



# Artificial Intelligence: a friend of convenience but a threat to privacy?

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“AI – friend or foe for insurance businesses?2

# Speaker Introduction – Patrick Nuttall, CISSP CISM CBCI



American-British cyber security professional based in London

Current role as a cyber security specialist in the Cyber Innovation & Services team within Corporate Underwriting at Munich RE (joined July 2018)

Previously spent nearly 7 years in the cyber security consulting practice at KPMG UK

Experience across multiple service types and industries, including financial services, oil & gas, non-profit, and public sector (local government and law enforcement)

Note: Views expressed are my own and do not necessarily represent the opinion or position of my employer or any other organisations.

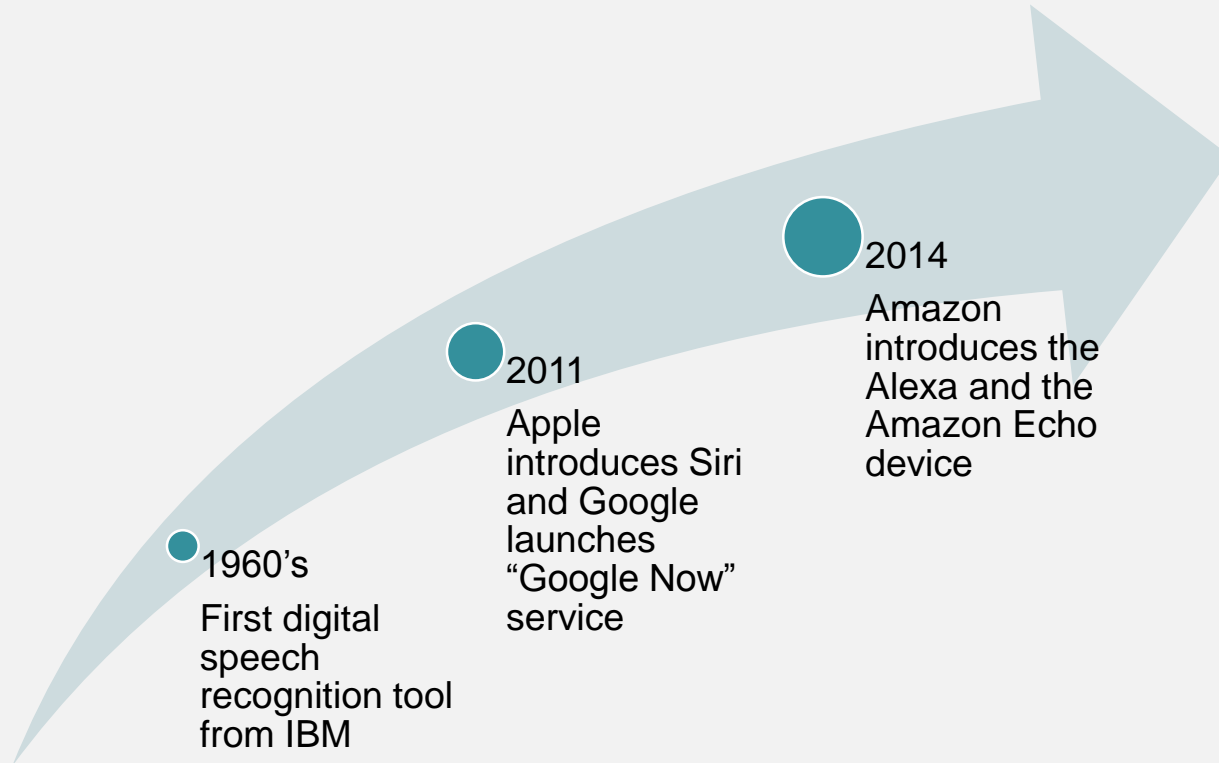
# Key Definitions

**Artificial Intelligence** – The theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.<sup>1</sup>

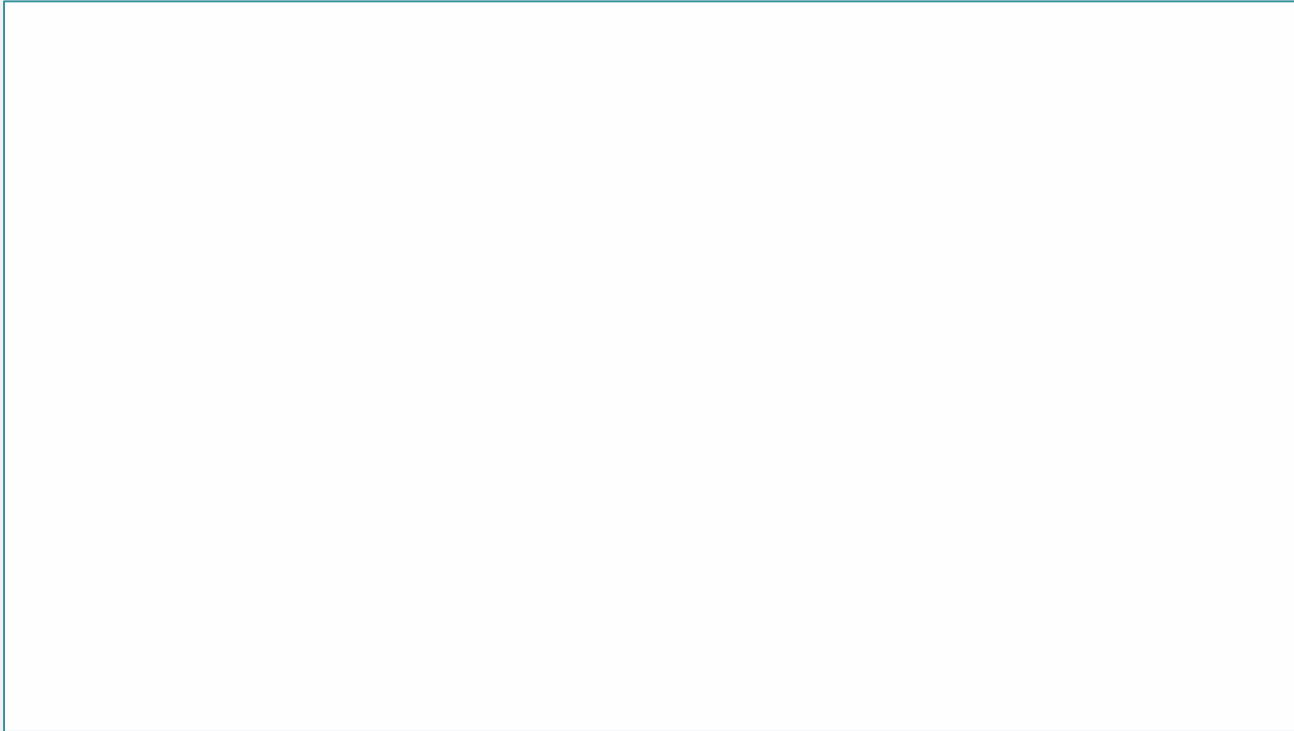
**Machine Learning** – The scientific study of algorithms and statistical models that computer systems use to effectively perform a specific task without using explicit instructions, relying on patterns and inference instead. It is seen as a subset of artificial intelligence.<sup>2</sup>

Sources: (1) Google Dictionary, (2) Wikipedia

# Applications of AI – Digital Assistants



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Video Link: <https://www.youtube.com/watch?v=znNe4pMCsD4>

# Digital Assistants - Insurance Applications

## ERGO subsidiary ERV to sell first insurance via voice recognition system

Press Release, 25.10.2018

As one of the first insurer in Europe, Europäische Reiseversicherung (ERV), which belongs to ERGO Group, offers the possibility to take out an insurance solely with the aid of Amazon's virtual assistant Alexa. From now on, customers can purchase medical travel insurances via this voice recognition system.



By saying "Alexa, start Europäische Reiseversicherung", customers can initiate the dialogue with Amazon's Alexa. In the course of the conversation with the virtual assistant, they are required to state their destination, along with the number and ages of persons travelling with them. After submitting an order with obligation to pay, the travel insurance is finally booked. This booking is made

- Travel insurance can be purchased using voice commands on Alexa
- Minimal information is required, just need to provide:
  - Trip destination and duration
  - Number and ages of travellers
- Identity is authenticated by Alexa using customer data in Amazon account

# Applications of Artificial Intelligence to Insurance

- Sales
  - Improving the customer journey to make buying insurance quicker and easier with less information required from the customer (such as buying insurance through a digital assistant)
- Claims
  - Automation of processes to make the claims process quicker and require less manual intervention
- Underwriting
  - Access to more data and better analysis to support underwriting decisions
  - Efficiencies achieved from automation could allow insurers to reduce underwriting costs and reach new markets which was previously not commercially viable (e.g. low limit SME business)

# Impact of Artificial Intelligence on Insurance

## Positive

- Opportunities for more engagement with customers and improved customer experience
- Automation of processes to improve “efficiency and accuracy” (e.g. underwriting, claims)
- Commercial viability to reach new markets due to automation and reduced costs
- Lower payments for claims due to machines making “better” decisions
- Potential for “improved safety” over manual operation by human beings
- Opportunities for new applications of AI technologies to gather and analyse field data (e.g. telematics)

Please note that all of the points above are hypotheses.



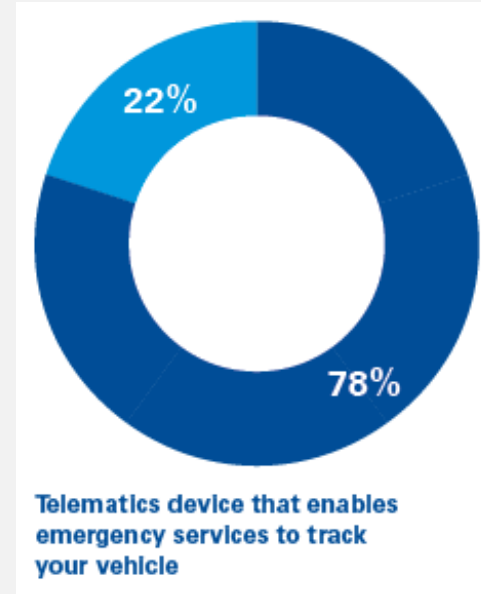
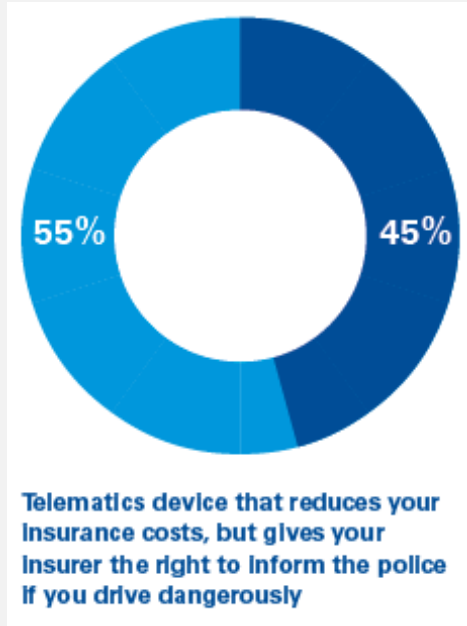
# Impact of Artificial Intelligence on Insurance

## Negative

- Rapidly increasing number of connected devices and increased reliance on these technologies
- Unclear liability resulting from AI devices which malfunction or cause damage
- Coverage for unknown risks arising from new AI technologies
- New accumulation risks arising from concentration of new AI technologies
- Perception of reduced need for insurance due to “improved safety”
- Pressure on margins in the event of lower claims payments

Please note that all of the points above are hypotheses.

# Privacy concerns regarding Insurance AI



Source: [“Creepy or cool? Staying on the right side of the consumer privacy line”](#) (November 2016), KPMG International

Note: Overall survey sample size was 6,900

## Would you find this “creepy” or “cool”?

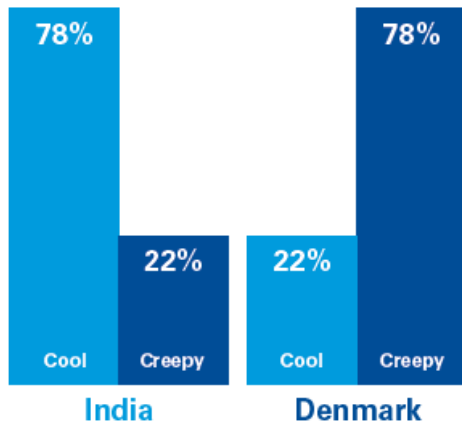
- You leave a train station and an alert pops up on your phone. Using your phone’s geo-location, a taxi company is offering to call a taxi for you if needed to reach your destination.
- You are walking through a shopping mall and you see a billboard. It is advertising a product which may interest you based on your previous shopping behaviour.

Source: [“Creepy or cool? Staying on the right side of the consumer privacy line”](#) (November 2016), KPMG International

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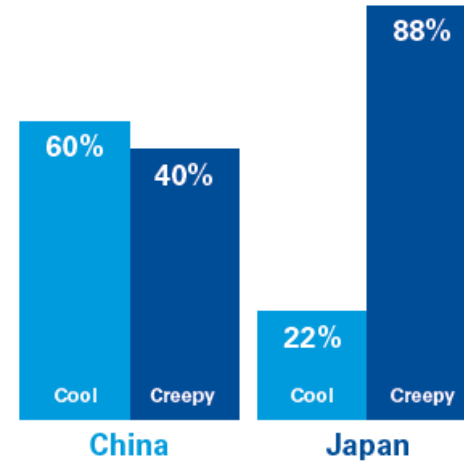
# Privacy is a culturally relative construct

Figure 2: Taxi companies to use geo-location



Source: Creepy or cool? Staying on the right side of the consumer privacy line, KPMG International 2016.

Figure 3: Personal billboard advertising



Source: Creepy or cool? Staying on the right side of the consumer privacy line, KPMG International 2016.



Source: [“Creepy or cool? Staying on the right side of the consumer privacy line”](#) (November 2016), KPMG International

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# Conclusions

## Friend

- Artificial intelligence offers opportunities to improve service quality and coverage through multiple applications, including sales, claims, and underwriting
- Applications of AI could improve convenience and efficiency
- Value can be delivered to both insurers and consumers, if applied successfully

## Foe

- Applications of Artificial Intelligence are experimental and need to be closely monitored
- Artificial Intelligence technologies could result in new and/or unknown risks
- Benefits of Artificial Intelligence need to be considered carefully against legitimate public concerns, including privacy