

The history of the ODI Data Skills Framework

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The Evolution of the Data Skills Framework: Balancing Technical and Non-Technical Skills

The journey towards a structured **Data Skills Framework** began with a pressing challenge: as data became increasingly central to decision-making across industries, there was a growing gap between those who could work effectively with data and those who couldn't. While highly technical training in data science was well-established at university level, many professionals working with data lacked the foundational knowledge needed to navigate data-driven environments.

This imbalance—where data expertise was concentrated in specialists while others struggled to engage—meant that organisations couldn't fully harness the value of data. The need for a **framework that balanced technical and non-technical skills** became clear.

The EDSA project: Understanding the need

The [European Data Science Academy \(EDSA\)](#) was one of the first large-scale initiatives to systematically explore the skills needed in a data-driven economy. Through an in-depth analysis of job markets, professional roles, and industry demands, the project identified the core competencies required for data professionals.

EDSA's work revealed two important insights:

1. **Data skills go beyond technical expertise** – While programming, statistics, and data engineering were in high demand, employers also sought people who could communicate insights, make ethical decisions, and apply data to real-world business challenges.
2. **Many professionals needed upskilling** – The majority of available data science courses catered to those with a strong technical background, but there was little structured training for people in non-technical roles who still needed to work with data.

To address these issues, EDSA developed an **open learning curriculum**, helping professionals build both technical and non-technical skills. But this was only the beginning.

Recognising the Missing Middle: The ODEdu Project

While EDSA laid the groundwork for training professionals, another challenge remained: **what about those who never studied data formally in the first place?**

The [ODEdu \(Open Data Education\) project](#) extended this work by mapping data-related skills to the **European Qualifications Framework (EQF)**. It explored the levels of education required for different types of data work and uncovered a significant gap:

- While **universities provided advanced data science courses**, and **schools introduced basic digital skills**,
- There was **little structured training for people whose formal education ended at the mandatory level but who still needed to work with data**.

This gap was particularly problematic for industries where **data-driven decision-making** was becoming essential, yet many employees lacked confidence in interpreting and using data. The ODEdu project highlighted the need for **data and AI literacy** as a **fundamental skill for all workers, not just technical specialists**.

The solution wasn't just about teaching people to code—it was about giving them the **critical thinking, ethical awareness, and practical skills to engage with data in their everyday work**.

While the ODEdu project website is no longer active, some of its insights remain available via the [Web Archive](#).

Bringing It All Together: The ODI Data Skills Framework

Building on these foundations, the **Open Data Institute (ODI)** developed the [ODI Data Skills Framework](#), ensuring a balance between **technical expertise and broader, non-technical competencies**. The framework acknowledges that while some people will become data scientists, many more will need to:

- **Interpret and question data** to make informed decisions,
- **Engage with data ethically** to build trust and transparency, and
- **Use data to drive business value** without needing deep technical

expertise.

The framework ensures that organisations don't just train technical specialists, but also equip policymakers, business leaders, and operational staff with **the knowledge and confidence to work effectively with data**.

A Future Built on Data Literacy

The journey from **EDSA to ODEdu to the ODI Data Skills Framework** reflects a growing recognition that **data skills are for everyone**. While advanced technical training remains crucial, the real challenge is ensuring that **all workers—regardless of background—have the knowledge they need to engage with data in a meaningful way**.

By balancing **technical and non-technical skills**, the framework enables organisations to build a workforce that is not only data-literate but also capable of using data responsibly and effectively. In an era where data and AI shape every sector, this approach ensures that **data is not just a tool for specialists, but a shared resource for smarter, more ethical decision-making across society**.