# Development and implementation: Systems development; Systems design DESN

## Description

The design of systems to meet specified requirements, compatible with agreed systems architectures, adhering to corporate standards and within constraints of performance and feasibility. The identification of concepts and their translation into a design which forms the basis for systems construction and verification. The design or selection of components. The development of a complete set of detailed models, properties, and/or characteristics described in a form suitable for implementation. The adoption and adaptation of systems design lifecycle models based on the context of the work and selecting appropriately from predictive (plan-driven) approaches or adaptive (iterative/agile) approaches.

## Level 6

Develops organisational policies, standards, guidelines, and methods for systems design. Champions the importance and value of systems design principles and the selection of appropriate systems design lifecycle models; whether predictive (plan-driven) approaches or more adaptive (iterative/agile) approaches. Drives adoption of and adherence to relevant policies, standards, strategies and architectures. Leads systems design activities for strategic, large and complex systems development programmes. Develops effective implementation and procurement strategies, consistent with specified requirements, architectures and constraints of performance and feasibility. Develops systems designs requiring introduction of new technologies or new uses for existing technologies.

## Level 5

Adopts and adapts appropriate systems design methods, tools and techniques selecting appropriately from predictive (plan-driven) approaches or adaptive (iterative/agile) approaches, and ensures they are applied effectively. Designs large or complex systems. Undertakes impact analysis on major design options and trade-off. Makes recommendations and assesses and manages associated risks. Reviews others' systems designs to ensure selection of appropriate technology, efficient use of resources, and integration of multiple systems and technology. Ensures that the system design balances functional and non-functional requirements. Contributes to development of systems design policies and standards and selection of architecture components.

## Level 4

Designs components using appropriate modelling techniques following agreed architectures, design standards, patterns and methodology. Identifies and evaluates alternative design options and tradeoffs. Creates multiple design views to address the concerns of the different stakeholders of the architecture and to handle both functional and non-functional requirements. Models, simulates or prototypes the behaviour of proposed systems components to enable approval by stakeholders. Produces detailed design specification to form the basis for construction of systems. Reviews, verifies and improves own designs against specifications.