TÄLLT

Insurtech Disruption Trends 2017

ARTIFICIAL INTELLIGENCE

"OVER TIME, WE WILL MOVE FROM MOBILE-FIRST TO AN AI-FIRST WORLD"

Sundar Pichai – CEO
Google

FOREWORD

Insurance is entering a time of increasing connectivity, automation and competition, driven by exceptional technological advances and a major shift in customer expectations.

While the term artificial intelligence (AI) has been around for over 50 years, it's now fast becoming part of our everyday conversation. The expression, denoting technology said to possess a level of intelligence somewhat comparable to humans, is creeping into our daily rhetoric, our purchasing behaviours, banking, and, more recently, insurance.

And with technological advances such as AI comes disruption. Since 2002 52% of the Fortune 500 companies are no longer trading; most are now expected to last no more than another 15-20 years.

Whilst the corporate mainstay has begun to feel the threat of disruption, investment into ventures with AI as a core function of their product or service reached annual records in 2016, as investors scrambled to claim their stakes in the tech revolution.

With a total of $5bn invested and a 33% rise in annual deal activity in 2016, AI tech has been well and truly thrust into the venture capital spotlight. And insurance-focused AI ventures are getting their fair share of the attention. Of the companies tracked by Tällt, over $1.35bn has been invested into insurance-focused AI startups in the last 5 years.

This movement inevitably presents a number of challenges; change is inescapable, but the path we choose to navigate the impending waters will ultimately determine success moving forward.

This report identifies challenges and opportunities generated through the emergence of AI as a powerful form of technology, faced across the entire insurance value chain.

By drawing on Tällt's unique intelligence on over 5m tech startups, this report provides the latest investment data, trends and insights into the corporates and new AI ventures altering the status-quo.

We hope you enjoy reading it.

Harry Clarke
Head of Research – Tällt Ventures

"I BELIEVE THAT AT THE END OF THE CENTURY, GENERAL EDUCATED OPINION WILL HAVE ALTERED SO MUCH THAT ONE WILL BE ABLE TO SPEAK OF MACHINES THINKING WITHOUT EXPECTING TO BE CONTRADICTED"

Alan Turing, 1947

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"OUR RESPONSIBILITY IS TO HAVE AI AUGMENT THE HUMAN INGENUITY AND THE HUMAN OPPORTUNITY"

Satya Nadella - CEO
Microsoft

ARTIFICIAL INTELLIGENCE

THE DEFINITION

The term AI, first coined by Prof. John McCarthy in 1955, is repeatedly bandied about, especially in recent years, with little regard to its literal definition. For some companies the analysis of data sets via excel is seemingly enough to constitute the 'sophisticated application of AI' across their technology. The term is being misused, make no mistake.

Before giving insight into how AI is being used across the insurance sector to disrupt , it's important we clarify what we actually mean by 'artificial intelligence'.

When consulting the Oxford Dictionary, AI is defined as *"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."* You can see how some are beginning to use the ambiguity of this definition to their advantage…

For the purpose of this report, we define AI as an umbrella term for **technology capable of making intelligent decisions** rather than just providing analysis of data and model-based prediction. AI is an extension to the human brain – that is, it should be technology capable of simulating the processes of the neural activity of the human brain, at least to some extent.

It's also important to understand AI is not a monolithic subject area. Machine learning, deep learning, natural language processing and cognitive computing are all examples of terms relating to a collection of technologies known as AI. They are often used to describe AI in more detail, alongside the term 'AI', or simply used independently. Whichever it may be, they all refer to the same umbrella term for technology which is artificial intelligence.

FUTURE THINKING

FUTURE THINKING

THE RISE OF THE ROBOT

In the 1950's, Alan Turing arguably began the AI era. The infamous Turing Test from his paper 'The Imitation Game', designed to assess the intelligence of machines, has become one of the most cited in philosophical literature.

Over the past 70 years the pursuit for the development and utilisation of artificial intelligence has persisted, but in recent years the march of the machines has truly begun. In 2014, the Turing Test was arguably passed by Eugene Goostman, the Ukrainian chatbot. The impending proliferation and deployment of intelligent machines to replace and automate many lower-skilled jobs is largely accepted. Robots have now replaced thousands of workers in areas such as automotive production and data entry. But pressure is now mounting on more sophisticated, well-paid professions.

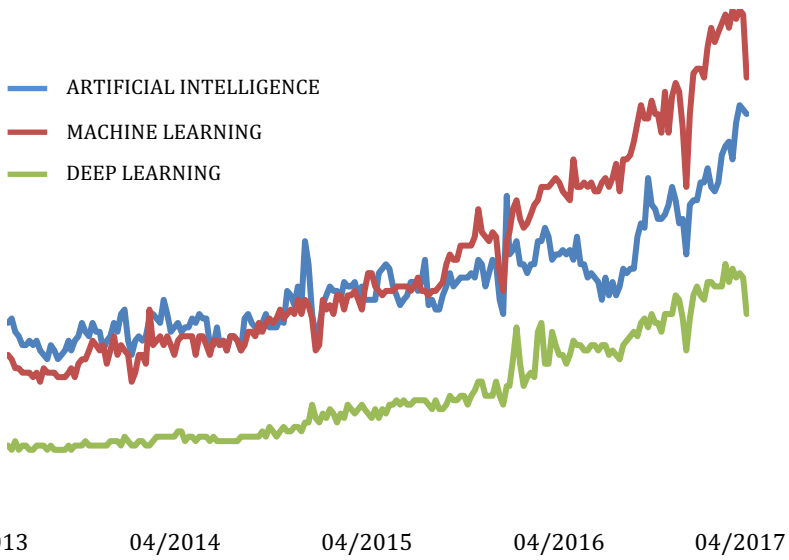
The value of applying AI has been recognised by an ever growing number of industries but, as with the exploitation of many technological advancements to date, insurance has been slow off the mark.

The ventures and corporate innovation examples within this report are the latest signs that machines are creeping further up the ranks, capable of radically altering the way we approach insurance. And also capable of replacing hundreds of thousands of jobs.

The potential of AI however should serve not to concern those in threatened jobs, but instead act as a discussion point for how those employees could be freed up and redeployed to roles where machine intelligence is no match for human sentience. It should be perceived as an opportunity to devote resources to developing new business ideas and to lift mundane responsibilities from the shoulders of our workforces.

Will robots steal our jobs? They may well do – but the outcome may be less disastrous than we think.

GOOGLE KEYWORD SEARCH INTEREST



FUTURE THINKING

EXPLAINABLE AI
IMPORTANCE OF INTERPRETABILITY

While the term 'artificial intelligence' (AI) was first coined by Prof. John McCarthy in 1955, its effectiveness has been accelerated in recent years due to the availability of high-end graphical processing units (GPUs), improvements in algorithms and an abundance of data.

The insurance industry is well positioned to take advantage of these advances in the field of AI. The data we have today will allow us to use AI in ways that could fundamentally change how decisions are made within an insurance company.

In light of this we must ensure that, in decisions of consequence, AI isn't applied in a way that limits our ability to sufficiently interpret and explain these decisions. Given the decisions we make throughout the insurance lifecycle, interpretability is important in a variety of circumstances, from regulation and consumer protection to enterprise risk management and underwriting. Additionally, meaningful insights about business process can be derived by data scientists and others in the analytics community by promoting interpretability in the models that they are creating.

The general consensus in the AI community has been that there is a trade-off between accuracy and interpretability - and many would argue that a model with higher accuracy is more valuable than a model with greater interpretability. We are however encouraged by the academic community's research on this trade-off in the past year, specifically Local Interpretable Model-Agnostic Explanations (LIME), a technique developed by a team of researchers from the University of Washington. LIME explains the predictions of any machine learning classifier, and focuses on ensuring the trust in both the individual prediction and the model itself.

As an industry we are expected to make meaningful decisions every single day. In fact, it's those decisions - whether the underwriting of a risk or the handling of a claim - that make up a large part of our engagement with customers, and what separates leaders in the industry from the rest. More importantly, many of the decisions that we make have consequences that are felt by our customers, regulators, employees and shareholders. Because of this, we must ensure that applications of AI allow trust and interpretation of not only the individual predictions, but also the models themselves.

Contributed by:

Ted Stuckey
Head of Innovation Lab
QBE Insurance

FUTURE THINKING

SENTIENCE
THE HURDLE AT WHICH AI FALLS

While reading historian Yuval Harari's 'Homo Deus- a Brief History of Tomorrow', which discusses moral and ethical implications of super intelligence, the following sentence transfixed me, "Maybe the mind should join the soul, God and ether in the dustbin of science". The statement demonstrated the 'Eliminative Materialism' concept of philosophy of mind, which holds that our understanding of the mind is false and there is no coherent neural basis for some or all mental states; the mind is just the working of the physical brain and its neurochemistry. This implies that in theory Artificial Neural Networks (ANN) can replicate biological neural networks because even the subjective experiences translate into brain activity which can be 'learned' by AI.

That, folks, is the theory, but what is the practical experience? Let's look at the experience of 'Tay' the teen girl AI chatbot which had to be deleted within a day of its launch. It transformed, within that day, into an evil Hitler-loving, misogynistic, conspiracy theorist. Why? Because her responses were learned by the conversations she had with real humans online – demonstrably all Twitter trolls who enjoy hijacking corporate attempts at PR! What the bot demonstrated was the distinct lack of self-awareness or, more broadly, sentience.

Most current and commercial AI is non-sentient. That means it has no subjective awareness and lacks intentional behaviour or motives. Richard Feynman (Nobel laureate and comedy genius!) described this as "A glorified, high class, very fast but stupid filing system". The algorithm to subjective experience or psychological phenomenon, or as philosopher David Chalmers calls it "Hard problem of consciousness", remains unresolved. So even if Elon Musk says so, robots are nowhere near enslaving us!

What this means for the insurance industry is that repetitive jobs with high data density, and solving familiar problems, are better performed by AI (e.g. claims processing, quote and buy process, elements of policy administration). When tasks are unique, and when data density is low, humans will have the upper hand (e.g. underwriting and negotiating syndicated deals and complex M&A). For all tasks in between a combination of human and AI is the optimal solution.

Insurers of the future will still employ humans, but much less than before!

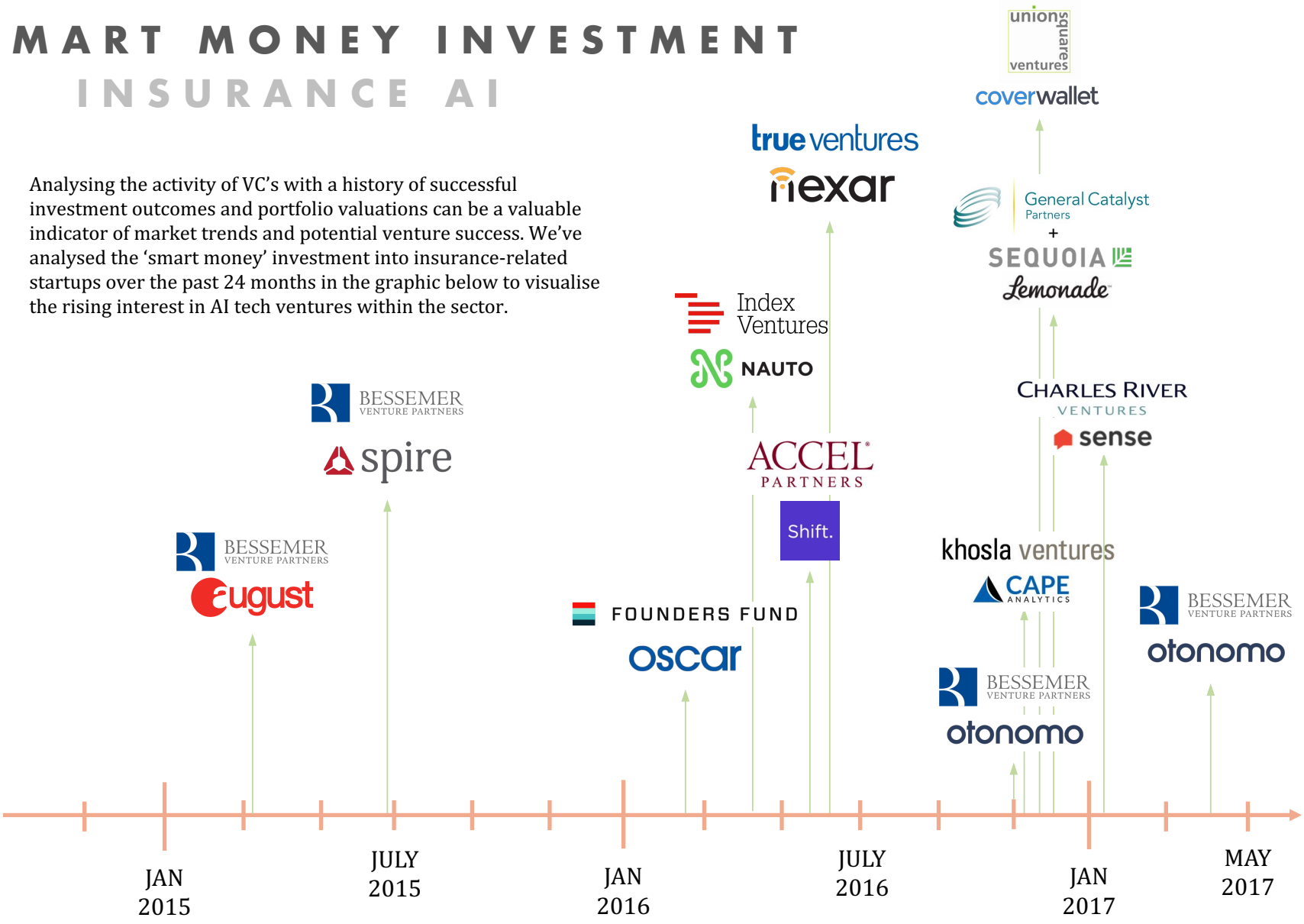
Contributed by:

Parul Kaul-Green
Head of M&A & Innovation
AXA UK Group

INVESTMENT WATCH

SMART MONEY INVESTMENT
INSURANCE AI

Analysing the activity of VC's with a history of successful investment outcomes and portfolio valuations can be a valuable indicator of market trends and potential venture success. We've analysed the 'smart money' investment into insurance-related startups over the past 24 months in the graphic below to visualise the rising interest in AI tech ventures within the sector.



TÄLLT'S TOP 10 WELL-FUNDED INSURANCE-FOCUSED AI VENTURES

At Tällt, we track 100+ ventures leveraging the power of AI within the insurance industry. Below we've brought together the top 10 highest funded AI ventures, either solely or largely focused on insurance. It's interesting to note that three of the top 10 ventures are applying AI to claims technology.

RANK	COMPANY	FUNDING in USD $ (DISCLOSED)	AI VERTICAL / AREA OF APPLICATION
1	Lemonade	$60m	Claims
2	Captricity	$51.9m	Administration
3	Cyence	$40m	Underwriting
4	H20.ai	$33.6m	Various
5	Zendrive	$20m	Customer Experience
6	Nauto	$14.85m	Customer Experience
7	Cape Analytics	$14m	Underwriting
8	Shift Technology	$11.8m	Claims
9	Kasisto	$11.4m	Virtual Assistance
10	Tractable	$9.9m	Claims

"BY FAR THE GREATEST DANGER OF ARTIFICIAL INTELLIGENCE IS THAT PEOPLE CONCLUDE TOO EARLY THAT THEY UNDERSTAND IT"

Eliezer Yudkowsky – Co-Founder
Machine Intelligence Research Institute

AI REPORT VENTURE PROFILES
BY GEOGRAPHY

CORPORATE ACTIVITY

CORPORATE ACTIVITY

Innovation in any industry acts as a petri dish style experiment of methods, processes and models. For large companies it provides a bird's eye view into what's happening, and ultimately what works and what doesn't. The challenge thereafter is deciding the next move.

With the pressure for insurance incumbents to compete with the well-funded innovative new ventures on the scene, corporates are investing in their strategy going forwards with a matter of urgency.

And if they aren't they should be!

That being said, many corporates face financial, cultural and resource-based impediments when it comes to successful innovation, all of which are difficult to overcome. Early stage ventures with substantial investments rarely suffer the burden of gaining permission for costly experimentation from a board of directors used to incremental gains. Extracting novel, cutting-edge disruptive ideas from an unyielding internal team steeped in traditional insurance practice can be like drawing blood from a stone, for example.

The outsourced R&D experimentation being conducted by millions of startups worldwide gives corporates a greater eclectic understanding of what works and what doesn't, and an often uncomfortably sudden view of tomorrow's disruption. However, startup activity is a fantastic source of ideas and inspiration for corporates hoping to innovate disruptively themselves.

In order for programmes of internal innovation to be a genuine success, corporates must find ways of circumnavigating the obstacles they face, which some have succeeded in doing. The following pages profile established companies working in the insurance space, applying disruptive AI technology to the industry.

UNDERWRITING RISK

COMPANY: Suncorp Insurance

PROJECT / INNOVATION: Kevinsured

Queensland-based Suncorp has collaborated with Spanish startup Traity to create a new micro-insurance offering which uses blockchain to insure peer-to-peer transactions made online via a chatbot named Kevin.

The platform, which insures online purchases on websites such as Gumtree and eBay from fraudulent activity, works by using a number of parameters to assess the reputation of both buyer and seller via a virtual agent named Kevin. If reputations are approved, a time stamp is created on blockchain that proves an agreement of transaction from both parties, and in the event of nefarious activity claimants are insured up to a value of $100.

The experimental initiative is currently being piloted in the UK, US and Spain, and is one of a number of technological solutions Suncorp are trialing this year.

INFO

LOCATION: Queensland, Australia
Madrid, Spain

WEBSITE

COMPANY: Suncorp.com.au
PROJECT/SERVICE: Kevinsured.com

CUSTOMER EXPERIENCE

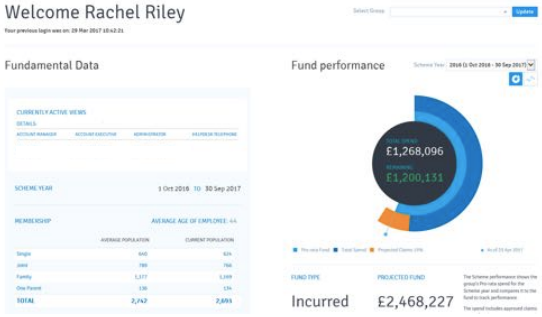
COMPANY: Western Provident Association

PROJECT / INNOVATION: Precision Analytics

Western Provident Association's (WPA) Precision Analytics, powered by the company's autonomous operating system DELOS, is a management information (MI) platform designed to offer corporate customers unparalleled access to their health scheme data as a no cost added-value service.

The innovative technology draws on AI to allow Finance and HR Directors real-time access to data, and insight on their scheme, bringing new levels of transparency that ensure their spend best addresses their workforce's needs. The platform allows customers, potential customers and employee benefit consultants the ability to 'deep dive' into their data, as far and as detailed as they require – analysing the minutiae of their company information, from medical conditions to demographic factors, to help identify trends and benchmark data.

Julian Stainton, the Chief Executive of WPA, remarked: "We have deployed the 'smart electricity meter' for the corporate healthcare market. Precision Analytics is only possible because we have invested significantly over the last three years in our underlying technology. DELOS, our autonomous operating system, is now fully operational and has successfully automated the majority of our business. Precision Analytics is the first chance for our customers to put our enhanced processing power through its paces".



INFO
LOCATION: Taunton, UK

WEBSITE
COMPANY: wpa.org.uk
PROJECT/SERVICE: N/A

CLAIMS MANAGEMENT

COMPANY: Zurich, Aegon, Allianz, Munich Re, Swiss Re

PROJECT / INNOVATION: B3i Blockchain Initiative

The B3i initiative, launched by five leading global insurers and reinsurers, is a project aimed at exploring the possibilities and potential of blockchain technology to better serve insurance clients. The project acts as a platform for insight exchange between the corporates, with research focused on applying distributed ledger technology and artificial intelligence to provide faster, more convenient and secure services.

The initiative will facilitate the development of viable disruptive solutions across the insurance value chain. Specifically the group, which other companies are welcome to join, will use anonymised data to develop proof-of-concept blockchain technology models for inter-group retrocessions.

Using the initiative as a platform, the group hopes to set the standard for the use of blockchain technology across insurance.

INFO
LOCATION: N/A

WEBSITE
COMPANY: N/A
PROJECT/SERVICE: N/A

Tokio Marine Life

TOMI

VIRTUAL ASSISTANCE

COMPANY: Tokio Marine Life Singapore

PROJECT / INNOVATION: TOMI Chatbot

Tokio Marine Life has launched a self-learning virtual assistant going by the name of TOMI, to aid its Singaporean customer base. The chatbot, developed by homegrown startup Pand.ai which communicates to users via a Facebook Messenger API, is designed to answer frequently asked questions relating to insurance policies.

Tokio Marine's TOMI is designed to expand its knowledge base by keeping track of questions that it is unable to understand. Powered by deep learning for natural language processing, TOMI is able to answer questions regardless of question structure, allowing for conversational communication.

Commenting on the launch in January 2017, Cheong Wai Hon, Chief Information Officer of TMLS said: “With TOMI, we hope to provide instant answers to operational enquiries, which enables our frontline staff to focus on dealing with more complex queries. While TOMI currently focuses on enhancing internal efficiency and adviser engagement, plans are underway to expand its functions to allow for customer-facing interaction.”

INFO

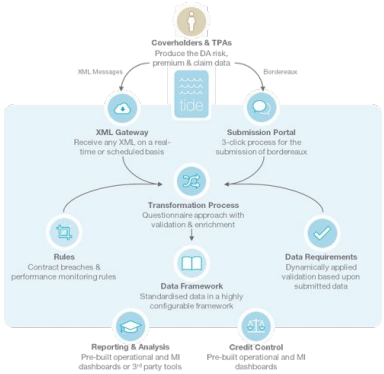
LOCATION: Singapore

WEBSITE

COMPANY: Tokiomarine-life.sg
PROJECT/SERVICE: N/A

Charles Taylor | INSURETECH

CONTRACTS, COMPLIANCE & ADMINISTRATION



COMPANY: Charles Taylor Consulting

PROJECT / INNOVATION: Charles Taylor Insuretech

Charles Taylor Consultancy has developed a new piece of software to reduce processing and compliance costs during the handling of delegated authority (DA) data.

Delegated authority outsourcing allows insurers to expand their offering to specialist sectors, enabling access to underwriting expertise in unique lines of insurance. Charles Taylor Insuretech's data management platform, 'Tide', takes information from any source, centralising everything in a cloud-based platform which processes, standardises and validates the information against rules autonomously. The result is a consistency in data flow and the elimination of lengthy query chains.

In February 2017 Charles Taylor Insuretech announced an acquisition of a majority stake in tech platform business Otak, which specialises in delegated authority solutions. The takeover will allow the company to improve the management solution currently in place.

INFO

LOCATION: London, UK

WEBSITE

COMPANY: Ctplc.com
PROJECT/SERVICE: Ctinsuretech.com

“THE WORLD'S FIRST TRILLIONAIRE IS THE PERSON WHO MASTERS AI”

Mark Cuban – Owner
Dallas Mavericks

DISRUPTION TRACKING

In an increasingly evolving market landscape, those in the insurance industry need to track and connect better with the global startup market. They need to understand the areas of potential for AI application, and the ventures disrupting those verticals. Only then will they be able to anticipate change.

And with that insight they need to evolve strategies, planning and budgeting to consider a range of economic scenarios, finding faster ways to meet the increasing demands and changes of the regulatory environment driven by digital innovation.

What is clear is that big businesses need to get better at creating products and services to meet rapidly changing consumer needs. Catching up with what's happening today is no longer top priority - things will already have changed.

At Tällt we track 5m+ startups globally, generating unique intelligence for our clients which simply cannot be sourced elsewhere. In the following section of this report, we've used qualitative and quantitative analysis of global investments into AI tech ventures disrupting insurance, to identify the verticals most likely to be affected by AI in 2017. And within each, a number of key startups that are fast gaining notoriety, market traction and experiencing particularly high-levels of external funding.

UNDERWRITING RISK

UNDERWRITING RISK

When talking insurance, and the perpetuation of the industry, underwriting is a fundamental operation. An insurer's capacity to underwrite risk effectively, that is to assess all risk factors present in a given policy and to price accordingly, is crucial. Errors or oversights made in the underwriting of risk can, and will, cost insurers big.

Insurers have spent huge sums of money on improving this process over time. Advances in technology and the accumulation of historical data, becoming richer as time progresses, has enhanced the process incrementally. Insurers are now better than ever at underwriting their risk effectively.

But now, in the advent of truly intelligent technology, we are witnessing a huge leap in the precision and efficiency of this process. The wealth of data now at our fingertips is permitting a number of ventures to leverage AI to drill down into data and provide incredibly fine-tuned, tailored policies. The fusion of historical data with real-time data streams, using technology capable of 'learning' and improving with every computation, has fundamentally altered the process of underwriting.

AI-powered underwriting is now transforming the industry.

UNDERWRITING RISK

Cytora

CONCEPT

Cytora is a startup which utilises real-time data to help insurers identify, quantify and price risk more effectively. The company's cloud-based platform scans raw unstructured data from hundreds of web sources globally, creating clean, quantifiable datasets of historical records showing reported incidents relevant to their clients, ultimately helping to identify the likelihood of future events more effectively.

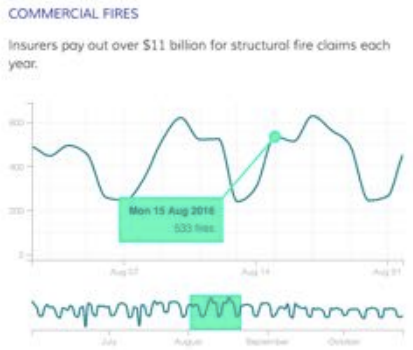
HOW THEY'RE DISRUPTING

Cytora's risk engine, enriched with machine learning technology, layers several proprietary and open source data points relevant to a specific line of insurance to provide intelligent insights on risk. Utilising the plethora of unstructured web data allows insurers to increase their capacity to new lines of insurance, as well as verify claims of damage against reports listed online.

INVESTMENT & FUTURE

Cytora received lead investment from Cambridge Enterprise, the commercialisation arm of the University of Cambridge, in October 2015 to close its first round of funding. The investment was earmarked to drive further growth in financial services and develop event detection technology.

Cytora has since participated in the 2016 Plug and Play Insurtech accelerator to further develop its insurance offering, and recently closed a $2.92m Series A round in January 2017, led by UK-based technology investors Parkwalk Advisors Ltd.



INVESTMENT

TOTAL: $2.92m (disclosed) from 2 Rounds
LATEST: $2.92m Series A - Jan '17

OTHER INFO

LOCATION: London, UK
WEBSITE: Cytora.com

TYCHE

UNDERWRITING RISK

CONCEPT

Tyche is a platform which draws on artificial intelligence to enhance the assessment of commercial casualty risk. By combining proprietary data from the insurer with risk-relevant open data from the web, Tyche's platform uncovers factors driving the risk of each submission, along with the tools for underwriters to turn that data into actionable insights for better underwriting judgment.

HOW THEY'RE DISRUPTING

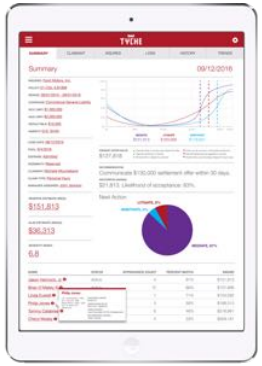
The Tyche platform uses natural language processing (NLP) to categorise words within the text of unstructured input, comparing these to its own model of relevance to claim rates, which improves with every comparison. The result is a claims likelihood model with ever-increasing accuracy at the disposal of those underwriting risk.

Tyche's predictive analytics can also help in the incidence of disputed claims, identifying factors most important to their resolution and subsequently achieving optimal claims outcomes for carriers and customers alike.

INVESTMENT & FUTURE

Tyche have received fairly little in terms of external funding to date, other than Seed investment gained from its involvement in the Alchemist and Global Insurance Accelerators. The company's participation has helped build deep relationships in the insurance industry which, coupled with the team's wealth of experience in legal analytics, has helped develop and iterate the platform.

Tyche are now working with one major reinsurer and approximately 10 mid-size casualty insurers in the US.



INVESTMENT

TOTAL: $68k from 2 Rounds
LATEST: $40k Seed – March '15

OTHER INFO

LOCATION: New York, US
WEBSITE: Tycherisk.co

DIGITAL FINEPRINT

CONCEPT

Digital Fineprint is a UK-based startup turning social data into insurance data. The technology developed allows insurers to (with permission) gain access to customer social media data relevant to an insurance policy from sites like Facebook and LinkedIn, and autofill this information directly into the applications. The social autofill opens the door for insurers to connect with new customers.

HOW THEY'RE DISRUPTING

Digital Fineprint aims to be more than just an auto-population form. The technology being developed and tested by the company is designed to trawl through unstructured social data and intelligently flag information which may be relevant to your policy. For example, the system could be used to detect periphery data requested in application forms such as physical exercise and smoking habits. Furthermore, the data could provide actionable insights on customer risk profiles, relationship management and cross-selling opportunities.

The company is currently focusing on life insurance, but the model is applicable for property and casualty lines of insurance too.

INVESTMENT & FUTURE

Having participated in the Allianz accelerator programme in early 2016, Digital Fineprint announced Eos Venture Partners as lead investors in their first Seed round in September 2016. Since then the company has closed the round, with Angel investment from a number of high profile individuals including Shailesh Rao of Twitter and Google.

The company recently partnered with MetLife soon after their selection into Accenture's Fintech Innovation Lab in London in January 2017. The company is now looking to move into the global market, with Asia as their next logical step.

INVESTMENT

TOTAL: $400k from 1 Round
LATEST: $400k Seed – Dec '16

OTHER INFO

LOCATION: London, UK
WEBSITE: Digitalfineprint.com

UNDERWRITING RISK

CAPE ANALYTICS

CONCEPT

Cape Analytics is a data provider which draws on computer vision, geospatial imagery, and machine learning to extract property data for insurers. The cloud-based platform provides "near inspection-quality data of high-value property features". What's more, the platform integrates directly into carrier quote engines via an API, allowing them to seamlessly utilise the structured property data for improved risk analysis.

HOW THEY'RE DISRUPTING

Cape Analytics aggregates key data for insurers by applying machine learning technology to turn geo-spatial imagery into a database of the most pertinent property features in real-time and at scale. The company runs data from drone & satellite imagery partners through the platform's deep learning algorithms to extract structured actionable intelligence. By layering the intelligent inferences onto property data, insurers are able to provide a much more accurate quote for customers without the lengthy process of manual property inspection.

INVESTMENT & FUTURE

Cape Analytics announced $14m in Venture funding in October 2016, made up of a number of contributions from heavyweight tech VC's, including lead investor Formation 8. The company also received backing from insurance focused XL innovate, the VC arm of insurer XL Catlin.

In March this year, Cape Analytics announced a partnership with NearMap, gaining access to the company's US aerial imagery library and expanding the pool of image data at their disposal. By combining the VC landscape knowledge of CEO Ryan Kottenstett (ex Kohsla Ventures Principal) and the image processing and machine learning expertise of co-founder Suat Gedikli, Cape Analytics hope to become the industry standard for property data.

INVESTMENT

TOTAL: $14m from 1 Round
LATEST: $14m Venture - October '16

OTHER INFO

LOCATION: Palo Alto, US
WEBSITE: Capeanalytics.com

Cybewrite

CONCEPT

Cybewrite is a startup which has developed a platform for underwriting of cyber insurance policies. Dubbed as 'Cyber security predictive analytics for the insurance space' the system provides insurance underwriters with everything they need to make data-driven, accurate decisions as to which cyber insurance coverage is a best fit for a business.

HOW THEY'RE DISRUPTING

Designed with the intention to bridge the gap between the unique needs of the underwriter and the ever-changing landscape of cyber security, Cybewrite provides a machine learning based solution to the fore. The intelligent operation system is able to map and filter relevant data online, which could indicate levels of risk and translate to policy activation. The result is a digestible report generated within hours, allowing the underwriter to understand what risk means to them in terminology they are familiar with.

INVESTMENT & FUTURE

Founded only last year, Cybewrite has been involved in a number of prominent accelerator programmes including Plug & Play and Citi Bank Accelerator. In February this year the company announced financial backing from 500 Startups.

Cybewrite plans to launch the platform this year into the cyber insurance market in which gross written premiums are predicted to increase to $7.5bn by the end of the decade, from around $2.5bn in mid-2015.

INVESTMENT

TOTAL: $150k from 1 Round
LATEST: $150k Seed – Feb '17

OTHER INFO

LOCATION: Tel-Aviv, Israel
WEBSITE: Cybewrite.com

ONES TO WATCH...

UK-based Arowana is a startup using next-generation data science and machine learning for high quality insurance risk selection. The company is currently giving little away around its plans, but disclosed it will be targeting motor insurance among other lines.

1 AROWANA
Next generation insurance. Now.

Arya.ai

2 Indian startup Arya.ai offers businesses the tools to build, maintain and scale complex deep learning applications. The company claims insurers can use the platform to improve the underwriting of risk, as well as processes across almost the entire insurance value chain.

South African startup Emerge Analytics is using AI to help customers get the most out of their data. With a focus on insurers, the company is developing a machine learning solution which improves underwriting processes, as well as fraud and lapse reduction.

3 EMERGE ANALYTICS

Atidot

4 Israeli startup Atidot offers predictive analytics for data modelling and risk assessment. The cloud-based platform harnesses clients' untapped proprietary data and integrates new and growing sources of social, open and sensor data to turn it into actionable business insights.

CUSTOMER EXPERIENCE

CUSTOMER EXPERIENCE

The insurance industry is historically poor when it comes to customer interaction and experience. Traditionally an insurer effectively offers two customer touch-points, the first when it sells a complex and over-engineered product, the second when it makes claiming against that product all the more difficult.

However the abundance of data made available to startups in the coming years will start to play an ever more critical role in altering this lack of engagement ingrained into the industry. There is a realisation of the critical need to improve the execution, distribution, interactions and relationships from insurers to align with the changing demands of millennials coming through.

Large amounts of real-time sensor data, unstructured data from social networks, and data such as text, voice and video can now be leveraged to engage with customers. This will allow insurers to accommodate increasing demand from customers for a meaningful well-informed relationship with their policy provider, which ultimately provides true value.

The following ventures are leveraging the power of AI to engage insurance customers across every element of the customer journey.

CUSTOMER EXPERIENCE

CONCEPT

Neos is a connected home insurance offering which uses technology to help prevent situations which could result in claims. When homeowners take out a policy with Neos, they are provided with a bunch of smart sensors, which alert the customers to problems via a smartphone app, enabling them to take action before things get worse. The policy, underwritten by a partner, also includes round-the-clock monitoring from the Neos emergency assistance team, who are on hand to warn customers if something is amiss.

HOW THEY'RE DISRUPTING

What's exciting about the Neos insurance offering is the potential for the technology to make inferences from independent, unrelated events. Take, for example, the detection of running water and no-one present in the house for a long-period of time. Neither present a risk individually but when combined, the results could be disastrous. The Neos policy is being developed to make intelligent inferences on potential risks.

INVESTMENT & FUTURE

Neos announced Seed investment of $1m in October 2016, with lead investment from Eos Venture Partners. Among investors who contributed to the Seed round is former England football star Gary Lineker, who is also an investor in telematics insurer Ingenie.

Neos plans to enrich its advisory bots with machine learning technology which can continually improve its performance based on its environment.

INVESTMENT

TOTAL: $1.22m from 1 Round
LATEST: $1.22m Seed – Oct '16

OTHER INFO

LOCATION: London, UK
WEBSITE: Neos.co.uk

CUSTOMER EXPERIENCE

nauto

CONCEPT

Nauto is an after-market tech startup using data analysis as a driver safety assistance tool. The company uses images, motion sensors and GPS location to gain situational awareness in real-time. By merging a number of data feeds, the systems detect what's happening on the road ahead and within the vehicle to alert the driver in the event of danger ahead, or distraction from within the car.

HOW THEY'RE DISRUPTING

As well as offering an intelligent safety mechanism to fleets and insurance carriers in the short term, Nauto's systems also anonymously store and analyse the data being collected by commercial fleets, to gather valuable insights into driver behaviour. Unlike competitors they are able to collect data on collisions, and arguably similarly important events such as near misses, to provide contextual data on driver behaviours, whilst also engaging drivers with a real-time feedback system.

INVESTMENT & FUTURE

The company's most recent undisclosed Series A funding was led by CVCs Allianz Ventures, BMWi and Toyota Research Institute. By expanding their customer base, Nauto hope to gather a rich data set which will allow insurers to assess risk with increasingly higher accuracy. The data can also ultimately serve as a contribution to the brains of autonomous vehicles of the future.

INVESTMENT

TOTAL: $14.85m from 3 Rounds
LATEST: Undisclosed Series A - Oct '16

OTHER INFO

LOCATION: Palo Alto, US
WEBSITE: Nauto.com

CUSTOMER EXPERIENCE

boundlss

CONCEPT

Boundlss is an AI health companion designed to inspire a healthy lifestyle via its digital messaging, virtual coaching technology, activity challenges and reward partners. The startup offers partnerships with health and life insurers to help them engage with their customers via the white-label platform, which integrates with over 250 wearables, biosensors and health apps to create a personalised, pro-active coaching tool.

HOW THEY'RE DISRUPTING

At the heart of the Boundlss health coach sits a chatbot which provides policy holders with a range of answers related to health and wellbeing, as well as suggestions and prompts via rule-based triggers in a conversational tone, rather than a waterfall style structured discussion offered by many competitors. By applying machine learning, the AI health coach, currently supported by a hybrid human interface, will become more autonomous over time as the system learns more about the user.

The company has targeted the Asian market, which has seen a sharp rise in lifestyle diseases linked to increased affluence and the proliferation of western dietary culture.

INVESTMENT & FUTURE

After participating in Startupbootcamp's FinTech accelerator in 2016, Boundlss began a successful pilot with AXA in Hong Kong, which will be rolled out to the insurer's health and life customer base in Hong Kong commencing August this year. The company is currently in the midst of financing a $3m+ Seed round, which it hopes to conclude in mid 2017.

Currently, the startup is focusing on improving its AI health coach, with plans to reach a 90%+ level of autonomy. Boundlss is also in discussions with insurers to utilise the data collected with their technology to improve the pricing and analysis of risk.

INVESTMENT

TOTAL: $238k from 2 Rounds
LATEST: $18.4k Seed – Apr '16

OTHER INFO

LOCATION: Perth, Australia
WEBSITE: Boundlss.com

FITSENSE

CUSTOMER EXPERIENCE

CONCEPT

The FitSense analytics platform is a Platform-as-a-Service (PaaS) which allows insurance companies to integrate a host of data from mobile and wearable devices to gather actionable insights, and provide more personalised insurance policies.

HOW THEY'RE DISRUPTING

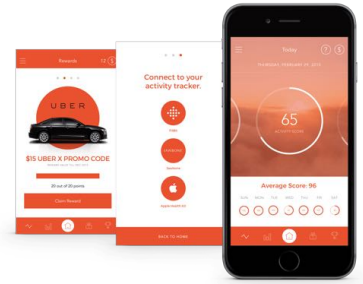
FitSense is designed to utilise data from a wide range of wearables and health tracking software to create rich customer profiles, and engage customers more by giving them the ability to actively reduce their premium costs, improving customer satisfaction and retention rates.

By layering multiple data points and utilising artificial intelligence, the software brings data into context to provide relevant insights to the insurer.

INVESTMENT & FUTURE

FitSense were chosen to take part in Startupbootcamp's 2016 Insurtech Accelerator programme, and are now seeking funding to close a £300k Seed round. With this investment the company aims to become the premier wearable and mobile analytics provider to insurance companies with a user base of one million within two years.

The company is currently running a platform beta project which enables insurers to simplify the underwriting process, making selling insurance online easier.



INVESTMENT

TOTAL: $44k from 1 Round
LATEST: $28k Venture – July '16

OTHER INFO

LOCATION: Singapore
WEBSITE: Fitsense.io

CUSTOMER EXPERIENCE

Neosurance

CONCEPT

Neosurance is a virtual insurance agent which uses the power of artificial intelligence to allow insurers to offer micro-policies at exactly the right time and place, and importantly in the best way possible. The solution gives insurers the opportunity to connect with customers via online established communities in an easy and intuitive acquisition process.

HOW THEY'RE DISRUPTING

The Neosurance platform draws on sophisticated algorithms which combine artificial intelligence and digital customer experience functions to offer contextually relevant coverage at just the right time via push notifications. The company works with insurers to map buying personas of target online communities, factoring in a number of psychological parameters to generate a series of behavioural assumptions. By layering this information on top of readily available smartphone data, the platform is able to engage customers with hyper-targeted policies via established community apps, based on their profile, location, context and behaviour.

INVESTMENT & FUTURE

Having invested €180k internally to get the business off the ground, Neosurance won Horizon 2020 funding of €50k in December 2016. The company is currently generating its first Seed round, due to be completed in summer 2017. The company has also recently begun a contract with a leading bank insurer to help them target online sports communities.

INVESTMENT

TOTAL: €230k from 2 Rounds
LATEST: €50k Funding – Dec '16

OTHER INFO

LOCATION: Milan, Italy
WEBSITE: Neosurance.eu

ONES TO WATCH...

1 otonomo

Israeli startup Otonomo is a cloud-based SaaS solution which sits between the car manufacturers and service providers and organises, limits, protects and makes sense of the data exchanged. The software allows insurers to work alongside car manufacturers to offer their customers a wealth of data-enhanced services.

2 sentiance

Belgian startup Sentiance harnesses the potential of sensor data from smartphones, wearables, and connected devices. The company allows insurers to leverage real-time behavioural data, enabling them to engage with customers as well as enhance risk profiling.

3 Liimex

German digital broker startup Liimex has developed a web-based solution which allows insurers to offer their clients real-time visibility of their business insurance coverage. Using machine learning technology the company is able to constantly analyse insurance policies to ensure policy holders are adequately covered.

4 picwell® choose smarter

US-based Picwell is a startup developing technology to help consumers navigate the complexities of choice in health insurance. The platform allows insurers and brokers to leverage big data, predictive analytics and machine learning techniques to help their customers select the right plan for them.

VIRTUAL ASSISTANCE

VIRTUAL ASSISTANCE

In today's world, customers are in search of new ways to interact with their insurance providers. Many young professionals, who by 2025 will account for 75% of the global workforce, have grown up in a world where picking up the phone to their insurer is unnatural and somewhat inconvenient when compared to the experience of booking a cab or getting a takeaway.

The communication preferences and expectations of the insurance industry's future customer base are fundamentally different, and insurers must now catch up.

Virtual assistance chatbot technology, which replicates human interaction via messaging platforms, is one solution providing customers with the immediacy and convenience they desire, at any number of touch points across the customer lifecycle.

Chatbots are nothing new; they were 2016's big hype and their roots go right back to 1994's 'Julia', the first conversational program to be coined a 'chatterbot'. However, only now is virtual assistance coming into its own as an interface.

The chatbot is fast becoming a communication tool which significantly outperforms human counterparts in many day-to-day tasks, improving in terms of consistency and accuracy every day.

2017 will witness the emergence of intelligent virtual agent platforms deployed by insurers which are able advise and engage their customers in ways previously not possible. It's also likely to be the year where we discover the most about their capacity to fail, and how we can learn from those instances.

VIRTUAL ASSISTANCE

niki.ai

CONCEPT

Startup Niki.ai offers a bespoke AI chatbot capable of conversing with users on behalf of partner businesses in a number of industries, including insurance. The company's platform leverages natural language processing (NLP) and machine learning technology to talk with customers in an instant messaging format using an SDK to drop the chatbot direct into partner apps.

HOW THEY'RE DISRUPTING

Niki.ai's dialogue manager provides a contextual engagement for customers in every conversation. The startup works on a partnership model, generating revenue for every order or transaction conducted on its platform. The chatbot is able to learn the intricacies of policies to answer any questions a customer may have, and also intelligently make suggestions based on customer profiles.

INVESTMENT & FUTURE

Since launching in 2015, Niki.ai has partnered with over 25 brands, with a user base of 40,000 across India. The company closed a Seed round back in December 2016, which included an undisclosed contribution from infamous Indian investor Ratan Tata. The company is now expanding across industries with a vision to become an enabler for everything commerce, across several platforms.

INVESTMENT

TOTAL: $441k from 3 Rounds
LATEST: $441k Seed – Dec '16

OTHER INFO

LOCATION: Bangalore, India
WEBSITE: Niki.ai

SURE.

VIRTUAL ASSISTANCE

CONCEPT

Sure is a mobile on-demand insurance app providing instant micro-duration episodic insurance coverage for events such as flights or renters insurance, as well as everyday insurance products. The intuitive app, which uses AI powered robo-broker technology, is designed to make insurance buying simpler and provide a solution for people looking for short term insurance options without the expense and complexity of standard insurance policies.

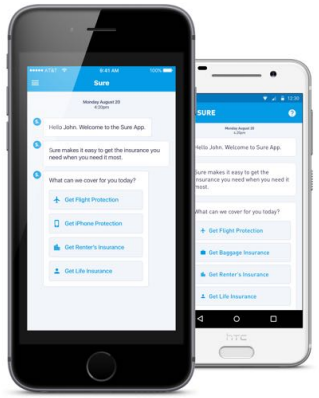
HOW THEY'RE DISRUPTING

The online platform, initially designed for on-demand flight insurance, is simple and intuitive, providing a framework for the company to expand to other episodic insurance opportunities. The startup's proprietary chatbot uses real-time data, such as location and customer behaviour, to offer customised insurance options through a virtual messaging assistant in the app and other chat platforms like Facebook Messenger.

Sure's on-demand insurance model means customers only pay for insurance when they need protection, rather than 24/7 as is the case for many of the policies sold today.

INVESTMENT & FUTURE

Sure plan to roll out worldwide service in 2017 and so far has early-stage funding from venture capital firms specialising in early-stage technology-based companies, including ff Ventures and Montage Ventures. The company's versatile framework has provided it with the capacity to expand its on-demand insurance offerings outside of what was initially only short-term life insurance.



INVESTMENT

TOTAL: $2.6m from 1 Round
LATEST: $2.6m Seed - May '16

OTHER INFO

LOCATION: New York, US
WEBSITE: Sureapp.com

Kasisto

VIRTUAL ASSISTANCE

CONCEPT

Aimed initially at the finance industry, Kasisto's conversational AI platform Kai powers virtual assistants and smart bots for multiple industries across mobile, messaging and wearables. The company offers businesses the opportunity to deploy the 'AI brain' of Kai across channels, allowing customers to interact with assistance consistent with the company's brand in a mode they prefer for a seamless customer experience.

HOW THEY'RE DISRUPTING

Founded as a spin-off of SRI International, creator of Apple virtual assistant Siri, Kasisto is a versatile chatbot platform. The virtual assistant can be calibrated for specific business needs of a number of industries. The complete stack technology is built on the copious research of SRI International and includes a speech recognition engine, natural language processing, AI reasoning, and natural language generation. The easy-to-integrate API allows deployment in weeks, offering on-site or cloud-based deployments.

INVESTMENT & FUTURE

Since its 2013 launch Kasisto closed a Seed round back in 2014, and more recently has received Series A funding in January 2017. The $9.2m round, led by Propel Venture Partners with participation from Mastercard and Commerce Ventures, also prompted the addition of financial services veteran and Propel partner Thomas Whiteaker to Kasisto's board of directors.

The latest investment has been earmarked for scaling up into new markets and hiring additional staff in the engineering and sales functions of the business.

INVESTMENT

TOTAL: $11.45m from 2 Rounds
LATEST: $9.2m Series A – Jan '17

OTHER INFO

LOCATION: New York, US
WEBSITE: Kasisto.com

INSURIFY

VIRTUAL ASSISTANCE

CONCEPT

Insurify is a mobile car insurance comparison platform which uses a virtual insurance agent powered by AI and advanced analytics to simplify the customer shopping experience. The company is the first in the US to integrate it's car insurance comparison chatbot technology with Facebook Messenger, capable of helping drivers with discounts and advice on the best policies for them.

HOW THEY'RE DISRUPTING

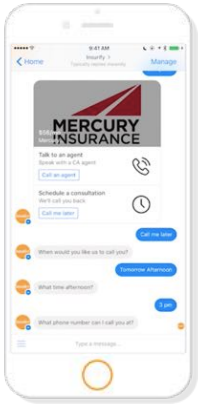
Insurify combines images of car registration plates with third-party data, machine learning technology and information supplied by insurance partners to provide customers with tailored quotes. By using owned proprietary image processing technology alongside multiple data providers, Insurify are able to verify a great deal of information from a single image.

Once all the data has been analysed, the software then uses a ranking algorithm to show the most suitable and relevant policies for the customer.

INVESTMENT & FUTURE

Since officially launching in January 2016 after the closure of a $2m Seed round, Insurify has seen a 40% monthly growth in the number of customers using the platform to purchase policies.

In March 2017, the startup announced a $4.6m Venture round led by the investment arms of insurance companies MassMutual and Nationwide. The funding will be used to aid development of the patent-pending virtual assistance technology and fuel the company's market growth.



INVESTMENT

TOTAL: $6.6m from 2 Rounds
LATEST: $4.6m Venture – March '17

OTHER INFO

LOCATION: Cambridge, US
WEBSITE: Insurify.com

SPIXII®

VIRTUAL ASSISTANCE

CONCEPT

SPIXII is an enterprise chatbot solution which acts as an automated insurance agent, able to converse with users in a chat format on smartphones. Users converse as they would with an advisor and, by using a hybrid form of AI, the chatbot is able to guide users towards the type of policy they need. SPIXII has also developed the capacity to connect to existing messaging apps like Kik and Facebook Messenger to converse with customers.

HOW THEY'RE DISRUPTING

SPIXII's software combines data provided by insurers with machine learning techniques to constantly improve the manner in which it converses with customers. What's more, through the application of AI and layering of contextually relevant data, the SPIXII chatbot offers insurers unprecedented insight into customer lifestyles and risk attitudes, as well as the ability to cross and up-sell their policies using previous purchases, locational data and more.

INVESTMENT & FUTURE

SPIXII, who took part in the Startupbootcamp's Insurtech accelerator programme in 2016, recently graduated from the 2017 Accenture FinTech Lab in March this year, which further shaped the business and helped expand its offering. Commercially, the company have grown a pipeline of 170+ businesses globally, have their first pilot live with a large insurance carrier and are currently funding their first seed round.

INVESTMENT

TOTAL: N/A
LATEST: Undisclosed Angel – Oct '16

OTHER INFO

LOCATION: London, UK
WEBSITE: Spixii.ai

ONES TO WATCH...

UK-based startup Digital Genius offers a cross-industry customer service platform which leverages machine learning technology to help companies deliver on customer expectations. The deep-learning algorithm at the heart of the platform integrates directly with insurer's existing software.

1 Digital Genius

bambu

2

Singapore-based startup Bambu is a B2B robo-advisor provider focused on the financial sector. The company's white label product, targeted at banks, asset managers and insurers, creates a personalised portfolio and risk profile for investment opportunities.

US-based Elafris is a chatbot platform designed specifically for the insurance and banking industries. The B2B2C platform integrates AI and machine learning technology to automate payment processing, identify sales opportunities and perform niche day-to-day operational tasks.

3 Elafris

JENNY

4

Finland-based Jenny is a startup developing a conversational AI chatbot for customer care. The technology, which integrates with an insurers existing platform, analyses incoming questions and generates smart response suggestions in a conversational format, drawing on internal databases and improving with every answer.

CLAIMS MANAGEMENT

CLAIMS MANAGEMENT

The insurance claim can be a sore subject for both insurers and customers.

For insurers, claims leakage from human error or inadequate underwriting of risk, fraudulent activity and complex, time-consuming procedures are just some of the pain points in managing a claim. For customers, the process of supplying countless pieces of evidence to back up a claim, only to be left waiting for weeks or months for a response, can leave a bitter taste in the mouth, and it does nothing for the relationship with their insurer.

Inefficiencies and inaccuracies in the handling of claims are tearing insurers and customers apart, widening the void of trust and exacerbating the negative stigmatisation surrounding the claims process. AI has the power to change that. Cognitive technologies being developed by ventures around the world are leveraging the power of AI to support the management of claims, and create a more efficient and accurate process.

By utilising AI, startups are providing the capacity to process huge amounts of claims data at a fraction of the time, and gain intelligent insights and decision-outputs as a result. In some cases of claims automation the burden of responsibility in the event of a claims decision can be removed entirely from the shoulders of the claims handler. If the technology is validated and transparent the result is a more trustworthy and efficient process.

AI-assisted claims management is currently in its infantile stages, however the potential for such automation is huge for both customer and insurer alike.

CLAIMS MANAGEMENT

Shift Technology

CONCEPT

Shift Technology is a Software-as-a-Service (SaaS) solution which draws on big data analytics and machine learning technology to spot patterns of fraudulent activity in insurance claims. The company works with claims handlers, providing them with a decision support platform which automates fraud detection processes, helping insurers decide which cases require more investigation.

HOW THEY'RE DISRUPTING

By providing a SaaS model, Shift can improve it's software over time by combining machine learning technology with data collected from insurance clients to educate the algorithms used. Furthermore the data collected across the entire client portfolio can be anonymously aggregated to provide useful insights and the improvement of algorithms.

Shift Technology developed its offering with claims handlers in mind, ensuring the software seamlessly integrates into their workload.

INVESTMENT & FUTURE

Shift Technology's $10m Series A in May 2016, led by Accel Partners, was the first piece of significant funding since the company's Seed round led by Iris Capital back in 2014. The cash injection will help build up the technical team and scale up sales and marketing efforts.

INVESTMENT

TOTAL: $11.8m from 2 Rounds
LATEST: $10m Series A - May '16

OTHER INFO

LOCATION: Paris, France
WEBSITE: Shift-technology.com

CLAIMS MANAGEMENT

TRACTABLE

CONCEPT

Tractable is a tech startup born out of Cambridge University, England, which leverages the power of AI to revolutionise the process of automotive claims assessment. Tractable technology compares image data taken from policy holders and collision repairers, against previous claims data, to make recommendations on the cost of repair.

HOW THEY'RE DISRUPTING

By starting with a relatively small yet data-rich set of labelled historical claims images supplied by insurers, body shops and loss adjusters, Tractable is able to grow its database of labelled imagery required to make autonomous assessments, based on a process of interactive machine learning. The algorithms used are able to transfer learning from previous cases, creating a scalable infrastructure which improves its accuracy as time goes on.

In an age where human accuracy has been surpassed by technology in image classification, Tractable makes a strong business case for improving operational efficiencies in insurance.

INVESTMENT & FUTURE

Tractable's first foray into investment raising started in mid-2015, where the company was able to scoop close to $2m in the space of just a few months, thanks to a contribution from Silicon Valley investors Zetta Venture Partners. Since then the company has gone from strength to strength, receiving hefty Series A investment from tech-focused Ignition Partners earlier this year.

With the cash injection, the company hopes to further develop its technology to allow for full repair estimation, without the need for human intervention at any stage, by the end of 2017.

INVESTMENT

TOTAL: $9.9m from 2 Rounds
LATEST: $8m Series A – Jan '17

OTHER INFO

LOCATION: London, UK
WEBSITE: Tractable.io

CLAIMS MANAGEMENT

CONCEPT

GetMeIns is a startup using AI to detect fraudulent insurance claims. By using multiple disciplines such as behavioural analytics, link analysis and machine learning algorithms the company offers insurance carriers the innovative intelligent infrastructure for fraud prediction.

HOW THEY'RE DISRUPTING

The GetMeIns 'intelligence-as-a-service' offering generates an initial risk score at point-of-sale by combining customer profile with open source data, which is constantly evaluated each time a customer progresses through their policy. The platform's algorithms are then able to detect fraudulent signals like behavioural anomalies and sentiment change, which are automatically streamed to the insurance carrier in real-time to defeat potential fraud.

INVESTMENT & FUTURE

Founded in 2014, the Israeli startup recently secured investment from Jerusalem Venture Partners after winning the Insurtech Israel competition, launched last year by the investors.

The startup intends to integrate AI capabilities into the core of its business and to begin business development in the US with a target of at least three active customers by the end of 2017.

INVESTMENT

TOTAL: N/A
LATEST: Undisclosed Seed – Feb '17

OTHER INFO

LOCATION: Netanya, Israel
WEBSITE: Click-ins.com

CLAIMS MANAGEMENT

CONCEPT

Plex.ai is an automotive telematics platform that uses blockchain technology, alongside AI and machine learning, to provide an insurance solution for the autonomous car. The company, also behind broker distribution channel HeyRover which uses AI to communicate with customers through social media channels, hope to disrupt the auto insurance industry with their new model.

HOW THEY'RE DISRUPTING

The Plex.ai telematics platform utilises AI technology to provide insurers real time, remote data on a car and its driver. Rather than rushing a sophisticated model to market, Plex.ai's team has spent time and effort working alongside insurers to figure out an acceptable regulatory framework for a *distributed* insurance model, which lends itself well to the insurance of data-heavy autonomous cars. The company are now well on their way to developing a working model, which founder Terek Judi believes existing carriers simply do not currently have the capacity to create.

INVESTMENT & FUTURE

40% of premiums in North America are personal auto. If, or perhaps more pertinently when, autonomous vehicles begin to dominate the market share of the industry, the majority of that 40% will require an overhauled insurance model, which Plex.ai hopes to provide. The company has been supported by The University of Waterloo's Velocity Innovation Garage on the outskirts of Toronto, and is already in talks with several potential investors to raise a Seed round by mid-2017.

INVESTMENT

TOTAL: Undisclosed
LATEST: N/A

OTHER INFO

LOCATION: Waterloo, Canada
WEBSITE: Plex.ai

Lemonade™

CLAIMS MANAGEMENT

CONCEPT

Lemonade is an insurance carrier startup which uses a combination of AI and behavioural economics to approve or deny insurance claims. The company, which challenges traditional insurance models by sourcing capital for claims directly from pooled policy premiums of like-minded 'peer' groups, runs claims received past a series of innovative anti-fraud algorithms to ensure the fairest outcome for insurer and customer alike.

HOW THEY'RE DISRUPTING

Lemonade's claims bot 'Jim' converses with policy holders in the event of a claim using virtual honesty nudges designed off the back of years of behavioural economics research. The algorithms driving the claims bot then draw on a host of proprietary and user-generated data points to provide a decision on whether the claim should be paid out, all without the need for human interference.

The company hit the headlines in January 2017 after claiming a 'new world record' for the fastest claim pay-out, made in just three seconds. Although the relatively simple claim in question acted more as a proof-of-concept than anything, the case opens the gates for a fundamental shift in claims processing technology.

INVESTMENT & FUTURE

Lemonade received a hefty $13m Seed round investment last year from a series of investors. This, alongside an undisclosed venture investment in August 2016 from XL Catlin's (Lemonade's lead reinsurer) venture arm, helped the company to launch their carrier platform in September 2016. The company announced expansion to Illinois, its second operating state outside New York, in April this year.

INVESTMENT

TOTAL: $60m (disclosed) from 4 Rounds
LATEST: Undisclosed - April '17

OTHER INFO

LOCATION: New York
WEBSITE: Lemonade.com

ONES TO WATCH...

Thailand-based startup Claim Di have developed a mobile platform designed to improve the communication between claimants and insurers. Drivers can log claims by taking pictures via the app at the scene of an accident. The AI tech then allows for an instant claims settlement, which can be further investigated later if necessary.

1 Claim Di

Cognotekt

2

German startup Cognotekt helps insurers automate claims management processes using AI. The SaaS offering currently automates P&C claims processes to improve business efficiencies. The software analyses claims data, automating outcomes in cases which do not require human escalation.

MotionsCloud provides an intelligent claims solution for P&C insurers to streamline and automate claims processes. The solution reduces cycle time, reduces expenses up to 75%, and improves the customer experience with mobile, AI, and video-enabled technologies which can integrate with legacy systems.

3

factom

4

US-based Factom is a blockchain startup which helps insurers automate highly specific insurance policies. The company's AI platform provides a blockchain protocol which creates triggers for smart contracts, making parametric insurance easier and more adoptable by insurance carriers.

COMPLIANCE & ADMINISTRATION

COMPLIANCE & ADMINISTRATION

Much of our deep-dive into AI Insurtech has focused within the realms of the industry which customers may be most familiar with; the recognisable processes of underwriting, claims, customer experience and distribution, for which the application of AI has a more obvious and comprehensible potential for everyday consumers.

That being said, arguably one of the most valuable applications of AI in the insurance industry will be across processes which our customers are least exposed to.

The day-to-day administrative and regulatory processes performed by insurers are what make the industry tick. They are also one of the principal strains on resources. As AI technology becomes more robust and sophisticated its application across the entire insurance value chain is a no-brainer.

Startups are utilising advances in AI to accelerate laborious administrative tasks, and ask questions of datasets to speed up notoriously complex regulatory compliance procedures. By applying AI to fundamental 'back-end' insurance processes, efficiency can be improved, operational costs reduced, and more resources dedicated to fixing the inherent issues of a broken insurance model.

COMPLIANCE & ADMINISTRATION

riskgenius

CONCEPT

RiskGenius is a startup which leverages patent-pending technology to help speed up the process of policy review. The platform uses machine learning to compare commercial policy options for customers, identifying potential gaps in coverage in a fraction of the time taken to complete the process manually.

HOW THEY'RE DISRUPTING

The Risk Genius algorithms separate insurance policies into clauses, which are then categorised based on common industry terminology. Users can then instantly locate key clauses across one or more policies, streamlining the review process. This process improves over time thanks to the application of machine learning technology.

What's more, the platform allows underwriters to drag and drop generic policy language from a clause library, allowing simple and efficient editing in the creation of new policies.

INVESTMENT & FUTURE

Risk Genius, which began raising investment back in 2014, closed its Series A at the beginning of 2016 with lead investment from tech-focused Flyover Capital.

The startup is currently gearing up to begin a new investment round, and are currently running a proof-of-concept product for the reinsurance industry.

INVESTMENT

TOTAL: $2.7m from 2 Rounds
LATEST: $1.8m Series A – Dec '15

OTHER INFO

LOCATION: Overland Park, US
WEBSITE: Riskgenius.com

COMPLIANCE & ADMINISTRATION

CoVi Analytics

CONCEPT

Insurance is an industry with an increasingly expensive and time-consuming regulatory landscape. CoVi Analytics is a first of its kind Compliance-as-a-Service (CaaS) startup to the insurance industry, designed to help insurers interpret and comply with regulations. The platform collates regulatory documents for easy search, and utilises artificial intelligence to bring attention to issues relevant to the client's requirements.

HOW THEY'RE DISRUPTING

According to the Association of British Insurers, insurers in the UK alone invested well over £3bn in the Solvency II directive. CoVi's CaaS is designed to make compliance a more efficient process by unifying the compliance value chain and automating regulatory workflow for Solvency II compliance and future legislation.

By automatically extracting only the most relevant documentation, and simplifying compliance into useful insights and visualisations, CoVi's software ultimately makes regulatory tasks more cost-effective and less susceptible to error.

INVESTMENT & FUTURE

CoVi Analytics, which took part in Startupbootcamp's Insurtech Accelerator early in 2016, is currently looking for investment to increase its team size and improve its marketing campaign. The company plans to help UK based insurers initially, widening their scope to the European market by 2018 and the global market by 2020.

INVESTMENT

TOTAL: $16.29k from 1 Round
LATEST: $16.29k Seed - December '15

OTHER INFO

LOCATION: London, UK
WEBSITE: Covianalytics.com

CONCEPT

Surukam Analytics is a startup using AI to shrink time spent in legal documentation. By implementing natural language processing and machine learning solutions, the company helps legal teams review and curate insurance contracts, speeding up drafting processes and helping to identify risk and problem areas in contracts.

HOW THEY'RE DISRUPTING

The Surukam Analytics end-to-end contract platform 'Crux IQ' provides AI powered legal analysis of insurance contracts, improving business efficiencies dramatically. By employing machine learning solutions the technology is able to learn the meaning of regulations, policies and standards and consequently sort through hundreds of potential combinations of clauses in minutes, make sense of complex legal language and identify any legal issues present.

INVESTMENT & FUTURE

Surukam has received no external investment to date. The company is currently concentrating on developing its platform, having participated in the Bengaluru-based Microsoft Accelerator in late 2016, which works with market-ready startups to provide the tools and expertise required to scale a business.

INVESTMENT

TOTAL: N/A
LATEST: N/A

OTHER INFO

LOCATION: Chennai, India
WEBSITE: Surukam.com

COMPLIANCE & ADMINISTRATION

CONCEPT

Captricity is a well established startup founded in 2011 that offers a software-as-a-service (SaaS) data capture platform which converts information from static documents (including handwritten) into 99%+ accurate, machine readable data. The software is able to pull data from all manner of forms, emails, scans and images into consistent data points, with a same-day turnaround service.

HOW THEY'RE DISRUPTING

Captricity's cloud-based solution uses deep learning technology which is able to extract data from any source and connect automatically to an insurers backend systems, eliminating the need for time-intensive manual data entry processes. The service allows businesses to bring legacy documentation into the world of enhanced data analytics without the need for wholesale core systems transformation.

INVESTMENT & FUTURE

Captricity, whose initial disclosed investment dates back to a Series A in 2013 led by Social Capital, has now accrued a total of $51.9m in investment across a total of six funding rounds. The company now boasts a client list of ten of the top twenty US life insurers using the robotics process automation to deliver business insights. The most recent funding was used to expand the platform and democratise customer data access for highly regulated customers.

INVESTMENT

TOTAL: $51.9m from 6 Rounds
LATEST: $35m Series C - Jan '15

OTHER INFO

LOCATION: Tel-Aviv , Israel
WEBSITE: Argus-sec.com

ONES TO WATCH...

US-based ComplyAdvantage provides anti money laundering data and compliance solutions to the finance industry. The startup uses AI and big data analytics to help insurers manage their compliance and risk obligations.

1 ComplyAdvantage

Solidware
We turn data into value.

2 South Korean startup Solidware builds predictive models for the finance industry to improve business efficiencies and profits. The company analyses clients proprietary data using machine learning algorithms, providing accurate prediction of risk, renewal rates and more, enabling customisation of product offerings and customer services.

US-based startup Neurensic has developed a SaaS offering to aid with compliance procedures. The company uses pattern recognition based on machine learning to identify behaviours that pose the greatest regulatory risk to businesses, reducing costs, eliminating risks, and improving the workflow efficiency of internal teams.

3 neurensic™

RightIndem

4 UK-based RightIndem is a SaaS company which takes a customer's lengthy claims administration process online, creating a more transparent, flexible and informed claims process. The company's proof of concept car insurance decision tool uses machine-learning algorithms on repair cost data to ensure the outcome is correct.

“ADAPT OR PERISH, NOW AS EVER, IS NATURE’S INEXORABLE IMPERATIVE”

H. G. Wells

SUMMARY

What is clear throughout this report is the enormous potential AI boasts for the insurance industry. There is little conceivable limit to the possible applications across the entire value chain of the industry, making it an important and inescapable innovation. To summarise:

- Implementation of AI to provide full autonomy across entire verticals in insurance is currently unfeasible, and negligent considering our current level of understanding around much of its potential. Thus a combination of machine intelligence and human input and creativity can offer the insurance industry a significant amplification of service value in the meantime.

- AI capabilities will improve dramatically in the next five years. Due to the nature of much of the technology discussed within this report, the application potential and capabilities of AI systems will exponentially improve as they learn from their interactions with the environment and the data they are fed.

- The interpretability of AI decision outputs must be a priority in the development of AI moving forward. As is the case with other industries, many of the decisions made have consequences that are felt by our customers, regulators, employees and shareholders. It is therefore crucial to ensure applications of AI allow trust and interpretation of not only the individual predictions, but also the models themselves. Failure to recognise this as a necessity could come back to haunt the industry.

- Insurers will need to sit up and pay attention to the new kids on the block. AI ventures are scaling at breakneck speed, in doing so commanding multi-billion dollar valuations. And there's good reason for it. Significant improvements in efficiencies, customer interaction and risk selection are within the reach of insurers able to apply AI to their operations effectively.

As our report illustrates, there is no shortage of potential for the application of AI within insurance. The hurdle to be overcome however, is willingness to evolve strategies and invest in disruptive innovation – whether that's building, partnering or acquiring.

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For more information on how Tällt Ventures can help your business please do get in touch.

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