



Cheeper®

The Power of Information

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What is Cheeper®?

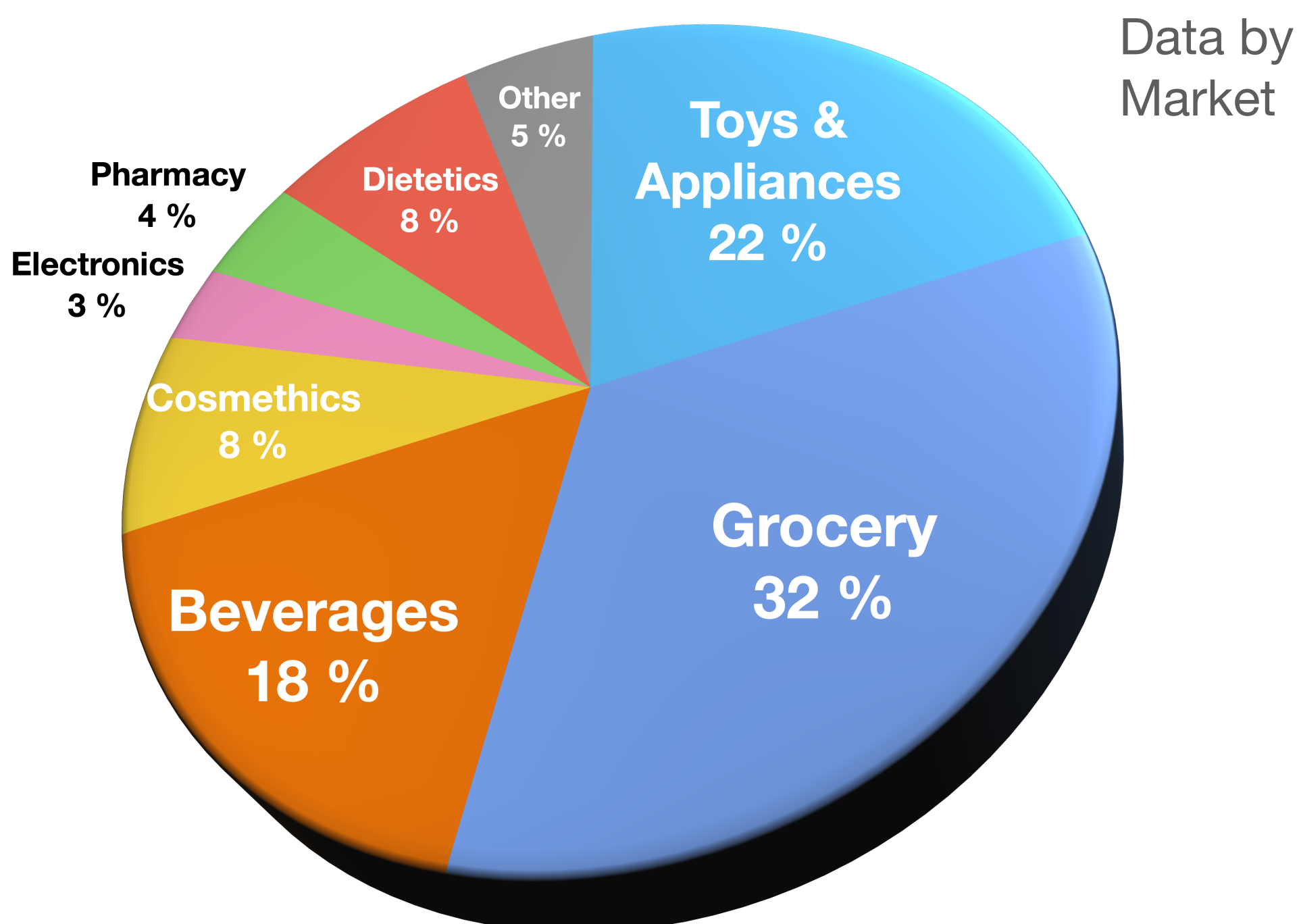
Cheeper® is an **innovative database** designed for different markets. It contains advanced information on consumer products, food, beverages, groceries, cosmetics, electronics, pharmacy, dietetics and nutrition, among others.

The data is constantly updated, several times a day, allowing a global, clear and reliable vision of each market, **including all products and price changes**. There are different ETL processes to transform, clean and treat them to guarantee the finest quality.

The data in **Cheeper®** is processed with Artificial Intelligence (ML) algorithms to yield new insights, create predictive models to reveal hidden pricing patterns, trends and unique indicators.

They provide a true view of the competition, incorporating data from new businesses, manufacturers and suppliers on a daily basis.

Cheeper® **links all the information** using internal product IDs (SKU's) instead of EAN codes, to allow comparing "bananas" or any other fresh products lacking EAN codes, across different online stores.



Cheeper® Use Cases

The information provided by **Cheeper®** has been structured to improve the online sales of any company. It allows to strengthen the following areas:

- **Analyze update frequencies:** To find out how often a business updates its prices and products on the web.
- **Market positioning:** It offers a clear comparison between products of the same nature, to help with online positioning while being more competitive.
- **Pricing strategies for campaigns:** Updated data from **Cheeper®** allows developing specific campaigns based on seasonality or to promote a specific product.
- **Competitive analysis:** To be able to study the commercial model of a certain product in different businesses.
- **Optimization of sales margins:** Allows you to analyze the commercial margin of products sold online and adjust them based on current supply and demand, while maintaining competitiveness.



Cheeper® Use Cases

- **Own-brand strategy:** the information provided by **Cheeper®** is key to position own-brand products, and define the commercial and pricing strategy against other brands of similar products.
- **Pricing strategy between brands:** to be able to analyze the behavior and historical evolution of prices between different brands, and define the pricing strategy for a specific product.
- **Supplier analysis:** To be able to study the commercial model of a certain supplier in different stores, or to analyze the positioning model that they have established for some particular products.
- **Sales Price Optimization:** Seeing how products behave in different online stores, sales prices can be dynamically adjusted to maximize the margin or profit.
- **Predictive models:** the historical data that **Cheeper®** has allows the implementation of predictive models, using traditional methodologies or Machine Learning.



Cheeper® Connectivity

The information contained in **Cheeper®** is accessible via:

PRODUCT HISTORY

All the historical information stored by **Cheeper®**, ready to be exploited in BigData platforms and Business Intelligence systems such as **TIBCO Spotfire®**.

Historical information from **Cheeper®** can also be used to implement new metrics and predictive models using Machine Learning, or any other methodologies.

WEB SERVICES

To query all product data on demand, sending its unique product identifier. This option allows for an easy integration with existing platforms and systems.

ALERTS

When any change occurs in the data of a product such as its price, alerts are sent to a specific Web Service provided by the client. In this way, they can be analyzed by workflows and decision-making systems to, for example, modify the price of our online products based on the current prices of the competition, always protecting our margins and following the internal Pricing policies.

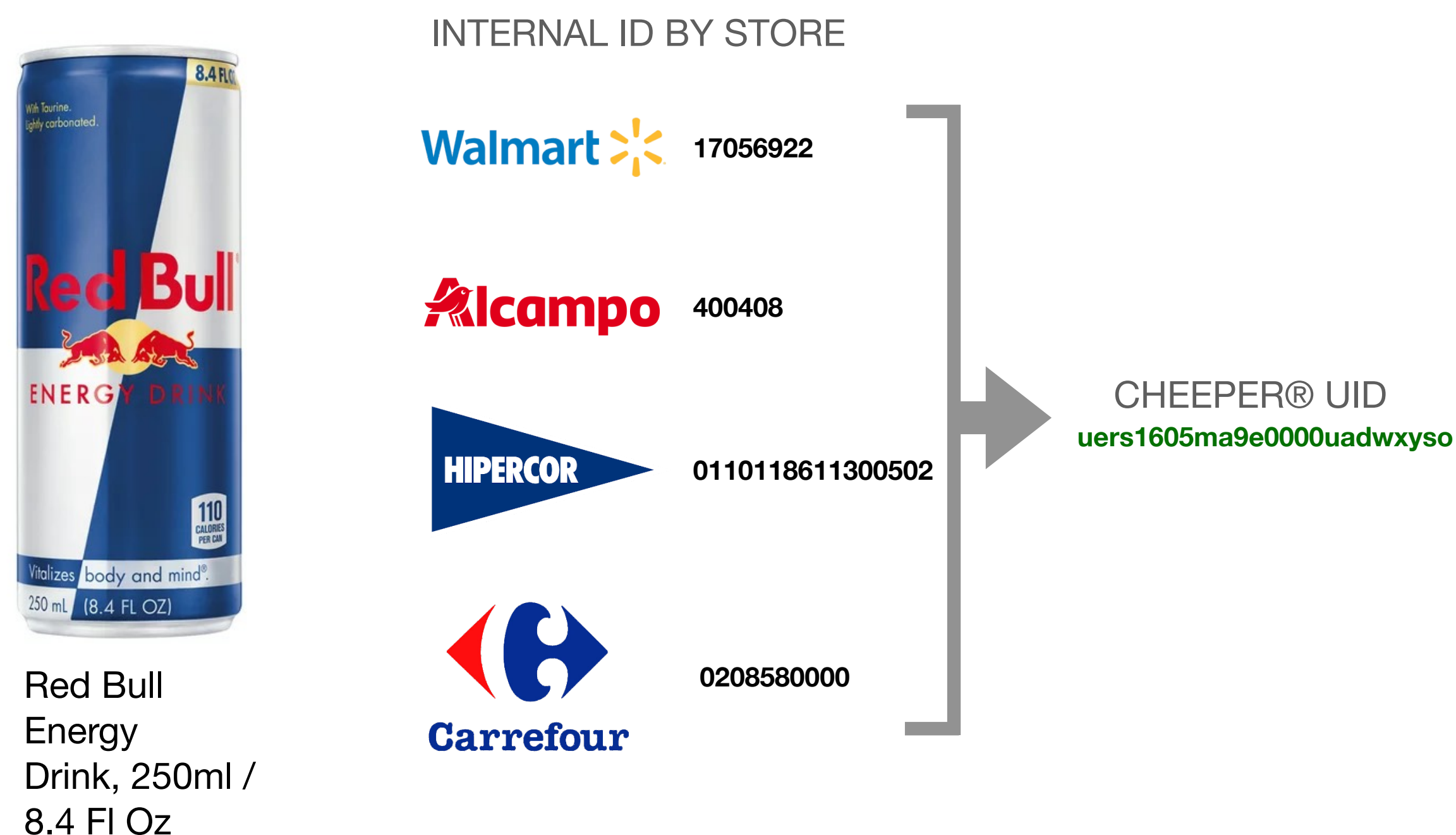


Cheeper® Universal IDs

Cheeper® maintains all links between products from different businesses through a "**Keying**" process, to guarantee that the same products are being compared, regardless of the code, SKU, reference or identifier that each business or supplier assigns to them.

In this way, **Cheeper®** assigns a **unique universal identifier** to all the products in its database, including fresh produce, which usually lack EAN or other standard barcodes.

For example:



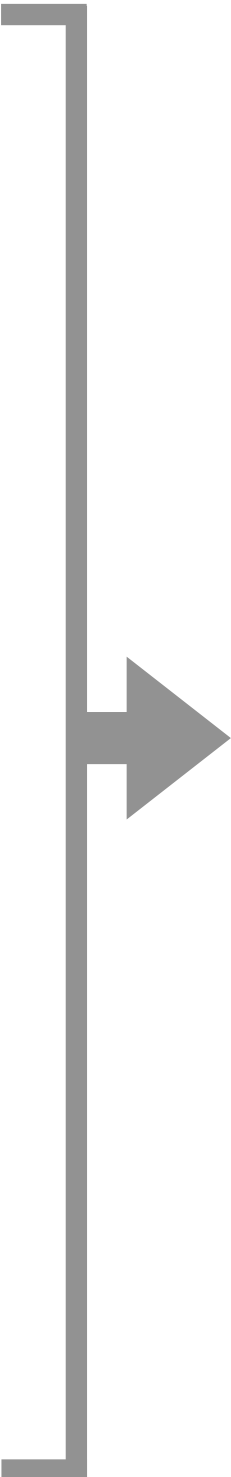








Any merchant can query **Cheeper®** data using the **exact same references** that they currently have in their systems, without worrying about what ID conventions others use. **Cheeper®** maintains all these relationships to deliver accurate data, thanks to its **internal unique identifier** that links all products.

Cheeper® also manages complex product references, for example in the case of fresh, unbranded or own-brand products.

It is very common that the packaging format of a store does not match the others, or different units of measure are used in liquid products. Cheeper® links the products of **variable nature by approximation**, while unifying their units of measure. For example:

HEINZ KETCHUP 700 Gr or 800 ML

	REFERENCIA	DESCRIPCIÓN		
	6801500000	Ketchup Heinz envase 700 g.		
	250181618	Heinz Top Down Squeezy Tomato Ketchup Sauce 700G		
	277454	HEINZ ketchup top down 700 gr		
	17263	Heinz Tomato Ketchup Maxi Pack 800 ml		
				CHEEPER® UID aucj6730dp9u7454rbr60021

As seen in this example, Cheeper® has linked similar products, although in some cases the format is **700gr.** and in another case **800ml.**, therefore within reasonable margins it is capable of associating similar weights and volumes.

Single Product Comparison

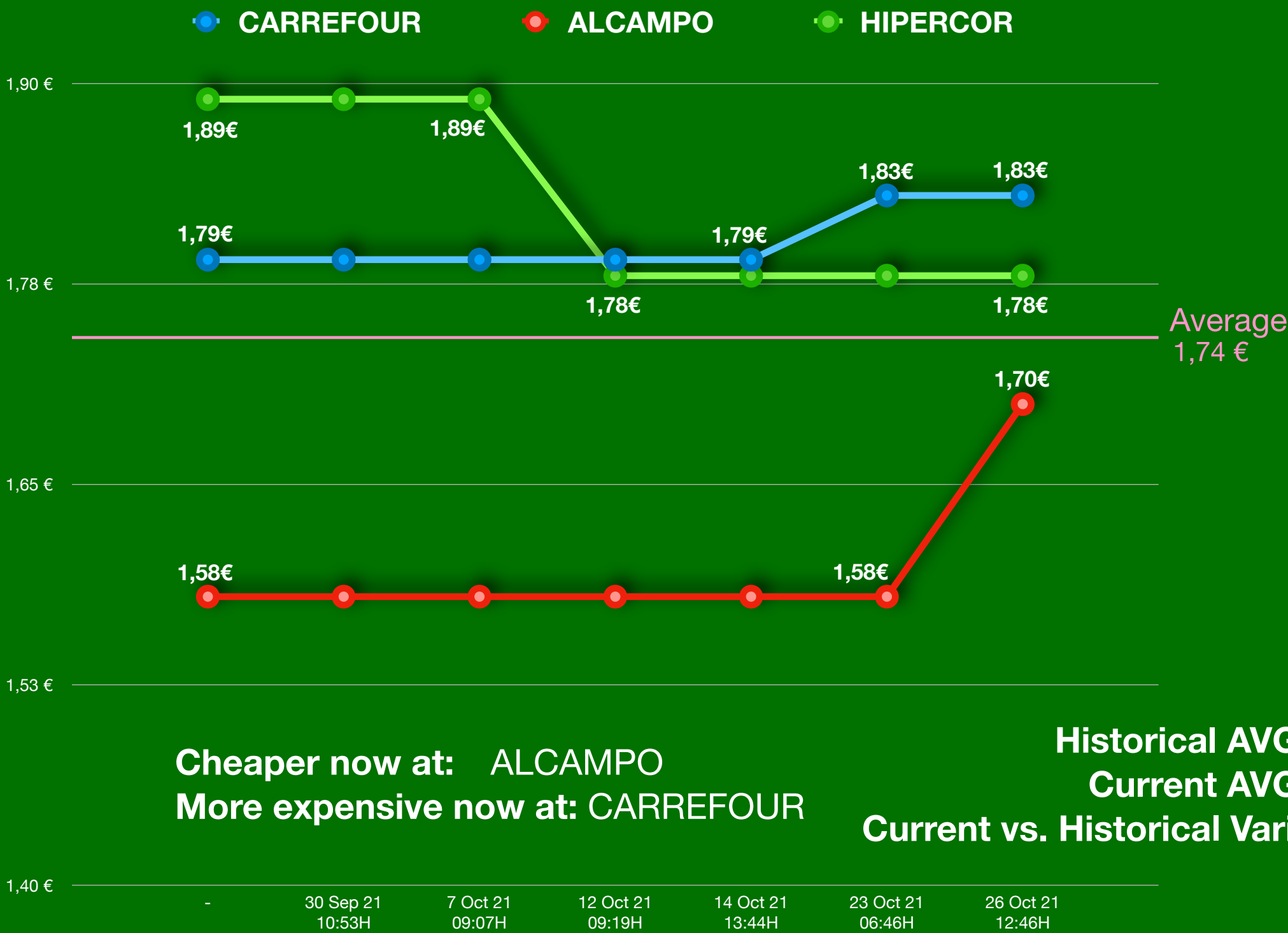
The data provided by **Cheeper®** allows you to compare the **historical evolution** of prices for **the same product** among **different online stores**.

In this case, we have compared a 1-liter bottle of **sunflower oil** in three different online supermarkets, analyzing the behavior of their prices for a month.

Use Cases:

- Analyze update frequencies to infer which products are being promoted, or which ones are being abandoned by other businesses.
- Product positioning according to the market.
- Pricing strategies for campaigns.
- Competition analysis.
- Optimization of sales margins with suppliers.
- Predictive models.

Single Product Comparison Report Coosol Sunflower Oil -1 L



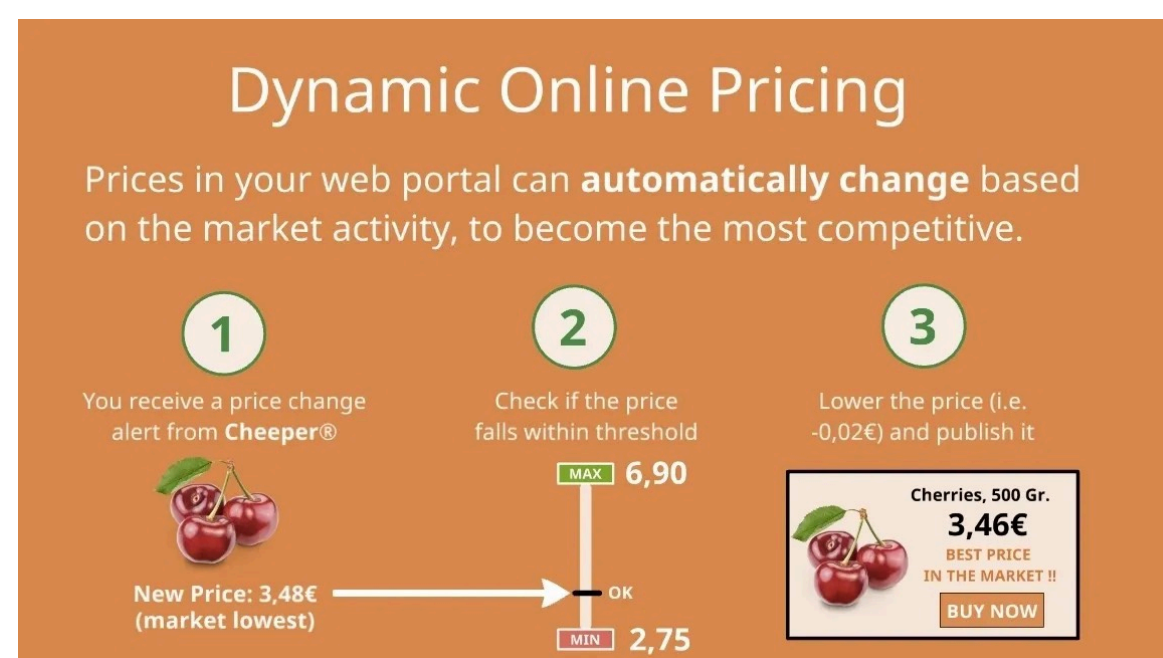
Practical use cases:

Cheeper® allows you to update the prices on your online store automatically, through workflows and decision engines, to publish the best prices on the market in a safe way, following your Pricing policies and preserving all profit margins.

Knowing what strategy our competitors have followed in previous campaigns, with **Cheeper®** makes it easier to predict what will happen in future campaigns, allowing to prepare new commercial strategies on set dates in advance.

The analysis of price patterns on the historical data of **Cheeper®** allows to identify strategies that are not visible to the naked eye, such as if a competitor is promoting or abandoning a certain product.

Knowing in real time what is happening in the market allows us to increase the prices of our products dynamically and safely, increasing commercial margins according to our competitor's lowest prices, taking into account the price sensitivity of consumers at all times.



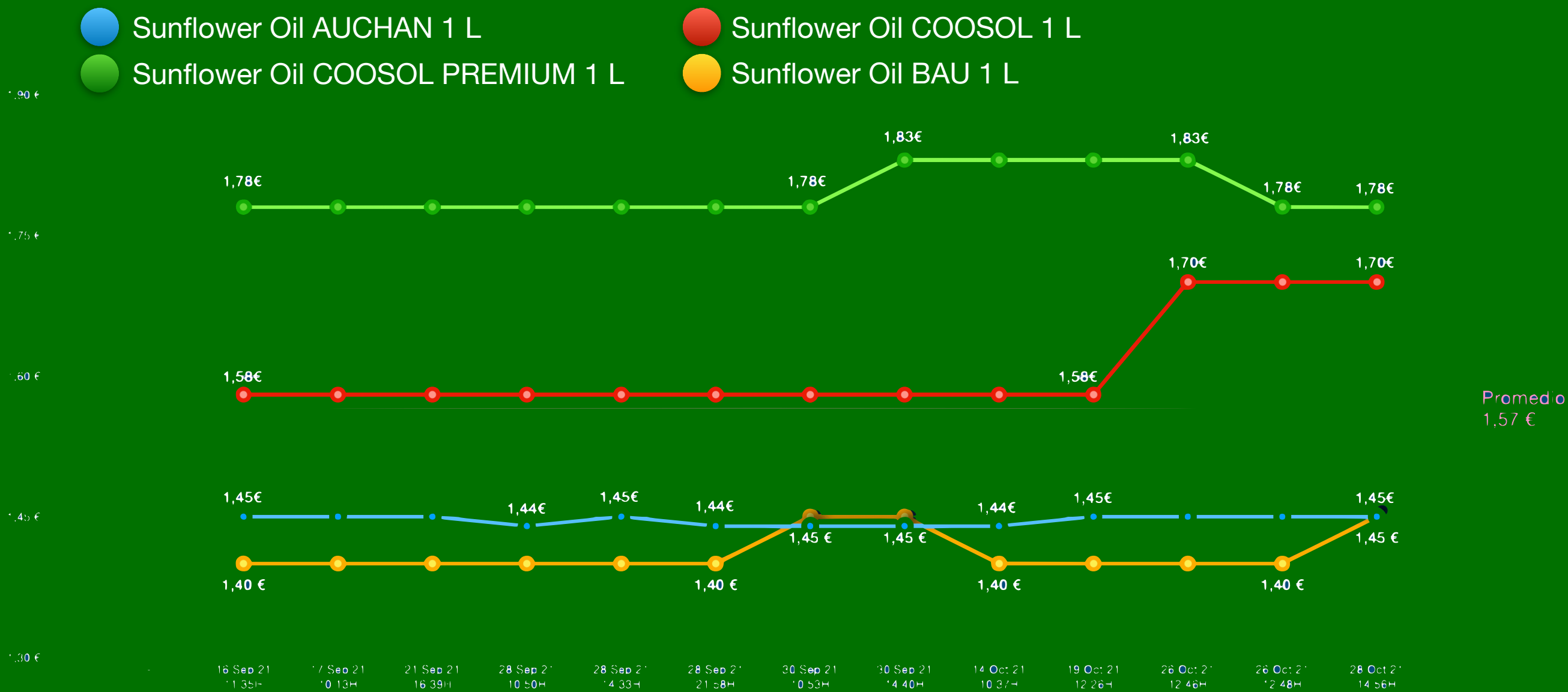
Comparing Similar Products

It allows to compare the **historical evolution** of prices of **several similar products** in the **same online store**, including white and own brands.

In this case, we have compared several bottles of 1-liter **sunflower oil** in the same supermarket, analyzing the behavior of their prices for a month.

Use cases:

- Analyze the Pricing strategies of our competitors.
- Positioning of our own brands against commercial brands.
- Pricing strategies for campaigns.
- Launch of new products adapted to market preferences, both in format and price.
- Measurement of consumer price sensitivity.
- Identification of the optimal price for existing products based on their evolution in the market.



Historical average price: 1,57€
Current average price: 1,60€
Current vs. Historical Variation: +1,9%

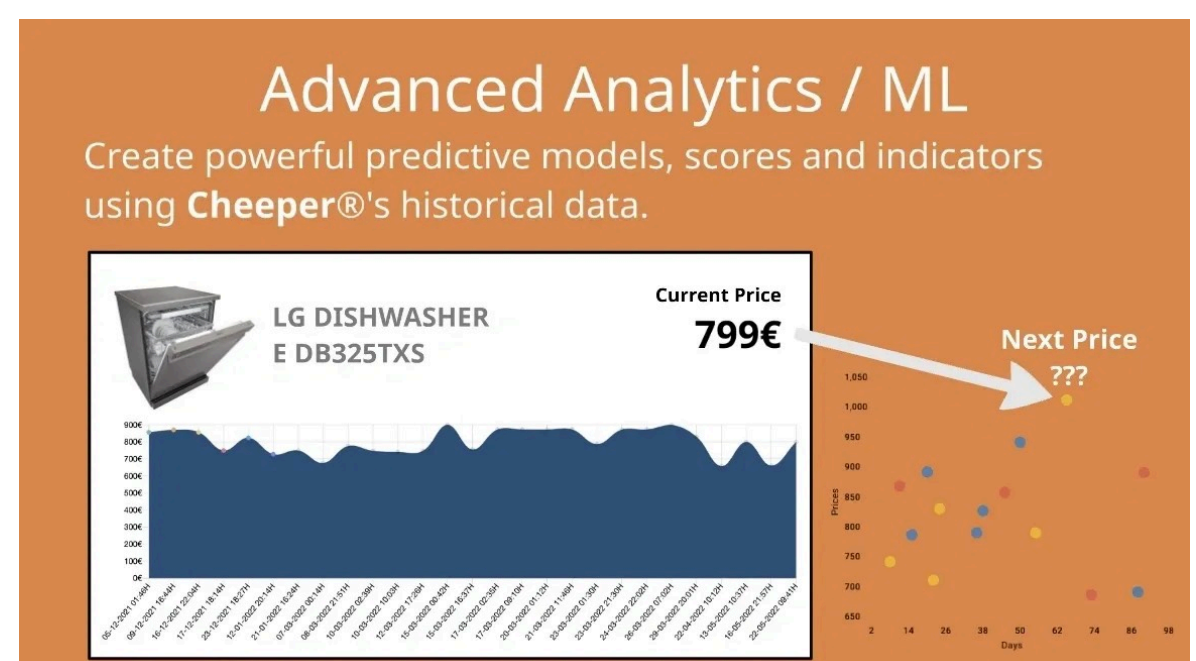
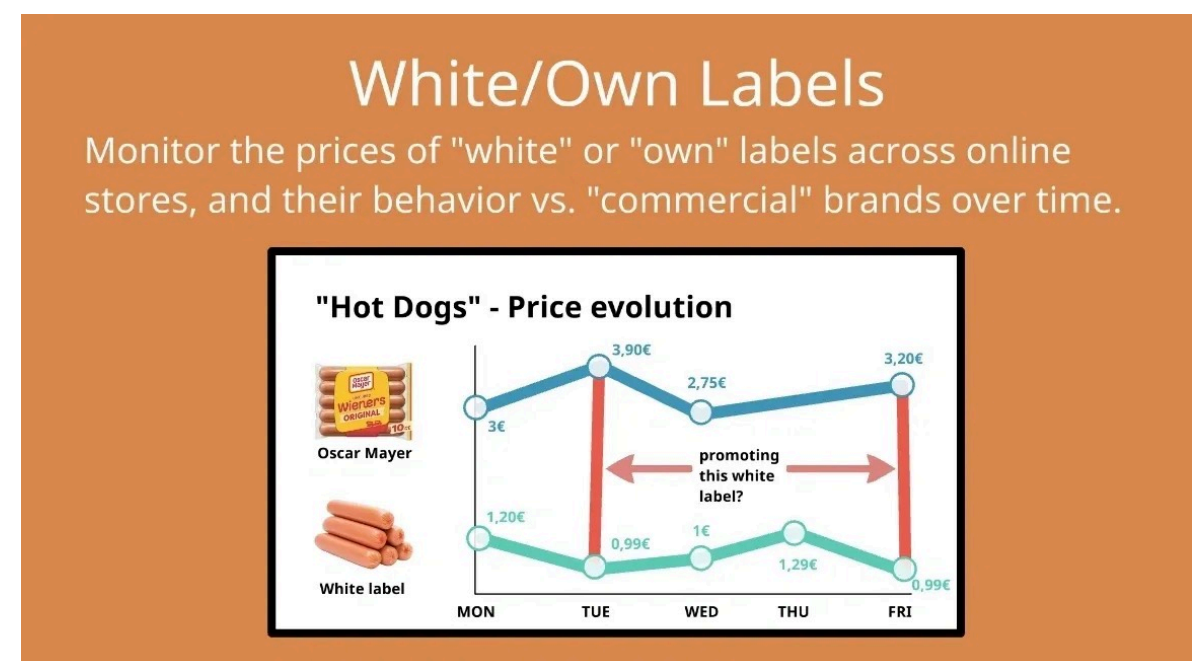
Practical use cases:

Cheeper® makes it possible to detect periods in which a white or own brand has been favored, or harmed, compared to commercial brands of products in similar formats. Conversely, it allows you to assess which brand name products may be affected by their own brand counterparts.

Consumer preferences and their increasing sensitivity to price make it crucial to analyze the market realistically, identifying the ideal formats and prices to launch new products. With **Cheeper®**'s product history, this task is much easier.

All **Cheeper®** information can be modeled with Machine Learning algorithms, for example, to predict when a product's price will change, estimate how much a product will cost within a certain time, or more sophisticated models combining other data sources.

Thanks to **Cheeper®** it is possible to identify which pricing strategies our competitors are applying for any product, detecting, for example, when they have succeeded in raising a price, or when they have failed due to rejection by consumers, lowering them again.



Current Price Report

This report is used to obtain the current price of a **product** based on its unique identifier, in **several online stores** simultaneously.

Supplied information:

- Current price of the product in different online stores
- Name of each product
- Price per kilo, pound, liter, Fl. Oz. or unit of each product
- Sales format by product (eg 1L, 250GR, 75CL)
- Indicator of the cheapest and most expensive product at this time
- Variation of each product with respect to its previous price (% and value)

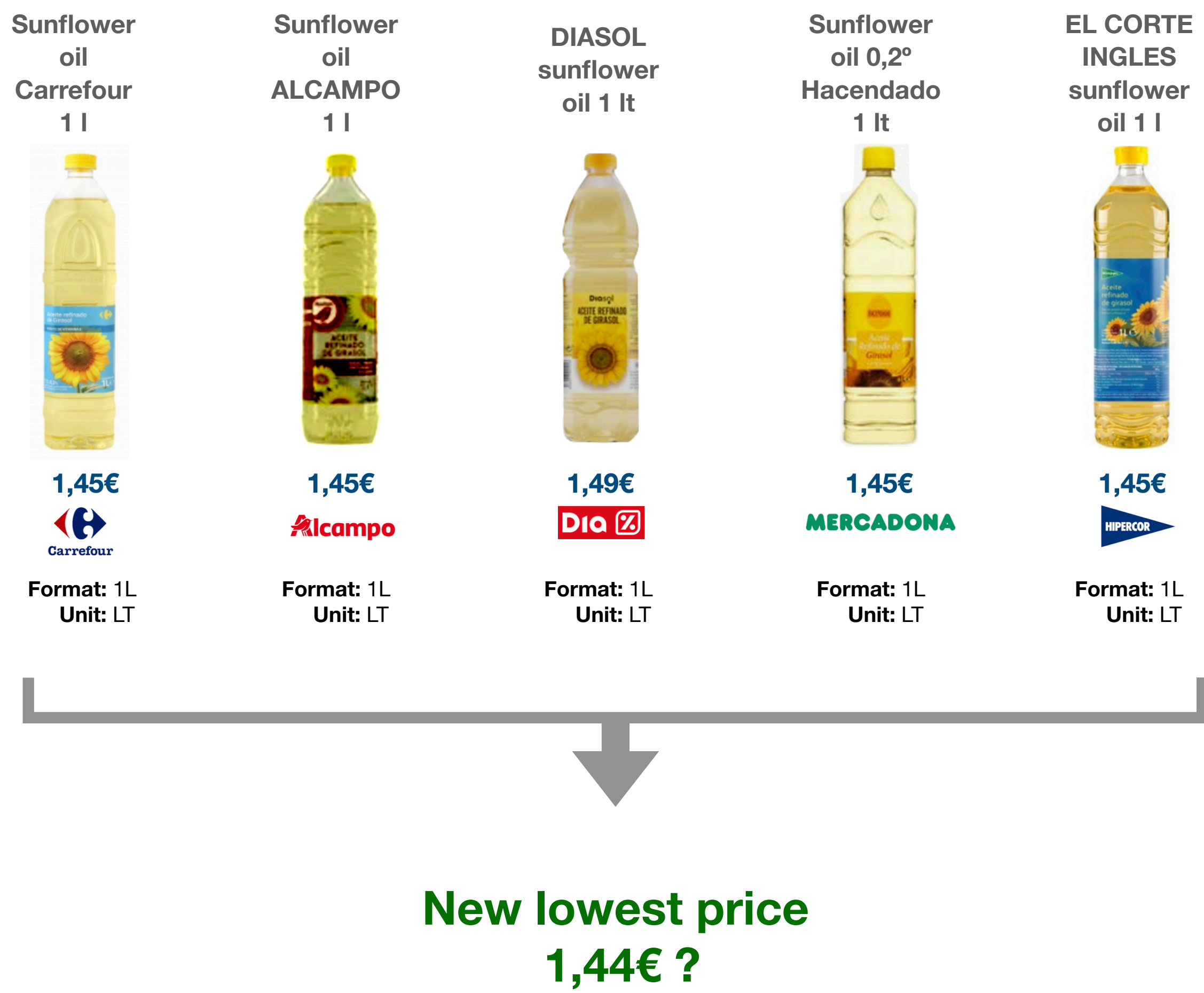
Use cases:

- Competitive analysis
- Manual or automatic adjustment of online prices

Current Price Report Sunflower Oil 1 L (own brands)



Knowing the price that a product has right now in several online stores, allows us to adjust our own prices in a faster and more competitive way.



If control thresholds were applied to each product, it would be possible to adjust prices dynamically based on the market, while at the same time sales margins would be guaranteed by adhering to Pricing policies.

Alerts: Price Change Notifications

These alerts are sent when it is detected that the price of a product undergoes any change in an online store.

Supplied information:

- Store name
- Previous online price of the product
- Previous date and time
- Current price of the product on the web
- Date and time of the current change
- Product title
- Unique product identifier
- Price per kilo, liter or unit of the product
- Sales format by product (eg 1L, 250GR, 75CL)

Use cases:

- Competitive analysis
- Manual or automatic adjustment of online prices



Alert: Price change notification
Sunflower oil Coosol 1 L

Store: 

Previous price: 1,58€ (30th Sept. 2022 - 10:53H)

Current price: 1,70€ (26th Oct. 2022 - 12:46H)

Variation: +7,6%

Price per liter: 1.70€
Format 1L



This type of information is especially relevant when we approach critical dates where consumption increases drastically, such as Christmas or Black Friday campaigns.

Thanks to **Cheeper®**, online prices can be quickly adjusted to remain competitive, avoiding the manual verification of hundreds of daily changes that would jeopardize the window of opportunity.



Sony PS4
DualShock V2 Red



MediaMarkt 59,99€

Carrefour 59,99€

Alcampo 59,98€

HIPERCOR 59,90€

**New lowest price
¿ 59,89€ ?**

Alerts: New Products

These alerts are sent when it is detected that an online store has registered a new product.

Supplied information:

- Store name
- Product price on the web
- Date and time of the current change
- Product title
- Price per kilogram, liter or any other unit for that product
- Sales format by product (eg 1L, 250GR, 75CL)



Alert: New product
Mango Loco Monster
Energy Drink 500 ml

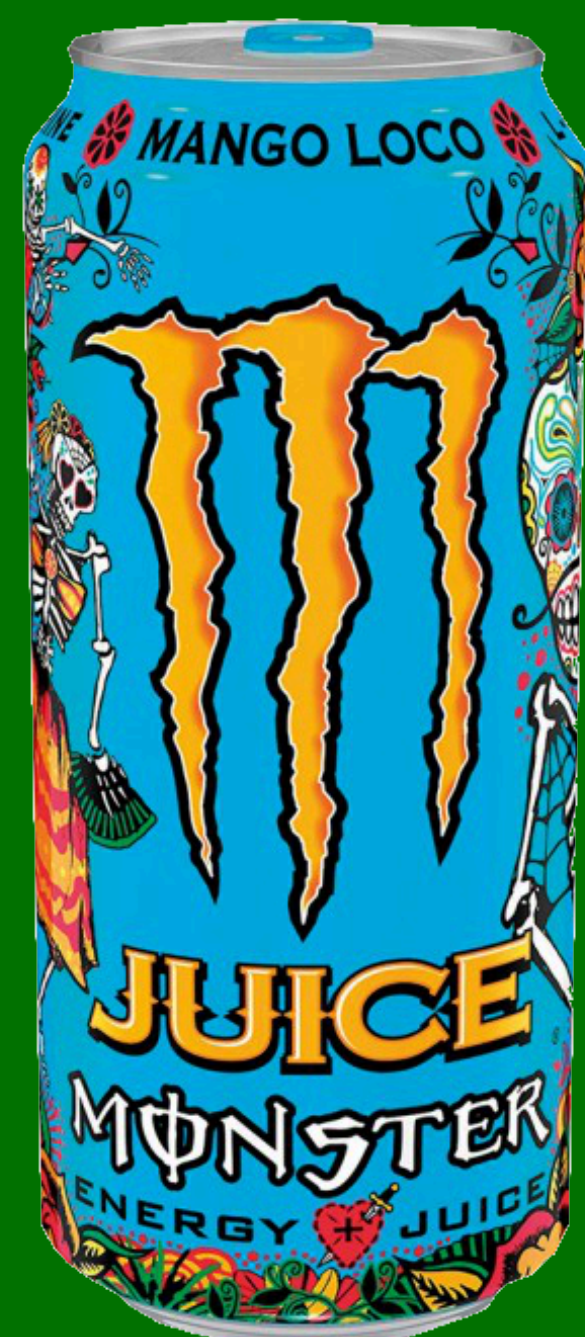
Store: **MERCADONA**

Price: **1,00€** (27th Oct. 2022 - 17:47H)

Alert Type: New Product

Price per liter: 2.00€

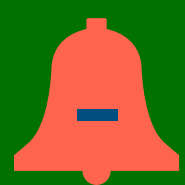
Format: 50CL



It is the most efficient way to quickly detect new products that enter the market, or even those that are canceled due to changes in the commercial agreements with suppliers, due to consumer's lack of interest or any other factor.

Use cases:

- Product or Category management
- Negotiations between businesses and suppliers



Alert: Product removal
DR OETKER sprinkles
ocean mix 50 gr

Store:



Price:

1,29€ (11th Nov. 2022 - 09:55H)

Alert Type: Product Removal

Price per kilo: 25.80€

Format: 50GR



E-Commerce in Europe

Dutch research company **Veraart Research** has a retail index, which lists the top 20 online retailers in Europe. They've ranked ecommerce companies active in Europe by turnover. This is their top 10 online stores in Europe, in billions of euros:

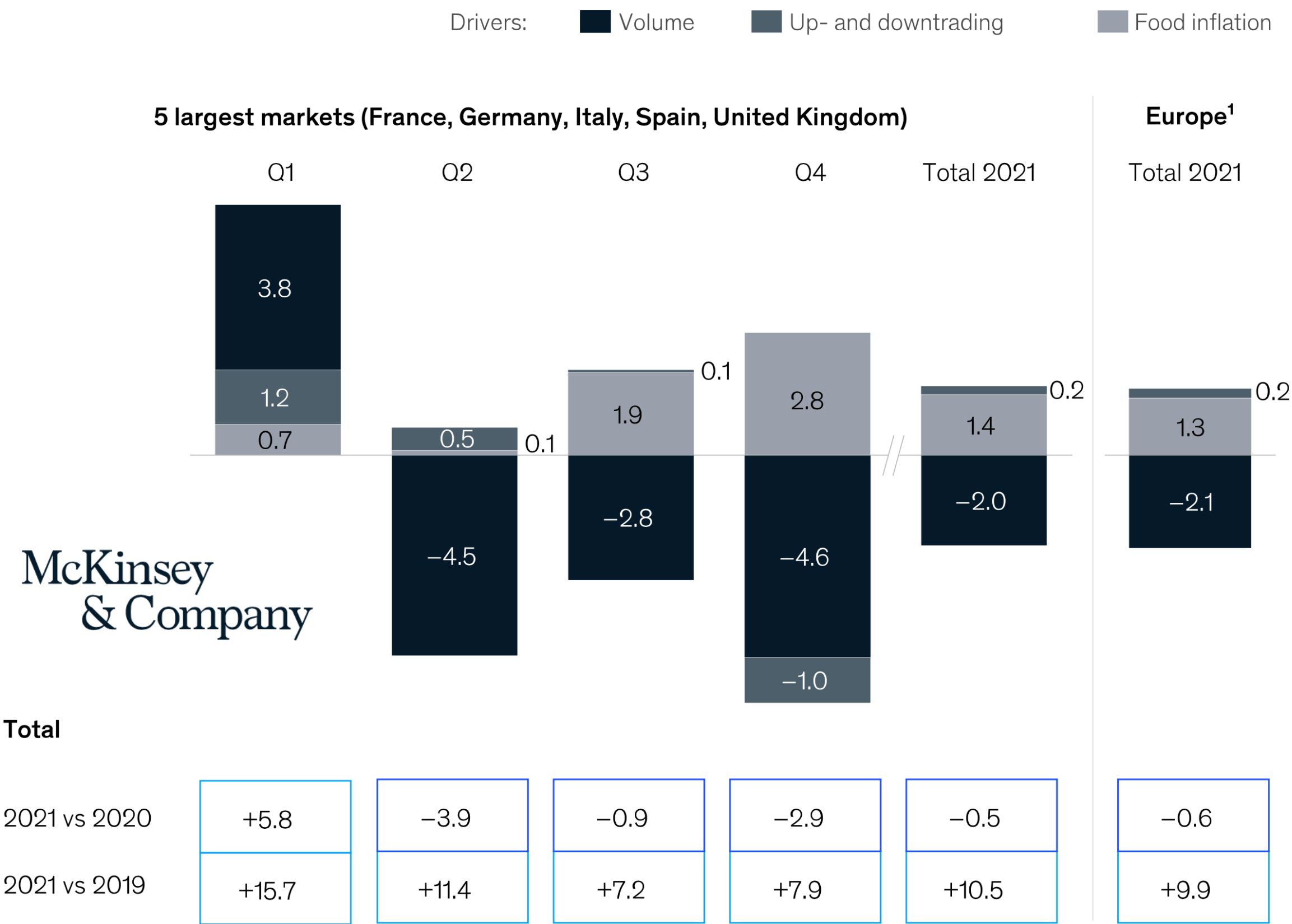
RANK	RETAILER	ONLINE TURNOVER	HEADQUARTERS
1	Amazon	32.18	Luxembourg
2	Otto	6.9	Germany
3	Zalando	6.5	Germany
4	Apple	5.75	USA
5	Tesco	4.8	The United Kingdom
6	Veepee	4.0	France
7	Carrefour	3.1	France
8	Ceconomy	2.93	Germany
9	Bol.com (Ahold)	2.8	The Netherlands
10	E. Leclerc	2.72	France

According to **McKinsey**, going into 2022, grocery CEOs expected market conditions to deteriorate. Five key themes will likely shape European grocery retail in 2022 and beyond:

- 1) Decreasing volumes and rising inflation
- 2) Widening polarization with higher price sensitivity and more focus on health, premium, and sustainability at the same time
- 3) A slower online growth with more differentiated offers
- 4) The search for new profit pools
- 5) A shift in the people model.

In 2021, price inflation and slight uptrading helped offset decreased volume in Europe.

Growth of grocery retail 2021 vs previous year, %



Note: Figures may not sum, because of rounding.
¹ Includes Czech Republic, France, Germany, Italy, Netherlands, Poland, Portugal, Spain, Sweden, and United Kingdom.
Source: Euromonitor (volume and up- and downtrading); Eurostat (inflation)

From a format standpoint, online and discounters posted highest results in 2021, growing faster than the market in most countries. Supermarkets and hypermarkets saw a decline in sales as a result. Online revenues across Europe rose by 8.8 percent compared with 2020. Most of online’s growth occurred in the first quarter of 2021; in the following quarters, online stayed at roughly the same level as in 2020. This growth was quite unequal across Europe: countries in Southern Europe (such as Italy and Portugal) and Central Europe (for example, Poland) saw a decrease in online. On the other end, Germany, the Netherlands, Sweden, and the United Kingdom recorded robust growth in 2021.

McKinsey’s research suggests that the instant-delivery market in Europe reached between €3 billion and €6 billion in 2021, accounting for less than 1 percent of the total market but with three-digit percent growth annually.

Market outlook and key trends in 2022

Going into 2022, and before the invasion of Ukraine, grocery CEOs expect market conditions to deteriorate. In McKinsey's State of Grocery CEO Survey, which included 57 European grocery CEOs, 60 percent of respondents said they believe market conditions this year will be worse than in 2021. Top reasons for their pessimism include the shrinking size of wallet for grocery retail as restaurants reopen in many parts of Europe, increased price sensitivity and competition (including from a maturing online market), and rising inflation. Wage increases, labor shortages, supply chain issues, and new regulations in some markets are other factors that affect the outlook of CEOs. The top opportunity cited by CEOs is e-commerce and omnichannel offerings, which remain a key priority for many of them.

European grocery CEOs have a generally negative outlook on market conditions for 2022.

European CEO survey results, n = 57

Survey date: December 2021–January 2022, before the crisis in Ukraine

Sentiment toward 2022 grocery market conditions¹



Words describing the grocery industry in 2022³

¹ Q: How will market conditions for the grocery retail industry evolve in 2022, in your view?

² Percentage points.

³ Q: Please choose the top 3 adjectives you would use to describe the grocery retail industry in 2022.

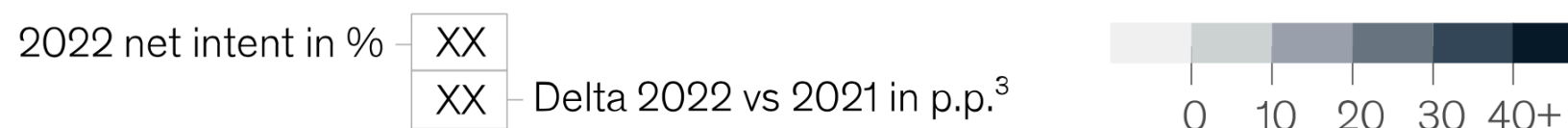
Source: CEO Survey 2021, January 2021, n = 48; CEO Survey 2022, November 2021–January 2022, n = 57

While price is a top priority for consumers across Europe, country differences are more pronounced for health and online.

2022 vs 2021 survey

Net intent¹ of consumers toward grocery shopping in 2022 compared with 2021²

Survey date: December 2021–January 2022, before the crisis in Ukraine



McKinsey
& Company

Northern and Western Europe

Southern Europe

Central Europe

Europe average⁴

Germany United Kingdom Netherlands France Sweden Switzerland Spain Italy Poland

More consumers prioritize price

Look for ways to save money when shopping	42% +9	41% +14	41% +3	38% +11	43% +10	36% +10	39% +5	48% +4	42% +3	45% +10
Actively research for best promotions	28% +1	12% -11	21% -1	27% +7	33% +6	27% +8	15% -8	40% +6	38% -2	39% +7
Switch to less expensive products to save money	18% +1	18% +7	19% -5	24% +10	18% +7	13% +4	16% -4	22% -8	8% -9	20% +5
Buy private-label products instead of known brands	14% +4	18% +6	13% +6	27% +14	11% +5	11% +7	14% +3	16% -2	8% -4	5% -3

Healthy and sustainable products remain a top priority

Focus on healthy eating and nutrition	34% +2	29% -8	28% -2	37% +7	38% +7	28% +1	30% +1	42% +7	40% +8	31% -4
Pay a higher price to get a healthier product	6% n/a	1% n/a	-5% n/a	-3% n/a	13% n/a	6% n/a	7% n/a	10% n/a	13% n/a	13% n/a
Pay a higher price to get an environmentally friendlier product	2% n/a	-3% n/a	-5% n/a	-9% n/a	8% n/a	4% n/a	6% n/a	6% n/a	3% n/a	9% n/a
High-income consumers' willingness to pay	15% n/a	14% n/a	11% n/a	16% n/a	21% n/a	16% n/a	16% n/a	10% n/a	16% n/a	16% n/a

Mixed outlook for online growth⁵

Buy groceries online	-1% -11	-9% -14	5% -11	4% -5	2% -10	2% -9	-7% -16	-1% -14	0% -8	-7% -17
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¹ Share of consumers who want to do more of activity minus share of consumers who want to do less of activity in 2022 vs 2021.

² Q: Think about 2022. Are you planning to do more, less or about the same of the following?

³ Percentage points.

⁴ Including all countries shown in this chart; unweighted average.

⁵ Excluding negative intent of consumers not regularly buying online (ie, less than once a month).

Source: Consumer Survey, November 6–13, 2020, n = 11,573, including the following markets: France, Germany, Italy, Netherlands, Poland, Spain, Sweden, Switzerland, and United Kingdom (sample to match general population ages 18 and up)

Grocery Markets in Europe by 2023

According to ecommercenews.eu, ten leading global online grocery markets are predicted to generate combined sales of almost 200 billion euros, at an annual rate of 20 percent, by 2023. And four of them are from Europe. The United Kingdom, France, Germany and Spain are predicted to have the highest online grocery market sizes in Europe.

UK's online grocery market will be worth €19.4 billion

The online grocery market of the United Kingdom is currently worth 12.8 billion euros and is expected to increase by to 19.4 billion euros, thanks to a CAGR of 7.8 percent. The online grocery channel share is predicted to grow from 6 to 7.9 percent over the next five years.

France has a 4.5% online grocery channel share

In France, this industry is now worth 10.2 billion euros and is set to show a CAGR of 8.2 percent, so it will be worth 15.1 billion euros in 2023. And then, the country's online grocery channel share is predicted to be 6 percent, while it's now at 4.5.

Germany is number eight on the global list

Germany, ranked number eight on the list, currently has a online grocery market that's worth 1.1 billion euros, but over the next five years a CAGR of 23.3 percent should lead to a market that's worth over 3.3 billion euros. Currently, Germany doesn't have a very significant online grocery channel share (0.5 percent), but it's predicted to increase to 1.2 percent.

Online grocery market is worth €790 million in Spain

Number last on the list is Spain, which now has an online grocery market valued at 790 million euros. This should grow to 1.8 billion euros within five years due to a 17.9 percent compound annual growth rate. The online share is now at 0.7 percent, but according to IGD it will grow to 1.4 percent by 2023.

Country	2018 Online grocery market size in billions of euros	2023 Online grocery market size in billions of euros	CAGR Compound annual growth rate	2018 Online grocery channel share	2023 Online grocery channel share
The UK	12.8	19.4	7.8%	6%	7.9%
France	10.2	15.1	8.2%	4.5%	6%
Germany	1.1	3.3	23.3%	0.5%	1.2%
Spain	0.8	1.8	17.9%	0.7%	1.4%

The online grocery markets in the United Kingdom, France, Germany and Spain.

Top 10 Food Retailers in Europe

Turnover (revenue) for 2020 in Billion €

Rank	Retailer	Turnover	Stores	Headquarter
1	Schwarz Gruppe	125,3	12 600	Germany
2	Aldi (Nord+Süd)	106,3	8 826	Germany
3	Rewe	63,7	8 369	Germany
4	Edeka	61,0	3 600	Germany
5	Tesco	56,67	4 613	United Kingdom
6	Carrefour	55,37	11 145	France
7	E.Leclerc	40,9	1 500 ¹	France
8	Les Mousquetaires	40,0 ¹	2 659	France
9	Sainsbury's	36,4	2 297	United Kingdom
10	Auchan	31,6	4 084	France

According to **Retail-Index**, the total turnover (revenue) of all European food retailers in 2020 was €2,4 trillion. Amounted by over 300 000 outlets in total. By revenue, France, Germany, Italy, the United Kingdom and Poland are among the highest grossing in Europe. The biggest retail chains are the French Carrefour, German Schwarz Group with the discounters Lidl and Kaufland, Tesco (UK) and Rewe Group (Germany) with its biggest banners Rewe and the discounter Penny.

Still, each of these companies takes up only a few per cent of the total market. Some retailers have been doing business for many decades but in each sector we can see the “younger” retailers competing effectively with the established merchants. Some examples of these younger participants are Morrisons in the UK, Jumbo in The Netherlands and Lidl in Germany and France.

Price-competition in combination with adequate service have been the main contributors to the increase in sales for these newer competitors. In the coming decades ecommerce and smart logistics to end-users will be the key points to focus on for healthy development. Retailers based in the United Kingdom clearly lead the way with Tesco now selling 5% of its turnover online. E-food will very likely be the fastest growing source of revenue for food retailers in the next 5 years.

TIBCO Spotfire® - Advanced Business Intelligence

TIBCO's Spotfire® software is a powerful BI platform widely deployed around the World, and it has been specifically designed for BigData environments with billions of records.

All the features are on their website: <https://www.tibco.com/es/products/tibco-spotfire>

The large number of connectors available to any database and BigData environments, the ease with which to cross data and create any type of interactive report or dashboard, the speed with which it is capable of analyzing large volumes of data or the advanced geolocation and Integrated Machine Learning are, among others, its strongest points.

This powerful BI Tool allows cross-references with multiple sources of information, in real time, creating interactive dashboards with which data can be explored and navigated intelligently.

To cite some practical use cases, this tool allows:

- Perform competitive analysis in real time, combining **Cheeper®** immediate alerts with other proprietary product databases.
- Position new white-brand or own-brand products with ease, having a comprehensive and instantly updated vision of similar products on the market.
- Instantly detect products that are being promoted on other websites.
- Detect products in decline, or that are being abandoned by other businesses.
- Analyze the commercial impact of any product when changing its online sales price.
- Visualize the evolution of online sales of your business in real time, with navigable dashboards, by product categories, by geographical area, with heat maps and many other types of graphics.

- Analyze the prices that are most accepted by consumers for each product.
- Calculate the limit price for each product, from which its sales begin to decrease.
- Visualize the "gaps" between your prices and those of your competition dynamically.
- Compare the historical evolution of prices of the same product in different online stores.
- Prepare special campaigns on dates set in advance.
- Detect special promotions from the competition before they appear in the media, such as "30% Off on Home Appliances".

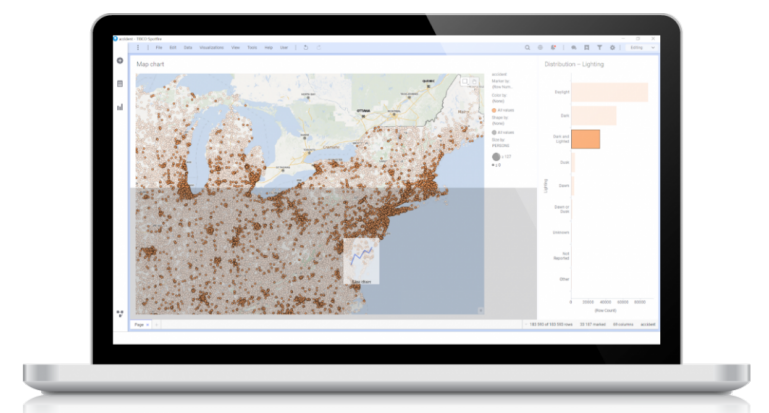
TIBCO Spotfire® is the most comprehensive analytics solution on the market, making it quick and easy for everyone to visualize new discoveries in data.

Using search and recommendations powered by a built-in AI engine, anyone can explore the data to contribute insights.

Whether creating simple metrics in dashboards, predictive applications, or dynamic real-time analytics applications, **Spotfire®** offers numerous capabilities at scale, including visual analytics, data management, predictive analytics, geoanalytics, and analytics in real time.

Smart visual analytics

Spotfire® is the fastest analytics tool for getting insights from your data, an even faster and easier solution—with a brand new, engaging, and even easier-to-use user interface for exploring and visualizing data, as well as sophisticated, interactive dashboards and point-and-click browsing capabilities—maintaining the powerful analytics features **Spotfire®** is known for.

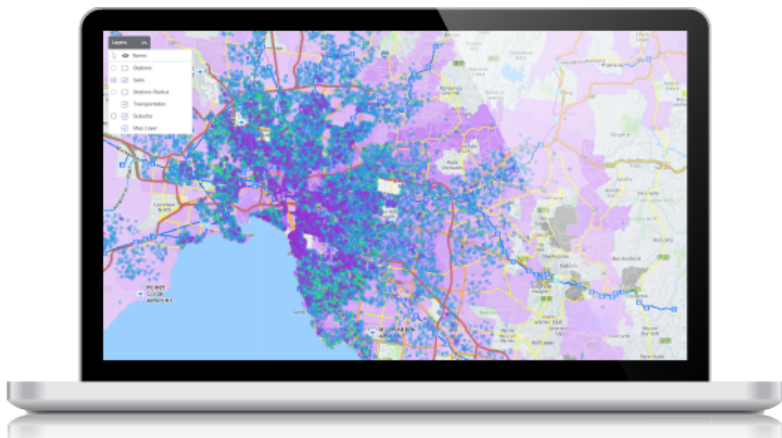


Integrated predictive analytics



With our out-of-the-box predictive methods of classification, clustering, and forecasting just a click away, anyone can start using predictive analytics. Input data and output results can be viewed on interactive Spotfire dashboards, and more detailed data science calculations can be performed using the **TIBCO® Data Science** platform or **Spotfire® Data Functions**, using code from R, Python, SAS, and Matlab.

Unprecedented location analysis



Instant out-of-the-box multilayer maps, geocoding and reverse geocoding provide geographic context to your analyses. Maps help generate valuable information and make predictions that would be impossible using tables and diagrams. Spotfire dashboards visualize data and results on custom maps and charts. Additionally, deeper geoanalysis can be performed using the integrated R engine and **TIBCO® GeoAnalytics**.

Analyze how you want

The multi-modal interface is the only one that allows you to choose how you want to interact with the data. You choose the UI method that best suits your needs: natural language query search, AI-based recommendations, or direct manipulation.

Get insights instantly with AI

A scalable and robust AI engine identifies relationships in data and instantly recommends visualizations for ultra-fast insights. Discover trends, outliers, and patterns in any type of data without needing to know its structure.

Solve complex problems

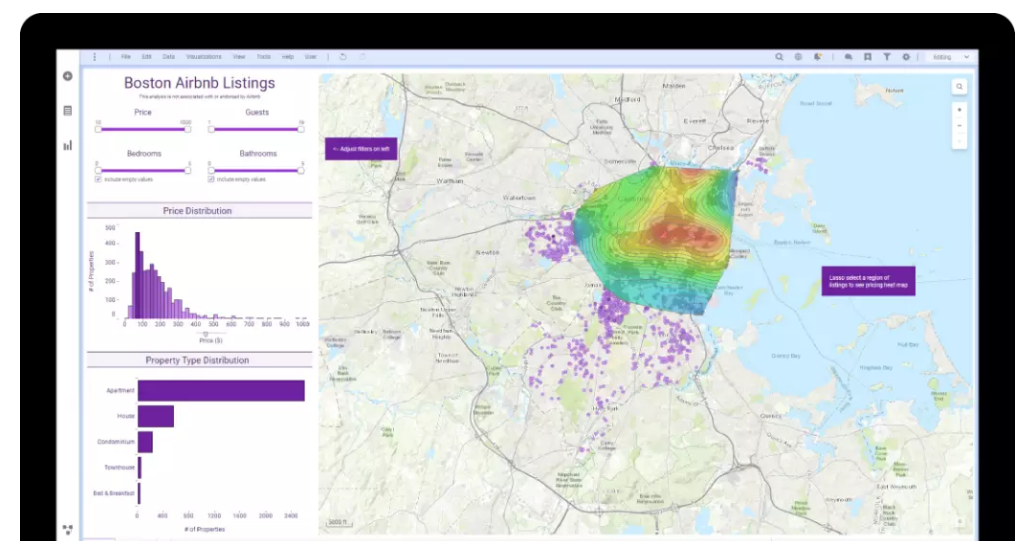
Use advanced analytics without being an expert. Geo-Analytics run statistical and machine learning methods through an embedded R engine and **TIBCO Statistica™**. Use real-time data and extend BI to more of your business.

Create specific applications for certain processes

Use out-of-the-box features and advanced APIs to provide process-specific guided applications that enable actions across multiple systems. Connect to proprietary data, custom calculations and visualizations, and statistical methods for applications that support any business process.

Streaming analysis in real time

Spotfire Data Streams continually sends new data to Spotfire for real-time analysis. Create interactive dashboards with real-time IoT (MQTT, OSI PI), social, and messaging (TIBCO, JMS, Kafka) sources as easily as static data. Reflect on what analytics can do for frequently changing data, new insights for time-sensitive decisions, and insight using both real-time and historical data.



Some TIBCO Spotfire® customers (full list on their website)





TIBCO Flogo® - Workflow Automation

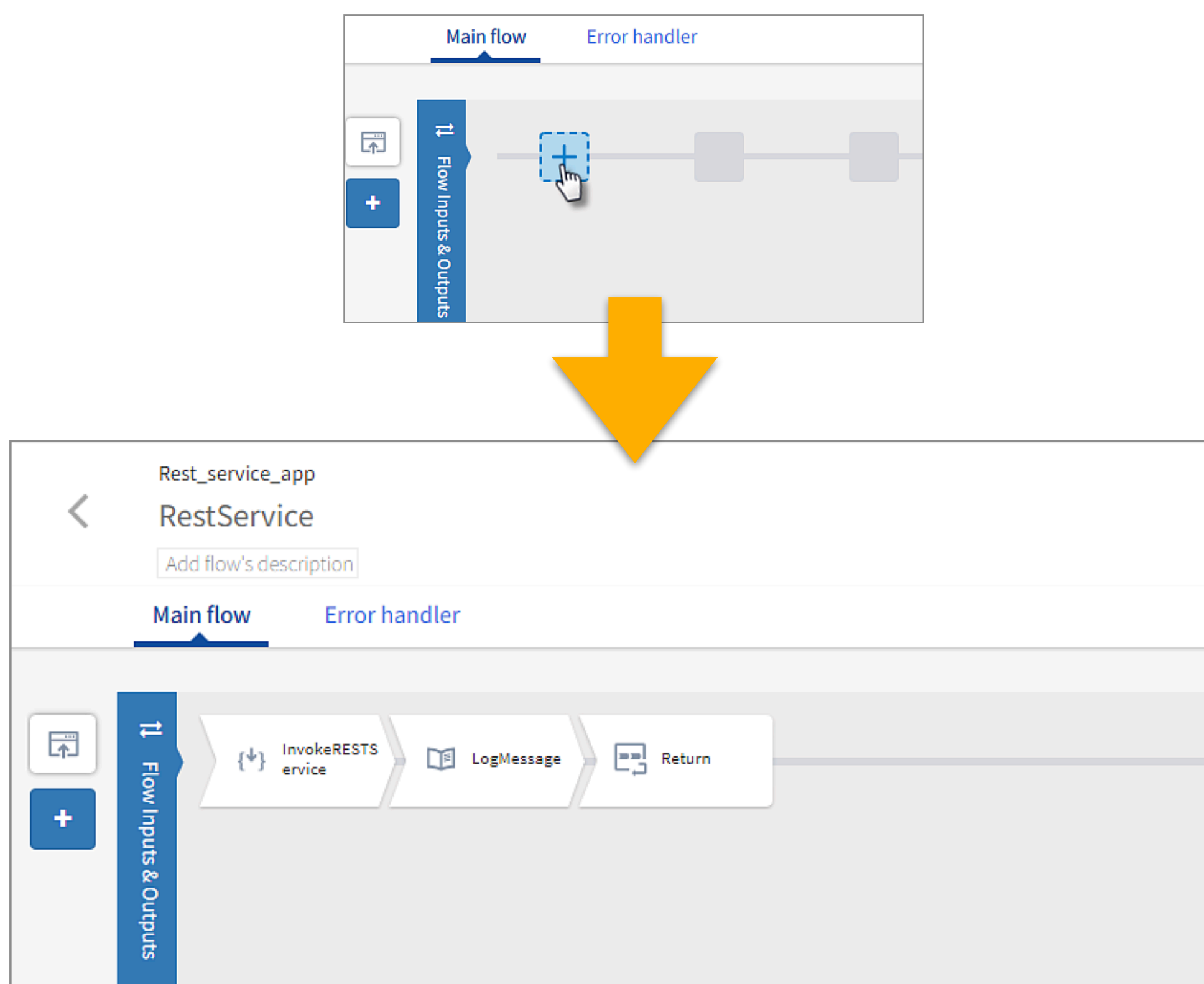
Cheeper® recommends **TIBCO Flogo®**, a powerful **Workflow Tool** widely installed worldwide, designed for environments with millions of daily transactions. You can find more info and documentation at <https://docs.tibco.com/products/tibco-flogo-enterprise>.

It is the perfect tool **to automate processes** where it is necessary to make decisions with data from various sources using rules, mathematical expressions and complex logic.

The large number of connectors available to databases and CRM systems, the ease of creating workflows, complex rules and web services without any type of programming, the integration capabilities with other systems and the speed with which it is capable of processing large volumes of requests are, among others, its strongest points.

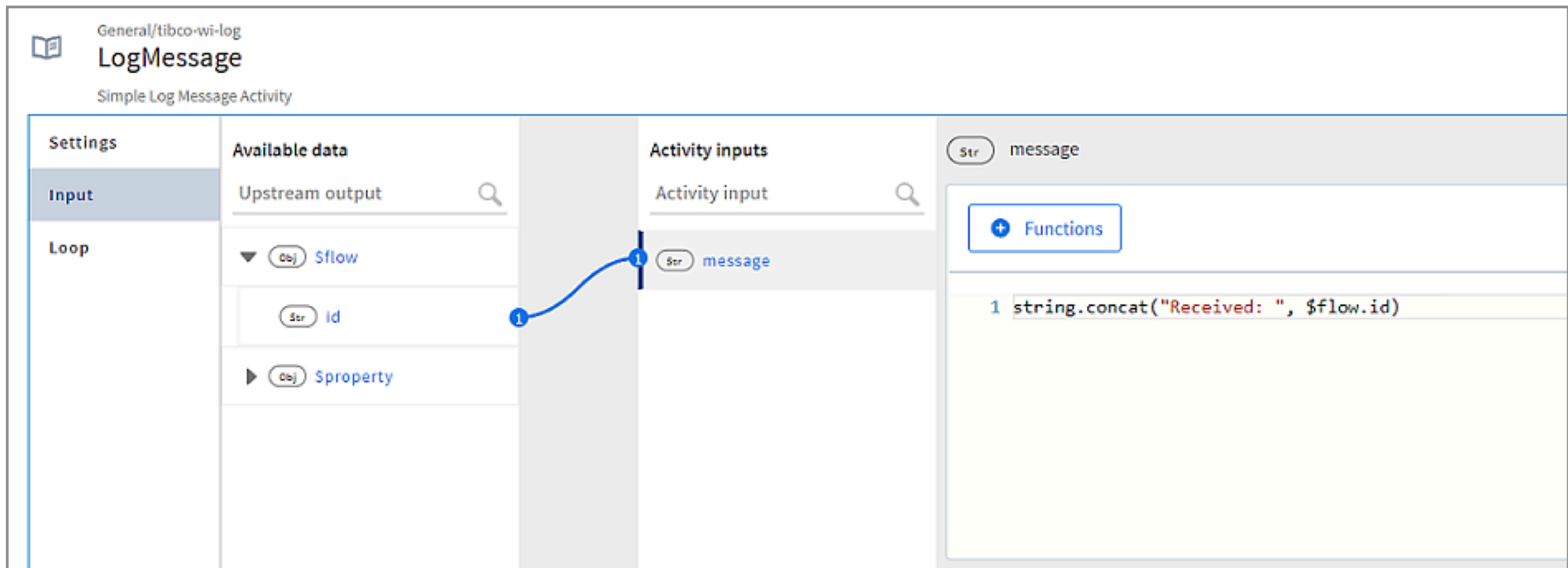
This powerful Workflow Tool allows you to "draw" all the steps that a workflow must execute, for example "Receive Cheeper® alert", "Get current price on our website", "Apply pricing rules", "Change price on the web", all graphically and intuitively.

These workflows can be created or modified by your company's own personnel or by dedicated personnel that **Cheeper®** can make available to you. Below is an example of a workflow where several steps are executed:



Examples of practical **use cases**:

- Propose the **most optimal prices** for each product in real time, combining **Cheeper®**'s immediate alerts with the product databases of your online store.
- Apply **complex pricing rules** based on minimum and maximum price thresholds, product stock, campaigns, special promotions, online purchase patterns, postal codes or other factors, and generate a proposal for several prices simultaneously, which can be updated in your CRM automatically if all pricing policies are met.
- Create **manual approval workflows**, such as “All electrical appliances must be manually approved”. These manual approval workflows add a lot of security to price proposals that may deviate from established standards.
- **Automate other areas** of your company not necessarily linked to pricing or e-commerce, since it is a very powerful tool that includes, among other features, automatic sending and receiving of emails, create business rules for any company process, transform, clean and validate data in bulk (ETL), data migration from one database to another, etc.



Buy-By-Recipe

Buy-By-Recipe is an innovative purchase-by-recipe service created by Cheeper®, designed to **increase the average ticket** of the shopping cart in online supermarkets. There are hundreds of recipes, many from famous chefs and celebrities. Cheeper® adds amazing creations every day.

TAPAS

Anchovy and crab snacks

🕒 20min 🍴 €€€ ★★★★★

Mushrooms stuffed with egg and cream cheese

🕒 20min 🍴 €€€ ★★★★★

Duck confit croquettes and roquefort sauce

🕒 20min 🍴 €€€ ★★★★★

MAIN COURSES

Roasted meat cannelloni with a touch of foie

🕒 2h 1/2 🍴 €€€ ★★★★★

Roast lamb with rosemary honey

🕒 55min 🍴 €€€ ★★★★★

Chef Ramsey's style chicken

🕒 50min 🍴 €€€ ★★★★★

DESSERTS

Pink panther cake with frosting and marshmallows

🕒 100min 🍴 €€€ ★★★★★

Sacher-style chocolate cake

🕒 75min 🍴 €€€ ★★★★★

Pedroche-style brioche from StretXo restaurant

🕒 45min 🍴 €€€ ★★★★★

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And how it works?

1

Customers make online purchases in a supermarket. By adding products to their shopping cart, the supermarket sends the added products to **Cheeper®**:

my cart 



- 1 +

Kiwi 500 gr3,75€

2

Cheeper®, evaluates the products as they are added to the basket, and returns recipe suggestions to the supermarket, to be shown to the users:

With the Kiwis you could make a delicious Fruit Fondue with Custard

See



3

Customers can see the recipe, browse through all the recipes, or even be recommended to prepare a romantic dinner. When accepting, they specify the number of people:

How many people will the Fruit Fondue with Custard be for?

4



4

Cheeper® calculates the number of products needed to prepare that recipe for 4 people, and sends the supermarket all the product identifiers and the quantity for each of them, as well as the recipe adapted to the number of people.

6

The customer has gone from buying one piece of fruit to incorporating 8 additional products that he had not planned, he has saved himself from adding products by hand, and he also perceives that the supermarket has helped him.

5

The supermarket adds all the products to the cart **in a single step** and sends the recipe to the customer:

Kiwi 500 gr



- 1 +

3,75€

Tangerine 1 Kg



- 1 +

1,98€

Banana 500 gr



- 1 +

2,10€

6 Eggs XL Size



- 1 +

0,95€

Cinnamon powder 40gr



- 1 +

1,66€



Ingredients

SKEWERS

- 2 kiwis
- 2 tangerines
- 2 bananas

CUSTARD

- 1/2 liter milk
- 3 egg yolks
- 4 tbsp sugar
- 1 tbsp corn flour
- 1 tbsp cinnamon powder
- 1 piece of lemon peel



Cheeper® Professional Services

Our staff is specialized in the following tasks and functions, so that our clients also stop worrying about day-to-day life if they wish:

- Telephone, online or face-to-face **support** at the client's offices
- Create, configure and manage any **Workflow, Rule, BI Report or Dashboard** at the client's request, having direct access to the manufacturer of both platforms (Workflows and BI) in case of blocking incidents.
- **Trainings** of **TIBCO Spotfire®** and **TIBCO Flogo®**.
- Configure connectors to data sources in Workflow and BI Tools.
- **Install licenses** for BI Analysts (Windows or Mac), or users of BI Consultation (Web)
- Manage the **Production and Pre-production servers** of the Workflow and BI Tools, monitoring logs, disk space, security, performance and other metrics.
- Manage the **databases** required for the operation of the project.
- Facilitate the client the **administration** of users, roles and permissions of all platforms and machines within the scope of the project.
- Configure and test **Web Services** in the Workflow Tool.



