# FINEOS

White Paper

# Insurance Innovation
## Product, Offer and Model

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## A changing landscape

Life and health insurers face perhaps some of the most significant changes of any insurance sector, partly due to the drastically changing nature of healthcare and healthcare technologies. Workplace insurance and workers' compensation will be likewise impacted by these and wider trends. Professor Eric Thomas, President of Universities UK, notes that '...the combined demands of an ageing population, increasing expectation and emerging technologies (are) shifting nature of the demands placed upon it (healthcare)[i]. The shift is occurring at a pace not seen over the past 30 years. 'In the face of escalating costs, quality challenges and uneven access to care, under pressure from continued economic challenges in Europe and healthcare reform in the US, companies in all healthcare sectors are reassessing how best to serve and succeed in the market[ii].'

The healthcare ecosystem is ripe for disruptive innovation. Big data, wireless sensors, mobile and social mediums are just some of the technologies that have yet to be fully explored, and a number of emerging technologies could fundamentally redraw healthcare. This has led some commentators to remark that '...the health industry is where the music industry was with the vinyl LP[iii].' In fact, powerful elements and trends in information technologies already exist today that will combine to enable continuing waves of innovation in health care information technologies[iv].

The wider healthcare system isn't oblivious to this. 86 percent of healthcare CEOs believe technological advances will transform their businesses in the next five years. In addition, they're far more conscious than other CEOs of the huge role demographics will play – 84 percent see it as a transformative trend, compared to just 60 percent in general[v]. There is even recognition of the need to become more consumer centric, although recognition and execution have yet to match. 94 percent plan to alter their customer growth and retention strategies, while 84 percent plan to alter their channels to market. Only relatively few have embarked on these changes, though, let alone completed them[vi]. The same is true of insurers. E&Y research shows that while insurers view digital as a key priority in delivering a better customer experience, 79 percent do not see themselves as digital leaders, and are instead trailing the spectrum in customer engagement, analytics and adoption of mobile and social media. Furthermore more than 1 in 2 (57 percent) say their operating models do not facilitate digital and 89 percent say they do not consider past interactions when recommending products or services to online customers[vii]. This last statistic is especially concerning since a truly customer-centred company would analyse feedback and history to identify patterns and take actions that would improve the customer's experience, based on how those actions will affect the economics of the business.

## Customer centric

A customer-centred approach also requires organisational change. Most insurers' internally focused stance assumes the agents are the customers yet consumer faced businesses demand that the sales-force serves end customers, whether they are new or existing[viii]. Some insurers have succeeded in making this transition. Bain notes that '...in one of Allianz's European life and health insurance operations, feedback revealed that customers had to call back repeatedly about the status of payments and were expected to describe their medical conditions again and again. An Allianz team figured out a process solution: On the initial call, a case manager would be assigned to the policyholder and handle all contact until the claim was resolved. Any delay in the reimbursement process would trigger a call or text message informing

[i]     Source: Universities UK, 2008 http://www.universitiesuk.ac.uk/highereducation/Pages/FutureHealthcareChallenges.aspx#.U2j3V_m2hlg
[ii]    Source: Strategyand, 2014 http://www.strategyand.pwc.com/global/home/what_we_do/industries/health
[iii]   Source: USA Today, 2014 http://www.usatoday.com/story/tech/columnist/shinal/2014/03/08/health-apps-sxsw-shinal/6205491/
[iv]    Source: Institute for the Future, retrieved 2014 http://www.iftf.org/uploads/media/IFTF_SR-1276_HC2020_Perspectives.pdf
[v]     Source: PwC, 2014 http://www.pwc.com/gx/en/ceo-survey/2014/assets/pwc-17th-annual-global-ceo-survey-healthcare-key-findings.pdf
[vi]    Source: PwC, 2014 http://www.pwc.com/gx/en/ceo-survey/2014/assets/pwc-17th-annual-global-ceo-survey-healthcare-key-findings.pdf
[vii]   Source: Ernst & Young, 2014 http://www.ey.com/GL/en/Industries/Financial-Services/Insurance/Insurance-in-a-digital-world--The-time-is-now
[viii]  Source: Bain, 2014 http://www.bain.com/publications/articles/customer-loyalty-and-the-digical-transformation-in-p-and-c-and-life-insurance.aspx

> ## Soon after implementing the new protocol, the claims unit saw a double-digit increase in its loyalty score and a significant rise in policy renewal rates.

the policyholder of the claim's status. Soon after implementing the new protocol, the claims unit saw a double-digit increase in its loyalty score and a significant rise in policy renewal rates[ix]. In short, consumer centric business demands not only C-suite buy-in to redesigning products and refining processes but that the customer becomes part of the insurers' DNA.

The benefits of doing so would seem ample enough to prompt pre-emptive change. Improving customer experience can increase an insurer's gross premiums by $75-$150m per year[x]. Globally, the size of the switching economy within insurance (the total expenditure considered up for grabs and not particularly loyal to any company/product) is estimated at $400 billion[xi]. If these figures aren't reason enough to prompt proactive change, then your competitors' actions will cause a less rewarding and more costly reactive change. It is better to disrupt than be disrupted.

## An era of disruption

> ## "First we do things differently, then we do different things."
> ### - David Smith 2012

In 2012 there was approximately 500 petabytes of digital healthcare data across the globe[xii]. That's expected to reach 25,000 petabytes by the year 2020 (i.e. a 50x increase in digital healthcare data). Big data analytics has already boosted the performance of some life insurance companies by 15 percentage points[xiii] yet only 17 percent of insurers say they use integrated analytics across the enterprise[xiv]. However, only 57 percent of healthcare CEO's are worried about the rate of technological change[xv]. Technological change does not occur in a vacuum however; it changes the business environment in significant ways by altering the capabilities required to be a successful ecosystem player. Barriers to entry shift, and as a result, new entrants from non-traditional fields provide new sources of collaboration and competition.

Google, for example, registers 6 billion daily unique searches and indexes of over 50 billion web pages (2013). 75 percent of all insurance purchases are forecast by Boston Consulting Group to be online by 2020, which places data companies like Google in the middle of data intensive industries – especially as a sales channel. Google Glass is another area where Google has '...the possibility to create a position within the insurance value chain. In January 2014, Google and VSP, the U.S.' largest insurance player in optical insurance, signed an agreement, subsidising Google Glass with prescription lenses for VSP's policyholders.' This will provide opportunities for collecting insurance data such as real-time health information from each user of the device[xvi]. The insurance value chain, as well as the broader healthcare environment, could be heavily impacted by data built businesses such as Google.

Another step-change for the industry occurs as partnerships are established to capitalize on data driven business models (such as Amazon, Apple or with several retailers) resulting in a fundamental change in the way insurance is bought and sold[xvii]. Indeed, insurers have the opportunity to partner with retailers to gain deeper customer insights says KPMG[xviii]. Real time data could enable the development of algorithms better equipped to deal with the present and future than using historical patterns. Customer data revealing an individual buying baby supplies at the supermarket

[ix] Source: Bain, 2014 http://www.bain.com/publications/articles/customer-loyalty-and-the-digical-transformation-in-p-and-c-and-life-insurance.aspx

[x] Source: Boston Consulting Group, 2014 https://www.bcgperspectives.com/content/articles/insurance_financial_institutions_improve_p_c_profitability_premium_growth/

[xi] Source: Accenture, 2014 http://insuranceblog.accenture.com/getting-to-grips-with-the-switching-economy-in-insurance/?cid=fs_insblogfy14_10000255_smc_0913#sf22269992

[xii] Source: ZDNet, 2013 http://www.zdnet.com/healthcare-turns-to-big-data-analytics-for-improved-patient-outcomes-7000024237/

[xiii] Source: Boston Consulting Group, 2014 https://www.bcgperspectives.com/content/articles/insurance_digital_economy_bringing_big_data_life/

[xiv] Source: Accenture, 2014 http://insuranceblog.accenture.com/insurance-chart-of-the-week-achieving-payback-in-insurance-analytics-part-1-of-5/?cid=fs_insblogfy14_10000498_smc_0913#sf28211016

[xv] Source: PwC, 2014 http://www.pwc.com/gx/en/ceo-survey/2014/assets/pwc-17th-annual-global-ceo-survey-healthcare-key-findings.pdf

[xvi] Source: TechCrunch, 2014 http://techcrunch.com/2014/06/21/will-google-enter-the-insurance-industry/

[xvii] Source: KPMG, 2014 http://www.kpmg.com/Global/en/IssuesAndInsights/ArticlesPublications/insurance-ma-landscape/Documents/insurance-ma-landscape-v2.pdf

[xviii] Source: KPMG, 2013 http://www.kpmg.com/global/en/issuesandinsights/articlespublications/valued-insurer/leading-insight-series/pages/retailer-data-fs.aspx

**59**

**AVERAGE AGE**
of insurance agents
in the U.S. in 2014

**25%**
of the insurance
**WORKFORCE IS
SET TO RETIRE**
by 2018

could indicate the potential to offer life insurance to protect their young family. Accessing this wealth of data might require '...a joint venture with a prominent retailer, enabling the chain to sell its insurance products on a white label basis. Or, an insurer may join the retailer's existing loyalty program, to share data among program sponsors and provide loyalty benefits to members[xix],' notes KPMG.

Two other key areas of known disruption centre around demographic and healthcare technology. In 2014, the average age among insurance agents in the U.S. is 59, with one-fourth of the insurance industry's workforce set to retire by 2018[xx]. Nearly 70 percent of respondents of one survey expect that up to one-quarter of their staff will retire in the next five years[xxi]. Replacing those employees with top new talent will be difficult, partially due to competition across all industries but also because of the value proposition of some insurers as employers. The best university I.T graduates, for example, have been studying Java and Hadoop, and are unlikely to find working at a company running COBOL programs on old mainframes to be attractive.

Healthcare technology meanwhile is evolving at such a rate as to change the calculus for health systems. The below table offers a brief selection of technologies that could transform the nature, cost, and location of healthcare in the period to 2030.

| Health related tech | Date of possible realisation | Description |
|---|---|---|
| Artificial solar Retina[xxii] | 2025-2030 | New research allows for wireless artificial retinas using carbon nanotubes that act as a natural velcro to bind themselves to the biological system. Such moves could help eradicate macular degeneration related blindness |
| Home health Avatars | Before 2020 | Electronic avatars, either in holographic form or via a TV (University of Kent project) could monitor heart rate and blood pressure as well as provide medication reminders. The avatar could potentially analyse a person's speech, movement and facial expression to detect mood and formulate an appropriate response[xxiii]. |
| Microscale 3D Printing | 2020-2030 | Jennifer Lewis of Harvard University has printed biological tissue interwoven with a complex network of blood vessels. The work addresses one of the lingering challenges in creating artificial organs for drug testing or, someday, for use as replacement parts: how to create a vascular system to keep the cells alive[xxiv]. |
| RNA-based Therapeutics | 2020 | Advances in basic RNA science, synthesis technology and in vivo delivery are combining to enable a new generation of RNA-based drugs. WEF expect this field of healthcare to increasingly challenge conventional pharmaceuticals in forging new treatments for difficult diseases in the next few years[xxv]. |
| Vocal Diagnostics | 2020 | Technology is being developed that will detect when someone is too sleepy to drive and studies have already revealed the ability to detect drug use (including type of drug) using vocal diagnostics. MIT's Parkinson's Voice Initiative can obtain 99 percent accuracy in lab-based diagnostic tests[xxvi]. MIT is now working on accurate telephone-based diagnostics. As this can be used with a number of neurological conditions, the ability to democratise this technology through smartphone compatibility could have significant implications for healthcare. |

[xix]  Source: KPMG, 2013 http://www.kpmg.com/global/en/issuesandinsights/articlespublications/valued-insurer/leading-insight-series/pages/retailer-data-fs.aspx
[xx]  Source: Property Casualty, 2014 http://www.propertycasualty360.com/2014/04/20/future-shock-recruiting-the-insurance-industrys-ne
[xxi]  Source: Risk, 2014 http://www.risk.net/insurance-risk/advertisement/2328910/are-insurance-companies-prepared-for-the-investment-infrastructure-challenges-ahead
[xxii]  Source: Engineering, 2014http://www.engineering.com/DesignerEdge/DesignerEdgeArticles/ArticleID/7181/Artificial-Vision--A-Moonshot-Project.aspx
[xxiii]  Source: Metro, 2014 http://metro.co.uk/2014/03/03/future-of-healthcare-avatars-could-look-after-the-elderly-in-their-own-homes-4394762/
[xxiv]  Source: MIT Technology Review, 2014 http://www.technologyreview.com/featuredstory/526521/microscale-3-d-printing/
[xxv]  Source: World Economic Forum, 2014 http://www3.weforum.org/docs/GAC/2014/WEF_GAC_EmergingTechnologies_TopTen_Brochure_2014.pdf

> A mindset that values incremental change over substantive change is unlikely to prosper in a future environment characterised by constant disruption.

## Barriers to change

The ability to cope with disruption of an increasing scale is perhaps the biggest overall barrier to change. Several barriers such as regulation, I.T, and staff skills exist, and all are related in some way to overall organisational structure.

For example it could be argued that regulation is hampering insurers' ability to meet consumers' needs. In response to changes affecting the industry, life insurers are offering fewer products (49 percent), limiting guarantees (40 percent) and raising prices (35 percent)[xxvii]. A reluctance to shift business models or operational models as a way of better adjusting to the need for increasing flexibility is a recurring theme in many cases. Typically, insurance companies spend between 50 and 70 percent of their IT budget on simply running the business[xxviii,] leaving little room for delivering the transformation of services that consumers demand. A recent Celent survey of insurance CIOs found that incremental improvement was the most popular modernisation strategy (being used by 35 to 45 percent of CIOs, depending on the core system[xxix]) A mindset that values incremental change over substantive change is unlikely to prosper in a future environment characterised by constant disruption.

As in other industries, the days of silo decision-making, where one person or department has control over a purchase is rapidly disappearing, and seeing as technology is a key driver, the ramifications for insurance IT are far-reaching. Insurers must bridge the CMO-CIO divide to become truly customer-centric says Accenture[xxx]. Redrawing the business along socially collaborative lines and reframing the business culture is essential for such changes to occur. The predominant insurance inside-out culture, notes KPMG, may hinder this. For example, it is suggested that with regards to possible partnership with retailers, '...the financial industry tends to believe their data are best, so they may be hesitant to explore new approaches[xxxi].' Good data of course is no substitute for effective value extraction from it.

Such organisational transformation must include platforms and processes too. Current investment operations platforms, for example, were designed years ago to handle a different business model, at a time when the economic crisis, the complexity and expansion in financial instruments and spiralling regulatory requirements were not on the radar. The issue extends beyond a simple systems upgrade[xxxii] and could be said to result from an inflexible structures and I.T. However, the tools for enabling change are not as out of reach as may be imagined.

## Enablers of Change

Simplifying operations by outsourcing select operations to firms accustomed to innovating to address changing regulations and market shifts is a necessary adaption for many in the industry[xxxiii]. Another is to face up to talent issues. In some studies it is noted that up to 70 percent of the industry expects staff turnover and retirement to total a quarter of all personnel[xxxiv]. This is both a challenge and a historic opportunity – on the one hand significant operational disruption is likely yet a greater strategic gain is possible by gaining the right staff and the right partners.

It is of the utmost import then, that the groundwork is prepared now – in terms of internal operations, infrastructure and culture, for efforts to develop a suitable talent pipeline. It must form an attractive environment that Millennials are comfortable in. Within this pipeline, consideration must be given to the type of leaders and talent needed and to the balance between managers, leaders and entrepreneurs. Too many discussion of talent are one sided in their promotion of a certain type of talent. In reality a balance between different worker profiles, with change agents and operational figures in suitable roles, is required.

xxvi  Source: The Verge, 2014 http://www.theverge.com/2014/7/17/5912491/diagnosing-sound-scientists-voice-recordings-Parkinsons-ADHD-Alzheimers

xxvii  Source: BNY Mellon, 2014 http://news.bnymellon.com/index.php?s=20295&item=129038

xxviii  Source: IT Briefing Centre, 2012 http://www.itbriefingcenter.com/programs/gartner_innovationgroup.html

xxix  Source: Celent, 2014  http://insuranceblog.celent.com/2014/05/13/four-ways-to-modernize-core-legacy-systems/

xxx  Source: Accenture, 2013 http://insuranceblog.accenture.com/digital-insurers-must-bring-the-cmo-and-cio-into-closer-alignment/?cid=fs_insblogfy14_10000186_smc_0913#sf20618354#sf20950317

xxxi  Source: KPMG, 2014 http://www.kpmg.com/global/en/issuesandinsights/articlespublications/valued-insurer/leading-insight-series/pages/retailer-data-fs.aspx

xxxii  Source: Risk, 2014 http://www.risk.net/insurance-risk/advertisement/2328910/are-insurance-companies-prepared-for-the-investment-infrastructure-challenges-ahead

xxxiii  Source: Risk, 2014 http://www.risk.net/insurance-risk/advertisement/2328910/are-insurance-companies-prepared-for-the-investment-infrastructure-challenges-ahead

xxxiv  Source: Risk, 2014 http://www.risk.net/insurance-risk/advertisement/2328910/are-insurance-companies-prepared-for-the-investment-infrastructure-challenges-ahead

> Insurers need to optimise their internal structures and develop an outside-in culture that values collaboration and other modern business practices such as outsourcing.

We are all a mix of Manager and Leader and Entrepreneur. This means we can all do the things in each profile – it's just that we usually prefer to do things within one or two of the profiles. Anyone can come up with a vision, make a plan, or deliver on a target. But if you only have 10 percent of one profile while someone else has 60 percent, they will have a much stronger preference to achieve the task.

**Manager:**
**Delivers today. Strong on process. Brilliant at capability**

Managers are brilliant communicators and very effective at managing people's capability. This means they are also great people to manage processes. They are good at lining everyone up and developing people through coaching and learning. The Manager secures the commercial return for the business.

Most organisations have more Managers than Leaders or Entrepreneurs, which is great for business because Managers can take innovative ideas and make them work. Managers are practical, grounded in today's reality and essential to keep the business wheels turning.

Each profile needs the other two. The Entrepreneurs might develop novel solutions – and Leaders might fire everyone up – but Managers make the ideas work!

**Leader:**
**Plans for tomorrow. Strong on people. Brilliant at behaviour**

People follow Leaders because Leaders are good with people and understand behaviour. Imagine a race of ducks in flight. Which is the leader? The one in front. If you do something first, and people follow you, then you are a Leader. They don't have to be innovative, they simply have to be first and have the ability to take people with them.

Leaders help people engage with change by inspiring them and generating a buzz. Often, they might be leading people into a new situation that has already been designed by the Entrepreneur. They are quick to identify opportunities and capitalise on ideas which they can communicate effectively to others. They aren't the original innovator and usually get their ideas from an Entrepreneur but they can apply their foresight to translate these into strategies to be implemented by the Manager.

**Entrepreneur:**
**Dreams about the future. Strong on ideas. Brilliant at vision**

Entrepreneurs live for change, ideas and innovation. Entrepreneurs can always suggest lots of ideas and are very adept at inventing and designing visions of the future. But don't necessarily have to design something totally new. Entrepreneurs often bring a change into their organisation that other organisations have adopted many times before. The important thing is that the Entrepreneur's organisation has never taken on this particular change before.

Entrepreneurs are innovators, the ideas person with plenty of start-up energy. In big corporations they are typically asked to launch novel products or create new business units. But the "pure" Entrepreneur usually doesn't have the required Leader or Manager profile to convert new product into sustainable sales, for example. Today, many "pure" Entrepreneurs work in small or medium sized businesses, feeling they don't belong in the corporate world as their skills are not always understood or appreciated.

Insurance companies have five years to embark on business model refashioning; any longer and they risk severe talent shortages that will take the ability to proactively change out of their hands.

In addition to getting the right people in the right position at the right time is the need to give them the right information at the right time. Big data and predictive analytics are proven within the insurance industry and will soon become the industry standard. True innovation lies a step beyond, with prescriptive analytics. Going beyond predictive analytics, prescriptive analytics not only predicts a possible future, it predicts multiple futures based on the decision maker's actions. A prescriptive model can be viewed as a combination of multiple predictive models running in parallel, one for each possible input action. Since a prescriptive model is able to predict the possible consequences based on different choice of action, it can also recommend the best course of action for any pre-specified outcome.[xxxv]

## Evolving the business model

Such enablers can help leverage the attraction of an organisation as both a place to work and for consumer experience. In many ways insurance is ideally placed, but success will not happen without significant change. 'Insurance is going to be the native business model for the Internet of Things,' says Tim O'Reilly, founder and CEO of O'Reilly Media[xxxvi]. The access and interpretation of data will result in new partnerships and business models, and insurers need to secure their place in this digital ecosystem as a priority. In order to optimise the basis of this business model, insurers need to optimise their internal structures and develop an outside-in culture that values collaboration and other modern business practices such as outsourcing.

Central to both collaboration, outsourcing and general modernisation is the need to reframe I.T as a strategic driver of business rather than an antiquated cost centre. Such transformation needs to occur before the insurance retirement flow becomes a flood. Bain notes that '…70 percent of companies say preferences of younger generations forcing them to change culture and processes[xxxvii],' yet antiquated I.T and work practices are off-putting to the very demographic that could help revolutionise insurance. Building the organisation that Millennials want to work in (and do business with) will require significant changes in organisational structure and corporate culture. Insurance companies have five years to embark on business model refashioning; any longer and they risk severe talent shortages that will take the ability to proactively change out of their hands.

## Questions

1. What is our approach to data modelling? Is it strong enough to base our business around and do we have the correct infrastructure in place to use it effectively throughout the organisation?

2. Are we prepared for shifting business foundations – especially demographic - and are we agile enough to incorporate change into our business model?

3. Who, or what, do we see as our main competitors or competitive challenges? Where could collaboration and/or outsourcing or partnering strengthen our value chain?

[xxxv] Source: Community, Lithium, retrieved 2014 http://community.lithium.com/t5/Science-of-Social-blog/Big-Data-Reduction-3-From-Descriptive-to-Prescriptive/ba-p/81556
[xxxvi] Source: Salon, 2014 http://www.salon.com/2014/05/30/in_the_future_insurance_companies_will_make_sure_that_you_exercise/
[xxxvii] Source: Bain, 2013 http://www.bain.com/about/press/press-releases/global-study-on-management-tools-and-trends.aspx

## About FINEOS

FINEOS is the leading claims solution for the global Life, Accident and Health insurance industry and supports the processing of Life, Disability, Critical Illness, AD&D, Waiver and a number of related lines. FINEOS supports both group and individual business claims on a single platform and can be used by organizations of all sizes, from small departmental claims teams to very large teams with thousands of users and millions of claims. FINEOS currently works with over 50 insurance carriers and counts six of the top 20 Life & Health carriers in the US and four of the top Life & Health carriers in Australia as customers. For more information, visit www.FINEOS.com



## About Global Futures and Foresight

Global Futures and Foresight (GFF) is a strategic futures research organisation. The aim of GFF is to develop views of the future to help their clients embrace change with more certainty, thereby releasing the full power of their creativity and innovation. GFF helps its clients to reduce their risk of being blindsided by change and to be better enabled to adapt to the fast changing world. GFF clients number some of the largest and most prestigious firms from around the world including: NATO, HSBC, Lloyds/TSB, RBS, Lloyds, More Than, e-sure, Acord, Kraft, Mars, Intel, Steria, CSC, Unisys, Cisco, Microsoft, Siemens, Equinix, Deloitte, Ernst & Young, KPMG, PWC, Royal Mail, Bausch & Lomb, Linpac, Kraft, Heinz, SAS airlines, Philips and many other businesses and academic institutions. **www.thegff.com** and twitter **davidsmithgff**