

CENTRAL BANK OF EGYPT  
Egyptian Banking Institute



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November 2022

# Current Trends

**Data Democratization**

Transforming employees to Citizen Data Scientists

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## Definition / concept:

Data Democratization is about facilitating organizational data's access to as many employees as possible, given reasonable limitations on legal confidentiality and security.

The idea is to embrace data driven decision making into the organization's culture, and to make data available not only to analysts and executives, but also to non-technical or non-specialist employees to observe, analyze, use data-driven in decision making, or make other use of it. Data must be cleaned, categorized, organized into context, and placed in an easy to access channel. However, placing data sets in an open shared drive will not promote data democratization, when data new users have few technical data skills. In this context, data democratization main pillars include sharing data, sharing data skills to allow employees to make data driven decisions, and it also includes shared responsibility for the data. All users should have a minimal level of skills to import, export, document, and analyze data.

Data Democratization is transforming employees into citizen data scientists by providing them unconstrained data access and the appropriate training. The concept of citizen data scientists has been referred to by Gartner as one of the biggest disruptors in the ways data analysis is considered. A citizen data scientist is generally a domain expert not a professional analyst who also happens to be proficient user and manipulator of data, thereby complementing the traditional data scientist's function.

## Background

In many organizations there is a gold mine of data, but they don't follow the right approach to fully utilize it. If the data resides in siloes, owned by a small group of individuals (data scientists and analysts), the analysis or usage of this data will happen only from their perspectives, limiting the larger opportunities of sharing it with the other stakeholders. This pushes the business professionals to search for alternatives to make data available for the right people at the right time to make the right decision.

Today, sophisticated business intelligence tools and analytics frameworks are allowing employees to gain access to data analytics capabilities. Many organizations' cultures are transforming into data cultures, in light of the amounts of data

being collected, processed and stored. With a significant percentage of conventional data science jobs getting automated, broader usage of data analytics is likely.

As for the banking industry, it is worth mentioning that the future of data-driven banking isn't data scientists replacing bankers. It is bankers harnessing technology to generate the insights they need for themselves. There's so much more data today than there was in the past in the financial services industry. With the increased flow of information, sharing data across various mediums and with raised number of people working and learning from home/anywhere post COVID-19, the importance of data democratization augmented.

## Importance/ benefits

Democratizing data can benefit both employees and clients in many ways such as:

- Relieving data scientists of low-level tasks and basic data analysis tasks, allowing them to focus more on deeper technical expertise tasks.
- Shifting spent time on aggregating data to analyzing data to improve workflows and enhance decision-making.
- Facilitating employees' easier and faster access to data to get the business insights they need without external help, which increase empowerment and sense of accountability at all levels of organization.
- Refining employees' data skills and providing them the data analytics tools can help an organization to reap better insights from their data, make cross-functional communication clearer and help make better decisions.
- Developing the data analytical skills and guarantying information's access promote the entrepreneurial spirit and add agility to the organization's work structure.
- Coping with the talent shortage in the data analytics' specialization in the market
- Enhancing customer relation at each point of contact and building effective Customer Relationship Management (CRM) strategies; better insights from data streams and increased individual responsibility of employees leading to better use of talent and enhance customer management.



## Challenges and concerns

With the increased flow of data challenges rise up and may include the following:

- Facilitating data access and enhancing the ability to understand client interests and needs to provide more customized solutions.
- Expanding investment in research and incorporating new and different datasets to existing processes to produce better outcomes for clients.
- Offering an opportunity for leaders to become more agile and responsive to customers, while enhancing organizational structure, HR management, technological ability and strategic planning.

- One of the primary concerns with data democratization comes in the form of potential misuse of data. Without appropriate training, employees poorly versed in data analysis can analyze the data incorrectly and make erroneous assumptions, especially if the data is taken out of context. With different teams working on the same data in a de-centralized manner, there is a potential for work redundancy and similar insights being worked out by different teams, essentially wasting effective man hours. Sharing large amount of data with everyone without a proper plan/platform leads to varied interpretations, results, incorrect decisions from all the sides affecting the larger decision-making efficiency.

- The challenge is that data can come from multiple sources, which requires users to go to many different places to reach the needed info. A manual effort may be required to access and retrieve this data. This challenge is addressed by the financial services industry adoption to new technologies, there are many cloud-based solutions that make data easily accessible by combining data in various formats from different sources. The increasing shift towards cloud-based technologies, allows for flexibility and connectivity of various services. The advancement of technology solutions is making it easier to shift the time spent on accessing data to analyzing data.

- Data Democratization as a practice leads to a set of quality, cybersecurity and data privacy concerns. The reason behind the concern is that new data workers may have little experience with assessing data quality. Basing decisions on poor data will result in poor decisions.

- There are still questions about how much access should be given to employees, how and when strategic advantage is compromised if proprietary data gets leaked, and other concerns about data ethics.

## | Practices

### General practice in the banking sector:

The role of data democratization in banks is significant. The banking sector holds a massive amount of data which has built over time. Data is appropriate in this sector owing to huge customer interactions and compliance requirements. The data is also critical not only from utilization point of view but from a security point of view. Making the right data available to the right person is a critical function as per the data democratization process. On the flip side, ensuring the required security for sensitive data is also equally important for data democratization. While data can help in credit scoring, loan risk management, discovering customer portfolios, it also helps in fraud detection, AML/BSA checks, financial reporting, record keeping, and IoT enabled security checks.

### The case of Royal Bank of Scotland:

Royal Bank of Scotland (RBS) is a prominent adopter of data democratization. RBS used data to integrate customer experience across all the touchpoints. RBS remapped their organization structure to introduce digital marketing leaders from across departments. This helped experts interact with each other and use the same firm data to help optimize overall customer experience from different perspectives. With this data-driven and integrated approach, RBS was able to understand customer behavior much better. They, for example, understood that 30% of all their customers were using mobile phones to apply for loans, although with low conversion rates. This caused RBS to concentrate their efforts on rolling out a better, more intuitive and streamlines mobile experience. This almost immediately increased their customer conversion rate substantially by over 20%.

## | Practices

- Data Democratization Driving Efficiency in Financial Services:

<https://www.williamblair.com/Insights/Data-Democratization-Driving-Efficiency-in-Financial-Services>

- The Democratization of Data and Data Science in Financial Services:

<https://www.linkedin.com/pulse/democratization-data-science-financial-services-beyond-bernard-marr>

- Re-imagining Financial Services with Data Democratization and Hype personalization:

<https://www.linkedin.com/pulse/re-imagining-financial-services-data-democratization-sourav-sekhar>

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