



APGAR.

Data Literacy, AI, and Human:
The Winning Trio
for Your Data.

Data for Good Reasons.

Editorial.

At Apgar, we firmly believe that data literacy is neither a mere concept nor a buzzword and certainly not a marketing tool. We see the democratization of data usage by all employees as the only way for companies to fully extract the value from their data.

However, it's essential to harness this data in its various forms and infuse it with collective intelligence. The ability to identify, collect, process, analyze, and interpret data cannot be improvised!

This is why «Data for good reasons,» our motto, is not just about communication; it truly embodies our *raison d'être*: to assist organizations of all sizes in achieving the highest level of knowledge and utilization of their data. This is for making informed decisions shared by all employees at every level of the company and also within its ecosystem.

With these convictions in mind, we offer you this practical guide to shed light on the current challenges of data literacy and its interdependence with new technologies, artificial intelligence, and human expertise.

Happy reading!

Frédéric ROBERT, Innovation and Data Advisory Director
Alaa HOBLOS, CEO and Founder

1 Do You Truly Understand the Data Revolution?

After technological and digital advancements, it's time for the data revolution!

Enhanced computing power, IoT devices, cloud storage, and Big Data—these are all technological innovations that provide enhanced data processing and comprehension capabilities, enabling organizations to improve and optimize their processes.

Nowadays, every company aims to adapt its operations based on existing data, develop the right products, evolve its positioning, and evaluate the competition. However, in practice, only a few succeed.

Yet, it is now known that a data-driven organization, one that can make appropriate correlations between data, people, and business, achieves the best results in advancing its activities and foreseeing its future.



The Striking Impact of the Digital Revolution in the Banking Sector

Data analysis captured in the branch is now done on-site. Advisors use tools that rely, in part, on artificial intelligence to offer real-time solutions tailored to their clients' profiles. After technological and digital advancements, it's time for the data revolution!

2 Do You Understand Your Role in Data Culture?

Data Literacy and Data Governance: How to Support Employees?

A person can be considered data literate when they grasp the significance of data and use this capability to make decisions confidently and without hesitation. Such individuals find it easier to embrace changes because they comprehend the implications of the transformation initiated by data governance.

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I'm convinced that it's mainly through practical experience in the field, well-defined processes and concrete activities that company employees really acquire data literacy skills, and not just through e-learning courses!



Frédéric ROBERT

Frédéric ROBERT, Innovation and Data Advisory
Director at Apgar

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Training alone is not sufficient. Becoming data literate is achieved through trial and error, accumulating experience across multiple projects.

With technology, one must learn to walk before running! Gradually improving the ability to analyze data lineage (the complete data lifecycle) and engage in data storytelling allows for the necessary perspective to build a shared vision.

Is Data Literacy Truly Relevant to Everyone? Certainly!



Executives or C-level Executives

During times of inflation, crisis or the post-Covid era, decision-makers closely monitor their budgets. The effort to instill data literacy among this audience aims to facilitate the identification of the value contribution of data.



CDO or CDIO (or CDAIO)

Good news! Data culture is no longer solely the responsibility of the Chief Data Officer; data science and analytics are no longer confined to a dark corner of the company.

With the emergence of CDIOs, data governance permeates all parts of the organization. It marks the return of the trio of «people/process/tools.»



Data Champions

These are the profiles to invest in for «positive contamination» or, in other words, setting an example. Here are some indicators to identify them:

- they are comfortable, curious, and effective communicators,
- they are highly active in meetings,
- they can dissect a problem while being pragmatic in its resolution,
- they are proficient with tools,
- they can interpret a business need and express it in a way considered in a data solution.



Data Stewards

This coordination role is often assigned alongside a primary mission (sales, procurement, etc.). It is time to fully recognize this role so that it is better acknowledged within the organization, particularly regarding of tasks and responsibilities.



Data Citizens

We could have started here: everyone in the company must be acquainted with data! This is why CDIOs work with IT and all business-side C-levels (marketing, HR, operations, commerce, R&D, etc.) to offer user-friendly tools.

3 Data Literacy: It's Time to Grasp Data Better!

Understanding the Business Context and Technical Data Architecture

In a data-literate organization, everyone understands why and how data contributes to creating value for the entire company. Regarding technical architecture, let's assume that everyone wants a data catalog to describe the general behavior of data.

Unfortunately, no one knows where to start! Data literacy serves as a significant lever to populate the catalog and thus promote its value. This is a prerequisite for data observability, which cannot exist without the catalog.

“*Data literacy transforms employees into astute detectives, able to identify what needs to be observed and researched to create an exhaustive vision around their data. More importantly, it enables them to identify when essential elements are missing before formulating their analysis. Just like building a jigsaw puzzle, you need to have a prior idea of what it represents, and that's precisely what data literacy offers.*”



Alaa HOBLOS
CEO, and Founder of Apgar



To grasp data better, it's vital to understand its lifecycle. Here are the major stages, adaptable to your context:

Creation

An event occurs within or outside the company, and data begins to exist.

***Example :** Product classification according to a global reference, customer orders, the passage of a package in a warehouse, etc

Analysis

The goal is to integrate data in the right place to provide truly relevant reporting.

Enrichment

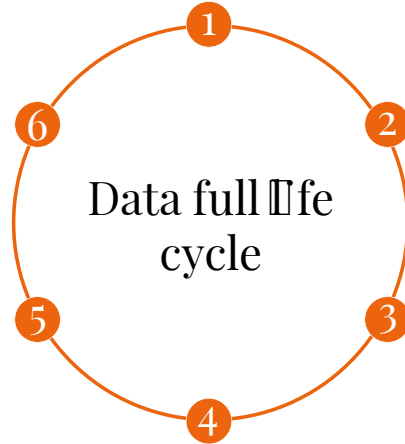
Data is checked for content and enriched for initial use.

Dissemination

Data, being highly volatile, can arrive through multiple channels and spread across various business processes.

Transformation

Data is transformed to fit into the system that will accommodate it.



Exploitation

Previous stages may have created branches that generate other

Beware of Forgotten Statuses:

- Data Loss: Data is lost, unretrievable, or exported.
- Undiscovered: Its existence is known, but not its location or form.

Deciphering Data Lineage

Only users who understand data lineage (i.e., the entire path from its creation to deletion, including various stages of collection, exploitation, and storage) can verify that it aligns with their needs.

It's possible to map and model both the horizontal and vertical axes of lineage:

- the business axis includes processes, company departments, and data lifecycle ;
- the technical axis involves data collection (analysis of applications, databases, etc.) and their activation to create visual maps and automation.

By accumulating «passive» and «active» metadata, it becomes possible to provide real-time predictions. At this point, you come close to the ultimate dream of the data catalog: anticipating side effects!

4 Data Culture Transforms the Entire Company.

From Data Literacy to Data Democracy

For employees, being data literate means gaining meaning, aligning with the company's vision and better understanding its strategy. When everyone grows at the same pace, the entire organization moves forward.

A data-literate company knows how to leverage its data assets to create more value. It understands the context in which it operates and has a broader

perspective. Predictions offer the opportunity to be disruptive rather than being disrupted.

This is how we move towards data democracy. If the concept of data is accessible, and the entire company is heading in that direction, it permeates and is measurable internally, then spreads externally, earning recognition from peers and the market.

Data Culture Transforms IT

For Executives or C-level Executive

Improving the ability to analyze data and understanding the data lifecycle and lineage allows for assessing the impacts of choices on IT and company security.

Keeping a critical eye on data

Maintaining a critical eye on data and capitalizing on past learnings enables comparing new accelerators with the past to evaluate consistency or inconsistencies in results. It involves introspection to correct mistakes, make sound decisions, and translate them into new processes or innovations.

Improve your ability to analyze data

Creating certainty in an uncertain world includes identifying potential challenges and knowing how to handle them effectively.

Capitalizing on learning

Today, it's possible to develop algorithms with ChatGPT. Perhaps in a year, it will be something else. How do we retain these learnings to inject them into future technological stacks?

The Example of ESG Reports

Data literacy allows for perpetuating and enriching learning about available data rather than starting from scratch each time. For instance, consistently finding the same numerical elements in an ESG report year after year instead of relying on a different consultancy each time.

5 What If We Finally Understood the Significance of AI?

Today, artificial intelligence captures everyone's attention but remains inadequately understood. Data literacy helps demystify AI so that it is accepted and viewed as a tool, asset, or colleague. Within the company, data champions actively play a role in this demystification. Subsequently, it's the responsibility of governance to perpetuate this education.

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*We shape our tools,
and thereafter our
tools shape us.*

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John M. Culkin

1 Not Doing AI for the Sake of AI

Who hasn't dreamed of having a data scientist on their team who is a coder, mathematician, great communicator, and project manager all in one? In reality, no magical resource, whether human or artificial, can solve all problems. However, there's added value that needs to be demonstrated and explained.

The ideal approach is to start by identifying the need for AI before conducting a proof of value. If this stage is validated, and AI adds value, positively impacting a business process, then it's possible to move into production.

2 Minimizing Waste

In recent years, Chief Data Officers (CDOs) have invested millions of dollars without achieving conclusive results with Big Data or AI.

3 Protecting Data and IT

The enthusiasm for tools like ChatGPT can be risky. For example, when retrieving code, it's essential to take the time to dissect it, analyze it, and validate it to ensure it doesn't contain any harmful elements. By educating employees, you ensure data confidentiality is preserved as they better understand the consequences of phishing or the disclosing confidential information.

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Remember, ten years ago, we were talking about HADOOP, HDFS, Apache stacks, mappers... Then, everyone rushed to buy first-generation solutions. With the arrival of hyper scalers like AWS, Azure, and GCP entering the AI market, we now have a new generation of solutions focused on users, such as ChatGPT or Gemini.

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Innovation and Data Advisory
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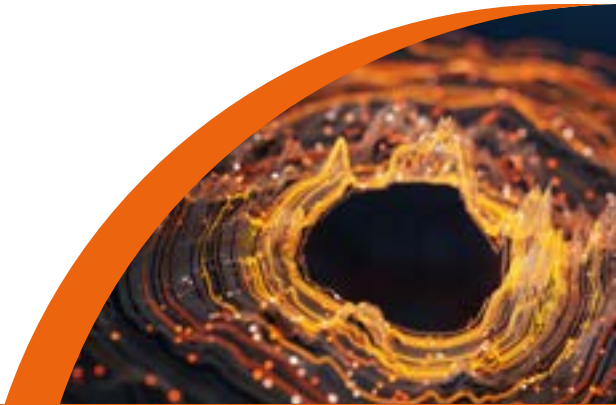


6 Data Literacy: Prepare Your Company's Future.

Data literacy allows for stepping back, assessing the current state of data within the company at a given moment, and making more informed decisions for the future.

Highlight the Human Contribution to AI Usage

Parallel to the enthusiasm for autonomous, tireless, and more intelligent AI tools, the assertion that «technology alone is not enough» remains more accurate than ever. The search for meaning and the identification of the value brought by humans beyond machines are more necessary than ever. Only humans can appreciate the purpose of the technologies implemented and ultimately be the sole judge of what works or doesn't work in the specific context of their company.



Smart Cities: Tomorrow's Challenges

To make life easier for residents, new connected cities in the Middle East result from state-driven initiatives. In Europe, innovations are supported by private entities, such as the accelerator Léonard led by the Vinci Group or the company namR.

Strong ecological challenges emerge, including real-time energy consumption adaptation and waste or transportation management. All of these advancements will be based on data collection from users in these future smart cities.

Use Data More Ethically

Laws and ethics encourage all actors to implement ethical data usage. This crucial trend will continue to grow over time, especially considering new constraints related to ESG (Environmental, Social, Governance) reporting.

Benefit from Cloud Elasticity

In contrast to the overconsumption of recent years, the trend is moving towards increased on-demand consumption and decentralization to distribute the workload better.

When all uses are known (applications, data usage and volume, transactions, connection durations, etc.), it becomes easy to define the sufficient usage for an activity. This contributes to optimizing energy consumption and costs—a virtuous circle that would benefit all companies.

Protect IT and Intellectual Property

Laws and ethics encourage all actors to implement ethical data usage. This crucial trend will continue to grow over time, especially considering new constraints related to ESG reporting.

Rethink the Evolution of the Digital Workplace

One critical scenario in Europe is the risk of power outages. Are we prepared to work without AI, without connected devices? It is necessary to retain our ability to perform manual work while developing the implementation of virtual assistants to facilitate our lives and automate our work.

7 Data Literacy Program: Tailored Support by Apgar.

Our Mission

Integrate data skills into the functioning of your company.

Our Commitment

Establish a framework in which you will quickly become autonomous.

1. Minimize Waste

We create acculturation tools, measure them, and track their progress.

2. Training

We provide comprehensive training programs to enhance data literacy over time and according to the expected skill level.

3. Sandbox

This dedicated space allows you to test tools yourself (in self-service mode) and provides support structures like Apple's Genius Bar to answer all your questions without impacting your main project. It's a far cry from traditional e-learning courses!

4. HR Support

We assist this function in requalifying the skills and job descriptions of employees who have acquired data literacy. We also help you recruit more effectively (internally and externally), particularly by valuing operational knowledge and identifying data skills, even if they are not explicitly mentioned on a CV.

Three Good Reasons to Choose Apgar :

- 1 A human-sized company, a team situated «between two worlds» working to bridge the gap between technology and users.
- 2 Ten years of unique expertise and the trust of major names to address complex challenges.
- 3 End-to-end support for your data initiative, from its inception to implementation.



A data project?

Contact our experts:

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