Lesson 2: AI, Machine Learning and RPA

Topic 2 - Current & potential future use in insurance
AI is obviously a key trend in digital insurance

Trend #7

Master AI and machine learning now

AI and machine learning is an intersectional tech with applications across the value chain and may prove to be the biggest driver of efficiency.

Trend #6

Data is the new oil — and the price is going up

Data is the lifeblood of the new order. Any lack of data will create gaps and cause integration and process flow issues, and needs to be assessed from as an end-to-end process. Insurers that lack data or the partners and models that generate it, will find their business models severely challenged.

Source: KPMG / TDI - InsurTech 10 trends 2019
Impact of AI

• **Improving the speed** at which tasks can be carried out; with Robotic Process Automation (RPA) being used to take away simple, repeatable tasks from Operational teams, and more complex actions now either being informed or carried out by trained AI models

• **Optimising the service**, or ‘next best action’, insurers can provide to customers, brokers, and other external third parties, based on their relationships, preferences, and past interactions

• **Providing new insights** that can be used to adjust, and eventually optimise, the way insurers price and distribute their products and services, and manage risk

• **Fundamentally changing how they operate**, both day to day and in the long term. Here there will be opportunities to move from the traditional coding of complex processes to an iterative use of trained AI models against large (enterprise) datasets.

Source: *IBM – Considering the impact of AI in insurance*
Generic Use cases

1. Image detection
2. IoT / sensors
3. Expert systems
4. Targeted marketing

5. Pricing & risk identification
6. Fraud, waste & abuse (& compliance)
7. Customer engagement / virtual assistants
8. Process reinvention
Uses of AI in insurance

Source: Business Insider Intelligence - AI in insurance annual report
Focus on the front end

WHERE INSURERS ARE FOCUSING ON AI IMPLEMENTATION

- Product innovation: 19%
- Process optimisation: 43%
- Customer experience: 58%

Everest Global 2018

Source: Everest Group: Artificial Intelligence (AI) in Insurance Moving From Pilots to Programs: Insurance IT Services Annual Report 2018
## Use cases across the value chain

### Use cases of AI across the insurance value chain

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<tr>
<th>Product development</th>
<th>Sales &amp; distribution</th>
<th>Underwriting</th>
<th>Policy administration</th>
<th>Claims management</th>
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- **Product development**
  - Leverage real-time and usage-based data to develop customer-focused products
  - Suggestions to customers on their required insurance plan and the sums insured
  - Predict success of new products

- **Sales & distribution**
  - Electronic KYC and automated form filling
  - Virtual agents for guided online buying processes
  - Use NLP to address customer queries on policy components

- **Underwriting**
  - Real-time risk assessment for automated underwriting and direct policy purchase
  - ML to improve the traditional statistical models for claims forecasting

- **Policy administration**
  - Face & voice recognition and digital signatures to fill forms
  - Auto reminders for policy updates triggered by life events

- **Claims management**
  - Claim validation and loss determination through drones (video and image analysis)
  - Algorithms to automate payout calculation for policyholders, thereby reducing the manual effort

### Use cases of AI across horizontal processes

- **Customer experience**
  - Customer portals and mobile applications for self-service and personalized experience
  - Use of face identification and voiceprint to reduce time taken for customer verification
  - Chatbots and virtual assistants to provide quick resolution to standard customer inquiries

- **Risk & compliance**
  - Analyze transactions to identify/predict/prevent fraudulent claims
  - Analyze social media and other channel data to identify non-compliant actions by advisors/agents
  - Automate risk analysis and reporting

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Source: [Everest Group: Artificial Intelligence (AI) in Insurance Moving From Pilots to Programs: Insurance IT Services Annual Report 2018](#)
Accenture: AI Reshaping insurance

TDI viewing Tip: Perspective on how AI will impact the insurance industry – particular focus on consumer impact

Possible discussion points for Weekly Clinic / Things to think about

- Do you agree with the stats on desire to interact with virtual assistants for advice?
- Any use cases you felt where missing?
- Does AI reinvent the digital interface with customers?