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Optimal Risk Group

Nuclear Security Profession Career Framework

Draft 1

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OPTIMAL RISK

Contents

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Introduction

The Nuclear Security Directors' Forum hope to build the capacity and capability of security professionals working in the civil nuclear sector, covering Physical, Personnel, Nuclear Technical Security and Corporate Enablers[1]. We aim to:

- Attract and recruit the best talent into the civil nuclear sector
- Retain a responsive, highly skilled and motivated workforce
- Develop a clear learning offer with external accreditation and interchange within the industry
- Support and align career pathways across the profession and wider industry
- Ensure future talent pipelines including apprenticeships and graduate schemes

This document is based closely on the Government Security Profession Career Framework. It should be used as a point of reference when:

- Identifying the required skills and experience when organisations are looking to recruit into a new role
- When employees are considering a role move
- During regular performance reviews, and
- When drafting a personal development plan

Useful References

This document should be read in conjunction with the following:

- Government Security Profession Career Framework
- Government Physical Security Curriculum and Brochure, April 2022
- Government Personnel Security Curriculum, February 2022
- Government Technical Security Learning Pathways and Curriculum Brochure, May 2022
- Government Security Leadership Learning Pathways, March 2022

[1] Cyber Security professionals have already adopted the Chartered Institute of Information Security (CIISec) framework, therefore cyber security roles are not included in this document.

Part 1- Nuclear Security Profession- Skills Framework

The Nuclear Security Profession Skills Framework describes the range of competencies expected of Nuclear Security professionals in the effective performance of their roles. It has been developed with reference to the Government Security Profession Career Framework[2], which groups skills into the following specialisms: Physical Security, Personnel Security and Corporate Enablers. Those skills which are unique to the civil nuclear sector are identified as a separate Nuclear Security specialism.

This framework seeks to define the skills and capability expected of nuclear security professionals in practical application and not just an assessment of the knowledge. Not all roles require detailed experience in all competency areas.

What are skills?

Skills refer to the expertise or aptitude in a capability that is needed to do something. The security skills are used to indicate the typical knowledge and experience required for each of the nuclear security roles in the career framework.

What are they for?

The security skills are for everyone in the civil nuclear sector working in a security role, or anyone who wants to find out what is required for different nuclear security roles.

How do I use the skills framework?

It is important to link the skills to your development and use them to inform career and development discussions with your manager. This will help you to agree which development areas to focus on.

Remember the following:

- The skill profiles are for guidance only and should not be used as an exact measure for a particular role
- Achieving the skill profile for a role at a different grade level does not entitle someone to that grade, but it may enhance their chances when applying for that role
- You do not need to achieve all aspects of the skill profile for a role before you can apply for it – we often learn best by stretching ourselves to take on new responsibilities
- Skill levels are cumulative - for example, to hold a 'practitioner' level in any skill, you must meet the requirements of 'working' level too

[2] Cyber Security and the government's Technical Security Specialisms are excluded from the Nuclear Security Skills Framework.

- Examples of training courses in this document are for illustrative purposes only and are not endorsed by the Nuclear Security Directors Forum, ONR or DESNZ

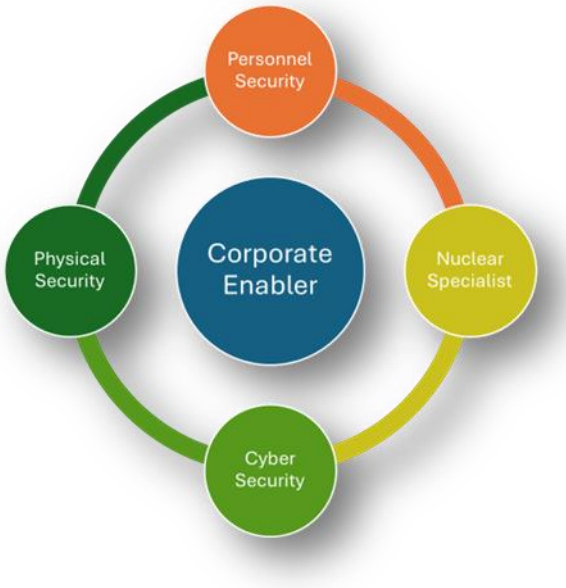
Security Specialisms

The Nuclear Security Profession career framework has four security specialisms, plus Corporate Enablers:

- Personnel
- Physical
- Nuclear
- Cyber

Each specialism also contains 3 role families:

- Advisory
- Operations
- Research, development and design



Physical Security

Physical security protects assets, including people, services, infrastructure, systems, places, equipment and networks. Effective physical security is achieved by multi-layering different measures, which is commonly referred to as defence in depth. The concept is based on the principle that the security of an asset is not significantly reduced with the loss of any single layer.

Role Family	Role Family Definition
Advisory	Responsible for providing physical security advice and assurance within the organisation and externally within the civil nuclear sector.
Operations	Responsible for the efficient and effective management of all aspects of physical security operations, including outsourced capability (e.g. services and people) of physical and personal security from the places where people work and the people themselves, to the locations of systems, services and networks.

Role Family	Role Family Definition
Research, Development & Design	Responsible for research and knowledge development of physical security countermeasures and associated guidance.

Personnel Security

Personnel security is a system of policies and procedures that seeks to identify, understand and mitigate the risk of workers (insiders) exploiting their legitimate access to an asset for unauthorised purposes.

Role Family	Role Family Definition
Advisory	Responsible for providing personnel security advice and assurance within the organisation and externally within the civil nuclear sector.
Operations	possible for conducting and facilitating people screening, implementing, reviewing and assessing security monitoring policies and investigating breaches or incidents of concern.
Research, Development & Design	Responsible for research and knowledge development of personnel security countermeasures and associated guidance.

Cyber Security

Cyber security protects information systems (hardware, software and associated infrastructure), the data on them, and the services they provide, from unauthorised access, harm or misuse. This includes harmed caused intentionally by the operator of the system, or accidentally, or as a result of failing to follow security procedures.

Role Family	Role Family Definition
Advisory	Responsible for advising and enabling teams to make security decisions. This includes providing advice and guidance about technical matters and the identification of cyber related risks, and how to mitigate and manage risks.
Operations	Responsible for monitoring, responding to and proactively managing threats facing the organisation, including by monitoring event data, collecting and disseminating actionable intelligence, and managing identified vulnerabilities across the organisation.
Research, Development & Design	Responsible for ensuring development and design of applications is done with sensitivity to threats facing the organisation, and building security in the development process. This includes, for example, conducting penetration tests and social engineering tests.

Nuclear Security

Nuclear security refers to the specialist skills and technical knowledge required to protect nuclear materials and associated technology from close access acquisition or sabotage by hostile actors. This includes the protection of nuclear materials whilst in transit.

Role Family	Role Family Definition
Advisory	Responsible for identifying and mitigating security risks relating to nuclear materials, including ensuring that appropriate implementation of effective countermeasures, while ensuring that mitigations are aligned to the expectations of nuclear industry regulators and legislative requirements.
Operations	Responsible for delivering the protection of nuclear materials and associated technology from close access acquisition or sabotage by hostile actors.
Research, Development & Design	Responsible for research and knowledge development of nuclear security countermeasures and associated guidance.

Corporate Enablers

The career framework also has Corporate Enablers. Corporate Enablers span the specialisms and are pivotal to the growth, development and success of the nuclear security profession. Individuals working in a corporate enabler role may belong to more than one nuclear function or profession. The corporate enablers included in the career framework are leadership, business continuity, education and awareness, training, capability development, policy, process, support, and risk management.

Skill Level Definitions

Skill level		Description
Awareness	*	Applies knowledge and experience of the skill, including tools and techniques, adopting the most appropriate for the environment
Working	**	Applies knowledge and experience of the skill with others, including tools and techniques, adopting the most appropriate for the environment
Practitioner	***	Shares knowledge and experience of the skill with others, including tools and techniques, defining those most appropriate for the environment
Expert	****	Has knowledge and experience in the application of this skill. Is a recognised specialist and adviser in this skill including user needs, generation of ideas, methods, tools and leading or guiding others in best practice use

Security skills are outlined in detail at Appendix 1.

Part 2 – Nuclear Security Profession- Role Profiles

The Nuclear Security Profession roles are broken down into 4 role levels[3]: entry level, associate, lead and principal. As the role level increases, the expectation on the individual increases, along with the number and complexity of skills associated with the role. In addition, the senior roles are required to support the development of junior roles and their departments through coaching, management and strategic planning.

Entry Level *	Entry level focuses on building a foundation of knowledge and skills aligned with a role. It is focused on increasing awareness of best practise, acknowledging the tools and techniques required to progress. This is also the primary entry point for apprentices and graduates.
Associate **	The Associate level focuses on developing knowledge and skills aligned with the role that were built at the entry level, including being able to utilise technical tools and techniques. It's also focused on increasing confidence and independence in the role, and sporting and working with others.
Lead ***	The Lead level begins to take the experiences at Associate level and shares this knowledge with others. Individuals at a Lead level will be expected to utilise the appropriate techniques and make decisions on project and programme levels.
Principal ****	Principal level individuals are considered experts in their field. They have a wealth of knowledge and experience in their security role, and are often expected to advise on the strategic decisions that involve their role within the department.

Role Profiles are outlined in detail at Appendix 2.

[3] Some roles will have less than 4 levels.

Abbreviations

Abbreviation	Meaning
ARC	Alpha Resilience & Capability
ASIS	American Society for Industrial Security
BCM	Business Continuity Management
BTEC	Business & Technology Education Council
CIPD	Chartered Institute for Professional Development
CIISec	Chartered Institute of Information Security
DESNZ	Department for Energy Security & Net Zero
DfT	Department for Transport
IAEA	International Atomic Energy Authority
NCSC	National Cyber Security Centre
NPSA	National Protective Security Authority
ONR	Office for Nuclear Regulation