

KSB DOCUMENTATION:

Key Themes – Data Analytics

Important Information

The following document will give you a breakdown of the KSB's attached to each of the key themes required for your portfolio.

- Some KSB's are already grouped together within the theme which comes directly from assessment plan. Both KSB's have been shown underneath to support you in meeting the criteria for each individual KSB
- Pathway specific KSB's have been noted underneath the IFATE assessment plan name. These are different/specific to each different pathway and are labelled starting "DA"

Underlying Principles

K7

Review the roles, functions and activities within digital technology solutions within an organisation.

K12
K14

Explain the role of data gathering, data management, and data analysis

K12 The role of data management systems within Digital and Technology Solutions.

K14 A range of quantitative and qualitative data gathering methods and how to appraise and select the appropriate method.

K13
S11

Apply the principles of data analysis for digital and technology solutions

K13: Principles of data analysis for digital and technology solutions.

S11: Determine and use appropriate data analysis techniques. For example, Text, Statistical, Diagnostic or Predictive Analysis to assess a digital and technology solutions.

K53
(DAK1)

Describe the barriers that exist to effective data analysis between analysts and their stakeholders and how to avoid or resolve these

Underlying Principles (continued)

**K55
(DAK3)**

Explain data formats, structures, architectures and data delivery methods including “unstructured” data

**K57
(DAK5)**

Explain approaches to data processing and storage, database systems, data warehousing and online analytical processing, data-driven decision making and the good use of evidence and analytics in making choices and decisions

Technical Solutions

S4

Initiate, design, code, test and debug a software component for a digital and technology solution

S10

Initiate, design, implement and debug a data product for a digital and technology solution

S9

Apply relevant security and resilience techniques to a digital and technology solution. For example, risk assessments, mitigation strategies.

S12

Plan, design and manage simple computer networks with an overall focus on the services and capabilities that network infrastructure solutions enable in an organisational context

**K59
(DAK7)**

Describes how Data Analytics can be applied to improve an organisation's processes, operations and outputs

Innovation and Response

B6

Participate in and shares best practice in their organisation, and the wider community for aspects relevant to digital and technology solutions.

B7

Maintain awareness of trends and innovations in the subject area, utilising a range of academic literature, online sources, community interaction, conference attendance and other methods which can deliver business value.

S48
(DAS1)

Describe how they define Data Requirements and perform Data Collection, Data Processing and Data Cleansing

S49
(DAS2)

Describe how they apply different types of Data Analysis, as appropriate, to drive improvements for specific business problems

S51
(DAS4)

Describe how they have encountered barriers to effective analysis both by analysts and their stakeholders within data analysis projects

Legal, Ethics and Landscape

B1

Have a strong work ethic and commitment to meet the standards required

B2

Be reliable, objective and capable of both independent and team working

**K19
S15**

Applies relevant legal, ethical, social and professional standards to digital and technology solutions considering both technical and non-technical audiences and in line with organisational guidelines

K19: Relevant legal, ethical, social and professional standards to a digital and technology solution.

S15: Apply relevant legal, ethical, social and professional standards to a digital and technology solution.

Legal, Ethics and Landscape (continued)



**K20
B8**

Explains sustainable development approaches within digital technologies as they relate to their role including diversity and inclusion

K20: Sustainable development approaches as applied to digital and technology solutions such as green computing.

B8: Champions diversity and inclusion in their work ensuring that digital technology solutions are accessible.

**K60
(DAK8)**

Describe how data and analysis may exhibit biases and prejudice. Describes how ethics and compliance affect Data Analytics work, and the impact of international regulations

Core Concepts



K6

Explain the approaches and techniques used throughout the digital and technology solution lifecycle and their applicability to an organisation's standards and pre-existing tools

K11

Critically evaluate the nature and scope of common vulnerabilities in digital and technology solutions. For example, the risks of unsecure coding and unprotected networks.

K16

Describe the fundamental computer networking concepts in relation to digital and technology solutions. For example, structure, cloud architecture, components, quality of service.

Leading and Working Together

**K8
S7
B4**

Explain how teams work effectively to produce a digital and technology solution, applying relevant organisational theories using up-to-date awareness of trends and innovations

K8: How teams work effectively to produce digital and technology solutions.

S7: Work effectively within teams, leading on appropriate digital technology solution activities.

B4: Commits to continuous professional development; maintaining their knowledge and skills in relation to developments in digital and technology solutions that influence their work.

**K9
K10
S8**

Describe the concepts and principles of leadership and management as they relate to their role and how they apply them

K9: The concepts and principles of leadership.

K10: Management techniques and theories. For example, effective decision making, delegation and planning methods, time management and change management.

S8: Apply relevant organisational theories. For example, change management principles, marketing approaches, strategic practice, and IT service management to a digital and technology solutions project

Leading and Working Together (continued)



K10

Describe how management techniques and theories apply to your role. For example, effective decision-making, delegation and planning methods, time management and change management

S8

Apply relevant organisational theories. For example, change management principles, marketing approaches, strategic practice, and IT service management to a digital and technology solutions project.