

OVERCOME BARRIERS AND CREATE VALUE WITH DATA-DRIVEN DECISIONS

"There is immense potential to fuel smarter, faster, and more impactful business decisions by turning information into actionable insights.

Yet, companies often face obstacles like poor data quality, cultural barriers, and underutilization of tools, which prevent them from unlocking this value. "

Matt Protopapas, PhD

*Data & Analytics Consultant,
Managing Partner*

Some of the organizations Matt has worked with:



Let's start with some examples of Analytics generating value:

Daily business processes generate a vast amount of data.

However, those data need further consolidation & quality control to be useful for strategic & tactical decision making.

A report created using inaccurate data leads to waste, re-work, and risks ... not meaningful information.

...on the other hand, a data model that consolidates information automatically and has quality controls in place...

....enables self-service analytics, improves productivity, and, together with AI tools, helps you create insightful reports in minutes.



Enhanced insights also benefit from more advanced analytical approaches.

For example, a sales report does not always provide insight on how to increase sales.

... a marketing mix model that estimates the impact on sales of price, place, promotional activities and factors such as GDP & seasonality does help you understand why sales drop and work on how to increase them.

Sometimes how to proceed is also not clear.

Advanced analytical techniques have always been useful...

Predictive Analytics & Econometrics

Simulation & Optimization

AI tools for data analysis (Machine Learning)...

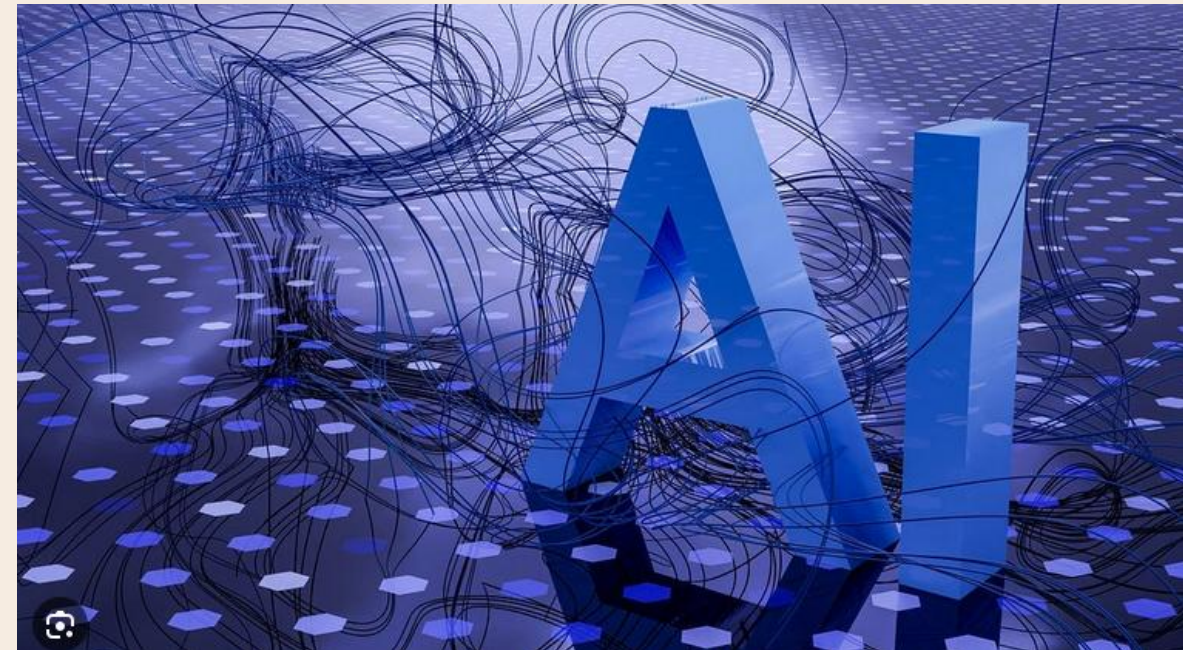
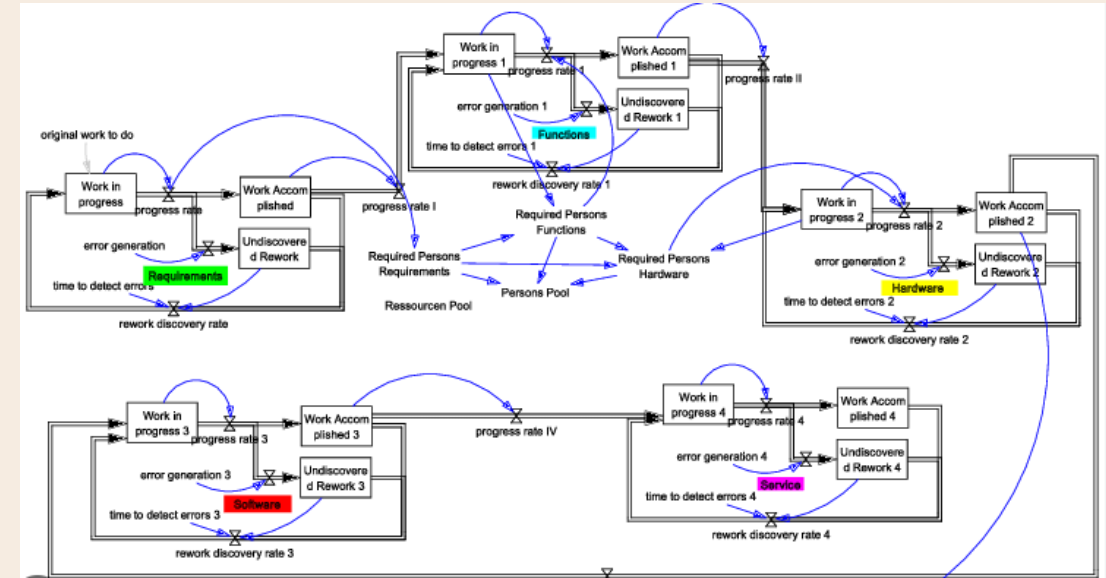
.. while nowadays, Gen-AI can even automate simpler decisions.

Of course, this in turn leads to questions like:

"How can AI improve our business?"

"What can we do with AI to create new offerings to help us grow?"

"How can we make money with AI?"

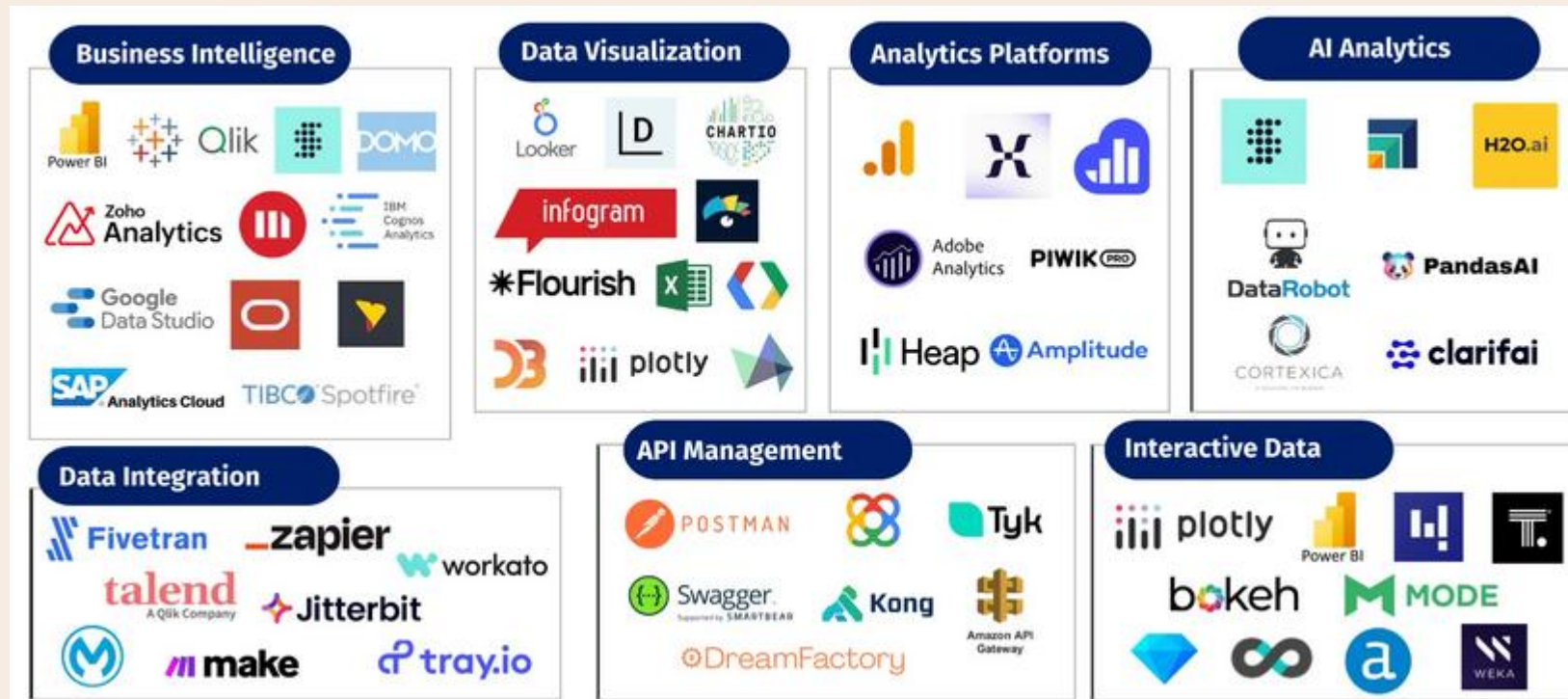




In the last couple of years, BI reports are evolving into reporting apps that enable decision-makers to control processes, generate actions, communicate with collaborators and coordinate AI agents...

... with everything embedded within tools like Power BI.

So, to make sure you can generate value from all these new capabilities and go from low analytics engagement, with fragmented, 'ad-hoc' reporting and analytics -sometimes based on low quality data- to high-value decisions powered by actionable insights and automated solutions that increase analytical productivity ...



You need to follow the right path...

You need to lay out the roadmap and perform the necessary steps.
That can be challenging...



...and support is important.



Matt Protopapas, PhD

Analytics Consultant, Managing Partner



KEDROS ANALYTICS
MAKE DATA DRIVEN DECISIONS

Matt has worked with global corporations, leading consultancies, and major universities, in various analytical roles, including BI Manager, Data Analyst, Data Scientist & Data Engineer, for over 20 years in total. He's been providing value to clients by developing automated reports, building data warehousing infrastructure, and empowering their analytical transformation; helping them foster a data-driven culture and leverage AI & advanced analytical tools.

20 +

Years of Data and
Analytics experience

BI (automated) Reports
Data Lakehouses
Advanced Analytics & AI

30 +

Companies worked with
in various sectors

Banking
Supply Chain
Pharma
Energy
Chemicals
FMCG
...

450 +

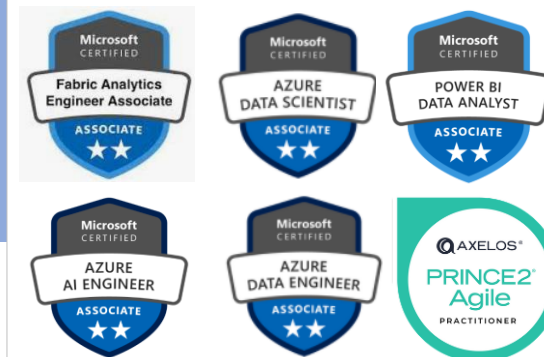
Power BI reports &
Analytics deliverables

2000 +

Project Days in BI
Development and
Data Engineering

20 +

Professional Certifications



... and more

Some of the organizations Matt has worked with:



HSBC UK



ALPHA BANK



Groupama
Ασφαλιστική



ATHENS UNIVERSITY
OF ECONOMICS
AND BUSINESS



PeopleCert



For a company in the initial stage of its data & analytics journey, the best is to focus on coaching your analytical team and generate value from day one.

A necessary first-step to any attempt to enable or improve data-driven decisions, is to start by handling reporting and analytics in a manual (or ad-hoc) manner.

This can be an initial **proof-of-value** stage where the team gain hands-on experience with business questions, data sources, and processes, and value is demonstrated.

This approach not only delivers immediate value but also acts as a 'learning ground' for the team to better understand the company's context, **setting the stage for further value increases, through automation and through an agile, controlled, value-adding process.**

At the same time, **it helps surface** the aforementioned '**obstacles to data-driven decision making**' that might be relevant to your business...

and **make sure they are addressed before scaling** to automated solutions which offer even more business value, but at the same time require extra investment

All these initiatives, fall into the broader discussion about the Data & Analytics strategy that is suitable for your company.

And while, as mentioned previously, the capabilities of today's technology are immense, and can enable you generate insight in seconds, control business processes with a set of 'clicks', and even fully automate simpler operational decision with AI...

... there are always barriers on achieving that value.

"You need to navigate the sea of risks and opportunities with precision,

.... and chart a clear roadmap to maximize ROI from future investments."

◆ Stages of Analytics Maturity

Stage 1 – Initial

- Data silos, inconsistent quality
- Ad hoc reporting, reactive insights

Stage 2 – Emerging

- Some governance, basic dashboards
- Use cases identified but limited adoption

Stage 3 – Scaled

- Integrated data platform, governed access
- BI & Advanced analytics in production
- Data-driven decisions in multiple functions

Stage 4 – Optimized

- Organization-wide data culture
- Predictive & prescriptive analytics embedded in decision-making processes
- AI-assisted operational processes, continuous value monitoring, optimization.

- 🔗 [Three important aspects of demand forecasting](#)
- 🔗 [How to 'prep' data for AI in Power BI \(GR\)](#)
- 🔗 [Intro to Dimensional modelling](#)
- 🔗 [Load data incrementally, into Power BI](#)

Over the years, I've worked with both large corporations and SMEs across Greece and internationally

And while the value of analytics is widely acknowledged, the reality is that very few organisations have truly unlocked its full potential when it comes to making smart, data-driven decisions

Entire ecosystems have formed around analytics, with thousands of experts employed specifically to help businesses turn raw data into actionable insights



AI and analytics together could unlock over
US\$20 trillion
in annual economic value

Source: MGI

Yet despite the promise, many companies still fall short in embracing data-driven decision-making

Throughout my 15+ years of experience in business environments, I've observed consistent patterns--roadblocks that repeatedly limit progress, stifle insights and reduce the impact of analytics, no matter the size of the company or the enthusiasm.

Lack of Focus and Actionability

...an inability to clearly identify key drivers, understand their root causes, or determine the most effective actions, making it challenging to address relevant issues, maximize profits, and minimize risks.

Organizational & Cultural Barriers

...arise from centralized decision-making, resistance to change, and a lack of leadership commitment to a data-driven culture, which, combined with misaligned incentives, hinder proactivity, scalability, and coordinated action.

Data Governance

Have you ever witnessed people in an executive meeting presenting different numbers for the same metric? Lack of clear definitions, or clear roles on who 'owns' them, block the creation of a 'single source of truth' and can create confusion.

Data Quality

...where inconsistent, incomplete, or inaccurate data, along with integration challenges, undermine trust and analysis, limiting visibility and hindering optimal decision-making.

Underutilization of Modern Tools

...adoption and effective use of BI tools, Advanced Analytics & AI remain limited. We talk today about AI creating reports without the need of data analysts – but OLAP existed since the 90ies... and we BI professionals create reports up to this day...

Decision Execution Gap

...occurs when organizations struggle to act on available insights due to misalignment with business priorities and slow decision cycles, preventing timely and effective responses.

Sales Report

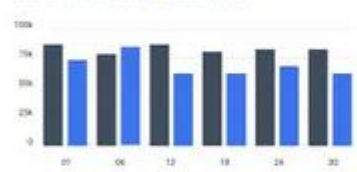
Cost
US\$ 32,900
+1.39%

Goal completions
56,963
+3.49%

Cost per click
US\$ 2,50
+0.13%

Campaign conversions

● Transaction revenue ● Transactions



Breakdown by Country

Country	Spent	Reach	Clicks
Germany	\$20,064	9,942	8,932
Denmark	\$18,052	7,753	6,945
Austria	\$17,032	6,934	5,578

Reach over time

○ Reach



Lack of focus and actionability refers to the tendency of business reports to present data that is broad, generic, or disconnected from the decisions that leaders need to make.

Instead of highlighting the specific drivers of performance or providing clear, actionable insights, these reports often focus on surface-level metrics—like sales or costs—without deeper context or analysis.

For example, in the report above, the areas that need improvement are not evident, the reasons why are missing, and there is not a clear path to action.



Decision-makers are overwhelmed with data but lack clarity on what truly matters



Key performance drivers are either unknown or poorly understood, making it hard to link outcomes (e.g., sales growth or cost increases) to specific internal or external factors



Reports highlight symptoms, not causes, limiting the ability to identify the root of problems or opportunities



There's little guidance on what actions to take, which leads to indecision, inefficiencies

As a result, leaders struggle to:

- Prioritize effectively,
- Align teams around the most impactful levers of performance
- React swiftly to changing conditions, and
- Drive sustainable growth and risk mitigation



Ultimately, a lack of focus and actionability undermines the very purpose of reporting: to enable better, faster, and more informed decision-making.

Knowing the volume of your sales, or the numbers in the 'bottom line' is important but cannot help you decide what to do to increase them.

You need to focus on what drives sales, profits and value...



KPIs with clear targets, and a clear view on when targets are not met.

Then leverage analytics to understand why,



define proactive action plans to maximize performance,

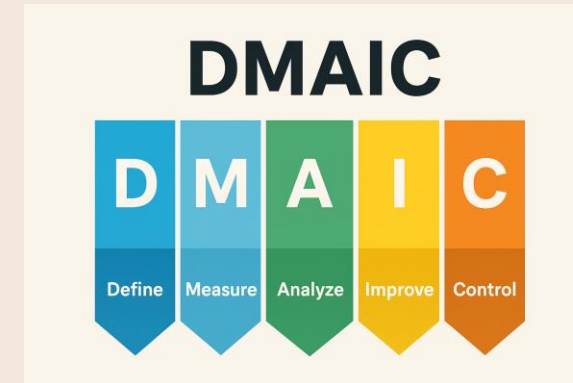
and put in place controls to trigger them.




Large companies have both business experts within the COO, CFO & CFO mandates, and access to management consulting firms, to determine KPI's and root causes for them.

SMEs on the other hand can either:

- ① **Try to adapt what works within their business models**
- ② **Use a framework to help them identify what to measure and analyze information**



When I was leading the BI & Big Data Team at PeopleCert, we worked together with a management consultant to model the entire set of business processes, and create a set of interconnected Power BI reports, for the senior stakeholders to review and decide how to move the business forward. We even made a summary video of the project:

 [Management Dashboard with System Dynamics](#)

- ③ **Use a structured problem-solving approach to identify & validate potential drivers.**

For example, MECE logical trees, popularized by an ex-McKinsey employee, can be used to break complex problems into clear, non-overlapping parts that cover all possibilities, helping structure analysis, avoid gaps, and initiate analytical investigations, to support data-driven decisions.

A data-driven culture has value on itself

The social interactions and norms within an organization, and in particular how decisions are made, are the main aspects of a data-driven culture - or the lack thereof.

Gut feeling is one way to make decisions, but is not very effective, and neither is scalable.

Culture is not about what we think we do; it is about what we actually do. The type of behaviors that are expected, rewarded and reinforced in a group is what establishes a culture.

Hence the saying, 'culture eats strategy for breakfast'.

Even if we have the best of intentions, and have thought deeply about how to achieve the next steps...

... norms do not change overnight.

The value of the data depends solely on whether they are used in a way that creates value.

And that's all about whether the decisions made are realistic and justified or are just about nodding in agreement to the predispositions of authority.

Smaller businesses rely heavily on a few people.

Decisions remain centralized, limiting growth.

In larger companies, resistance to change is common, while overreliance on intuition over data is not uncommon either.

Lack of leadership commitment to foster a data-driven culture, and misaligned incentives between the various teams within the organization, lead to suboptimal and uncoordinated actions.

Without a data-driven culture, proactivity and scalability suffer.

① Executive Sponsorship

A data driven culture needs have 'executive buy-in'. If leadership is not aware of the value gains and the problems that need to be solved, then even the most persistent efforts to build an effective data-driven culture will fail.

The executive sponsor, is a leader that can align (and rally) the people towards a common goal. The benefits that employees gain when they adopt one set of practices instead of another, are defined by leadership. This plays a pivotal role on culture evolution, and the leader must demonstrate that data-driven decision is placed high in the set of company values.

The leader can also secure the necessary resources, such as the development of data & analytical assets necessary for generating value from data. They can provide funding and time for training and foster a 'safe space' for experimentation.

All these aspects are critical for a data-driven culture to thrive.

② Pluralism: various roles and tools

An organization can have different modes of developing analytical value from data.

Corporate BI has been a centralized, IT driven way of creating reports and analytical data assets for decades, but the requirements for agility and speed has led to the adoption of flexible **business-led, self-service analytics** alongside the expensive data ware(-lake)houses and automatic reports displaying metrics in a consistent way, as per business definitions.

The agility and emergence of novel insights of self-service analytics, are now elevated even more with modern **AI tools** that can help analysts reach value even faster.

So, they are two forces at play: creativity and the need for consistency that must interwind together for value to be maximized: '**discipline at the core & flexibility at the edge**', as per a famous quote used from many Microsoft employees.

③ Community of practice

An informal –and extensive- team of professionals within the organization that communicate and work together to develop assets, ways of working and value for the common good of the company, is a community of practice.

The community plays a pivotal role on the development of culture. If no such community exist, then the culture cannot be fostered in an effective way.

And while the technical tools that facilitate communication (chat, forums, e-mail lists, video channels, and a perhaps a central portal to host all those assets) are commonplace today, there is always the need for **champions** – people who promote and demonstrate the values of data-driven decisions and ways of working , and a **Center of Excellence** – a group of people who can guide the rest of the community through their expertise on either technical best practices on managing and analyzing data or making effective data-driven decisions.

④ Motivation

Motivation and encouragement to use data-driven practices is also necessary. Intrinsic motivation – the joy we derive from doing the work itself in a creative way- is always superior to extrinsic motivation – bonuses, promotions and anything we are promised to gain if we perform it well.

Of course both are necessary, and it is important to link extrinsic motivators to following the values of the culture we want to build, otherwise those discrepancies can act as de-motivators. However, the creativity, sense of belonging to the community and mental health benefits that derive intrinsically can play the most drastic role in happiness and productivity.

Judging from myself, in various phases in my career, I gained more money in a project... not always it did translate on me being happier or feeling 'unstoppable' in regard to my creativity and productivity.

5 Training

The value of the availability of the necessary tools, and the necessary training to use them is apparent. Even a community of motivated individuals that receive guidance from the best experts cannot by themselves take the initiatives they need to take to structure their thinking and generate the insights they need to realize value from information.

Here the role of the executive sponsor is again evident, as (s)he should ensure all the necessary resources are in place.

6 Measuring Success

All the previous strategic and tactical steps – and the subsequent actions an organization needs to take- should always come along with the question: “how do we know it’s actually working?”. This is the only way we can progress towards the goal of building a data-driven culture.

A simple way would be to look at the number of people who are actively involved in ways that align well with the values of our data-driven culture. For example, how many people use Power BI reports to generate information and how often.

Of course that does not measure success – it measures usage. A more subtle way would be to evaluate whether the analytics that are required for people who need to make decisions to be able to make them in a timely and data informed manner, are there – or are evolving towards the desired state.

Finally, the most important measure – and perhaps the most difficult to attain- is value. The end value of the decisions made, and how they are better when they are based on data and information, instead of intuition, would be the measure of success with the most importance. It is of course difficult to attribute an increase in profits to specific analytical initiatives.

However, the importance of culture is that encompasses the entire organization. And no one can deny that culture, not strategy or indeed tactics, which are eaten for breakfast ☺ , provide the most impact on achieving every one of these goals.



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Agentic AI



AGENT

AGENT

		60,000	60,000	100	240,000
		60,000	60,000		240,000
					80,000
		20,000	20,000	90	120,000
		30,000	30,000		40,000
315,000		10,000	10,000		1,265,000
	400,000				400,000
	400,000				400,000
315,000	300,000				615,000
315,000					315,000
	300,000				300,000
	250,000				250,000
	250,000				250,000

PLACING STAY!

50 70 50 90

QUANTITY

1 2 3 4 5

6 7 8 9

Contract	Contract Date	Contract Value	Contract Type	Contract Status	Contract Risk	Contract Owner
OPP-27706	8/1/2023	\$ 973	IF4	Open	High risk	Y
OPP-28613	7/1/2023	\$ 982	0%	Open	High risk	Y
OPP-30808	6/12/2023	\$ 962	0%	Open	High risk	Y
OPP-32104	6/2/2023	\$ 127	0%	Open	High risk	Y
OPP-33899	5/23/2023	\$ 873	0%	Open	High risk	Y
OPP-33926	5/31/2023	\$ 973	IF4	Open	High risk	Y
OPP-35409	4/5/2023	\$ 982	0%	Open	High risk	Y
OPP-39149	1/18/2023	\$ 917	IF4	Open	High risk	Y
Total		124	2,977,569	0%		

By a set By opportunity

APPLY DISCOUNT TO OPPORTUNITIES

Step 1

Filter the characteristics of the opportunities from the filter section to which you want to apply a new discount.

Step 2

Enter the new assigned discount.

Numbers only (0-50)

Submit discount

Alert your team via email when a Power BI data alert is triggered



Logistics Demo



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On-Time (in €)

100.00%

Fill Rate (in €)

47.55%

Perfect Order Items (in €)

47.55%

Orders

6

Order Items

11

Time To Pack

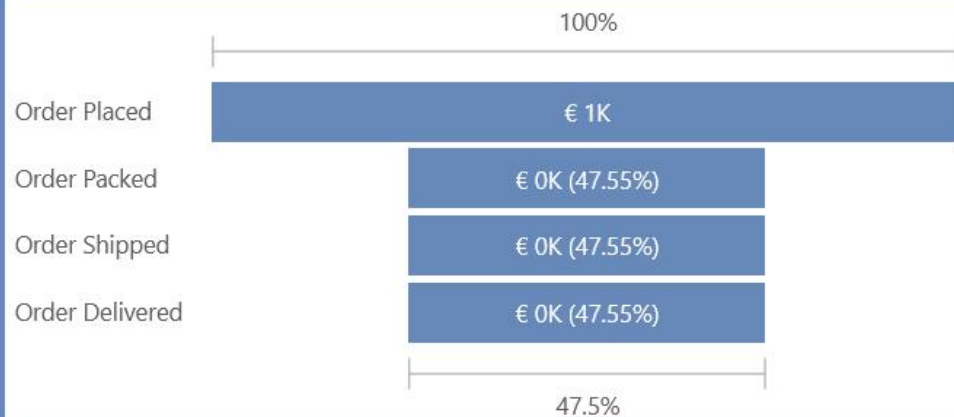
0.40

Time To Ship

2.20

Time To Deliver

3.60

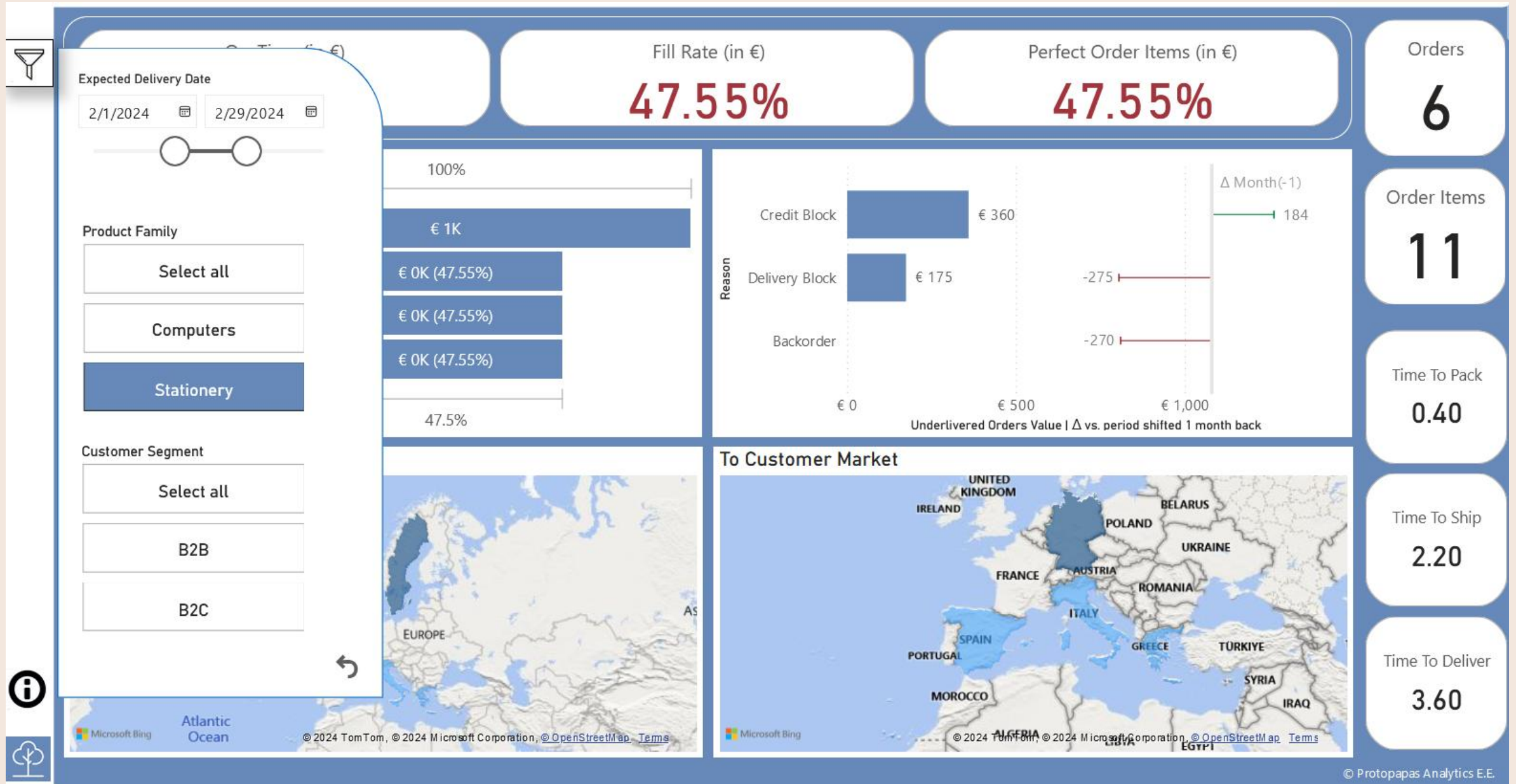


From Warehouse Location



To Customer Market





...and clearly understand the meaning of each metric.



This is the percentage of the total value of (only the delivered) orders that have been expected within the selected period, that have also been delivered within the agreed timeframes

The percentage of the total value of the orders expected within the selected period, that has been actually delivered (i.e. the corresponding order items have been delivered, sooner or later).

The percentage of the total value of the orders expected, that have been delivered on-time and in-full (i.e. all their order items have been delivered within the agreed time frames).

Number of orders expected within the selected period.

This is a funnel showing the % of orders expected to be delivered within the reference period, that have been packed, shipped, or delivered.

Each bar shows both the actual number of orders that have passed each stage, as well as their percentage to the total orders expected to be delivered within the period selected in the date slicer, within the filter panel.



From Warehouse Location

This shows the value of the orders expected to be delivered within the selected period, sent (or scheduled to be sent) from each warehouse location.

There are other relevant metrics, displayed as well.

Selecting a specific country, enables us to filter most of the other visuals as well, providing metrics for the specific country.

This is probably the most complex visual of this dashboard. It shows the reasons why some of the orders have not been delivered.

As the other visuals, it focuses on the orders expected in the selected period. And as in every visual, the metrics are subject to all the other filters applied through the filter panel, as customer segment, product family, etc. The value of these orders are displayed in the bars at the left hand side of the visual.

There is a reference vertical bar at the right, as well as horizontal error bars. These show the difference between the values of the orders within the period, and the values of the orders of the parallel period shifted one month back. So, if we've selected Feb 2024 in the "Expected Delivery Date" filter, then the vertical bars show the difference between e.g. the value of the backorders of Feb 2024 to Jan 2024.

To Customer Market

This shows the value of the orders expected to be delivered within the selected period, to each customer market / country.

There are other relevant metrics, displayed as well.

Selecting a specific country, enables us to filter most of the other visuals as well, providing metrics relevant to the orders of the specific market.

Order items expected within the selected period.

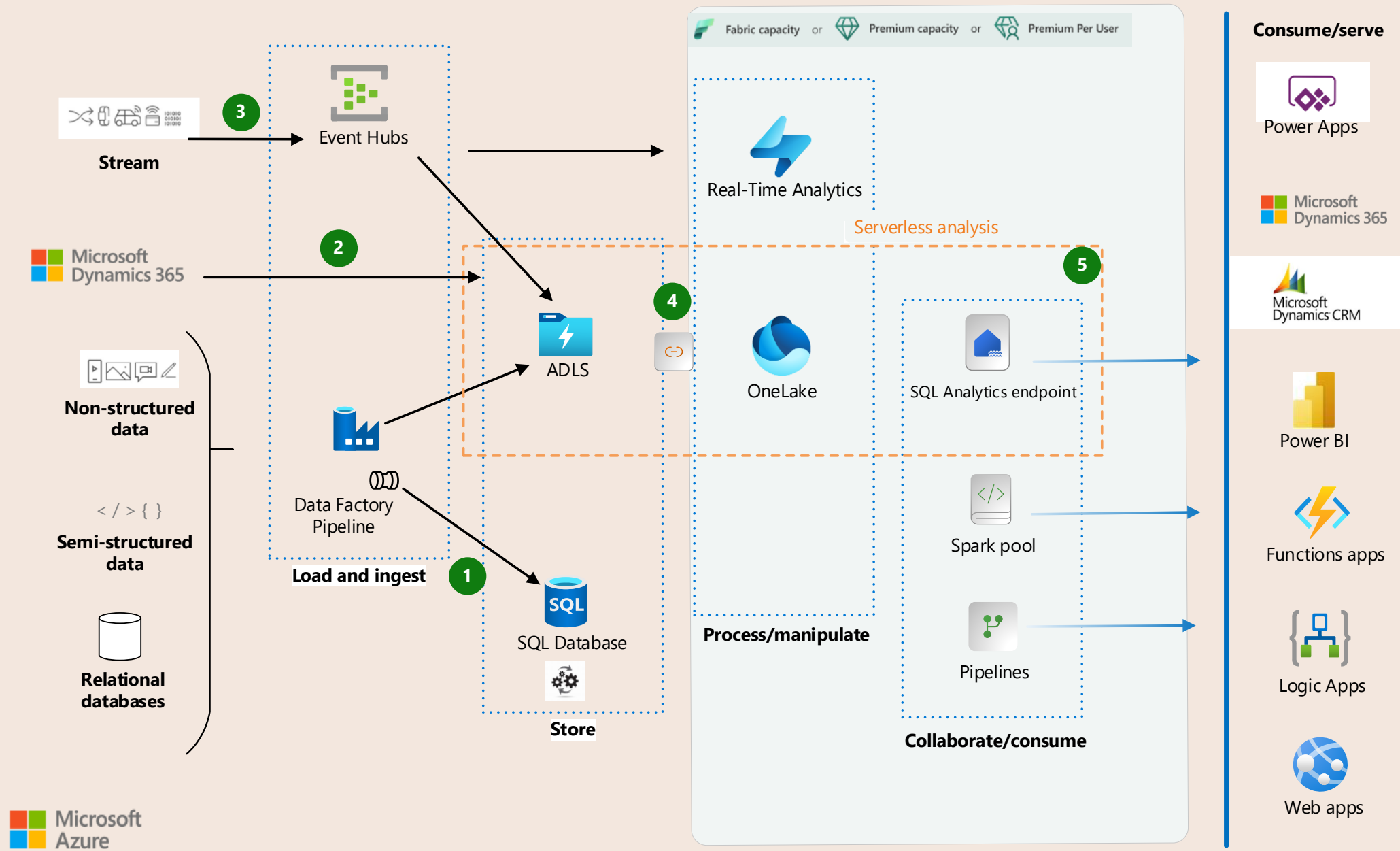
Average time elapsed from placement to packaging

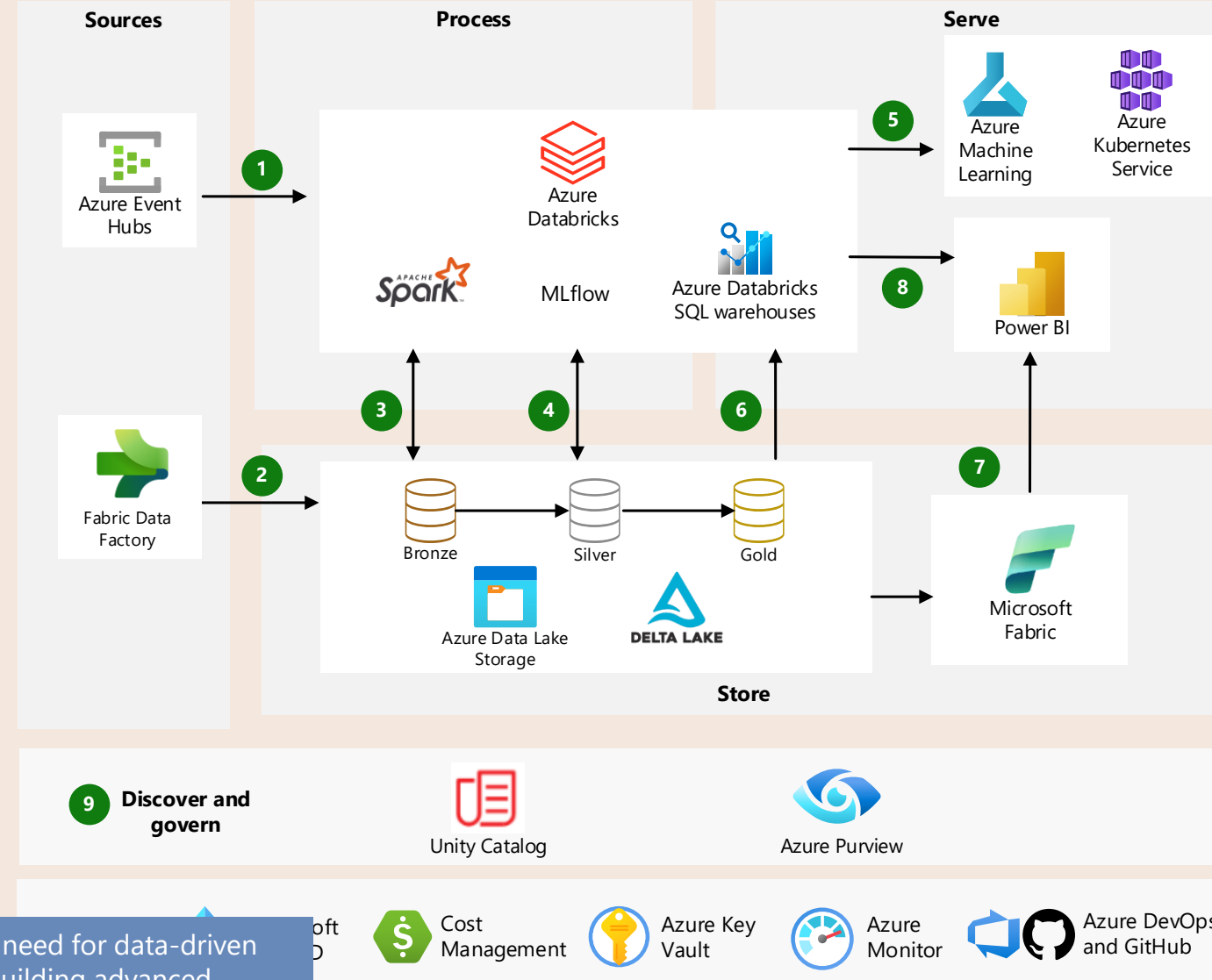
Average time elapsed from packaging to shipping

Average time elapsed from shipping to delivery

A company with emerging analytical capabilities, should focus more on standardizing and automating its analytics potential, to save on time and development costs, achieve a coherent way of understanding and communicating during decision making – a 'single version of truth' – and progress towards scaling even further.

While at the same time building the analytical infrastructure(s),





Finally, a company that has already grounded the need for data-driven decision making within its culture, can invest on building advanced infrastructure, to incorporate both structured & unstructured information (text, video) from its business processes and its systems into its 'single version of truth', to achieve enhanced near real-time insight...

either by myself, or with my network of trusted partners...

Vasilis Panagopoulos, MSc

Grigoris Nitas, MEng

Tony Loci, MPM

 **Office Line**

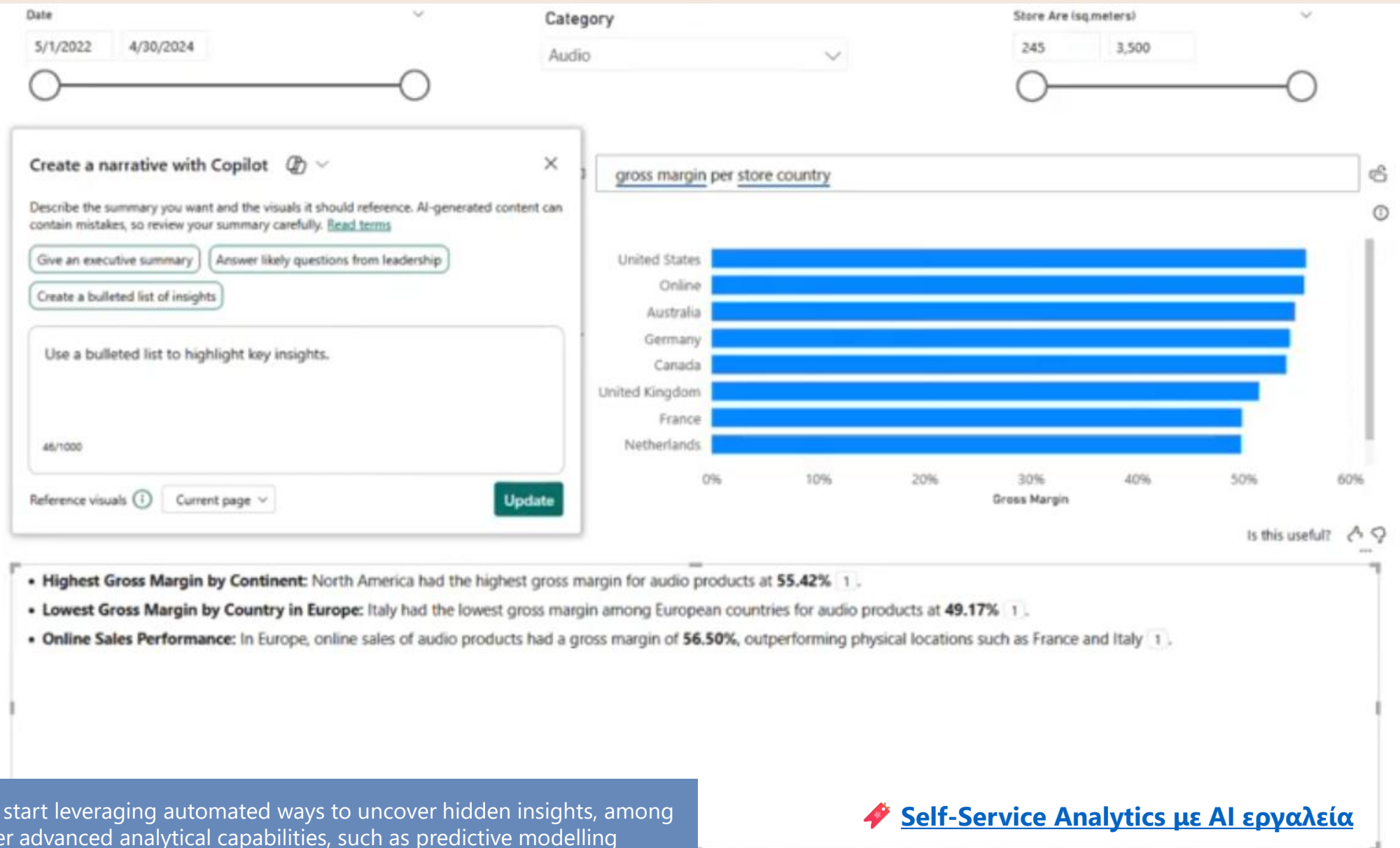
 **Finartix**

 **Aimplan**
Extending Power BI

... and more

... within a structured process that ensures timely delivery as per the requirements, and quality of the deliverables up to the high standards I set for our projects.

...enabling you get insights from your data in seconds, using AI,



The automated, consolidated datasets we create, are further prepared for AI, as we work with you to incorporate business context that aligns with your business processes,

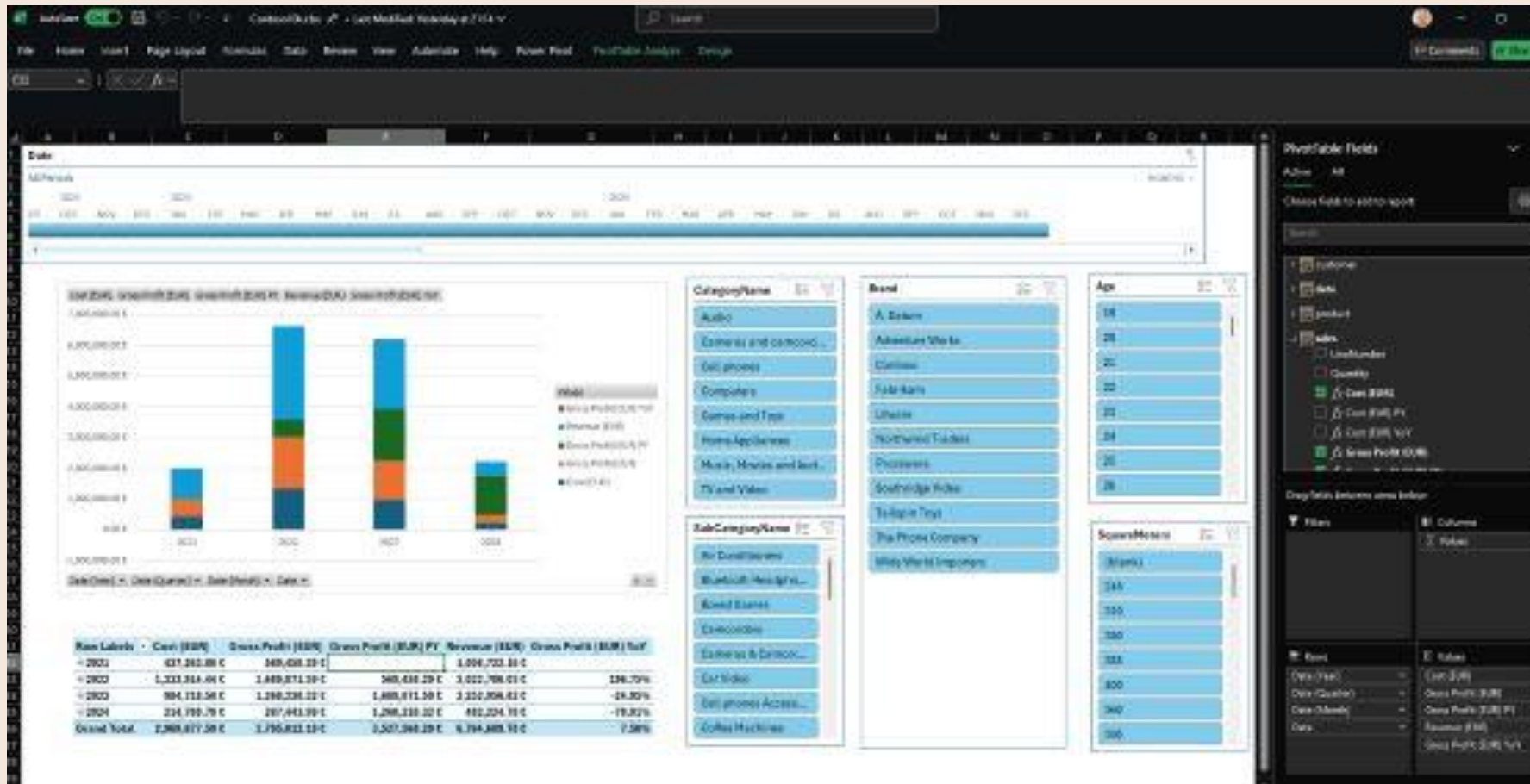
[How to 'prep' for AI in PBI](#)

enabling you to ask questions in natural language and get insights & reports generated automatically by AI tools, in seconds.

...to start leveraging automated ways to uncover hidden insights, among other advanced analytical capabilities, such as predictive modelling

In tools like Power BI, or more familiar tools like Microsoft Excel

🔗 [Connect to Power BI from Excel \(GR\)](#)



...while empowering them to leverage advanced analytics - even within Excel through a secure way to integrate Python code, managed by Microsoft

🔗 [Self-Service Analytics με απλό drag & drop](#)

A company should also empower its people with effective tools for performing the analytics they need to get insights and make data-driven decisions, increasing analytical productivity >10x and progressing further towards optimizing its decision-making processes.

🔗 [Example of Python in Excel \(GR\)](#)

```
Py df = xl("A1:D12", headers=True)
df.groupby(["From", "To"])["Case ID"]
```


ATHEX (Top-25 cap) Organization

Guided a team of Big-4 specialists to migrate the analytical infrastructure used for automatic BI reports

(from Databricks, ADF, Synapse, Power BI)

... into a Data Lakehouse within Microsoft Fabric, that enables:

- 1) Consistency and accuracy of reporting metrics across business lines and processes.
- 2) Faster and more cost-effective development of new reports and analytics.
- 3) Business stakeholders can generate actionable insights in minutes, by creating their own analytics, through AI & Self-Service BI.

Global French Pharmaceutical

Contributes to next-gen BI capabilities for global Supply Chain Analytics, which provide Gen AI capabilities, dashboards with KPI customization features, alerts management with comments & status write-back, etc.

At the same time, contributed to the development of a Power BI reporting pack to monitor key metrics such as OTIF and 3PL performance KPIs,

...and helped redesign the underlying semantic data models, improving reporting performance vs. capacity costs, of over 400% in total.

ATHEX listed Manufacturer

Developed Power BI reports to help the client manage sales, shipments and safety stock & delivery timelines,

leveraging SAP BW, Proteus WMS & Aimplan to 'write-back' user defined input for global demand and lead times,

...creating a 'translytical' tool that extends 'classic' reporting and empowers the client control their global supply chain in a proactive, cost-effective, and collaborative way.

Ioannis Fousteris

Group ICT Director,
leading Greek manufacturer

We had the privilege to co-operate with Matt, an excellent professional with an out of the box thinking and always willing to assist. I do recommend Matt, regardless of the complexity of the requirements.

Harris Theodorakis

Manager SE Europe,
global Supply Chain company

Working with Matt has enabled us to convert raw data into KPIs and market trends, with a profound impact on our business. Matt's continuous support allow us to aim on higher efficiency, sustainability and cost savings.

Angelos Paidas

Head of e-Mobility Products & Services,
leading Greek Energy provider

I've been working with Matt for over a year, in order to create some advanced BI reports. His in-depth knowledge of BI tools and professionalism are standing out and helped deliver 1st class Power BI reports.

Poulcheria Benou

Information Systems Analyst,
leading Greek bank

I have worked with Matt in a BI project for a Greek bank. The quality of the result, timely response and excellent cooperation, make Matt a leader in his field and an impeccable professional.

Dimitris Dimopoulos

Vice President, Circana

I had the pleasure of working with Mattheos on various projects and feel that I have benefited greatly from his expertise and effectiveness. He is adept in a variety of programming languages and always willing to transfer knowledge.

Tasos Plataniotis

Director, EY

I worked with Matt in several projects in EY. He was a very skilled senior, with knowledge of various areas of financial risk and strong computational skills. He has always provided significant input in the challenges we faced.

Schedule a Free 30'
Discovery Call

