

# Building a Competency Framework for Biorisk Management Professionals

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What defines a biorisk  
management professional?





There is no front door.



**ABSA**  
**INTERNATIONAL**  
*The Association for Biosafety and Biosecurity*

[www.absa.org](http://www.absa.org)

Universities

Public Health

Plant Science

Pharmaceutical

Biotechnology

Agriculture

Veterinary

Wildlife

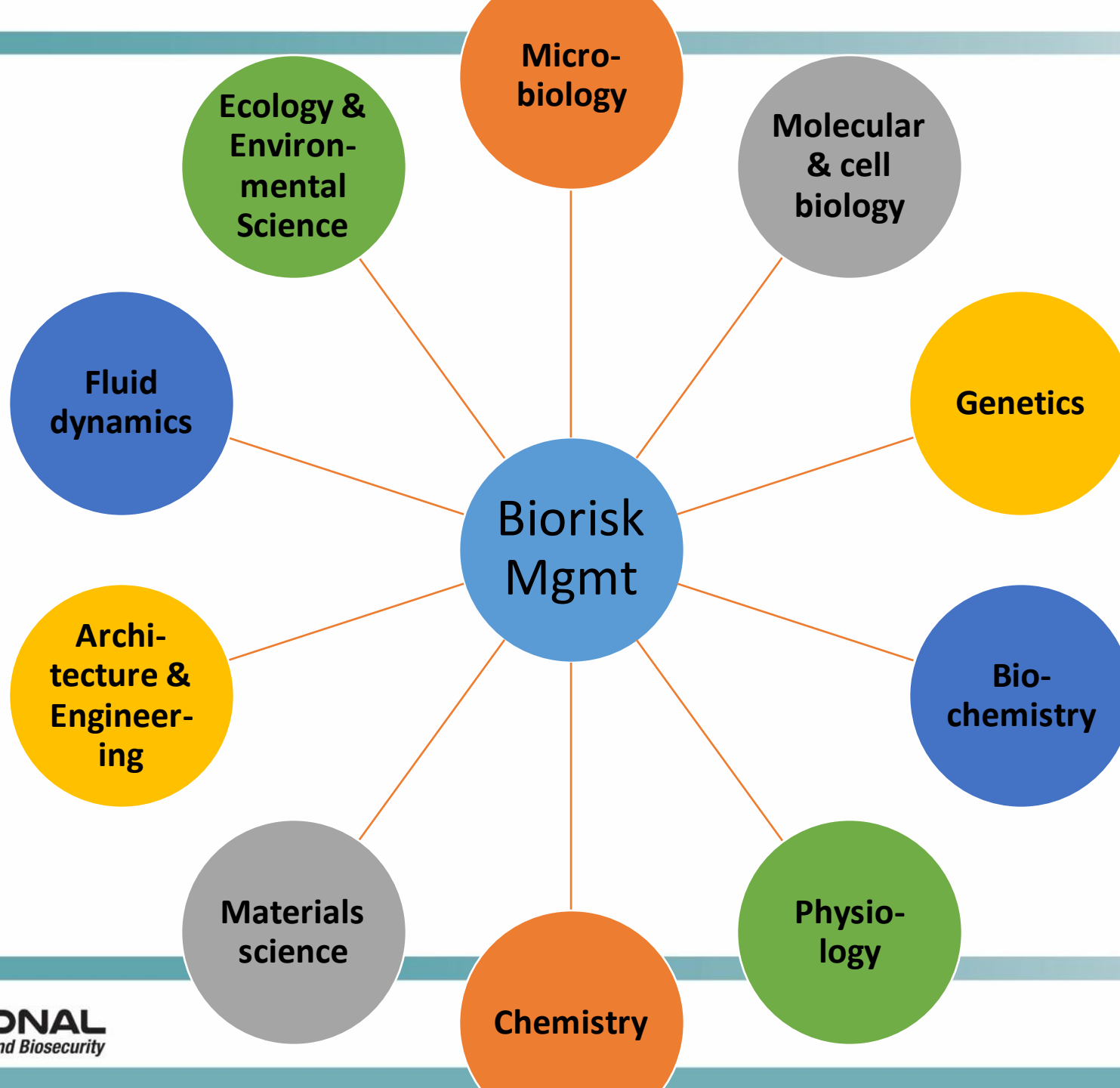
Security

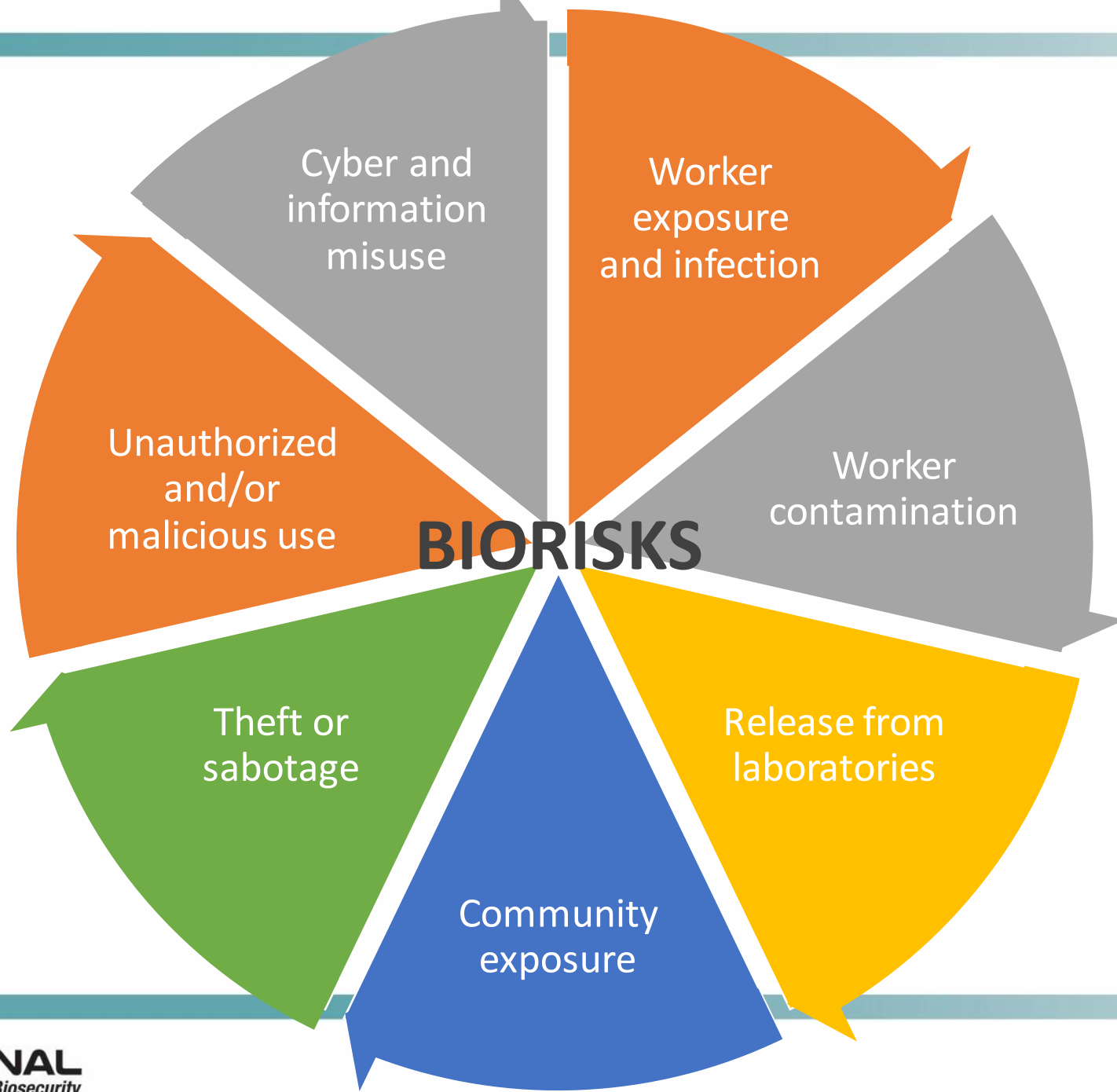
Contract  
Research

Government  
Labs

Law  
Enforcement







# Discovery & Innovation: Prioritizing Safety, Security & Science

## **We ask:**

- What do we know?
- What don't we know?
- What could go wrong?
- How could it happen?
- How might we prevent it?

## **To reduce or prevent:**

- Exposure/infection of laboratory staff
- Unauthorized or unmitigated release of agents outside laboratory
- Unauthorized or unmitigated release of information
- Unauthorized access to facilities, agents, or information
- Release to community: humans, animals, plants, environment
- Non-compliance

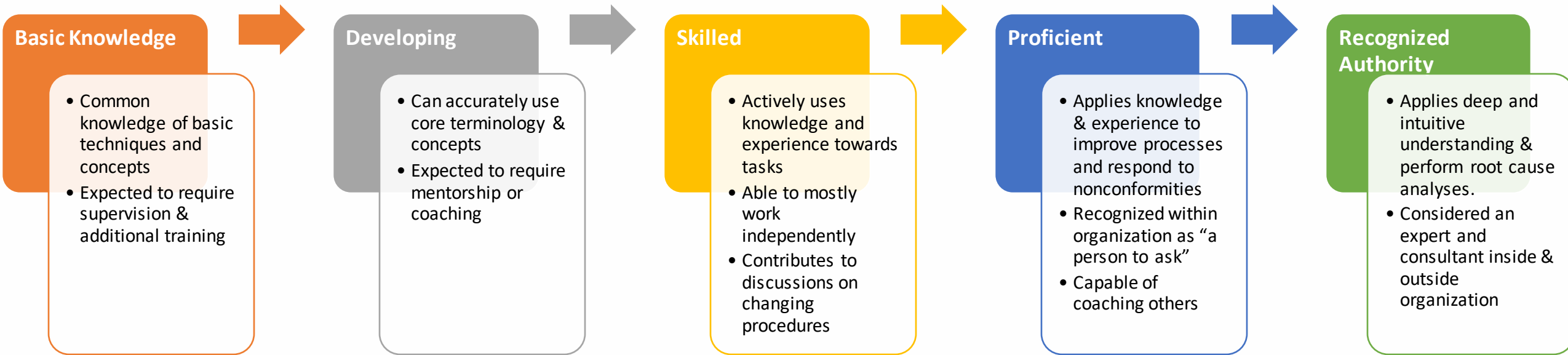




# Why develop a competency framework?

- Standardize vocabulary and expectations
- Provide consistent self-assessment tool for those seeking further development and validation of skills
- Increase comparability across multiple sectors and geographies
- Provide more consistent learning objectives for training and education
- Provide consistent criteria for credentialing that is reliant on activities, rather than on title or coursework

# Suggested Proficiency Levels



*derived from NIH Competency Proficiency Scale , APHL/CDC Competency Guidelines for Public Health Laboratory Professionals, and WHO Laboratory Leadership Competency Framework*



# Suggested Domains

Risk Mgmt

Risk  
Assessment

Risk  
Mitigation

Risk Mgmt  
Performance

Incident  
Response

Legal  
Frameworks



# Example Competencies/Knowledge Areas

## Risk Management

- Know how the components of risk management - assessment, (evaluation), mitigation, and performance – work together to reduce or eliminate risk and why all components are essential.

## Risk Assessment: Identify biohazards

- Know what a hazard is
- Know what factors contribute to make something a “hazard”

## Risk Mitigation: Overview

- Know that control measures should be designed to reduce or eliminate the defined risk presented by identified hazard(s), threat(s), and situation(s)



# Putting it all together: Competency Framework

	Basic Knowledge	Developing	Skilled	Proficient	Recognized Expert
<b>Know what a hazard is; know what factors contribute to make something a “hazard”</b>	<i>Define a hazard; provide examples of hazards</i>	<i>Provide examples of factors that make something a hazard</i>	<i>Differentiate hazards according to characteristics</i>	<i>Predict the likelihood of encountering a hazard given a certain situation</i>	<i>Provide experience-based information to more completely characterize a hazard given multiple situations</i>
<b>Know that control measures should be designed to reduce or eliminate the defined risk presented by identified hazard(s), threat(s), and situation(s)</b>	<i>List common control measures; describe how control measures reduce risk</i>	<i>Describe the features and procedures for how (specific) control measures are used to reduce or eliminate risk (associated with specific hazards and situations)</i>	<i>Generate a plan for using control measures to reduce or eliminate risk (for specific hazards and situations)</i>	<i>Provide feedback and troubleshooting for proposed plans; identify non-conformances</i>	<i>Provide experience-based feedback and suggestions for improving plans to maximize risk reduction while limiting over-control</i>

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# Next Steps

- Finalize domains and competencies using variety of sources & documents
- Draft proficiency statements for a competencies at each proficiency level
- Peer evaluation
  - Relevance to biorisk management professionals
  - Usefulness to ABSA International activities in defining and supporting biosafety and biosecurity professions
- Release first draft
- Gather feedback
- Revise and finalize