



# Baldrige Cybersecurity Excellence Builder

Key questions for improving your organization's cybersecurity performance

**Draft September 2016**

**National Institute of Standards and Technology**

Feedback on this draft release of the *Baldrige Cybersecurity Excellence Framework* will be incorporated into the version 1 release, scheduled for early 2017. Please submit feedback to [baldrigecybersecurity@nist.gov](mailto:baldrigecybersecurity@nist.gov) by December 15, 2016.



# Contents

<b>Introduction</b>	<b>1</b>
C Organizational Context	5
<b>Cybersecurity Processes</b>	
1 Leadership	7
2 Strategy	9
3 Customers	11
4 Measurement, Analysis, and Knowledge Management	13
5 Workforce	15
6 Operations	17
<b>Cybersecurity Results</b>	
7 Results	19
<b>Evaluating Your Responses</b>	<b>22</b>
Assessment Rubric	
Process (Categories 1–6)	23
Results (Category 7)	24
Self-Analysis Worksheet	25
<b>Glossary of Key Terms</b>	<b>27</b>
Appendix: <i>Baldrige Cybersecurity Excellence Builder–Cybersecurity Framework Crosswalk</i>	30



# Introduction

## What is the Baldrige Cybersecurity Excellence Builder?

The *Baldrige Cybersecurity Excellence Builder* is a voluntary self-assessment tool that enables organizations to better understand the effectiveness of their cybersecurity risk management efforts. It helps leaders of organizations identify opportunities for improvement based on their cybersecurity needs and objectives, as well as their larger organizational needs, objectives, and outcomes.

Using this self-assessment, you can

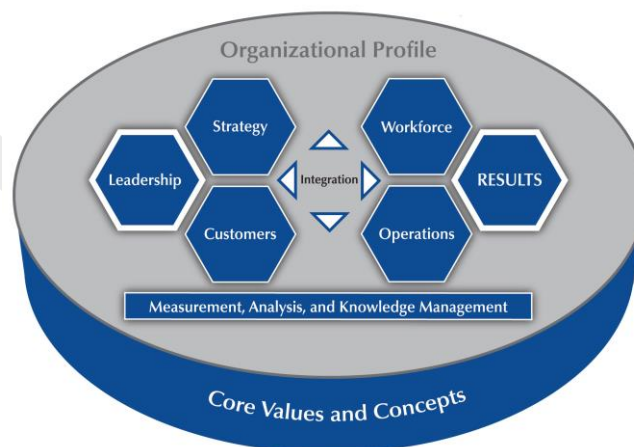
- determine cybersecurity-related activities that are important to your business strategy and critical service delivery;
- prioritize your investments in managing cybersecurity risk;
- determine how best to enable your workforce, customers, suppliers, partners, and collaborators to be risk conscious and security aware, and to fulfill their cybersecurity roles and responsibilities;
- assess the effectiveness and efficiency of your use of cybersecurity standards, guidelines, and practices;
- assess the cybersecurity results you achieve; and
- identify priorities for improvement.

Like the [Framework for Improving Critical Infrastructure Cybersecurity](#) (*Cybersecurity Framework*) and the [Baldrige Excellence Framework](#), the *Baldrige Cybersecurity Excellence Builder* is not a one-size-fits-all approach. It is adaptable and scalable to your organization's needs, goals, capabilities, and environment. It does not prescribe how you should structure your organization's cybersecurity policies and operations. Through interrelated sets of open-ended questions, it encourages you to use the approaches that best fit your organization.

## What is the relationship between the Baldrige Cybersecurity Excellence Builder and the Framework for Improving Critical Infrastructure Cybersecurity?

The *Baldrige Cybersecurity Excellence Builder* blends the systems perspective of the *Baldrige Excellence Framework* with the *Cybersecurity Framework*.

The *Cybersecurity Framework* assembles and organizes standards, guidelines, and practices that are working effectively in many organizations. In the Baldrige approach as applied to cybersecurity, an organization manages all areas affected by cybersecurity as a unified whole. As shown in the diagram below, the system consists of your cybersecurity-related approaches in the areas of leadership, strategy, customers, workforce, and operations, as well as the results you achieve. The system foundation is measurement, analysis, and knowledge management. The background for all of these components is the Organizational Context. In this set of questions, you define your organization's distinctive characteristics and situation as they relate to cybersecurity.



The *Baldrige Cybersecurity Excellence Builder* incorporates the content outlined in the *Cybersecurity Framework* into those system elements. The table in the Appendix shows how the items in the *Baldrige Cybersecurity Excellence Builder* relate to the

elements of the *Cybersecurity Framework*.

## Who in an organization should use the *Baldrige Cybersecurity Excellence Builder*?

The *Baldrige Cybersecurity Excellence Builder* is intended for use by the leaders and managers in your organization who are concerned with and responsible for mission-driven, cybersecurity-related policy and operations. These leaders and managers may include senior leaders, chief security officers, and chief information officers, among others.

Role/Function	Benefit of/Reason for Using the <i>Baldrige Cybersecurity Excellence Builder</i>
Board and Executive Management	<ul style="list-style-type: none"> <li>• Understand how internal and external cybersecurity should support organizational (business) objectives, including support for customers</li> <li>• Understand current and planned workforce engagement processes and their success</li> <li>• Understand opportunities to improve cybersecurity in alignment with organizational objectives</li> <li>• Understand the potential exposure of the organization’s assets to various risks</li> <li>• Align cybersecurity policy and practices with the organization’s mission, vision, and values</li> </ul>
Chief Information Officer (CIO)	<ul style="list-style-type: none"> <li>• Understand how cybersecurity affects organizational information management practices and culture</li> <li>• Improve communication and engagement with organizational leaders and the cybersecurity workforce</li> <li>• Understand how cybersecurity affects the organization’s culture and environment</li> </ul>
Chief Information Security Officer (CISO)	<ul style="list-style-type: none"> <li>• Support the organization’s commitment to legal and ethical behavior</li> <li>• Create and apply cybersecurity policy and practices to support the organization’s mission, vision, and values</li> <li>• Respond to rapid or unexpected organizational or external changes</li> <li>• Support continuous improvement through periodic use of the self-assessment tool</li> <li>• Support organizational understanding of compliance with various contractual and/or regulatory requirements</li> <li>• Understand the effectiveness of workforce communication, learning, and engagement, as well as operational considerations for cybersecurity.</li> </ul>
IT Process Management	<ul style="list-style-type: none"> <li>• Improve understanding of business requirements and mission objectives and their priorities</li> <li>• Determine the effectiveness of IT processes and potential improvements</li> <li>• Understand how aspects of cybersecurity are integrated with organizational change management processes</li> </ul>
Risk Management	<ul style="list-style-type: none"> <li>• Discern the impact of cybersecurity on internal/external customers, partners, and workforce</li> <li>• Improve understanding of how workforce engagement in cybersecurity and communication to the workforce about cybersecurity impact the organization’s overall risk posture</li> </ul>
Legal/Compliance Roles	<ul style="list-style-type: none"> <li>• Understand legal/ethical behavior on the part of the workforce, as well as the overall cultural environment</li> <li>• Understand how the organization applies cybersecurity-related policies and operations to ensure responsible governance, including legal, regulatory, and community concerns</li> </ul>
Employees (Workforce)	<ul style="list-style-type: none"> <li>• Understand leaders’ expectations</li> <li>• Be better prepared for changes in cybersecurity capability and capacity needs</li> <li>• Benefit from a workplace culture and environment characterized by open communication, high performance, and engagement in cybersecurity matters</li> <li>• Learn to fulfill their cybersecurity roles and responsibilities</li> </ul>

## How can organizations use the *Baldrige Cybersecurity Excellence Builder* to assess and improve their management of cybersecurity risks?

There are 17 items (plus 2 in Organizational Context), each with a particular focus. These items are divided into three groups according to the kinds of information they ask for:

- The Organizational Context asks you to define the organizational environment that informs your cybersecurity risk management program.
- Process items (categories 1–6) ask you to define your organization’s processes relating to cybersecurity risk management.
- Results items (category 7) ask you to report results for your organization’s cybersecurity-related processes.
- The Assessment Rubric (page 25) helps you evaluate the effectiveness and efficiency of your cybersecurity-related processes, as well as the quality of your cybersecurity-related results and how they work together as a system.

Here is how you might use the *Baldrige Cybersecurity Excellence Builder* in a self-assessment of your organization’s cybersecurity-related work.

### 1. Decide on the scope of your self-assessment.

The *Baldrige Cybersecurity Excellence Builder* is most valuable as a voluntary assessment of an entire organization’s cybersecurity risk management program, but it is also useful in assessing a subunit, multiple subunits, or parts of an organization.

### 2. Complete the Organizational Context.

The Organizational Context section is critically important for the following reasons:

- It helps you identify gaps in key information and focus on key cybersecurity performance requirements and results.
- You can use it as an initial self-assessment. If you identify topics for which conflicting, little, or no information is available, use these topics for action planning.
- It sets the context for and allows you to address unique aspects of your organization’s cybersecurity-related needs in your responses to the questions in the rest of the *Baldrige Cybersecurity Excellence Builder*.

### 3. Answer the process questions in categories 1–6.

Many of the questions begin with “how.” In answering these “how” questions, give information on your organization’s key cybersecurity-related *processes*:

- *Approach*: How do you accomplish your organization’s cybersecurity-related work? How systematic are the key processes you use?
- *Deployment*: How consistently are your key cybersecurity-related processes used in relevant parts of your organization?
- *Learning*: Have you evaluated and improved your key cybersecurity-related processes? Have improvements been shared within your organization?
- *Integration*: How do your cybersecurity-related processes address your current and future organizational needs?

### 4. Answer the results questions in category 7.

For these five items, give information on the cybersecurity-related *results* that are the most important to your organization’s success:

- *Levels*: For your key measures of the effectiveness and efficiency of cybersecurity-related processes, what is your current performance?
- *Trends*: Are the results improving, staying the same, or getting worse?
- *Comparisons*: How does your performance compare with that of other organizations and competitors, or with benchmarks?
- *Integration*: Are you tracking cybersecurity-related results that are important to your organization and consider the expectations and needs of your key stakeholders? Are you using the results in decision-making?

## 5. Assign a descriptor to your responses to each item.

Using the process and results assessment rubrics on pages 25 and 26, assign a descriptor (Reactive, Early, Mature, or Role Model) to your responses.

## 6. Prioritize your actions.

Celebrate the strengths of your cybersecurity risk management program, and build on them to improve what you do well. Sharing what you do well with the rest of your organization can speed improvement.

Also prioritize your opportunities for improving your cybersecurity-related processes and results; you cannot do everything at once. Think about what is most important for your organization as a whole at this time, balancing the differing needs and expectations of your stakeholders and your expected results, and decide what to work on first.

## 7. Develop an action plan, implement it, and measure and evaluate your progress.

As you respond to the questions and gauge your responses against the rubric, you will begin to identify strengths and gaps—first within the categories and then among them. The coordination of key processes, and linkages between your processes and your results, can lead to cycles of improvement. As you continue to use this assessment tool, you will learn more and more about your organization and begin to define the best ways to build on your strengths, close gaps, and innovate. Completing this voluntary self-assessment might also serve as a first step in carrying out these suggestions in the *Cybersecurity Framework*, section 3.0 (“How to Use the Framework”):

- 3.1 Basic Review of Cybersecurity Processes: Use the information gained from answering the self-assessment questions to compare your current cybersecurity activities with those outlined in the *Cybersecurity Framework Core*.
- 3.2 Establishing or Improving a Cybersecurity Program: Use your answers to the self-assessment questions to inform the seven steps in creating or improving a cybersecurity program (see also the Appendix).
- 3.3 Communicating Cybersecurity Requirements with Stakeholders: Your answers to the questions might inform the creation of a Target Profile to express cybersecurity risk management requirements to stakeholders.



## C Organizational Context

### C.1 Organizational Description: What are your key organizational characteristics?

#### a. Organizational Environment

- (1) **Product Offerings** What are your organization's main product/service offerings? What is the relative importance of each to your success? What mechanisms do you use to deliver your products/services?
- (2) **MISSION, VISION, and VALUES** What are your stated MISSION, VISION, and VALUES? What are your organization's CORE COMPETENCIES, and what is their relationship to your MISSION?
- (3) **WORKFORCE Profile** What is your overall WORKFORCE profile? What is your CYBERSECURITY WORKFORCE profile? What recent changes have you experienced in the composition of your overall and your CYBERSECURITY WORKFORCE or in your needs for them? What are
  - Your overall WORKFORCE and CYBERSECURITY WORKFORCE employee groups and SEGMENTS,
  - the KEY drivers that engage them in accomplishing their work, including CYBERSECURITY-related work, and in achieving your MISSION and VISION?
- (4) **Assets** What are your priorities for protecting your organization's assets, based on their criticality and business value?
- (5) **Legal and Regulatory Requirements** What are the KEY laws and regulations relating to CYBERSECURITY in your industry? What are the KEY applicable
  - safety regulations relating to CYBERSECURITY;
  - accreditation, certification, or registration requirements relating to CYBERSECURITY;
  - industry CYBERSECURITY standards; and
  - environmental, financial, and product regulations relating to CYBERSECURITY?

#### b. Organizational Relationships

- (1) **Organizational Structure** What are your overall organizational structure and GOVERNANCE system? What are the reporting relationships among your GOVERNANCE board, SENIOR LEADERS, and parent organization, as appropriate? What is the structure of your CYBERSECURITY operations? What are the reporting relationships among your SENIOR LEADERS and your CYBERSECURITY leaders and managers?
- (2) **CUSTOMERS and STAKEHOLDERS** What are your KEY internal and external CUSTOMER groups and STAKEHOLDER groups, as appropriate? What are their KEY requirements and expectations for your CYBERSECURITY policies and operations? What are the differences in these requirements and expectations among CUSTOMER groups and STAKEHOLDER groups?
- (3) **Suppliers and PARTNERS** What are your KEY types of suppliers, PARTNERS, and COLLABORATORS for your organization as a whole and for your CYBERSECURITY operations? What role do they play in producing and delivering your KEY products/services and CUSTOMER support services? What CYBERSECURITY roles do they play in your organization? What are your KEY mechanisms for two-way communication with suppliers, PARTNERS, and COLLABORATORS? What are your KEY supply-chain requirements?

*Terms in SMALL CAPS are defined in the Glossary of Key Terms (pages 29–31).*

#### Notes

**C.1a(3).** Your cybersecurity workforce profile might include information on education, tenure, certifications, and other key characteristics. Workforce or employee groups and segments might be based on type of employment or contract-reporting relationship, location (including telework), tour of duty, work environment, or other factors.

**C.1a(4).** Assets include physical devices and systems, software platforms and applications, organizational communication and data flows, external information systems, and data and information. You should set priorities for protecting these based on their importance to your mission and business objectives.

**C.1b(2).** Customer groups might be based on common expectations, behaviors, preferences, or profiles. Within a group, there

may be customer segments based on differences, commonalities, or both. You might subdivide your market into market segments based on product lines or features, distribution channels, business volume, geography, or other defining factors.

## C.2 Organizational Situation: What is your organization's strategic situation?

### a. Competitive Environment

- (1) **Competitive Position** What is your competitive position? What are your relative size and growth in your industry or the markets you serve? How many and what types of competitors do you have?
- (2) **Competitiveness Changes** What KEY changes, if any, are affecting your competitive situation?
- (3) **Comparative Data** What KEY sources of comparative and competitive CYBERSECURITY data are available from within your industry? What KEY sources of comparative CYBERSECURITY data are available from outside your industry? What limitations, if any, affect your ability to obtain or use these data?

### b. Strategic Context

What are your KEY STRATEGIC CHALLENGES and ADVANTAGES in the areas of overall operations and CYBERSECURITY?

### c. PERFORMANCE Improvement System

What are the KEY elements of your PERFORMANCE improvement system, including your PROCESSES for evaluation and improvement of KEY CYBERSECURITY-related projects and PROCESSES?

*Terms in SMALL CAPS are defined in the Glossary of Key Terms (pages 29–31).*

**C2.a(3).** While comparative data about cybersecurity may be relatively sparse, their use is important for the following reasons: (1) Your organization needs to know where it stands relative to competitors and to best practices; (2) comparative information and information obtained from benchmarking often provide the impetus for significant improvement or transformational change; (3) comparing performance information frequently leads to a better understanding of your processes and their performance; (4) data on competitors' performance may reveal organizational advantages as well as challenge areas; and (5) comparative information may support business analysis and decisions relating to core competencies, partnering, and outsourcing.

**C.2c.** Your performance improvement system refers to your overall approach to improving processes and projects within your organization. The approach you use should be related to your organization's needs. Some examples of approaches that are compatible with the overarching systems approach provided by this self-assessment are Lean, Six Sigma, Plan-Do-Check-Act, ISO standards, and decision science, among others.

# 1 Leadership

## 1.1 Senior and Cybersecurity Leadership: How do your senior and cybersecurity leaders lead your cybersecurity policies and operations?

In your response, include answers to the following questions. Assess your response using the process rubric on page 25.

- (1) How do your leaders' actions demonstrate their commitment to CYBERSECURITY?
- (2) How do your leaders DEPLOY the organization's MISSION, VISION, and VALUES to the WORKFORCE, to KEY SUPPLIERS and PARTNERS, and to KEY CUSTOMERS and other STAKEHOLDERS, as appropriate?
- (3) How do your leaders' actions demonstrate their commitment to legal and ETHICAL BEHAVIOR?
- (4) How do your leaders' actions build CYBERSECURITY policies and operations that are successful now and in the future?
- (5) How do your leaders communicate with and engage other organizational leaders, the WORKFORCE, and KEY CUSTOMERS and STAKEHOLDERS regarding CYBERSECURITY?
- (6) How do your leaders create a focus on action that will achieve the organization's CYBERSECURITY objectives in ALIGNMENT with its MISSION?

*Terms in SMALL CAPS are defined in the Glossary of Key Terms (pages 29–31).*

### Notes

**1.1.** In this item, "leaders" includes your organization's senior leaders *and* those specifically responsible for overseeing and executing cybersecurity risk management and operations. Leadership on cybersecurity policies and approaches ideally resides at multiple organizational levels. Your organization should decide whether each question refers to all senior leaders or your cybersecurity leaders.

**Q4.** To build successful cybersecurity policies and operations that are successful now and in the future, leaders should create an environment for improvement and learning; create a workforce culture that fosters engagement in cybersecurity matters; and create an environment for innovation and intelligent risk taking, achievement of your cybersecurity strategic objectives, and operational agility.

**Q6.** Leaders should create a focus on actions that will improve cybersecurity performance and achieve innovation and intelligent risk taking. In setting expectations for cybersecurity-related performance, they should include a focus on creating and balancing value for customers and other stakeholders.

## 1.2 Governance and Societal Responsibilities: How do you govern your cybersecurity policies and operations and fulfill your organization's societal responsibilities?

In your response, include answers to the following questions. Assess your response using the process rubric on page 25.

- (1) How does your organization ensure responsible GOVERNANCE of its CYBERSECURITY policies and operations?
- (2) How do you address legal, regulatory, and community concerns with your CYBERSECURITY-related policies and operations?
- (3) How do you promote and ensure ETHICAL BEHAVIOR in all CYBERSECURITY-related interactions?
- (4) How do you actively support and strengthen the CYBERSECURITY infrastructure of your KEY COMMUNITIES?

*Terms in SMALL CAPS are defined in the Glossary of Key Terms (pages 29–31).*

### Note

**Q3.** Some examples of measures of ethical behavior are the percentage of independent board members, instances of ethical conduct or compliance breaches and responses to them, survey results showing workforce perceptions of organizational ethics, ethics hotline use, and results of ethics reviews and audits. Other measures might be evidence that policies, workforce training, and monitoring systems are in place for conflicts of interest.

**Q4.** To support and strengthen key communities, an organization might identify these key communities, determine areas for involvement (e.g., areas for external participation in improving cybersecurity), and contribute to the improvement of cybersecurity in those key communities.

DRAFT

## 2 Strategy

### 2.1 Strategy Development: How do you develop your cybersecurity strategy?

In your response, include answers to the following questions. Assess your response using the process rubric on page 25.

- (1) How do you conduct your CYBERSECURITY strategic planning?
- (2) How do you ensure ALIGNMENT between your CYBERSECURITY strategic planning and your organization's overall strategic planning?
- (3) How does your CYBERSECURITY strategy development PROCESS stimulate and incorporate INNOVATION?
- (4) How do you collect and analyze relevant data and develop information for your CYBERSECURITY strategic planning PROCESS?
- (5) How do you decide which KEY CYBERSECURITY PROCESSES will be accomplished by your WORKFORCE and which by external suppliers and PARTNERS?
- (6) What are your organization's KEY CYBERSECURITY STRATEGIC OBJECTIVES and timetable for achieving them?
- (7) How do your organization's KEY CYBERSECURITY STRATEGIC OBJECTIVES relate to your organization's overall STRATEGIC OBJECTIVES?
- (8) How do your CYBERSECURITY STRATEGIC OBJECTIVES achieve appropriate balance among varying and potentially competing organizational needs, including the balance between CUSTOMER and STAKEHOLDER requirements and business objectives?

*Terms in SMALL CAPS are defined in the Glossary of Key Terms (pages 29–31).*

#### Note

**2.1.** Strategy development refers to your organization's approach to preparing for the future. In developing your strategy, you might use various types of forecasts, projections, options, scenarios, knowledge, analyses, or other approaches to envisioning the future in order to make decisions and allocate resources. As appropriate, you might involve key suppliers, distributors, partners, and customers in your strategy development.

**Q3.** Innovation refers to making meaningful change to improve products/services, processes, or organizational effectiveness and create new value for stakeholders. Innovation involves adopting an idea, process, technology, product, or business model that is either new or new to its proposed application. The outcome of innovation is a discontinuous or "breakthrough" change in results, products/services, or processes. Innovation benefits from a supportive environment, a process for identifying strategic opportunities, and a willingness to pursue intelligent risks.

**Q4.** The data and information you collect and analyze might relate to current and future cybersecurity risks locally, nationally, and globally; requirements for and strengths and weaknesses of your partners and supply chain; customer requirements, expectations, and opportunities, including privacy; your core competencies; the competitive environment and your performance now and in the future relative to competitors and comparable organizations; your products and services; technological and other key innovations or changes that might affect your products and services and the way you operate; workforce and other resource needs; opportunities to redirect resources to higher-priority products, services, or areas; financial, societal, ethical, regulatory, technological, and other potential risks and opportunities; your ability to prevent and respond to emergencies; changes in the local, national, or global economy; changes in your parent organization; and other factors unique to your organization.

### 2.2 Strategy Implementation: How do you implement your cybersecurity strategy?

In your response, include answers to the following questions. Assess your response using the process rubric on page 25.

- (1) What are your KEY short- and longer-term CYBERSECURITY ACTION PLANS?
- (2) How do you DEPLOY YOUR CYBERSECURITY ACTION PLANS?
- (3) How do you ensure that financial and other resources are available to support the achievement of your CYBERSECURITY

ACTION PLANS while you meet current obligations?

- (4) What are your KEY WORKFORCE plans to support your short- and longer-term CYBERSECURITY STRATEGIC OBJECTIVES and ACTION PLANS?
- (5) What KEY PERFORMANCE MEASURES OR INDICATORS do you use to track the achievement and EFFECTIVENESS of your CYBERSECURITY ACTION PLANS?
- (6) For these KEY PERFORMANCE MEASURES OR INDICATORS, what are your PERFORMANCE PROJECTIONS for your short- and longer-term planning horizons?
- (7) How do you establish and implement modified CYBERSECURITY ACTION PLANS if circumstances require a shift in plans and rapid execution of new plans?

*Terms in SMALL CAPS are defined in the Glossary of Key Terms (pages 29–31).*

## Notes

**2.2.** The development and deployment of your cybersecurity strategy and action plans are closely linked to other items. The following are examples of key linkages:

- Item 1.1: how your leaders communicate organizational direction
- Category 3: how you gather internal and external customer knowledge as input to your cybersecurity strategy and action plans and to use in deploying action plans
- Category 4: how you measure and analyze cybersecurity data and manage cybersecurity knowledge to support key information needs, support the development of cybersecurity strategy, provide an effective basis for cybersecurity performance measurements, and track progress on achieving cybersecurity strategic objectives and action plans
- Category 5: how you meet cybersecurity workforce capability and capacity needs, determine needs and design your overall and cybersecurity workforce development and learning system, and implement workforce-related changes resulting from action plans
- Category 6: how you address changes to your cybersecurity work processes resulting from action plans
- Item 7.1: specific accomplishments relative to your cybersecurity strategy and action plans

## 3 Customers

### 3.1 Voice of the Customer: How do you obtain information from your customers?

In your response, include answers to the following questions. Assess your response using the process rubric on page 25.

- (1) How do you listen to, interact with, and observe internal and external CUSTOMERS to obtain actionable information?
- (2) How do you determine internal and external CUSTOMERS' satisfaction, dissatisfaction, and ENGAGEMENT with your organization's CYBERSECURITY policies and operations?

*Terms in SMALL CAPS are defined in the Glossary of Key Terms (pages 29–31).*

#### Notes

**3.1.** The voice of the customer refers to your process for capturing customer-related information. Voice-of-the-customer processes are intended to be proactive and continuously innovative so that they capture stated, unstated, and anticipated customer requirements, expectations, and desires. The goal is customer engagement. In listening to the voice of the customer, you might gather and integrate various types of customer data, such as survey data, focus group findings, blog comments and data from other social media, warranty data, marketing and sales information, and complaint data that affect customers' purchasing and engagement decisions.

**Q2.** You might use any or all of the following to determine customer satisfaction and dissatisfaction: surveys, formal and informal feedback, customer account histories, complaints, field reports, win/loss analysis, customer referral rates, and transaction completion rates. You might gather information on the web, through personal contact or a third party, or by mail. Determining customer dissatisfaction should be seen as more than reviewing low customer satisfaction scores. Dissatisfaction should be independently determined to identify root causes and enable a systematic remedy to avoid future dissatisfaction.

**Q3.** Information on relative customer satisfaction may include comparisons with competitors, comparisons with other organizations that deliver similar products/services in a noncompetitive marketplace, or comparisons obtained through trade or other organizations. Information obtained on relative customer satisfaction may also include information on why customers choose your competitors over you.

### 3.2 Customer Engagement: How do you engage customers by serving their needs and building relationships?

In your response, include answers to the following questions. Assess your response using the process rubric on page 25.

- (1) How do you enable internal and external CUSTOMERS to seek information and support related to your CYBERSECURITY policies and operations?
- (2) How do you build and manage internal and external CUSTOMER relationships to increase cooperation and ENGAGEMENT on CYBERSECURITY matters?
- (3) How do you ensure that external CUSTOMERS understand and fulfill their CYBERSECURITY roles and responsibilities?
- (4) How do you manage internal and external CUSTOMER complaints about your CYBERSECURITY policies and operations?

*Terms in SMALL CAPS are defined in the Glossary of Key Terms (pages 29–31).*

#### Note

**3.2.** Your results for customer perceptions and actions (outcomes) should be reported in item 7.2.

**Q1.** Your approach to enabling customers to seek information and support should include provisions to protect privacy and civil liberties when personal information is used, collected, processed, maintained, or disclosed in connection with your organization's cybersecurity activities. Some examples of activities with privacy or civil liberties considerations include cybersecurity activities that may result in the overcollection or overretention of personal information; disclosure or use of personal information unrelated to cybersecurity activities; and cybersecurity mitigation activities that result in denial of service or other similar potentially adverse impacts, including incident detection or monitoring that may impact freedom of expression or association.

Privacy principles to consider incorporating in cybersecurity policies and operations include minimizing the collection, disclosure, and retention of personal information related to the cybersecurity incident; use limitations outside of cybersecurity activities on any information collected specifically for cybersecurity activities; transparency for certain cybersecurity activities; individual consent and redress for adverse impacts arising from use of personal information in cybersecurity activities; data quality, integrity, and security; and accountability and auditing.

DRAFT



## 4 Measurement, Analysis, and Knowledge Management

### 4.1 Measurement, Analysis, and Improvement of Performance: How do you measure, analyze, and then improve cybersecurity-related performance?

In your response, include answers to the following questions. Assess your response using the process rubric on page 25.

- (1) How do you track data and information on daily CYBERSECURITY operations and overall CYBERSECURITY PERFORMANCE?
- (2) What are your KEY CYBERSECURITY PERFORMANCE MEASURES?
- (3) How do you select comparative data and information to support fact-based decision making on CYBERSECURITY policies and operations?
- (4) How do you select VOICE-OF-THE-CUSTOMER and market data and information to support fact-based decision making on CYBERSECURITY policies and operations?
- (5) How do you ensure that your measurement of CYBERSECURITY PERFORMANCE can respond to rapid or unexpected organizational or external changes?
- (6) How do you review your organization's CYBERSECURITY PERFORMANCE and capabilities?
- (7) How do you project your organization's future CYBERSECURITY PERFORMANCE?
- (8) How do you use findings from PERFORMANCE reviews (addressed in question 6) to develop and DEPLOY priorities for continuous improvement and opportunities for INNOVATION in your CYBERSECURITY policies and operations?

*Terms in SMALL CAPS are defined in the Glossary of Key Terms (pages 29–31).*

#### Notes

**4.1.** The results of cybersecurity-related performance analysis and review should inform the strategy development and implementation you describe in category 2. Your cybersecurity-related performance results should be reported in items 7.1–7.5.

**Q3.** Organizations obtain comparative data and information benchmarking and by seeking competitive comparisons. *Benchmarking* is identifying processes and results that represent best practices and performance for similar activities, inside or outside your industry. *Competitive comparisons* relate your performance to that of competitors and other organizations providing similar products and services.

**Q6.** Your reviews of cybersecurity performance should be informed by performance measures identified throughout this self-assessment tool, and they should be guided by the strategic objectives and action plans you identify in category 2. Reviews might include a review by your organization's governance board.

### 4.2 Knowledge Management: How do you manage your organization's cybersecurity-related knowledge assets?

In your response, include answers to the following questions. Assess your response using the process rubric on page 25.

- (1) How do you manage your organization's CYBERSECURITY-related knowledge?
- (2) How do you use your knowledge and resources to embed LEARNING in the way your CYBERSECURITY operations function?
- (3) How do you maintain your organization's awareness of a continually changing CYBERSECURITY threat environment?
- (4) How do you share CYBERSECURITY best practices in your organization and with CUSTOMERS, suppliers, and PARTNERS, as appropriate?
- (5) How do you verify and ensure the quality of organizational data and information related to CYBERSECURITY?

*Terms in SMALL CAPS are defined in the Glossary of Key Terms (pages 29–31).*

#### Notes

**Q1.** To manage cybersecurity-related knowledge, an organization collects and transfers workforce knowledge related to cybersecurity; blends and correlates cybersecurity-related data from different sources to build new knowledge; transfers relevant cybersecurity-related knowledge from and to customers, suppliers, partners, and collaborators; and assembles and transfers relevant cybersecurity-related knowledge for use in innovation and strategic planning processes.

**Q2.** Embedding learning in the way your organization operates means that learning (1) is a part of everyday cybersecurity work; (2) results in solving problems at their source; (3) is focused on building and sharing cybersecurity knowledge throughout your organization and (4) is driven by opportunities to bring about significant, meaningful change and to innovate with regard to cybersecurity.

DRAFT

## 5 Workforce

### 5.1 Workforce Environment: How do you build an effective and supportive workforce environment to achieve your cybersecurity goals?

In your response, include answers to the following questions. Assess your response using the process rubric on page 25.

- (1) How do you assess your WORKFORCE CAPABILITY and CAPACITY needs related to CYBERSECURITY?
- (2) How do you recruit, hire, place, and retain new CYBERSECURITY WORKFORCE members?
- (3) How do you organize and manage your CYBERSECURITY WORKFORCE to establish roles and responsibilities?
- (4) How do you prepare your WORKFORCE for changing CYBERSECURITY CAPABILITY and CAPACITY needs?

*Terms in SMALL CAPS are defined in the Glossary of Key Terms (pages 29–31).*

#### Notes

**5.** The questions in this category focus on either your overall workforce or your CYBERSECURITY workforce, as you determine to be appropriate.

**5.1.** Your cybersecurity workforce consists of the people actively involved in accomplishing your organization’s cybersecurity work. It includes permanent, temporary, and part-time personnel, as well as any contract employees you supervise. It includes team leaders, supervisors, and managers at all levels.

**Q1.** Workforce capability is your organization’s ability to carry out its work processes through its people’s knowledge, skills, abilities, and competencies.

Workforce capacity is your organization’s ability to ensure sufficient staffing levels to carry out its work processes, including the ability to meet seasonal or varying demand levels.

**Q1.** In assessing your workforce capability and capacity needs, you should consider not only current needs but also future requirements based on the strategic objectives and action plans you identify in category 2.

**Q2.** This question refers only to new workforce members. For the retention of existing workforce members, see item 5.2, Workforce Engagement.

**Q4.** Preparing your workforce for changing capability and capacity needs may involve managing your workforce for change as you address changes in your external environment, culture, technology, or strategic objectives. These changes could be organizational (e.g., a merger with another group, or exponential growth or downsizing) or could reflect a significant change in the threat landscape (e.g., newly discovered vulnerabilities or risks from new technology). Addressing these capability and capacity needs might include training, education, more frequent communication, consideration of workforce employment and employability, career counseling, and outplacement and other services.

### 5.2 Workforce Engagement: How do you engage your workforce to achieve a high-performance work environment in support of cybersecurity policies and operations?

In your response, include answers to the following questions. Assess your response using the process rubric on page 25.

- (1) How do you foster an organizational culture that is characterized by open communication, HIGH PERFORMANCE, and a WORKFORCE that is engaged in CYBERSECURITY matters?
- (2) How do you assess the ENGAGEMENT of your organization’s overall WORKFORCE in CYBERSECURITY matters?
- (3) How does your WORKFORCE PERFORMANCE management system support WORKFORCE ENGAGEMENT in CYBERSECURITY matters and HIGH PERFORMANCE in WORKFORCE members’ fulfillment of their CYBERSECURITY roles and responsibilities?
- (4) How does your LEARNING and development system support your organization’s needs and the development of your organization’s overall WORKFORCE members, managers, and leaders in fulfilling their CYBERSECURITY roles and

responsibilities?

- (5) How do you evaluate the EFFECTIVENESS and efficiency of your CYBERSECURITY LEARNING and development system?
- (6) How do you carry out succession planning for KEY CYBERSECURITY management and leadership positions?

*Terms in SMALL CAPS are defined in the Glossary of Key Terms (pages 29–31).*

#### Notes

**Q1–Q6.** These questions refer to your organization’s entire workforce.

**Q2.** Drivers of workforce engagement (identified in C.1a[3]) refer to the drivers of workforce members’ commitment, both emotional and intellectual, to accomplishing the organization’s work (including cybersecurity-related work), mission, and vision.

DRAFT

## 6 Operations

### 6.1 Work Processes: How do you design, manage, and improve your key cybersecurity work processes?

In your response, include answers to the following questions. Assess your response using the process rubric on page 25.

#### a. CYBERSECURITY PROCESS Design, Management, and Improvement

- (1) How do you determine KEY CYBERSECURITY WORK PROCESS requirements?
- (2) How do you design your CYBERSECURITY WORK PROCESSES to meet requirements?
- (3) How does your day-to-day operation of CYBERSECURITY WORK PROCESSES ensure that they meet KEY PROCESS requirements?
- (4) How do you determine the KEY support PROCESSES that enable your CYBERSECURITY operations?
- (5) How do you improve your CYBERSECURITY WORK PROCESSES to improve their PERFORMANCE and reduce variability?
- (6) How do you manage opportunities for INNOVATION in your CYBERSECURITY operations?

#### b. PROTECTION of Assets and Systems

- (1) How do you limit access to assets and associated facilities to authorized users, PROCESSES, or devices, and to authorized activities and transactions?
- (2) How do you manage information and records (data) consistent with your risk strategy to PROTECT their confidentiality and integrity, and ensure their availability?
- (3) How do you maintain and use security policies (that address purpose, scope, roles, responsibilities, management commitment, and coordination among organizational entities), PROCESSES, and procedures to manage PROTECTION of information systems and assets?
- (4) How do you maintain and repair industrial control and information system components consistent with policies and procedures?
- (5) How do you manage technical security solutions to ensure the security and resilience of systems and assets consistent with related policies, procedures, and agreements?

#### c. DETECTION of CYBERSECURITY Events

- (1) How do you DETECT anomalies in a timely manner and assess the impact of CYBERSECURITY events?
- (2) How do you monitor information systems and assets at discrete intervals to identify CYBERSECURITY events and verify the effectiveness of protective measures?
- (3) How do you maintain and test DETECTION PROCESSES and procedures to ensure timely and adequate awareness of anomalies?

#### d. RESPONSE to CYBERSECURITY Events

- (1) How do you execute and maintain RESPONSE PROCESSES and procedures to ensure timely RESPONSE to detected CYBERSECURITY events?
- (2) How do you coordinate RESPONSE activities with other WORKFORCE units, CUSTOMERS, and STAKEHOLDERS, as appropriate, including external law enforcement agencies?
- (3) How do you analyze your RESPONSE activities to ensure adequate RESPONSE and support RECOVERY activities?
- (4) How do you limit expansion of an event, mitigate its effects, and eradicate the event?

#### e. RECOVERY from CYBERSECURITY Events

- (1) How do you execute and maintain RECOVERY PROCESSES and procedures to ensure timely restoration of systems

or assets affected by CYBERSECURITY events?

- (2) How do you coordinate RECOVERY activities with other WORKFORCE units, CUSTOMERS, and STAKEHOLDERS, such as coordinating centers, Internet service providers, victims, other computer security incident RESPONSE teams, and vendors?

*Terms in SMALL CAPS are defined in the Glossary of Key Terms (pages 29–31).*

### Notes

**6.1a(3).** Ensuring that your day-to-day operation of work processes meets requirements includes establishing key performance measures or in-process measures to control and improve these processes.

**6.1a(4).** Support processes for your key cybersecurity work processes might include finance and human resource processes, for example.

**6.1a(5).** The results of improvements in process performance should be reported in item 7.1. To improve process performance and reduce variability, you might implement approaches such as a Lean Enterprise System, Six Sigma methodology, ISO quality system standards, PDCA methodology, decision sciences, or other process improvement tools. These approaches might be part of the performance improvement system you describe in C.2c in the Organizational Context section.

## 6.2 Operational Effectiveness: How do you ensure effective management of your cybersecurity operations?

**In your response, include answers to the following questions. Assess your response using the process rubric on page 25.**

- (1) How do you control the overall costs of your CYBERSECURITY operations?
- (2) How do you ensure that your suppliers and PARTNERS understand and fulfill their CYBERSECURITY roles and responsibilities?
- (3) How do you manage your CYBERSECURITY-related supply chain?
- (4) How do you ensure that your CYBERSECURITY operations consider and align with your organization’s overall operations?
- (5) How do you ensure that your CYBERSECURITY operations consider and align with your organization’s overall operational safety system?
- (6) How do you ensure that your organization incorporates CYBERSECURITY considerations and operations in its preparation for disasters or emergencies?
- (7) In the event of an emergency, HOW do you ensure that systems and assets continue to be secure and available to serve CUSTOMERS and business needs?

*Terms in SMALL CAPS are defined in the Glossary of Key Terms (pages 29–31).*

### Notes

**Q2.** Managing your supply chain includes selecting suppliers and ensuring that they are qualified and positioned to not only meet operational needs but also enhance your performance and your customers’ satisfaction, measuring and evaluating your suppliers’ performance, providing feedback to your suppliers to help them improve, and dealing with poorly performing suppliers.

## 7 Results

### 7.1 Process Results: What are your cybersecurity performance and process effectiveness results?

Provide data and information to answer the following questions. Assess your response using the results rubric on page 26.

- (1) What are your RESULTS for the PROTECTION of your systems and assets?
- (2) What are your RESULTS for the DETECTION of CYBERSECURITY EVENTS?
- (3) What are your RESULTS for your RESPONSE to CYBERSECURITY EVENTS?
- (4) What are your RESULTS for your RECOVERY from CYBERSECURITY EVENTS?
- (5) What are your PROCESS EFFECTIVENESS and efficiency RESULTS for your CYBERSECURITY operations?
- (6) What are your emergency preparedness RESULTS for your CYBERSECURITY operations?
- (7) What are your RESULTS for suppliers' and PARTNERS' understanding and fulfillment of their CYBERSECURITY roles and responsibilities?
- (8) What are your RESULTS for management of your CYBERSECURITY supply chain?

*Terms in SMALL CAPS are defined in the Glossary of Key Terms (pages 29–31).*

#### Notes

**7.** The results you report in items 7.1–7.5 should provide key information for analyzing and reviewing your cybersecurity-related performance (item 4.1), demonstrate use of cybersecurity knowledge (item 4.2), and provide the operational basis for customer-focused results (item 7.2) and financial results (item 7.5). There is not a one-to-one correspondence between results items and categories 1–6. Results should be considered systemically, with contributions to individual results items frequently stemming from processes in more than one category.

**Q1–Q8.** The results you report here should address the key operational requirements you identify in the Organizational Context section and in category 6.

**Q1.** Results for the protection of systems and assets should relate to the protection processes you describe in category 6. These results might include, for example, the percentage of devices and/or software accurately recorded in inventory, the percentage of devices configured according to policy, the percentage of critical information servers supported by strong authentication, and the number of facilities with PIV-based electronic locks

**Q2.** Results for the detection of cybersecurity events should relate to the detection processes you report in category 6. These results might include, for example, the number of anomalies detected, investigated, and resolved, and the percentage of planned vulnerability mitigation actions effectively completed.

**Q3.** Results for your response to cybersecurity events should relate to the response processes you report in category 6. These results might include, for example, incident recovery and response time, number of disaster recovery incidents, and number of reports shared with Information Sharing and Analysis Organizations or other appropriate third parties.

**Q4.** Results for your recovery from cybersecurity events should relate to the recovery processes you report in category 6. These results might include, for example, the time to restore lost availability and the time to access alternate availability mechanisms and restore services.

**Q5.** Process effectiveness and efficiency results for your cybersecurity operations might include those for simplification of jobs, waste reduction, and work layout improvements.

**Q6.** Emergency preparedness results might include the cybersecurity operation's response times for emergency drills or exercises and results for work relocation or contingency exercises.

**Q8.** Results for cybersecurity supply-chain performance might include the percentage of contracts that include cybersecurity monitoring and reporting requirements; supplier and partner audits; and acceptance results for externally provided services and processes, as well as improvements in downstream supplier services to customers.

## 7.2 Customer Results: What are your customer-focused cybersecurity performance results?

Provide data and information to answer the following questions. Assess your response using the results rubric on page 26.

- (1) What are your RESULTS for your internal and external CUSTOMERS' satisfaction and dissatisfaction with your CYBERSECURITY policies and operations?
- (2) What are your RESULTS for your internal and external CUSTOMERS' ENGAGEMENT with your organization's CYBERSECURITY policies and operations?
- (3) What are your RESULTS for your internal and external CUSTOMERS' understanding and fulfillment of their CYBERSECURITY roles and responsibilities?

*Terms in SMALL CAPS are defined in the Glossary of Key Terms (pages 29–31).*

### Notes

**7.2.** Results for customer satisfaction, dissatisfaction, engagement, and relationship building should relate to the customer groups you identify in C.1b(2) and to the listening and determination methods you report in item 3.1.

**Q1.** Results might include, for example, survey results on customer satisfaction and dissatisfaction with cybersecurity and privacy, number of complaints about cybersecurity issues.

**Q2.** Results might include, for example, the number of customer systems applying multifactor (strengthened) authentication, or the percentage of customers who change passwords regularly.

**Q3.** Results might include, for example, the number of potential incidents reported by external customers, the requirements for service-level agreements regarding recovery of critical customer systems, and the percentage of customers who have changed their passwords within a specified time period.

## 7.3 Workforce Results: What are your workforce-focused cybersecurity performance results?

Provide data and information to answer the following questions. Assess your response using the results rubric on page 26.

- (1) What are your CAPABILITY and CAPACITY RESULTS for your CYBERSECURITY WORKFORCE?
- (2) What are your RESULTS for the ENGAGEMENT of your WORKFORCE in CYBERSECURITY matters?
- (3) What are your RESULTS for WORKFORCE members' fulfillment of their CYBERSECURITY roles and responsibilities?
- (4) What are your WORKFORCE and leader development RESULTS related to CYBERSECURITY?

*Terms in SMALL CAPS are defined in the Glossary of Key Terms (pages 29–31).*

### Notes

**7.3.** Results reported in this item should relate to the processes you report in category 5. Your results should also respond to the key work process needs you report in category 6 and to the action plans you report in item 2.2.

**Q1.** Results might include, for example, the number of qualified referrals received through employee recommendations, the percentage of cybersecurity vacancies remaining open for a specified number of days, and the percentage of staff members who have achieved necessary qualifications (e.g., CISM, CISSP).

**Q2.** Results should relate to the workforce engagement drivers you describe in C.1a(3) and the methods of assessing engagement you describe in item 5.2.

**Q3.** Results might include, for example, the percentage of employees who complete role-specific cybersecurity training, cybersecurity management training Hours per FTE, the percentage of employees trained on incident handling, the percentage of employees trained to recognize and avoid email scams, the percentage of employees trained on how to secure an email browser, the number of employees trained on use of guidelines for cell phone and PDA security, and the percentage of users who did not change their passwords in a timely manner.



## 7.4 Leadership and Governance Results: What are your cybersecurity leadership and governance results?

Provide data and information to answer the following questions. Assess your response using the results rubric on page 26.

- (1) What are your RESULTS for leaders' communication and engagement with your organization's other leaders, your WORKFORCE, and your KEY CUSTOMERS and STAKEHOLDERS regarding CYBERSECURITY?
- (2) What are your RESULTS for GOVERNANCE accountability related to CYBERSECURITY?
- (3) What are your legal and regulatory RESULTS related to CYBERSECURITY?
- (4) What are your RESULTS for ETHICAL BEHAVIOR related to CYBERSECURITY?
- (5) What are your RESULTS for support of the CYBERSECURITY infrastructure of your KEY communities?
- (6) What are your RESULTS for the achievement of your CYBERSECURITY strategy and ACTION PLANS?

*Terms in SMALL CAPS are defined in the Glossary of Key Terms (pages 29–31).*

### Notes

**Q1.** Responses should include results relating to the communication processes you identify in item 1.1.

**Q2.** Responses should include results relating to the governance processes you describe in item 1.1. These results might include financial statement issues and risks, important internal and external auditor recommendations, and management's responses to these matters.

**Q3.** Legal and regulatory results should relate to the processes and measures you describe in item 1.2. Examples might be the percentage of business systems in compliance with legal and regulatory requirements, the number of compliance breaches, and the frequency of warnings/violation notices for cybersecurity infractions.

**Q4.** Responses should include results relating to the processes for ensuring ethical behavior that you identify in item 1.2.

**Q5.** Results for support of the cybersecurity infrastructure of your key communities might include the extent of collaboration to improve cybersecurity and results showing the effectiveness of that collaboration (e.g., improved detection using shared indicators of compromise).

**Q6.** Results for strategy and action plan achievement should relate to the strategic objectives and goals you report in item 2.1 and the action plan performance measures you report in item 2.2.

## 7.5 Financial Results: What are your financial performance results for your cybersecurity operations?

Provide data and information to answer the following questions. Assess your response using the results rubric on page 26.

- (1) What are your financial PERFORMANCE RESULTS for your CYBERSECURITY operations?

*Terms in SMALL CAPS are defined in the Glossary of Key Terms (pages 29–31).*

### Notes

**7.5.** Results should relate to the financial measures you report in item 4.1 and the financial management approaches you report in item 2.2. Examples might include, for example, cost savings produced by the information security program or through costs incurred from addressing information security events, cost/schedule variance in information security activities, cost per defect, cybersecurity spending as a percentage of the IT budget, performance to budget, and cost avoidance or savings.

# Evaluating Your Responses

1. For each item (e.g., 1.1, 1.2) in categories 1–7 of the *Baldrige Cybersecurity Excellence Builder*, use the process and results rubrics on pages 24–25 to assign a descriptor (Reactive, Early, Mature, or Role Model) for each evaluation factor.

For processes (categories 1–6), the evaluation factors are approach, deployment, learning, and integration (ADLI):

- *Approach* consists of the methods used to carry out a process, the degree to which your approach is systematic (i.e., repeatable and based on reliable data and information), the appropriateness of these methods to the item questions and your operating environment, and the effectiveness of your use of the methods.
- *Deployment* is the extent to which your approach is applied consistently and the extent to which it is used by all appropriate work units.
- *Learning* is the refinement of your approach through cycles of evaluation and improvement, the encouragement of breakthrough change to your approach through innovation, and the sharing of refinements and innovations with other relevant work units and processes in your organization.
- *Integration* is the extent to which your approach is aligned with the organizational needs identified in the Organizational Context section and in other process items. Integration also includes the extent to which your measures, information, and improvement systems are complementary across processes and work units; and the extent to which your plans, processes, results, analyses, learning, and actions are harmonized across processes and work units to support organization-wide goals.

For results (category 7), the evaluation factors are levels, trends, comparisons, and integration (LeTCI; “let’s see”).

- *Levels* are your current performance on a meaningful measurement scale.
- *Trends* are your rate of performance improvement or continuation of good performance in areas of importance (i.e., the slope of data points over time).
- *Comparisons* are your performance relative to that of other, appropriate organizations, such as competitors or organizations similar to yours, and your performance relative to industry leaders or relevant benchmarks.
- *Integration* is the extent to which your results address important performance requirements relating to customers, products/services, markets, processes, and action plans identified in the Organizational Context section and in the process items (categories 1–6). It also includes the extent to which your results reflect harmonization across your processes and work units to support organization-wide goals.

2. Indicate the importance (high, medium, or low) of each item to the successful management of cybersecurity within your organization.

3. Prioritize your actions.

Celebrate your strengths of your cybersecurity risk management program, and build on them to improve what you do well. Sharing the things you do well with the rest of your organization can speed improvement.

Prioritize your opportunities for improvement; you cannot do everything at once. Think about what is most important for your organization as a whole at this time, balancing the differing needs and expectations of your stakeholders, and decide what to work on first. Look at the next level in the rubric for how you might improve. Develop an action plan, implement it, and measure your progress.

# Assessment Rubric

## Process (Categories 1–6)

Maturity Level	Evaluation Factor			
	Approach	Deployment	Learning	Integration
<b>Reactive</b>	CYBERSECURITY-related policies/operations are characterized by activities rather than by PROCESSES.	DEPLOYMENT of CYBERSECURITY-related APPROACHES to appropriate organizational units, and to CUSTOMERS, PARTNERS, and suppliers, as appropriate, is lacking.	Improvement in CYBERSECURITY-related policies/operations is achieved mainly in reaction to immediate needs or problems.	CYBERSECURITY-related goals are poorly defined; individual units within the CYBERSECURITY operations function independently of each other. There is no coordination between CYBERSECURITY-related policies/operations and those of the rest of the organization.
<b>Early</b>	CYBERSECURITY-related policies/operations are beginning to be carried out with SYSTEMATIC APPROACHES.	KEY CYBERSECURITY-related APPROACHES are beginning to be DEPLOYED to appropriate organizational units and to CUSTOMERS, PARTNERS, and suppliers, as appropriate.	CYBERSECURITY-related policies/operations are beginning to be SYSTEMATICALLY evaluated and improved.	CYBERSECURITY-related strategy and quantitative GOALS are being defined. There is some early alignment among CYBERSECURITY operational units and, as appropriate, between CYBERSECURITY policies/operations and the rest of the organization.
<b>Mature</b>	Most elements of CYBERSECURITY-related policies/operations are characterized by SYSTEMATIC APPROACHES.	KEY CYBERSECURITY-related APPROACHES are well DEPLOYED to appropriate organizational units and to CUSTOMERS, PARTNERS, and suppliers, as appropriate.	CYBERSECURITY-related policies/operations are SYSTEMATICALLY evaluated for improvement, and learnings are shared, with some INNOVATION evident.	CYBERSECURITY-related APPROACHES address KEY strategies and GOALS. There is alignment among CYBERSECURITY operational units and, as appropriate, between CYBERSECURITY policies/operations and the rest of the organization.
<b>Role Model</b>	Many to all elements of CYBERSECURITY-related policies/operations are characterized by SYSTEMATIC APPROACHES.	KEY CYBERSECURITY-related APPROACHES are fully DEPLOYED to appropriate organizational units and to CUSTOMERS, PARTNERS, and suppliers, as appropriate.	CYBERSECURITY-related policies/operations seek and achieve efficiencies through ANALYSIS, INNOVATION, and the sharing of CYBERSECURITY information and knowledge, including with the rest of the organization.	CYBERSECURITY-related policies/operations are INTEGRATED with current and future organizational needs defined by the organization; these policies/operations are well INTEGRATED with those of the rest of the organization.

## Results (Category 7)

Maturity Level	Evaluation Factor			
	Levels	Trends	Comparisons	Integration
<b>Reactive</b>	CYBERSECURITY-related RESULTS are missing, not used, or randomly reported.	TREND data are not reported or show mainly adverse TRENDS.	Available comparative information is not tracked.	CYBERSECURITY-related RESULTS that are important to the organization's ongoing success are not tracked.
<b>Early</b>	The organization tracks some CYBERSECURITY-related RESULTS, and they show early good performance LEVELS.	Some TREND data are tracked, and some show improvement over time.	Some available, mainly internal, comparative information is tracked.	Some CYBERSECURITY-related RESULTS that are important to the organization's ongoing success are tracked.
<b>Mature</b>	The organization tracks many CYBERSECURITY-related RESULTS, and they show good-to-excellent performance LEVELS.	Many CYBERSECURITY-related RESULTS show improvement or sustained high PERFORMANCE over time.	Results show good CYBERSECURITY-related PERFORMANCE relative to available information on competitors, other relevant organizations, or BENCHMARKS.	Many CYBERSECURITY-related RESULTS that are important to the organization's ongoing success are tracked. RESULTS are beginning to be used in decision making.
<b>Role Model</b>	The full array of CYBERSECURITY-related RESULTS is tracked, indicating top performance.	The full array of CYBERSECURITY-related RESULTS is TRENDED over time, indicating improvement or sustained high PERFORMANCE.	Results indicate top CYBERSECURITY-related PERFORMANCE relative to available information on other organizations or BENCHMARKS.	All CYBERSECURITY-related RESULTS that are important to the organization's ongoing success are tracked. The RESULTS are used in decision making.

# Self-Analysis Worksheet

[Note: In its final form, this worksheet may be an Excel file with drop-down boxes and/or another type of non-paper-based tool.]

Process (Categories 1–6)	Reactive, Early, Mature, or Role Model?				High, Medium, or Low?
	Approach	Deployment	Learning	Integration	Importance
<b>1 Leadership</b>					
1.1 Senior and Cybersecurity Leadership: How do your senior and cybersecurity leaders lead your cybersecurity policies and operations?					
1.2 Governance and Societal Responsibilities: How do you govern your cybersecurity policies and operations and fulfill your organization’s societal responsibilities?					
<b>2 Strategy</b>					
2.1 Strategy Development: How do you develop your cybersecurity strategy?					
2.2 Strategy Implementation: How do you implement your cybersecurity strategy?					
<b>3 Customers</b>					
3.1 Voice of the Customer: How do you obtain information from your customers?					
3.2 Customer Engagement: How do you engage customers by serving their needs and building relationships?					
<b>4 Measurement, Analysis, and Knowledge Management</b>					
4.1 Measurement, Analysis, and Improvement of Performance: How do you measure, analyze, and then improve cybersecurity-related performance?					
4.2 Knowledge Management: How do you manage your organization's cybersecurity-related knowledge assets?					
<b>5 Workforce</b>					
5.1 Workforce Environment: How do you build an effective and supportive workforce environment to achieve your cybersecurity goals?					

5.2 Workforce Engagement: How do you engage your workforce to achieve a high-performance work environment in support of cybersecurity policies and operations?					
<b>6 Operations</b>					
6.1 Work Processes: How do you design, manage, and improve your key cybersecurity work processes?					
6.2 Operational Effectiveness: How do you ensure effective management of your cybersecurity operations?					

Results (Category 7)	Reactive, Early, Mature, or Role Model?				High, Medium, or Low?
	Levels	Trends	Comparisons	Integration	Importance
<b>7 Results</b>					
7.1 Cybersecurity Process Results: What are your cybersecurity performance and process effectiveness results?					
7.2 Customer Results: What are your customer-focused cybersecurity performance results?					
7.3 Workforce Results: What are your workforce-focused cybersecurity performance results?					
7.4 Leadership and Governance Results: What are your cybersecurity leadership and governance results?					
7.5 Financial Results: What are your financial performance results for your cybersecurity operations?					

# Glossary of Key Terms

*The terms below are those in SMALL CAPS in the Baldrige Cybersecurity Excellence Builder categories or are key terms used in the scoring rubrics.*

**ACTION PLANS.** Specific actions that your organization takes to reach its short- and longer-term strategic objectives. These plans specify the resources committed to and the time horizons for accomplishing the plans. See also **STRATEGIC OBJECTIVES**.

**ALIGNMENT.** A state of consistency among plans, processes, information, resource decisions, workforce capability and capacity, actions, results, and analyses that support key organization-wide goals. See also **INTEGRATION**.

**APPROACH.** The methods your organization uses to carry out its processes.

**BENCHMARKS.** Processes and results that represent the best practices and best performance for similar activities, inside or outside your organization's industry.

**COLLABORATORS.** Organizations or individuals who cooperate with your organization to support a particular activity or event or who cooperate intermittently when their short-term goals are aligned with or are the same as yours. See also **PARTNERS**.

**CORE COMPETENCIES.** Your organization's areas of greatest expertise; those strategically important capabilities that are central to fulfilling your mission or that provide an advantage in your marketplace or service environment.

**CUSTOMER.** An actual or potential user of your organization's products, programs, or services. See also **STAKEHOLDERS**.

**CUSTOMER ENGAGEMENT.** Your customers' investment in or commitment to your brand and product offerings.

**CYBERSECURITY.** The process of protecting information and assets by limiting the occurrence of, detecting, and responding to attacks.

**CYBERSECURITY EVENT.** A cybersecurity change that may have an impact on organizational operations (including mission, capabilities, or reputation).

**DEPLOYMENT.** The extent to which your organization applies an approach in relevant work units throughout your organization.

**DETECT.** Develop and implement the appropriate activities to identify the occurrence of a cybersecurity event.

**EFFECTIVE.** How well a process or a measure addresses its intended purpose.

**ETHICAL BEHAVIOR.** The actions your organization takes to ensure that all its decisions, actions, and stakeholder interactions conform to its moral and professional principles of conduct. These principles should support all applicable laws and regulations and are the foundation for your organization's culture and values.

**EXCELLENCE.** See **PERFORMANCE EXCELLENCE**.

**GOALS.** Future conditions or performance levels that your organization intends or desires to attain. See also **PERFORMANCE PROJECTIONS**.

**GOVERNANCE.** The system of management and controls exercised in the stewardship of your organization.

**HIGH PERFORMANCE.** Ever-higher levels of overall organizational and individual performance, including quality, productivity, innovation rate, and cycle time.

**HOW.** The systems and processes that your organization uses to achieve its mission requirements.

**INNOVATION.** Making meaningful change to improve products/services, processes, or organizational effectiveness and create new value for stakeholders. The outcome of innovation is a discontinuous or breakthrough change.

**INTEGRATION.** The harmonization of plans, processes, information, resource decisions, workforce capability and capacity, actions, results, and analyses to support key organization-wide goals. See also **ALIGNMENT**.

**KEY.** Major or most important; critical to achieving your intended outcome.

**KNOWLEDGE ASSETS.** Your organization's accumulated intellectual resources; the knowledge possessed by your organization and its workforce in the form of information, ideas, learning, understanding, memory, insights, cognitive and technical skills, and capabilities.

**LEARNING.** New knowledge or skills acquired through evaluation, study, experience, and innovation.

**LEVELS.** Numerical information that places or positions your organization's results and performance on a meaningful measurement scale.

**MEASURES AND INDICATORS.** Numerical information that quantifies the input, output, and performance dimensions of processes, products, programs, projects, services, and the overall organization (outcomes).

**MISSION.** Your organization's overall function.

**PARTNERS.** Key organizations or individuals who are working in concert with your organization to achieve a common goal or improve performance. Typically, partnerships are formal arrangements. See also **COLLABORATORS**.

**PERFORMANCE.** Outputs and their outcomes obtained from processes, products/services, and customers that permit you to evaluate and compare your organization's results to performance projections, standards, past results, goals, and other organizations' results.

**PERFORMANCE EXCELLENCE.** An integrated approach to organizational performance management that results in (1) delivery of ever-improving value to customers and stakeholders, contributing to ongoing organizational success; (2) improvement of your organization's overall effectiveness and capabilities; and (3) learning for the organization and for people in the workforce.

**PERFORMANCE PROJECTIONS.** Estimates of your organization's future performance. See also **GOALS**.

**PROCESS.** Linked activities with the purpose of producing a product or service for a customer (user) within or outside your organization.

**PROTECT.** Develop and implement the appropriate safeguards to ensure delivery of critical infrastructure services.

**RECOVER.** Develop and implement the appropriate activities to maintain plans for resilience and to restore any capabilities or services that were impaired due to a cybersecurity event.

**RESPOND.** Develop and implement the appropriate activities to take action regarding a detected cybersecurity event.

**RESULTS.** Outputs and outcomes achieved by your organization.

**SEGMENT.** One part of your organization's customer, market, product offering, or workforce base.

**SENIOR LEADERS.** Your organization's senior management group or team.

**STAKEHOLDERS.** All groups that are or might be affected by your organization's actions and success. See also **CUSTOMER**.

**STRATEGIC ADVANTAGES.** Those marketplace benefits that exert a decisive influence on your organization's likelihood of future success. These advantages are frequently sources of current and future competitive success relative to other providers of similar products/services.

**STRATEGIC CHALLENGES.** Those pressures that exert a decisive influence on your organization's likelihood of future success. These challenges are frequently driven by your organization's anticipated competitive position in the future relative to other providers of similar products/services.

**STRATEGIC OBJECTIVES.** The aims or responses that your organization articulates to address major change or improvement, competitiveness or social issues, and business advantages. See also **ACTION PLANS**.

**SYSTEMATIC.** Well-ordered, repeatable, and exhibiting the use of data and information so that learning is possible.

**TRENDS.** Numerical information that shows the direction and rate of change of your organization's results or the consistency of its performance over time.

**VALUE.** The perceived worth of a product, process, asset, or function relative to its cost and possible alternatives.

**VALUES.** The guiding principles and behaviors that embody how your organization and its people are expected to operate.

**VISION.** Your organization's desired future state.

**VOICE OF THE CUSTOMER.** Your process for capturing customer-related information.

**WORK PROCESSES.** Your organization's most important internal value-creation processes.

**WORKFORCE.** All people actively supervised by your organization and involved in accomplishing your organization's work,



including paid employees (e.g., permanent, part-time, temporary, and telecommuting employees, as well as contract employees supervised by your organization) and volunteers, as appropriate.

**WORKFORCE CAPABILITY.** Your organization's ability to accomplish its work processes through its people's knowledge, skills, abilities, and competencies.

**WORKFORCE CAPACITY.** Your organization's ability to ensure sufficient staffing levels to accomplish its work processes and deliver your products/services to customers, including the ability to meet seasonal or varying demand levels.

**WORKFORCE ENGAGEMENT.** The extent of workforce members' emotional and intellectual commitment to accomplishing your organization's work, mission, and vision.

DRAFT

# Appendix: Baldrige Cybersecurity Excellence Builder–Cybersecurity Framework Crosswalk

<i>Cybersecurity Excellence Builder</i> Categories and Items	Related Sections in the <i>Cybersecurity Framework</i>		
	2.4, Figure 2: Notional Information and Decision Flows	3.2, Establishing or Improving a Cybersecurity Program	Appendix A: Framework Core Categories and Functions <sup>1</sup>
<b>C Organizational Context</b>			
C.1 Organizational Description	Executive Level	Step 1: Prioritize and Scope; Step 2: Orient	ID-AM, ID-BE
C.2 Organizational Situation	Executive Level; Changes in Current and Future Risk	Step 1: Prioritize and Scope; Step 2: Orient	ID-BE, ID-RM
<b>1 Leadership</b>			
1.1 Senior and Cybersecurity Leadership	Executive Level	Step 1: Prioritize and Scope; Step 2: Orient	ID-BE, RC-CO
1.2 Governance and Societal Responsibilities	Executive Level	Step 2: Orient	ID-GV, RS-CO
<b>2 Strategy</b>			
2.1 Strategy Development	Business/Process Level; Mission Priority and Risk Appetite and Budget; Changes in Current and Future Risk	Step 1: Prioritize and Scope; Step 2: Orient; Step 4: Conduct a Risk Assessment; Step 5: Create a Target Profile Step 6: Determine, Analyze, and Prioritize Gaps	ID-BE, ID-GV, ID-RA, ID-RM
2.2 Strategy Implementation	Business/Process Level; Mission Priority and Risk Appetite and Budget; Changes in Current and Future Risk	Step 1: Prioritize and Scope; Step 2: Orient; Step 5, Create a Target Profile; Step 7: Implement Action Plan	ID-BE, ID-GV, ID-RA, ID-RM
<b>3 Customers</b>			
3.1 Voice of the Customer	Business/Process Management; Implementation/Operations Level	Step 3: Create a Current Profile; Step 5: Create a Target Profile	ID-BE
3.2 Customer Engagement	Business/Process Management; Implementation/Operations Level	Step 3: Create a Current Profile; Step 5: Create a Target Profile	ID-AM, PR-AT, RS-CO, RC-CO
<b>4 Measurement, Analysis, and Knowledge Management</b>			
4.1 Measurement, Analysis, and Improvement of Performance	Implementation Progress	Step 6: Determine, Analyze, and Prioritize Gaps	DE-AE, DE-DP, RS-IM, RC-IM
4.2 Knowledge Management	Business/Process Management; Implementation/Operations Level	Step 6: Determine, Analyze, and Prioritize Gaps	ID-RA, DE-AE, RS-CO
<b>5 Workforce</b>			
5.1 Workforce Environment	Business/Process Management; Implementation/Operations Level	Step 3: Create a Current Profile; Step 5: Create a Target Profile	ID-AM, ID-GV, PR-IP, DE-DP, RS-CO
5.2 Workforce Engagement	Business/Process Management; Implementation/Operations Level	Step 3: Create a Current Profile; Step 5: Create a Target Profile	PR-AT, PR-IP, RS-CO

<b>6 Operations</b>			
6.1 Work Processes	Implementation/Operations Level	Step 2: Orient; Step 3: Create a Current Profile; Step 4, Conduct a Risk Assessment; Step 5, Create a Target Profile	PR-AC, PR-DS, PR-IP, PR-MA, DE-AE, DE-CM, DE-DP, RS-RP, RS-AN, RS-IM, RS-MI, RC-RP, RC-IM
6.2 Operational Effectiveness	Implementation/Operations Level	Step 3: Create a Current Profile; Step 5, Create a Target Profile	ID-AM, ID-BE, PR-AT, PR-IP
<b>7 Results</b>			
7.1 Process Results	Implementation Progress	Step 3: Create a Current Profile; Step 5, Create a Target Profile	PR-AC, PR-DS, PR-IP, PR-MA, DE-AE, DE-CM, DE-DP, RS-RP, RS-AN, RS-IM, RS-MI, RC-RP, RC-IM
7.2 Customer Results	Implementation Progress	Step 3: Create a Current Profile; Step 5, Create a Target Profile	ID-BE, ID-AM, PR-AT, RS-CO, RC-CO
7.3 Workforce Results	Implementation Progress	Step 3: Create a Current Profile; Step 5, Create a Target Profile	ID-AM, ID-GV, PR-IP, DE-DP, RS-CO, PR-AT, PR-IP, RS-CO
7.4 Leadership and Governance Results	Implementation Progress	Step 3: Create a Current Profile; Step 5, Create a Target Profile	ID-BE, ID-GV, ID-RA, ID-RM, RC-CO
7.5 Financial Results	Implementation Progress	Step 3: Create a Current Profile; Step 5, Create a Target Profile	ID-BE

<sup>1</sup>The *Cybersecurity Framework* functions are Identify (ID), Protect (PR), Detect (DE), Respond (RS), and Recover (RC). For an explanation of the categories within these functions, see the [Cybersecurity Framework](#).