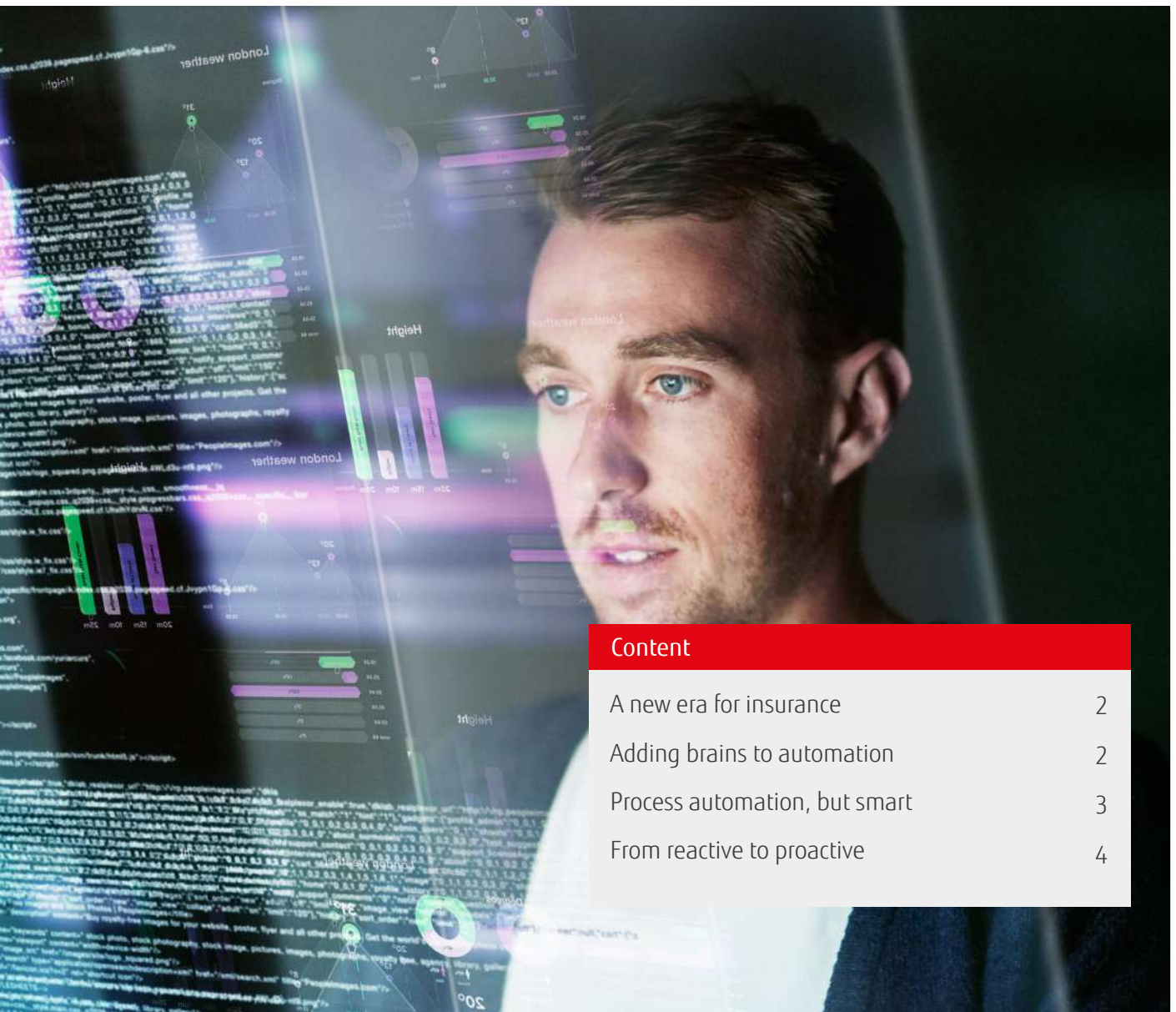


White Paper

How Artificial Intelligence is shifting the insurance model from Protection to Prevention

Lower costs.
Better experiences.
Proactive prevention of risk.



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A new era for insurance

As a heavily regulated, intensively bureaucratic sector – a business founded on caution – insurance has always been slow to adapt. But a confluence of historic challenges is forcing the industry to undergo arguably the most radical change in its history.

Fundamentally, insurance is a hedge against risk. Over the coming years, it will become a proactive exercise in preventing risk. ‘Predict and prevent,’ rather than ‘replace and repair.’

As you’ll see in this paper, the shift will be enabled by Artificial Intelligence. It will be catalyzed by two key interlinked challenges.

First, the 2008 financial crisis – compounded by the 2020 coronavirus crisis – put enormous pressure on insurers’ balance sheets. It has become essential to operate on ever-tighter margins, relying on three fundamental levers for profit: minimizing operating costs, maximizing sales, and reducing claims.

Second, technological trends have shifted expectations around customer experience and product personalization. Digital self-service, instant quotes, dynamic pricing, and precisely tailored products are all part of a landscape that insurers have so far viewed from a distance.

Insurance has always been a data business. But the sector is falling behind in its ability to harness information, opening the door to existential competition from digital disrupters better able to meet customer expectations, in part because of earlier adoption of AI.

AI is the key to overcoming both challenges.

And it will happen quickly. As Peter Utzinger, Financial Services CTO, Fujitsu Global, said, “AI scales instantly, empowering companies to become immediately responsive,” already making the technology “a major building block in the contemporary business architecture.”

Indeed, Gartner reported in January 2019 that 37% of all organizations had already implemented some level of AI. From recent research into AI, carried out by independent research firm Forrester Consulting on a commission from Fujitsu, it was found that 86% of business leaders said they intended to invest in AI over the next 12 months.¹ 57% of finance and insurance leaders already have a formalized plan approved and backed by the board.¹

At the time of writing, insurance is at an early stage of AI maturity. But its AI-empowered future is not far away. One where the fundamentals of the sector are entirely upended – and everybody is better off for it.

Adding brains to automation

Meeting the first challenge – improving carriers’ operating ratio – is the clearest starting point for AI in insurance.

As a sector, insurance is heavily process oriented. It also still tends to rely on manual processes and cumbersome legacy systems. The relatively high labor costs that come with an over-dependence on outdated methods are a weight that businesses can ill-afford after the economic shock of 2008.

The imperative to make efficiency savings is even greater following the sheer volume of event and continuity claims that came with the coronavirus crisis of 2020, the aftermath of which will be felt for years to come.

Robotic Process Automation (RPA) – which has become common in the industry – goes some way to improving process efficiency. But AI is set to supercharge those savings – 35% of business leaders expect AI to increase employee productivity¹ – as well as curtailing losses from fraud.

“ AI scales instantly, empowering companies to become immediately responsive, already making the technology a major building block in the contemporary business architecture. ”

Peter Utzinger
Financial Services CTO, Fujitsu Global

1. Starting Today, AI Will Power Businesses Into The Future, a commissioned study conducted by Forrester Consulting on behalf of Fujitsu, May 2020.

Process automation, but smart

RPA is a relatively primitive automation system, operating on strict rules. If <this> then <that>. The efficiency savings of implementing RPA are significant, but largely equivalent to the savings you would make if humans could work without any breaks or sleep.

RPA is marginally faster than a highly efficient human that doesn't need to stop. But it's certainly no smarter. If RPA encounters an exception to its instructions, it has no option but to flag it for attention.

If premium reconciliation numbers are usually expected on Mondays, but arrive on a Tuesday, the RPA will simply send an alert equivalent to 'don't understand.'

By contrast, machine learning AI may flag the exception the first time, perhaps even the second. But once it recognizes that these are the numbers it was expecting – just on the wrong day – it will learn to look for reconciliation figures on every day of the week, without intervention.

This ability to learn enormously amplifies the cost reductions possible from process automation. While RPA yields roughly 20%, machine learning based Hyperautomation results in savings of approximately 60% – improving over time as the algorithm becomes adept at more complex processes.

The efficiency savings from AI enriched process automation are potentially transformative in themselves. Indeed, the top three current uses for AI cited by surveyed finance and insurance leaders were improving efficiencies in IT operations (23%), improving efficiencies in business operations (19%), and improving business automation (19%).²

But the indirect benefits are arguably of even greater value. Having automated such routine tasks, humans are freed to focus on higher value labor such as sales and marketing, business development, and product innovation.

“ AI is already proving its abilities to fight fraud in the financial sector, where its aptitude for pattern recognition excels at identifying suspicious transaction sequences. ”

Intelligent fraud detection

The FBI estimates non-healthcare insurance fraud costs US insurers \$40 billion per year – \$400-\$700 extra on annual premiums for the average American family. Insurance Europe estimates that European carriers lost €13 billion to insurance fraud in 2017.

AI is already proving its abilities to fight fraud in the financial sector, where its aptitude for pattern recognition excels at identifying suspicious transaction sequences.

2. Ibid.

From reactive to proactive

In being reactive, customers purchase insurance policies and nearly immediately forget about it... until an accident happens. Insurance premiums in the traditional model are based on historical data and viewed similar to an "annual tax". Underwriters and actuaries use past data sets to look for loss patterns and make projections about future outcomes. Risk management and loss prevention practices similarly use projections based on historic data sets and consequently have limited success in preventing incidents.

Digital innovation in a traditional insurance model is thus largely limited to making the purchase, administration and claims process "easier" by automating the process flows and improving user experience.

The "prevention" model, in contrast, works by analysing vast volumes of data to find patterns in the causes of particular risks. By identifying the beginnings of these patterns in real time, interventions can be made before the pattern plays out.

Think of a manufacturing business. By tracking the health of factory machines right down to individual components using the Digital Twin technology, insurers and risk managers can not only create more accurate predictions about their likely operational lives, but actually recommend timely repairs to stop the machine from breaking down which in-turn reduces accidents at workplace.

“ Insurance providers can now make dynamic projections about future outcomes, with a continuously updated view of the underlying risk. And they can develop consumption-based pricing models that update in tandem. ”

Manan Sagar
Insurance CTO, Fujitsu EMEA

This saves the insurance provider not just on Machinery Breakdown and associated Business Interruption claims, but also on Employers' Liability claims. The power of data and AI can be similarly applied to insuring large construction projects and in operating aircrafts, ships, railway locomotives and utility supply lines.

The technology to enable this radical shift already exists. The advent of connected (IoT) devices, data translators that facilitate transmission of data whilst enabling anonymity and artificial intelligence that enables real time analytics, has opened the door for insurance providers to innovate to "smart insurance policies".



“Smart policies” use real time data feeds to make dynamic projections about future outcomes. Pricing models are updated in real time to compute the changes in premiums, which are then automatically invoiced to the customer. With “smart policies”, when accidents do happen, associated data feeds will not just automate claim adjudication and payments but also prevent fraud, saving the insurance industry millions, thus further improving profitability.

Organisations can focus on getting things right for the future, rather than addressing the mistakes of the past. It will build trust between insurers and their customers by demonstrating value. “Value” is not created by being the cheapest insurer or the one providing the best user experience. It is created by helping customers reduce their underlying risks and losses, which is only possible by focusing on real time insights from data. Only then will the insurance premium begin to be viewed lesser as an “annual tax” and more as a “service charge”.

Insurance organisations have the opportunity to become a force for good, rather than just reimburse for losses and damages. Such a shift would be a holistic one - a culture based around social purpose is of growing importance to both employees and customers today as it not only benefits the insurance industry, but society at large.

Discover Fujitsu's AI solution, and how it can put you at the front of insurance's bold new era. [Contact us today.](#)

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