

The Integration of Safety and Security Teams to Enhance Value to Customers and Projects

At the 34th G8 Summit in Japan in 2008 the assembled leaders acknowledged the role of nuclear power in reducing CO2 emissions. Part of the final communique stated their commitment to the highest possible standards on “nuclear non-proliferation, safeguards, safety and security”. They recognised that synergies exist between the Triple Ss, (nuclear safety, nuclear security, and nuclear safeguards) and considered it was important that the separate disciplines are integrated, and that the Triple S infrastructure is strengthened through international cooperation and assistance.

The National Nuclear Laboratory (NNL) brought together their Safety and Security assessment teams and their Safeguards Programme Management into a single management chain in 2016.

This paper will describe how the safety and security assessment teams (2S) have been successfully working together as a multi-disciplinary team to provide enhanced value to internal and external customers.

The paper considers which approaches, methods and processes can contribute most to improving the integration of safety and security.

It acknowledges the individual aims:

Safety is aimed at protecting workers and the public from the harmful effects of radiation (or chemicals or other hazards);

Security is aimed at preventing malicious acts that might harm a nuclear facility (sabotage) or result in the loss (theft) of nuclear materials; and

And how they share the same overall objectives of protecting the public and the environment from the hazards associated with the nuclear industry.

The principles to achieve protection; multiple barriers, defence in depth, decision analysis and consequence assessment; are discussed. The regulatory regimes for safety and security use, in the main, the same processes; assessment, permissioning, inspection, enforcement and influence.

NNLs Learning from Experience through close and integrated working will be shared. Our experience includes the removal of ‘silo working’, the development of collaborative relationships, and the cross-fertilisation of knowledge between disciplines. Some of the existing challenges to closer co-operation and alignment will also be explored and potential mitigation methods considered.

Specialists in Safety and Security need to become more aware of the priorities, approaches, methods and drivers that the other specialists use in delivering their objectives to develop and promote an integrated approach. Early interaction reduces the potential for conflict, and allows identification on where negative interactions may occur. Thus potentially expensive rework or compromises are removed.

It is our experience that integration of 2S is more likely to be achieved and be effective in the early design and construction phases of a project, with the positive effects being an influence through operations. Thus ongoing costs are optimised.

Integration of Triple S is a positive management approach to use throughout a project or a facility’s lifetime as it allows the interactions and boundaries to be more clearly understood so that a right first time outcome is achieved and potential conflicts are removed. This also leads to more streamlined operations and subsequent cost savings. It can also lead to reduced radiological doses and more effective cross-specialism communication and interactions.

2S is leading to increasing professionalism as methods and techniques used by one group of specialists are adapted and used by others through sharing of knowledge and learning from experience.

From a security perspective replacing the ‘Need to Know’ with the ‘Need to Share’ has eradicated the ‘Dark Art of Security’ and improved organisational buy-in to the security delivery objectives.

We are finding that interaction with the other specialist can lead you to reconsider how you do your work and what information is important such that nuclear safety and nuclear security are more effectively integrated.

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