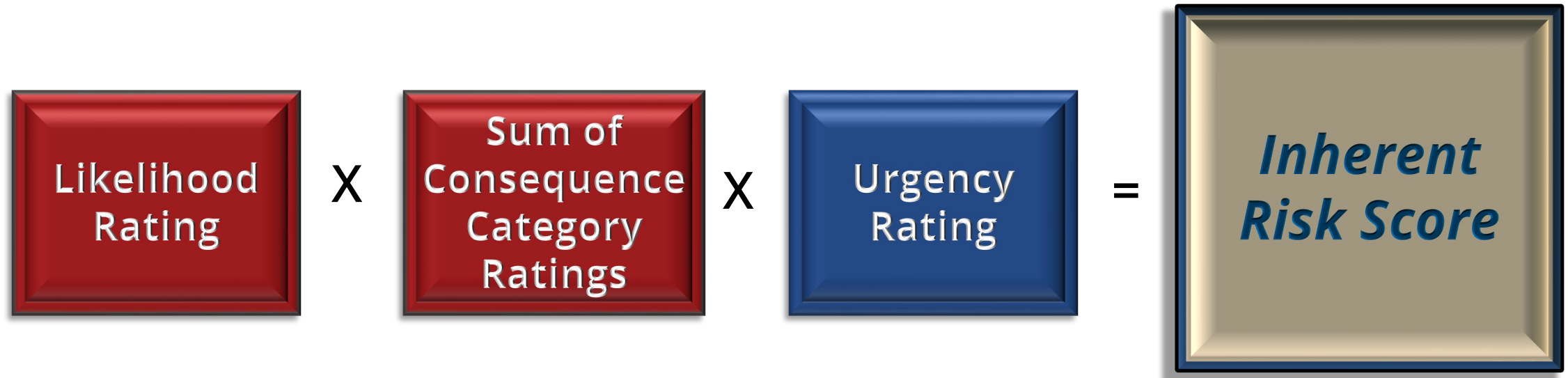
Rating Value	Rating	Service Disruption, Process Impact on Operations	Financial Impact	Legal / Compliance	Workforce	Reputation	Life Safety
4	High	Serious disruption to or failure of service  <i>AND/OR</i>  Significant impacts to more than two campus	State appropriation reduction of more than 15 percent  <i>AND/OR</i> Loss of revenue or increase in expenses of greater than 15 percent or combination of both  <i>AND/OR</i> Need to use stabilization fund  <i>AND/OR</i> Impacts to all campuses	Increased state or federal regulatory scrutiny for additional campus(es)  <i>AND/OR</i> External agency sanctions such as debarment or civil and/or criminal liability  <i>AND/OR</i> Litigation exposure with significant financial (\$10M+), reputational or precedent exposure  <i>AND/OR</i> Substantial audit findings	Inability to recruit or retain employees with essential knowledge, skills and abilities  <i>AND/OR</i> Work culture is defined by excessive internal conflict or widespread negativity  <i>AND/OR</i> Inability to collaborate across the system or limited information sharing and cooperation  <i>AND/OR</i> Low level of trust among colleagues	Negative national media coverage or negative social media activity ("viral") for multiple days  <i>AND/OR</i> Tangible, long-term impacts to enrollment (more than one cycle), philanthropy and public support  <i>AND/OR</i> Significant personnel actions  <i>AND/OR</i> Widespread internal reaction	Fatality or permanent disability of one or more people
3	Medium	Moderate disruption to service  <i>AND/OR</i>  Significant impact to one campus	State appropriation reduction of 10-15 percent  <i>AND/OR</i> Loss of revenue or cost increase of 5-10 percent, or combination of both (est. \$175M - \$350M)  <i>AND/OR</i> Impacts to BDL or UMA or UMMS	Restrictions or requirements placed on the University's operational activities  <i>AND/OR</i> Substantial (\$1M+) regulatory fines and/or response costs  <i>AND/OR</i> Moderate audit findings  <i>AND/OR</i> Litigation with substantial financial (\$1M - \$10M), reputational or precedent exposure	Difficulty recruiting or retaining employees with essential knowledge, skills and abilities  <i>AND/OR</i> Work culture experiences frequent internal conflict or significant  <i>AND/OR</i> Significant obstacles to system-wide collaboration  <i>AND/OR</i> Decreased information sharing in many circumstances	Negative regional (northeast) media coverage or some negative social media activity  <i>AND/OR</i> Tangible, short-term impacts to enrollment (one cycle), philanthropy and public support  <i>AND/OR</i> Significant internal reaction	Serious injury of one or more people
2	Low	Minor impact on service  <i>AND/OR</i>  Some impact to more than one campus	Between \$5M and 1 - 5 percent revenue loss or expense increase or combination of both (est. \$5M to \$175M impact)  <i>AND/OR</i>  Impacts to up to two campuses	Regulatory fines (less than \$1M)  <i>AND/OR</i> Minor audit findings  <i>AND/OR</i> Litigation with financial (less than \$1M), reputational or precedent exposure  <i>AND/OR</i> Internally-imposed consequences or requirement for formal corrective action	Minor impact to recruitment or retention  <i>AND/OR</i> Work culture experiences some internal conflict or negativity  <i>AND/OR</i> Challenges with system-wide collaboration  <i>AND/OR</i> Decreased information sharing and cooperation in limited circumstances	Negative local media coverage or minimal social media activity  <i>AND/OR</i>  Moderate on-campus/internal reaction	Minor injury to more than one person
1	Negligible	Annoyance	Less than \$5M impact	No to minimal impact	No to minimal impact to recruitment or retention  <i>AND/OR</i> No to minimal impact to workplace culture  <i>AND/OR</i> No to minimal impact to system-wide collaboration or information sharing	No to minor internal reaction	No impact or minor injury to individual

# Urgency Factor: Assessed by ERM Executive Committee

How soon does the UMass system need to prioritize this risk?

Rating Value	Rating	Timeframe
3	High	Within the next 12 months
2	Moderate	1-3 years
1	Low	More than 3 years

# Inherent Risk Score Calculation



Assessed by ERM Working Group



Assessed by ERM Executive Committee

# FY 2024 Systemwide Risk Registry

■ Priority Risks

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

Rank	Risk
11	Information Privacy
12	All-Hazards Planning and Response Capabilities
13	Labor Relations
14	Data Management
15	Vendor Risk Management
16	Sexual Assault Policies and Response Procedures
17	NCAA Regulations
18	IT Disaster Recovery
19	Continuity Planning
20	Environmental and Public Health, & Safety Regulations

Rank	Risk
21	Alcohol and Substance Abuse
22	Fraud, Waste, Abuse
23	Crisis Communication Coordination
24	Uninsured Loss
25	Multi-State Payroll Taxation
26	Multi-State Business Taxation
27	Employment Laws and Regulations
28	Policies/Procedures Regarding Minors on Campus
29	Academic Quality and Standards
30	Oversight of Student Organizations

# Using Risk Assessment Data

# FY24 Risks Ranked Based on Highest Legal/Compliance Exposure

*Listed by highest legal/compliance exposure, then by Inherent Risk Score; priority/top 10 risks bolded/italicized*

## High

- ***Information Security***
- ***Research***
- ***Diversity, Equity, Inclusion & Accessibility***
- Employment Laws & Regulations
- Academic Quality & Standards

## Medium

- ***Facilities & Deferred Maintenance***
- ***Student Health & Mental Health Support***
- ***Artificial Intelligence***
- ***International Activities***
- Information Privacy
- All Hazards Plans & Response Cap.
- Vendor Risk Management
- Sexual Assault Policies & Response Procedures
- NCAA Regulations
- Env. Health, Pub. Health, & Safety Regs
- Alcohol and Substance Abuse
- Fraud, Waste, and Abuse
- Multi-State Payroll Tax
- Multi-State Business Tax
- Policies/Procedures Minors on Campus

## Low/Negligible

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



# UMass Systemwide Enterprise Risk Management Program

Moving Beyond Risk Assessment

# Moving Beyond Risk Assessment

- Understanding risk exposure is very beneficial
- Equally important – if not more so – is understanding:
  - *What are we doing about our risk exposure?*
  - *How effective are those risk mitigation strategies in reducing our risk exposure?*

# 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* the *impact* of mitigation strategies on risk exposure

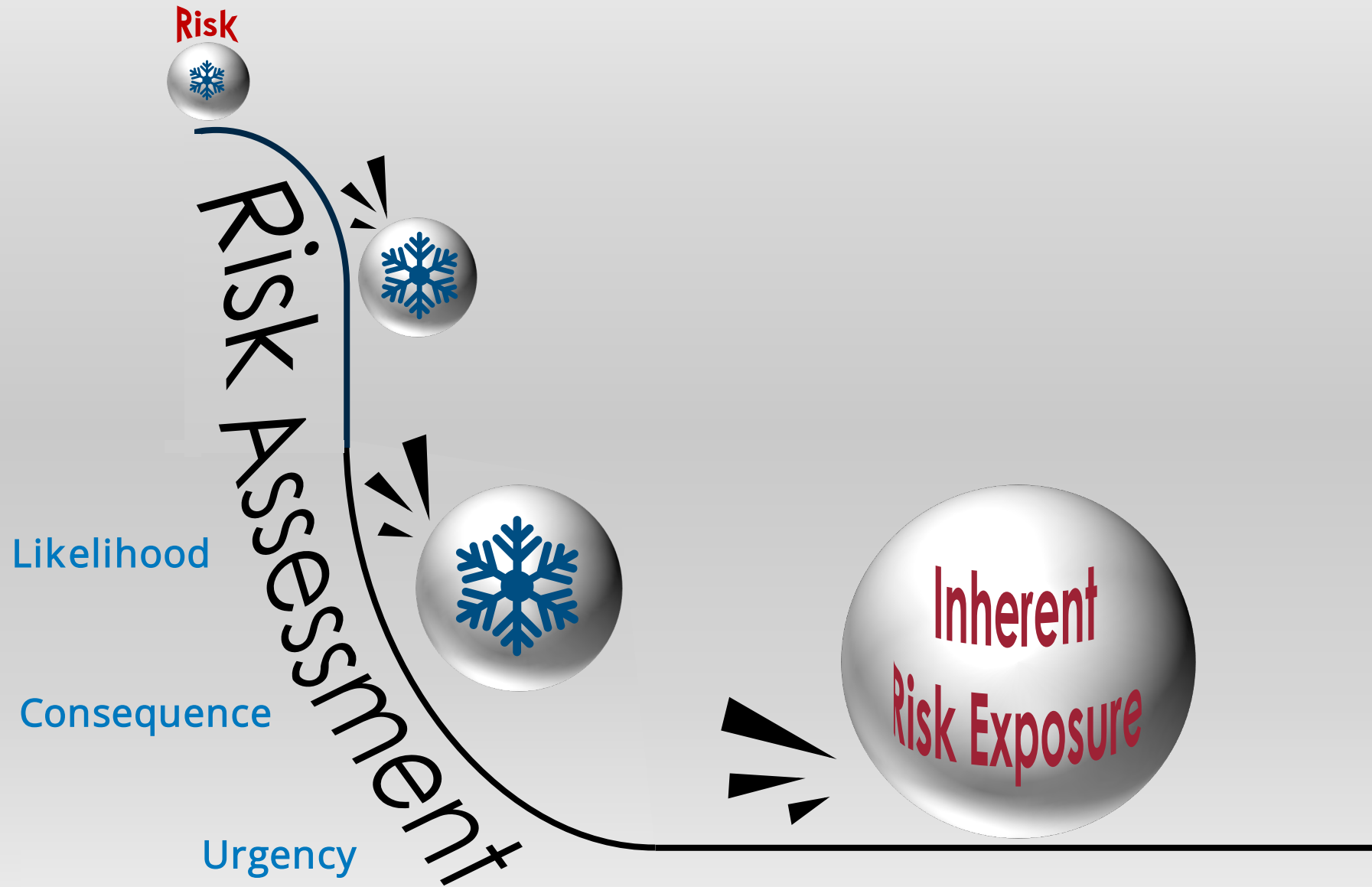
# Transparency

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

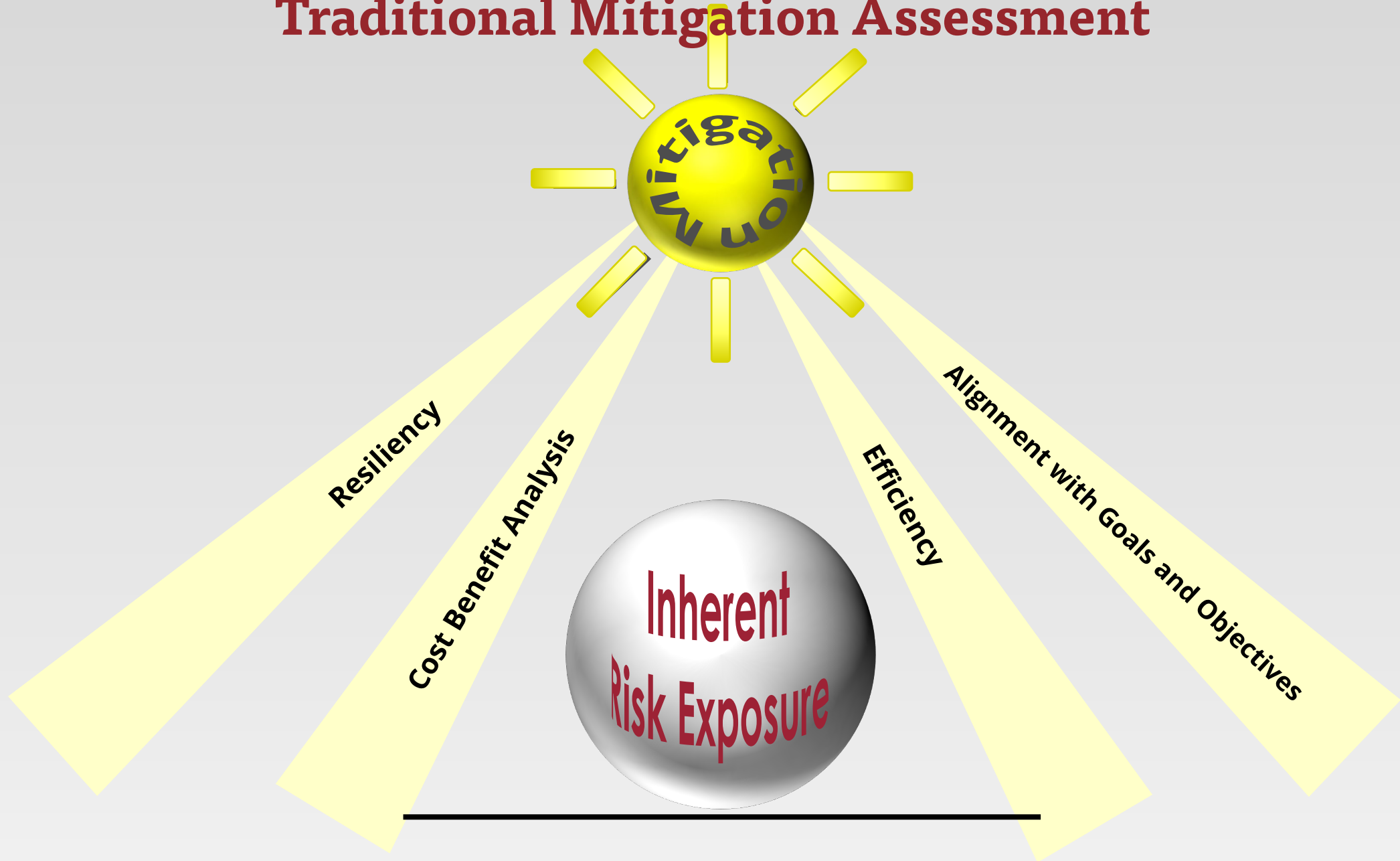
# Correlation

- Traditional mitigation assessment considers important organizational factors, but these factors do not directly correlate to risk exposure
- Need 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



# UMass Mitigation Assessment Tool for Reducing Risk Exposure



- Excel-based tool
- Enables documentation of mitigation strategies for each systemwide risk in a central repository
- Facilitates the assessment of mitigation strategies
- Generates data on the impact of mitigation strategies

*Focused mitigation assessment on top 10 FY22 risks for MATRX pilot.*

# 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

# UMass Systemwide Enterprise Risk Management Program

## Overview of Mitigation Assessment

# Mitigation Assessment Process

For each Top 10 FY22 risk, the ERM Program worked with risk partners to document and assess mitigation strategies

1. Initial Data Capture for each strategy
2. Assessment of each mitigation strategy
3. Compilation of results



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# 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	Purpose
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"><li>• Operational: Everyday or regularly occurring activity</li><li>• Project-based: Initiative or project with finite timeframe</li></ul>	Understand if strategy is ongoing or timebound
Status	<ul style="list-style-type: none"><li>• Proposed: Strategy is not yet approved/funded</li><li>• Planned: Strategy is approved/funded, but not yet implemented</li><li>• Ongoing: Strategy is underway</li><li>• Complete: Strategy has concluded</li></ul>	Determines whether strategy is included or excluded from one or more mitigation assessment calculations
Implementation Level	<ul style="list-style-type: none"><li>• Fully: Mitigation strategy is fully implemented</li><li>• Partially: Mitigation strategy is not yet implemented at full capacity and/or across the system</li><li>• N/A: Not applicable or not yet implemented</li></ul>	Determines whether weightings are applied to the mitigation assessment calculation

# Mitigation Assessment: Consequence

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

- Service/Operations Disruption
- 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; provides little to no reduction in 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](#).

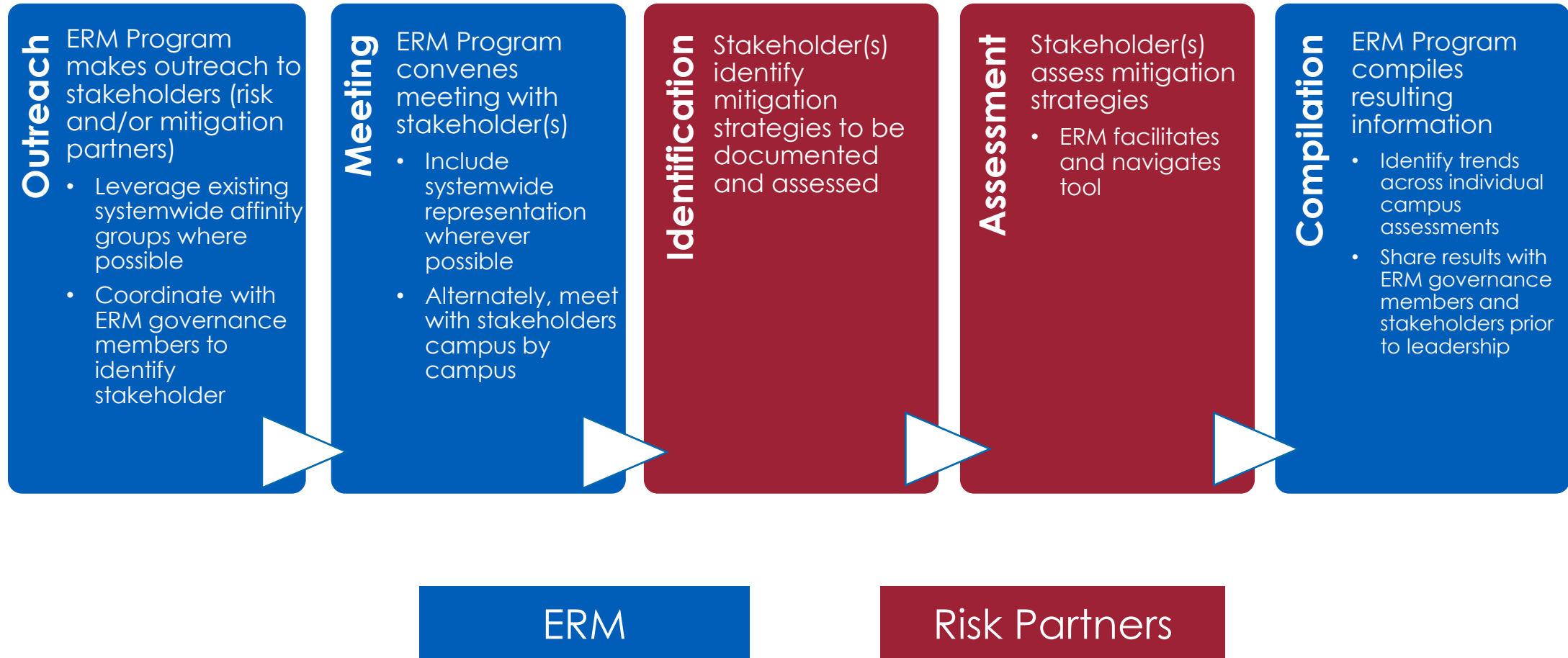
# Mitigation Assessment: Likelihood

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

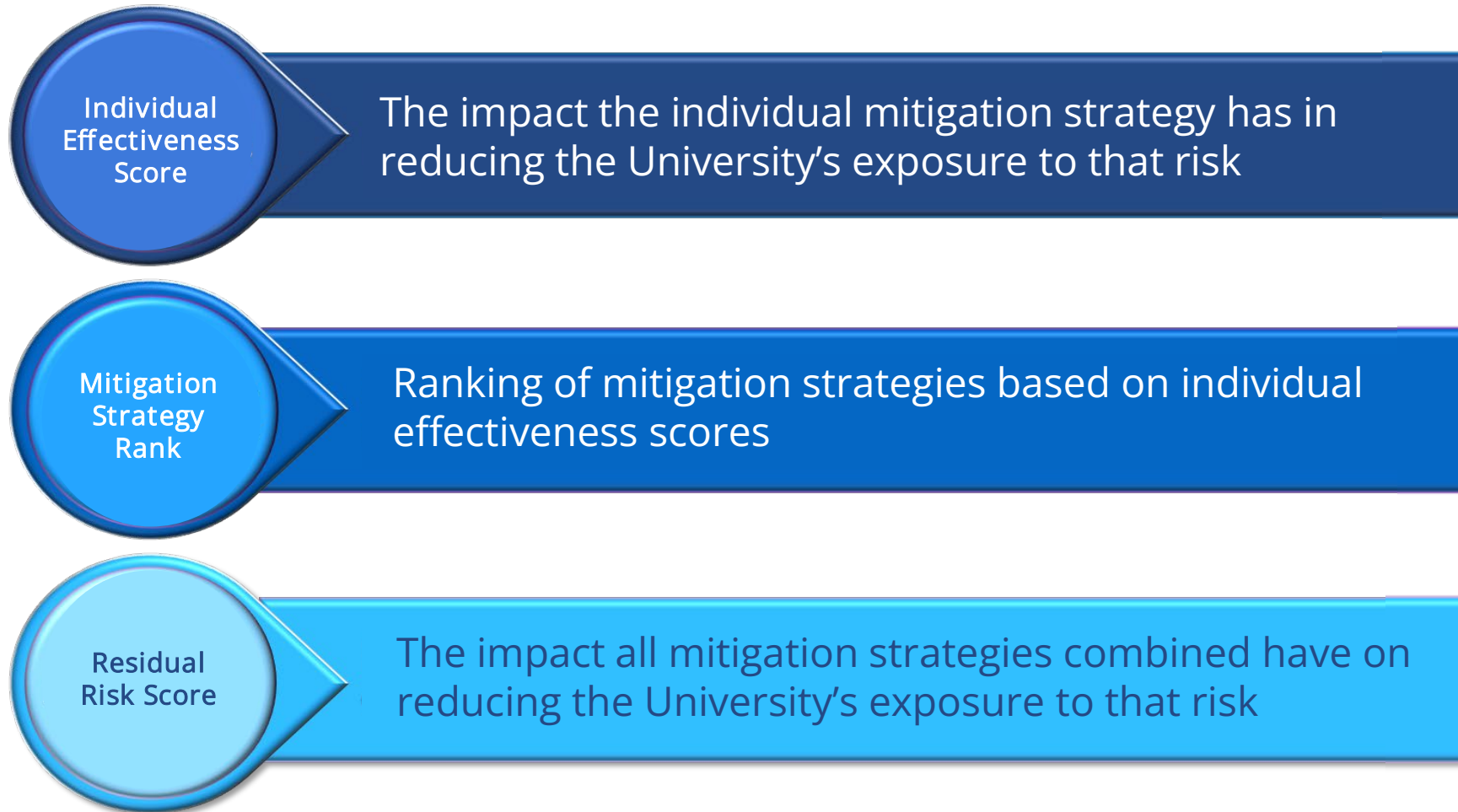
Rating	Description
Decreases Likelihood	Improves: Mitigation strategy has decreased the likelihood that the risk will occur.
No Impact	Neutral: Mitigation strategy has no impact on the likelihood that the risk will occur.
Increases Likelihood	Worsens: Mitigation strategy has increased the likelihood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



# Risk Partner Engagement Process



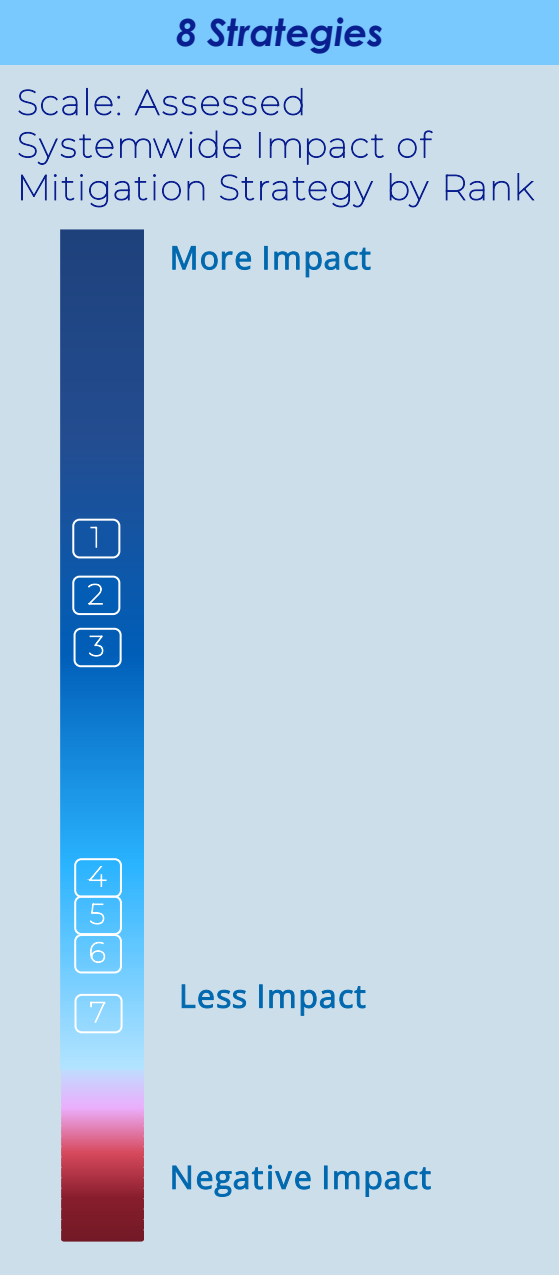
# Mitigation Assessment Results



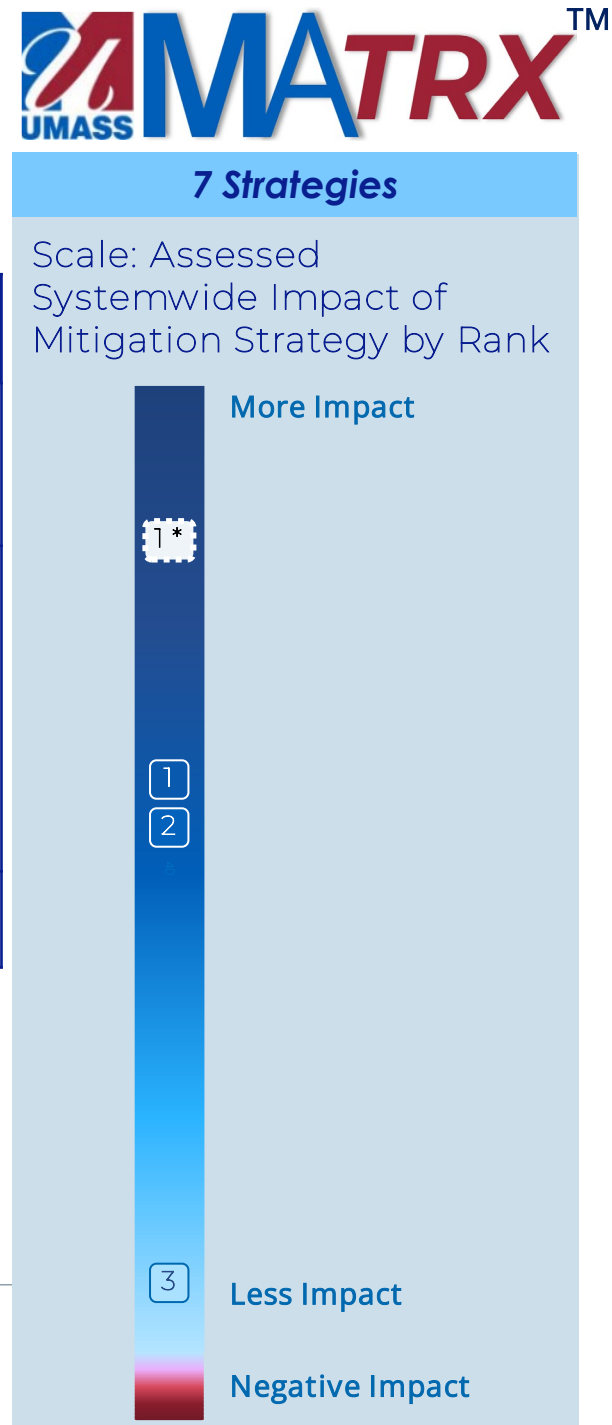
# Individual Effectiveness and Rank

# Mitigation Assessment Results: International Activities Risk (FY22)

Rank	Mitigation Strategy as of June 30, 2023	Implementation Level
1	Travel Registry	Fully
2	New Travel Policies and Standards	Fully
3	Systemwide International Employment Guidelines	N/A
4	Business Travel and Expense Policy and Standards	Fully
	International Travel Accident and Sickness Services and Insurance	Fully
5	International Tax Advisory Services	Fully
6	International Employment Issues Evaluation	Fully
7	International Hires Pilot	Partially



# Mitigation Assessment Results: Facilities & Deferred Maintenance Risk (FY22)

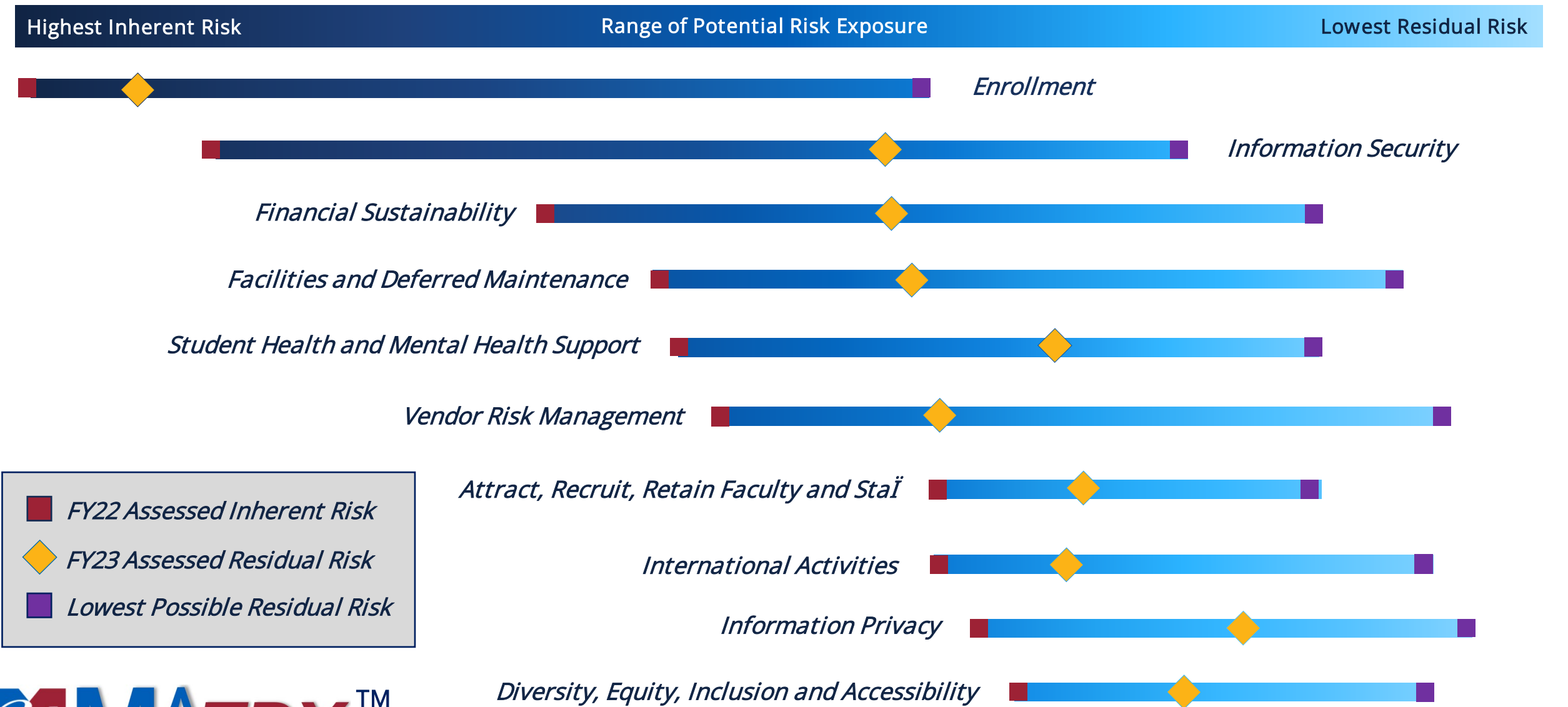


Rank	Mitigation Strategy as of June 30, 2023	Implementation Status
1	Reaching/Maintaining Keep Up Targets	Partially*
	Reaching/Maintaining Catch Up Targets	Partially*
2	Annual Update of Campus Deferred Maintenance (Gordian)	Fully
	Capital Policy & Standards	Fully
	Reporting – Biannual Capital Plan	Fully
	Reporting – Quarterly Capital Reporting Including Keep Up and Catch Up	Partially
3	Tracking Spending Against DCAMM Contracts	Partially

*\* The impact of these strategies would be significantly greater if these strategies were fully implemented. See scale.*

# Residual Risk

# FY22 Risks: Movement in Reducing Risk Exposure



# 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



# Questions?

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# Thank you!