

Introduction to the Proficiency Framework

The Proficiency Framework is a flexible skills and proficiencies framework that forms the backbone of the JSE Data & Digital Factory. The framework can be flexed to organisational and individual needs as required.

What is the Framework made up of?

The Framework comprises:

- **The Proficiency Levels**, which is a high-level summary of proficiencies and the differences between them
- **The Skills Table** is the foundational table of data skills mapped across Proficiency Level.

What is the framework for?

The Framework serves as the backbone of the JSE Data & Digital Factory skills assessment and the associated training curriculum. Outlining what skills need to be displayed to be at a certain level of proficiency will:

- Enable the identification of those who need training for a certain skill
- Enable post-learning intervention evaluation

How can the framework be used?

The Data Proficiency Levels are intended as a validated and specific skills framework that **can be adjusted to a given role** by JSE teams or line managers – akin to a ‘pick and mix’. They can choose:

- What skills are relevant for a given role profile
- What Proficiency Levels these skills should be at for a given role profile

It is **not expected** that someone at a given Proficiency Level would exhibit every skill at that level

- Someone in a certain role would more likely have a **mix** of skills at different Proficiency Levels.

This slide outlines the key differences between Proficiency Levels. It is expected that individuals, line managers and organisational teams would tailor the required Skills and Proficiency Levels to requirements.

Expert Level



Highly specialist data skillset, who can tackle complex data issues

An Expert would be **someone at the top of their field**, regularly applying the newest and most advanced data techniques. They would have a mix of Working, Practitioner and Expert skills tailored to their role.
For example, a [Lead Data Engineer](#) would likely be an **Expert in Data Engineering**, and have Practitioner or Working level knowledge of other data skills.

Practitioner Level



Well-versed in relevant subject matter with advanced understanding

Someone at the Practitioner level would be in a data/technical role e.g., a Senior Data Engineer.
It would be likely that they would have a **mix of skills (tailored to their role)** ranging from Working to Practitioner proficiency.

Working Level



Working knowledge of data concepts and frameworks

Someone applying data skills at the Working Level would have a **good working knowledge of a given data skills/concept**.
For example, a professional might have a Working knowledge of Data Visualisation to filter and interpret charts, etc., but not build them directly.

Awareness Level

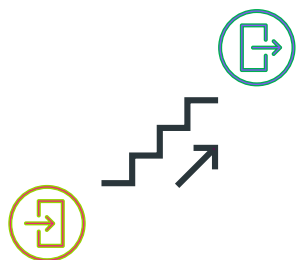


Basic awareness of data, with knowledge of incorporating data skills in their day job

This is the basic knowledge of data (e.g. data quality, being able to read pie charts) that **everyone in the organisation should have**, from frontline/operational roles to senior roles.
Some roles may not need to go beyond this level.



People can step on and off their Learning Journey **as needed**



Not everyone will need to progress beyond Awareness – this is up to individuals & managers

Full List of Purple Person Skills

This slide shows the full list of data-related red and blue skills which were identified and defined as part of the JSE Data and Plan and can be mapped to the Purple Person canvas

Red/Technical Skills

- Data Quality
- Data Impact Analysis
- Data Analysis & Statistics
- Data Modelling
- Data Engineering: Advanced Data Analytics and AI, including machine learning and predictive analytics.
- Data Architecture
- Data Governance
- Data Visualisation
- Software Engineering: Coding Standards, best practices, and software design principles.
- Digital Fluency: Understanding and leveraging digital technologies to drive business outcomes.
- Data Ethics & Regulation: Navigating ethical considerations and regulatory requirements in data usage.
- Data Security & Protection: Implementing advanced security measures to protect data integrity and confidentiality.
- Metadata Management
- Master Data Management
- Cloud Fundamentals
- Data Retention & Archiving
- Data Sharing
- Blockchain and Distributed Ledger Technology: Understanding and applying blockchain principles for enhanced security, transparency, and efficiency.

Blue/Soft Skills

- Data Strategy & Op Models
- Written & Verbal Reasoning & Analysis
- Documentation/Knowledge & Information Management
- Process and Information Analysis
- Continuous Learning and Development
- Storytelling with Data
- Teamwork
- Leading Teams.
- Communication Skills.
- Stakeholder Analysis and Management.
- Self-Awareness
- Self-Discovery
- Customer Service Orientation
- Stress Management

Examples of Skills (1/2)

This slide shows some examples of the Purple Person skills and corresponding definitions at the proficiency levels. The full list has been provided in the Appendix

Skill	Awareness	Working	Practitioner	Expert
<p>Coding Standards</p>	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Understands and applies robust coding standards, especially those specific to database programming e.g. SQL Understands the 7 Principles of Good Coding Confidently uses pseudo-code to explain and/or document code 	<ul style="list-style-type: none"> Understands and applies robust coding standards, especially those specific to database programming e.g. SQL Understands the 7 Principles of Good Coding Confidently uses pseudo-code to explain and/or document code
<p>Metadata Management</p>	<ul style="list-style-type: none"> Understands what metadata is Can articulate the importance of metadata Can identify the right stakeholders (i.e. metadata manager) for further information 	<ul style="list-style-type: none"> Understands the types of metadata (descriptive, structural, etc) Can articulate the importance of metadata for the organisation Can assess and understand the uses of metadata within their role Working with technical stakeholders, can make decisions regarding how best to utilise metadata within business solutions 	<ul style="list-style-type: none"> Can establish and drive a common business language for the area in which they work Can assess and document data lineage Can create and reuse data assets within their specific business area Can prepare, sort, and filter data within in their area 	<ul style="list-style-type: none"> Can create and implement a metadata strategy in line with best practice and augment where required Able to establish and drive a common business language for the organisation Can assess data lineage and provide advice/recommendations on the practical implications Can create, reuse and repurpose organisational data assets when required Can prepare, sort, and filter organisational data Provide guidance and recommendations to business stakeholders regarding the best use of metadata

Examples of Skills (2/2)

This slide shows some examples of the Purple Person skills and corresponding definitions at the proficiency levels. The full list has been provided in the Appendix

Skill	Awareness	Working	Practitioner	Expert
<p>Stress Management</p>	<ul style="list-style-type: none"> Identifies personal stress triggers and the basics of stress management techniques. Recognizes the impact of stress on health and productivity. 	<ul style="list-style-type: none"> Regularly practices stress management techniques such as time management, exercise, or meditation. Can maintain composure in moderately stressful situations. 	<ul style="list-style-type: none"> Effectively manages high-stress situations through advanced coping strategies. Supports colleagues in identifying and managing stress. 	<ul style="list-style-type: none"> Masters in stress resilience, consistently maintaining focus and productivity under pressure. Mentors others in developing personalized stress management plans and building a supportive workplace culture.
<p>Customer Service Orientation</p>	<ul style="list-style-type: none"> Recognizes the importance of customer satisfaction and its impact on business success. Understands basic principles of respectful and responsive customer service. 	<ul style="list-style-type: none"> Applies customer service principles in interactions, ensuring customer needs are addressed. Can handle common customer inquiries and issues with courtesy and efficiency. 	<ul style="list-style-type: none"> Demonstrates advanced problem-solving skills to manage complex customer service challenges. Proactively anticipates customer needs and develops strategies to enhance customer satisfaction. 	<ul style="list-style-type: none"> Leads by example in delivering exceptional customer service. Develops and implements customer service policies and training to improve the overall customer experience and loyalty.