QBurst

AI: Reinfusing Life into Life Insurance

I. THE STORY OF INSURANCE TODAY

Decline and Disruption

All is not well with traditional life insurance. Between 2015 and 2020, its market size shrunk every year by 2.3%. Premiums grew only by 14% during 2007-2017, which is lower than where they stood at the turn of the century. According to McKinsey, a decline in consumer interest is evident over a thirty-year period.

New trends suggest that it is not business as usual either. Strong undercurrents of change are beginning to show, most notable of which is the entry of non-insurers into the insurance domain. Amazon's and Google's partnerships with health insurance heavyweights and potential disruptors are an expression of the tech giants' interest in the market. Their massive data and capital alone are potent tools of disruption.

A step ahead of mega tech, thousands of technology startups are readying to disrupt the market. With high-tech platforms, innovative business models, and specialized offerings, they are diving into areas where no insurer has ventured before. The lines are further blurring with specialty insurers, reinsurers, insurtechs, financial services, peer-to-peer insurance groups, affinity arrangements of trade associations, myriad venture capitalists, consultancies, brokers and agents entering the fray.

The disruptors have trained their attention on the industry's long-standing deficiencies—lack of speed, transparency, and customer engagement—to create new value propositions that appeal to modern-day customers. By leveraging data and cutting-edge data science, mobile and cloud platforms, these disruptors are reviving an industry that has fallen behind in innovation and market penetration. Given these trends, incumbents will have to re-evaluate their position and renounce some of their orthodoxies to stay ahead of the curve.

II. INNOVATION—THE NEED OF THE HOUR

Why Insurers Must Embrace Innovation

- **To Withstand Competitive Pressure**

The global insurance market may be led by a few old guards, but there are over 1200 startups, flush with investor money, ready to disrupt the status quo. While it is the distribution and customer experience segment of the value chain that non-traditional players have zeroed in on, their novel propositions of simplified and specialized offerings, transparency and convenience can soon translate to significant market clout.

Game Changers

- Sureify, a US-based technology startup, has positioned itself as the Salesforce of insurance engagement with digital tools to modernize customer acquisition.
- Australian startup Boundless combines data from over 200 data points to provide health advice and insights that can help customers lead healthier lives.
- Ping An, the Chinese insurance giant, deploys artificial intelligence to underwrite 96% of its life insurance policies. The underwriting process is completed within 30 to 40 minutes of virtual interviews.
- Haven Life offers medically underwritten term insurance in 20 minutes as opposed to weeks.
- MetLife's LumenLab is improving the claims experience for customers using data analytics.
- CoverHound, an insurance comparison website, offers a curated list of personal and business insurance options along with rating transparency.
- UK insurer AVIVA's Simple Life insurance provides customers with essential life insurance without any medical exam.
- The American insurer USAA uses AI to spot identity theft from its customers.

To Gain Insight and Agility

Social media, mobility, analytics, and cloud computing (SMAC technologies) are spurring innovation and imparting agility to businesses in ways unimaginable until a few decades ago. AI and machine learning have added to their advanced capabilities. With these new-age tools and technologies have emerged new business models, new forms of value creation for customers, and better cost-cutting means for insurers.

Industry Insights

- 69% insurers plan to invest in digital infrastructure over the next three years.
- Most of the top 20 insurers have transformed their claims, administration, and billing systems.
- Automation can save 50% of the claim costs and 43% of employee time.

Source: Accenture, McKinsey

To Meet New Customer Expectations

Experience-centric business models like Amazon, Uber, and Netflix have reset customer expectations forever. Seamlessly blended online-offline interactions, 24x7 availability, and personalized engagement are the hallmarks of the new experience. To match these expectations, insurers will have to rethink the current distribution models and provide a more connected and convenient experience for customers.

Life Insurance's New Focus: Wellness

Life insurance meets a major need but, paradoxically, only after policyholders' death. Insurers John Hancock and AXA are changing this to help customers enjoy policy benefits when they are alive. Customers who have annual checkups, eat healthy meals, maintain a healthy weight, etc., are rewarded with lower premiums and other benefits. This repositioning of life insurance to incentivize healthy living is also good for insurers as it can help lower claims and bridge existing trust deficit.

Industry Insights

- 50% of customers consider switching to new innovative insurance models.
- 30% of American adults who say they need some or more life insurance don't know where to start.
- 15% of health, life and, auto insurance products will be personalized by 2020.

Source: EY survey, LexisNexisconsumers

To Cater to Millennials

The millennials outnumber the baby boomers in the US today. As a consumer group, millennials are different from previous generations in that they are more digitally savvy; they prefer to shop online and expect the experience to be quick and convenient. To reach out to this audience, insurers will have to build a solid digital presence and engage with them on the channels of their choice with messages that are simple and straightforward.

Industry Insights

- Only 10% of millennials have the life insurance coverage they need.
- Millennials are more than twice as likely than other generations to buy policies online.

Source: New York Life & Gallup Poll

To Address New Risks

Insurers have a long history of dealing with known risks. But of late, they have had to deal with risks of different kinds: natural catastrophes, pandemics, and terrorism. These come at a heavy cost for insurers. Going forward, insurers will have to tune into various micro and macro events that could impact insurance. Mitigation should focus on capturing new sources of data and creating advanced predictive models.

III. REINVENTING INSURANCE FOR A RESILIENT FUTURE

Areas of Transformation

To withstand competitive pressure, create product differentiation, and build long-term customer loyalty, insurers will have to introduce innovation across the insurance value chain.

1. Product Design

The current technological disruption is a shot in the arm for actuarial science, the bedrock of insurance. With AI and machine learning tools in their armor, actuaries can do what they have always done—predict risks, price products, prevent losses, protect margins—in a more disaggregated manner.

1.1 Accurate Risk Analysis

In the past, actuaries relied on a limited dataset and a few financial models to draw statistical inferences about future events. Today, they can use a wide variety of machine learning data models leveraging rich internal and external data for more accurate analysis. With this advanced capability to make predictions about claim frequency, severity, and other potential losses, actuaries can measure and manage risks more effectively.

Traditional Approach

Standard actuarial models are used to estimate claim frequency and severity.	Models are tested for compliance, accuracy, efficiency, etc., manually and painstakingly.	Risk estimation is not optimal due to inadequate real-world data.

AI-Driven Approach

Multiple models are built of diverse datasets to predict claim risk.	Models are evaluated and iterated quickly using machine learning techniques.	Accurate modeling leads to more accurate prediction of risk probability and severity.

1.2 Faster Product Development

Portfolio expansion is fundamental to growth and competitive relevance. But to have the first-mover or fast-follower advantage, insurers should be able to develop products much more swiftly. Traditional modeling does not give insurers this advantage as considerable time is lost in model fitting and validation. Machine learning speeds up the process so that products can be taken to market faster after due regulatory approval.

1.3 Differentiated Products

The priorities, lifestyles, and aspirations of today's customers are very different from those of the baby boomer generation—and so are their insurance needs. To cater to them, insurers need a more diversified portfolio. Microinsurance, on-demand insurance, and dynamic premiums are just some of the ways in which modern insurers are addressing the diversity in demand. Data availability makes the design of such fine-grained insurance products possible.

2. Underwriting

The insurance sales process typically hits a speed bump at the underwriting stage. The time to review and approve policies after due checks is currently anywhere from days to weeks to months. For instance, a Simplified Issue can take up to a week or longer, a No Medical Examination Life Insurance can take up to a month, and Fully Underwritten can take two months before they are approved and rated. According to a LIMRA study, as much as 18.7 million people drop out of the sales funnel at this point. Insurers can check this leak leveraging AI.

2.1 Accelerated Underwriting

Machines can efficiently process vast amounts of complex data and accelerate the risk evaluation and rating processes in underwriting. By analyzing hundreds of customer attributes collected from MIB reports, paramedical exams, prescriptions, and other data sources, they can help underwriters assess risks more precisely and quickly. This is a step up from rules-based underwriting, which has limited capacity to handle complicated cases. With machines taking care of low-risk referrals, the underwriters' time can be reserved for reviewing high-stakes policies.

2.2 Dynamic Pricing

Dynamic pricing, an innovation modeled on "pay as you use" in car insurance, is gaining currency in life insurance as well. Unlike the traditional cost-plus method, which inflates premiums to cover expenses and profits, the pricing of "pay as you live products" is pared down to reflect the changing nature of risk. Dynamic pricing involves refining pricing models with new data continuously. These pricing models capture non-traditional data such as data related to fitness, lifestyle, etc., to provide a more granular view of risks.

Traditional Underwriting

Rating is derived using actuarial formulas and life expectancy calculations.	Manual data entry and rules-based underwriting takes weeks to complete.	Once fixed, the pricing remains the same till the end of policy.

AI-Driven Underwriting

All or part of the applications are automatically screened.	Risk is measured precisely using a diverse array of data.	AI algorithms and predictive models automate the rating process.	Dynamic premiums are generated through real-time risk assessment.

3. Claims Processing and Settlement

Customers judge insurers by their claim settlement time. Ensuring customer satisfaction is a priority but so is protecting against financial fraud. Across business lines, fraud accounts for $80 billion every year. As often pointed out, insurance fraud is not a victimless crime as the price is ultimately paid by the public as higher premiums and taxes. To eliminate fraud, every claim must be subject to rigorous scrutiny, but without adversely affecting the claim settlement time.

3.1 Intelligent Claims Creation

With AI-driven chatbots to assist claims registration, customers can submit their claims anytime anywhere. These NLP-enabled chatbots self-adapt their conversation to the specific claim for which information is submitted. By raising relevant questions, they can ensure that all supporting information is submitted by claimants to initiate the next steps in the claim adjudication process. Error-free claim submission facilitated by intelligent chatbots reduces claim rejections and unnecessary bouncing of application between the insurer and claimant.

3.2 Accurate Fraud Detection

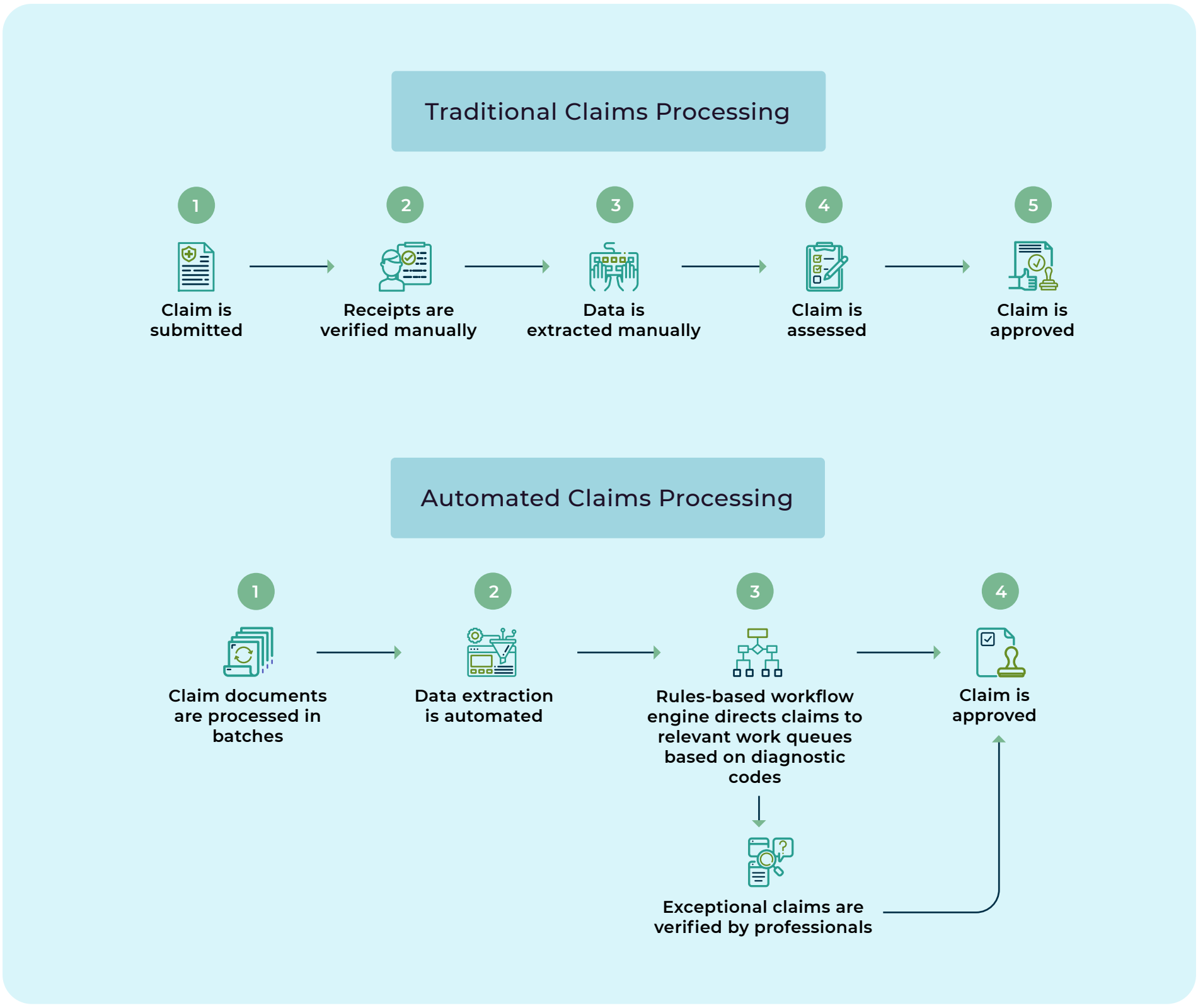
Machine learning models trained on historical claims data can help analyze new claim data to establish its veracity. They can generate diagnostic codes that will help the insurer determine whether to accept, deny, or further investigate the claim. When a claim is flagged by the system, the insurer's decision (whether to accept, deny, or hold) will act as feedback that will help the model refine itself. Having unsupervised fraud prediction models is advantageous in that they can continuously learn from new data and update themselves autonomously so they become more capable over time at picking out new types of fraud.

3.3 Streamlined Insurance Workflows

The diagnostic codes generated by the machine learning models can be used with a rules-based workflow engine, which will direct each claim to the right work queues for quick processing. Insights from machine learning models can be used to augment the workflow further for touchless claims processing. Exceptional and red-flagged claims are directed to human operators who can easily identify the issues for further investigation based on the codes.

3.4 Automated Data Extraction

Despite the digitalization of claim creation, insurers still have a lot of paperwork to deal with—if not as claim forms, at least as supporting documents. The process of organizing and extracting information from these documents can be expedited using Natural Language Processing (NLP), optical character recognition (OCR), and robotic process automation (RPA) technologies. As machines excel at high-volume tasks, hundreds of claim forms can be processed each day with fewer errors. Specific software can also be used to facilitate information transfer directly from health care provider systems. Only the higher-value task of detailed claim verification needs to be handled by humans.



4. Customer Service

Any innovation will be dead on arrival if not guided by true customer insight. All technology-enabled enhancements have to come from a place of understanding and address customer aspirations and pain points. From the wealth of data available today, insurers can have a more informed view of their customers and by optimizing the use of various channels, they can ensure a more connected customer journey.

4.1 Comprehensive Customer Profiles

To raise the quality of engagement with customers, insurers need to have a comprehensive profile of each customer. This requires bringing all of the fragmented customer data to one place such as Customer Relationship Management (CRM) system and mapping customer journeys through their entire life cycle and delivering contextually relevant and compelling messages.

4.2 Microsegmentation

It is clear that demographics or psychographics by themselves do not constitute a meaningful customer segment. By employing clustering techniques on the vast fund of internal and external data, insurers can identify different subgroups by their shared attributes and deliver targeted messages to each. Microsegmentation will also help identify a very important subgroup: the high-value customers. Loyalty programs, triggered marketing, and other strategic personalization are key to acquiring and retaining this group.

4.3 Omnichannel Experience

Whether it is self-service or assisted purchase, insurers should be able to provide customers an omnichannel experience cutting across offline and online platforms. They will have to offer a frictionless service as customers segue from websites to social media platforms to mobile applications to call centers or agents. A connected customer experience will minimize the current risk of dropout mid-journey.

4.4 Chatbots and Virtual Assistants

By deploying cognitive and emotionally intelligent chatbots, insurers can provide the dedicated support that customers expect from their carriers. Chatbots can carry out human-like one-to-one conversations with individual customers while easily scaling to the needs of hundreds of customers. While there is always room for agent-mediated interactions, chatbots will dramatically improve response times in insurance solicitation, claims registration, and query resolution.

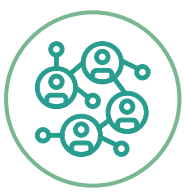
AI-Driven Approach to Customer Acquisition and Retention

Profiling

Detailed customer profiles are created to get a holistic view of customer interests, needs, expectations, etc.

Microsegmentation

Customers are segmented into precise subgroups. Services for each microsegment are highly personalized to deliver more value.



Connected Experience

Interactions across physical-digital channels are consistent and context-specific.

On-Demand Assistance

NLP-powered chatbots offer 24x7 services including personalized quotes, advisory, claims registration and tracking.

IV. MOVING WITH THE TIMES

The days of conventional life insurance are clearly numbered. But a more dynamic insurance that is technology-enriched and customer-centric will take its place. Insurers who capitalize on the rich technology ecosystem with a sense of urgency will be better prepared for the future. Some industry analysts take the view that a fundamental restructuring is required on the part of individual carriers while others, from a more pragmatic viewpoint, emphasize on incremental changes. Whatever the pace and manner of innovation, the consensus is that there is no looking back.

It will indeed take time to phase out legacy systems but innovation cannot wait. The transition must begin now, starting with the identification of areas for improvement where tangible business benefits can be realized. Digital transformation is a gargantuan task and an ongoing process. It calls for long-term commitment and a strong technology partnership that can successfully fulfill that commitment.