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ORD Risk Assessment

Background

The 2016 update of OMB Circular A-123, *Management's Responsibility for Enterprise Risk Management and Internal Control* calls for agencies to implement an effective agency-wide approach to addressing the full spectrum of an organization's external and internal risks. Agencies are required to implement an enterprise risk management capability coordinated with the strategic planning and strategic review process.

EPA's program offices must submit an enterprise risk assessment identifying risks to achieving EPA's Draft FY2018-2022 Strategic Plan. These enterprise risks will guide agency action over the next four years, as well as form the basis for EPA's Initial Risk Profile under EPA's draft FY 2018-2022 Strategic Plan. OCFO will develop the Initial Risk Profile in compliance with the OMB's guidance.

OPARM must submit a completed risk assessment spreadsheet to OCFO detailing the **top three** risks to achieving EPA's draft FY2018-2022 Strategic Plan Objective 3.2: Prioritize Robust Science by **Wednesday August 2, 2017**. OCFO will analyze the results of the agency risk assessments and engage senior leaders in ranking the agency's enterprise risks.

ORD Risk Assessment Summary

Building on the risks the agency identified in the FY16 Strategic Review, ORD's risk assessments are based on the EPA's FY 2014-2018 Strategic Plan, the Administrator's priorities, and EPA's draft FY 2018-2022 Strategic Plan, specifically *Objective 3.2 – Prioritize Robust Science: Refocus the EPA's robust research and scientific analysis to inform policy making.*

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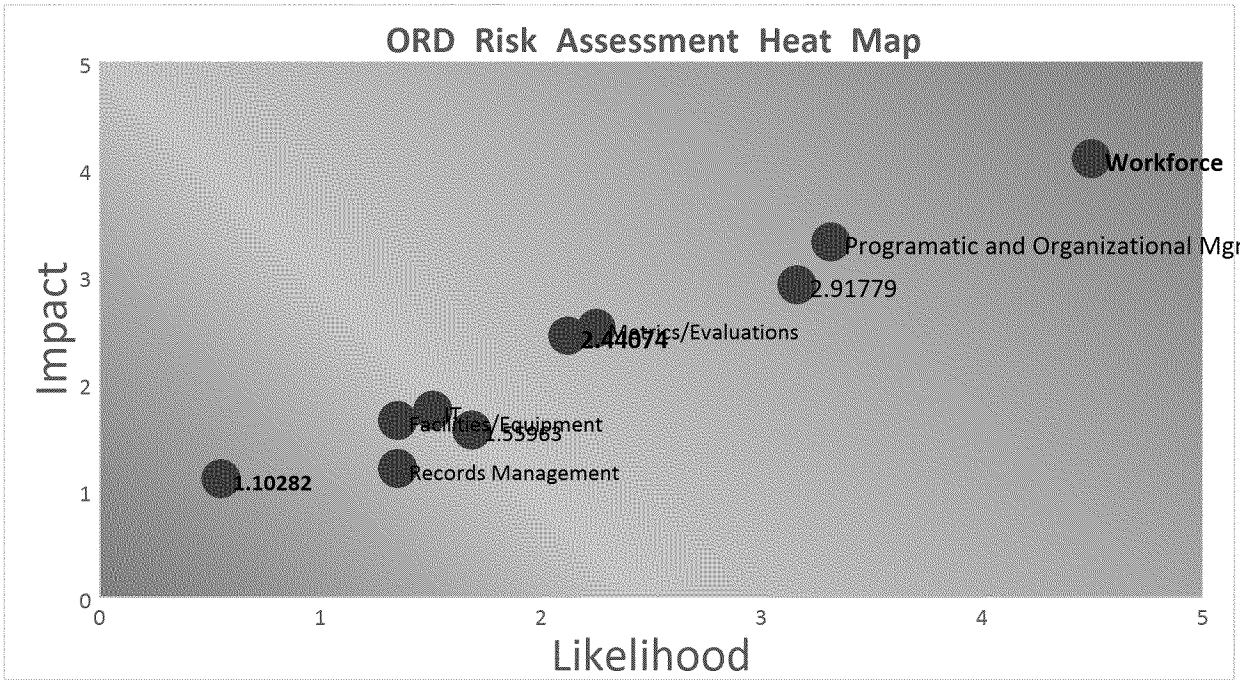
The risk scores provided by NPDs and LCOs are composed of two values: the likelihood of a risk event occurring and the impact of that event, each ranked 0-5. Below is ORD's Risk Assessment Heat Map, with each value averaged by NPD and LCO submission and weighted against the number of respondents identifying the risk:



OPARM collected risk assessment data from all NPDs and LCOs in June, 2017. Additionally, lead region 4 reviewed ORD's risk assessments and added 2 regional specific risks related to Facility/Equipment and Finance and Resource Management. In total, 76 risks were identified and scored. OPARM broke these risks out into ten categories which are described as follows:

Category	Description
Programmatic and Organizational Management	The management of research programs through the implementation of a new Agency Strategic Plan and the advent of reorganizations puts at risk ORD's ability to maintain continuous expert staffing, program management, and support for program offices.
External Engagement	External engagement includes both ORD's extramural activities such as contracts, along with ORD's interactions with partners, stakeholders, and the public.
Facilities/Equipment	Inadequate and costly infrastructure to sustain operations as well as lack of monitoring or inspecting scientific equipment.
Finance and Resource Management	Reduced budget levels and overall resource uncertainty threatens ORD's ability to fulfill its mission. ORD's failure to properly manage resources, such as through the re-obligation of unliquidated funds
Health and Safety	Events that could result in the Agency failing to comply with workplace safety standards or environmental laws and regulations.
Information Technology (IT)	ORD's inability to rapidly adapt to and implement new IT solutions and maintain information security standards – both hardware and software.
Metrics/Evaluations	Internal expert program reviews by the BOSC and external performance reporting processes are at risk of failing to adequately measure and demonstrate the quality and impacts of ORD research. This could reduce ORD's capacity to manage research programs and fully illustrate program performance.
Public Access to Research	ORD is required to provide public access to Agency funded research publications and data. Challenges associated with the implementation of ORD's Science Integrity Policy and Public Access Plan puts the office risk of failing to comply with public access requirements.
Records Management	Records management program and policies are not well understood by staff and need to be followed more closely. Failure to do so can result in records management policy noncompliance.
Workforce	ORD's ability to fulfill its mission is dependent on its ability to sustain its workforce. This includes maintaining adequate staff levels, retaining world class scientists and experts (through Title 42), and attracting highly qualified recruits.

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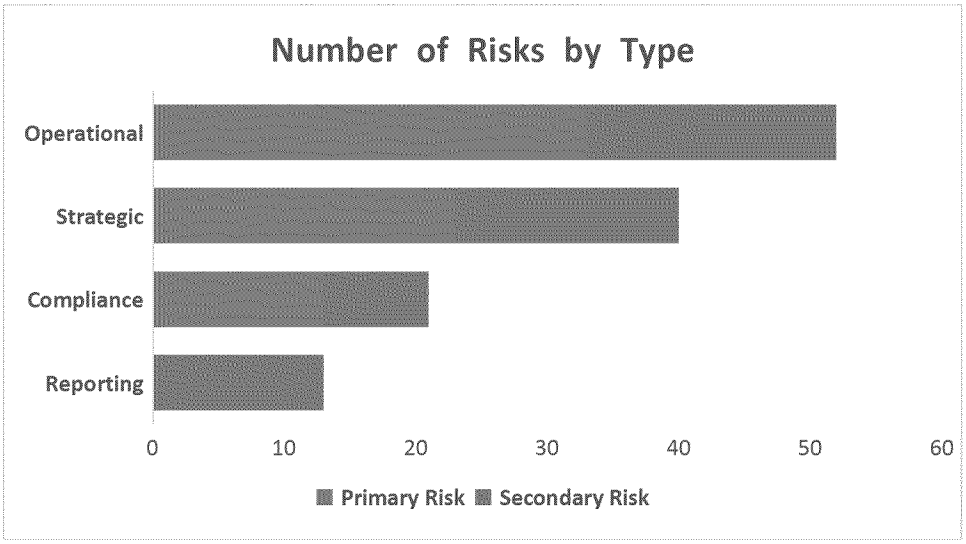
Supplemental risk assessment information can be found in Appendix A, which is an explainer on risk types, and Appendix B, which lists proposed language for the ORD Risk Assessment Submission. In addition, attached is an excel spreadsheet containing a comprehensive list of ORD and Region 4's risks grouped by the above listed categories.

Appendix A: Understanding 'Risk Types'

In order for the agency to develop a full profile of the risks at hand, program offices were asked to list which risk type most effectively describes the risks listed in the tables. ORD has the opportunity to list two risk types, a primary and a secondary, for each risk. Below is an explanation of the risk types, along with a chart indicating how NPDs and LCOs defined the risks they reported:

Category	Description
Operational Risk	A risk that causes ORD's internal processes to fail to function properly, such as technology or resource management.
Strategic Risk	A risk that would prevent ORD from accomplishing its mission
Compliance Risk	A risk of failing to comply with applicable laws and regulations or a failing to detect and report noncompliant activities
Reporting Risk	A risk of failing to collect the proper data to make policy and management decisions



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Appendix B

OPARM Recommendations							
Risk	**Description**	**Risk Type**	**Secondary Risk Type**	**Likelihood**	**Impact**	**Actions to Address Risk**	**Internal Controls**
Sustainable workforce	ORD's ability to sustain its workforce and retain expertise is at risk due to anticipated retirements in mission critical positions. ORD's current ability to backfill positions will be essential for the organization, but it is limited. Because of these anticipated retirements, ORD is at risk of losing institutional knowledge and maintaining working relationships with internal and external partners. Staffing levels in specific scientific disciplines are currently inadequate to meet the needs of the research and assessment efforts and the product production schedules required by the Agency and other clients. In addition, the agency's Title 42 Authority expires in FY 2020, presenting a risk to ORD's continuing ability to recruit and retain world class scientists and engineers.	Operational	Strategic	Very High	High	ORD leadership has been conducting succession planning exercises in order to identify anticipated gaps in expertise and anticipated or potential hires, including critical hires while considering overarching strategic directions, which are evolving to align with new Administration priorities. Additionally, ORD is focused on ensuring staff are adequately trained and have professional growth opportunities. Other actions include supporting cross-training opportunities and details to shadow pending retirees for critical positions, and using current staff expertise to provide science policy support in a manner that meets evolving priorities. Coordination with the HR Shared Services Center is critical as ORD utilizes multiple personnel options such as Pathways, fellowships, and details and expanding staff professional development initiatives to provide staff with opportunities for professional growth.	Human Resources provides routine updates on retirement eligibility dates and current staffing lists. Management examines staffing on a regular basis and updates lists of priority hires and staffing needs. Utilize innovative approaches to replace lost skills and meet ORD's research mission
Finance and Resource Management	Delays in the award of support contracts and other financial vehicles introduce uncertainty and research delays. Delays in procurements of goods and services impact ORD's ability to meet commitment and obligation funding requirements. Funds lost due to expiration, and misapplication of funds resulting in underfunding of ORD level priorities. Further, reductions and uncertainty in funding levels means ORD is at risk of lacking the adequate budget levels to adequately fund and implement research programs.	Operational	Compliance	Moderate	High	Internally work to maximize financial efficiency with limited resources. Recruit and mentor staff with expertise in financial management. Multiple reviews throughout the FY, with an emphasis on end of year fund status.	Qualified expertise in the organization to address financial management. Ongoing reviews and reporting requirements.
Metrics and Evaluations	Internal expert program reviews by the BOSC and external performance reporting processes are at risk of failing to adequately measure and demonstrate the quality and impacts of ORD research. This could reduce ORD's capacity to manage research programs and fully illustrate program performance.	Strategic	Reporting	Moderate	Moderate	ORD to research and study metrics and evaluations of other research focused institutions. Ensure the BOSC maintains continuous staffing and support to give advice on how ORD's research programs can evaluate their effectiveness. Continue to work to develop and establish appropriate evaluation methods.	ORD as established workgroups, along with an OPARM-led metrics community of practice, to study and develop metrics in support of program measures and evaluation methods.

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Risk	Description	Risk Type	Secondary Risk Type	Likelihood	Impact	Actions to Address Risk	Internal Controls
Additional ORD Risks							
Programmatic and Organizational Management	The management of research programs through the implementation of a new Agency Strategic Plan and the advent of reorganizations puts at risk ORD's ability to maintain continuous expert staffing, program management, and support for program offices. This category also includes risks to individual programs, such as toxic chemical research, human subjects research policies, and NAAQS research	Strategic	Operational	High	High	Ensure research products are properly aligned to Agency priorities and support program offices, continue to develop standard operating procedures that facilitate collaboration and planning.	The StRAP development process helps ensure ORD research is properly aligned to Agency priorities, ORD management frequently meets internally to address programmatic risks and organizational challenges.
External Engagement	Reliance on external groups to participate in research and assessment activities and/or to conduct scientific review of products, could jeopardize productivity and limit ORD's ability to meet it objectives. This also includes reliance on and management of grant and contract activities. If external bodies are unable to participate, or these activities are not properly managed, this would limit ORD's ability to deliver products.	Operational	Strategic	Moderate	Moderate	Comprehensive project planning and management processes that can react to changes in availability. Increased outreach to cooperators and clients, inside and outside the Agency. Continued improvement of grant and contract management policies.	Regular interactions with scientists and managers in program offices, regions, the scientific community and other government agencies to establish priorities. Regular management reviews of grant and contract activities
Facility and Equipment Management	Risk events that could lead to an inadequate infrastructure to sustain operations and/or improper maintenance, restoration, or repair of the organization's facilities and assets. The cost of conducting cutting edge science has increased over the past 20 years, while the complexity of problems ORD must solve has increased, straining the balance between facilities and science spending. Budget reductions, therefore, will further risk the financial viability of ORD's facility profile.	Strategic	Operational	Moderate	Moderate	Infrastructure needs are adequately resourced by the Agency to meet needs. Infrastructure meets Agency's energy, environmental, and sustainability requirements. ORD will continue to evaluate its operations and identify any remaining operational efficiencies that lower operational costs while supporting environmental science priorities. ORD will also closely monitor the budget situation and define options for meeting an FY18 budget once enacted.	ORD complies with EO 13514 Federal Leadership in Environmental, Energy and Economic Performance and EPA's commitment to EMS. Management works closely with OARM to identify critical facility needs and carry out planned facilities consolidations.

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Health and Safety	Risk events that impair the work environment and compromise the physical safety of employees.	Operational	Compliance	Low	Low	There are sufficient Occupational Safety and Health administrative controls and subsequent training (written regulatory program such as Chemical Hygiene, Blood borne Pathogens, Confines Space Entry, Occupant Emergency Plans, Continuity of Operations Plans project specific safety plans, etc.). There are appropriate workplace inspections, audits, and program reviews, and management support to correct findings.	Written regulatory plans, such as chemical hygiene, occupant emergency, blood borne pathogens are required before operation of a laboratory. In addition, new hire, annual and refresher H&S training. COOP plans exist and internal and external audits are conducted and reported to management.
Information Technology (IT)	Inability to rapidly adapt to and implement new IT solutions, both hardware and software. Reduced funding levels impact the ability to upgrade or maintain adequate IT environment.	Operational	Strategic	Moderate	Moderate	Broad network of federal and contract staff assigned to all segments of this activity. SIO conveys budget priorities to ORD as needed. Provision of training to improve skill sets with existing systems, emphasis on cross training to improve overall organizational readiness and abilities, and exploration of future trainings for staff at large and integration of these functions within existing work requirements (i.e., software acquisition and training for Qlik and other analytic tools).	Federal and EPA IT policies and procedures. ORD SIO, CTO, PISO, Customer Support Representatives, and support contractor staff engaged. Evaluation of software expertise and needed skillsets is under development.
Public access to EPA funded research publications and data	ORD is required to provide public access to Agency funded research publications and data. Challenges associated with the implementation of ORD's Science Integrity Policy and Public Access Plan puts the office risk of failing to comply with public access requirements.	Compliance	Reporting	Moderate	Moderate	Integrate reviews on use of Science Hub in senior management meetings. Develop reporting process for progress entering data in Science Hub.	Monthly Science Hub progress report.
Records Management	Records management program and policies are not well understood by staff. ORD staff do not appropriately apply record keeping strategies to their data and other types of information.	Compliance	Reporting	Low	Low	The ORD Records Program Manager monitors related training completions to ensure that annual training requirements are met. Monthly ECMS usage reports are posted to ORD Intranet for management and staff analysis of email records retained by each individual/organization. Training sessions with ORD's Records Management Lead.	Mandatory records management annual training, reviewing record keeping systems, and prioritizing records management including in PARS agreements; Records liaison works with staff to determine records disposition and approach.

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