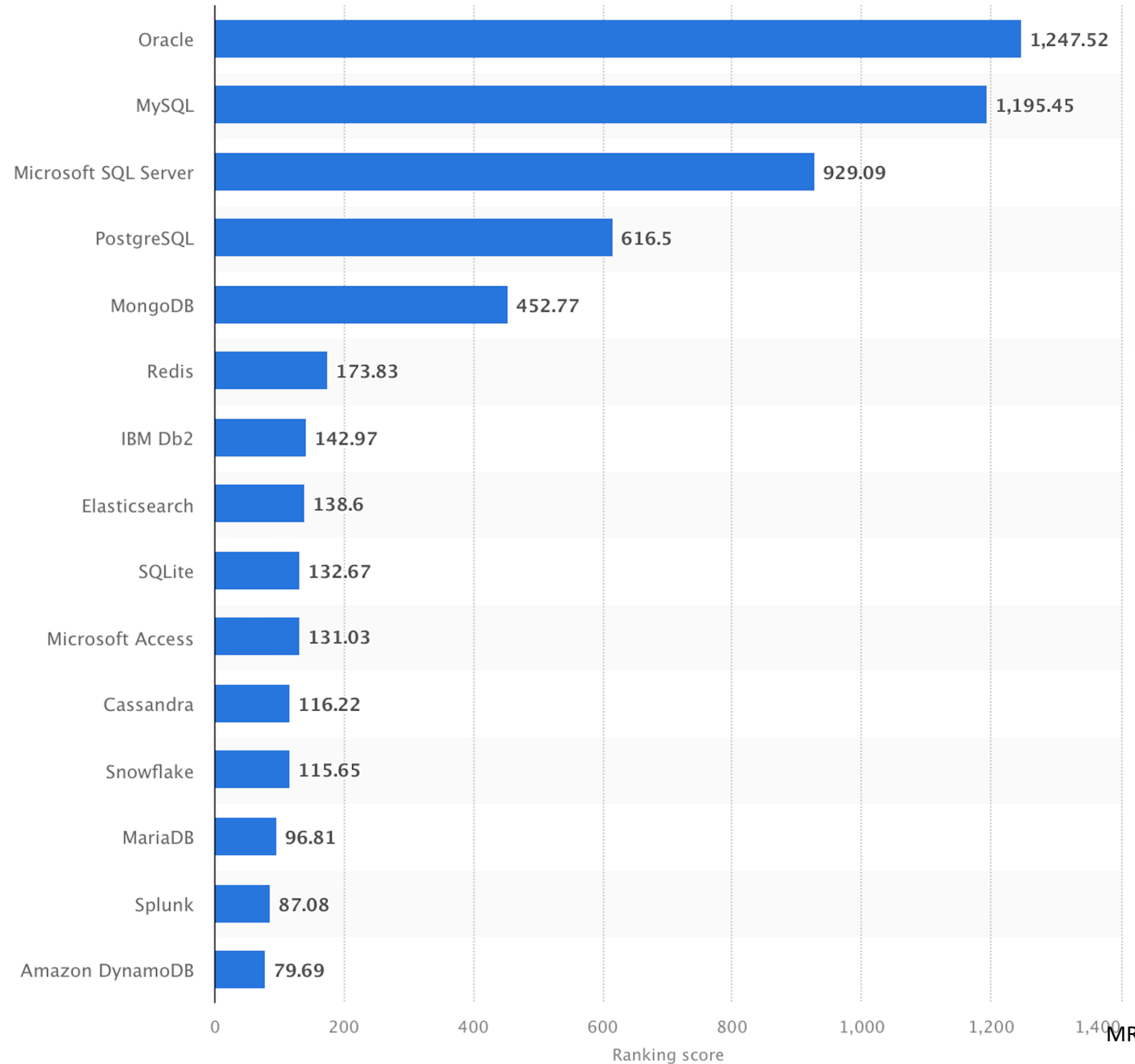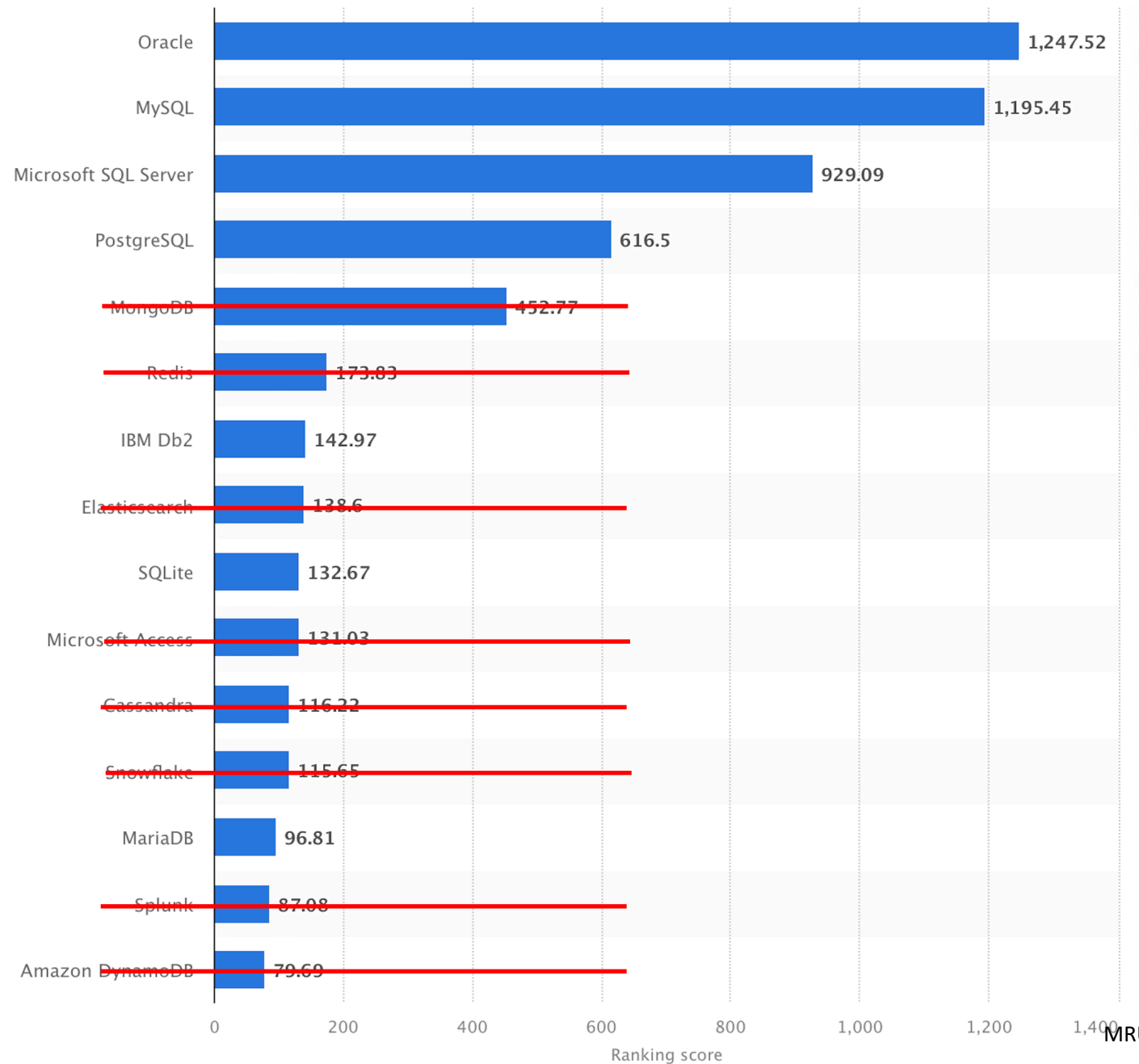# Databases Environment

- DBs Market

- Roles & responsibilities

- Standards

- Metrics & Optimization
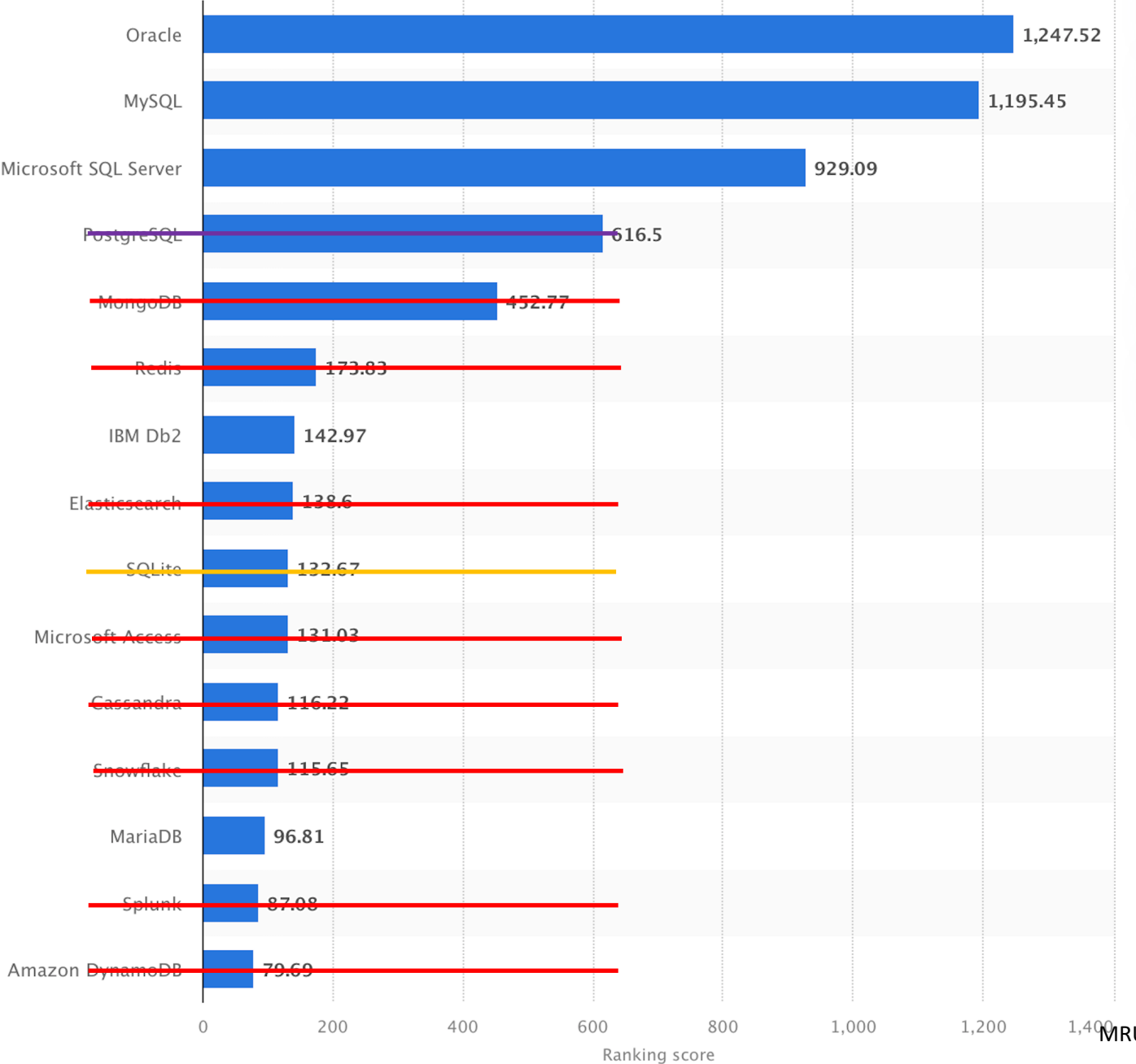
Ranking of most popular database management systems worldwide (Feb. 2023)

DBMS	Ranking score
Oracle	1,247.52
MySQL	1,195.45
Microsoft SQL Server	929.09
PostgreSQL	616.5
MongoDB	452.77
Redis	173.83
IBM Db2	142.97
Elasticsearch	138.6
SQLite	132.67
Microsoft Access	131.03
Cassandra	116.22
Snowflake	115.65
MariaDB	96.81
Splunk	87.08
Amazon DynamoDB	79.69

By Statista

Ranking of most popular database management systems worldwide (Feb. 2023)

Database	Ranking score
Oracle	1,247.52
MySQL	1,195.45
Microsoft SQL Server	929.09
PostgreSQL	616.5
~~MongoDB~~	452.77
~~Redis~~	173.83
IBM Db2	142.97
~~Elasticsearch~~	138.6
SQLite	132.67
~~Microsoft Access~~	131.03
~~Cassandra~~	116.22
~~Snowflake~~	115.65
MariaDB	96.81
~~Splunk~~	87.08
~~Amazon DynamoDB~~	79.69

Ranking score

MRU - Advanced Databases (Dr. Orestes Appel)

Ranking of most popular database management systems worldwide (Feb. 2023)

Database	Ranking score
Oracle	1,247.52
MySQL	1,195.45
Microsoft SQL Server	929.09
PostgreSQL	616.5
MongoDB	452.77
Redis	173.83
IBM Db2	142.97
Elasticsearch	138.6
SQLite	132.67
Microsoft Access	131.03
Cassandra	116.22
Snowflake	115.65
MariaDB	96.81
Splunk	87.08
Amazon DynamoDB	79.69

Ranking score

MRU - Advanced Databases (Dr. Orestes Appel)

Ranking of most popular database management systems worldwide (Feb. 2023)

Oracle — 1,247.52
MySQL — 1,195.45
Microsoft SQL Server — 929.09
IBM Db2 — 142.97
MariaDB — 96.81

Ranking score (x-axis: 0, 200, 400, 600, 800, 1,000, 1,200, 1,400)

What does a DBA do?

Day2Day Activities of DBA as per ITIL® Service Operation

The day-to-day activities that a DBA performs as outlined in ITIL®
Service Operation include:

- Creating and maintaining database standards and policies

- Supporting database design, creation, and testing activities

- Managing the database availability and performance, including
  incident and problem management

- Administering database objects to achieve optimum utilization

- Defining and implementing event triggers that will alert on
  potential database performance or integrity issues

- Performing database housekeeping, such as tuning, indexing, etc.

- Monitoring usage, transaction volumes, response times,
  concurrency levels, etc.

- Identifying reporting, and managing database security issues,
  audit trails, and forensics

- Designing database backup, archiving, and storage strategy

How to Organize & Standardize DM Tasks

- ITIL
- DAMA
- Others

Roles & Responsibilities: ITIL

- The Information Technology Infrastructure Library (ITIL) is a set of detailed practices for IT activities such as IT service management (ITSM) and IT asset management (ITAM) that focus on aligning IT services with the needs of the business.

- ITIL describes processes, procedures, tasks, and checklists which are:
  - neither organization-specific, nor
  - technology-specific but can be applied by an organization toward strategy, delivering value, and maintaining a minimum level of competency.
- It allows the organization to establish a baseline from which it can plan, implement, and measure.
  - It is used to demonstrate compliance and to measure improvement.
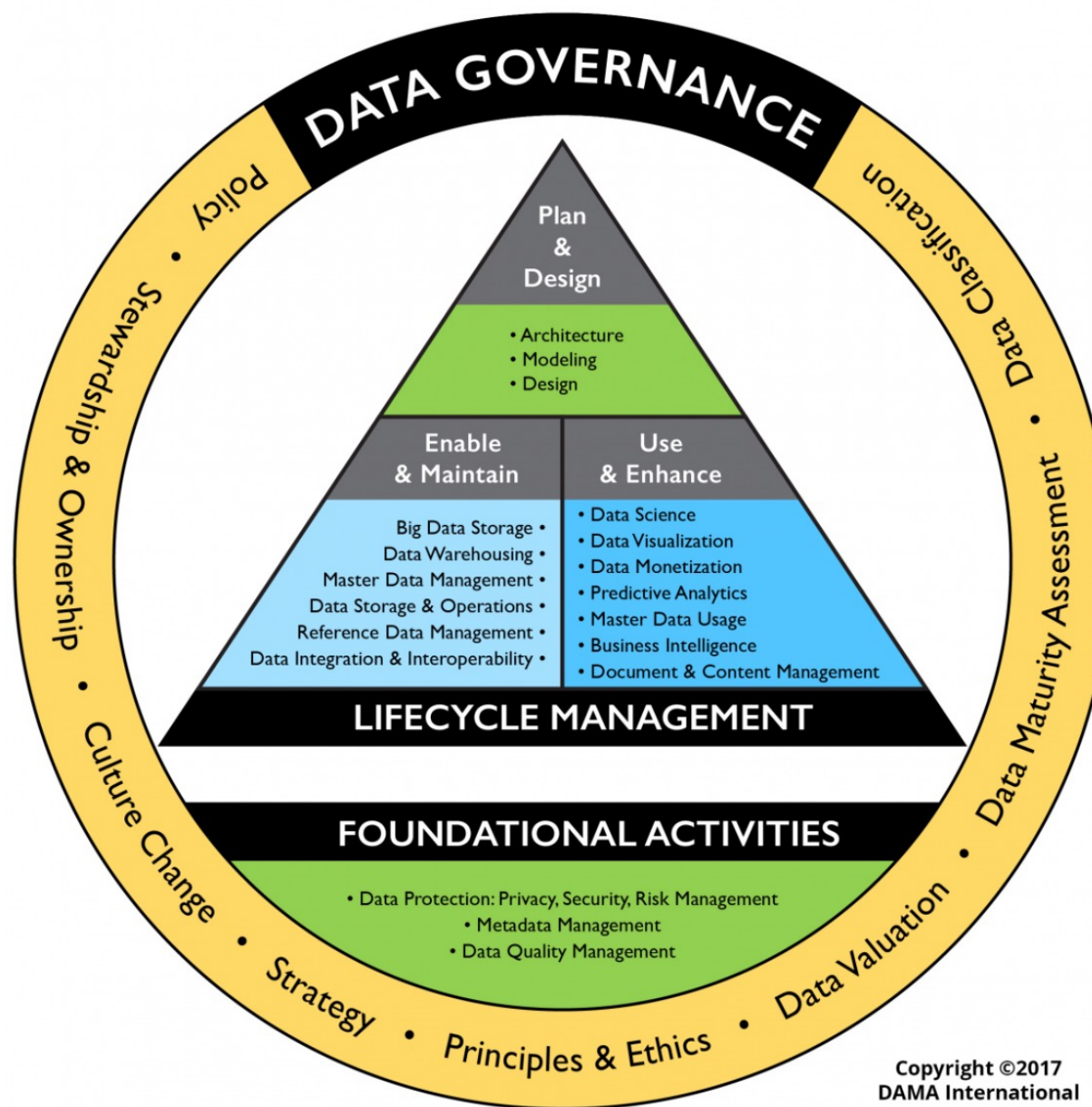
Roles & Responsibilities: ITIL

Responding to growing dependence on IT, the UK Government's Central Computer and Telecommunications Agency (CCTA) in the 1980s developed a set of recommendations designed to standardize IT management practices across government functions, built around a process model-based view of controlling and managing operations.

- In 1989, ITIL was released. In April 2001, the CCTA was merged into the Office of Government Commerce (OGC), an office of the UK Treasury.[4]

- In 2001, ITIL Version 2 was released.

- In May 2007, ITIL Version 3 was released, consisting of 26 processes and functions, now grouped into only 5 volumes, arranged around the concept of Service lifecycle structure.

- In July 2011, ITIL 2011 was released.

- In 2013, ITIL was acquired by AXELOS, a joint venture between Capita and the UK Cabinet Office.

- In February 2019, ITIL version 4 was released. The main changes were:
  - to consider end-to-end Service Management from holistic and value-centric perspectives
  - to align with philosophies such as Agile, DevOps, and Lean, and
  - to reduce the emphasis on IT Service Management in favor of general Service Management.

- In June 2021, PeopleCert completed the acquisition of Axelos.
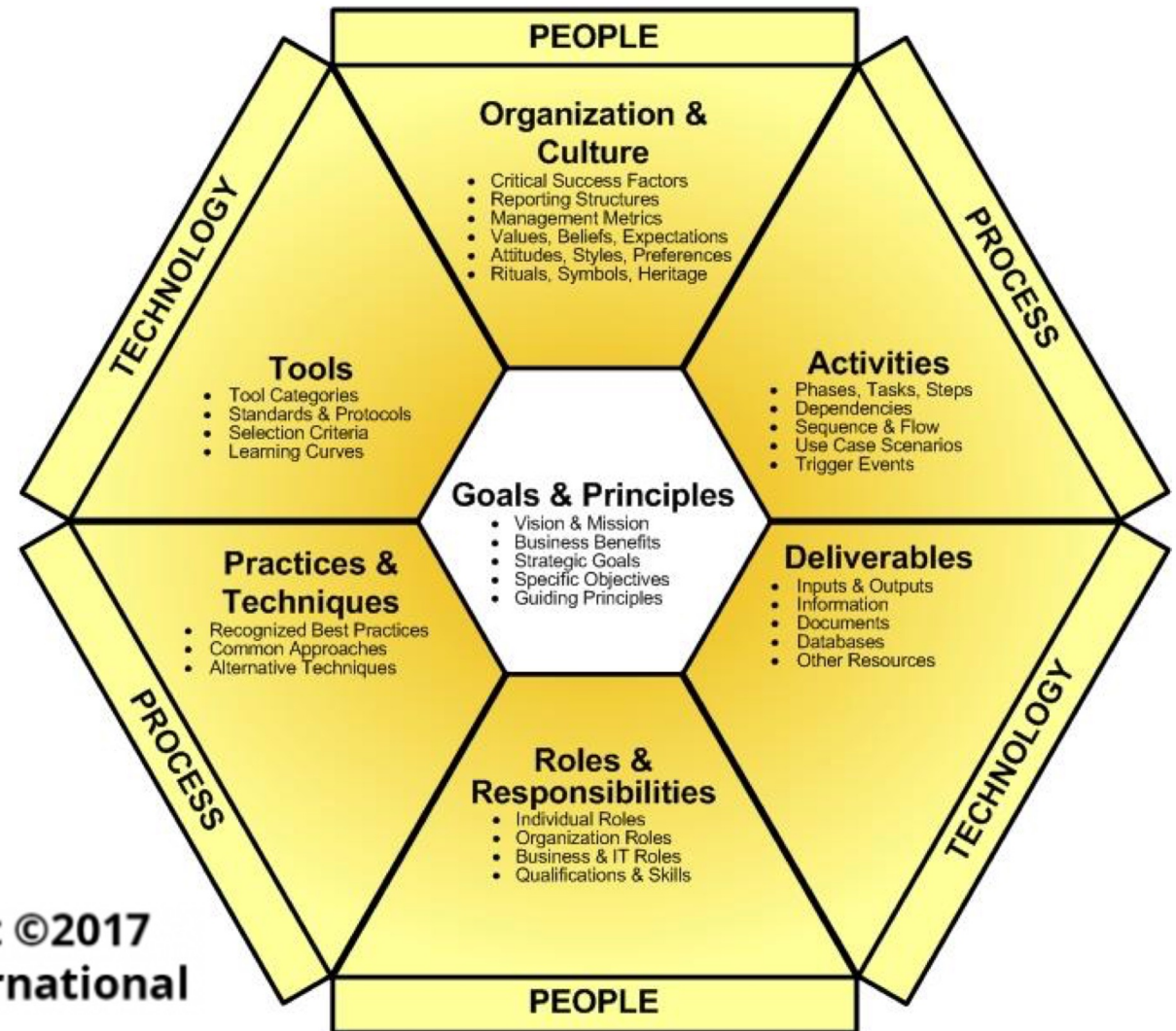
The Data Management Association (DAMA)

The Data Management Association (DAMA) is a non-profit and vendor-independent association of business and technical professionals that is dedicated to the advancement of data resource management (DRM) and information resource management (IRM).

DAMA: Top Wheel

MRU - Advanced Databases (Dr. Orestes Appel)

DAMA: Environmental Elements

Copyright ©2017
DAMA International

DAMA: Guide Knowledge Area Wheel