

MANUEL CALDEIRA CABRAL | ASF – PORTUGAL

## 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 riscks 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 (AlaaS)

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





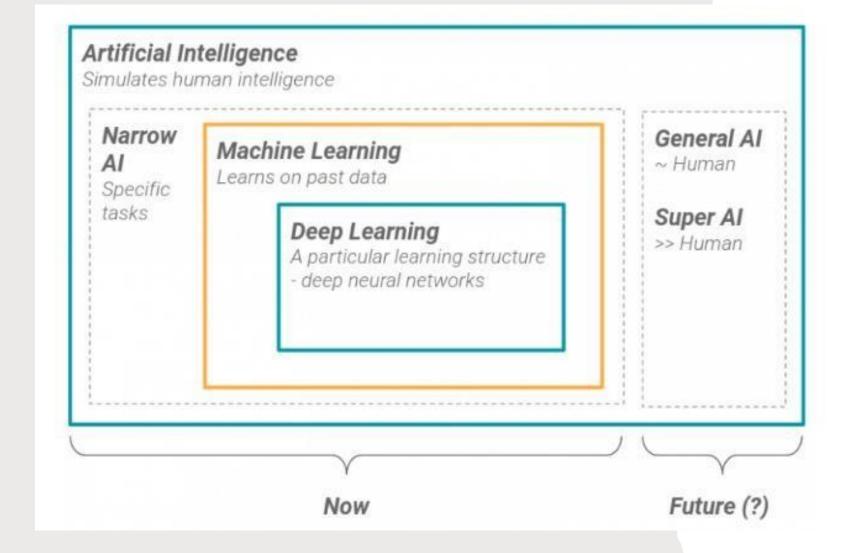
From Chess, 1997, IBM's Deep Blue



Diplomacy, Meta AI masters the game, 2022

Nature, 22 november 2022, <u>Human-level play in the game of Diplomacy by combining language models with strategic reasoning</u> 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.



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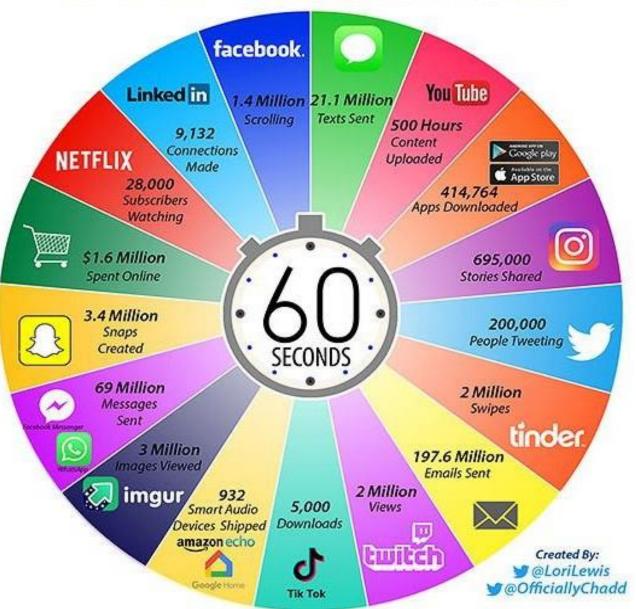
"I set a date for the Singularity—representing a profound and disruptive transformation in human capability—as 2045."

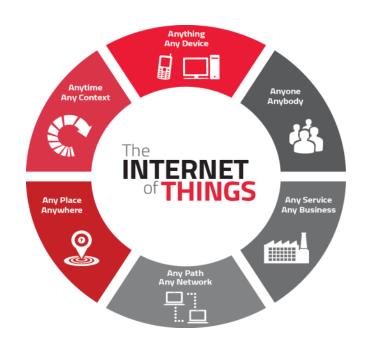
#### Dr. Ray Kurzweil

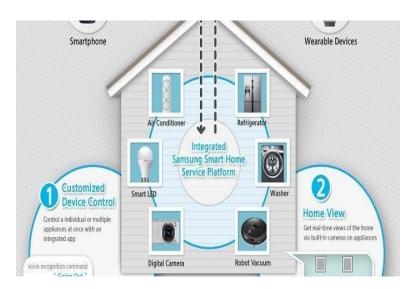
Co-Founder and Chancellor, Singularity University

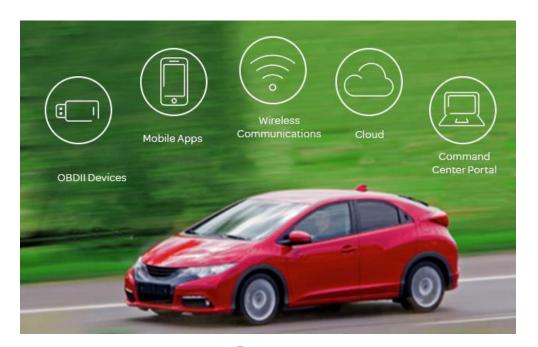
## **BIG DATA**

# 2021 This Is What Happens In An Internet Minute











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# IN SURT ECH: SEGUROS COM TECNOLOGIA / IA

**Business Model Disruption** 

Claims Management, Fraud Detection

Plataforms / Ecossistems / Mixed Activity Groups

360° Vison of the Client

New Products: Behavior Based Protucts (related with IoT)

## Disruption of Classic Business Models

USE CASES	Automated data extraction from pdf reports and comparison against various policy combinations     Automated demand analysis and generating new product offerings     Machine learning insights to support customer segmentation  Marketin  Marketin	Automated creation of targeted marketing materials & promotions  Customer personality & tone analysis  Enabling intelligent customer engagement  Workload balancing / lead allocation for agents  Sales & Distribution	Automated product recommendations & natural language question answering  Enabling intelligent self-service product research for customers  Intelligent reporting & visualisation	Extraction of insights from multiple data sources (incl. unstructured)      Automated demand analysis & generation of new product offerings      Enhanced pricing & policy rating, personalization      Natural language question answering for employees  Underwriting	Understanding & actioning of external emails & requests      Automation of call center & webchat service      Assistance for self-service queries on policy issuance, endorsements, cancellations & renewals      Processing of unstructured data      Servicing & Policy     Administration	Real-time Q&A service for FNOL      Pre-assessment of claims & automated damage evaluation      Automated claims fraud detection using enriched data analytics      Prediction of claim volume patterns      Augmentation of loss analysis      Claims Management	Contextual analytics & skill contology to score CVs against job descriptions  Prediction of likelihood candidate will get through selection process  Prioritization of candidates based on hireability metrics  Leveraging online assessments  Recruiting
BENEFITS	Enhanced pricing     Customized products and services     Improved speed shift focus from product to market need	New marketing channels with tailored marketing campaigns	Increased leads generation  Efficient leverage for cross and upselling effectiveness  Increased service quality	Efficient and lean underwriting processes     Improved hit and retention ratios     Increased risk evaluation quality	Increase in administration processes efficiency     Increased analytical insights	Higher quality in claims assessment, management and administration     Improved predictability of reserves and fraud	Optimized conversion rates     Improved match rates & offer acceptance

Accenture

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## Claims Management and Fraud detection





Broken headlamp



Broken tail lamp



Glass shatter



Door scratch



Door dent



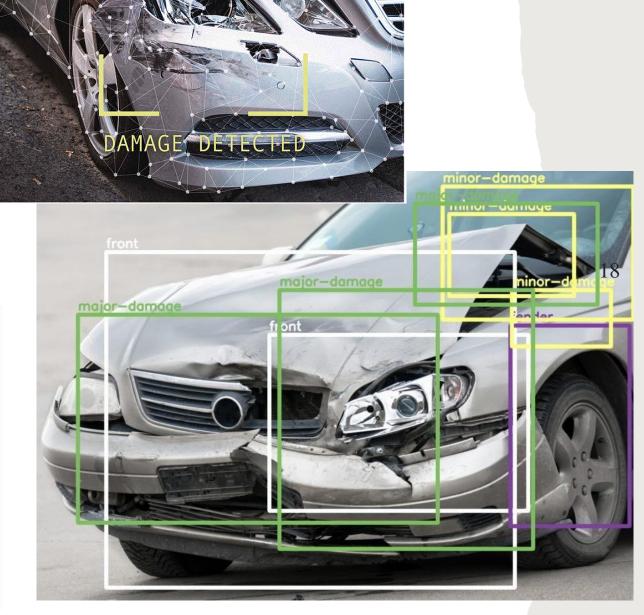
Bumper dent



Bumper scratch



Unknown



#### Plataforms / Ecossistems / Mixed Activity Groups)

(1)

## Safe driving Safe-driving alerts and rewards Maintenance notifications and discounts

## Purchase and sale



- Help buying/selling homes and cars
- Advice on financing

Health

#### Home security



- Remote monitoring and alerts
- Discounts on smart devices

#### **Emergency support**



- Automatic shutoffs during fire, smoke, leakage
- Emergency service
- Remote assessment

#### **Emergency support**



- Alerts for theft or damage
- Breakdown service

#### On the road



- Wireless connection
- Assistance to find car
- Concierge services





Home









Life

#### Energy



Alerts to save energy

#### Comfort



- Remote home control and assistance
- Discounts on household items

#### Senior citizen support



- · Housing, including special care, meal-delivery discounts
- Emergency support

#### Healthy living



- Diagnostics and advice
- Rewards for healthy living
- Checkups and access to digital health records

#### Treatment



- Finding and scheduling doctors
- Remote diagnosis and consultation

#### Financial planning



- Pension and estate planning
- Advice on personal finances

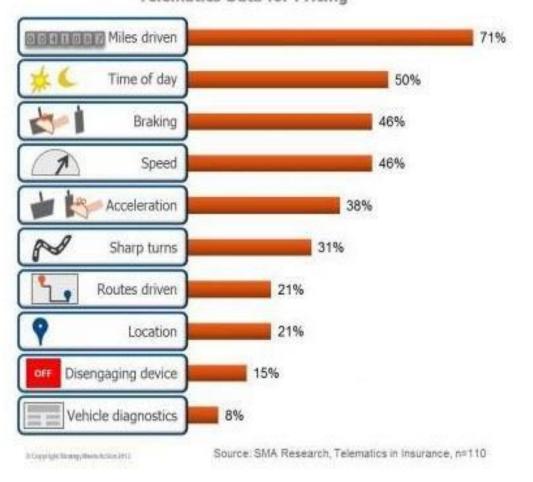
Source: Bain & Company

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# Building a 360-Degree Customer View

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



## Jamie, here is your potential discount

Based on 100 days of driving

Mous in your driving?





## **Legal Challenges**

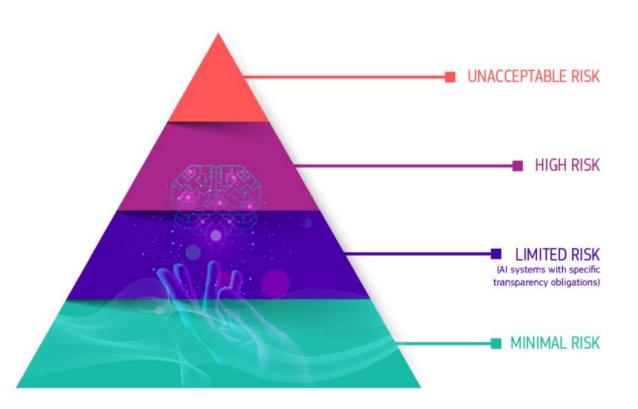


## AI in the EU Legal Discussion

- 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

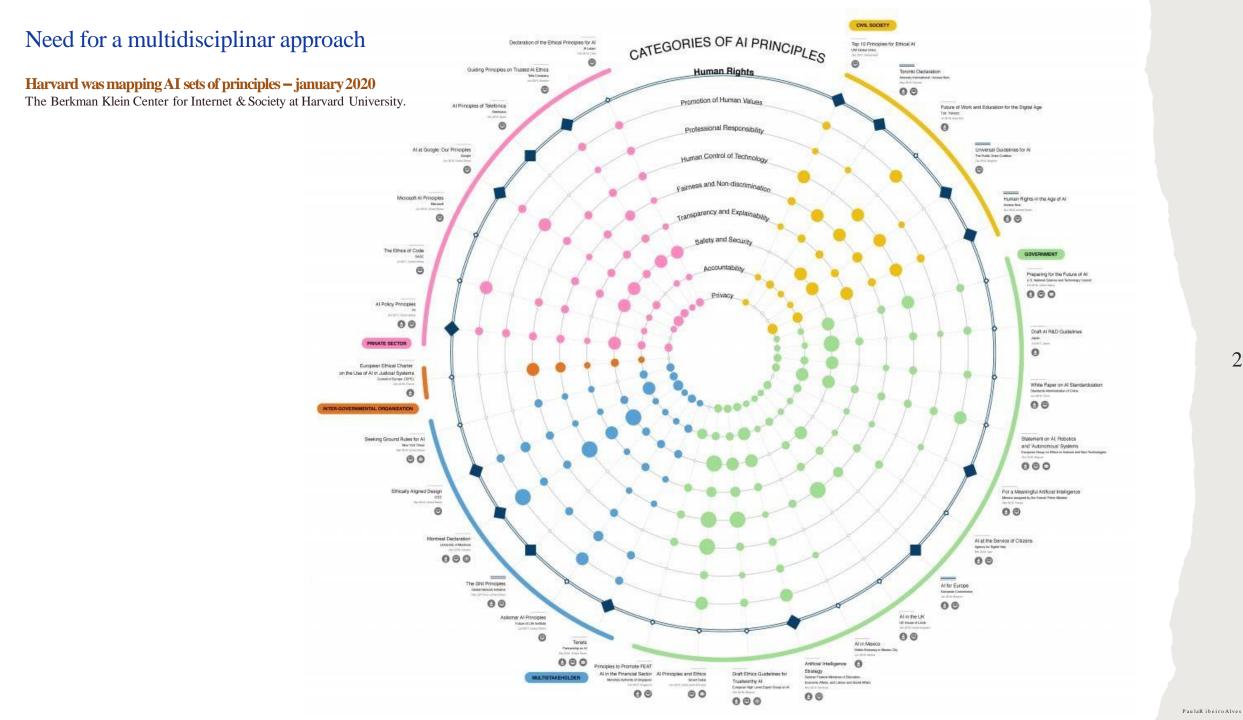
## **Unacceptable** Risks

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. Al 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)



## AI in Insurance Business and Regulation

### **Prudential**

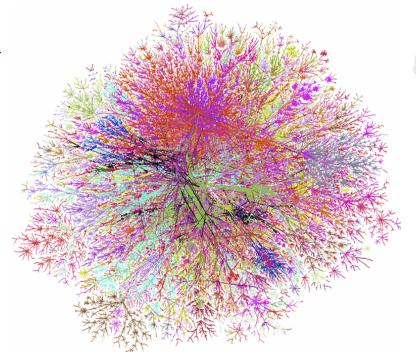
- Ciber Risk
- Legal Frammework
- New Players
- Asset Management

### **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

