



## Management Dashboards: Visualizing Enterprise Risks

Prepared by Bryan Adams, Elizabeth Drobnak, Jonah Hatley, Joshua Holley, Sachin Iyengar

NC STATE GRADUATE STUDENTS | POOLE COLLEGE OF MANAGEMENT

Faculty Advisor: Bonnie V. Hancock

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## Introduction

Since the advent of Enterprise Risk Management (ERM), organizations have captured increasing amounts of risk-related information about their businesses. To better communicate risk information, and sort and categorize data from multiple sources, many ERM leaders have implemented dashboards. A dashboard is a representation of an organization's information in a visual, identifiable, easily digestible way. In the context of ERM, dashboards are used to create structure and to organize key risk information for effective decision making. The purpose of this case study is to capture and share ERM dashboard practices such that ERM practitioners will be able to benchmark or improve their organization's dashboard process.

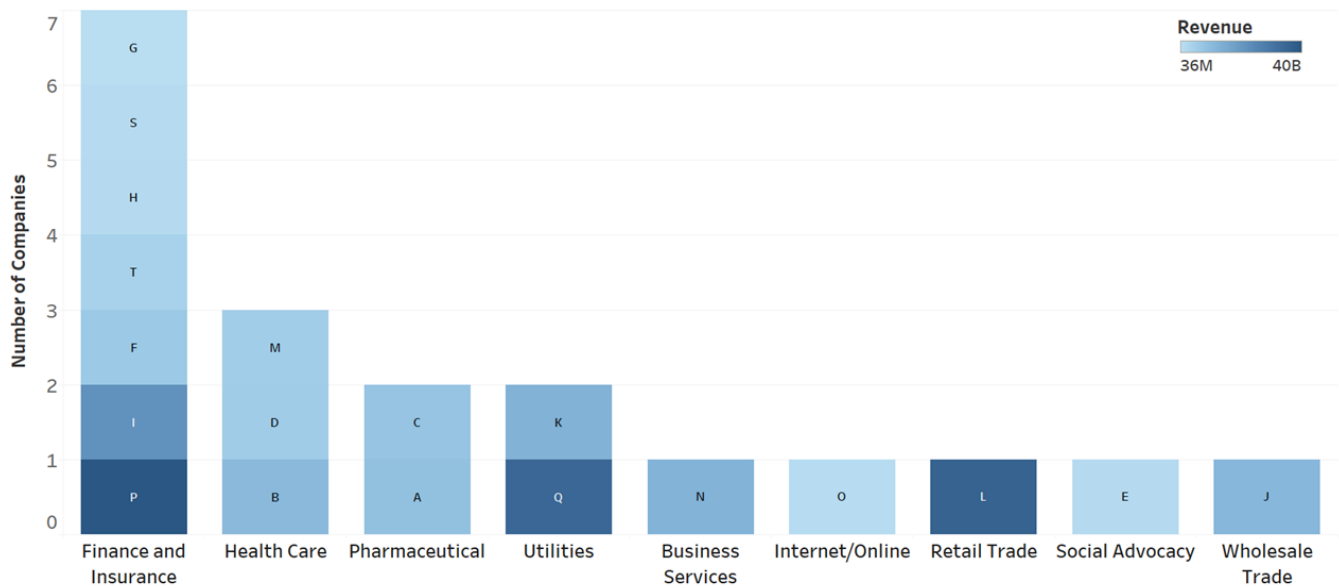
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## Process & Participants

To identify unique and helpful practices in ERM dashboard reporting, this case study was conducted by interviewing and researching twenty organizations from nine different industries. As seen in the chart below, the number of organizations ranged across industries with each entity identified by a specific letter. Throughout the case study, specific participants will be referenced using only these letter identifiers to ensure anonymity.

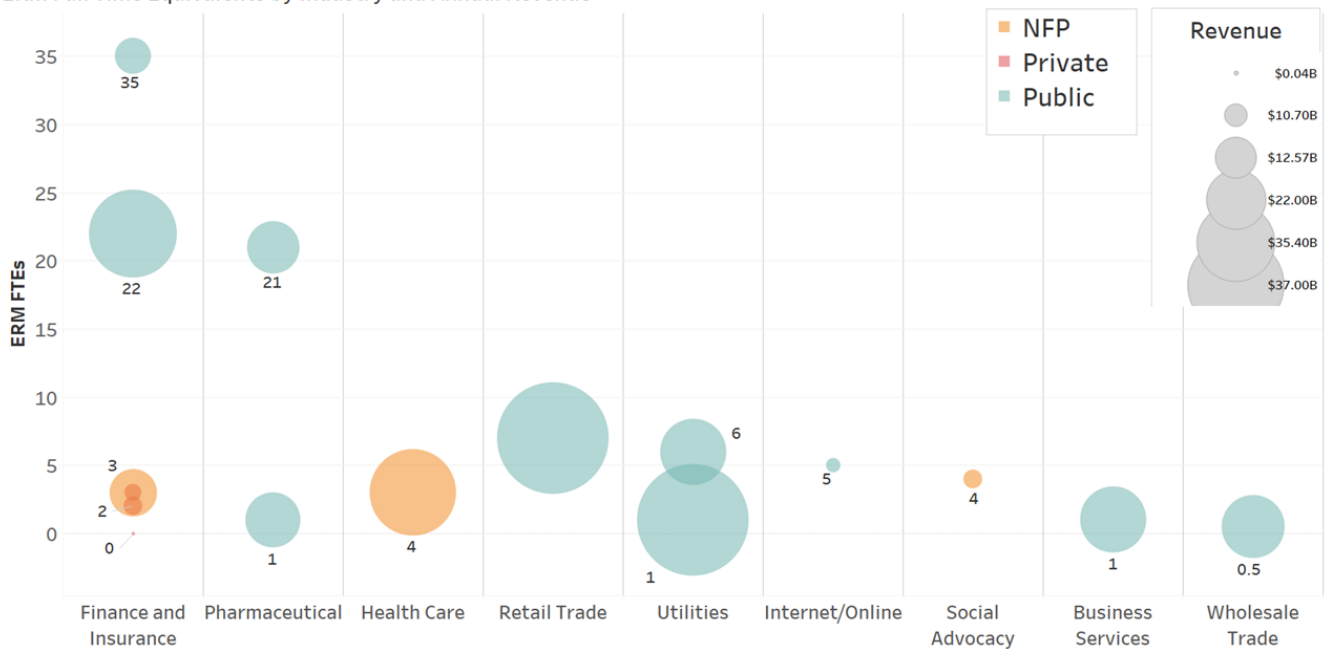
Participant Companies by Industry

Each letter represents one participant company and is organized by their respective industry.



The participant organizations included public, private, and not-for-profit organizations with annual revenues ranging from \$36 million to over \$40 billion. Across all participants the number of full-time equivalents dedicated to the ERM function varied. The chart below displays the number of full-time equivalents within each participant organization according to their industry, revenue, and type (Public, Private, NFP).<sup>1</sup>

ERM Full Time Equivalents by Industry and Annual Revenue

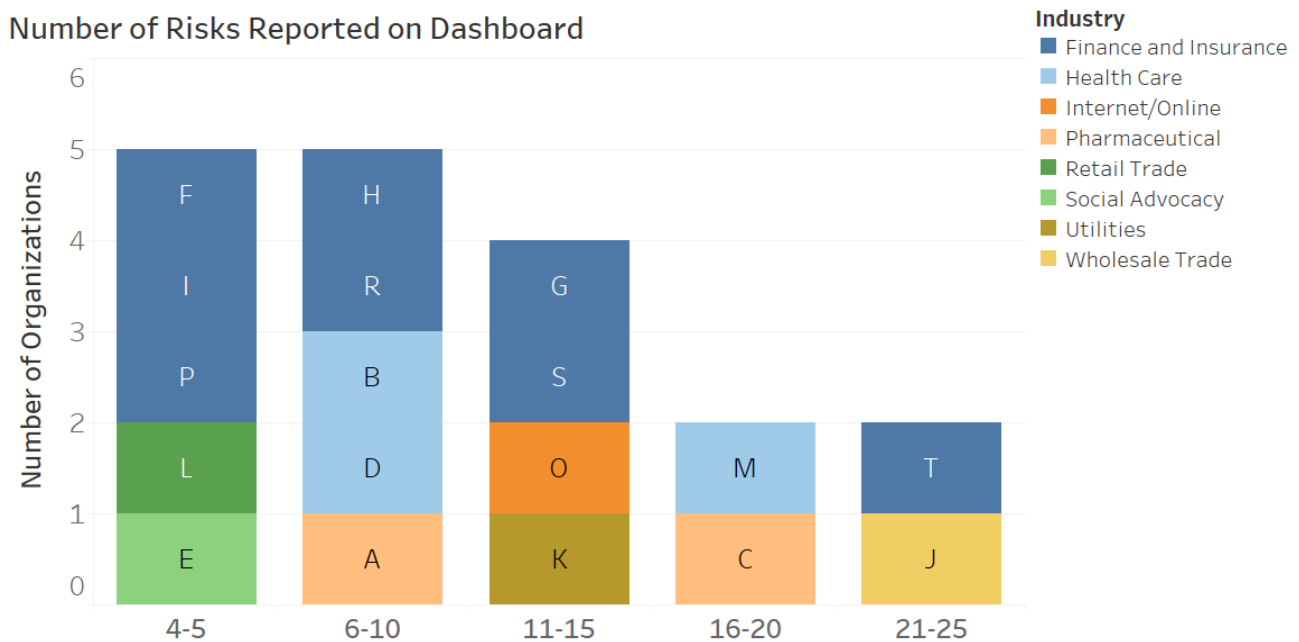


The interviews were conducted by asking questions that focused primarily on the ERM dashboard reporting process, but also included questions about the ERM department structure as well. The dashboard-specific questions were grouped by the following subjects: dashboard organization, preparation, distribution, effectiveness, and evolution. Dashboard organization questions were developed to identify types of risks and thresholds visualized on the dashboards. We also inquired about the dashboard preparation process including the use of software versus manual functions, and data gathering timelines as they relate to production and distribution. Finally, we sought to identify effectiveness and evolution information from ERM leaders to glean development obstacles and future improvement plans.

<sup>1</sup> There was one outlier participant organization within the Finance and Insurance industry not displayed in this chart, which had approximately 260 FTEs and annual revenues of \$40.5B.

## Dashboard Methods Compared Across Participants

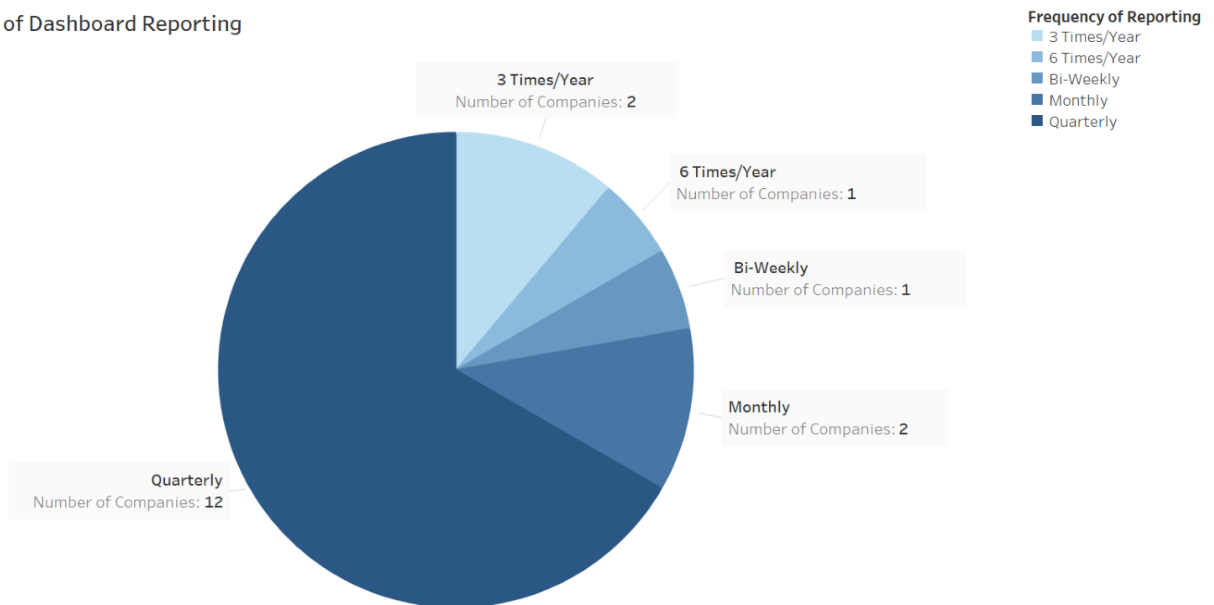
With the broad range of industries and various sizes of the organizations we interviewed, it is not surprising that we found a broad range in the number of risks reported on the dashboards. In the chart below, we have grouped the organizations according to the number of risks reported on its dashboard.



As visualized by the data above, risks reported on the dashboard extended from 4 to 25 top risks, where most of the organizations reported between 4-10 risks. Out of the 20 participants, there were 18 participants who had dashboards in place. The two organizations which did not yet have functioning dashboards, organizations N and Q, were omitted from the stacked bar graph above. In most cases (14 organizations) key risk indicators (KRIs) were reported on dashboards; however, 4 participants indicated they had not yet developed KRIs.

There were various methodologies used to collect data for the dashboards. We found that many organizations required the risk owners to update their owned risk(s) on the dashboard directly. The permissions granted to edit the dashboards varied from organization to organization. When dashboards were unable to be edited by the risk owners themselves, the intermediary (generally the ERM team) will request the information and update the dashboard.

Frequency of Dashboard Reporting



As shown in the visual above, while a few organizations produced a dashboard biweekly or monthly, the most common practice was to produce a dashboard quarterly. One organization, organization E, would update the dashboard when the risk owners deemed it necessary. Whenever the risk owner had any new key information, the risk owners were responsible for updating the dashboard accordingly. These updates were generally reviewed and confirmed by the ERM team.

## Practical Applications of Dashboard Best Practices

The research team sought to establish the key features that distinguish an effective management dashboard. Through research and observations made across study participants, we identified dashboard best practices and key features used in dashboards. According to the International Journal of Market Research, the successful development and implementation of a management dashboard hinges on five value adds to the organization: deciding on the right key performance indicators, data that is easily understood, following a call-to-action approach, developing a design for gained insight, and encouraging users to take action.<sup>2</sup>

Dashboard developers must decide on the right performance metrics to ensure presented information is meaningful, relevant, and has a direct impact to the users of the dashboard. The data should be easily understood and should be organized in a manner that does not overwhelm the user with excessive text and numerical data. The integration of visuals should serve a purpose to the information being conveyed, delivering readability and intuition to the audience. Visuals should support and communicate pertinent risk data collected by the ERM team. One ERM leader told us that focusing on the needs of the audience while also fully communicating all relevant risk information is key to effective dashboard utilization that leads to action.

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*"It comes down to understanding the audience and what they want to see, but we also have to keep our own independence."*

*-ERM Leader*

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The call-to-action approach is a visual hint that prompts the user to take certain measures using visual alerts that capture the attention of the user such as thresholds, tolerances, and benchmarks. Dashboards that deliver insight inform the user about the need for action, deliver causal information, and foster effective decision making. Ultimately, the dashboard should turn information into insight and insight into effective action.

Taking these suggested dashboard best practices into consideration, we observed practical applications of these concepts across case study participants.<sup>3</sup> We have included on the following pages excerpts from several different companies' dashboards to illustrate those concepts.

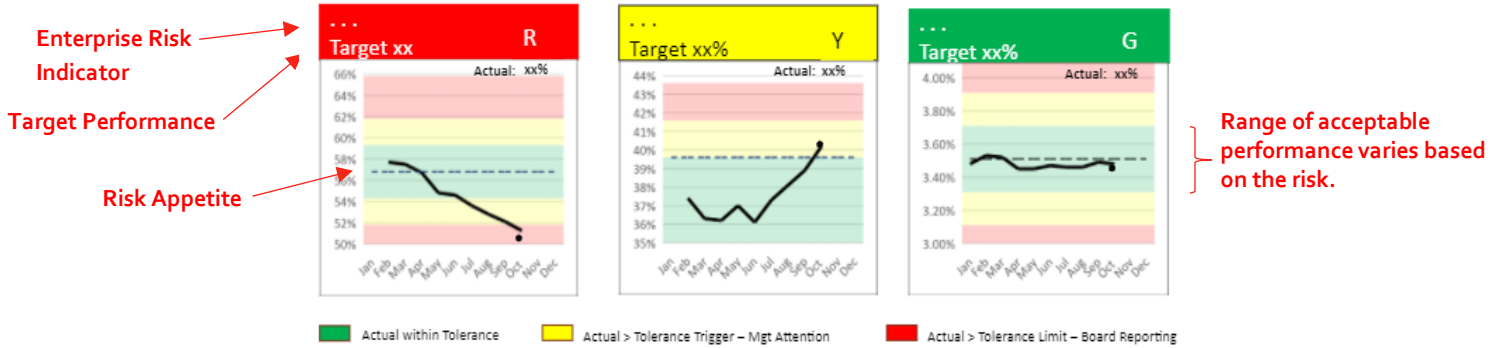
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<sup>2</sup> Skroka, Alexander (2017), Successful dashboard implementation in practice- How to overcome implementation barriers and ensure long-term sustainability. International Journal of Market Research, Vol. 59 Issue 2. DOI: 10.2501/IJMR-2017-017

<sup>3</sup>Please refer to Appendix C: Participants' Dashboard Samples to view these examples and others in complete form.

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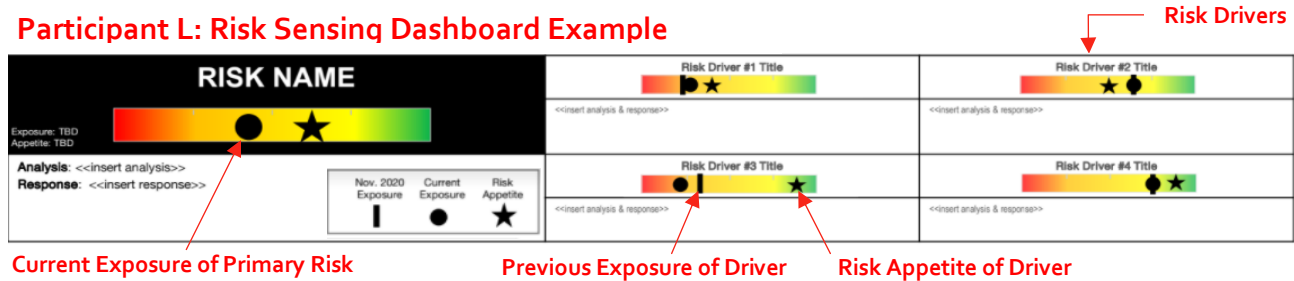
**Participant H: Call-to-Action Approach Example**



Participant H utilizes an enterprise dashboard that presents the top risks to the organization graphically in a series of tiled plotted line graphs. The enterprise risk indicator would be displayed in the upper-left corner of each tile, as shown by the red arrow to the ellipsis. The risk indicator’s target performance is listed directly underneath its name to visually draw attention to how its actual performance compares to the established target performance. The audience is alerted to the performance of the risk indicator based on the red (R), yellow (Y) or green (G) tile color. The legend shows the viewer how the risk indicators are performing against the entity’s tolerance limits. Further, the tile color also indicates what action is required based on the risk indicator’s performance such as manager attention or reporting to the board.

The line graphs reflect how the risk is trending over time and how it is performing relative to the established risk appetite, displayed using a dotted line. The use of green, yellow, and red banding depicts the risk tolerance the entity has set for these metrics. The color banding varies based on the risk being evaluated, so there are risks that may be in danger of performing too low or too high as shown in the red tile on the left above (red band at top and bottom of the graph). The middle tile reflects a risk indicator where there is only a danger of the metric being too high (red band is only at the top). The ranges of acceptable performance therefore will vary based on the nature and target performance levels of each risk indicator. The plotted line graphs, while seemingly simple, communicate a variety of risk information to the audience in a concise manner. This dashboard effectively illustrates the call-to-action approach.

**Participant L: Risk Sensing Dashboard Example**



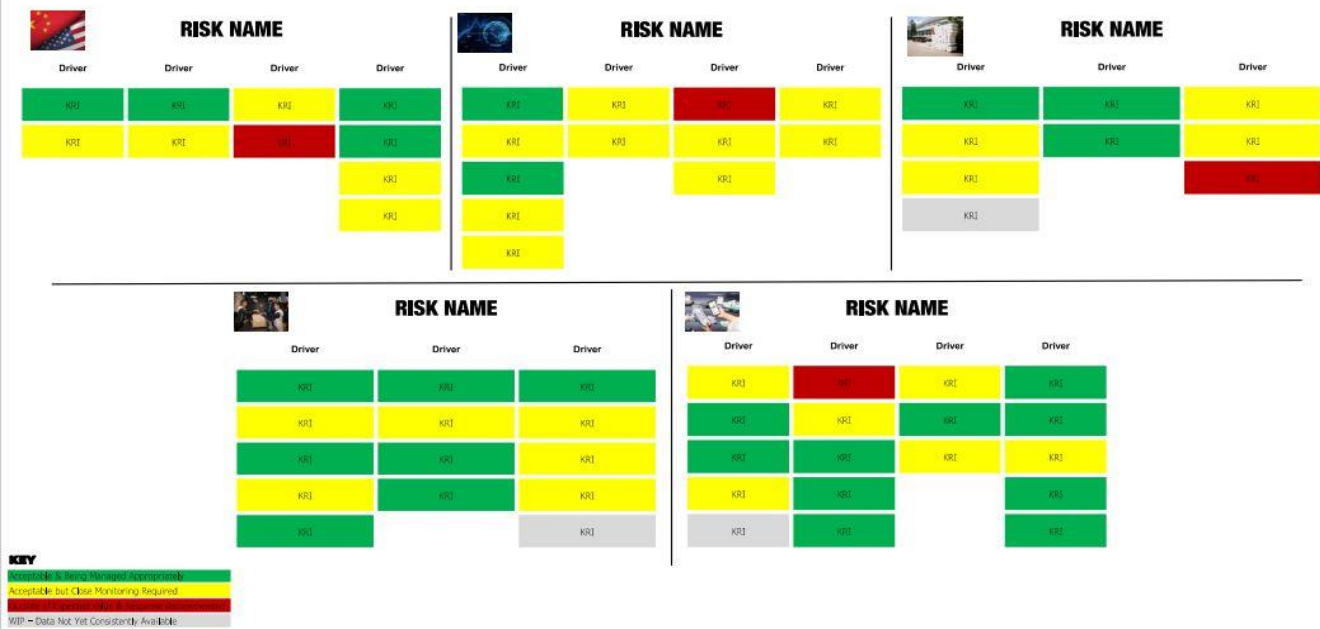
Participant L has developed a dashboard that visualizes forward-looking information concerning their enterprise risks. The risk sensing dashboard displays the risk on the left with the trend shown on a color scale. The circle represents current exposure, the star represents risk appetite, and the bar can be used to show prior period exposure to illustrate progress of the risk management plan. The right side of the dashboard shows the risk’s relevant drivers. The drivers are displayed with the same color scale and symbols to indicate exposure, appetite, and historic trends as seen on the primary risk. Separating out the risk drivers for each risk helps the viewer recognize risk changes in advance of them creating a risk concern, which puts the entity in a position to respond proactively to risks.

In addition, ERM best practices suggest that entities refresh their enterprise risks in the same time window as their strategic planning time horizon and use that risk information in planning. Therefore, it is helpful if entities can anticipate risks on the horizon using forward-looking information, typically derived from more external than internal sources.<sup>4</sup> The above risk sensing dashboard accomplishes this task.

<sup>4</sup> NC State Enterprise Risk Management, MBA 518 Course Notes extracted from Dr. Mark Beasley’s lecture.

Participant L – Summary KRI Dashboard

APPENDIX – Q3 RISK SENSING KRI DASHBOARD

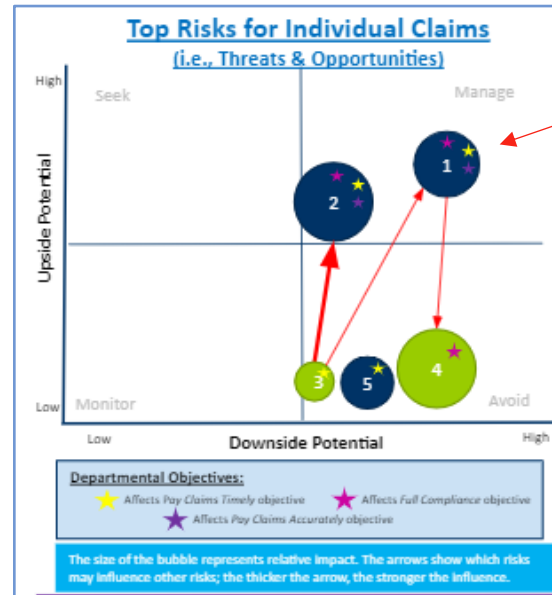


The above KRI dashboard is also distributed alongside the risk sensing dashboard to provide an overview of the status of each identified risk's respective KRIs. The risk sensing dashboard previously displayed is summarized into one of the five blocks of this summary KRI dashboard to provide a deeper look at the status of each risk's drivers based on their key risk indicators. Green KRIs are classified as being at an acceptable level and are managed appropriately. Yellow KRIs are also considered at an acceptable level, but close monitoring is required. Red KRIs are outside of expected values and response is recommended. Finally, the grey color indicates that data is not yet consistently available to provide status and response recommendations. The benefit of this view is that it enables management to quickly review the status of each risk based on its risk drivers, which are further broken down into their KRIs for effective and efficient monitoring, review, and response.

Participant I utilizes a bubble plot to convey enterprise risk information. Each bubble represents an enterprise risk, the size of the bubble represents the potential impact to the organization, and the directional arrows reveal the interrelationships of the risks. The quadrants of the graph are categorized according to the activities that would be required for risks in those quadrants: Monitor, Seek, Manage, and Avoid. Here is a description of what a risk signifies when they are plotted within either of these four quadrants.

- **Monitor:** The risk has a low downside potential and a low upside potential.
- **Seek:** The risk has a low downside potential and a high upside potential.
- **Manage:** The risk has a high downside potential and a high upside potential.
- **Avoid:** The risk has a high downside potential and a low upside potential.

**Participant I: Risk Connections Dashboard Example**

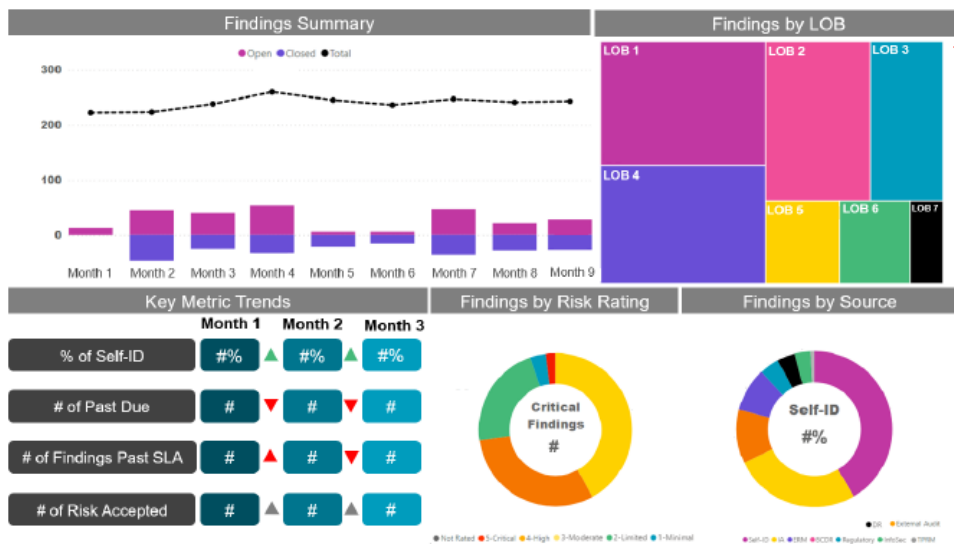


Risk 1 affects all 3 departmental objectives.

Interestingly, this graph illustrates the both the downside and opportunistic sides of enterprise risk management. Those risks that fall in the seek category have the most opportunity since they present high upside potential met with minimal downside potential. Traditionally, mitigation is thought to be the most appropriate response to risk, but as evidenced above there are those we want to seek or manage instead.

The red arrows illustrate the impact that risks have on other risks. The thickness of the arrow reflects how strongly one risk could influence another. Also, the colored stars displayed in the bubble plot show how departmental objectives are affected by enterprise risks. For example, enterprise risks 1 and 2 affect the timeliness of paid claims, their full compliance, and their accuracy. This bubble plot exemplifies the power meaningful visuals have on the communication of the message.

### Participant R: Enterprise Findings Summary Example



The Tree map chart depicts the relative number of findings from each line of business.

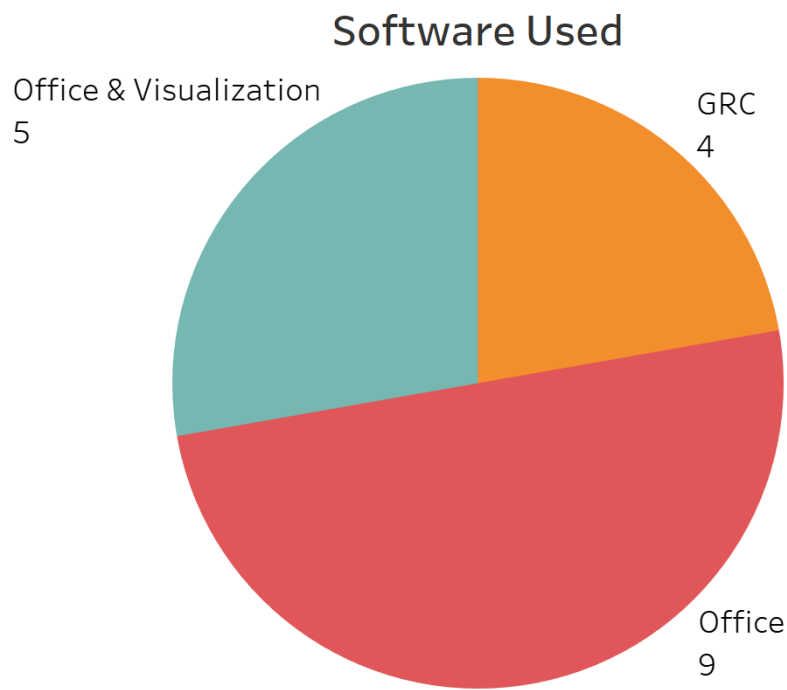
Overarching risk finding metrics and how they are trending month to month.

The above reveals an all-encompassing view of a dashboard Participant R developed to track their risk findings by each line of business (LOB), which are then rolled up into this Enterprise Findings Summary dashboard. Risk findings are the results of risk assessments conducted for each line of business. Starting at the upper-left section of the dashboard, the Findings Summary displays a snapshot of open and closed risk findings against the total number of findings each month. Closed risk findings are those that have been evaluated and are being managed. Open findings are those that require additional risk management attention.

Moving clockwise, the Findings by LOB tree map reveals how many risk findings are coming out of each line of business. In the lower right-corner, the Findings by Source illustrates where each finding was sourced such as regulatory, self-identified, internal audit, and more. Then in the Findings by Risk Rating section, the audience is given a status update on how the recent risk findings are rated. We see a small sliver of red, indicating critical risk findings, a larger piece of yellow, conveying moderate rated risk findings, and another large segment of orange, showing high rated findings. Then the dashboard rounds out with the Key Metric Trends section, which shows how relevant risk finding metrics are trending month over month. This participant has a defined process in place for tracking their risk findings and uses these findings to inform and update the next steps in the ERM cycle.

## Software Used to Produce Risk Dashboards

Of the 18 participants that have risk management dashboards in place, nine use only the Microsoft Office Suite, which includes Excel, Publisher, PowerPoint, SharePoint, Outlook, and Teams. Five organizations use Microsoft Office and include data visualization software in their risk dashboard development process. Four organizations use dedicated governance, risk management and compliance (GRC) software.



Participants reported Microsoft Office software produces dashboards that are well received by senior management and boards of directors. The benefits of using Microsoft Office applications are that most organizations already utilize the software across the business so there is no immediate need for new software or IT support as there can be with dedicated GRC software. The limitations of the Microsoft Office Suite are that there is no ability to drill down into risk indicators, and the update process is highly manual and time consuming. In fact, the manual aspect of the Microsoft Office applications was the most common concern about the software.

For data visualization, we observed that some participants use Tableau and Microsoft's Power BI. Both applications can extract data from SQL databases, Excel, and Access files to create dashboards that are interactive and offer the ability to drill down. One of the advantages of using data visualization software to augment the Microsoft Office applications is that it allows different dashboards to be created and easily updated for different audiences.

The three organizations that use dedicated GRC software were in the finance, insurance, and health care industries. The applications are powerful tools that offer the ability to drill down into risk data. It is also much easier to develop different dashboards for different audiences using GRC software. The downsides to these applications are that they can be costly to implement, and they require either dedicated inhouse IT support or a support contract with the software developer. While updating the data in these applications is still a manual process, it is not as time consuming as using the Microsoft Office applications.

Not all GRC software is created equally, and some of them are not well suited for risk reporting purposes. This is because some GRC applications are intended for internal audit or compliance use rather than functions like strategy and risk that are more qualitative than quantitative. We did receive some great advice related to determining what GRC software is best suited for ERM reporting. One of our participants recommended to first develop KRIs and build the foundation of an ERM dashboard using applications like Excel. This allows KRIs to be developed and analyzed for effectiveness, and it allows the ERM team to determine the best reporting format for senior management and board members. Having a rough dashboard to start will help determine what software will best suit the needs for ERM reporting. The two GRC applications we saw being used by case study participants were RSA Archer and OnSpring.

While a GRC software may already be in use by an entity, it may not fit the needs for risk reporting. Rather than trying to force enterprise risk reporting to work within a GRC application that was already in use for internal audit purposes, one participant found that using the Microsoft Office Suite was a better alternative.

## Process Improvements

Regardless of the software used, across all dashboard development processes observed, there is some component of the process that is manual. These manual processes include interviewing risk owners, gathering data from risk owners and other internal and external sources. The person or team that manages the ERM dashboard must then sift through the data that is provided to them to validate it before it gets updated into the dashboard. It may not be possible to automate narrative based data that is extracted from sources like the news and professional journals. Every participant that was producing dashboards reported they would like to increase the level of automation in updating key metrics and data.

GRC software can reduce some of the manual work involved in updating the dashboard. For the GRC software to work well it should be capable of handling qualitative as well as quantitative data. If a GRC software is not currently being used, ERM teams can take this opportunity to determine what features they want and need out of a potential GRC software. If a GRC software is not desired or is cost prohibitive, visualization software like Microsoft's PowerBI or Tableau, will allow for the automatic updates to graphics used in dashboards. They also allow for more analysis than the Microsoft Office applications are capable of.

Participants also want to improve their process for developing more data driven KRIs. Seventeen participants use metric driven data for their KRIs. In this case, we use metric driven to indicate data that is measurable rather than

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qualitative. Two organizations are still in the process of developing KRIs. Participants in heavily regulated industries like utilities, finance, and insurance, tended to maintain the same KRIs over longer periods of time than participants in the retail and wholesale trade industry that reevaluate their KRIs more often. “More often” in this case means, at least annually. The risk management programs in heavily regulated industries are often driven by compliance issues, so their KRIs are often tied to regulatory guidelines. But the risk management programs in retail and manufacturing industries are often informed more by industry and market changes. Industries and markets can evolve quickly which may require more frequent changes to KRIs to ensure that they are still meaningful measures.

For the foreseeable future, most organizations expect there will continue to be a manual part of the dashboard update process. However, as new tools become available to analyze and organize the data that goes into dashboards, there is an expectation that some of the manual effort can be reduced. In addition, software products for risk reporting continue to improve and could become a powerful addition to the risk dashboard process that reduces the amount of time spent updating the dashboard and allows for more real time communication of risk information.

## Conclusion

Throughout this report we have covered several different topics concerning dashboards. These topics include:

- A comparison of dashboard practices such as how many risks are included on the dashboard and how frequently the dashboard is distributed.
- A look into dashboard best practices and some sample dashboard applications from participating organizations.
- An analysis of the different software tools that participants use to create their dashboards.
- A discussion of the areas of dashboards that participants targeted for improvement, particularly the level of manual work required and the process for developing KRIs.

After reviewing and discussing dashboard practices with case study participants, we have identified several key factors that one should consider when creating a risk dashboard for use by decision makers. The first factor one should consider is tailoring the information to your audience’s needs and preferences. We found that participants’ dashboard audiences tended to accept dashboards and use them more often when they included information that the audience could use in managing their area of responsibility. The next factor is keeping the dashboard simple and easy to understand. We received lots of feedback from participants that their dashboards had to be concise to prevent audiences from being overwhelmed with data.

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One ERM leader stated that their goal regarding dashboard clarity is that extensive verbal instruction and interpretation on how to use the dashboard should not be necessary for leaders to make decisions from the data visualized.

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*"[The ERM team] shouldn't have to be in the room to explain [the dashboard], it should be clear."*

*-ERM Leader*

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We also found that drill down options usually helped to overcome the gap between too much information and the need for detail.

The final factor that makes for effective dashboard reporting is the inclusion of forward-looking information that captures evolving risk environments. We have found this can mostly be done by capturing trends or leading indicator or risk driver data and incorporating call-to-action graphics as we discussed in the practical applications section of the report.

Using this report, ERM leaders and dashboard creators can identify areas and techniques to apply in developing dashboards for the first time or in improving an existing dashboard so that it conveys information in a concise, visually appealing, action-oriented snapshot. Communicating critical risk information in this way can provide substantial value to the organization's decision-making and planning processes.

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## APPENDIX A: Interview Questions

### Company and Organizational Information:

- Confirm the following census data: Industry, total revenue, market capitalization, total assets.
- What is the organizational structure of the ERM function, and the individuals involved?
  - How many full-time equivalents (FTEs) are devoted to ERM?
  - What is the title of the ERM lead?
  - Where does ERM report in the organization? (Ex: through CFO organization, legal, etc.)
  - How many reporting levels are there between the CEO and ERM leader?

### Dashboard Organization:

- Can you provide us with a redacted sample of your dashboard?
- How many risks are reported on the dashboard?
  - What types of risks are reported? (Operational, Strategic, Financial, etc.)
- Does the dashboard report historical information?
- Does the dashboard report forward looking information? Please provide an example.
- Does the dashboard show trends? If so, how (graphs, arrows, colors, etc.)?
- Does the dashboard show relevant KRIs or other metrics?
  - Does the dashboard include risk appetite/tolerance thresholds?
- Is there an ability to “drill down” on specific risks, or is it a static report (may relate to a question on software below)?
  - Is there an ability to drill down on corporate vs. region vs. district risk data?
- Are there different reports for different audiences?
  - If so, how many and how do they differ?
  - Does anyone use a dashboard to also assist with ERM calendar functionality and/or survey functionality?

### Dashboard Preparation:

- How is the data gathered to update the dashboard?
    - Use a software tool or manually?
      - If a software tool is used, what is it?
      - If a software tool is used, how satisfied are you with that tool?
      - If manually, how much effort is required to produce it?
    - Is data gathered from internal or external sources?
-

- Role of ERM team vs. risk owners in update process?
- How frequently is the dashboard updated/produced?
  - Is there different timing for different audiences (board vs. management, for example)?
  - How are KRIs created, tested, and adopted?
- Who has access to editing the dashboards?

#### **Dashboard Distribution:**

- Who receives the dashboards (levels of the organization)?
  - Does everyone receive the same version? Or is there a different dashboard for the Board of Directors vs senior management vs ERM team?
  - Are there limits on access to dashboards between the various levels of the company?
- Are there recurring meetings where the dashboard is reviewed?
  - If so, what are those meetings, who is involved, and how frequent?

#### **Dashboard Effectiveness and Evolution:**

- Was the dashboard created internally or by a 3rd party?
- How long has the current dashboard been used?
  - Have there been any changes to the dashboard over time? If so, what were they?
  - Can you provide any perspective into the development of the initial dashboard? Obstacles? Milestones?
- How satisfied are you with the dashboard you currently use?
  - What do you believe is the best feature of the dashboard you use?
  - What business decisions, dialogue, and actions have been driven using the dashboard?
- Have you gotten any feedback from users about the usefulness of the dashboard?
  - Individual business units vs. ERM Managers vs. Board of Directors
- Is there anything you would like to improve or plan to improve on your dashboard?
  - If so, what?

#### **Final Question:**

- Is there anything else you would like to add about dashboard reporting?
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## APPENDIX B: List of Participants

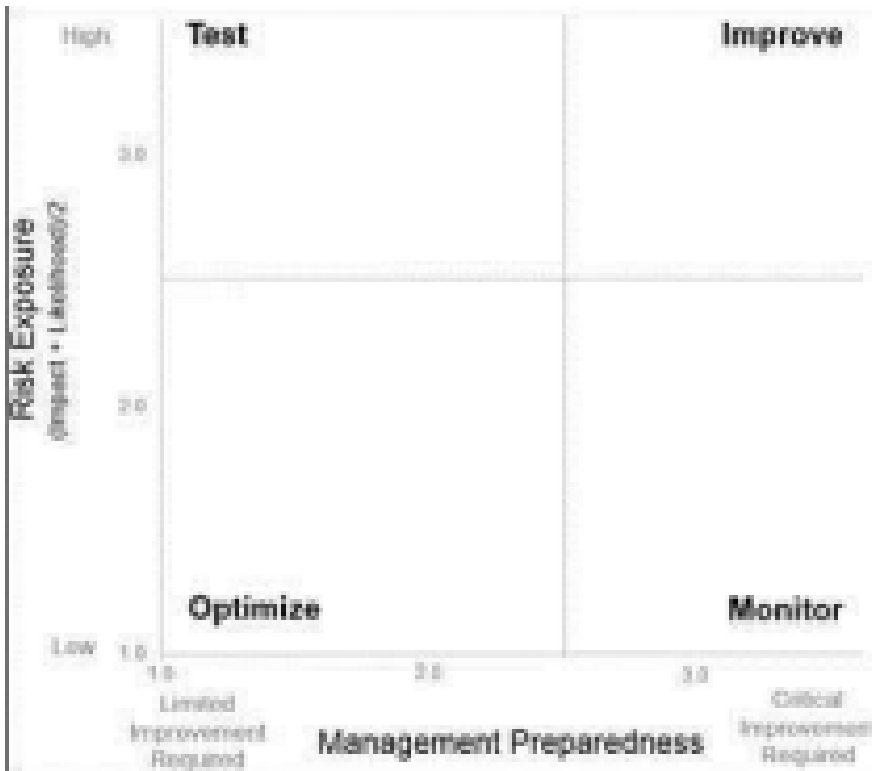
Participant	Title of ERM Lead	Reporting Structure	Number of reporting levels between ERM lead and CEO	Number of FTEs
A	Executive Director of ERM & Legal Operations	Reports to General Council	1	1
B	Assistant Vice President ERM	Reports to Chief Legal officer who then reports to CEO	2	3
C	Senior Director of Global Risk Management	Reports to CFO who then reports to CEO	2	21
D	Chief Operating Officer	Reports to CEO	1	3
E	Vice President of Risk Management	Reports to General Counsel who then reports to CEO	2	4
F	Senior Risk Manager	Reports to head of legal who then reports to CRO who then reports to CEO	3	3
G	Chief Risk Officer	Reports directly to CEO	1	0
H	Chief Risk Officer	Report directly to President	1	2
I	Chief Risk Officer	Reports to CFO who then reports to CEO	2	22
J	Director of Enterprise Risk	Reports directly to CEO	1	1
K	ERM Director	ERM director Reports to CFO who then reports to CEO	2	3

<b>L</b>	Senior Director of ERM	Reports to CRO who then reports to CFO who then reports to CEO	3	7
<b>M</b>	Director of ERM	Report to Chief Strategy Officer	1	3
<b>N</b>	Director	Reports to General Counsel who then reports to CEO	2	1
<b>O</b>	Vice President of Internal Audit	Reports to CFO who then reports to CEO	2	5
<b>P</b>	Chief Risk and Compliance Officer	Reports to CEO	1	260
<b>Q</b>	Chief Risk Officer	Reports to the General Counsel who then reports to CEO	2	1
<b>R</b>	Chief Risk Officer	Reports directly to CEO	1	7
<b>S</b>	Director of Risk Management	Reports to CRO who then to CEO	2	3
<b>T</b>	Chief Risk Officer	Report directly to CEO	1	35

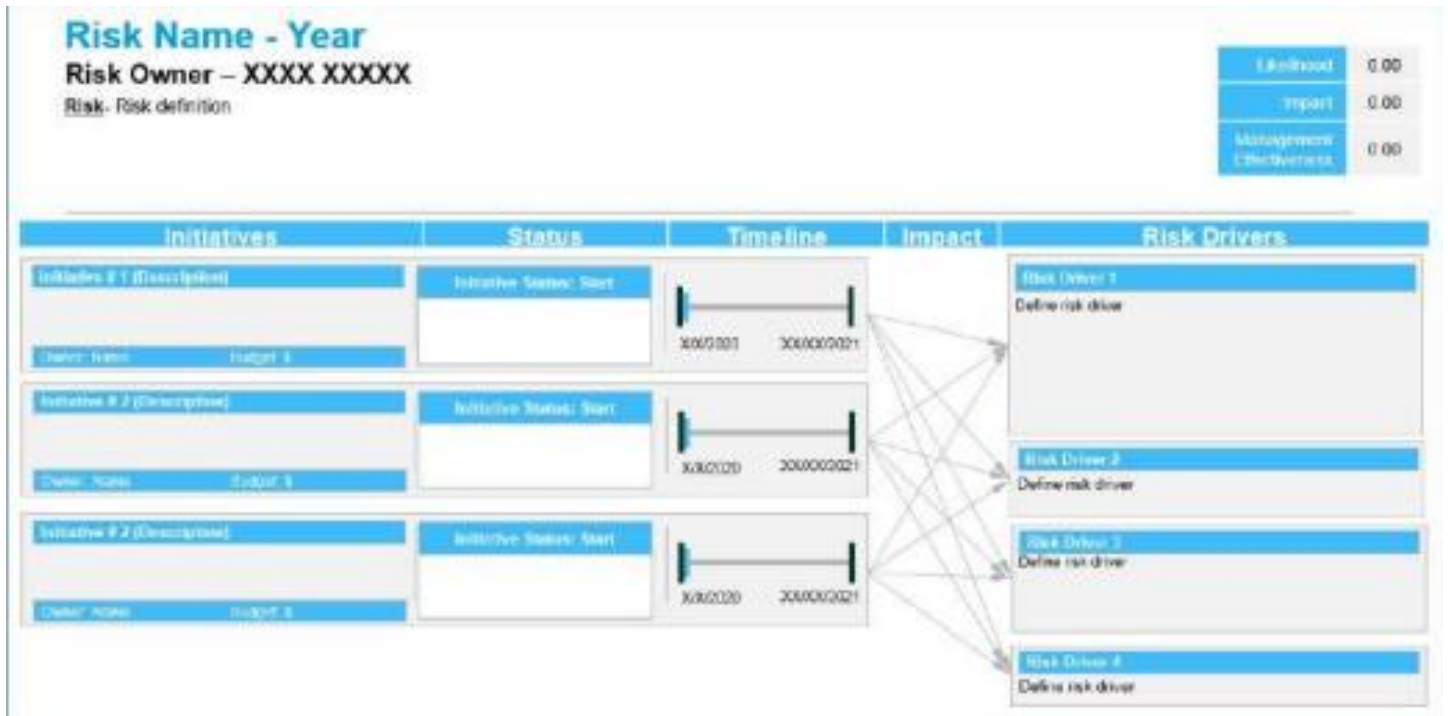
## APPENDIX C: Participant Dashboards

This appendix includes the sample dashboards that we obtained from participants in the case study. Most of these dashboards were in some way referenced in the body of this report. Readers should be aware that many of these may contain blank spaces where information had to be removed to ensure confidentiality.

### Participant A Dashboard



YEAR Mitigation Plans –Risks Identified for Improvement/Monitoring		
Risk	Owner	Risk Mitigation Plan Highlights



## Participant B Dashboard

Snapshot ERM Risks Dashboard

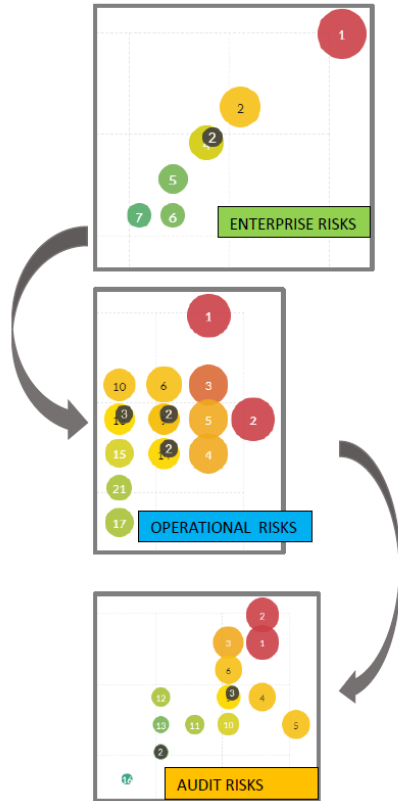
Risk Category	Enterprise Risks and Opportunities	Risk Level	Risk Appetite	Key Activities and Metrics
Financial	<b>Changing Reimbursement Landscape</b> Payor relationships may change due to declining government and commercial reimbursement, increased pressure to offer outpatient alternatives, and payors aggressively advancing pay for performance models.	High		
Technology	<b>Cyber Security</b> Cyber crime is a continuous and growing threat requiring heightened vigilance.		Medium	
Financial	<b>Increasing Cost</b> The cost of building materials, drugs, qualified personnel, supplies, and technology continue to rise, potentially threatening our operating results.			
Strategic	<b>Rapidly Changing Competitive Environment</b> Large for-profit provider entry in NC may accelerate consolidation, and well-funded alternative care models and insurance industry entrance into the care delivery space, may drive price competition.			
Regulatory	<b>Regulatory Uncertainty</b> Regulatory changes, such as 340B, Medicaid Managed Care, and two sided ACO risk, coupled with the DC landscape, may impact our business model and create issues for us as a safety net provider.			
Human Capital	<b>Talent and Leadership</b> Attracting, onboarding, and retaining skilled health professionals and senior leaders who will shape the culture and effectively manage change.			<ul style="list-style-type: none"> <li>Evaluate the needed workforce competencies and develop infrastructure to assess those competencies before hire.</li> <li>Metric: Turnover Vacancy</li> <li>Metric: Engagement Indicator</li> </ul>

Spaces Left intentionally blank or redacted for example.

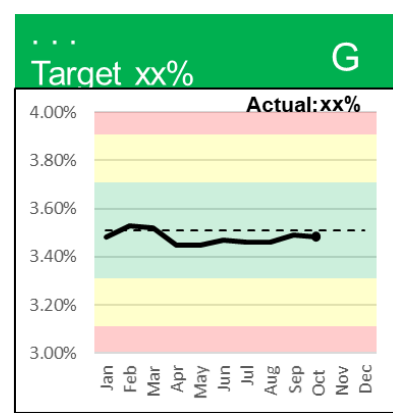
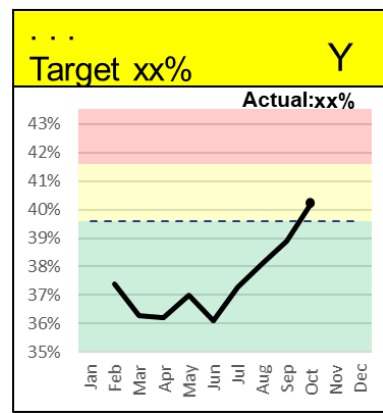
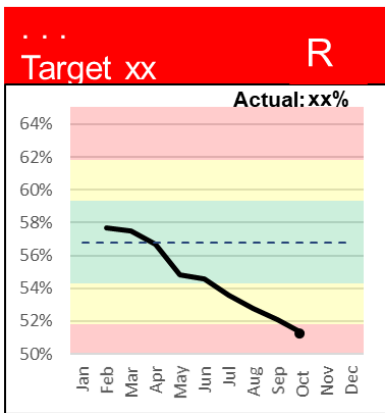
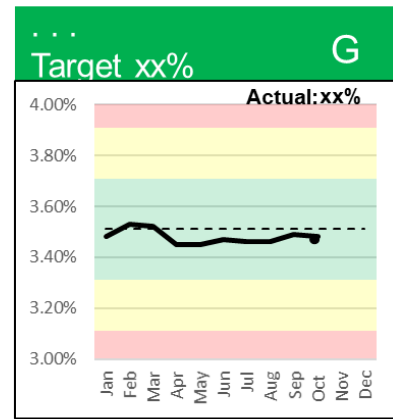
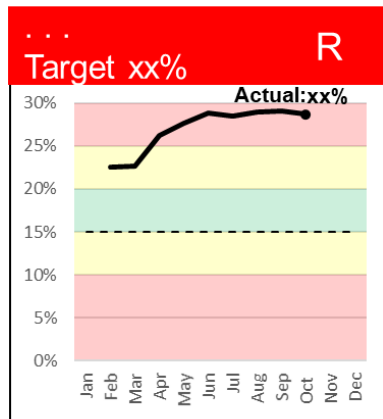
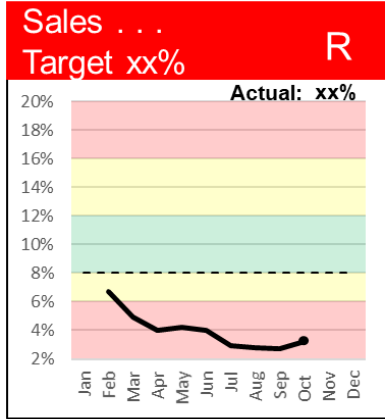
### Heatmap of Enterprise Risks



Cascading Risks



## Participant H Dashboard



■ Actual within Tolerance    
 ■ Actual > Tolerance Trigger – Mgt Attention    
 ■ Actual > Tolerance Limit – Board Reporting


## Participant L Dashboard

### FY21 Q3 RISK SENSING DASHBOARD (1/2)

Nov. 2020 Exposure	Current Exposure	Risk Appetite
I	●	★


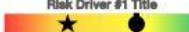


<b>RISK NAME</b> Exposure: TBD Appetite: TBD 	<b>Risk Driver #1 Title</b> 	<b>Risk Driver #2 Title</b> 
	<<insert analysis & response>>	
<b>Analysis:</b> <<insert analysis>> <b>Response:</b> <<insert response>>	<b>Risk Driver #3 Title</b> 	<b>Risk Driver #4 Title</b> 
<<insert analysis & response>>		<<insert analysis & response>>





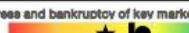
<b>RISK NAME</b> Exposure: TBD Appetite: TBD 	<b>Risk Driver #1 Title</b> 	<b>Risk Driver #2 Title</b> 
	<<insert analysis & response>>	
<b>Analysis:</b> <<insert analysis>> <b>Response:</b> <<insert response>>	<b>Risk Driver #3 Title</b> 	
<<insert analysis & response>>		

<b>RISK NAME</b> Exposure: TBD Appetite: TBD 	<b>Risk Driver #1 Title</b> 	<b>Risk Driver #2 Title</b> 
	<<insert analysis & response>>	
<b>Analysis:</b> <<insert analysis>> <b>Response:</b> <<insert response>>	<b>Risk Driver #3 Title</b> 	<b>Risk Driver #4 Title</b> 
<<insert analysis & response>>		<<insert analysis & response>>

### FY21 Q3 RISK SENSING DASHBOARD (2/2)

Nov. 2020 Exposure	Current Exposure	Risk Appetite
I	●	★

<b>RISK NAME</b> Exposure: TBD Appetite: TBD 	<b>Risk Driver #1 Title</b> 	<b>Risk Driver #2 Title</b> 
	<<insert analysis & response>>	
<b>Analysis:</b> <<insert analysis>> <b>Response:</b> <<insert response>>	<b>Risk Driver #3 Title</b> 	
<<insert analysis & response>>		

<b>RISK NAME</b> Exposure: TBD Appetite: TBD 	<b>Technology advancements and adoption</b> 	<b>Transformation of physical retail spaces</b> 
	<<insert analysis & response>>	
<b>Analysis:</b> <<insert analysis>> <b>Response:</b> <<insert response>>	<b>Size and influence of digital marketplace platforms</b> 	<b>Financial distress and bankruptcy of key marketplace partners</b> 
<<insert analysis & response>>		<<insert analysis & response>>

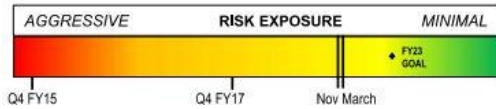
### Q3 RISK SCORECARD: <<RISK NAME>>

<b>RISK CHAMPION</b>	<b>RISK LEADER</b>
<<Insert name>>	<<Insert name>>
<b>RISK DEFINITION</b>	
<<Insert definition>>.	
<b>RISK ANALYSIS</b>	
<u>Evolving Risk Landscape Headwinds</u>	
<<Insert details>>.	
<u>Notable Progress Tailwinds</u>	
<<Insert details>>.	

KEY METRICS		
<b>METRIC #1</b>	<b>METRIC #2</b>	<b>METRIC #3</b>
 <p>CURRENT: 94% PREVIOUS: 93% TARGET: 95%</p>	 <p>CURRENT: 99.9% PREVIOUS: 99.8% TARGET: 95%</p>	 <p>CURRENT: 99.0% PREVIOUS: 99.6% TARGET: 100%</p>

KEY UPDATES
<p><b>Response Focus Area #1</b></p> <ul style="list-style-type: none"> <li>Detailed update</li> </ul> <p><b>Response Focus Area #2</b></p> <ul style="list-style-type: none"> <li>Detailed update</li> </ul> <p><b>Response Focus Area #3</b></p> <ul style="list-style-type: none"> <li>Detailed update</li> </ul> <p><b>Response Focus Area #4</b></p> <ul style="list-style-type: none"> <li>Detailed update</li> </ul> <p><b>Response Area #5</b></p> <ul style="list-style-type: none"> <li>Detailed update</li> </ul>

BOTTOM LINE
<p>&lt;&lt;Insert current analysis&gt;&gt;.</p> <p>&lt;&lt;Insert future analysis&gt;&gt;.</p>



## APPENDIX – Q3 RISK SENSING KRI DASHBOARD



### RISK NAME

Driver	Driver	Driver	Driver
KRI	KRI	KRI	KRI
KRI	KRI	KRI	KRI
		KRI	KRI
		KRI	



### RISK NAME

Driver	Driver	Driver	Driver
KRI	KRI	KRI	KRI
KRI	KRI	KRI	KRI
KRI		KRI	
KRI			
KRI			



### RISK NAME

Driver	Driver	Driver
KRI	KRI	KRI
KRI	KRI	KRI
KRI		KRI
KRI		KRI



### RISK NAME

Driver	Driver	Driver
KRI	KRI	KRI
KRI	KRI	KRI
KRI	KRI	KRI
KRI	KRI	KRI
KRI		KRI



### RISK NAME

Driver	Driver	Driver	Driver
KRI	KRI	KRI	KRI
KRI	KRI	KRI	KRI
KRI	KRI	KRI	KRI
KRI	KRI		KRI
KRI	KRI		KRI

**KEY**

- Acceptable & Being Managed Appropriately
- Acceptable but Close Monitoring Required
- Unacceptable
- WIP - Data Not Yet Consistently Available

# Participant I Dashboard

## Q4 US Risk Dashboard: Top Risks Affecting X US Strategic Objectives

**Key Takeaway:** COVID's impact on X US's 30% sales growth target for 2021 is the top risk.

### Top 5 Risks / Uncertainties: Three Categories of Focus

### Key Updates During Q4

#### COVID Impact on Sales

- 140,000 US jobs were lost in December, the first monthly drop since April. Losses were concentrated among the US services sector (e.g., restaurants) where X US's book of business has a high concentration.<sup>1</sup>
- However, X US's year-end Retention was xx% (up x.xx% YoY) and Persistency was xx% (up x.xx% YoY) due to a combination of stimulus, emergency orders, and proactive internal efforts, such as outbound health check calls, credit card payment pilot, promotional recurring auto-draft campaigns, and e-transfer.
- Lower than expected AWP (down xx%) and career recruiting (down xx%) contributed to lower sales.
- Tier One launched successfully on-time, xxx acquisition closed in Q4, and X D&V roll-out is underway.

#### Regulatory & Political Uncertainty

- Regulatory scrutiny continues to increase due to macroeconomic conditions, product complexity, and other factors. California's CCPA and upcoming California Privacy Rights Act are two items gaining focus internally.
- Paid FMLA legislation is being monitored (both state and federal). This risk poses both upside and downside potential. The acquired Management business mitigates the downside risk exposure.

#### Strategy Execution

- No new projects for 2021 have been added in order to maintain a laser focus on the top priorities.
- X US's new governance structure seeks to accelerate decision-making and strengthen accountability.

Footnote: 1) Sources AP, WSJ 2) Source: Oxford Information Technology, Ltd. 3) Sources: New York Times, the Jerusalem Post.

### Looking Ahead: Risks to Achieving 2021 Objectives

#### COVID Impact on Sales

- December's \$900B stimulus package is expected to boost consumer spending, which would prompt hiring to keep up with demand. This package gives small businesses – who employ half the US workforce and represent a significant portion of X US's book of business – access to loans. The next proposed round of stimulus, the \$1.9T "American Rescue Plan," may also help Premium Persistency in the short-term via aid to the USA's 30M small businesses, 4M of whom are at risk of closing.<sup>2</sup>
- The details of future stimulus is a high-impact uncertainty for X US. Stimulus focused on small businesses especially helps X US Premium Persistency due to the payroll-deduction nature of our products. Conversely, stimulus checks to individuals have a smaller impact on Persistency and Sales.
- Virtual Enrollment Enablement capabilities partially "soften the blow." However, "take rates" in a virtual environment are less than half of the 30%-40% "take rates" in a face-to-face environment.
- Agent recruiting (goal of xxxxx new agents in 2021): Conversion rates may be more volatile in 2021. The current high unemployment rates plus high uncertainty in the small business sector due to COVID could suggest new recruits may not stick with X for the long-term.
- Vaccine efficacy appears to be promising (95% efficacy rate for Pfizer). The public health world is watching Israel, who is the farthest along in vaccine distribution and shows significant drops in infections and hospitalizations, even after just the first dose.<sup>3</sup>

#### Regulatory & Political Uncertainty

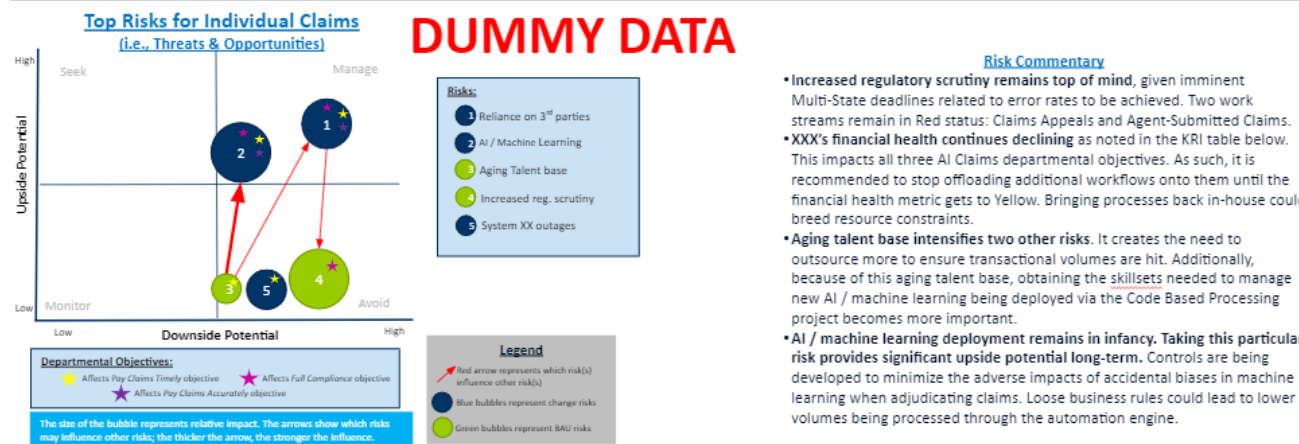
- Election results could impact COVID economic effects and create other slow-developing, high-impact uncertainties over the long-term (e.g., timing and extent of tax increases, government's role in healthcare, etc.). Government Relations continues heavily monitoring and advising.
- Regulatory uncertainties may affect 2021 strategy execution. Both 2019 & 2020 had unexpected regulatory items added to the project portfolio; 2021 may as well.
- Civil unrest continues to be monitored for potential impacts to X (employees, investors, and customers).

#### Internal Risk Factors Posing Uncertainty

- VSP's potential impact to Service Turnaround Times may impact the customer experience and/or sales-enabling activities. This could be exacerbated by operations volumes returning to normal in 2021. To mitigate, automation, outsourcing, & backfilling (6-9 months ramp-up time) are being utilized.
- Better System X 2.0 stability helps drive agent productivity. The "All Hands on Deck" ticket approach launched in order to resolve tickets quicker and remove barriers to success for producers. Also, third party integrations with other platforms is another point of focus to drive adoption and benefits.
- Complexity of products creates challenges for agents servicing customers and for operational (e.g., Claims) efficiencies. Going forward, the development and implementation of strategies to convert/retire old series of products that have high administrative complexity becomes more important.

## Department Risk Scorecard Part 2 of 2: Risk Exposure (Prototype – Individual Claims as an example)

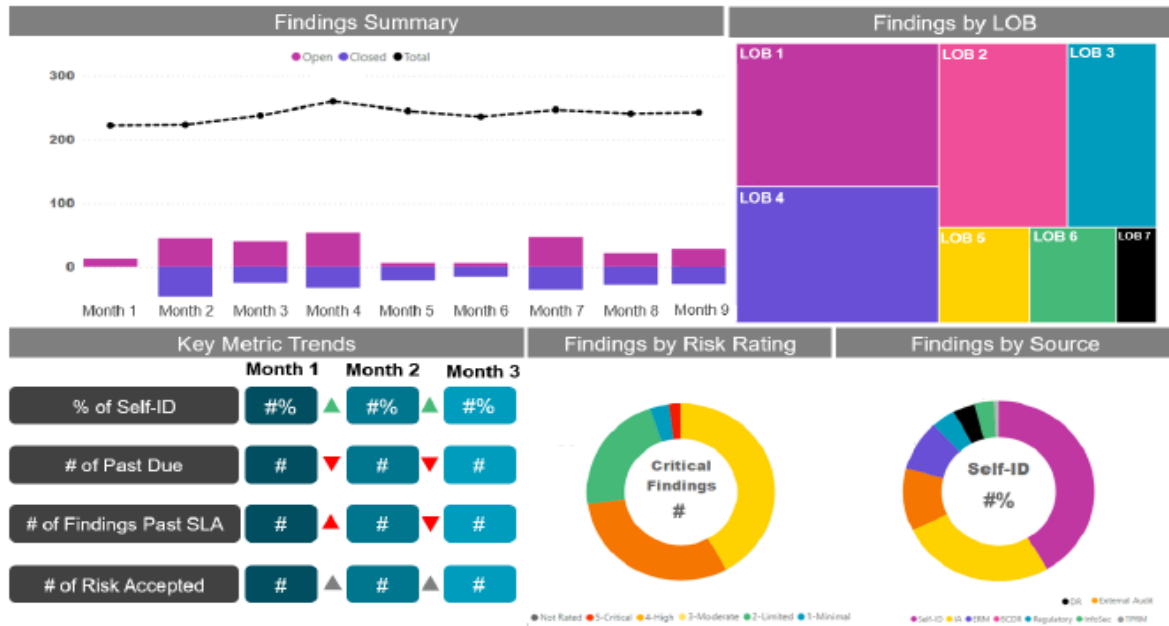
**Key Takeaway:** Increased regulatory scrutiny remains top of mind, given imminent Multi-State deadlines. Meanwhile, reliance on third parties (namely XXX) is a growing risk.








### Key Risk Indicators

Pertinent Objective(s)	Key Risk Indicator	Actuals					Established Tolerance Ranges and Targets			
		June	July	August	Sept.	October	Low	Medium	High	Critical
★	XXX financial health metric	43	42	41	40	39	70+	60-69	50-59	<50
★ ★ ★	Accuracy rate for Claims using AI / Machine Learning	92%	85%	86%	88%	90%	90%+	85%-89%	80%-84%	<80%
★ ★	% of Workforce Eligible for Retirement in 2022	9%	9%	11%	11%	9%	<10%	11%-20%	21%-30%	>30%
★	# of Multi State milestones in Red status	2	2	2	2	2	0	1	2	3+

## Participant R Dashboard



## APPENDIX D: About the Authors

	<p><b>Elizabeth Drobna</b> is a graduate student in the Jenkins Master of Accounting (MAC) program at NC State University and serves as a graduate assistant to the Jenkins MAC Career Services Department. She completed her Bachelor degree in Accounting also from NC State University where she concentrated in Information Systems and completed the Business Analytics Honors program. Upon graduation, she looks forward to working at Deloitte in Boston, MA as a Risk and Financial Advisory Analyst and plans to finish the Certified Public Accountant (CPA) credential.</p>
	<p><b>Joshua Holley</b> is currently pursuing his Master of Accounting degree at NC State's Poole College of Management and is concentrating in Enterprise Risk Management. He received his Bachelor of Arts degree in Intercultural Studies from the University of Mobile. Joshua worked for a non-profit organization for over 2 years before beginning to pursue a career in the public accounting industry. Upon graduation from the Jenkins MAC program, Joshua will begin his career with RSM US as a Risk Consulting Associate in Raleigh, NC.</p>
	<p><b>Jonah Hatley</b> is currently pursuing his Master of Accounting degree at NC State's Jenkins Master of Accounting program with a concentration in Enterprise Risk Management. He is also currently a graduate assistant for undergraduate classes at NC State. He received his Bachelor of Science degree in Accounting from Wingate University. Upon graduation From the Jenkins MAC program he plans to start his career with PWC as an Assurance Associate in Charlotte, NC.</p>
	<p><b>Sachin Iyengar</b> is a student at NC State's Masters of Accounting (MAC) program with a concentration in Enterprise Risk Management. He completed his Bachelor of Science degree in Accounting, with a minor in mathematics, from Appalachian State University. He is currently working as a compliance analyst for Alvarez and Marsal and as a Teacher's Assistant for ACC 201 - Concepts of Financial Reporting. He is also the President of the Masters of Accounting Organization. Sachin is currently planning on continuing his education as a student in the Master of Financial Mathematics program at NC State.</p>
	<p><b>Bryan Adams</b> is pursuing his Master of Accounting degree (MAC) at NC State with a concentration in Enterprise Risk Management. He is a US Navy veteran. He received his Bachelor of Arts in History from NC State in 2019. He currently works as an intern for PC Law   Time Matters LLC where he has also been offered a full time position following graduation. He intends to complete the requirements to earn his CPA and continue his career in the software industry.</p>