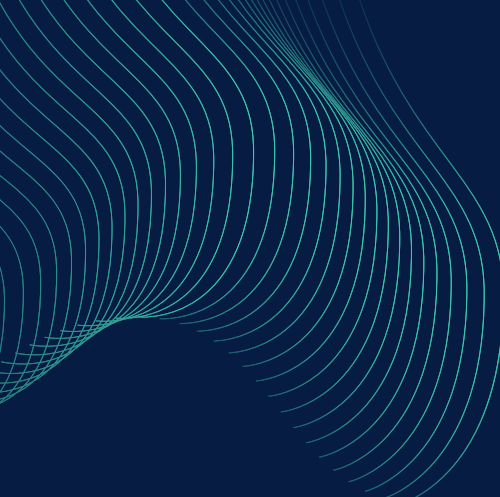


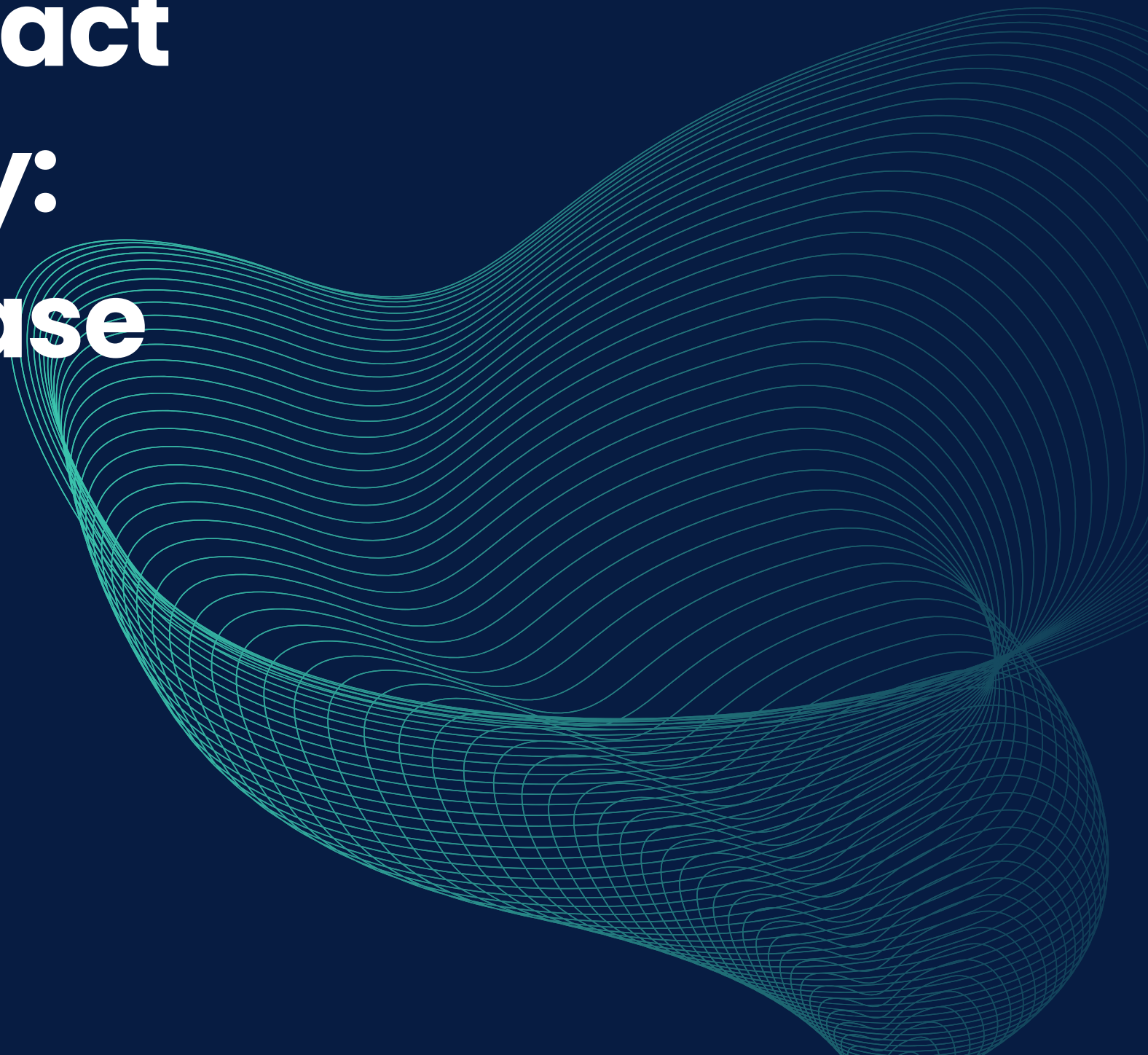


Artificial intelligence impact on the insurance industry: the Unipol Group S.p.A. case

Alessandra Arcuri

Melissa Mattioli

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Agenda

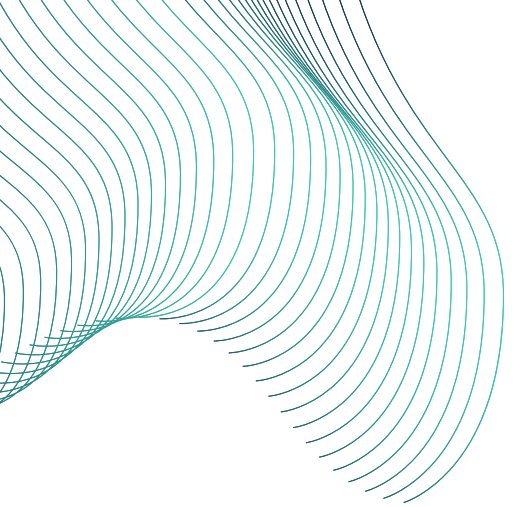
01 The insurance industry

02 Insurtech

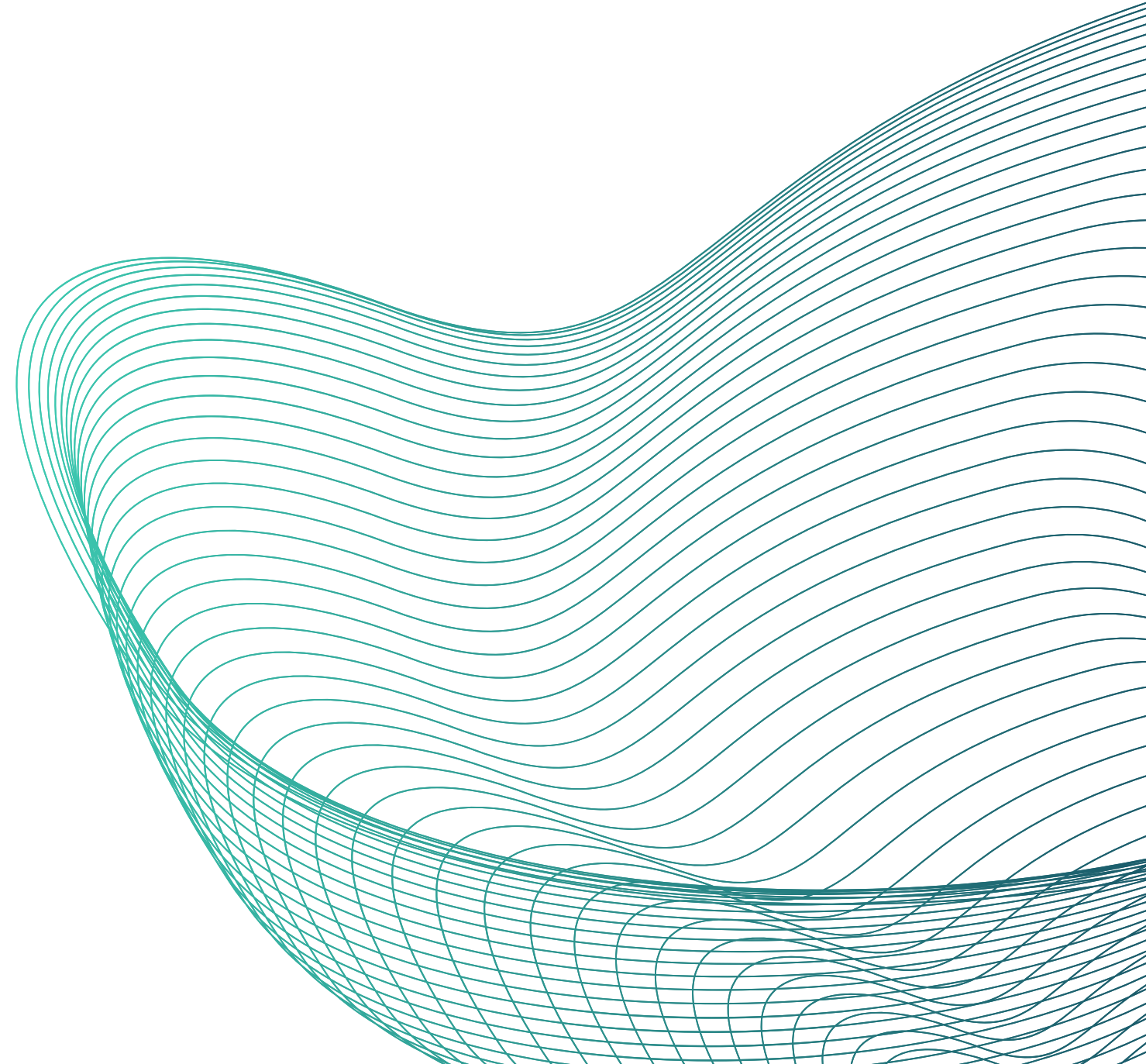
03 AI in the insurance field

04 Case study: Unipol Group S.p.A.

05 Conclusion: the future of AI
and insurance



I. The insurance industry



Types of policies

Insurance plans can be divided into classes or branches that cover related risks.

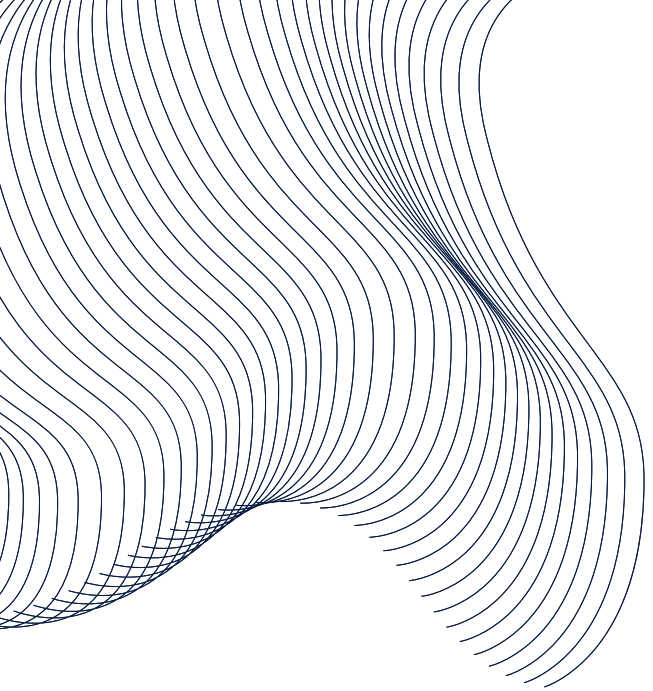
Non-life insurance

Protection against occurrences that could harm specific assets, earning capacity, overall assets, or the insured as a person.

- **Property damage**
- **Assets or expenses insurance**
- **Damage to persons**

Life insurance

- Life policy
- "Death benefit" insurance
- Index-linked policy
- Unit-linked policy
- Revaluable policy



The evolution of the insurance market

Evolution of legislation

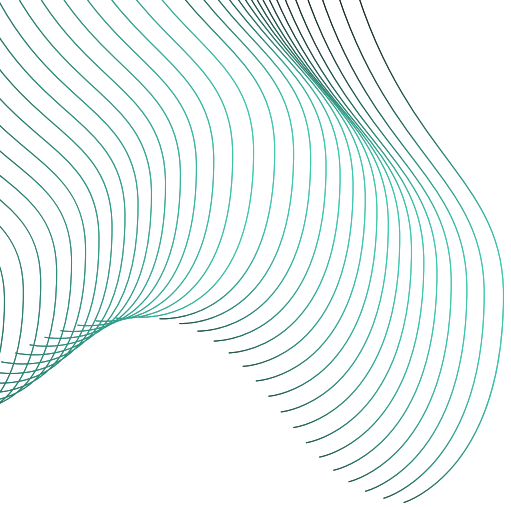


- **Maastricht Treaty Impact:** in 1993 limited competition, high barriers, and intermediaries' central role.
- **Establishment of the European Union and the single market in 1999:** increased trade volume and dismantled financial barriers.
- **Italy:** enhanced transparency of distribution and contractual conditions, greater consistency among countries, helped by the introduction of the euro.

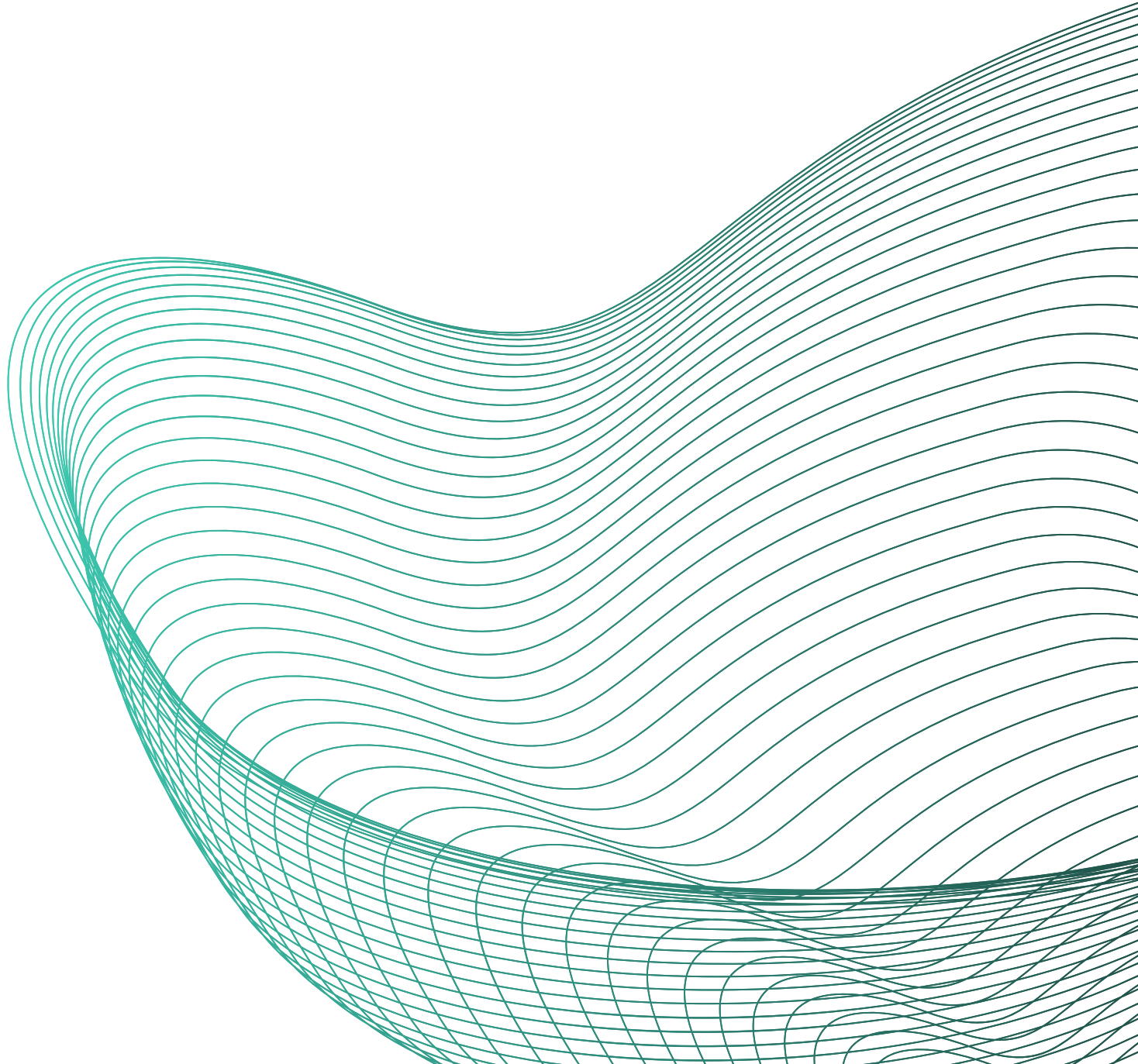
Internationalization and globalization



- **Changes in the management and deregulation,** increase in competition and decline in profit margins.
- **Concentration in the insurance industry,** which resulted in a true structural transformation.
- **Differentiation approach:** the selection of goods and services increased, and the traditional insurance protection complemented by additional services (ex. UnipolService)
- **Investment in Innovation:** new product development, operational efficiency, and service quality
- **Shift in Competition:** competition from diverse operators in a more dynamic marketplace (banks and postal services).

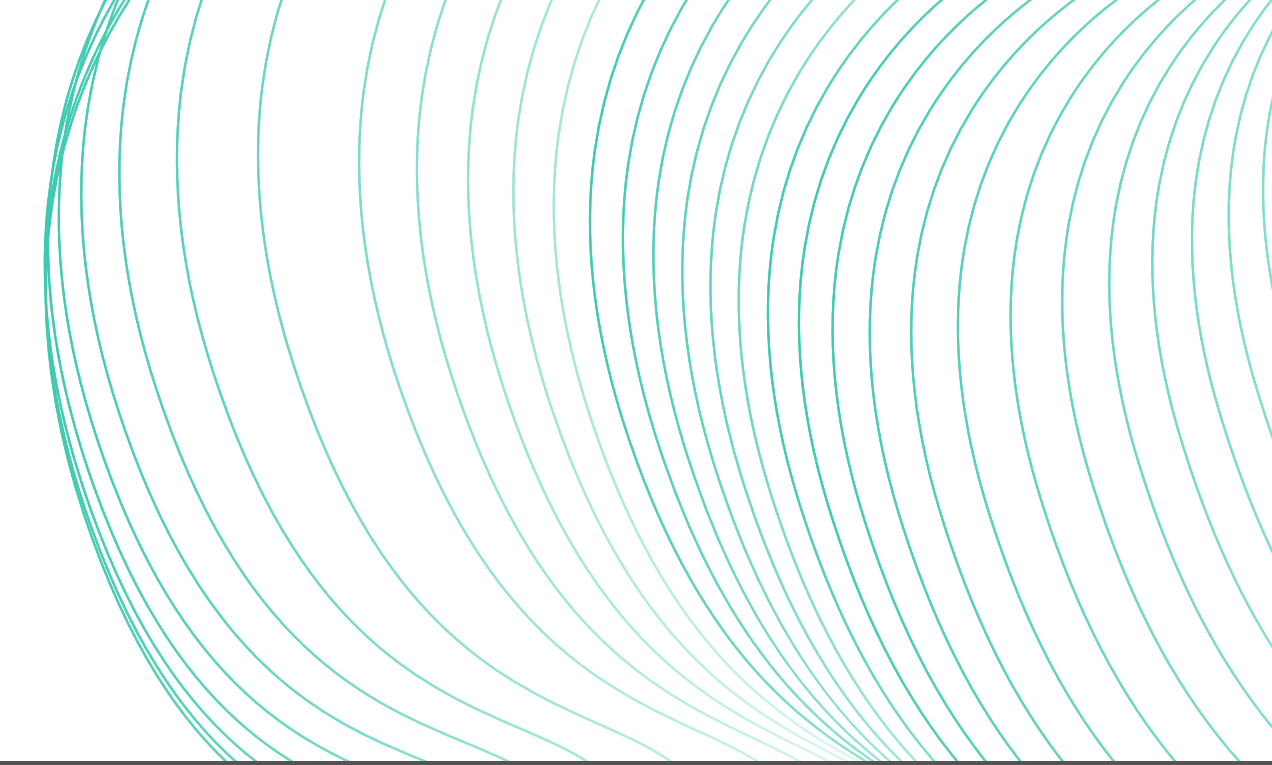


II. Insurtech



InsurTech industry

New channels: increasing dynamism, changes in the structures of the industry.



Changes in landscape

- **Emerging technologies:** Cloud Computing, Big Data, Blockchain, Artificial Intelligence, and the Internet of Things
- **New business models**
- **Higher number of players**
- **Higher investments:** one billion dollars in 2013, investments reached 8 billion dollars in 2022 on a global scale*

How are InsurTechs innovating

- Advanced **technologies**
- Focus on **improving the experience** to foster a user-centric approach
- **Agile culture** and approach and **advanced analytics** to make business decisions.

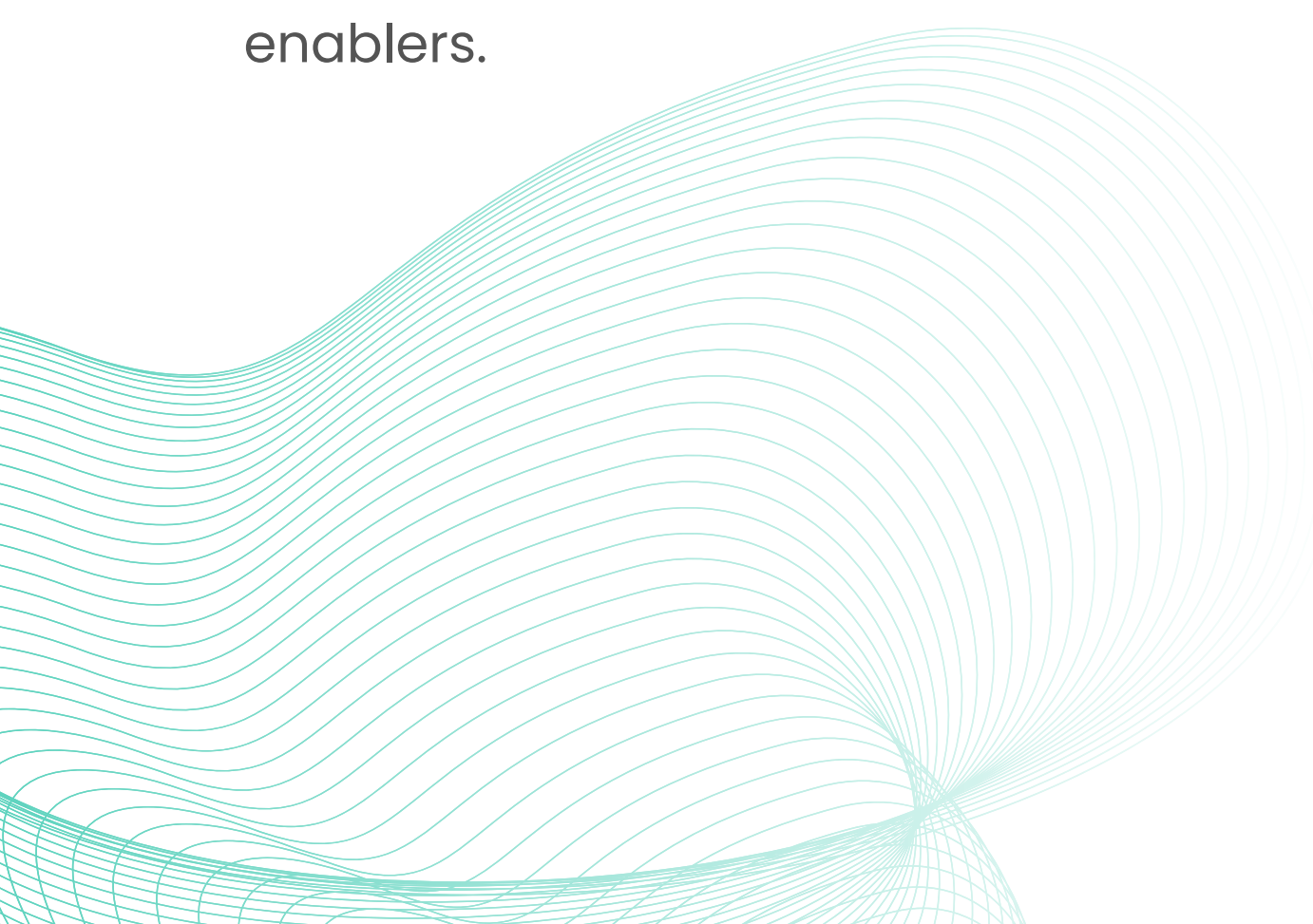
Classification of Insurtech

The types of InsurTechs vary in relevance to specific assets, value-added, and business and operating models:

- **Enablers**
- **Distributors**
- **Full carriers**

Game-changing technologies

Cloud computing, Big Data, Artificial Intelligence, Blockchain and the Internet of Things are key enablers.



Artificial intelligence

AI-based platforms to boost the effectiveness and efficiency of critical functions.

Big data

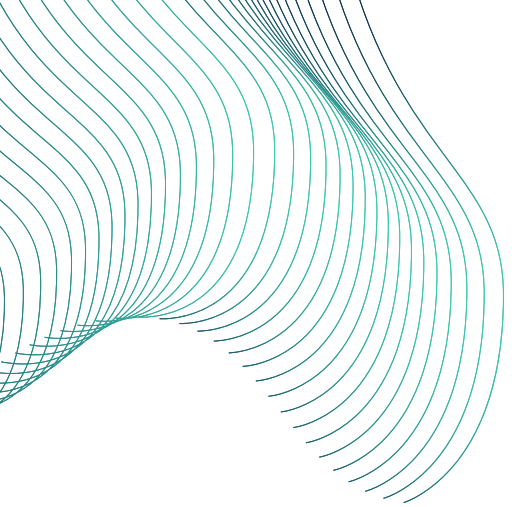
Used to improve underwriting processes, mitigate losses and enhance customer personalization.

Embedded insurance

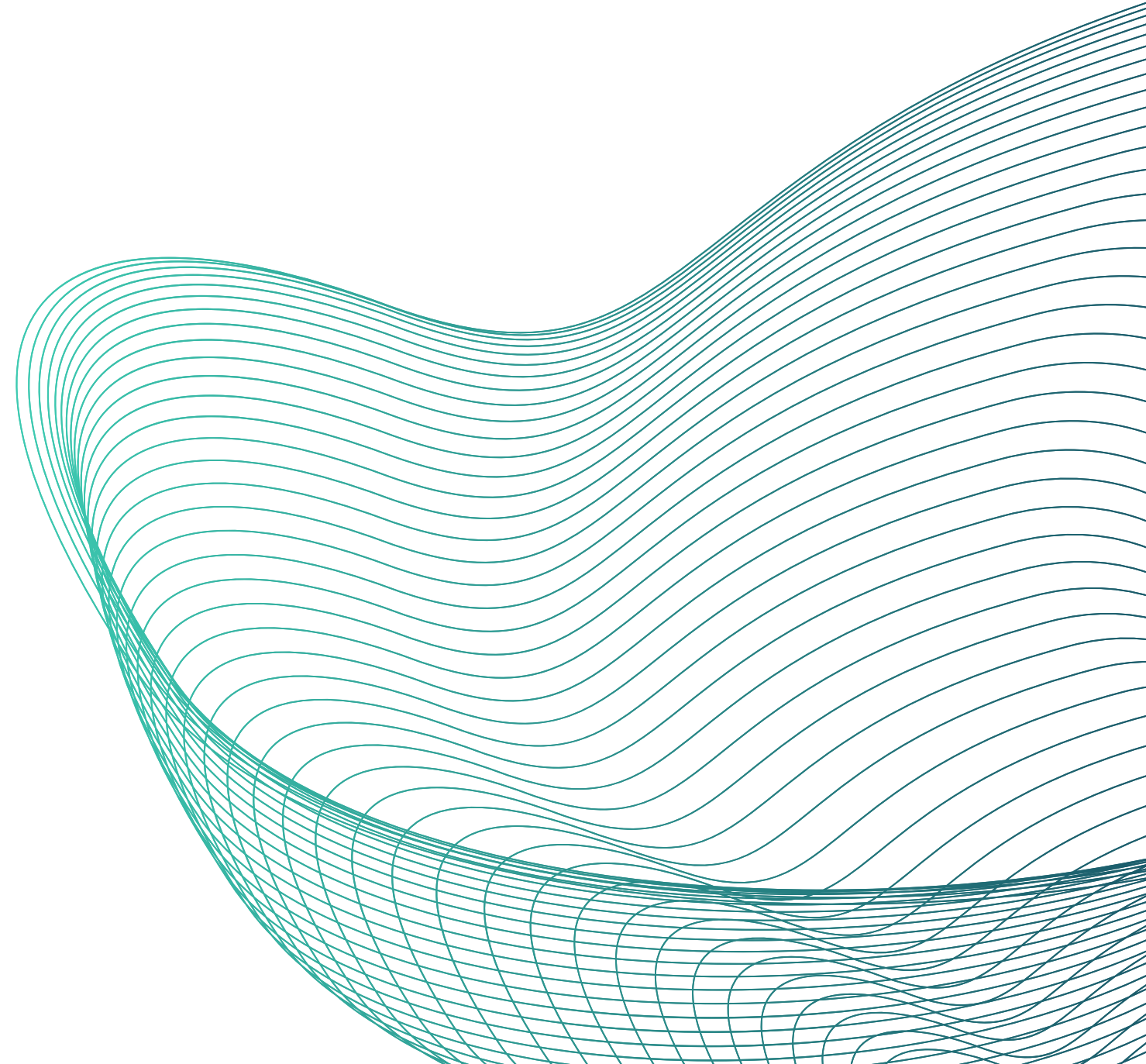
Open application programming interfaces (APIs) to seamlessly integrate insurance products and solutions into customers' digital journeys.

Cloud-based platforms and as-a-service business models

Greater speed and efficiency across their value chains.



III. AI in the Insurance field



The entire insurance sector is being transformed due to Artificial intelligence

Narrow AI:

1. Automate repetitive tasks
2. Generate insights from large and complex dataset to improve decision-making
3. Improve parametric products and risks solutions

Most widely used AI technology:

- Machine Learning
- Natural Language Processing
- Computer vision.

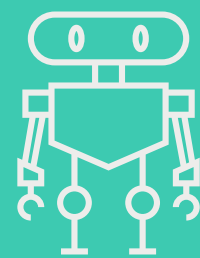
AI has the potential to influence and add value to the entire insurance value chain and bring significant benefits to customers. It is important to be aware of the risks and challenge involved.

Drivers



Increase of data coming from connected devices (IoT)

- Sensors equipped devices
- Flow of new data
- Better understanding of the customer



Rise in the use of physical robotics

- Change in interaction with the environment
- How much the risk is affected?
- Introduction of new products



Open-source systems

- Collaboration to build ecosystems
- Possibility to share data and use them across industries



Cognitive technology advancements

- Convolutional Neural Network used for text, audio and picture processing

Use cases and benefits

UNDERWRITING

Manual underwriting:

- Time consuming
- Based on a limited amount of data (questionnaires)
- Easy to make mistakes and set inefficient prices

Insurance using AI:

- Access to large amount of data
- Improved accuracy of pricing process
- Automation

CUSTOMER SERVICE

Conversational AI used for **voice assistants** and **chatbots**:

- 24/7 service
- Increased number of customer served
- No need for an employee for each customer anymore
- Enable to achieve economies of scales and gain competitive advantage

CLAIMS

Automated claim process:

- Allows to guide the client without encountering problems or delays
- Limits human intervention
- Ensures efficiency
- Saves significant amount of time

FRAUD

Frauds examples:

- Staging an accident
- Misrepresenting the circumstances of a claim
- Changing the actors, the causes and the extent of the damage

Solution: **combining collected data with proper ML and AI system**

Risks



Workforce



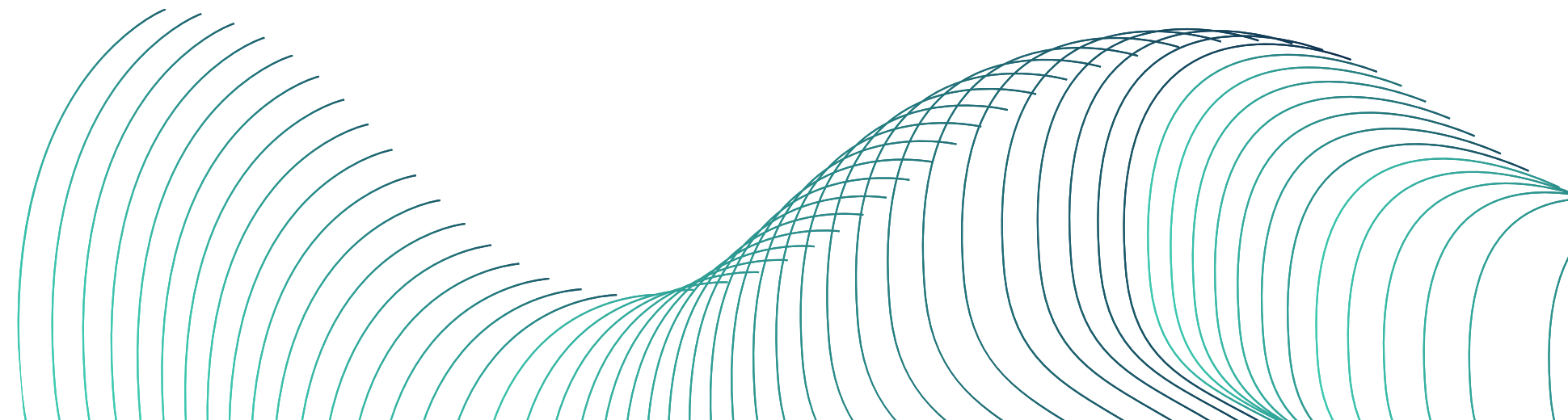
Lack of appropriate
operating models
and right **mindset**



**Loss of
privacy**



Discrimination



Opportunities

- **Technology-driven change enables the creation of new product categories.**

E.g., autonomous cars, connected houses, physical robotics

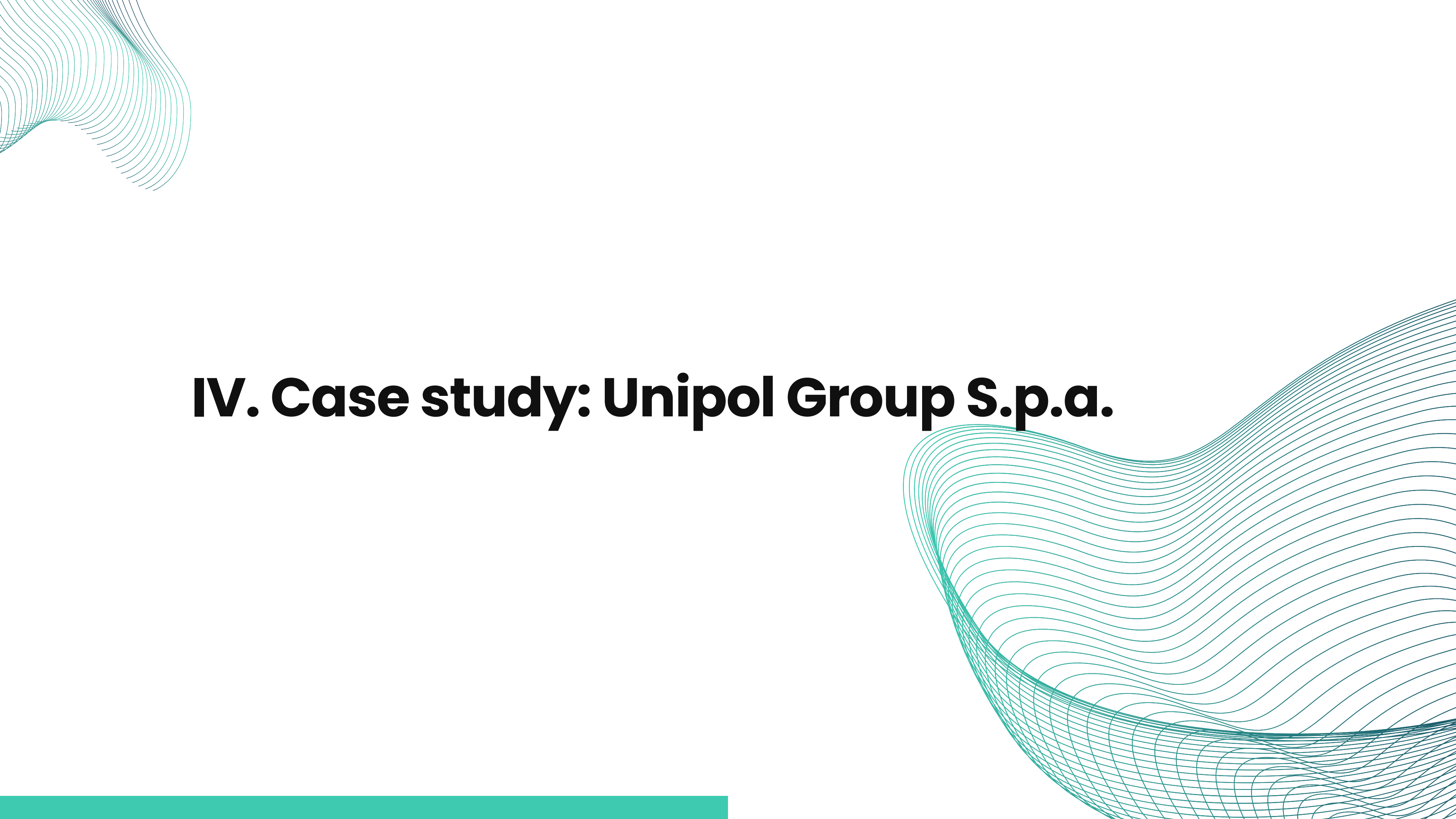
- **Limiting the payout:** with the help of AI is possible to implement **proactive care**.

E.g., health and life insurance companies are launching health apps and medical-grade sensors to help people stay healthy.

AI for weather events and mobility.

Challenges

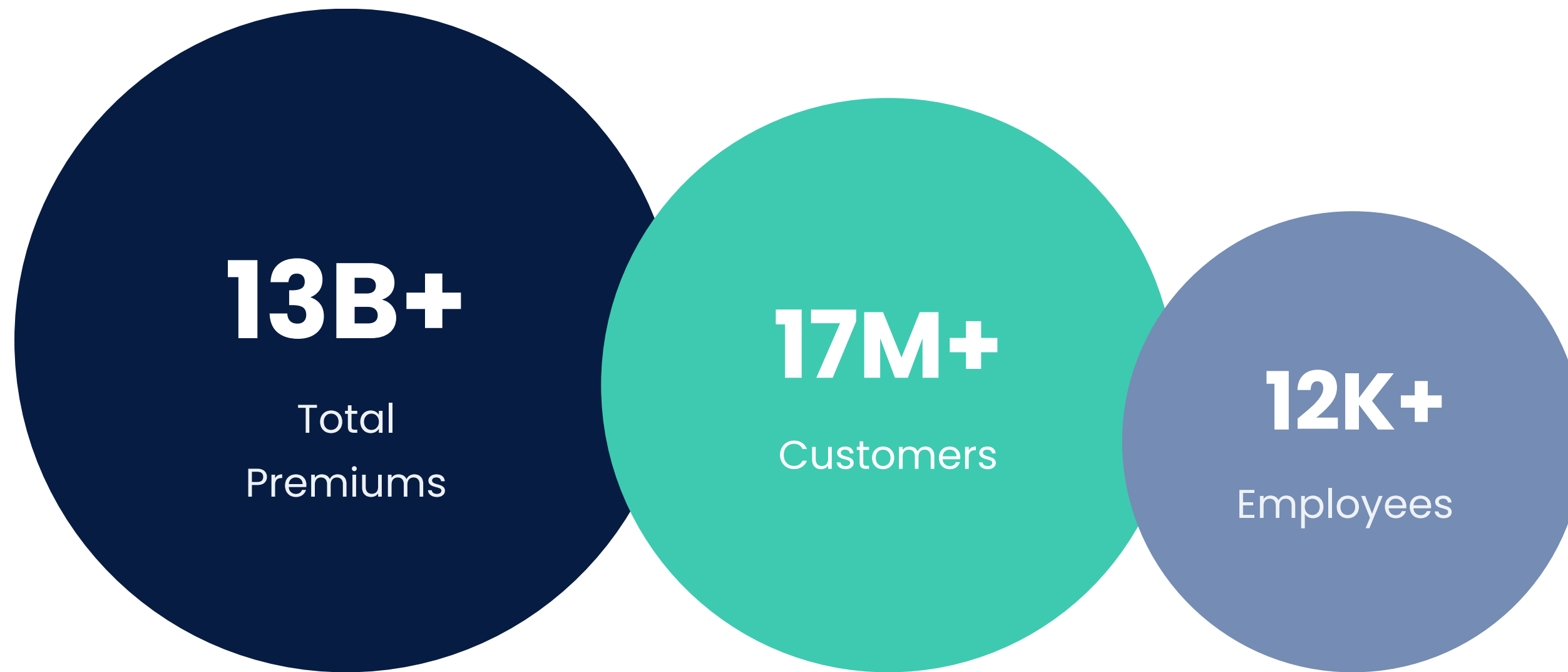
- **Lack of high quality data:** retrieve, clean, transform, integrate data
- **Lack of AI expertise:** retrain the workforce, establishing the right partnership
- **Implementation costs:** do not hesitate to devote enough money and time even when results are not visible
- **Change management:** leaders must be open to and prepared for change



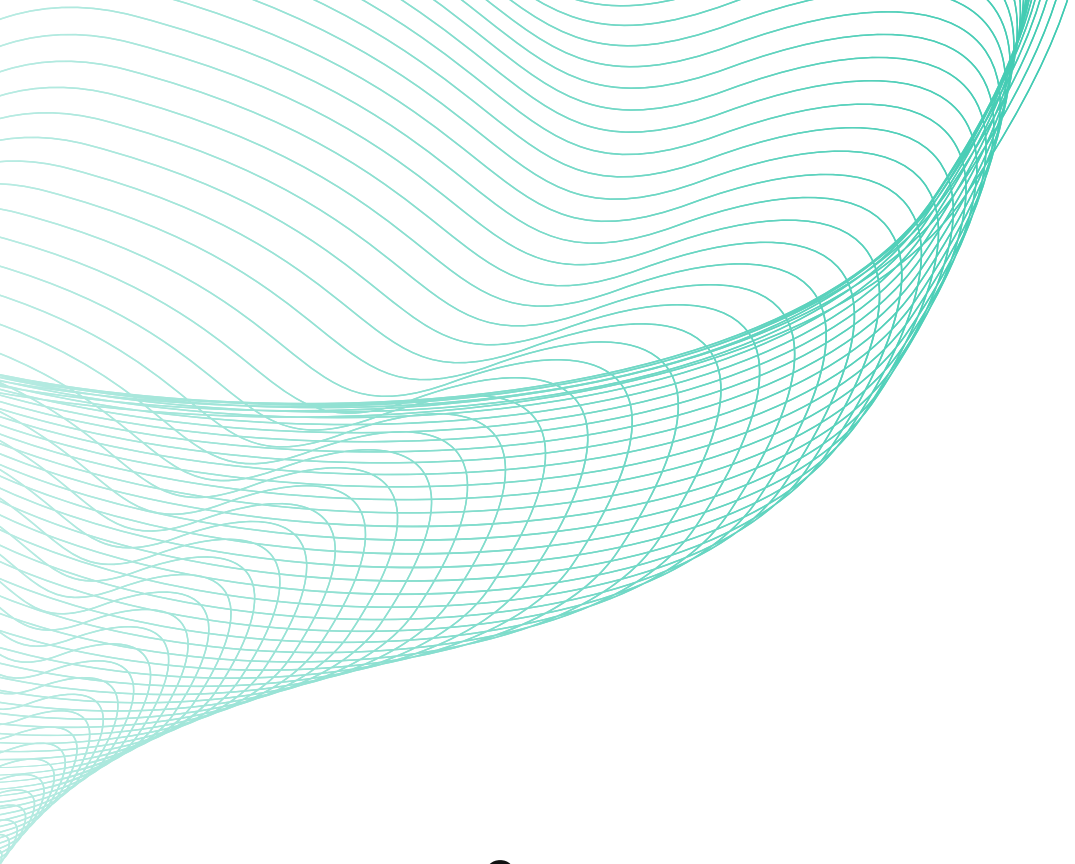
IV. Case study: Unipol Group S.p.a.

Company Overview

- **Unipol Group S.p.A** is a prominent Italian financial holding company known for its integrated financial services.
- It operates through UnipolSai Assicurazioni S.p.A, market leader in **non-life insurance** in Italy, characterized by two specialized firms, Linear Assicurazioni (direct insurance sector) and UniSalute (health protection).
- The company's diversification across multiple sectors, including insurance, finance, real estate, and mobility, ensures a comprehensive approach to meeting **customer needs** and **market demands**.



Market Size



Unipol Group's AI strategy

Unipol Group's strategic is based on the utilization of data analytics and artificial intelligence, to guarantee innovation and customer satisfaction, through tailored insurance solutions, maintaining a competitive edge with initiatives like telematics and smartphone integration.



Utilization of Data and AI

Through the use of telematics devices, the company gathers **real-time data** on customer behavior and driving patterns, allowing for **personalized insurance policies** and optimized pricing strategies.

AI-driven analytics enable Unipol Group to anticipate customer needs, deliver personalized service, and ensure seamless customer interactions.



Telematics and Black Box Technology

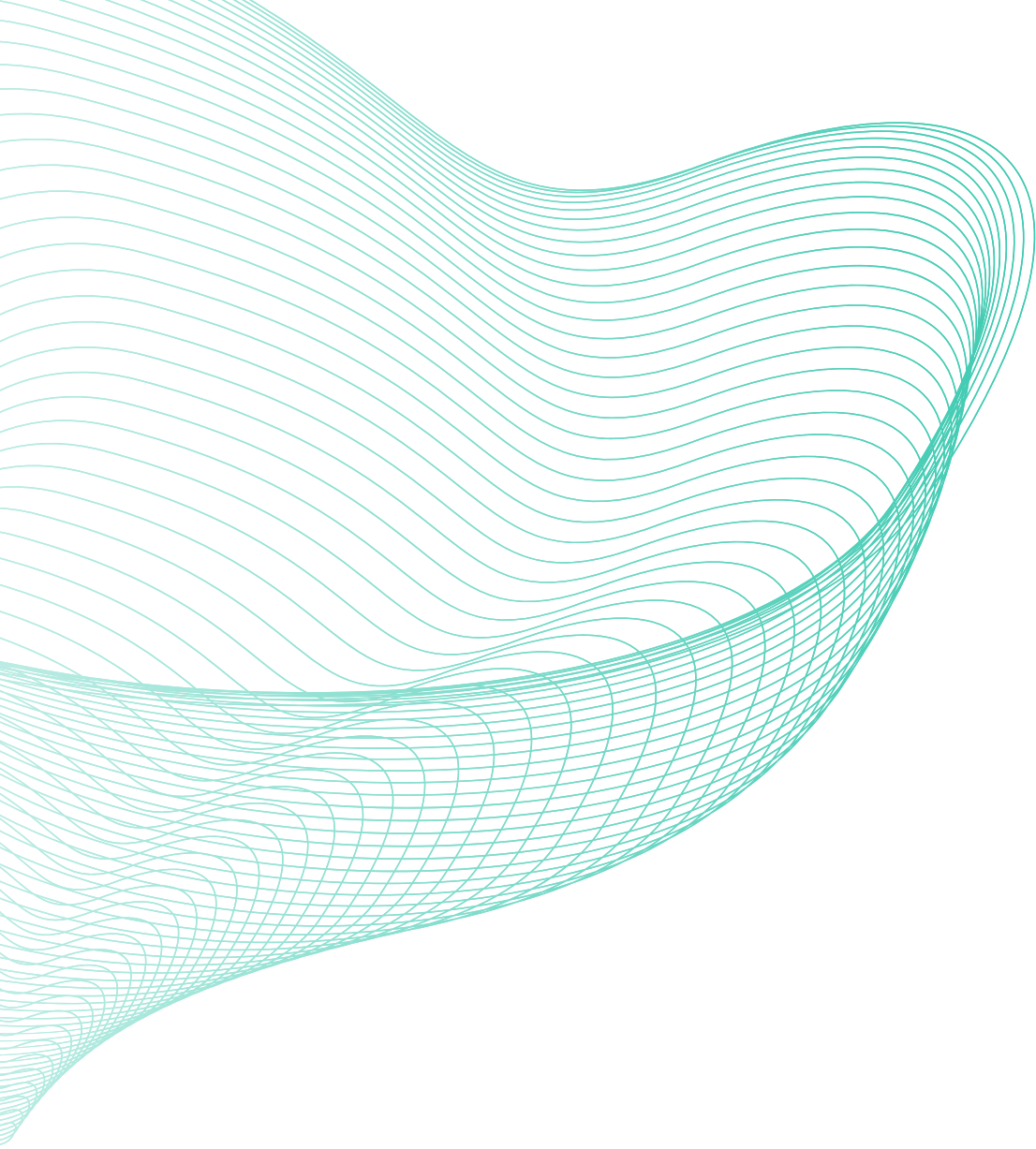
Telematics data allow assessing driving behavior, detecting accidents, expediting claims processing, and preventing fraudulent claims.

Continuous monitoring and detection of anomalous events prompt alerts to emergency services and streamline claims adjudication. This enhances customer satisfaction, mitigates losses, and prevents fraudulent claims.



Smartphone Integration

Smartphones equipped with sensors provide rich data, facilitating personalized insurance offerings and **real-time assistance** to a wider audience.



Unipol Group's AI strategy



Mobility as a Service

With the rise of the Mobility as a Service (MaaS) trend, the company is committed to offer comprehensive insurance solutions, in which insurance coverage will extend beyond physical vehicles to encompass the **broader mobility experience**, including shared rides, public transportation, and other transportation services.



Partnerships and Data Privacy

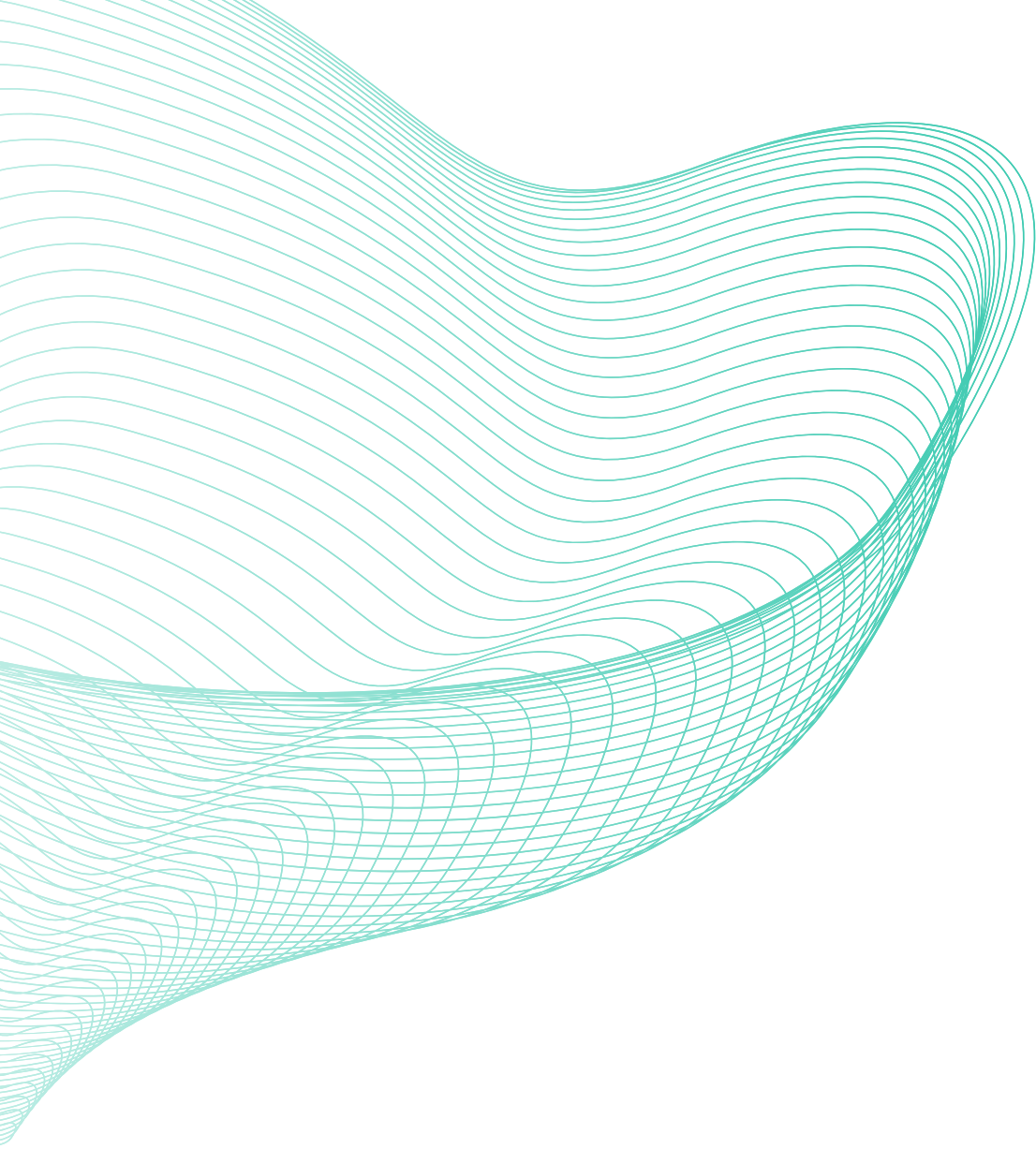
Collaborations with service providers allows to have access to a wider spectrum of vehicle data, but also comes with risks concerning **data privacy** and **security**.

The company is dedicated to respecting individual privacy rights and implementing robust data protection measures to avoid unauthorized access or misuse and to ensure compliance with data protection regulations like GDPR.



Use of AI for weather events

Specialized teams utilize **AI algorithms** to analyze diverse data streams, facilitating early detection and forecasting of weather phenomena, in order to guarantee **prompt delivery** of alerts to policyholders through messages or push notifications, enhancing risk mitigation efforts



Unipol Group's AI strategy



Human-Centric Approach to Automation

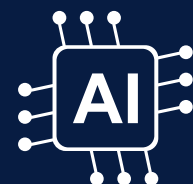
Human activities still represent the main resources to tasks that require creativity, empathy, and problem-solving skills, to ensure human empathy and intervention, especially in delicate scenarios like claims processing or client support.



Conservative Approach to Data Management

The company prioritizes **internal control** and expertise retention over external solutions or outsourcing, to guarantee **data privacy** and **cybersecurity integrity** and to mitigate risks and ensure compliance with regulatory requirements.

For this purpose, Subsidiaries like Leithà s.r.l. are established to internally manage data



AI and Data-centric enterprise intelligence

Recognizing the increasing supportive role represented by **AI**, the company believes there is potential for expansion into other areas, such as product proposals and customer service, with the aim of providing **streamline operations**, enhancing efficiency, and delivering personalized client experiences.

CONCLUSIONS:

THE FUTURE OF AI AND INSURANCE

- Innovations in **AI** and **ML** are expected to completely transform the insurance market by introducing new risk categories and changing premium structures.
 - New **digital data sources**, such as smartwatches and social media, offer insights for improved **risk assessment**, and monitoring devices allow customized contracts that lower total insurance costs.
 - **Privacy** concerns arise from customer data sharing, which are handled by offering premium discounts for installing monitoring equipment as a way to encourage safer conduct.
 - Regulation ensures **transparency**, informed consent, and robust data protection measures, safeguarding **customer privacy** and promoting fair insurance practices.
- 

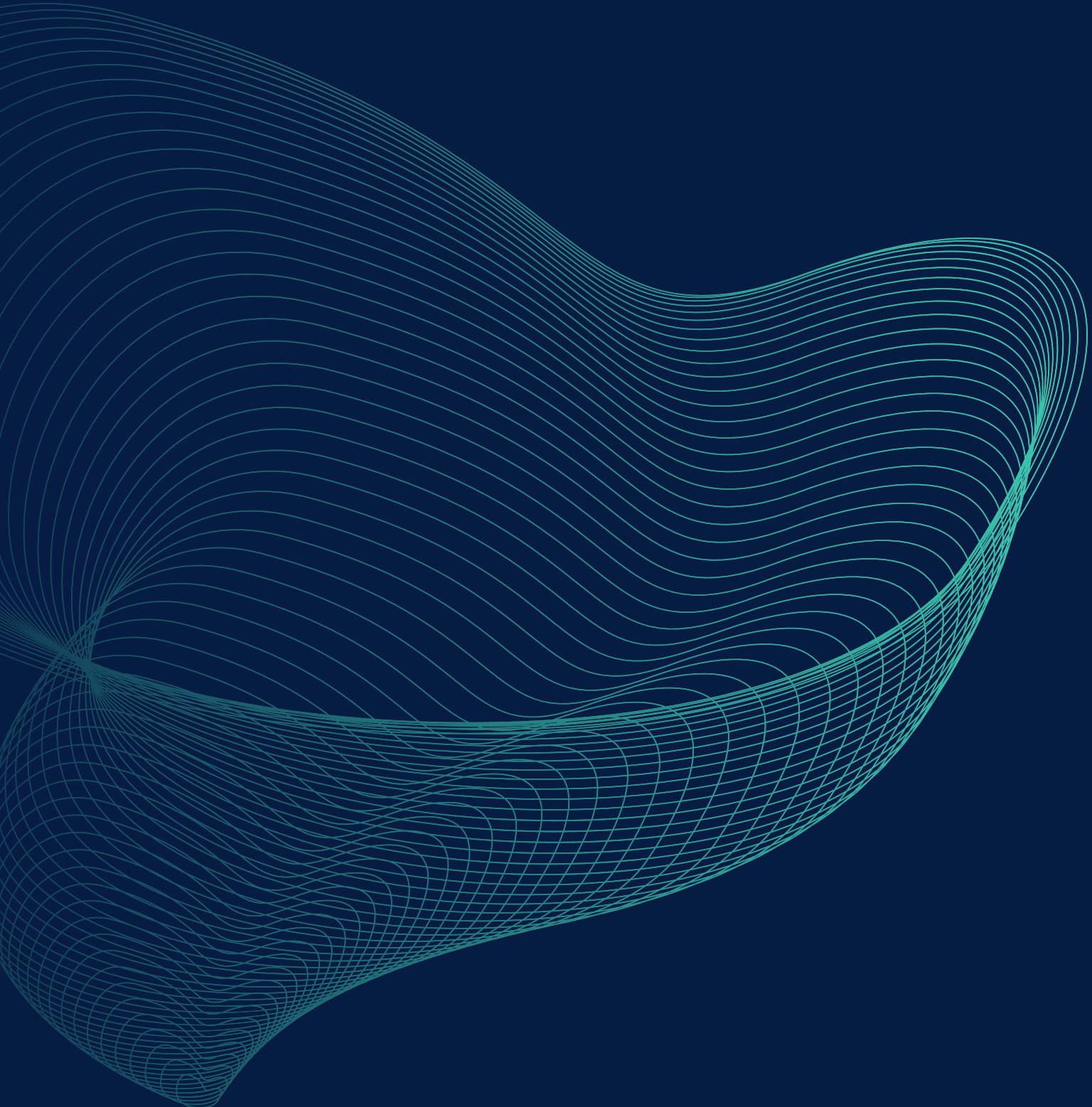
CONCLUSION: THE FUTURE OF AI AND INSURANCE

- AI is projected to automate underwriting processes using **sensor data** and expedite basic claims processing.
- AI is anticipated to greatly impact all aspects of insurance, with the extent of impact contingent on specific tasks

Swiss Re Group analyzes AI's potential impact on the insurance industry



- Classification into **low, medium, and significant** reflects AI's varying influence.
- Areas like product pricing, sales management, and claims administration are expected to undergo **significant AI impact**.
- Conversely, roles such as market research and collections may experience **lower AI impact**.



Thank You!

Alessandra Arcuri
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