

**ARTIFICIAL INTELLIGENCE
INSURANCE MARKETS RISKS AND OPPORTUNITIES**

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Summary

1. Artificial Inteligence – What it is

2. AI – Connections

Big data ; Internet of things – IoT), Platforms, Internet (5G, 6G, 7G), Cloud; Smart Phones; Quantic Computing; blockchain/DLT; Aumeted reality and virtual reality 3D models Metaverse....

3. Insurtech and AI applied to Insurance

Disruption of business models; Claims and acident management, Fraud Detetion ;
Plataforms and access to clientes; 360° vision of the cliente; Behavior based insurance

4. Opportunities and risks for Insurance

New Produts: behavior based (related to IoT); Figuring the rules of an algorithm in evolution

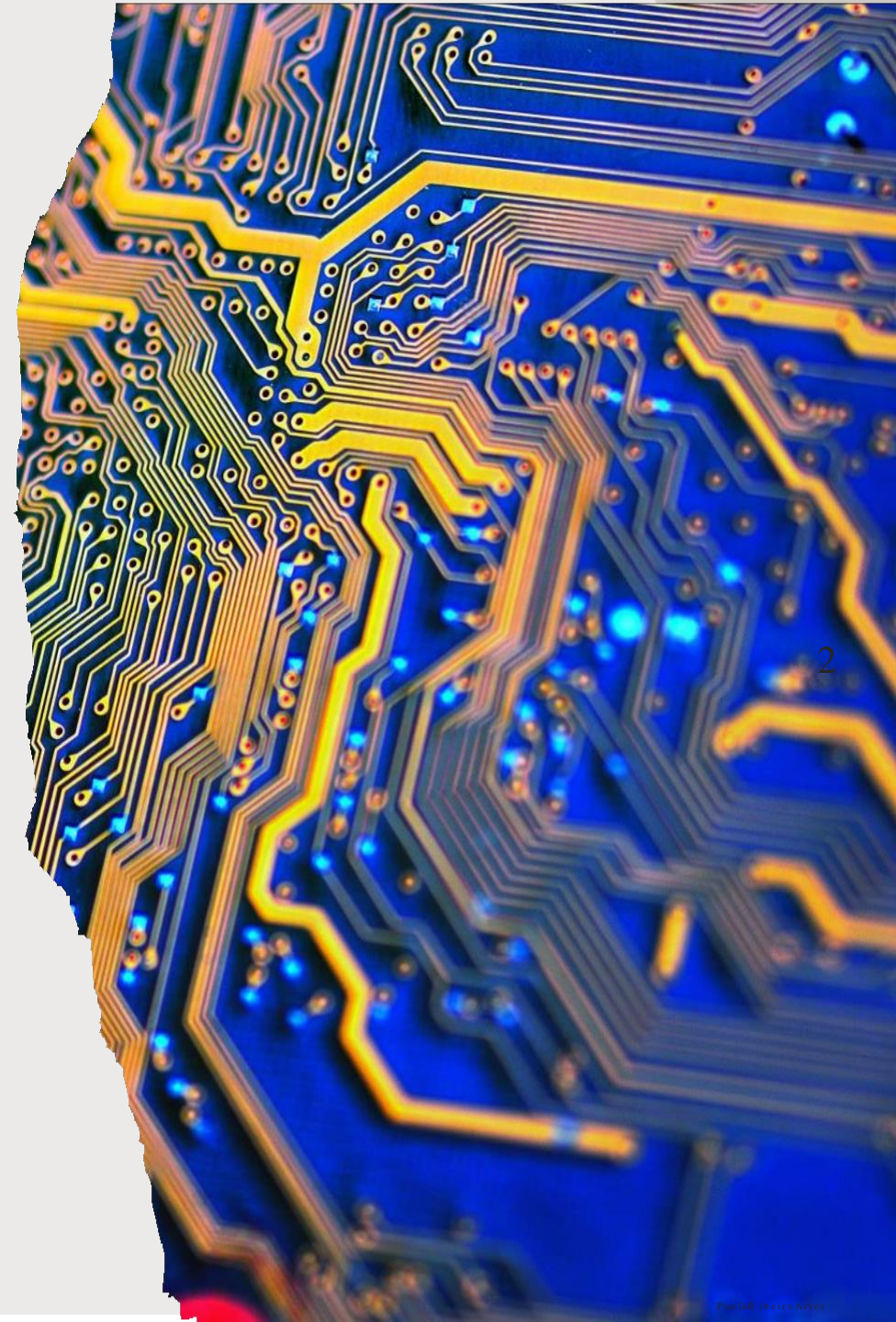
Cost reduction; Fragmentation of business models; External Business providers (AIaaS)

Fairness, discriminations and privacy of IA systems

Contracts done by *chatbots*

Market Power of the Platforms

Ciberrisk





ARTIFICIAL INTELIGENCE

Affects Everything, everywhere all at once

ARTIFICIAL INTELLIGENCE



Autonomous Vehicles

Reinforcement Learning

Image Recognition

Optimization

Linear, Integer, Non Linear

Forecasting

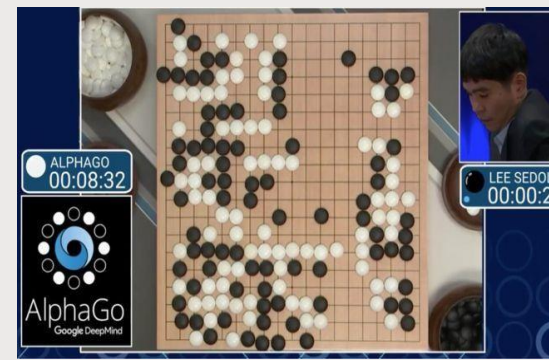
Speech Translation

Deep Learning

Process Automation

Machine Learning

Recommendation Engines



From Chess, 1997, IBM's Deep Blue

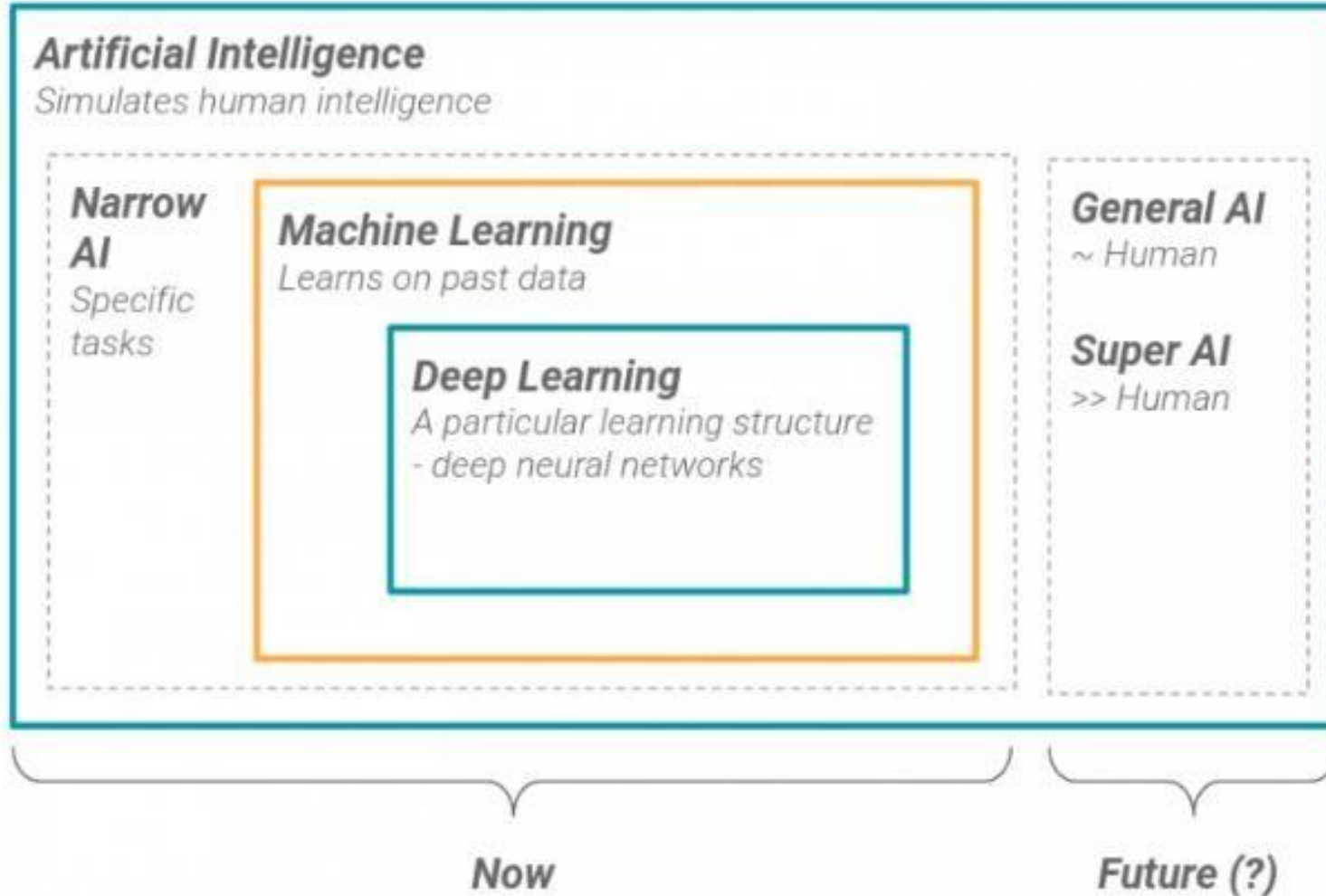


Diplomacy, [Meta AI masters the game](#), 2022

Nature, 22 november 2022, [Human-level play in the game of Diplomacy by combining language models with strategic reasoning](#) Autor: Meta Fundamental AI Research Diplomacy Team (FAIR).

[Glossary of human-centric artificial intelligence](#), Joint Research Center of the European Commission (JRC), 2022

Moravec Paradox: difficult things for humans are easy for robots and AI Systems, and easy tasks for humans are very difficult for AI systems.



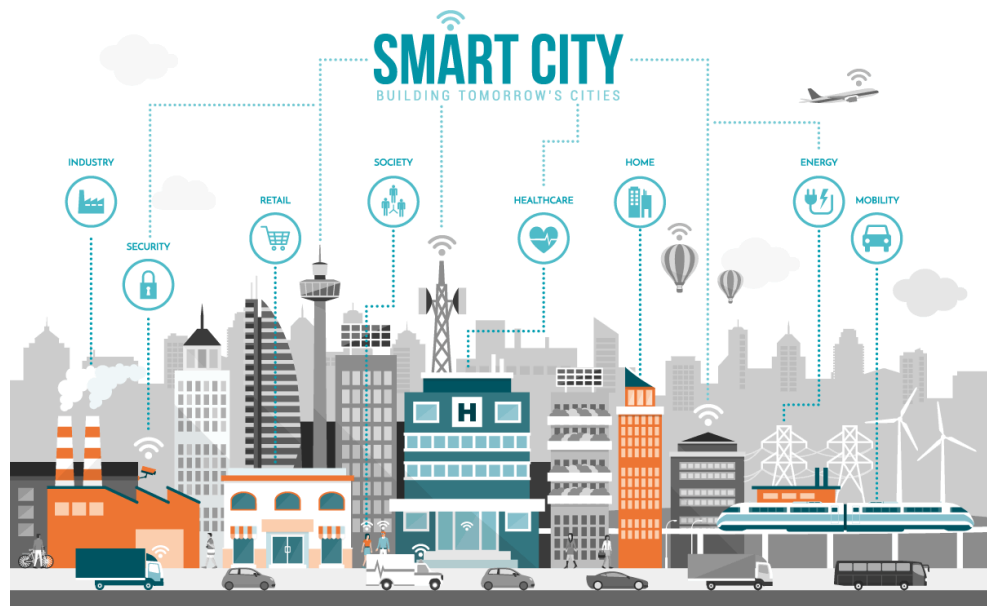
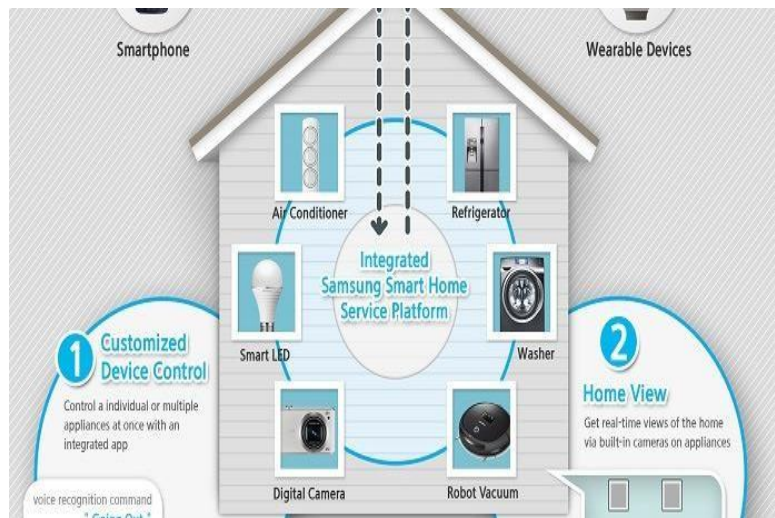
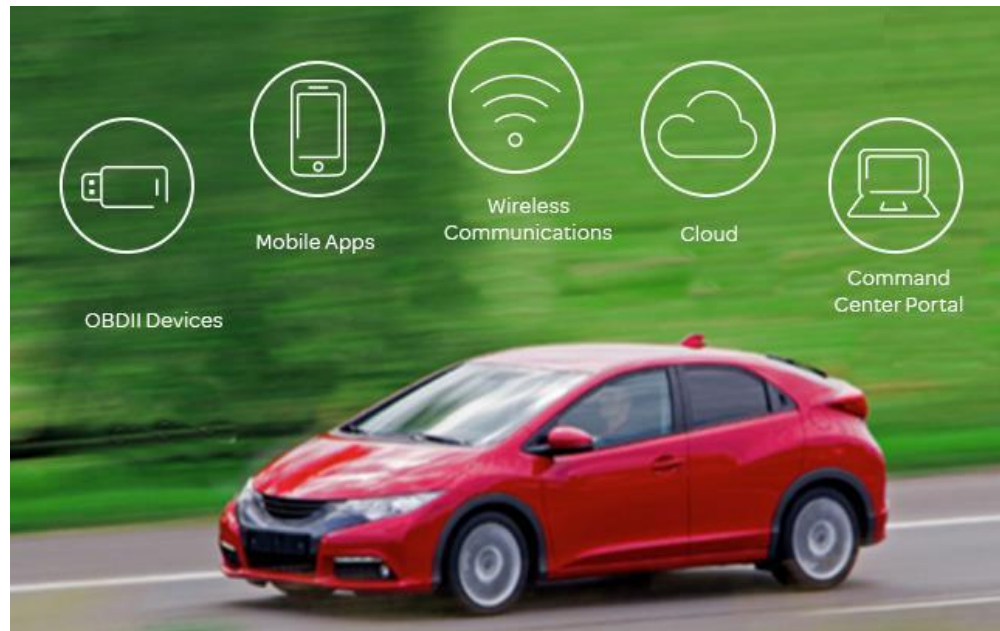
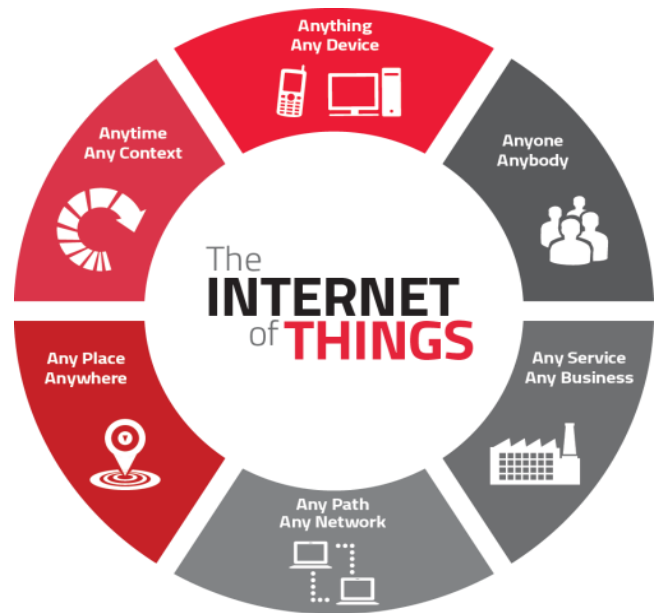
“I set a date for the Singularity—representing a profound and disruptive transformation in human capability—as 2045.”

Dr. Ray Kurzweil
*Co-Founder and Chancellor,
Singularity University*

BIG DATA

2021 *This Is What Happens In An Internet Minute*





IN SURTECH: SEGUROS COM TECNOLOGIA / IA

Business Model Disruption

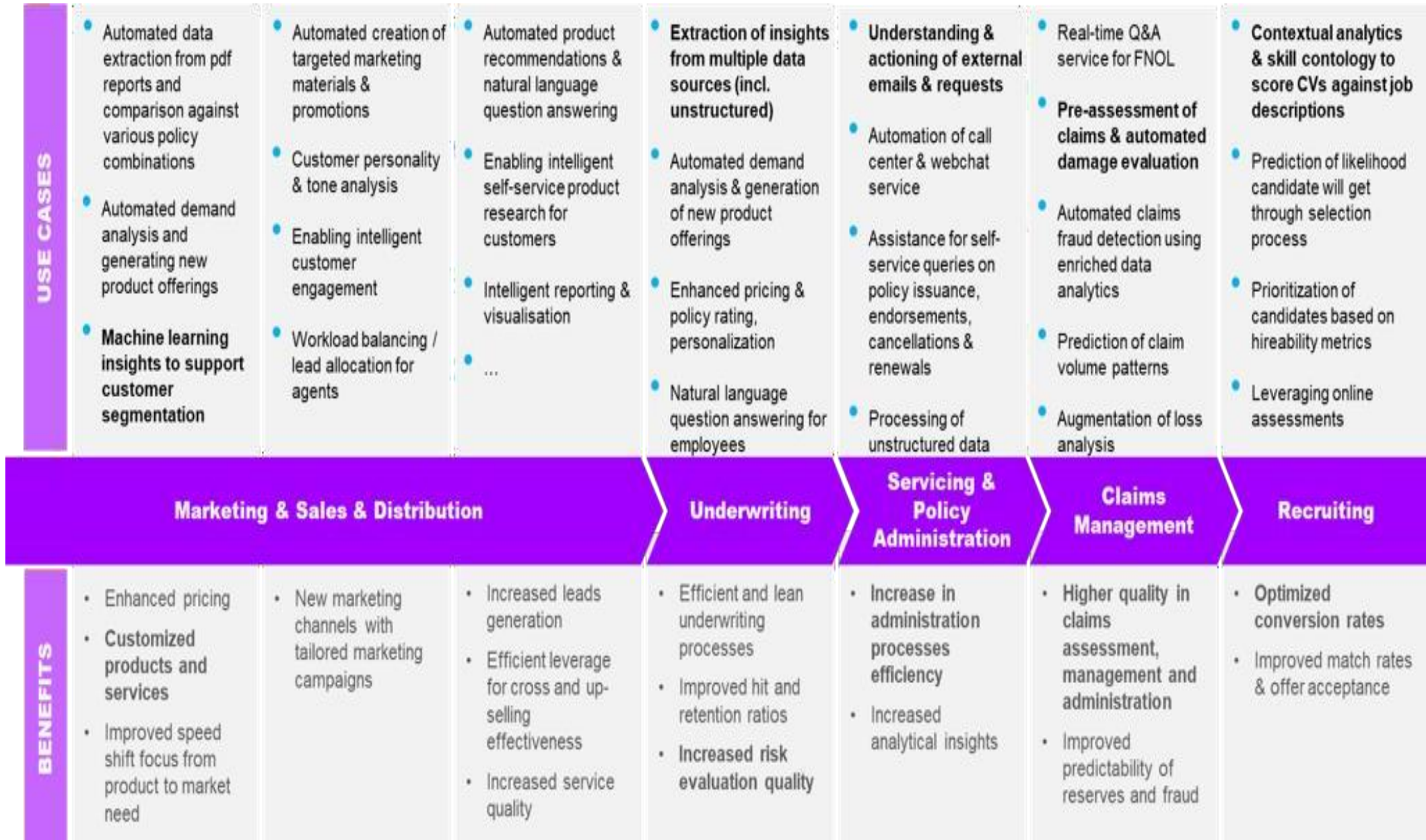
Claims Management, Fraud Detection

Plataforms / Ecosystems / Mixed Activity Groups

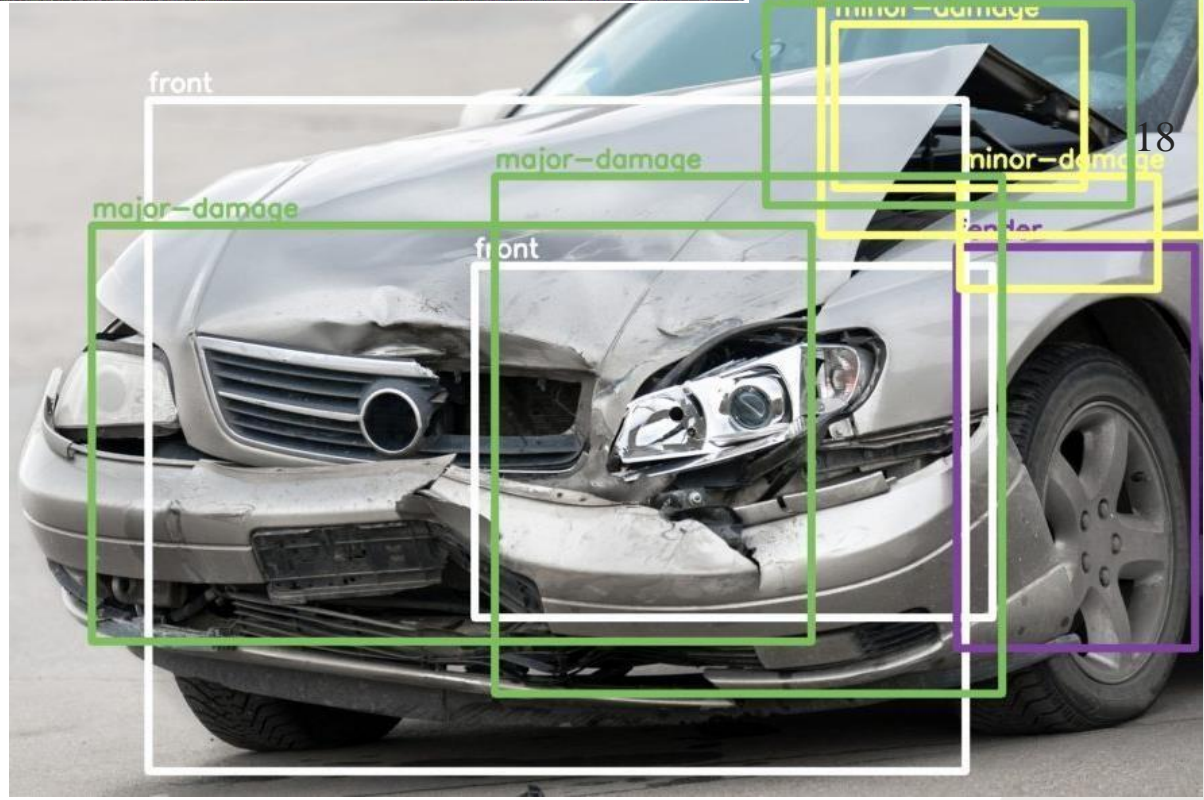
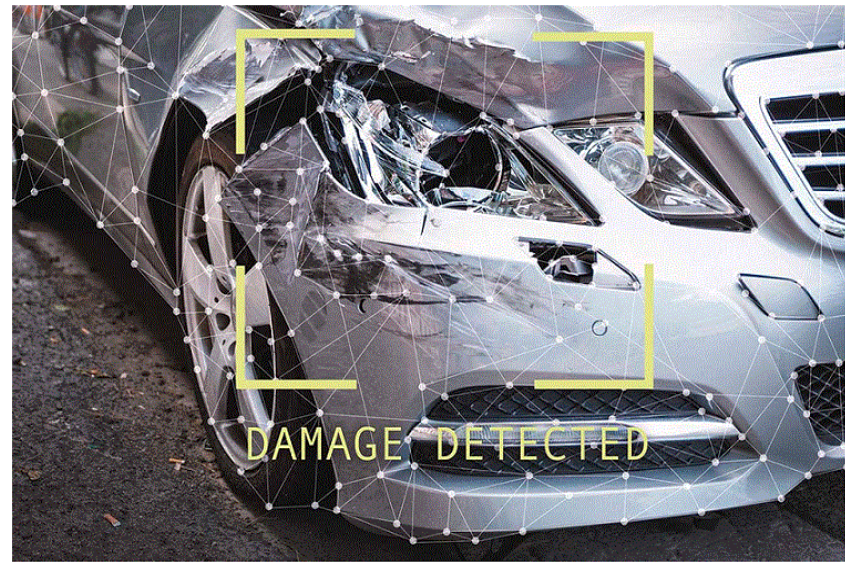
360° Vison of the Client

New Products: Behavior Based Protucts (related with IoT)

Disruption of Classic Business Models

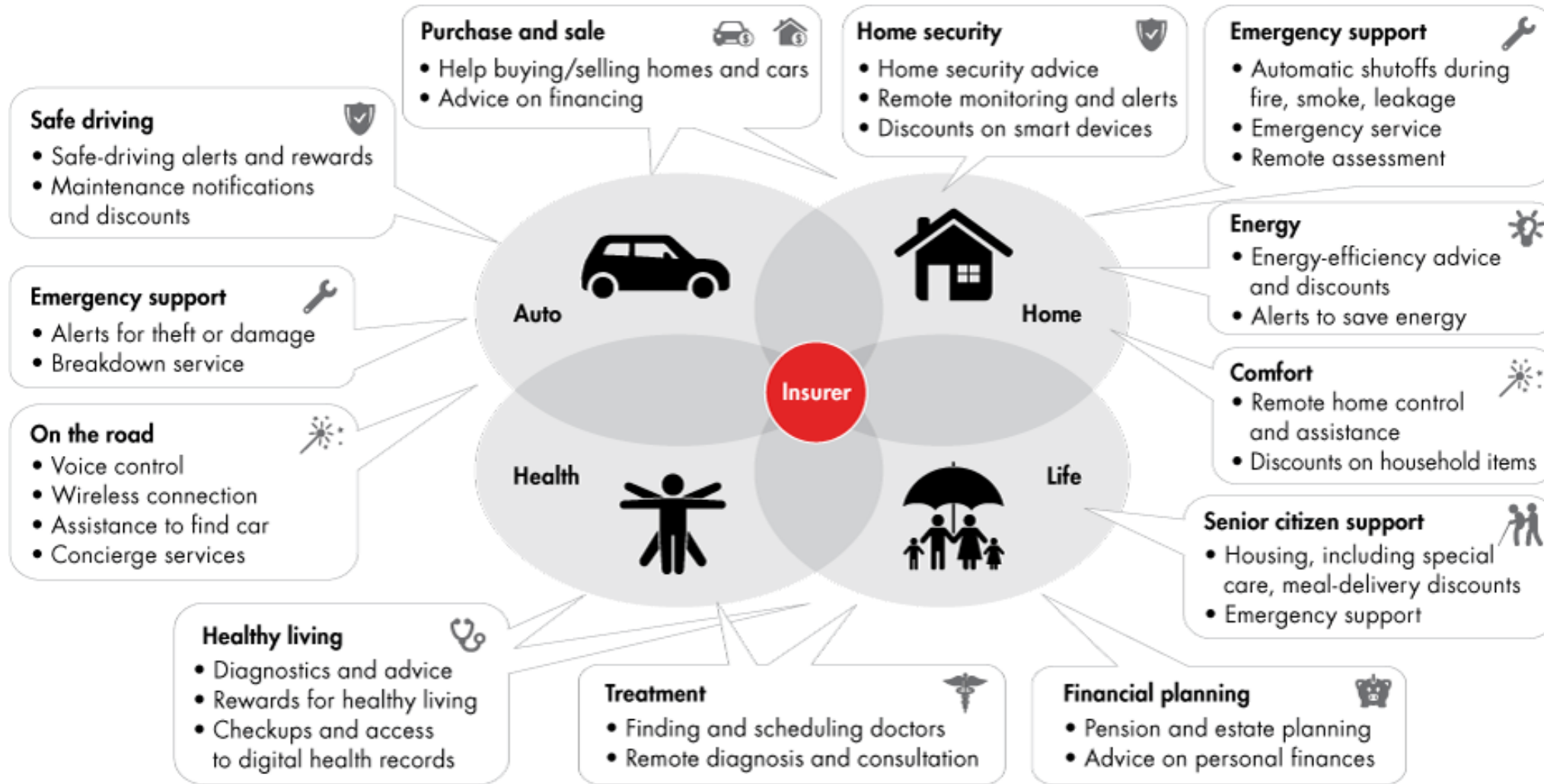


Claims Management and Fraud detection



			
Broken headlamp	Broken tail lamp	Glass shatter	Door scratch
			
Door dent	Bumper dent	Bumper scratch	Unknown

Plataforms / Ecosystems / Mixed Activity Groups)



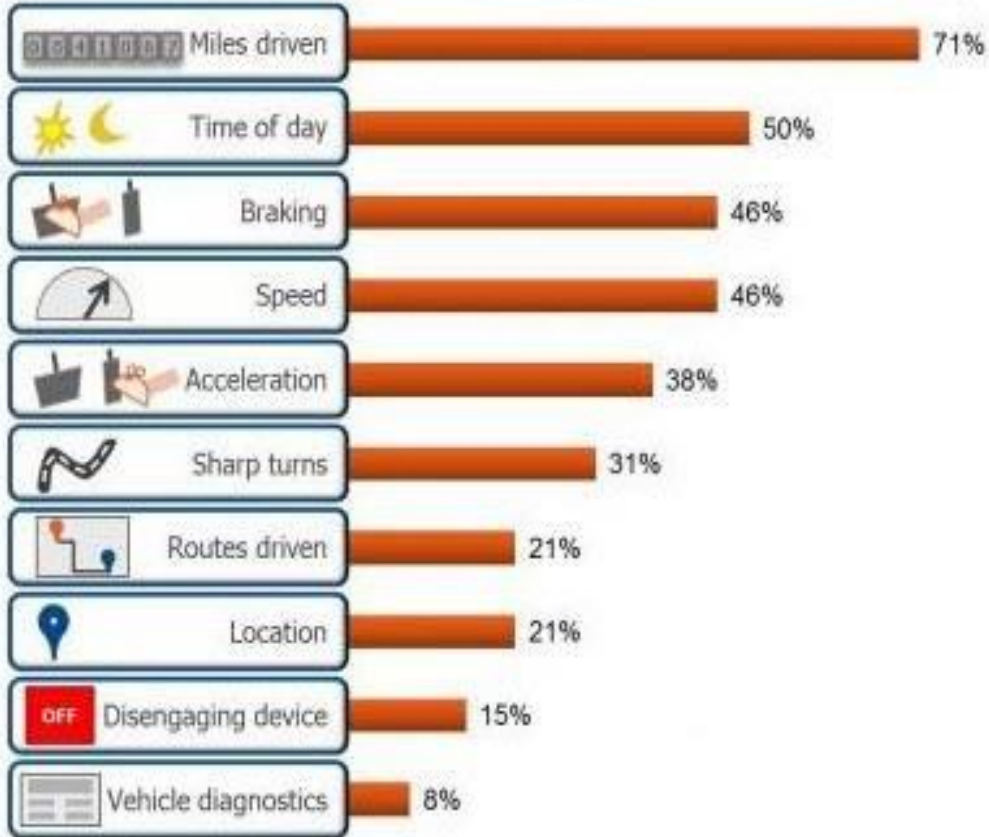
Source: Bain & Company



Building a 360-Degree Customer View

Produts: Behavior based Insurance

Figure 5. Percent of Insurers Using Specific Telematics Data for Pricing

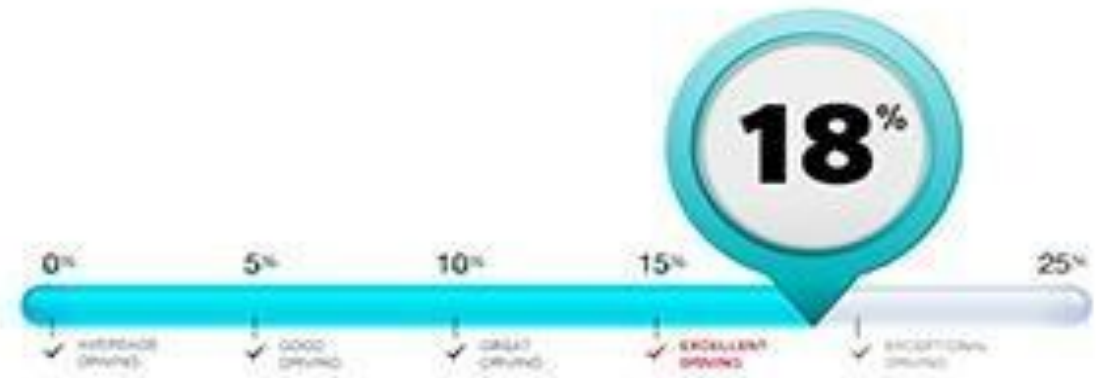


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Source: SMA Research, Telematics in Insurance, n=110

Jamie, here is your potential discount

Based on 100 days of driving



How is your driving?

Potential discount last updated on

Legal Challenges

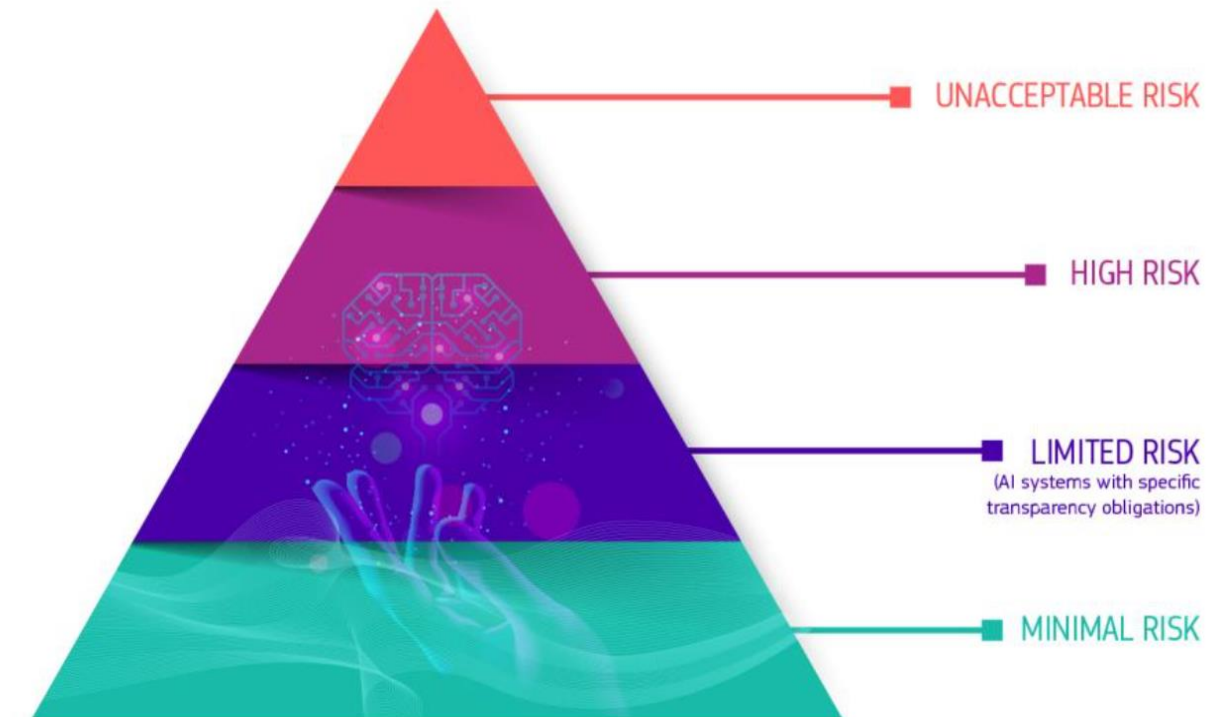


AI in the EU Legal Discussion

- 21 April 2021
 - Proposal of **AI ACT**)
 - Proposal of revision of the Machines Regulation (2006)
 - Coordinated Plan for excellence and Trust in AI (2018)
 - 28 september 2022 - **AI Liability Directive**
-
- Digital Finance Strategy (24 september 2020)
 - Markets in Crypto Assets – MiCA)
 - Digital Operational Resilience Act – DORA),
Approved in the 28th of November of 2022

Unacceptable Risks

Anything considered a clear threat to EU citizens will be banned: from social scoring by governments to toys that encourages dangerous behaviour of children.



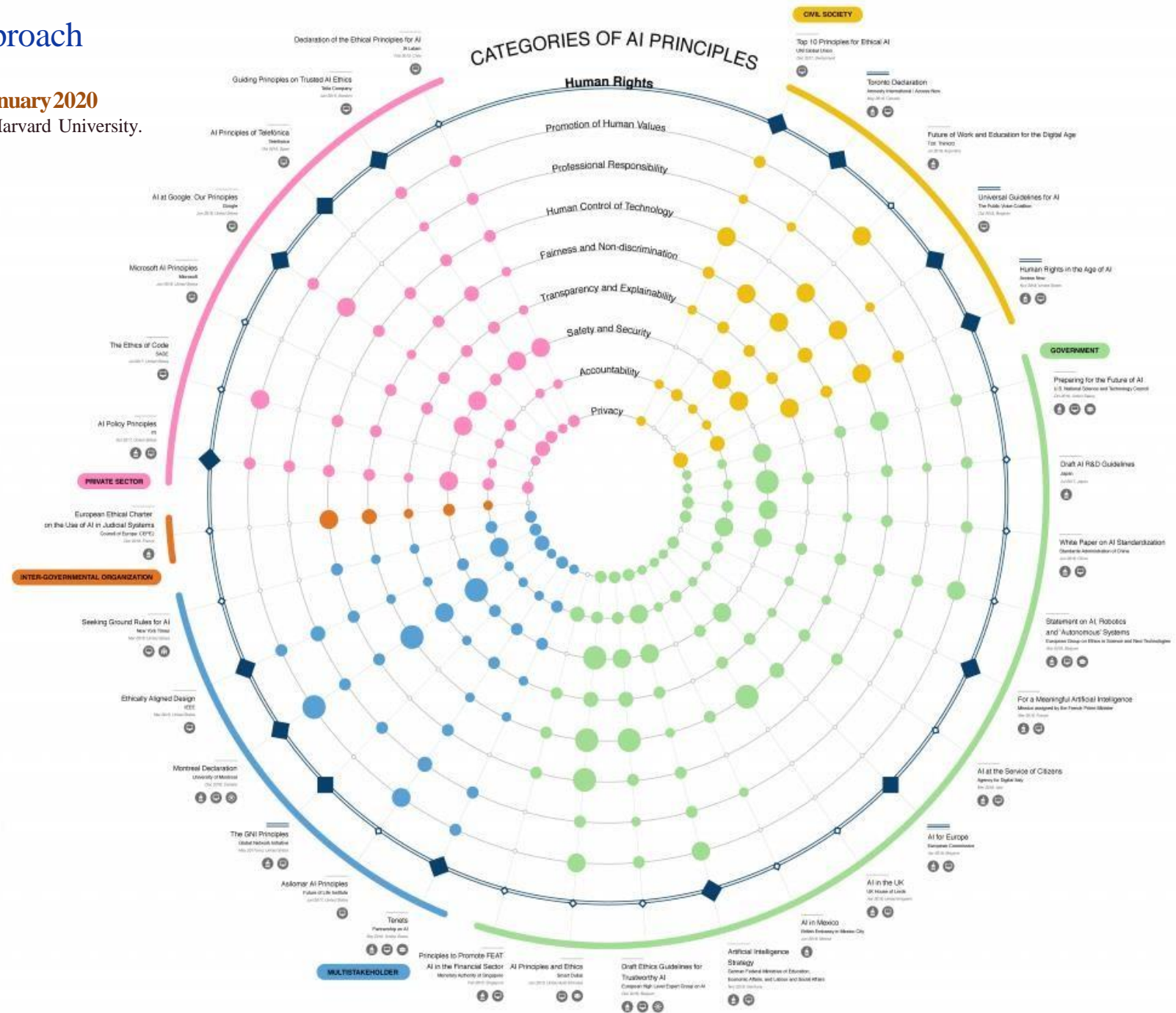
High Risks

- Critical infrastructures (e.g. transport), that could put the life and health of citizens at risk
- Educational or vocational training, that may determine the access to education and professional course of someone's life (e.g. scoring of exams)
- Safety components of products (e.g. AI application in robot-assisted surgery)
- Employment, workers management and access to self-employment (e.g. CV sorting software for recruitment procedures)
- Essential private and public services (e.g. credit scoring denying citizens opportunity to obtain a loan)
- Law enforcement that may interfere with people's fundamental rights (e.g. evaluation of the reliability of evidence)
- Migration, asylum and border control management (e.g. verification of authenticity of travel documents)
- Administration of justice and democratic processes (e.g. applying the law to a concrete set of facts)

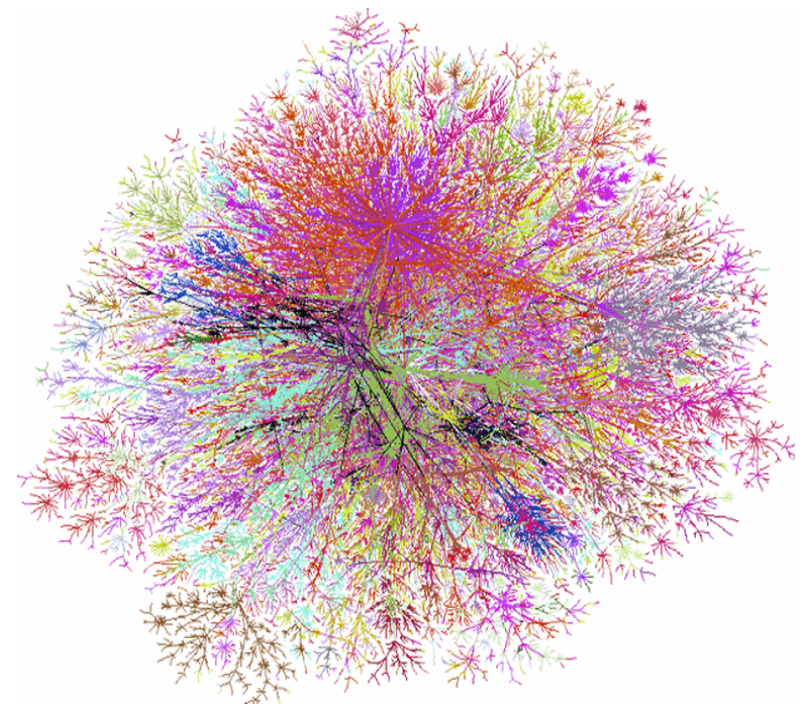
Need for a multidisciplinary approach

Harvard was mapping AI sets of principles – January 2020

The Berkman Klein Center for Internet & Society at Harvard University.



AI in Insurance Business and Regulation



- Prudential

- Cyber Risk
- Legal Framework
- New Players
- Asset Management

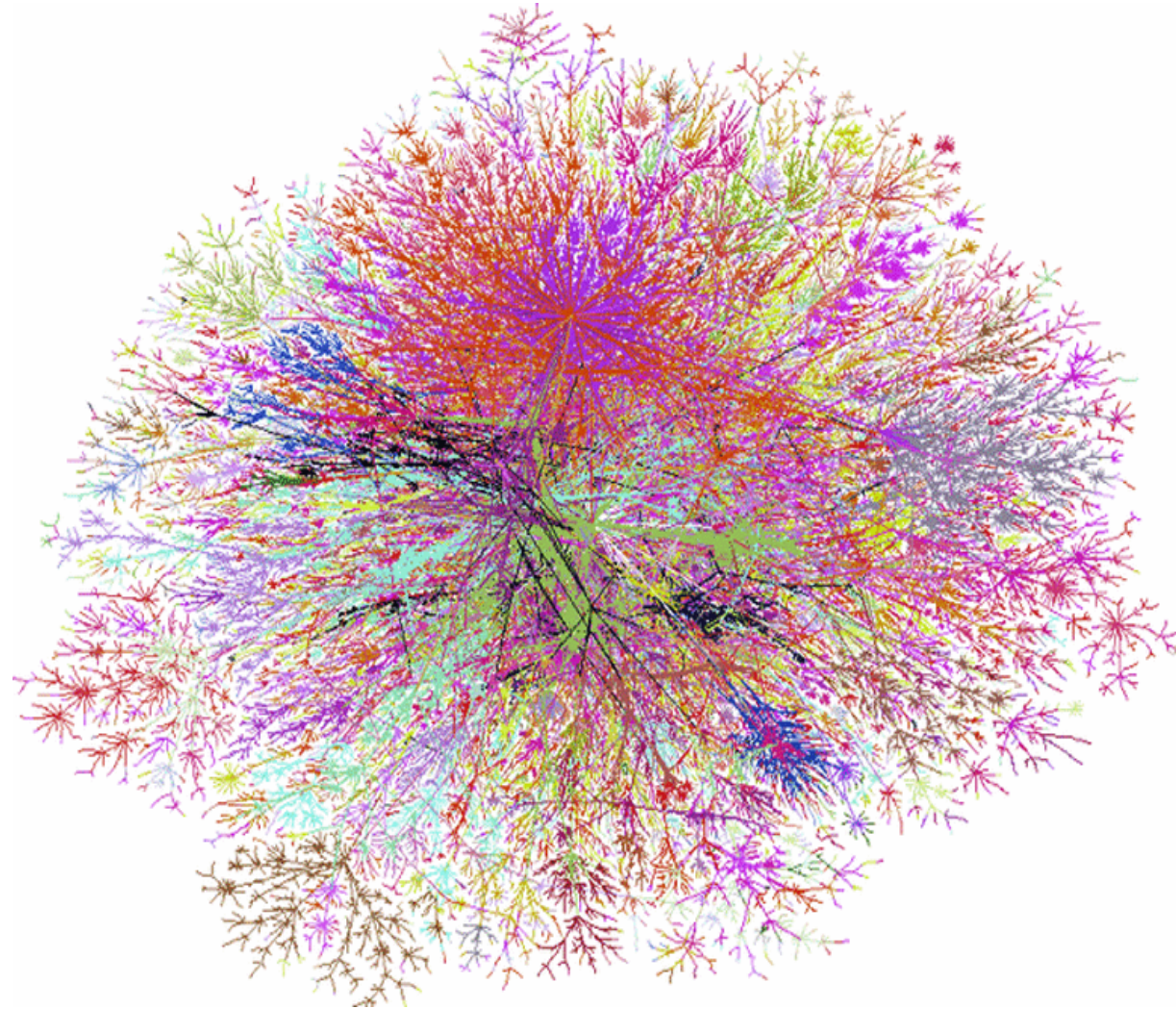
Behavior

- Black Boxes that Discriminate
- Supervision of Algorithms – used to determine risk or to maximize profit

Supervision Authorities

Need to Invest in Human Resources and in Rules and External Auditing of Insurance Firms
The use of AI is going to be needed to supervise AI systems.

Gracias



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