



# *Natural Language Processing & Artificial Intelligence*

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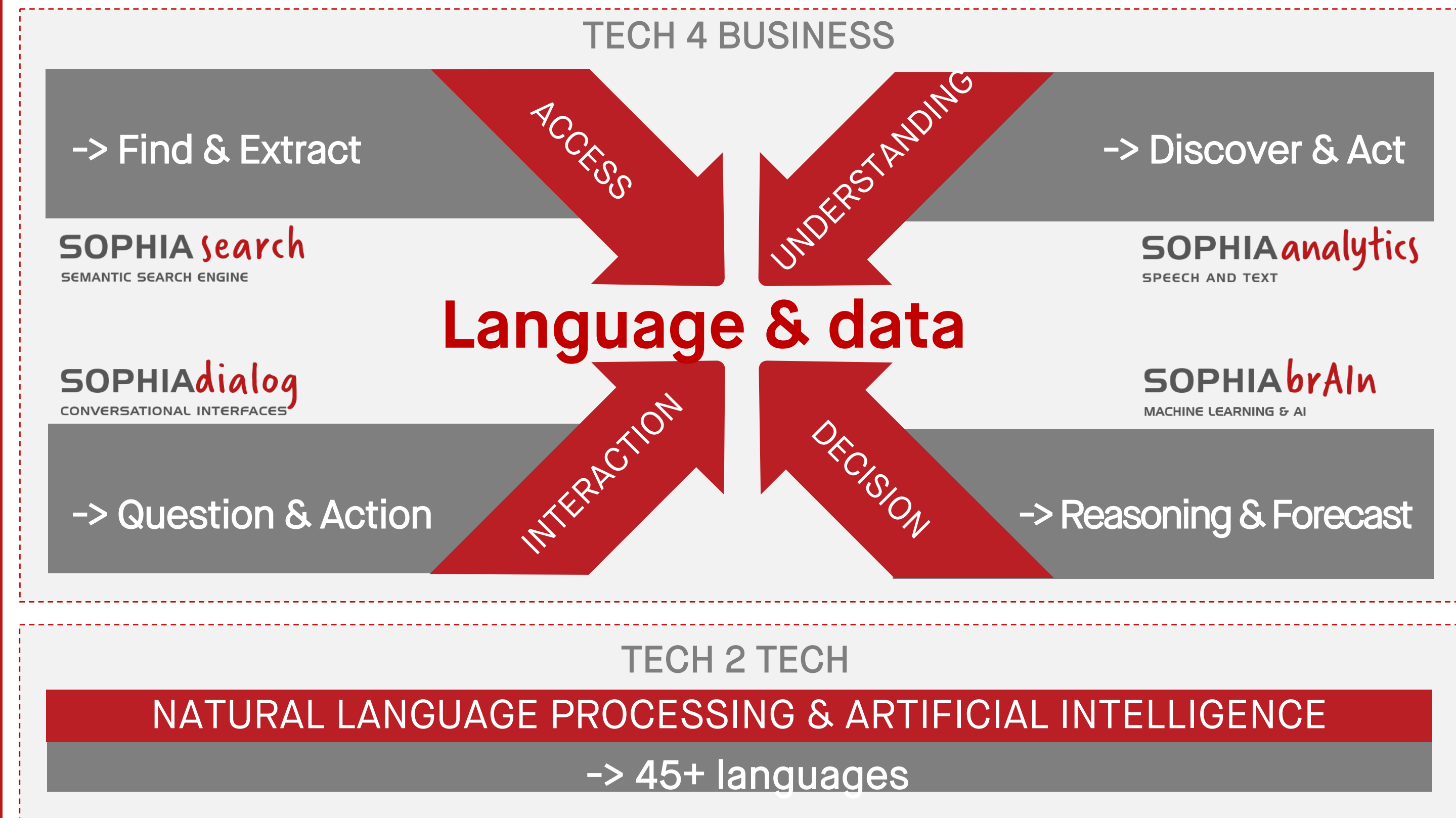
2021



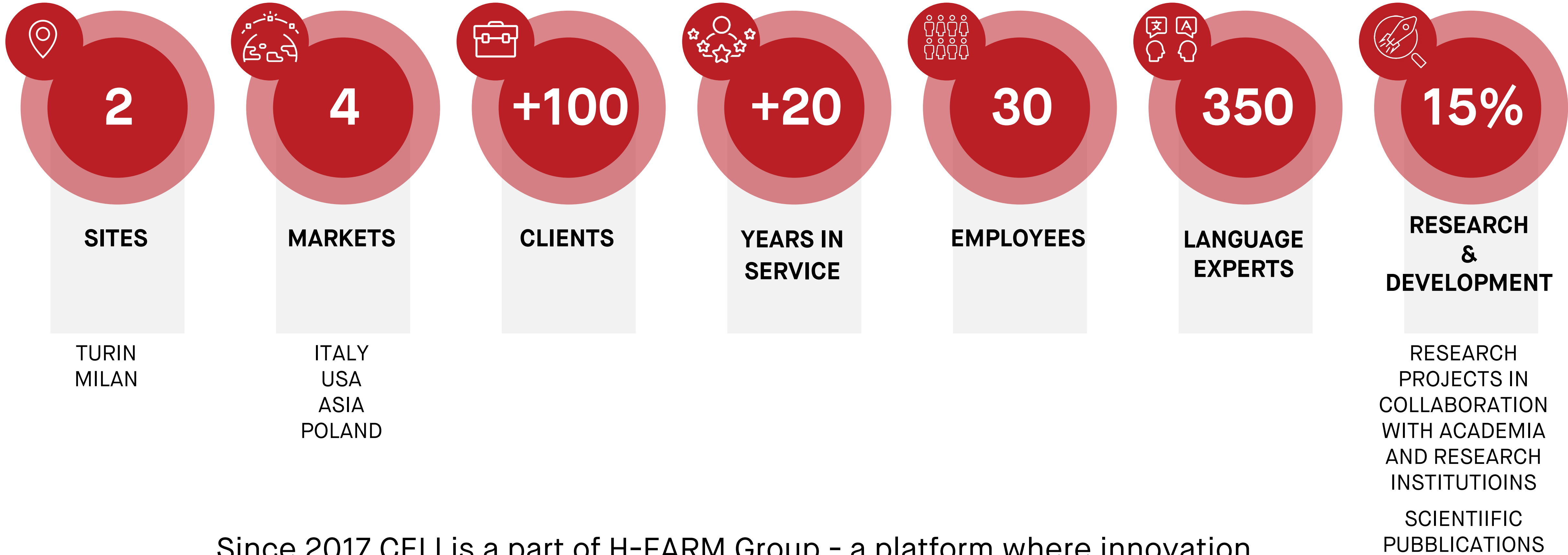
## Natural Language Processing & Artificial Intelligence

Through a combination of Machine Learning and language interpretation techniques, we help people to:

- communicate naturally with the devices and systems that increasingly populate our world
- extract relevant information from the universe of data
- gain insights to solve their business dilemmas



# FACTS & NUMBERS



Since 2017 CELI is a part of H-FARM Group - a platform where innovation, entrepreneurship and education coexist and influence each other

H-FARM is listed in the Italian Stock Exchange



## MISSION

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**We help companies to empower their business with  
Artificial Intelligence & Natural Language Processing**

80% of enterprise data is not  
structured: the challenge is to extract  
value for business

Business decisions are data-driven

Natural language is the new interface:  
human are getting used to talk to  
machines

# LANGUAGE & DATA

For years, companies and organizations have been making good use of their structured data. However, most enterprise data is expressed in natural language (written or spoken), unstructured and less accessible.

Human knowledge is expressed in language

Language is part of a broader understanding system

Language is grounded in the world and in communicative intents of speakers

Language is used socially, exploiting culturally constructed representations and communicative practices

Unstructured data can become a sustainable source of profit, performance and customer satisfaction. Combined with structured data will provide smarter insights and help actively concentrate on unrealized business opportunities.

Natural Language Processing is an essential enabler of Artificial Intelligence.

NLP-based solutions support understanding of the infinite variety of our expressions, including complex, conceptual, imprecise or fuzzy data. They deliver meaningful and inherently richer results. With NLP data processing and value extraction become several orders of magnitude broader by enabling organizations to expose and consume information in natural language, in different languages bridging the gap between users and data.

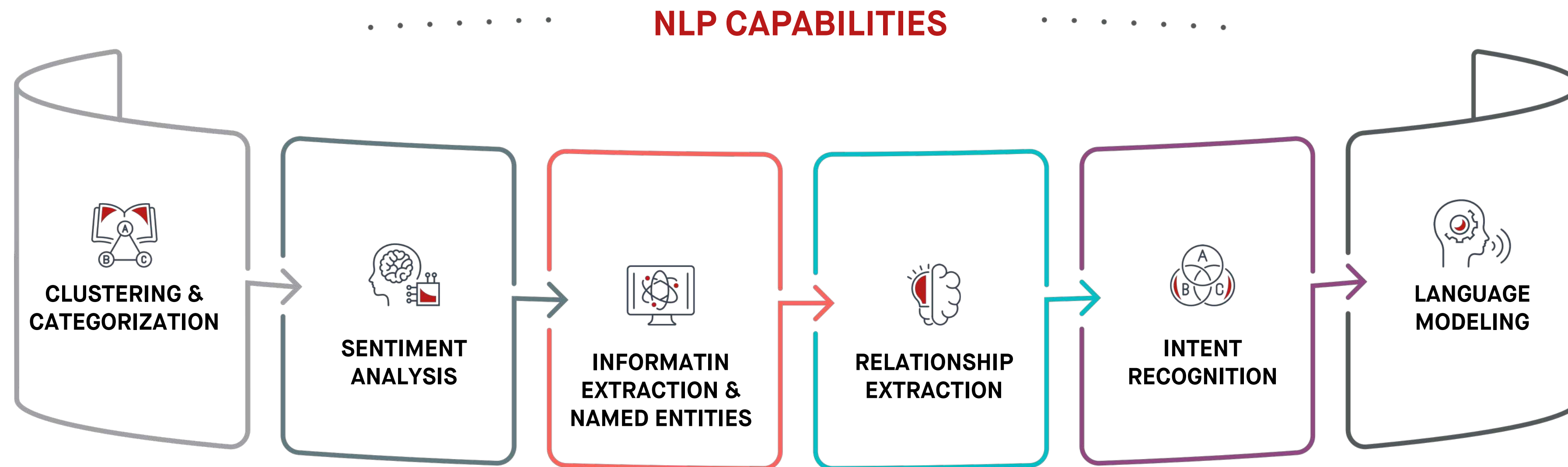
Natural Language Processing is just great at **making new data consumable automatically** as soon as they are produced.

# THE NLP REVOLUTION

The impetus given by Deep Learning has revolutionized NLP.

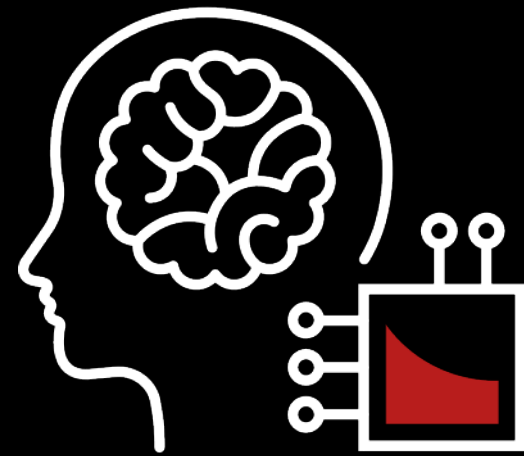
CELI offers a **hybrid approach** to the problem of language analysis and understanding by combining established **semantic technologies** with **Deep Learning** algorithms.

Today it is possible to extract patterns, classifications and opinions with a precision and coverage never achieved before and generate a "**semantic space**" - an abstract understanding of linguistic content - which can be used to:



# NLP APPLICATION FOR AI

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## PERCEPTION

COMPUTER VISION  
TEXT & SPEECH UNDERSTANDING



## PREDICTION

ADVANCED & PRESCRIPTIVE  
ANALYTICS

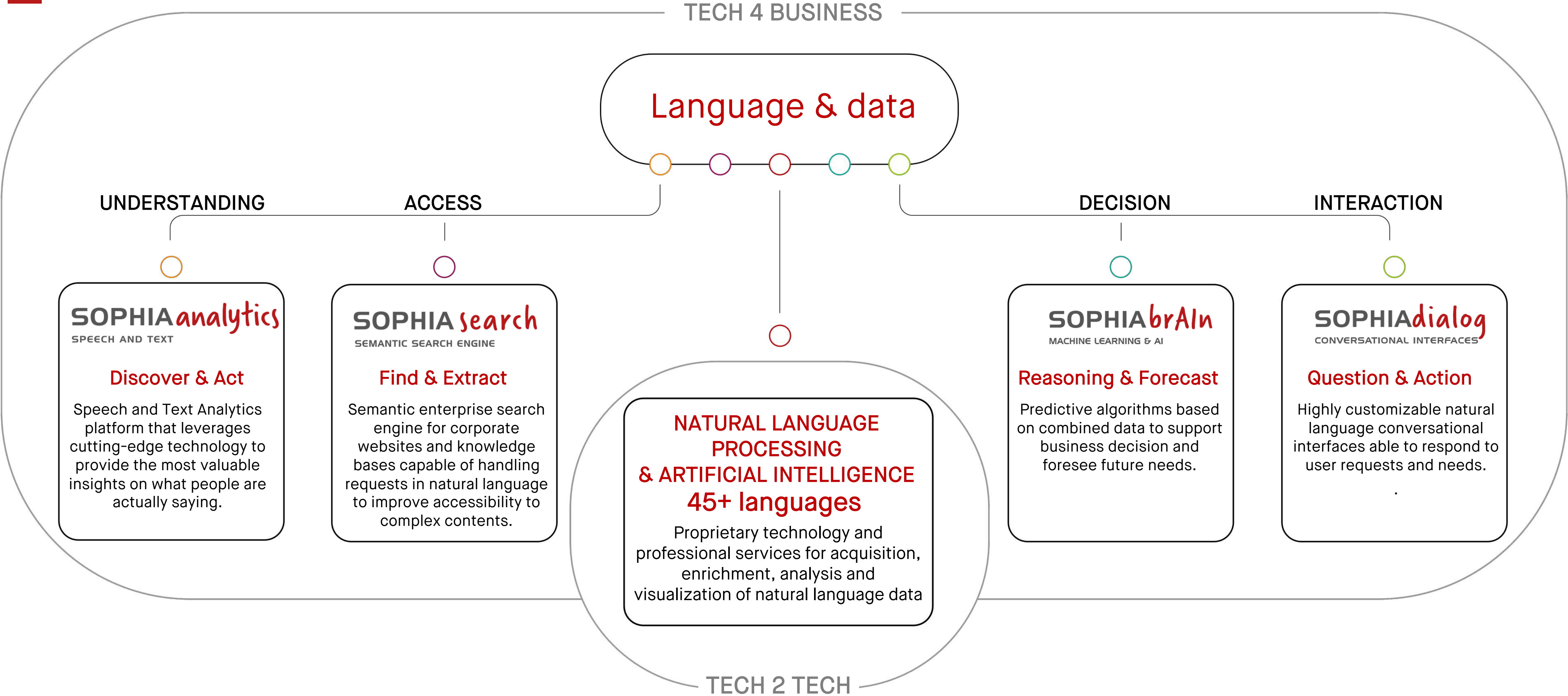


## INTERACTION

NATURAL LANGUAGE INTERFACES



# PRODUCTS & SERVICES



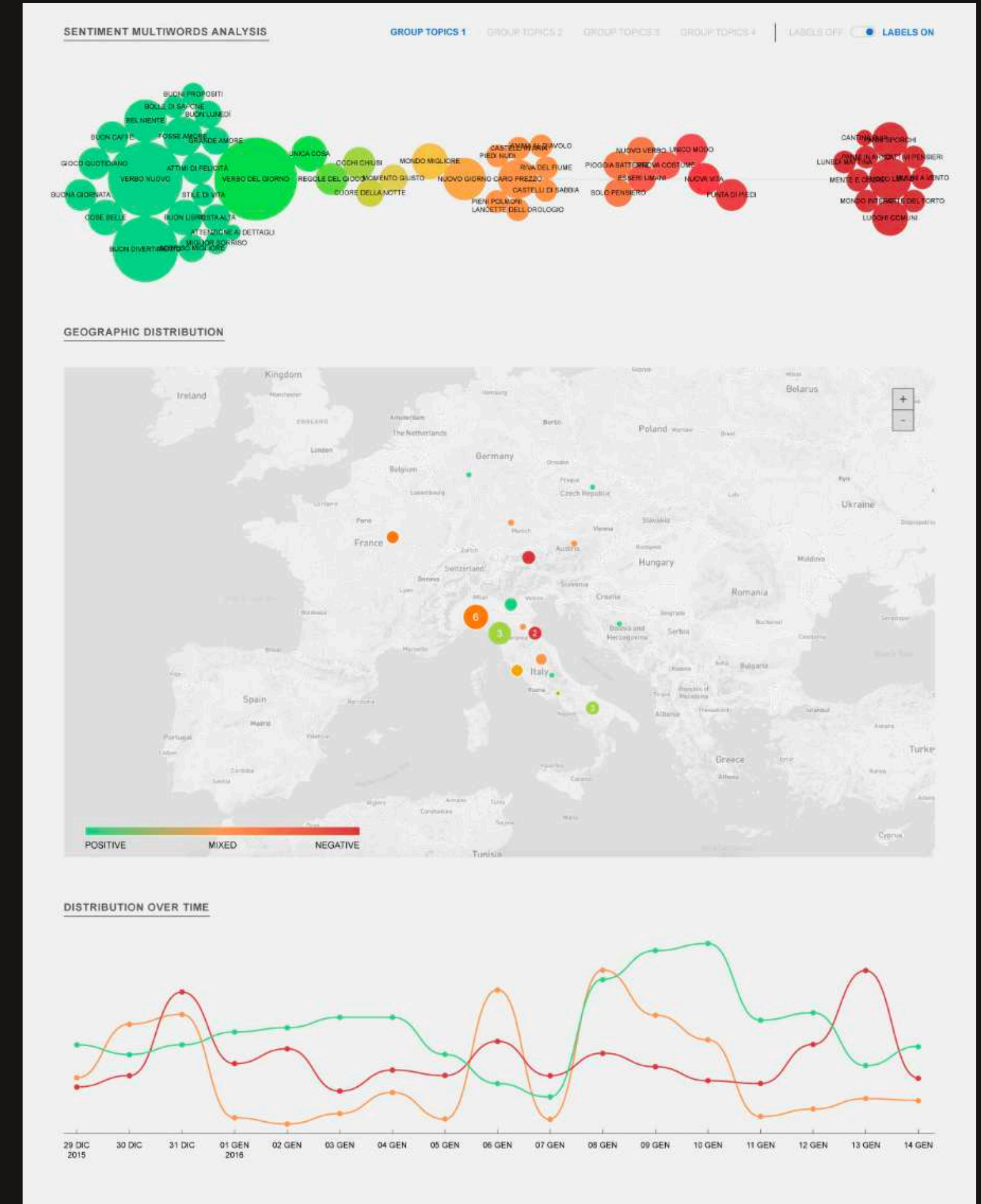


Speech and Text Analytics platform that leverages cutting-edge technology to provide the most valuable insights on what people are actually saying.

Thanks to Sophia Analytics' user-friendly interface, organizations can broaden their perspectives, combining structured data with more fine-grained information, extracted from natural language data.

It helps to reduce the distance between analysts and data, and grant high-level performance on human language understanding, analyzing thousands of documents per minute in more than 15 languages. The agile architecture is well suited for every organizational or technical need, letting humans focus on what really matters: finding the best solutions for every situation.

## → Discover & Act





Semantic enterprise search engine for corporate websites and knowledge bases capable of handling requests in natural language and improve accessibility to complex contents.

Sophia Search integrates natural language understanding, facet-based navigation, information extraction, search-as-you-type and clustering capabilities, letting the users search, browse and filter data according to their needs and helping them to discover content.

Sophia Search guarantees speed and scalability of integration with document management systems.

→ Find & Extract

The screenshot displays the Sophia Search interface with a search bar at the top containing the query "attività di cessione". Below the search bar, it indicates "18.637 REQUISITI NORMATIVI TROVATI". The main content area lists three search results, each with a title, a brief description, and a "più dettagli" link. The first result is titled "ISTRUZIONI PER LA REDAZIONE DEI BILANCI E DEI RENDICONTI DEGLI INTERMEDIARI FINANZIARI, DEGLI ISTITUTI DI PAGAMENTO, DEGLI ISTITUTI DI MONETA ELETTRONICA, DELLE SGR E DELLE SIM" and contains the text "ATTIVITÀ FISCALI", "ATTIVITÀ NON CORRENTI E GRUPPI DI ATTIVITÀ IN VIA DI DISMISSIONE", "ALTRE ATTIVITÀ" - STATO PATRIMONIALE - ATTIVO - ATTIVITÀ FISCALI; ATTIVITÀ NON CORRENTI E GRUPPI DI ATTIVITÀ IN VIA DI DISMISSIONE; ALTRE ATTIVITÀ. The second result is titled "ISTRUZIONI PER LA REDAZIONE DEI BILANCI E DEI RENDICONTI DEGLI INTERMEDIARI FINANZIARI, DEGLI ISTITUTI DI PAGAMENTO, DEGLI ISTITUTI DI MONETA ELETTRONICA, DELLE SGR E DELLE SIM" and contains the text "UTILE/PERDITA DA CESSIONE O RIACQUISTO" - CONTO ECONOMICO - UTILE/PERDITA DA CESSIONE O RIACQUISTO. The third result is titled "ISTRUZIONI PER LA REDAZIONE DEI BILANCI E DEI RENDICONTI DEGLI INTERMEDIARI FINANZIARI, DEGLI ISTITUTI DI PAGAMENTO, DEGLI ISTITUTI DI MONETA ELETTRONICA, DELLE SGR E DELLE SIM" and contains the text "UTILI (PERDITE) DA CESSIONE DI INVESTIMENTI" - CONTO ECONOMICO - UTILI (PERDITE) DA CESSIONE DI INVESTIMENTI. On the right side, there is a sidebar with filters (FILTRI) and a cluster visualization (CLUSTER). The filters include PERIMETRO NORMATIVO, FONTE NORMATIVA, TEMATICA NORMATIVA, SEZIONE, and DATA DI APPLICABILITÀ. The cluster visualization is a hexagonal grid of colored nodes representing different topics related to the search query.



Predictive algorithms based on combined data to support business decision and foresee future needs.

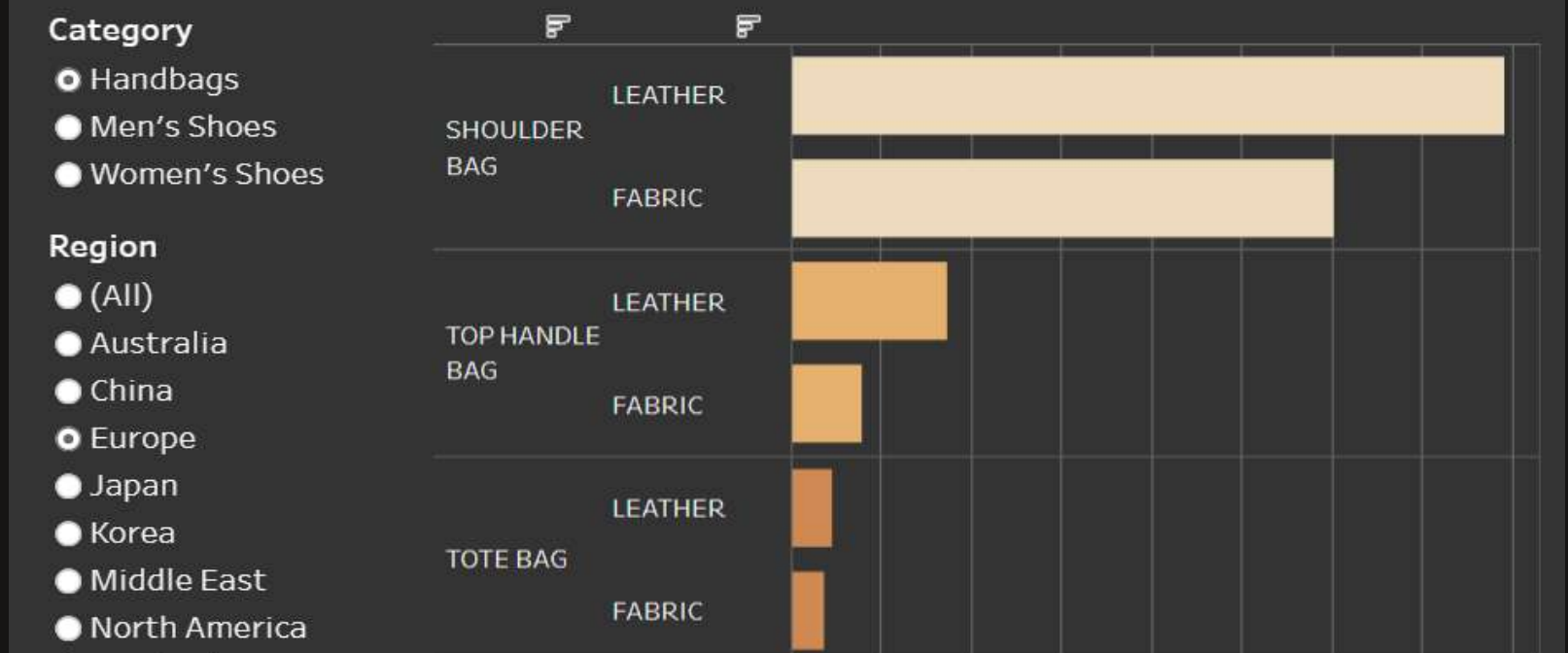
Data has become every organization's main asset. They are originated by different internal and external processes, have different nature, are collected and stored in silos.

Sophia Brain applies most advanced Artificial Intelligence techniques to combine a variety of data and data sources, extracts value, improves the efficiency and effectiveness of business.

→ Reasoning & Forecast

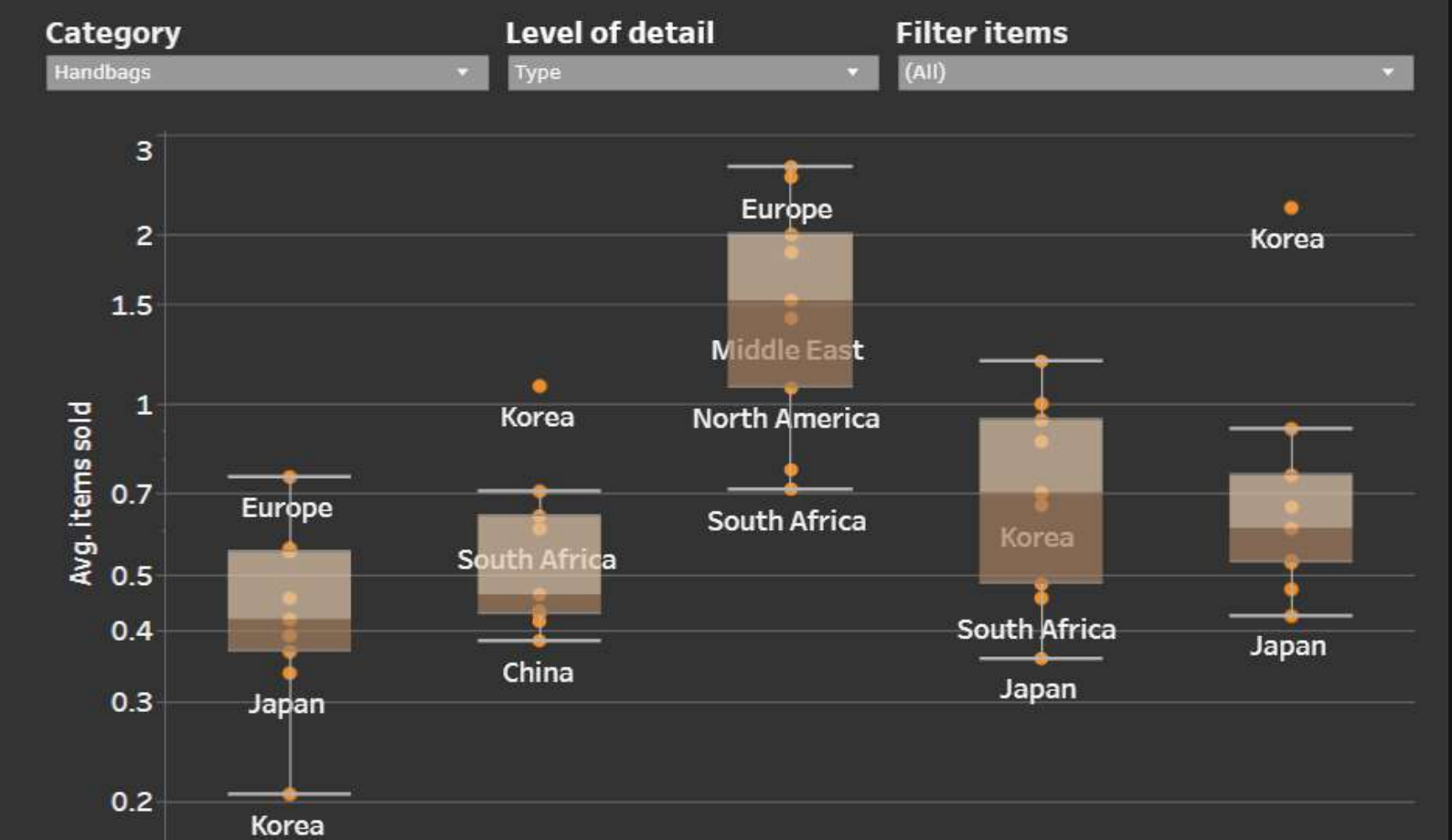
### Top-selling products

At different levels of detail



### Regional best-sellers

Average store sales across Regions

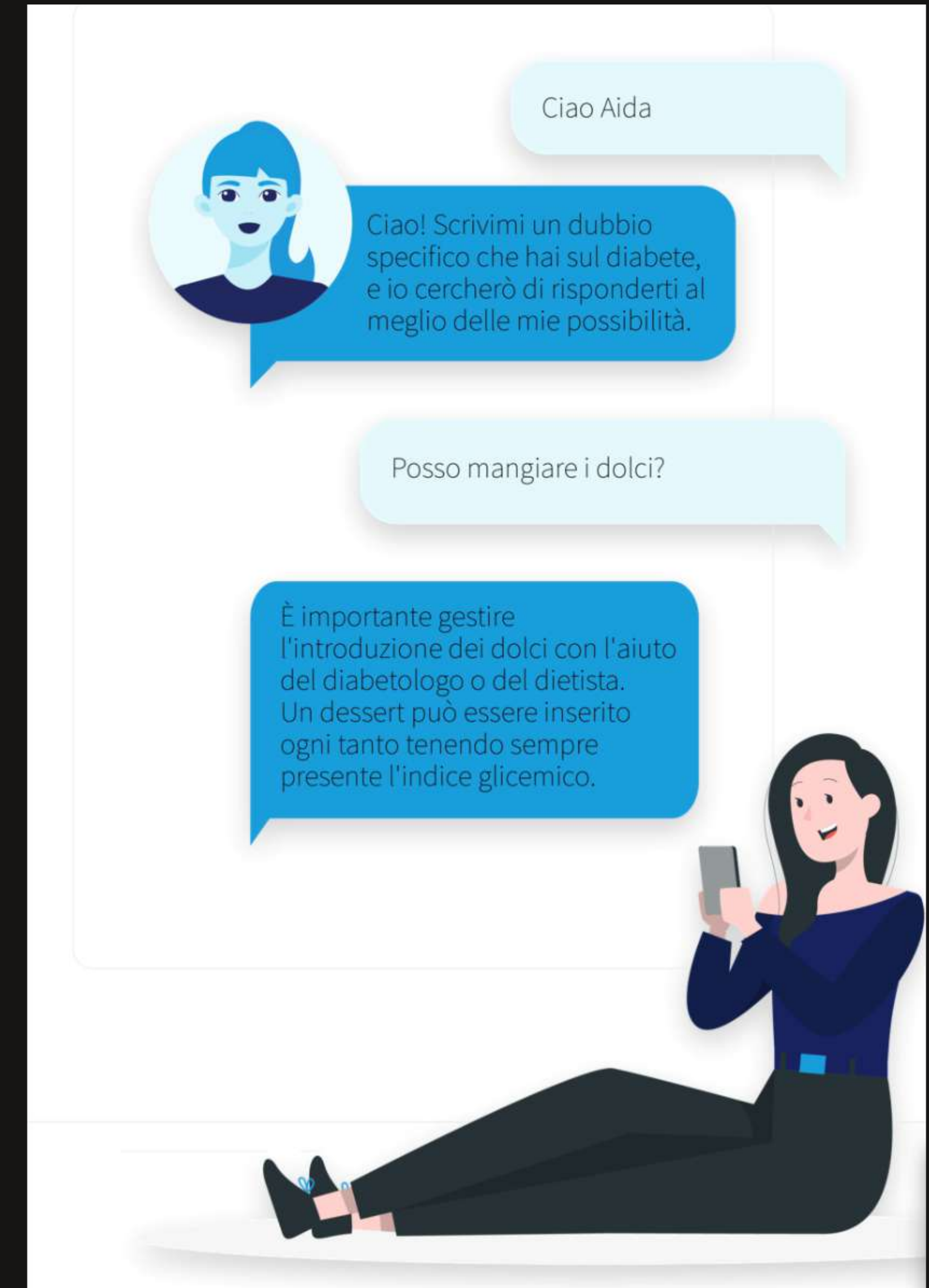


Highly customizable natural language conversational interfaces able to respond to user requests and needs.

A conversational interface represents a distinctive channel of communication with organizations and technology, automatically provides relevant answers and support responding to concrete needs in a natural and effective way.

Sophia Dialog optimizes and improves the development of chatbots, voicebots and voice apps by combining two perspectives: on the one hand, the need for companies to innovate and give a voice to their brand, and on the other, the needs of the end user.

→ Question & Action





# WHAT WE DELIVER

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We deliver technology, projects and professional services to enhance the value extraction from data





*Big Shoes and Beautiful Mind*