Institute and Faculty of Actuaries

Policy & Public Affairs

Inclusive insurance bulletin

Greater expectations

The Future of Insurance

Informing the debate

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Contents

Introduction

Duncan Minty, Chartered Insurance Practitioner and independent ethics adviser.

Innovating for inclusive insurance comes in many forms

Our insurance sector is a great success. It plays a vital role in so many facets of our daily lives that we might sometimes wonder what we would do without it!

That, however, is a question around which is wrapped a challenge. How do we ensure that as many people as possible have access to the insurance they need? How does the sector keep pushing forward on this? Are there opportunities to really make a difference?

One way of going about this is to think differently, to use our creative skills to find new ways of tackling issues around the availability and accessibility of insurance. Innovation is a very popular word in the insurance market right now. Is the time ripe for a new era of inclusive insurance?

The digital transformation going on in insurance at the moment is being talked about in very positive terms. Yet it also has the potential to have negative impacts on inclusivity. This points to innovation being complex and in need of careful thought and planning. How best to do this then?

The challenge with innovation designed to enhance the inclusivity of insurance is that it cannot be done by actuaries and insurance people alone. They can bring many skills and much experience to the table, but that often tends to be more orientated around where insurance is working for mainstream society. What about those parts where it has not been reaching as well as it could have?

This points to innovation to improve the availability and accessibility of insurance being something that cannot be done by the sector alone. Ideas that look great on paper or whiteboards can sometimes just not work in practice. We can drift into the habit of innovation in insurance being something more easily done ‘to the customer’, rather than something done ‘with the customer’.

This tells us that how we innovate is as important as what that innovation is. As a result, this makes innovation just as much a people thing as it is a technology thing, if not more so. Bringing people together, sharing ideas and fashioning something out of this can generate inclusive innovation for inclusive insurance.

Doesn’t the complexity of innovation undermine this though? It shouldn’t, for innovation need not be complex. After all, what could be simpler than one of the most impactful innovations in insurance history – the industrial life agent’s account book. It was at the heart of one of the biggest revolutions in insurance, in which millions of consumers had their first experience of the value that insurance can bring.

In the hands of the many agents embedded in their markets, the account book became the data intelligence tool par excellence. It was at the heart of a distribution structure that revolutionised access to the market by focusing on relationships that built trust with people. Liz McFall’s article introduces us to the significance of this early innovation.

The future can be different. Innovation is an important way in which that difference can be achieved.

Innovation need not be about creating something new. After all, account books had been around for a while in Victorian society. The innovation can be just as much about connecting existing things together, to build new potentials by 'joining the dots' and making 'one plus one' equal more than two. Cat Divers shows us how this can help tackle problems around inclusivity. Cat's article is about bringing together rising needs and under-used resources, helping civil society groups reach parts of the insurance market that they hadn't been getting to.

Of course, if you are connecting things together, the ingredient that causes something magic to happen is that age-old skill called listening. It sounds simple but it still needs care to be done right. And a little bit of daring too, for listening to people in ways that get to the heart of how you do business can really challenge 'business as usual' thinking.

This moves the business from the typical 'done to the customer' through the emerging 'done with the customer' and into the innovative 'done by the customer'. In other words, what we do is determined by those we serve. Rob Moore's article sets out what needs to be done to embrace this way of working, starting with the purpose and governance of a firm.

How then can these new ways of working permeate out from a few firms into the wider market? It won't happen overnight of course, but there are ways in which it can be encouraged, even accelerated. Change comes from both moving forwards and avoiding going backwards.

One hurdle that firms need to address is making sure people are properly equipped to think and do things in new ways. This means empowering them to experiment and to break out of a 'this is how we have always done things' mentality. Hugh Terry's article explores how firms need to prepare their culture to be more innovative around inclusive insurance.

We need to remember though that not all innovations start from within insurance. Sometimes developments within the market can be driven, for better or worse, by events outside of the market. This again is a cultural issue, in that we shouldn't be tempted by 'they did well with it so we must copy that' type thinking. Chris Dolman's article gives us an example of how to critique the emerging trend of open finance and identify the issues that could emerge for inclusive insurance.

What this all points to is that innovating to address the availability and accessibility of insurance is not a technology thing, but a people thing. It succeeds when partnerships help people work together, delivering the sought-after outcomes through relationships and trust. This can be both something actioned locally and something actioned on a much wider scale.

Peter Hamilton looks at the global Access to Insurance Initiative and how its principles can be used to shape an innovation challenge. He weaves through this the story of an early policyholder, Charles Dickens. In his iconic story of Christmas, Dickens has Scrooge see a bleak future ahead, but one that, through listening and trusting others, he then understands to not be set in stone.

Current problems around inclusivity and insurance are not set in stone either. The future can be different. Innovation is an important way in which that difference can be achieved.

Technologies of insurance inclusion: a very short history

Dr Liz McFall, Chancellor's Fellow, University of Edinburgh

The conventional attitude to technology in financial services, as almost everywhere, regards it as the coming thing, the future that is almost upon us. A few decades ago, the word 'technology' in insurance usually meant the convergence of telecommunications and computer technologies known as Information and Communication Technologies (ICTs). Today, ICTs are still with us but the term is less common since it doesn't quite capture the further convergence of mobile technologies, sensors, the smart Internet of Things, cloud computing and artificial intelligence/machine learning of the platform economy or the Fourth Industrial Revolution. But what if that way of thinking about technology is not the best approach to thinking about innovation in insurance, especially not the enduring challenges of customer relationships and social inclusion? With insurance now identified as the biggest contributor to the 'poverty premium' – the extra cost borne by those on low incomes for accessing services and goods, whether insurance, credit, energy or groceries, by the catch-22 virtue of being on a low income[1] – it's an interesting moment to engage in a historical thought experiment about what insurance technology is and how it can serve inclusive relationships.

Stripped to essentials, a technology is just a way of doing something. That does not make technologies neutral, on the contrary, technologies are inherently and inescapably social. The contemporary divide in access to data, internet, and digital tools leaves little room for doubt that technologies can not only reflect but exacerbate existing inequalities. As the late, lamented sociologist Bruno Latour insisted, what technology cannot be, is separate from society. Latour once used the Kodak camera to illustrate how looking closely at the history of technology always exposes social relations.[2] Here I copy his example with a near forgotten information and communication technology before the fact – the collecting insurance agent's account book.

A Pearl Assurance Agent on the doorstep with his account book, c. 1976

Stripped to essentials, a technology is just a way of doing something.

1 | **https://www.actuaries.org.uk/system/files/field/document/Inclusive%20insurance%20Bulletin%203%20Final.pdf**
https://www.ft.com/content/2be0ee61-30cc-494d-9e6f-b8ba2749560d

2 | Latour, B. (1991) Technology is society made durable, in Law, J. *The Sociology of Monsters*, The Sociological Review, London, pp103-131

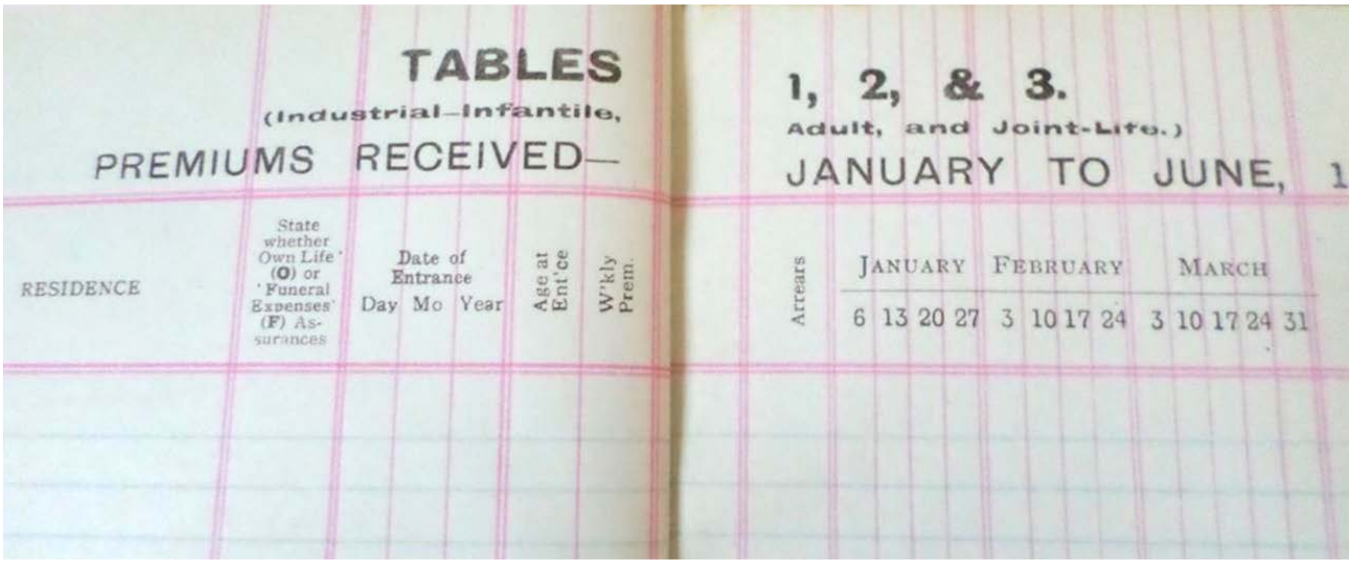
The agent's account book is an artefact of industrial life assurance (ILA). ILA was a form of life assurance, targeted at the poorer or 'industrious' classes, that was ubiquitous across Britain, America and many other parts of the world, well into the 20th century (still is in parts of Asia and Africa). It arose in the mid-19th century as a way of expanding the insurance market beyond the primarily affluent customers who could set aside sufficient sums for the hefty annual or quarterly premiums of 'ordinary life assurance'. The largest British offices – the Prudential, the Pearl, the Refuge, Royal Liver and Liverpool Victoria – developed a model of doorstep sales and collection that was so successful its fundamental design remained unaltered for well over a century. Between them, these offices had sold several million policies by 1900, a trend that continued until its peak in the 1940s with over 100 million policies in force in Britain. That's more lives than there were people because multiple 'own life' and 'life of another' policies could be issued on the same person. Just how quickly the industry became this colossal is remarkable for a few reasons.

First, ILA was a complicated financial product that was sold to people with low, often precarious, incomes and it represented a substantial chunk of their spending. Second, ILA was controversial from the start. Doorstep collection was an expensive business model, the administrative expense ratio could be as high as 50% of premiums. Policies were issued irrespective of insurable interest and used initially to pay 'funeral expenses', which could mean anything from the direct burial costs incurred by a parent to mourning clothes to attend the funeral of a distant aunt. This meant ILA was regarded as a morally hazardous means of saving at best, and a dangerous form of gambling at worst. It was therefore the target of repeated governmental reforms designed variously to regulate, limit, outlaw or nationalise it. None of these efforts really succeeded. When the industry did begin its long decline in the 1960s it was for socio-cultural reasons rather than political or even economic ones.

There are many reasons why ILA quickly thrived and very slowly declined but one of the most interesting ones in the context of designing inclusive technologies was customer loyalty and attachment. One of the main obstacles to regulation was public opposition, specifically, the electoral clout of millions of mobilised policyholders. Whatever lawmakers thought of industrial assurance, its policyholders were loyal, often fiercely and intergenerationally so. Part of this came from the human relationships that doorstep collection was designed to foster. Customers got to know their agents – as Lloyd George famously acknowledged when his attempts to bypass the industry in the 1911 National Insurance Act failed – agents were explicitly and intentionally trained to act as their customers' 'guides, philosophers and friends'.

If it hadn't been for him, we shouldn't have saved a penny. Prudential Advertisement, c.1952

Agents would, for example, shoulder the burden of insurance paperwork, they translated technical terms and conditions into benefits and, quite literally, took the policy to their customers. This mode of delivery was neatly adapted to the lived circumstances of customers who wanted to make provision for specific future contingencies – initially funeral costs but later all sorts of things from weddings to washing machines. These were major and important expenditures for cash-strapped households but setting aside future provision against urgent present needs demanded 'skilled dieticians with marked tendencies towards puritanism', as the sociologist Pete Townsend put it in 1954. The design of weekly premium collection, and the policy itself, was much better adapted to these circumstances than voluntaristic saving. All policies separate customers from their contributions, but weekly collection, timed to coincide with payday, also hugely reduced the risk of lapse. The system also explicitly permitted customers to miss premiums, tolerating arrears for weeks or months before the policy lapsed. If the system had been designed by a behavioural economist it could scarcely have been more frictionless.



Liverpool Victoria Accounts Book

All of this depended upon efficient mechanisms for mass data processing, long in advance of computerisation or even significant automation. The account book was at the very centre of that. Once ubiquitous, these relics, contained so much sensitive, financial and commercial information that they were routinely destroyed and are now very hard to find. They recorded everything about their customers – their biographical and financial histories, their relationships, sometimes their personal habits and characteristics – anything that might help agents judge the right moment for the next sales pitch was scribbled down. Since people bought multiple policies, of different types and on different lives, agents pitched their offers to fit the relationships and events – the births, deaths and marriages, jobs, promotions, illnesses, retirements, and comings of age – that structured customers' lives. Their books did similar work to the customer relationship management (CRM) software of the 2000s and the algorithmically driven recommendation engines of today. Equipped with account books, agents could manage customer relationships, transmit information, receive feedback and change their recommendations accordingly.

As important as the book system was, it worked not because it was an advanced technology but because it was integrated into a vast bureaucratic system that not only recorded and duplicated transactions as they moved from customer to agent to branch office to head office but was constantly adapting to changes in their target market.

This constant adaptation between organisation, system and customer is why ILA persisted for so long. account books did not change much over the years: the infrastructures they were part of, the policies and the people who bought them, did. Policies, organisation, training, management and regulations were revised frequently but the agent-book-collection system remained because it worked. This is not to praise ILA unconditionally. ILA carried its own 'poverty premium' – the administrative expenses were higher and the return on investment was significantly lower than in ordinary life assurance. Even so, it was an innovation that allowed several generations of people on low and precarious incomes to access a financial service and to save. Contemporary attempts to improve insurance inclusion could do worse than follow an example that demonstrates that the technologies that succeed are those that are socially adaptable.

Contemporary attempts to improve insurance inclusion could do worse than follow an example that demonstrates that the technologies that succeed are those that are socially adaptable.

New ideas for old problems

Cat Divers, Chief Executive, National Support Network CIC

No organisation can meet all customer needs in-house. So how can organisations signpost those customers in need to the right support, at the right time?

11.8 million people in the UK struggle to find support when facing personal life challenges. Of these, two in five will delay or give up looking (Censuswide, 2020). This is a long-standing issue spanning many areas such as money, health and housing problems. Without finding support at the earliest opportunity, problems are likely to worsen and give rise to yet further problems.

Frontline staff often interact with customers who present multiple requirements and problems. The frequency of these more complex interactions is on the rise as customers grapple with one crisis after another. While specialist teams can support vulnerable customers, many advisers do not have adequate resources to refer customers to trusted support across the variety of problems that can arise.

So what type of interactions are these? Some will be insurance related, such as accessing the right cover, while others will be wider, touching on issues such as mental health or budgeting, or events like bereavement or redundancy. These are often intertwined in the emotional and financial micro-crises that can unfold around an insurance event.

Engaging with a customer who is experiencing the loss of a car, their health or even a home, then become key moments in which the insurer can make a difference to that customer's financial resilience. The challenge, of course, is in how to support that customer in a way that is comprehensive and consistent.

Joining people together

National Support Network (NSN) equips organisations with the tools to refer customers to external support services, including charity helplines across 1,000 problem areas. Another unique aspect are the new insights on the challenges facing customers, which can then help firms develop more targeted customer wellbeing and communication strategies.

Following a background as a chartered insurance professional, I struggled to find support for myself and others. These personal experiences led me to leave my City career on a mission to help others find the support they need when they need it.

Backed by Big Issue Invest, the initiative has focused on gathering, vetting and maintaining high-quality information on national support services through a trained volunteer network and public crowdsourcing. Over the past four years we have compiled information on over 2,500 services, with sister website My Pickle picking up many awards along the way.

Less noise, more referrals

Our focus is on making it easy for organisations to refer those in need to specialist support by providing high-quality information. We reduce the noise and streamline referrals by hosting the UK's largest vetted and independent directory of services.

The NSN Directory is one-of-a-kind. It can easily be integrated with existing customer platforms and processes through API, iFrame, microsite and other offerings. Whereas existing signposting resources can quickly become outdated, or do not offer as much scope, the NSN Directory is continually updated, in recognition of the continually changing support landscape.

Offering a valuable extension to wellbeing strategies and toolkits for both customers and staff, NSN's innovative specialist signposting services can help direct people to charities or third parties who can provide relevant support without risking advisers overstepping their training.

Many organisations go above and beyond to help their customers but it's impossible to help all customers with all the problems they present. Instead, in some instances, it is appropriate and potentially life-changing to assist with a referral to a third party.

Quality information

Effective signposting requires high-quality and trusted information. With new customer problems and the support landscape frequently changing, information on services requires continual maintenance and upkeep. Compiling information for one-off instances can quickly become outdated. For example, the cost-of-living crisis has given rise to new support services such as grant schemes, warm spaces and even pet food banks.

With a background in risk management, I knew that data and information quality needed to be at the heart of the initiative from the outset. Scope, quality and trust are core tenets of our work. We use a five-person review process before publishing information on services and monitor information with ongoing review processes. Suitability requirements and data quality standards have been co-created with subject matter experts and volunteers. They span areas such as accreditation, authority and quality of services.

A collaborative approach

NSN takes an innovative and collaborative approach to compiling and maintaining service information. Pooling knowledge from communities with expert knowledge and lived experiences helps NSN to generate and maintain high-quality information at scale. Anyone can contribute if there is something missing, or flag if something is wrong or does not look right.

Customers are facing more varied and complex problems, and it is in the interests of insurers to look for ways in which they can better support their customers in need through these difficult times. Regulators and trade bodies are also encouraging this through signposting arrangements. As an independent and reliable source for information on external services, the NSN Directory can quickly become an important part of a customer adviser's toolkit.

National Support Network is a certified Social Enterprise and not-for-profit community interest company. For more information visit **https://nsn.org.uk/** or contact Cat Divers at **cat@nsn.org.uk**

Customers are facing more varied and complex problems, and it is in the interests of insurers to look for ways in which they can better support their customers in need through these difficult times.

Listening can be transformational

Rob Moore, Strategy Director (Insurance), Wagestream

In the third Inclusive Insurance Bulletin, Martin Coppack, Director of Fair by Design, set out the facts regarding the poverty premium in insurance. This increasingly quoted measure is calculated by the Personal Finance Research Centre at the University of Bristol and highlights the average extra cost that lower income households have to pay for the same essential goods and services , compared to households on higher incomes.

The most recent update calculated this to be £478 per household, with insurance costs identified as the most significant driver of the difference. The macro solutions to this challenge are undoubtedly tied to the ability of government, regulators and the market to protect those that are marginalised, but there are also businesses out there that are taking aim at this inequality and trying to innovate to create solutions to some of the problems faced by lower income households.

One example is Wagestream, a four-year-old UK fintech business that works in partnership with employers to provide fairer financial services for their frontline employees. Founded in 2018 with support from the Joseph Rowntree Foundation, Barrow Cadbury Trust and Big Society Capital, the reduction of the poverty premium and the provision of fairer financial services products have been written into Wagestream's company articles from the start. The company now provides a number of services including financial coaching, easy-saving products and flexible pay, as well as recently having taken its first step into insurance.

So how does a company founded around a social charter choose to approach innovation around inclusion and fairness in the insurance market? A critical feature is the way in which Wagestream has chosen to build engagement with its service users and other stakeholders into the governance of the business.

Senior voice representing impact and inclusion

Wagestream created a senior role dedicated to evaluating and improving the company impact on the financial wellbeing of its users. This individual has the freedom and permission to call out strategy or product features that divert from the business mission, as well as owning a well-thought-out impact governance framework.

Welcoming external and challenging voices into the detail of the business

This framework includes the normal internal Treating Customers Fairly (TCF) board that is a common feature of most regulated businesses, but the impact governance framework also includes an influential external advisory board. This consists of named individuals from academia and policy think tanks, as well as social impact investors, who meet to stress-test the core methodologies and frameworks used by Wagestream to achieve its social mission. Insurance strategy, product plans and user experiences are shared openly with the advisory group whose feedback then influences the future direction of the product design.

Time spent engaging with those that may be most affected

Wagestream spends a lot of effort understanding and speaking to its target audience. This audience is over one million UK workers in frontline jobs up and down the country. Core to this is a collaborative user co-creation group that meets regularly and permits customers to review, challenge and influence Wagestream's plans at several stages in the design process and extending through to post launch. These day-long closed-door sessions create a unique, high-trust environment that allows the company to spend real time with customers, drilling deeper into the specific challenges faced by lower income workers, and to rapidly test and evaluate product ideas.

A strong network of business collaborating to improve financial inclusion

As a B2B2C business Wagestream also spends time building a strong collaborative network to deliver its products. A Customer Advisory Board also exists to bring together senior human resources individuals from a number of proactive employers to help unpack and consider ways to improve the financial wellbeing of their employee populations.

When applied to the development of insurance products, this high engagement approach creates an early opportunity to fundamentally question the purpose and impact of any product on the users and their lives. Products being brought to market will be considered by the various forums, and feedback is quickly built into the design of the next product iteration.

Listening can be transformational

The learning from these sessions is often surprising and challenging. Where there is a high level of trust and genuine intent to listen to feedback, the learning can be transformational. The combination of real lived experience and inclusion expertise quickly debunks assumptions and directs focus towards real problems and real solutions.

This need for trust also means that all parties need to be clear on what each group is looking to achieve. For an insurance product, the result has to create a profitable stable portfolio for the insurer, engaged and supported workers for the employers, growth scale and impact for Wagestream and a positive impact on the financial wellbeing of the individuals.

Ultimately, the approach is not that different from any other product development business. For any business wanting to impact on the inclusivity challenges in insurance, there is a need to create the space and robust frameworks that allow the voices of those most likely to be excluded from design of the insurance product to be properly considered and reflected in each step of the process.

The combination of real lived experience and inclusion expertise quickly debunks assumptions and directs focus towards real problems and real solutions.

Inclusion in this digital world – opportunities for the insurance industry

Hugh Terry, Chief Executive, The Digital Insurer

Let's be clear. We live in a revolutionary era where the adoption of technology is profoundly changing how humankind thinks and operates. On all metrics, we are still at the very early stages of this digital revolution: take your pick on whether it is 20, 30, 50 or 70 years – a timespan that is the blink of an eye in our evolutionary path as a species.

Digital technology continues to improve year-on-year

As a recent example, we have seen the breakthrough of ChatGPT technology and the leap forward in human-centred AI that it represents. I asked ChatGPT for some views on the topic for this article:

Q. What are the top three opportunities for insurers to be more inclusive in this digital world?

A. Verbatim from ChatGPT in 10 seconds…

1. *Developing insurance products that are specifically tailored to the needs and risks of underserved communities. This could include insurance for gig workers, small business owners in underrepresented communities, or people who have difficulty accessing traditional insurance due to their socioeconomic status or location.*

2. *Using technology to improve the accessibility and convenience of insurance for all customers. This could include offering online or mobile-based insurance options, using chatbots or virtual assistants to provide customer service, or implementing more user-friendly interfaces on insurance company websites.*

3. *Partnering with organisations or advocacy groups that work to increase insurance literacy and access in underserved communities. This could involve providing education and resources on insurance options, collaborating on insurance enrolment drives, or working to advocate for policy changes that make insurance more accessible.*

If this is where we are today, where will we be in 10 years? It is almost certain that AI will be able to produce text, videos and audio indistinguishable from human-created content in a fraction of the time a human might take to create them.

What impact will this technology have on how we do business and express ourselves?

Turning back to the central theme, I would like to propose how technology might be a great leveller and enabler in insurance, as it is in much of society. Covid-19 has proven that flexible working patterns are possible, leading to insurance services that are more inclusive for customers and more diverse hiring practices.

Let's look at inclusivity for customers and insurance professionals. I want to deliberately focus on opportunities as we often get lost in the short-term challenges, which in my view, are just that – short-term.

Inclusivity for our insurance customers

Technology provides three critical opportunities to:

1. Develop new digital business models and products to cater for underserved customers
2. Increase awareness of the benefits of insurance so consumers can make informed choices
3. Make insurance more understandable and easier to execute for people with disabilities

We can see that innovation is already dealing with the first opportunity. There are a plethora of embedded insurance platforms that, combined with digital payments, have created the 'plumbing' to sell and service small-ticket insurance policies.

With these available technologies, customers are responding. Companies such as BIMA have been particularly effective in supporting underserved populations in emerging economies.

Increasing awareness remains problematic, and the insurance industry could make better use of technology, including gamification, to help potential customers become more financially savvy. All-encompassing financial literacy is a long way off, and insurers should be more enlightened and prepared to invest and experiment in this area.

Serving people with disabilities is one where a combination of standards and some nudging could help to make the provision of websites and services more user-friendly for those with disabilities. For example, voice-enabled chatbots promise much for those who are visually impaired.

Inclusivity at insurers – working and hiring practices

The move to hybrid working automatically increases the talent pool available to companies and creates an enormous opportunity for more inclusive hiring. Organisations that are 100% virtual, and The Digital Insurer (TDI) is one of them, can hire talent from anywhere in the world and those building a hybrid infrastructure must also be able to manage staff who are 100% remote.

Let's take a look at skills needed for this digital world – and the chronic shortage of these skills

Education today is not fit for purpose in providing the digital skills needed. Many in the talent pool cannot obtain generic and insurance-specific digital skills. It is beyond the remit of this article to rearchitect the education system so let's focus on the digital skills needed in the workplace.

Figure 1 (opposite): Digital skills gaps – we all know they exist

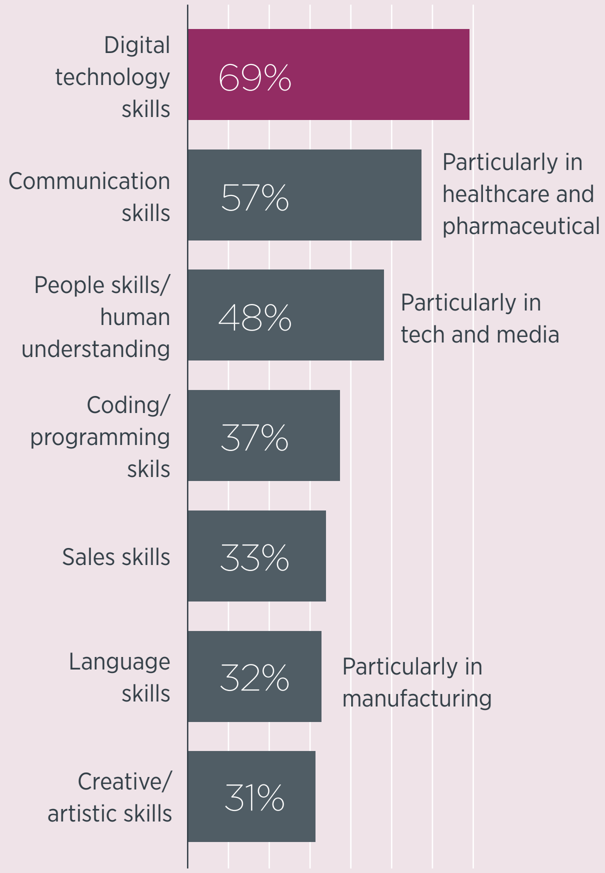
On top of the deep technical skills of specialists, insurers are starting to realise the importance of broad 'digital mindsets'. This shift to a digital culture requires organisations to create the skills and environment that will enable as many as possible to participate in digital and recognise that innovation is a 'team sport'.

The days when IT called the shots or users could manage with no digital skills are long gone.

Education today is not fit for purpose in providing the digital skills needed.

Companies see the gap...

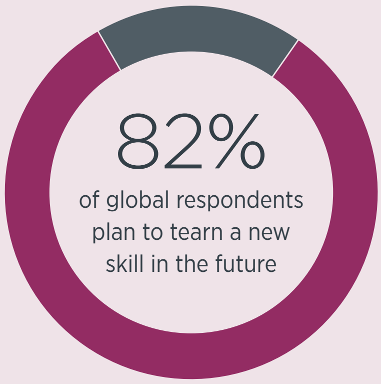
Most important skills required in the workplace for the next 3-5 years



Source: World Economic Forum – With life long learning you too can join the digital workforce

...and employees feel it too

Most important skills required in the workplace for the next 3-5 years



Source Salesforce – 2022 Global Digital Skills Index

Over the last 10 years, TDI's business model has evolved into a platform for exploring, learning, and delivering digital across the insurance world. In early 2020 TDI launched its TDI Academy, which specialises in providing formal Learning & Development (L&D) programmes on digital insurance.

We have seen in our TDI Academy Programmes how broad the agenda is, how strong the need is, and how hungry insurance professionals are to participate in this digital future. This hunger cuts across gender, functional areas and geographies.

With more and more L&D programmes in place, insurers must ensure they cast a wide net for digital talent – and take proactive steps to ensure inclusivity, particularly regarding gender representation in digital functions. At TDI we try to make a small contribution with a dedicated Women In Tech community as part of the platform of free knowledge resource and communities we make available to digital insurance professionals.

To conclude

In summary, we have exciting opportunities to make the insurance industry more inclusive for customers and staff.

For customers, we are seeing innovation at work which brings new products to the underserved.

For staff inclusivity, while we need action in the short term to accelerate this change, I am a firm believer the forces at work are unstoppable. More inclusive hiring practices are good for the bottom line as they allow the best talent to be hired irrespective of race, religion, gender and, increasingly, geography.

More inclusive hiring practices are good for the bottom line as they allow the best talent to be hired irrespective of race, religion, gender and, increasingly, geography.

Open data and financial inclusion – a boon or a bane?

Chris Dolman, Executive Manager, Data and Algorithmic Ethics, Insurance Australia Group

All over the globe, countries are in the process of enacting ‘open data’ regimes. While details vary, there is a common pattern:

- First, a sector is identified as one containing valuable data to be ‘opened up’. Usually this starts with banking, though some countries are going further. Australia, for example, has ambitions for this to be ‘economy wide’[1] and is actively considering insurance for the next phase of the rollout, under the banner of ‘Open Finance’.[2]
- People are given various rights over data held about them by institutions in the identified sector, most notably some form of right to transfer that data in electronic form to another provider. In some regimes, this can cross sectors.
- Standards are prescribed over that data transfer process, encompassing things such as data quality, consent processes, UX, security, complaints, etc.

There are many benefits commonly put forward in support of such regimes, including enhanced competition, greater transparency for consumers, and enablement of product innovation. It is also commonly suggested that such regimes will help to improve financial inclusion. A recent report by Fintech NZ[3] outlines some excellent examples of where financial inclusion may improve under an open data regime.

But is it all positive? Perhaps I’m a cynic, but I’m always suspicious when large structural changes are described in glowing, upbeat terms. With complex changes, there are almost always downsides that need to be carefully considered and managed. While it seems obvious that open data reforms will improve financial inclusion for some people, perhaps there will be others who suffer detriment under such changes. Perhaps this ultimately excludes them from insurance. If we fail to discuss the downsides alongside the positives, they don’t go away, we just miss our chance to manage them effectively.

Encouragingly, I’ve seen some recent developments in this direction, with downsides being discussed more openly. That same Fintech NZ report contains one page entitled ‘Financial Inclusion Barriers’, describing two themes that will certainly need attention, as part of a broader ‘Barriers and Challenges’ section. Perhaps more comprehensive in terms of considerations of negative consumer impacts is the recent discussion paper from EIOPA, containing a balanced section on ‘Risks and Benefits of Open Insurance’.[4] So I’m encouraged that the discussion of downsides is beginning, though much of the discussion I see on this subject is still rather one-sided.

With complex changes, there are almost always downsides that need to be carefully considered and managed.

1 | ‘CDR is an economy-wide reform that will be rolled out sector by sector.’ Cited [?] on **https://www.cdr.gov.au/what-is-cdr**, accessed 8/12/22

2 | **https://ministers.treasury.gov.au/ministers/jane-hume-2020/media-releases/more-power-compare-and-switch-telco-providers-and-share**

3 | FinTechNZ: “Aotearoa Open Finance and Digital Equity” 2022. pp45-6. Available at: **https://fintechnz.org.nz/wp-content/uploads/sites/5/2022/03/FinTechNZ-Report-2022_digital_03.22.pdf**

4 | European Insurance and Occupational Pensions Authority: “Open Insurance: Accessing and Sharing Insurance-Related Data – Discussion Paper” Jan 2021. Section 5,pp22-25. Available at: **https://www.eiopa.europa.eu/consultations/open-insurance-accessing-and-sharing-insurance-related-data_en#reference-documents**

In all this, though, even when downsides are discussed openly, the market effects of open data regimes on the pricing of services are usually overlooked. This is a surprising omission, particularly given that insurance pricing is data-driven, the prospect of open data being used in insurance pricing is widely discussed,[5, 6, 7, 8] and affordability of cover is generally accepted to be a core consideration for financial inclusion.[9]

In a recently published paper, two co-authors and I explore this via an examination of the current Australian open data regime. By applying similar data sharing rules to insurance to those already in place for banking, we expose the vulnerability of a stylised insurance market to financial exclusion via the well-understood mechanisms of adverse selection.[10] By giving the public the ability to opt-in to share their data with their insurer for pricing purposes, some of those consumers will suffer detriment, even if they choose to play no part themselves in the open-data ecosystem.

I find this conclusion tends to be counterintuitive for many people. How could merely providing access to your data, at your option to share (or not), make your situation of financial inclusion worse if you choose not to participate? Yet this is possible, indeed likely, under existing proposals today.

We can see how this might occur by considering the following styled situation:

- Suppose we have a simplistic insurance company operating in a simplistic market where everyone pays the same price for cover ($100, say), representing the expected costs of claims with no allowance for expenses, profits, investment income or any other matters. There is 100% market participation and standardised coverage.
- Suppose there are two categories of risk – high and low – which are not directly observed. The expected cost of claims is $120 for high risks, and $80 for low risks. Let each of the populations we describe below be split 50/50 between each of these risk types.
- Let open data be revealed which can reliably categorise a customer as either high or low risk, with no categorisation error.
- Open data is not available for everyone. Not everyone will have a bank account, mortgage, electricity bill, etc. Suppose this represents 5% of the population.
- Suppose a further 10% of the population have access to open data but cannot effectively make use of it due to lack of digital skills, access or ability.
- Insurers seek to act rationally and use the open data system to price more accurately – if the consumer chooses to make the data available. This gives us three pricing segments: 'data – high', 'data – low' and 'no data'.

How will customers react to this change, and how will insurance prices evolve over the medium term? And does this help or hinder financial inclusion?

Assuming some level of rationality, we would expect the following:

- Those who are low risk and can share their data will do so to get a discount – this is the 'data – low' segment, where the price will be $80.
- Those who are high risk and can share their data will not choose that option as their price would increase (to $120). Instead, they fall into the 'no data' segment. The 'data – high' segment is empty.
- Those who cannot share their data will not, and so will also fall into the 'no data' segment.
- The price of this 'no data' segment becomes $114.78, being the weighted average claims cost of all the individuals now in that segment. Note that this is materially greater than the $100 everyone was paying previously.

While this is a highly stylised illustration, it shows an important general effect that we should expect to find to some degree in real markets. If you give people the option to opt-in to sharing more of their data, they will generally only do that when they gain from it. This causes the average price for the remainder to increase – in line with basic theories of adverse selection – meaning those without data or digital skills end up with a worse deal than they had before. The right to have and share data appears neutral, but this is a mirage – its existence makes the base situation worse for everyone who chooses not to engage with that right, or who cannot. Observe that the 'choice' to share your data in this environment is not truly a free one – not only will some people be unable to participate, but there is also a clear price of privacy.[11]

5 | Ibid, section 3;

6 | FinTechNZ: "Aotearoa Open Finance and Digital Equity" 2022. pp43

7 | FinTech Australia, "Submission to Federal Treasury: Strategic Assessment to inform an economy-wide Consumer Data Right", September 2011, available at: **https://treasury.gov.au/sites/default/files/2021-12/c2021-198050-fintech_australia.pdf**

8 | Yates, R. 2011 "How 'Open Insurance' could change the image of insurance for the better" available at: **https://medium.com/open-finance-australia/how-open-insurance-could-change-the-image-of-insurance-for-the-better-13dd7e109522**

9 | For example, see Australian Competition and Consumer Commission, "Northern Australia Insurance Inquiry – Final Report" November 2020, Section 12.7. Available at **https://www.accc.gov.au/publications/northern-australia-insurance-inquiry-final-report**

10 | Bednarz, Dolman and Weatherall; "Insurance Underwriting in an Open Data Era - Opportunities, Challenges and Uncertainties"; Presented to the Actuaries Institute 2022 All-Actuaries Summit 2-4 May 2022. Available at **https://actuaries.logicaldoc.cloud/download-ticket?ticketId=09c77750-aa90-4ba9-835e-280ae347487b**

11 | For an accessible introduction to this and other common issues in privacy/data consent processes see: Solove, D. J. (2012). Introduction: Privacy self-management and the consent dilemma. Harv. L. Rev., 126, 1880. For an economic analysis of privacy, see: Acquisti, A., Taylor, C., & Wagman, L. (2016). The economics of privacy. Journal of economic Literature, 54(2), 442-92.

The solution to this must be a more careful and nuanced societal discussion of the permitted uses of data than we have been having so far.

The implications for financial inclusion are potentially severe. Those without access to data are already more likely to be considered vulnerable or excluded from society in various ways – this is why they have no data! Those without digital skills or access to digital technology are also more likely to be vulnerable. It clearly does not improve their financial inclusion to have their price of insurance increase, and it seems likely that this would make insurance unaffordable, at least for some.

A way forward

In our work, we have identified a structural, market-driven mechanism whereby open data regimes can worsen financial inclusion for some members of the community. However, open data regimes tend to be structured around and centred on individuals – granting rights to them over their data and rights to choose what that data might be reused for. Proponents of such regimes focus heavily on consent as a control – individuals will not consent to something that harms them individually, goes the theory.

While some will argue that even that assumption is too strong – the limitations of consent processes are now widely understood[12] – this fails to grasp the broader point. The collective is also important, and the actions of individuals not only affect them, but also the collective and the other individuals in it. This is particularly true when rights do not accrue evenly to all individuals – and open data rights certainly do not. If we are to fairly receive the gains that open data regimes can provide, we must ensure that individuals are prevented from making choices that materially harm not only themselves but also that collective, particularly vulnerable members of it.

The solution to this must be a more careful and nuanced societal discussion of the permitted uses of data than we have been having so far. Opt-in is not good enough. Some clear standards around what is and is not acceptable – at least for our industry – would help to ensure open data regimes support overall financial inclusion and do not detract from it. So far, the standards around data use that I have seen proposed in open data regimes are relatively flimsy. This must improve.

Finally, it should be noted that there is really nothing in this discussion that is particularly specific to insurance. Open data regimes are likely to have similar negative impacts on vulnerable people in competitive markets wherever open data is permitted for important, substantial decisions. These regimes need to grapple more urgently with the broader implications of open data regimes on markets and take stronger action to prevent societal disadvantage from becoming more entrenched.

12 | Issues are many and varied, and beyond the scope of this essay (though again see references at note 11). Perhaps the author's personal favourite illustration of the unwillingness of consumers to engage in digital contractual consent processes in line with 'rational' theories is the now infamous 'Herod clause' experiment, as described by Fox-Brewster in The Guardian 2014 (viewed 13/12/2022) **https://www.theguardian.com/technology/2014/sep/29/londoners-wi-fi-security-herod-clause**

Innovation, inclusion and insurance – and a glimpse into the future

Peter Hamilton, Head of Market Engagement, Zurich Insurance UK.

"It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity..."

Charles Dickens wrote this famous introduction to *A Tale of Two Cities* in 1859. It feels very applicable to the times we are living in right now. Our scientists innovate and develop vaccines in record times, there are reports of breakthroughs in heart medicines that could be game changing, while at the same time war rages in different parts of the world, and domestically we lurch from one crisis to the next.

I mention Dickens as Zurich recently shared details of his insurance policy with us, as we celebrate having operated in the UK for 100 years. And Dickens, an active campaigner for inclusion and social justice, had a keen interest in innovation, not least in the world of health and medicine.

He edited a weekly called *Household Words*. This covered subjects such as public health issues, sanitation, housing, slums, medical schools, proposals for health insurance, vaccination, water pollution and much more. An article Dickens commissioned and edited compared mortality rates in a London slum to those in a specially designed housing project for the poor. The mortality rate in the slum was five to six times higher. In May 1863 he gave a speech alerting the public to what had only been appreciated by a few at the time – that premature death was far more common in the poor than the rich.

He was innovative and inclusive – the serialisations he was famous for weren't commonplace – and in a country that still had relatively low literacy rates, his reach was outstanding – anyone who could read and afford the price of an issue was included.

How do we bring inclusion and innovation to insurance? Innovation can be fascinating but scary – it needs collaboration, iteration, aggregation, as well as a willingness to accept regular failure. And there are very real dangers. Access to data brings the opportunity to innovate and craft personalised products and communications, but also a real risk of exclusion, as we undermine the benefits of risk pooling.

The global Access to Insurance Initiative (A2ii) is a partnership with the mission to ensure that the world's excluded and underserved have access to insurance, allowing them to take control of their lives and reduce their vulnerability against risks. A2ii's website includes links to the United Nations Sustainable Development Goals, and resources on the role and importance of insurance across nine of them – No Poverty, Reduced Inequalities, Zero Hunger, Good Health and Well-being, Gender Equality, Decent Work and Economic Growth, Industry Innovation and Infrastructure, Climate Change and Partnerships for the Goals. There is a focus here on collaboration, process, and bringing people and ideas together in parts of the world where the need for insurance may be great, but where the infrastructure and eco systems are under-developed.

One innovation has been an insurance scheme in Zimbabwe aimed at female farmers struggling with weather patterns, such as crop failure because of too much or too little rain, which in turn creates a cycle of poverty.

Competition time

The themes of process and collaboration are at the fore of Zurich's Innovation Championship, a worldwide challenge for entrepreneurs that aims to combine agile innovative start-ups with the reach and experience of a global insurer.

This year more than 2,500 startups and scaleups competed to reach the accelerator stage, where they benefit from a co-creation implementation lab with the chance to take their product or service to market in new or existing locations. The winners benefit from financial support, exposure to a potential global market and an existing customer base, plus mentoring and engagement from senior executives.

There is an open category – solutions that help redefine what it means to protect customers against risk – in terms of what we use to protect customers (new risk pools, for example) and how (a differentiated customer experience, for example), with three other categories focused on simplicity, prevention and mitigation, and sustainability.

Inclusivity is at the heart of a number of the innovations. One of 2022's winners was Democrance. *"I always had a passion for microinsurance and its impact on society,"* says founder Michele Grosso.

"The low-income population's lack of access to basic risk protection tools ... was something that I wanted to change for the industry. The biggest challenge is the misalignment between a startup and a large corporate in terms of priority, speed and iteration."

A selfie moment

Another of the 12 winners, Binah.ai, provides AI-powered, video-based health and wellness monitoring solutions using any camera-equipped device such as a smartphone camera. With it, blood pressure, heart rate, heart rate variability, oxygen saturation, respiration rate, mental stress, parasympathetic activity (the body's ability to relax) can all be measured, and there are more health parameters in the pipeline.

David Maman, co-founder and CEO, said: *"Too many people are very sick today and die from totally preventable diseases. I want to help people to easily keep an eye on their health and wellness levels, tackling health issues before it's too late."*

"I think the main challenges we initially had were to convince the medical community that we are here to help and that no, artificial intelligence will not replace doctors and nurses, at least not for the coming 50 years. Then came coronavirus, and everyone understood that to be able to properly care and serve the present global population, healthcare needed a lot of support."

Just two examples showing how insurers can partner with start-ups to push the boundaries of what and who insurance covers.

Cobblers

Dickens's own medical record was a one-page report. On taking out the policy, he confirmed he was not afflicted by health conditions such as 'Dropsy, Consumption, Gout, Fits, Haemorrhage and Rapture'.

Today, life insurers would ask for more detail in terms of alcohol and drug use, rather than rely on a question asking if his habits are 'perfectly sober and temperate', which the report confirmed them to be. That said, Claire Tomalin, a biographer, noted that Dickens's final American tour saw him tuck in every day to fresh cream and two tablespoons of rum at seven in the morning; a Sherry Cobbler (sherry, sugar and slices of orange) with a biscuit at noon; a pint of Champagne at three; and an egg beaten into a glass of sherry before his evening performance. Perhaps some suggestion of non-disclosure here.

Shaken and stirred

While talking of drink, it's interesting to see the journey of Lemonade, a certified B corporation. As a new insurer, they wanted to address what they saw as the inherent structural problems of 'slow to change' insurers weighed down by legacy processes and attitudes.

Their focus has been on contents insurance for people renting, a market that traditional insurers have sometimes struggled with. The Lemonade approach involves the application of behavioural insights to try to remove what they argue is an insurance experience that can, at times, be too adversarial and distrustful.

Innovation can be fascinating but scary – it needs collaboration, iteration, aggregation, as well as a willingness to accept regular failure.

In announcing a recent partnership with Aviva in the UK, the CEO of Lemonade observed: *"Pairing Lemonade's strengths with Aviva's promises to deliver insurance that is digitally native, yet rooted in the birth of modern statistics in the 1700s. It's the best of both worlds, giving people a refreshing experience backed by a company they've known and trusted for years."*

Technology and behavioural change can be a powerful cocktail for innovation – we need to be shaken and stirred to action.

Life, the metaverse and everything

The phrase the 'metaverse' emerged from a book, not by Dickens, but by Neal Stephenson, in his 1992 novel *Snow Crash*. It's taken a while, but as a concept, it's increasingly hard to avoid.

In his book *The Metaverse and How It Will Revolutionise Everything*, Matthew Ball defines it as: *"A massively scaled and interoperable network of real time 3D worlds that can be experienced synchronously and persistently by an effectively unlimited number of users with an individual sense of presence and with continuity of data, such as identity, history, entitlement, objects communications and payments".* It's already infusing retail, education, entertainment, fashion, finance, medicine, and more.

It's likely to impact all of our lives in some way at some time. McKinsey has suggested that industry invested $120bn in metaverse-related activities in just the first five months of 2022. There are plenty of potential applications, but one concept I think has legs (even if the avatars currently don't) is using behavioural insights to understand and then find ways to change people's behaviours. From both a customer and insurer perspective, understanding future outcomes from present behaviours will help deliver better decisions. The technology is in its early stages of both development and availability, but it could provide a valuable source of new insights.

Avatars could help us picture our future selves based on our current health behaviours for example, or walk us through our streets in a local environment reshaped by climate change. What might we do differently today if the longer-term impact were made more obvious and immediate?

If this sounds familiar, it's because Dickens got there first. The Ghost of Christmas Yet to Come in A Christmas Carol takes Scrooge to see a bleak future, but makes clear that his fate is not set in stone but can be changed – by him changing his actions in the present.

Of course he does change. Tiny Tim survives and Scrooge decides that from that time on, 'he will live in the Past, the Present, and the Future'.

Whether or not we use the metaverse as a spirit guide, now is the time to be telling stories about the importance of prevention and protection and how together we can innovate towards an inclusive, better future, so that customers can have great expectations rather than face hard times.

Technology and behavioural change can be a powerful cocktail for innovation – we need to be shaken and stirred to action.

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