# Systems and software life cycle engineering SLEN

Establishing and deploying an environment for developing, continually improving, and securely operating software and systems products and services.

|  |
| --- |
| **Guidance Notes:**This skill is associated with interdisciplinary approaches to developing and operating software and systems products and services across the full life cycle. Typically, but not exclusively, labelled with terms such as DevOps, DevSecOps, site reliability engineering, developer productivity engineering.Activities include, but are not limited to:* establishing secure and reliable software lifecycle principles and practices
* developing a supporting framework of methods, procedures, techniques, tools, and people with required skills, knowledge and competencies
* deploying and using this environment with the people and teams that are responsible for all systems and software life cycle engineering
* building repeatable and reliable capabilities through a process of trial, feedback, learning and continual evolution
* adapting working practices to the needs of specific products and services
* defining, controlling and improving software life cycle processes
* building in risk management, quality, security, privacy and safety
* maximising the automation of activities
* establishing software architecture and design principles to enable the desired life cycle processes
* focusing on mission, value and customers
* establishing a culture of collaboration, learning, knowledge management, adaptation and resilience
* adopting and integrating appropriate industry frameworks to guide improvements:
 |

## Level 4

Elicits requirements for systems and software life cycle working practices and automation.
Prepares design options for the working environment of methods, procedures, techniques, tools, and people.
Selects systems and software life cycle working practices for software components and micro-services.
Deploys automation to achieve well-engineered and secure outcomes.

## Level 5

Collaborates with those responsible for ongoing systems and software life cycle management to select, adopt and adapt working practices.
Supports deployment of the working environment for systems and software life cycle working practices.
Provides effective feedback to encourage development of the individuals and teams responsible for systems and software life cycle working practices. Provides guidance and makes suggestions to support continual improvement and learning approach.
Contributes to identifying new domains within the organisation where systems and software life cycle working practices can be deployed.

## Level 6

Obtains organisational commitment to strategies to deliver systems and software life cycle working practices to achieve business objectives.
Works with others to integrate organisational policies, standards and techniques across the full software and systems life cycle.
Develops and deploys the working environment supporting systems and software life cycle practices for strategic, large and complex products and services.
Leads activities to manage risks associated with systems and software life cycle working practices. Plans and manages the evaluation or assessment of systems and software life cycle working practices

## Level 7

Represents and leads systems and software life cycle working practices at the highest level in the organisation.
Identifies opportunities for innovation in systems and software life cycle working practices to achieve organisational goals and objectives.
Leads the essential cultural and environmental changes and communicates the benefits to all stakeholders.
Oversees the quality of the work performed and delivers measurable business benefits.