The University of Vermont

Enterprise Risk Management Program

"First weigh the considerations, then take the risks."

-Helmuth von Molke (1800-1891)

GUIDE TO RISK ASSESSMENT & RESPONSE

THE UNIVERSITY OF VERMONT

Updated March 22, 2022

ABSTRACT

This "Guide to Risk Assessment and Response" provides users with a practical tool with instructions, examples and formats for preparing risk assessments and, when applicable, for preparing and reporting risk and opportunity management response plans (MRPs) to the President and the Board of Trustees.

The responsible official for interpreting the use of this guide is the University's Director of Compliance Services and Chief Privacy Officer (DCS/CPO).

For more information about UVM's ERM program, visit <u>www.uvm.edu/erm</u>

WHAT IS ENTERPRISE RISK MANAGEMENT (ERM)?

"Enterprise risk management is a structured, consistent, and continuous process across the whole organization for identifying, assessing, deciding on responses to, and reporting on opportunities and threats that affect the achievement of its objectives" (Institute of Internal Auditors, 2009).

OVERVIEW

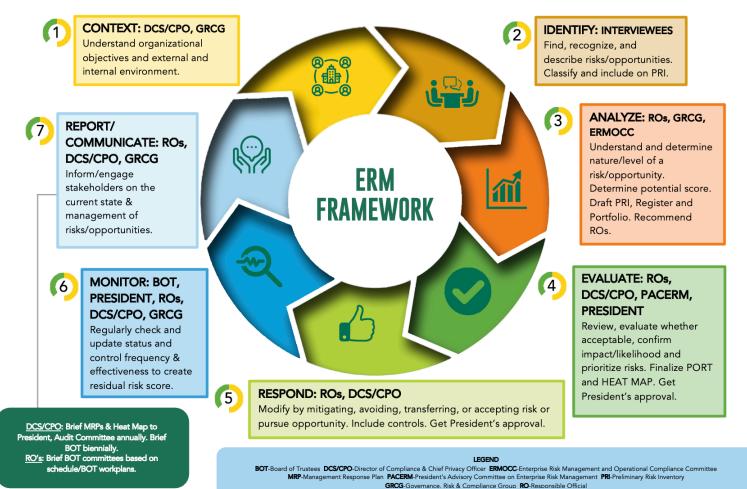
The risk management process – of identifying, analyzing, evaluating, and ultimately responding to and monitoring risk – is at the heart of enterprise risk management (ERM). Extending this process across an entire organization, looking at both "upside" opportunities and "downside" risk, and considering risks and opportunities in the context of strategy is what differentiates "ERM" from "traditional" risk management.

This <u>abbreviated</u> Guide to Risk Assessment & Response deals with the seven steps in UVM's risk/opportunity management process shown in Figure 1 which are:

- <u>Step 1</u>: establishing the context;
- <u>Steps 2 4</u>: conducting risk assessment which includes identifying, analyzing, evaluating;
- <u>Step 5</u>: responding to risks and opportunities;
- <u>Step 6</u>: monitoring and updating the status; and
- <u>Step 7</u>: reporting on those that could materially affect the institution or a department.

The context and assessment steps help decision-makers choose which risks or opportunities are priorities, what the appropriate response should be, and what resources should be allocated to manage the risk or opportunity in a way the best supports the organization's strategy. The response step involves deciding on and planning for the best way to "treat" or modify the risk or opportunity and then implementing that plan. This guide starts with understanding where risk comes from and then provides guidance on the 7 steps.

BIENNIAL RISK-OPPORTUNITY MANAGEMENT PROCESS



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UNDERSTANDING WHERE RISK COMES FROM

Risk statement describes the potential event(s) and consequences of the event(s).



EXAMPLES OF CAUSE, RISK, AND IMMEDIATE AND DOWNSTREAM EFFECT STATEMENTS

- <u>CAUSE:</u> "The current hardware is not fast enough to support testing so"...
 <u>RISK</u>: ... "we may not be able to test performance until we start production." <u>IMMEDIATE EFFECT</u>: "This may delay hiring new employees."
- <u>CAUSE:</u> "The team doesn't have a design for the gateway software so"...
 <u>RISK</u>: ... "the architecture may not work." <u>DOWNSTREAM EFFECT</u>: "This may result in increased costs."

Step 1: Establish the Context

The purpose of establishing the context for risk and opportunity assessment is to understand the external and internal factors that could impact the organization's ability to achieve its mission, vision, goals, and competitiveness; or impact its reputation; and therefore, sets the stage for risk and opportunity identification. Since "risk" is defined as "any issue/event (positive or negative) that may impact an organization's ability to achieve its objectives," defining the organization's objectives is a prerequisite to identifying risks and opportunities.

Establish the context steps to follow:

- 1. Identify which goals or objectives of the <u>UVM Strategic Vision</u> your area supports, if any.
- 2. Identify the strategic goals of your college, school, division, department, or unit.
- 3. Identify any major initiatives that your area is planning or engaged in at any level (institutional, college, school, division, department, unit).
- 4. Identify the critical activities, functions, or services others rely on your area to provide.
- 5. Identify any of your department's external/internal context: legal/regulatory requirements, stakeholder perceptions and expectations and any relevant social, cultural, political, financial, technological, economic, or competitive factors.
- 6. Share a "context" summary of the results with your risk assessment team.

Step 2: Risk & Opportunity Identification

The purpose of the risk and opportunity step is to "generate a list of <u>KEY</u> risks [and opportunities] based on those events that might create, enhance, prevent, degrade, accelerate, or delay the achievement of your goals or objectives" (ISO 31000, 2009). Also, see definition of "risk" in the <u>key terms</u> section.

Things to keep in mind when identifying risks and/or opportunities:

- Be as comprehensive as possible at this stage identify everything you can.
- Identify positive events that could advance strategic goals (opportunities) as well as negative events that could hinder attainment of those goals (risks).
- Include risks and opportunities regardless of whether they are "under your control."
- Consider the risks associated with *not* pursuing an opportunity.
- Think about related risks and opportunities and cascading or cumulative impacts.
- Involve the most knowledgeable people.
- Use the most relevant and up-to-date information you have.

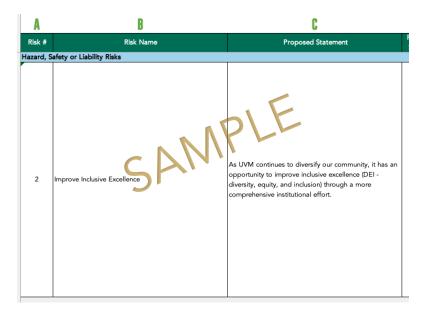
Questions to spur your thinking and discussion:

- 1. What could affect the institution or your area's ability to achieve or fulfill your strategic goals, initiatives, or key functions, either positively or negatively? What uncertainties do you face?
- 2. What risks or opportunities could your area or the institution face in terms of:
 - a. Compliance and Privacy

- b. Finances
- c. Health, Safety or Liability
- d. Human Capital
- e. Operations
- f. Reputation
- g. Strategic
- 3. What do you see as the strengths, weaknesses, threats, and opportunities facing you?
- 4. Have there been recent major changes to your area of responsibility or control (new regulations, new programs/activities, organizational changes, etc.) that pose new risks or opportunities?
- 5. Are there particular programs, activities, internal controls, or legal/regulatory issues in your area that worry you or you think may pose significant risk to your unit or the institution?

Identification steps to follow:

- 1. Identify all the risks and opportunities you can that might affect your objectives (see "<u>Questions</u> to spur thinking & discussion" above.
- 2. For each one, give it a short name or title ("Risk Name" Column B below).
- 3. Write a brief "risk/opportunity statement ("Proposed Statement" Column C below) that describes each risk or opportunity and provides a little more detail about its sources and causes. Do not include potential impacts or consequences.
 - a. Aim for a "Goldilocks" risk/opportunity statement: not too short, not too long; not too vague, not too detailed; meaningful but not inflammatory.
 - b. Examples:
 - i. <u>Too vague</u>: "IT infrastructure"
 - ii. <u>Too specific/inflammatory</u>: "IT network and hardware is obsolete, resulting in the potential for loss of institutional business continuity, loss of irreplaceable data, and privacy breaches."
 - iii. <u>Just right</u>: "IT infrastructure not maintained and/or upgraded to necessary standards."



- 4. Identify responsible official ("Responsible Official (RO)" Column U below), consults (Consult(s) Column V below), and the Responsible Person ("Responsible Person (RP) Column W) for each risk or opportunity. RO's and RP's are members of the UVM community with accountability and authority to manage the risk and/or pursue an opportunity. Consults are generally members of the UVM community that are involved in the process improvement or implementation and oversight of controls. Occasionally, Consults may be third parties such as UVM's liability carriers or contractors.
- 5. Consider whether each statement is either a risk or opportunity choose the one that represents the statement more ("Risk or Opportunity" Column X below).
- 6. Using the drop-down menu, determine what the primary category of the risk/opportunity is (refer to <u>Table 1</u>) and enter this into Column Q "Impacts Risk Category (Primary)".
- 7. If it is primarily a <u>strategic</u> risk or opportunity, then also address which <u>UVM Strategic Vision</u> goal it affects or is most closely related to. If applicable, consider other strategic goals or initiatives for the University AND for your division, college, school, department, or unit that this risk or opportunity affects. These can be added to Column R "Risk Category Rationale (add additional Risk Categories)".
- 8. Also provide a rationale for assigning the strategic vision to the risk or opportunity ("Risk Category Rationale Column R below). Note: not all risks and opportunities will correlate cleanly to the strategic vision so some may need additional rationale.

N	0	P	Q	R	S	
Control Effectiveness	Residual Risk After Controls	Residual Risk Rating PRI/Reg/Port	Impacts Risk Category (Primary)	Risk Category Rationale (add additional Risk Categories)	Proposed Response	
None	9		Enrollment Management and Student Success	Direct crosswalk to strategic vision statement: Ensuring Student Success: Provide an environment that fosters diversity of all kinds, including diversity of thought.	Mitigate/Enhance	R ⁱ Fian Naj co P

ENTERPRISE RISK MANAGEMENT (ERM)

GUIDE TO RISK ASSESSMENT AND RESPONSE

Т	U	V	W	X	Y
Proposed Response Rationale	Responsible Official (RO)	Consult(s)	Responsible Person (RP)	Risk or Opportunity	Control Status
Resource and implement the "DRAFT" plan, "A Framework for Building a More Diverse, Inclusive, and Multiculturally Competent Campus" dated November 19, 2015. This would need to include appropriate change management and communication strategies that would increase the plan's success.	PROVOST	VPEM, VPAA&SS, CHRO	VPDEI	o	Poorly controlled

Key terms:

- <u>Consults</u>: Generally, members of the University community that are in a position to review processes, recommend changes, and execute, manage and oversee any implemented controls. Occasionally, Consults may be third parties such as liability carriers or contractors.
- <u>Event</u>: Occurrence or change of a particular set of circumstances. Can be one or more occurrences, can have several causes, and can consist of something not happening.
- Identification: Process of finding, recognizing, and describing risks and opportunities.
- <u>Impact (consequences)</u>: Outcome of an event affective objectives, either positively or negatively. Can be certain or uncertain; can be expressed qualitatively or quantitatively. An event can lead to a range of consequences, and initial consequences can have escalated effects.
- <u>Responsible Official (RO) (risk/opportunity owner)</u>: Vice President, Dean, Chief Officer with the accountability and authority to manage a risk or opportunity as assigned by the President.
- <u>*Risk/Opportunity*</u>: Any issue, positive or negative, that may impact an organization's ability to achieve its objectives; the effect of uncertainty on organizational objective. Often characterized in reference to potential events, consequences, and the likelihood thereof.
- <u>*Risk/Opportunity Statement (description)*</u>: Structured statement of risk or opportunity usually containing four elements: sources, events, causes, and impacts/consequences.
- <u>Source (of risk or opportunity)</u>: Element or circumstance which alone or in combination has the intrinsic potential to give rise to risk or opportunity. Can be tangible or intangible.
- <u>Responsible Person (RP)</u>: Director, Department Chair, and/or Manager with the accountability and authority to manage, day-to-day, a risk or opportunity as assigned by a Vice President, Dean, Chief Officer, or Vice Provost.

Step 3: Risk & Opportunity Analysis

The purpose of the analysis step is to develop an understanding of the risk or opportunity to inform your evaluation and decision of whether a response is required. Here is where you will assess the potential impact and likelihood of the risks and opportunities.

Things to keep in mind when doing your analysis:

- Analysis can be qualitative, semi-qualitative, quantitative, or a combination thereof.
- Consider causes and sources, their positive and negative consequences, the likelihood that they can occur, and other attributes of the risk or opportunity.
- Consider the interdependence of different risks or opportunities and their sources to decide whether like risks or opportunities should be grouped together or kept separate to do the analysis.

Quantitative vs. Qualitative

Quantitative refers to information that can be quantified. If it can be counted or measured and given a numerical value, it is quantitative.

Examples: How many people are affected? How much does will it cost to accomplish our goal?

Qualitative refers to information that is expressed in words rather than numbers. It is information that cannot be measured or counted.

Examples: Why did this happen? What caused this? What will happen if we don't do this?

Analysis steps to follow:

- Consider the potential impact of each risk or opportunity by using the risk and opportunity impact scales shown in <u>Table 3</u> and <u>Table 5</u>. If more than one column of the scale relates to your risk, base your rating on the column that reflects the greatest impact. This will likely be the column that also corresponds to the category of the risk or opportunity. (For example, if you categorized your risk as a "financial" issue, you would likely use the financial column of the impact scale to determine your impact rating.) Enter the number into Column D ("Risk Impact Score (1-6)" or "Opportunity Impact Score (1-6)" Column D).
- 2. Also using <u>Table 3</u>, choose from the drop-down menu the corresponding classification based on the Risk Impact Score ("Risk Impact Classification" Column E).
- Consider the likelihood (Column G below) that each risk or opportunity will occur by using the appropriate scale: the risk likelihood scale in <u>Table 2</u> or the opportunity likelihood scale in <u>Table 4</u>.
- 4. Also using <u>Table 2</u> (for risks) or <u>Table 4</u> (for opportunities), from the drop-down menu, choose the corresponding classification ("Risk Likelihood Classification" Column H).
- 5. The impact and likelihood scores will be used to automatically calculate an overall risk score ("Proposed Overall Score" Column J below) for each risk or opportunity. This is determined by multiplying the risk times the likelihood.
- 6. If an issue presents <u>both</u> risk and opportunity (it could have both positive and negative impacts), rate the positive/opportunity aspects of the issue using the opportunity impact and likelihood scale. Multiply the impact and likelihood ratings to produce an opportunity score. Then consider the negative/risk aspects of the issue and rate it using the risk impact and likelihood scales. Multiply the impact and likelihood ratings to produce a risk score. Compare your opportunity

and risk scores and choose the one that is greater. If there is more upside or if there is more downside to the issue, that is the one you want to enter in the worksheet.

D	E	F	6	H		J
Risk Impact Score (1-6)	Risk Impact Classification	Impact Rationale	Risk Likelihood	Risk Liklihood Classification	Liklihood Rationale	Proposed Overall Score (Impact x PI
3	Liklihood High/Probable	Recent national media attention on bias incidents and student-led protests in response to these bias incidents at higher education institutions affords UVM an opportunity to reduce bias incidents and improve inclusive excellence (diversity, equity, and inclusion – DEI) by increasing proactive education and training, and communication and outreach to UVM employees and students. Strategic Impact: Guided by a comprehensive plan for building inclusive excellence, UVM could further advance its efforts to build a diverse and globally avare university community, and an inclusive, supportive, and just campus climate. Reputational Impact: If successful, such an undertaking could substantially contribute to UVM's image as a national leader, increase our competitive advantage and provide lasting improvement in UVM's reputation and better position UVM to recruit and/or retain a more diverse faculty and student body.	3	impact Substantial or Liklihood High/Probable	 (1) President's Commission on Inclusive Excellence (PCIE) currently exists. (2) Efforts are underway to develop a comprehensive strategy and implementation. 	9

Key terms:

- <u>Control</u>: Any process, policy, device, practice, or other action that modifies risk or opportunity.
- Impact (consequences): Outcome of an event affecting objectives, either positively or negatively. Can be certain or uncertain; can be expressed qualitatively or quantitatively. An event can lead to a range of consequences, and initial consequences can escalate through knock-on effects.
- <u>Likelihood</u>: Chance that something will happen whether defined, measured, or determined objectively or subjectively, qualitatively, or quantitatively, and described using general terms or mathematically.
- **Probability**: Measure of the chance of occurrence expressed as a number between 0 and 1.
- <u>*Risk/Opportunity Analysis*</u>: Process to comprehend the nature of risk or opportunity and to determine the level of a risk or opportunity; provides the basis for risk/opportunity evaluation and decisions about response.

TABLE 1: RISK CATEGORIES

Category*	Description
Compliance & Privacy	Risks or opportunities related to violations of federal, state, or local law, regulation, or University Policy, that creates exposure to fines, penalties, lawsuits, reduced or forfeiture of future funding, imposed compliance settlements, agency scrutiny, injury, etc.
Financial	Risks or opportunities related to physical assets or financial resources such as tuition, government support/funding, gifts, research funding, endowment, budget, accounting and reporting, investments, credit rating, fraud, cash management, insurance, audit, financial exigency plan, long-term debt, deferred maintenance, etc.
Hazard, Safety or Liability	Risks or opportunities related to legal liability (negligence), injury, damage, or health and safety of the campus population or the environment, including impacts caused by accidental or unintentional acts, errors or omissions, and external events such as natural disasters.
Human Capital	Risks or opportunities related to investing in, maintaining, and supporting a quality workforce, such as: recruitment, retention, morale, compensation & benefits, change management, workforce knowledge, skills, and abilities, unionization, employment practices.
Operational	Risks or opportunities related to management of day-to-day University programs, processes, activities, and facilities, and the effective, efficient and prudent use of University resources.
Strategic	Impacts related to UVM's ability to achieve its strategic goals and objectives, including competitive market risks, and risks related to mission, values, strategic goals, diversity, academic quality, research, student experience, business model, market positioning, enrollment management, ethical conduct, and accreditation.
Enrollment Management and Student Success	Opportunities to be strategic and systematic in positively influencing the number and characteristics of new students, as well as positively influencing the persistence of students to continue their enrollment from the time of their matriculation to their graduation.
Reputational	An intangible asset that is a key determinant of a future organization prospects, resulting from a collection of perceptions and opinions, past and present, about that organization that resides in the consciousness of its stakeholders, and grows over time.

***Note**: UVM recognizes that many institutions of higher education use "reputational risks". In UVM's view, however, a significant event in an of the above risk categories has the potential to impact the institutions reputation. UVM, therefore, does not classify reputational risks separately and, instead, considers reputational impacts in its risk assessment (Table 2 & Table 3 below).

TABLE 2: RISK LIKELIHOOD SCALE

Score	Category Name	Likelihood
1	Low/Remote	Unlikely or rare; could occur at some time in the next 6-10 years
2	Medium/Possible	Likely to occur at some time in the next 1-5 years
3	High/Probable	Very likely will occur in the next year, or is already occurring

TABLE 3: RISK IMPACT SCALE

Impact Score	Short Description	Human Capital	Hazard/ Safety/Liability	Financial	Operational	Compliance	Strategic	Reputational
1	Minor	 Affects <5% of employees No collective bargaining impacts No impact on recruitment or retention 	 Minor injury Minor legal liability exposure Minor, reparable environmental damage 	 Annual loss of <\$1M in current fiscal year 5-year cumulative liability/ obligation <\$10M 	 No disruption of critical operations and services 1–2-day disruption of a department Minor impact on efficiency, client/student programs and services, environmental sustainability, or infrastructure No effect on leadership effectiveness 	Minor audit findingsMinor fines	Slows progress on one UVM strategic goal	 Limited negative publicity No effect on UVM reputation/ image
2	Moderate	 Affects 5% - 10% of employees Collective bargaining required <5% employee turnover 	 Moderate injury Self-insured workers' compensation injury/exposure possible Moderate legal liability exposure Moderate, reparable environmental damage 	 Annual loss of \$1M>\$5M in current fiscal year 5-year cumulative liability/ obligation \$10M<\$50M 	 3-to-5-day disruption of several departments or one critical service Moderate impact on efficiency, client/student programs and services, environmental sustainability, or infrastructure Moderate effect on leadership effectiveness 	 Moderate audit findings Moderate fines Short-term agency scrutiny 	Slows progress on more than one UVM strategic goal	 Local/regional negative publicity Minor, short-term effect on UVM reputation/ image
3	Substantial	 Affects 11%-25% of employees Collective bargaining required 6% - 9% employee turnover 	 Substantial injury Self-insured workers' compensation injury/exposure possible Substantial legal liability exposure Substantial environmental damage requiring mitigation 	 Annual loss of \$5M>\$10M in current fiscal year 5-year cumulative liability/ obligation \$50M<\$100M 	 6-to-10-day disruption of a college, school, or division or several critical services Substantial impact on efficiency, client/student programs and services, environmental sustainability, or infrastructure Substantial impact on leadership effectiveness 	 Audit findings requiring programmatic changes Moderate-term agency scrutiny Enforcement action likely 	Stops progress of one UVM strategic goal	 Local/regional negative publicity Pressure for UVM to control the message Moderate damage to UVM's reputation/ image
4	Serious	 Affects 26%-50% of employees Collective bargaining required 10%-15% employee turnover 	 Serious injury Self-insured workers' compensation injury/exposure Serious legal liability exposure Environmental damage eligible for EPA National Priorities List 	 Annual loss of \$10M>\$25M in current fiscal year 5-year cumulative liability/obligation \$100M<\$150M 	 14-day-to-3-month disruption of 2 or more colleges, schools, or divisions or 3 or more critical services Serious impact on efficiency, client/student programs and services, environmental sustainability, or infrastructure Serious effect on leadership effectiveness 	 Principal investigator excluded from federal/state programs Program funds rescinded Long-term agency scrutiny Enforcement action likely 	Stops progress on more than one UVM strategic goal	 National negative publicity Intense pressure for UVM to control the message Significant damage to UVM's reputation/image
5	Severe	 Affects 51%-75% of employees Collective bargaining required 16%-25% employee turnover 	 Severe injury or death Self-insured workers' compensation injury/exposure Severe legal liability exposure Severe environmental damage eligible for EPA National Priorities List 	 Annual loss of \$25M>\$100M in current fiscal year 5-year cumulative liability/obligation \$150M<\$250M 	 14-day-to-3-month disruption of 2 or more colleges, schools, or divisions or most critical services Severe impact on efficiency, client/student programs and services, environmental sustainability, or infrastructure Severe effect on leadership effectiveness 	 Imposed settlement or corporate integrity agreement Individual criminal or organizational prosecution Record financial judgment 	Reverses progress on one or more UVM strategic goal	 National negative publicity UVM cannot control the message Severe, long-term damage to UVM's reputation/image
6	Business- Critical	 Affects >75% of employees Collective bargaining required >25% employee turnover 	 Business critical injury or death Critical legal liability exposure Major, irreparable environmental damage 	 Annual loss of >\$100M in current fiscal year 5-year cumulative liability/obligation >\$250M Insolvency 	 UVM shutdown >3 months Insolvency Leadership failure results in long-term damage to the institution 	 Threatens viability of UVM or its research mission Loss of all federal research or Title IV funds 	University strategic plan failure	 Negative publicity could permanently impair UVM's image/reputation Significant decrease in enrollment or research funding

TABLE 4: OPPORTUNITY LIKELIHOOD SCALE

Score	Category Name	Likelihood	Indicators
1	Low/Remote	Some chance of favorable outcome in 4 or more years	Possible opportunity that has yet to be fully investigated by management. Likelihood of success is low on the basis of management resources currently being applied.
2	Medium/Possible	Reasonable prospects of favorable results in 1 to 3 years	Opportunity that may be achievable but that requires careful management. Opportunity that may arise over and above the plan.
3	High/Probable	Favorable outcome is likely to be achieved in 1 year	Clear opportunity that can be relied upon with reasonable certainty to be achieved in the short- term based on current management processes.

TABLE 5: OPPORTUNITY IMPACT SCALE

Impact Score	Short Description	Strategic	Reputational	Enrollment Management & Student Success	Financial	Operational
1	Minor	 Minor alignment with UVM vision and mission Minor contribution to competitive advantage or long-term viability Minor progress on one strategic goal 	 Limited, local positive publicity No lasting effect on UVM reputation/image 	 Minor improvement in recruitment, retention, completion, or student satisfaction with UVM experience 	 Annual savings or new net revenue <\$1M* 	 Minor improvements in efficiency, client/student programs and services, environmental sustainability, or infrastructure
2	Moderate	 Moderate alignment with UVM vision and mission Moderate contribution to competitive advantage or long-term viability Minor progress on more than one strategic goal 	 Positive local/regional publicity Minor, short-term effect on UVM reputation/image 	 Moderate improvement in recruitment, retention, completion, or student satisfaction with UVM experience 	 Annual savings or new net revenue of \$1M>\$5M* 	 Moderate improvements in efficiency, client/student programs and services, environmental sustainability, or infrastructure
3	Substantial	 Substantial alignment with UVM vision and mission Substantial contribution to competitive advantage or long-term viability Major progress on one strategic goal 	 Positive publicity and external recognition Moderate, short-term improvement to UVM's reputation/image Positive effect on UVM's academic, environmental, or research reputation 	 Substantial improvement in recruitment, retention, completion, or student satisfaction with UVM experience 	 Annual savings or new net revenue of \$5M>\$10M* 	 Substantial improvements in efficiency, client/student programs and services, environmental sustainability, or infrastructure
4	Serious	 Overall alignment with UVM vision and mission Significant contribution to competitive advantage or long-term viability Major progress on more than one strategic goal 	 Positive national publicity or external recognition Significant, lasting improvement of UVM's reputation/image Positive effect on UVM's academic, environmental, or research reputation 	 Significant improvement in recruitment, retention, completion, or student satisfaction with UVM experience 	 Annual savings or new net revenue of \$10M>\$25M* 	 Serious improvements in efficiency, client/student programs and services, environmental sustainability, or infrastructure
5	Major	 Complete alignment with UVM vision and mission Major contribution to competitive advantage or long-term viability Accelerates progress on one or more strategic goals 	 Positive national publicity or external recognition Long-term enhancement of UVM's academic, environmental, or research reputation 	 Major improvement in recruitment, retention, completion, or student satisfaction with UVM experience 	 Annual savings or new net revenue of \$25M>\$100M* 	 Major improvements in efficiency, client/student programs and services, environmental sustainability, or infrastructure
6	Transformative	 Complete alignment with UVM vision and mission Definitively enhances competitive advantage or long-term viability Fulfills strategic plan 	 Positive national publicity and external recognition Permanent enhancement of UVM's academic, environmental, or research reputation Results in a significant increase in enrollment, student academic quality, and/or research funding 	 Meets or exceeds recruitment, retention, completion, or student satisfaction with UVM experience goals 	 Annual savings or new net revenue of >\$100M 	 Transformative improvements in efficiency, client/student programs and services, environmental sustainability, or infrastructure

*Based on final-year projected savings or net revenue projections for multi-year initiatives

Step 4: Risk/Opportunity Evaluation

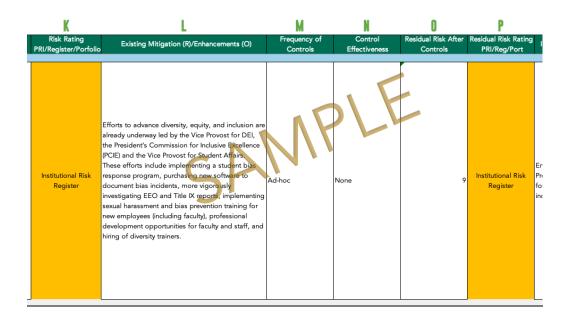
The purpose of the evaluation and response steps is to decide, based on the results of your analysis, what types of controls exist, the frequency of these controls, and how effective these controls are.

Things to keep in mind when doing your analysis:

- Each risk or opportunity's proposed overall score (Column J above) will determine where it falls on UVM's risk and opportunity "heat map" (Figure 2) and what level of institutional review each risk or opportunity will receive.
- The type and effectiveness of existing controls are used to further refine the overall score and to determine the residual risk (risk after controls).
- Risk/opportunity evaluation is a cyclical process. Risk scores are adjusted based on actions. Residual risk scores (after response) are routinely evaluated to determine whether they are acceptable to the institution or whether new responses/controls are necessary. Risks are regularly assessed until the risk is eliminated or reduced to such a level that it is removed or accepted. Opportunities are regularly assessed until the opportunity has been met or determined that it cannot be met.

Evaluation steps to follow:

- 1. Consider the overall results of your risk/opportunity analysis, especially your rating of the risk or opportunity's impact and likelihood and the resulting risk score.
- 2. Consult the "heat map" (Figure 2) to see where your risks and opportunities will fall and what level of institutional review the risk/opportunity will require based on its risk score.
- 3. Using the list below and <u>Table 6</u>, specify the frequency of controls and the effectiveness of your controls. Controls are those actions designed to reduce or mitigate risk. Use the types of controls listed in <u>Table 7</u> as a guide to help identify controls that you may already have. Use the drop-down menu to enter frequency and effectiveness in Column M "Frequency of Controls" and Column N "Control Effectiveness", respectively. Consider any costs or special resource needs as well associated with your response as well as how long it would take to fully implement your response.



FREQUENCY OF CONTROLS

- Multiple Times Daily
- Daily
- Weekly
- Monthly
- Quarterly

- Semi-Annually
- Annually
- Ad Hoc
- Other (if other, specify)

TABLE 6: CONTROL EFFECTIVENESS SCALE

Effectiveness Category	Effectiveness Description
Nearly complete	The controls reduce the risk's combined likelihood and severity by 95%.
Significant	The controls reduce the risk's combined likelihood and severity by 75%.
Moderate	The controls reduce the risk's combined likelihood and severity by 50%.
Minor	The controls reduce the risk's combined likelihood and severity by 25%.

TABLE 7: CONTROL TYPES

Control Type	Control Type Description
Preventative	Proactive controls such as separation of duties, authorization, and approvals of transactions, pre-numbered documents, documentation, verification, checks for reasonableness and completeness, access control, and security.
Detective	Reactive, often automatic or system-produced controls such as error messages and reconciliations.
Corrective	Controls that correct or fix an error.
Directive	Less common, usually positively constructed controls such as guidelines, training and incentives. Often routed in ethics and morals rather than policy and procedure.
Compensating	Workarounds, fail-safes, arrangements for special circumstances or situations.

Step 5: Risk/Opportunity Response

The purpose of the response step is to decide, based on the results of your analysis, which risks and opportunities require a response and what your recommended response will be.

Things to keep in mind when doing your analysis:

- A decision can be to <u>not</u> respond to the risk or opportunity other than maintaining existing management or control activities.
- Consider the values of expectations of stakeholders in developing a response.
- Consider whether some responses are not economically justifiable (e.g., an expensive response for a high impact but low likelihood risk).
- Responding to risks or opportunities can itself introduce risks. Consider how your response plan will deal with any secondary risks.

Evaluation and Response steps to follow:

- 1. Consider the overall results of your risk/opportunity analysis, especially your rating of the risk or opportunity's impact and likelihood and the resulting risk score.
- 2. Consult the "heat map" (Figure 2) to see where your risks and opportunities will fall and what level of institutional review the risk/opportunity will require based on its risk score.
- 3. Using <u>Table 8</u>, consider which risk or opportunity response options you will use to manage this risk. When making this determination, consider what steps you will take to respond to each risk or opportunity, consider any costs or special resource needs associated with your response, and consider how long it would take to fully implement your response. Enter this into Column S.
- 4. Describe any additional rationale that led you to that response and enter that into Column T.

TABLE 8: RISK/OPPORTUNITY RESPONSES

Risk Responses	Opportunity Responses
Accept : An informed decision to tolerate or take on a particular risk. Take no active measures	Ignore : An informed decision to take no active measures regarding an opportunity.
Avoid : An informed decision not to be involved in, or to withdraw from, an activity, in order not to be exposed to a particular risk. Eliminates uncertainty.	Exploit : An informed decision to make an opportunity definitely happen (i.e., increase probability to 100%). Aggressive measures are taken which seek to ensure that the benefits from this opportunity are realized by the project.
Mitigate : Take actions designed to reduce either the likelihood and/or impacts (consequences) of a risk.	Enhance : Take actions designed to increase the likelihood and/or impacts (consequences) of an opportunity.
Sharing (Transfer) : Contractual risk transfer to other parties, including insurance. Risk Financing is a form of risk sharing, involving contingent arrangements for the provision of funds to meet or modify the financial consequences should they occur.	Sharing (Transfer): Seek a partner able to manage the opportunity that can maximize the change of it happening and/or increase the potential benefits. Involves sharing any upside.

	R	S	Т	U	V
s)	Risk Category Rationale (add additional Risk Categories)	Proposed Response	Proposed Response Rationale	Responsible Official (RO)	Consult(s)
	Direct crosswalk to strategic vision statement: Ensuring Student Success: Provide an environment that fosters diversity of all kinds, including diversity of thought.	Mitigate/Enhance	Resource and implement the "DRAFT" plan, "A Framework for Building a More Diverse, Inclusive, and Multiculturally Competent Campus" dated November 19, 2015. This would need to include appropriate change management and communication strategies that would increase the plan's success.	PROVOST	VPEM, VPAA&SS, CHRO

Step 6: Monitor

The University's biennial risk assessment process is linear and occurs over an 8-month period every other year. Existing risks and opportunities should be monitored for changes that may require reassessment and a change to existing mitigation responses. Additionally, new risks and opportunities affecting the University can emerge at any time during the two-year cycle and require identification, assessment,

response and monitoring by the Board, President, Senior Leaders, Responsible Officials (ROs), Responsible Persons (RPs) and applicable functional managers throughout the University. These off-cycle changes may require update to the University's heat map (Figure 2). The Office of Compliance & Privacy Services is available to assist stakeholders in this effort by continuously working with stakeholders to keep the University's heat map up to date.

Step 7: Report

The DCS/CPO annually briefs the Audit Committee and the Committee of the Whole of the Board of Trustees, usually in February. Depending on whether it is a review year or an off-year, the report will either be a report on the results of the biennial assessment or an in-process interim report.

ROs brief their management response plans (MRPs) (<u>Appendix B</u>) to their assigned Board of Trustee's committee according to the approved reporting schedule (<u>Appendix C</u>).

Key terms:

- **Opportunity Response (treatment)**: Process to modify or respond to an opportunity. Opportunity response can involve one or a combination of: enhancement, exploitation, ignoring, or sharing.
- <u>Enhance</u>: the opportunity equivalent of "mitigating" a risk is to <u>enhance</u> the opportunity. Enhancing seeks to increase the probability and/or the impact of the opportunity in order to maximize the benefit to the project.
- <u>Exploit</u>: Parallels the "avoid" response, where the general approach is to eliminate uncertainty. For opportunities, the "exploit" strategy seeks to make the opportunity definitely happen (i.e., increase probability to 100%). Aggressive measures are taken which seek to ensure that the benefits from this opportunity are realized by the project.
- <u>Ignore</u>: Just as the "acceptance" strategy takes no active measures to deal with a residual risk, opportunities can be *ignored*, adopting a reactive approach without taking explicit actions.
- <u>Sharing (Transfer) Opportunity</u>: The "share" strategy for opportunities seeks a partner able to manage the opportunity who can maximize the change of it happening and/or increase the potential benefits. This will involve sharing any upside in the same way as risk transfer involves passing penalties.
- <u>*Risk Response (Treatment)*</u>: Process to modify or respond to a risk. Risk response can involve one or a combination of acceptance, avoidance, mitigation, or sharing.
- <u>Accept</u>: Form of risk response an informed decision to tolerate or take on a particular risk.
- <u>Avoid</u>: Form of risk response an informed decision not to be involved in, or to withdraw from, an activity, in order not to be exposed to a particular risk.
- <u>*Mitigate*</u>: Form of risk response involves actions designed to reduce a risk or its consequences.
- <u>Sharing (Transfer) Risk</u>: Form of risk response involves contractual risk transfer to other parties, including insurance.

- **<u>Risk Financing</u>**: Form of risk sharing involves contingent arrangements for the provision of funds to meet or modify the financial consequences should they occur.
- Risk/Opportunity Management Response Plan (MRP): Plan to implement chosen risk or opportunity response.
- Risk/Opportunity Criteria: Terms of reference against which the significance of a risk or opportunity is evaluated.
- **<u>Risk/Opportunity Evaluation</u>**: Process of comparing the results of risk/opportunity analysis with criteria to determine whether the risk/opportunity and/or its magnitude is acceptable. Use of a tool/system to rate and/or prioritize a series of risks or opportunities.

Figure 2: UVM Risk & Opportunity Portfolio and Register Heat Map



SCORE 1-3 4-9 10-18

LEVEL OF REVIEW

Retained at unit-level, overseen by Responsible Official (RO)

Included in institutional risk register, reviewed by ERMOCC and PACERM, overseen by RO

Included in institutional risk portfolio, reviewed by PACERM and President, overseen by PACERM

APPENDIX A1 - EXAMPLE: HOW TO COMPLETE A RISK ASSESSMENT

A	В			C	D	E	F	6	н	I.	J	K	L. L	
Risk #	Risk Name		Pro	posed Statement	Risk Impact Score (1-6)		Impact Rationale	Risk Likelhood	Risk Liklihood Classification	Likilhood Rationale	Proposed Overall Score (Impact x	Risk Rating PRI/Register/Porfo	Existing Mitigation (R)/Enhancements (O)
2 Improve b	lebility Risks ndusive Excellence		an opportunity to im	o diversify our community, it has prove inclusive excellence (DEI - I inclusion) through a more lutional effort.		Impact Substantial or Läihood High/Probable	Recent national media attention on bias incident student-led protests in response to these bias incidents at higher education institutions affords I an opportunity to reduce bias incidents and impre inclusive excellence (dwrstly, equity, and inclusion DEI) by increasing proactive education and trainin and communication and outreach to UVM employ and students. Strategic Impact: Guided by a comprehensive pla building inclusive excellence, UVM could further advance its efforts to build a diverse and globally avare university community; and an inclusive, supportive, and just campus climate. Reputational Impact: If successful, such an undertaking could substantially provorhaute to UVM image as a national leader, increase our compet advantage and provide lasting improvement in U reputation and better position UVM to recruit and retain a more diverse faculty and student lady.	UVM we a - g. yees a for 3 I's tive W/s's	Impact Substantial or Läähood High/Probable	 President's Commission on Inclusive Excelle (PCIE) currently exists. Efforts are underwaying develop a compreh strategy and implementation. 	9	Institutional Rick Register	Efforts to advance diversit are already underway led DEI, the President's Corm Excellence (PCIE) and the Affairs. These efforts inch student bias response pro software to document bia software to document bia implementing exsual hara prevention training for ne for faculty and staff, and trainers.	by the Vice Provost for risision for Inclusive Vice Provost for Student ude implementing a gram, purchasing new is incidents, more AD and Title IX reports, ssment and bias w employees (including lopment opportunities
Frequency of Controls	Control R Effectiveness	() residual Risk Afte Controls	P Residual Risk Ratin PRI/Reg/Port	Enrollment Management and E Student Success e	Pirect crosswalk t	fosters diversity of a	tement:	Frame Inclusi Camp need mana	ros and implement th work for Building a M we, and Multiculturality wa ² dated November to include appropriate gement and comprist increase the plan's su	s "DRAFT" plan, "A ore Diverse, Competent 19, 2015. This would PROVOST change ation strategies that	VPEM, VPAA85S, CHRO	W Responsible	Rerson (RP) Rak or Opportunk	Y Control Status Poorly controlled

APPENDIX A2 – BLANK "RISK ASSESSMENT WORKSHEET

TITLE													DRAFT
What is your proposed risk/opportunity name?	What do you propose for the risk/opportur statement?	Who would the responsible official be for this c risk/ opportunity	Who would you need to consult with or this issue?	Who is the responsible person for this issue (if the same as the responsible official, enter "RO")?	ls this a Risk or Opportunity? Circle One.	What is the primary risk category? Circle One.	Are there other risk categories? Circle all that apply.	Does this correlate to a strategic risk or opportunity Yes or No	If yes, which strategic goal does this correlate to? Circle One.	Describe you rationale for connecting thi risk/opportun y to this specific strategic goal	What is the impact score fo this risk or opportunity. Circ one.	What is the likelihood score for this risk or opportunity?	Multiply Impact X Likelihood. If you are not sure if this should be a risk or an opportunity, repeat this step using both scate and pick the higher of the two.
					R	Compliance & Privacy Financial Hazard, Safety, or Liability Human Capital Operational Strategic Enrollment Management & Student Success	Compliance & Privacy Financial Hazard, Safety, or Liability Human Capital Operational Strategic Enrollment Management & Student Success Reputational	Yes No	Ensuring Student Success Investing in our Distinctive Research Strengths Fulfilling our Land Grant Mission		1: Minor (R/O) 2: Moderate (R/O) 3: Substantial (R/O) 4: Serious (R/O) 5: Severe (R) Major (O) 6: Business Critical (R) Transformative (O)		

RISK ASSESSMENT WORKSHEET

APPENDIX B – MANAGEMENT RESPONSE PLAN (MRP) TEMPLATE & INSTRUCTIONS



MANAGEMENT RESPONSE PLAN (MRP) INSTRUCTIONS

General Instructions:

To develop and maintain a consistent level of MRP development, maintenance, and reporting, a blank MRP template, MRP instructions and MRP example have been developed and are provided here. Responsible Officials (ROs) should use the template and instructions to prepare, maintain and report on their portfolio-level MRPs.

MRP Instructions:

Purpose of the Management Response Plan (MRP): Describe UVM's chosen response to a particular risk or opportunity that is negatively or positively impacting or could impact the University's objectives.

Definitions:

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 <u>Controls</u>: The actions established through policies and procedures that help ensure that management's directives to mitigate risks to the achievement of objectives are carried out.

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- a. <u>Control Frequency</u>: Frequency of controls can be one of the following:
 - Multiple
 - Times Daily
 - Daily
 - Weekly

If the frequency is "other", specify the frequency.

b. <u>Control Effectiveness</u>: The effectiveness of the controls is specified using the chart below.

Effectiveness Category	Effectiveness Description
Nearly complete	The controls reduce the risk's combined likelihood and severity by 95%.
Significant	The controls reduce the risk's combined likelihood and severity by 75%.
Moderate	The controls reduce the risk's combined likelihood and severity by 50%.
Minor	The controls reduce the risk's combined likelihood and severity by 25%.

Monthly

Quarterly

Annually

Semi-

c. Control Type: There are five major types of control activities.

Control Type	Control Type Description
Preventative	Proactive controls such as separation of duties, authorization, and approvals of transactions, pre-numbered documents, documentation, verification, checks for reasonableness and completeness, access control, and security.
Detective	Reactive, often automatic or system-produced controls such as error messages and reconciliations.

Annually

Ad-Hoc

Other



Corrective	Controls that correct or fix an error.
Directive	Less common, usually positively constructed controls such as guidelines, training and incentives. Often routed in ethics and morals rather than policy and procedure.
Compensating	Workarounds, fail-safes, arrangements for special circumstances or situations.

- 2. <u>Residual Risk</u>: The risk that will remain (or be retained) even after the management response plan is fully implemented.
- 3. <u>Risk/Opportunity Response</u>: Process to modify or respond to a risk or opportunity to support organizational objectives with the general goal of reducing uncertainty. Risk response can involve one or a combination of: acceptance, avoidance, mitigation, sharing, or transfer to a third party as shown below. Opportunity response can involve one or a combination of: enhancement, exploitation, ignoring, sharing, or transfer to a third party as shown below.

Risk Responses	Opportunity Responses
Accept: An informed decision to tolerate or take on a particular risk. Take no active measures	Ignore: An informed decision to take no active measures regarding an opportunity.
Avoid: An informed decision not to be involved in, or to withdraw from, an activity, in order not to be exposed to a particular risk. Eliminates uncertainty.	Exploit: An informed decision to make an opportunity definitely happen (i.e., increase probability to 100%). Aggressive measures are taken which seek to ensure that the benefits from this opportunity are realized by the project.
Mitigate: Take actions designed to reduce either the likelihood and/or impacts (consequences) of a risk.	Enhance: Take actions designed to increase the likelihood and/or impacts (consequences) of an opportunity.
Sharing (Transfer): Contractual risk transfer to other parties, including insurance. Risk Financing is a form of risk sharing, involving contingent arrangements for the provision of funds to meet or modify the financial consequences should they occur.	Sharing (Transfer): Seek a partner able to manage the opportunity that can maximize the change of it happening and/or increase the potential benefits. Involves sharing any upside.

4. Management Response Plan (MRP): A plan used to implement and communicate the chosen risk or opportunity response.

Detailed Instructions:

Section I: Risk/Opportunity Information Lines 1 – 5a are provided to the RO. The DCS/CPO develops the initial DRAFT MRP and fills in information about the risk/opportunity that has been gleaned from interview notes and/or the preliminary risk inventory. Information in this section is taken from the risk-opportunity portfolio.

Line 6a. is filled in by the RO when they create the MRP and 6b. is updated for each new iteration of the MRP.

Section II: Impact/Likelihood Assessment Lines 7 – 8 are filled in by the RO. Describe the current impact and score it as high, medium, or low. Describe the current likelihood and score it as a high, medium, or low.

Section III: Management Response Line 9 is filled in by the RO. If it's a risk, check off the box that corresponds with your planned risk response. If it is an opportunity, check off the box that corresponds with your planned opportunity response.





Section IV: Actions Lines 10-13 are filled in by the RO. Briefly describe management's actions to date and the plan going forward. If there are any key dependencies (critical actions that must occur to ensure management's response will be successful), describe those here. Provide the frequency and effectiveness of controls. Finally, provide an estimated target year the MRP will be completed.

Section V: Status Lines 14-17 are filled in by the RO. Check off the box that best describes the current status of the MRP implementation and provide information on Board reporting required for this MRP.

Section VI: Expectation Lines 18-19 are filled in by the RO. Describe any expected residual risk (risk remaining after the MRP has been implemented) that remains. Provide additional detail any comments or notes.





MANAGEMENT RESPONSE PLAN (MRP) TEMPLATE

Form Instructions: Use the "tab" key to move between questions. Use "space bar" to check boxes.

SECTION	I I: RISK/OPPORTU	INITY INFORMATION:	
1.	Responsible C	Official Name: Email:	
2.	MRP Number:	:	
3.	Risk/Opportur	nity Name:	
4.	Risk/Opportur	nity Statement:	_
5.	Nature:	Risk	Opportunity
5a.	Category:	Risk Categories:	Opportunity Categories:
		Compliance & Privacy	Strategic
		Financial	Enrollment Management &
		Hazard, Safety, Legal Lial	pility Student Success
		Human Capital	Financial
		Operational	Operational
		Strategic	
	6a. Date MRP	Created:	
	6b. Date(s) MF	RP Updated:	
SECTION	I II: IMPACT/LIKEL	LIHOOD ASSESSMENT	
7.	Describe the in	mpact this risk or opportunity could he	ave/has on UVM's mission, vision, UVM Strategic Vision,
	competitivene	ess, and/or reputation:	_
	7a. Impact Sco	ore: Business Critical (6)	Severe (5) Serious (4)
		Substantial (3)	Moderate (2) Minor (1)
Q	Describe the li	ikelihood it will occur:	
0.	Describe the li		
	0 13 13 1		
	8a. Likelihood	Score: High/Probable (3)	Medium/Possible (2) Low/Remote (1)

The University of Verm		
9. Response:	Risk Response:	Opportunity Response:
9a. (check most applicable)	Accept	Ignore
	Mitigate	
	Avoid	Share
CTION IV: ACTIONS/CONTROLS		
11. What are the types of contr Preventative Directive	ol activities implemented Detective Compensating	d? Corrective
12. What is the frequency of co Multiple Times Daily	ntrols?	Weekly Monthly
Quarterly	Semi-Annually	Annually Ad-Hoc
Other – Describe:		
Significant: The implement Moderate: The implement Minor: The implemente	mplemented controls re- ented controls reduce the ented controls reduce the d controls reduce the ris	duce the risk's combined likelihood and impact by 95%. The risk's combined likelihood and impact by 75%. In risk's combined likelihood and impact by 50%. In the risk's combined likelihood and impact by 25%.
14. Describe management's pla	an going forward:	

- 15. Describe any key dependencies (what critical actions must occur to ensure management's response will be successful?):
- 16. Timeframe: Target year MRP will be completed:





SECTION VI: RESIDUAL RISK/NOTES

21. Estimated residual risk (after mitigation strategy has been implemented):

22. Additional Comments:



APPENDIX C: SAMPLE BOARD OF TRUSTEES PRESENTATION SCHEDULE

CY20XX RESPONSIBLE OFFICIAL'S MANAGEMENT RESPONSE PLAN (MRP) BOT PRESENTATION SCHEDULE

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NOTE: The MRP # corresponds to the MRP # in the biennial risk assessment report and not to the risk/opportunity overall score

MRP #	Portfolio Level Risks (R) / Opportunities (O)	Board Committee w/ Oversight Responsibility	Responsible Official (RO)	Audit & Full Board 02/20XX	Audit Committee 04/20XX	Full Board 05/20XX	Audit Committee 09/20XX	Full Board 10/20XX	Audit Committee 11/20XX	Audit & Full Board 02/20XX (next year)
n/a	Enterprise Risk Management (ERM) biennial risk assessment report and management response plans (MRPs)	Audit & CofW	DCSCPO	Audit & CofW						
n/a	Enterprise Risk Management (ERM) status update and management response plans (MRPs)	Audit & CofW	DCSCPO							Audit & CofW
n/a	Biennial ERM Program Review	Audit & CofW	DCSCPO		Audit					
1	Sample Opportunity (O)	CofW	Responsible Official	CofW		CofW				
2	Sample Risk (R)	CofW	Responsible Official			CofW				
3	Sample New Opportunity (O)	Audit	Responsible Official				Audit			
4	Sample New Risk (R)	EPIR	Responsible Official	EPIR		EPIR		EPIR		
5	Sample Risk (R)	BFI	Responsible Official w/Consult	BFI				CofW		
6	Sample New Risk (R)	BFI/CofW	Responsible Official	BFI & CofW		BFI & CofW		BFI & CofW		
7	Sample Opportunity (O)	EPIR	Responsible Official					EPIR		
8	Sample Risk (R)	Audit	Responsible Official w/Consult		Audit					
9	Sample Risk (R)	Audit	Responsible Official	Audit & CofW (Executive Session)			Audit (Executive Session)			