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how can this be applied to Insurance?

# Microservice Platforms for Insurance: The Bluffers Guide

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**... these companies have taken old ideas and somehow exponentially increased the efficiency of the interaction between providers and consumers ‘simply’ by using a platform of re-useable digitised capabilities allowing scale, reach and near zero unit costs.**

Fiona Zhang

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## Microservices for Insurance: A Bluffers Guide

Microservice Platforms for Insurance are like a well-kept secret.

Whether you are an IT or Business person, after reading this you should be well equipped to bluff about 'microservice platforms' and the super weapon status they will acquire in the insurers business arsenal.

The guide is divided into two sections, 'Part 1 – Simple bluffing' and 'Part 2 - Advanced bluffing'.

It is divided this way because Part 1 hopefully takes you to that aha moment where you think this makes sense. The problem with euphoric aha moments is that they rarely tell the whole story. Part 2 illustrates when just as we think we understand the benefits of a new technology, we need to be aware of the does and don'ts of adapting to change.

### Part 1 Simple Bluffing – what is a microservice platform?

Con conversationally, you will have heard terms like, the Platform Economy, the Gig Economy, the Sharing Economy. While you may not be able to give an exact definition, you could probably point to some excellent examples like, Uber (cabs), Airbnb (accommodation), Facebook (media), Spotify (music), even Netflix (films).

So, our starting point is right here.

These massively successful companies have done one 'simple' thing. They have taken old ideas and somehow exponentially increased the efficiency of the interaction between providers and consumers.

The pioneers have done this by using a platform of re-useable digitised capabilities allowing scale, reach and near zero-unit cost.

The fact is, most successful companies with modern platforms are built using microservices, a prime example being Netflix<sup>(2)(3)</sup>. This is why it is worth investing a bit of your time to understand what it all really means.

If we look at how this trend has disrupted other industry sectors it makes sense to explore its potential.

The big question is, how can this be applied to Insurance?

#### How do they work?

If we accept the premise that microservice platforms can exponentially increase the efficiency of the interaction between providers and consumers, what is about them that makes this possible – what is the reason?

The reason is microservice platforms make it easy to create new functionality with minimum coding and to do it quickly and economically. This in turn means it is possible to create insurance products and enable related services to distribution channels and partners for near zero cost.

Further, the reduced cost means that this removes the traditional price barriers to entering new market segments. This also creates new possibilities of selling products directly and/or through partners.

We will explore in more depth in section 2.

## When is this happening?

It is early days and this is a ground floor opportunity.

The platform economy trend is spilling into every industry sector and we think at some point the adoption of microservice platforms by the Insurance sector is inevitable. The important thing to note is, how and when this happens is potentially in the readers hands (see Advanced Bluffing later).

This guide is to show why this is true and spotlight the opportunity that lies ahead.

In some parts of the world, for example China, massive platforms are being aggressively used for selling insurance and there are lessons to be learnt from their experience. Closer to home, in Europe, there is the example of Moonshot <sup>(4)</sup> which launched in Nov 2017 and there are other examples but so far they are few.

## Why is adoption not happening faster?

The arrival of these platforms for insurance is a stealthy process for three reasons.

Firstly, it a relatively new idea applying platform technology to insurance, it takes time. People are still trying to figure out how to port the best ideas from other industry sectors to insurance.

*Secondly, these platforms cost a fraction of traditional enterprise systems so, in a way, it is understandable why they are not being pushed with great enthusiasm so far. This type of technology is not actively promoted by most of the larger consultancies and software development houses because it will disrupt their existing revenue models.*

Thirdly, software houses have to re-engineer and re-write their code base to convert it into microservices from which they can then build a platform that they can sell to you. This means breaking down millions of lines of code into small bits of atomised functionality called microservices. This takes both a significant financial investment and a fair amount of time to do the actual developing.

## The potential impact of microservice platforms?

It is not an overstatement to say that they will fundamentally change how the insurance world works for providers and consumers alike (judging by China).

We're in an age when there are many new things happening, AI for claims, Blockchain for contracts, AI for underwriting etc. so, why are Microservice platforms worthy of your attention? The reason is simple, microservices can link all of these and most other functionality in a connected, configurable way.

*'Configurable' is the key point because in the past that equivalent functionality would had to have been coded. By being configurable that means less coding, which means less time and expense. The end result is you can quickly create new insurance products and distribute to new markets at near zero cost (apart from initial set up).*

Without getting technical because there are other papers that do that better, microservices are pieces of digital functionality that can be bundled together and be configured or connected to other microservices through a simple interface, called an API.

If conceptually you think, digital Lego, that is close.

Collectively, these individual pieces of insurance process functionality form a microservice platform from which most insurance products and their related services can be created and traded.

Some software houses have even begun creating digital libraries of these microservices which you access and then 'mix and match' elements to create your own custom insurance platform on the fly. Compare and contrast that with trying to make any changes to existing enterprise systems.

If you are interested in creating your own microservice platform and do not have an army of IT people and a stretchy budget this is the way to go. In other words, rent a platform from a software house and tailor it to your own requirements.

## **It requires a new way of thinking about insurance systems**

### ***1. Dramatically reduced Cost***

We have got used to the idea that enterprise software systems underpin and manage our end-to-end quote-bind-issue-claims administrative processes. Not unreasonably, we have also got used to the idea that this usually comes with a multi-million price tag and a lot of expensive code to support and maintain. That is not to say these systems have not served us well when there was not a better alternative.

Now we need to start thinking 20-30% of the old prices, new PAYG models plus, near zero-unit costs for new products, channel and services.

### ***2. Increased speed to market***

Things are changing with the introduction of microservice platforms, instead of having these massive code blocks you can now say I want the capabilities of those systems to be atomised and represented as individual self-contained pieces of configurable code. This is revolutionary because now you can reassemble small pieces of pre-configured code (the microservices) to create different capabilities. Think a kind of digital Lego.

Now we need to start thinking of projects rolled out in days and weeks not, months and years.

### ***3. Extended market reach***

We mentioned earlier that successful platform users extend their reach through partners who can use the same platform.

All of this functionality you create exists on 'your platform' and your platform can talk to other platforms through API's. It's actually quite hard to convey the significance of this benefit but it is a step change.

By analogy, think about this scale and speed of fibre optic broadband versus old style copper wire networks. Except, the analogy falls short because, now you don't only transmit data you are transmitting processes.

## **Conclusion to the Simple Bluffing section**

So, microservices make it easy to create new functionality with minimum coding and to do it very quickly. This in turn means you can create products, distribution channels to partners and other services at near zero cost. This together with the fact that platforms can be connected to one another, allows for new markets to be cost effectively explored either directly and/or through partners. It's not an exaggeration to say this is potentially a kind of super weapon in the insurance arena.

Conversely, if you do not have your own platform of microservices then you are stuck with the old problem of custom coding multiple systems to achieve the same effect. This is virtually impossible because these older systems which were good in their day are just too rigid and there is no way of excluding the unused redundant code so you can focus on the subset of functionality you really want.

## Part 2 - Advanced Bluffing

So Part 1 was saying microservice platforms are a potentially devastatingly powerful tool for insurers if they emulate what other platform owners from other industries have done. Which is to exponentially increase the efficiency of the interaction between providers and consumers.

In Part 2 we are going to share with you two stories that you can use to explain to others why microservices are so significant and also a potential trap if their use is not carefully thought through. The first is called 'Steam Vs Electricity', the second is, 'Netflix for Insurance'.

### Steam Vs Electricity, what can we learn?

The biggest clue is what is happening right now happened around a century ago when electricity was taking over from steam power in factories. At that time, long established companies slowly switched over to electricity. They made substantial savings on their power consumption costs, 20 – 60% reductions. (Comparable with enterprise software Vs platforms today).

But was it a happy story? Actually, it wasn't, the surprise is that most of those companies then went out of business. The reason being was that only a few of them realised it was NOT the price efficiency that made them more competitive. The real advantage was it made it possible for factory production lines to be dramatically reconfigured and spread out. Which meant they could have made new and more competitive products.

Previously, there was a limiting factor because production lines had been close to the one steam engine driving the whole factory. It distributed its power through a series of axles, wheels and belts. With the advent of electricity, it was possible to have many individual motors driving many varied production lines at greater distances.

History lesson over, what does that tell us? It tells us that in spite of it appearing obvious to us now - that with electricity you can have a much better production lines in addition to cheaper running costs - it was not obvious at the time. Very few of the established companies spotted the opportunity. Most of them replaced the single steam engine with an electric engine exactly at the same spot in the factory.

The result, was that the majority of the existing companies went bust because they found themselves competing with new players who simply did not miss out on the real opportunity to have flexible distribute production lines not physically anchored to a single, central power source. It was not because the new generation were much smarter, but it was because they had NOT been previously conditioned to believe production lines could only be powered from a single central source.

They had not been bought up in the steam driven era when everything was centralised and tethered to a single steam engine and so went on to become the dominant players.

So, the moral of the story is that we cannot always see the real benefits of a new technology because we have been conditioned to think a certain way by our life/work experience. But any new generation coming along does not have to undo old thinking patterns it simply embraces what's in front of them and deploys to maximum value.

*The microservice platform story is very similar and we need to be aware that it's not just about cost saving.*

### **Netflix for Insurance, what can we learn?**

Think about Netflix and HMV for a moment. It was inconceivable a few years back that a successful High Street shop chain selling films in the form of physical DVDs on physical shelves like HMV would be replaced by the virtualised equivalent – a digitised library of films available on any phone, laptop, or tablet.

But the real game changer is that this 'platform' can be distributed through other Netflix partners, thereby exponentially increasing its reach. Imagine, when you buy a PlayStation, an Xbox, or apple TV, etc, etc, you did not intentionally buy Netflix but there it is anyway, no escape. What if you could do similar with your company's insurance products?

This is a key concept, Netflix essentially embeds its digital product offering into its partners physical products. Now, transpose this idea to insurance where the insurer embeds its product inside the physical product or service of a partner e.g. travel insurance inside a train or plane ticket, motor insurance inside a new car sale, warranty inside a new appliance sale, life insurance inside a new house purchase, etc.

You might be tempted to at this stage to say that insurance has been sold this way (B2B2C) for longer than Netflix has been around? Which is true but the point here is, for the first time ever, new/modified products can be created through dynamically acquired rating instantly and distributed at near zero cost. Which logically means there are an extraordinary number of newly economically viable possibilities to embed insurance inside physical products or services.

To summarise, if you can create digital insurance products and embed them in partners physical products (or services) for near zero cost then there is no price barrier barring entry into a new market segment (or micro segment).

To round off the Netflix point, 1) They took physical films and digitised them 2) They bundled them up so, the product they are selling is not actually the digital film but the whole digital film library itself 3) They made the digital library look good and easy to use 4) They made it pervasively available directly over the internet on any device or via partner products like Xbox.

Lastly but not least, they could do this because it was enabled by microservice platform.

This is the knowledge we need to successfully transpose to Insurance and Netflix is a great analogy because everyone knows what it is.

### **Conclusion to Part 2**

The take away from this is if you believe the future is possibly having your own insurance microservices platform be aware that it's not just about cost savings. If we are to learn from 'Steam Vs Electricity' then adopting a platform strategy just to save costs won't actually save you because others will come along and use its full capability to change (disrupt) things on a more competitive level.

The trick will be – and it will be obvious in hindsight – finding a way to exploit the opportunities for ‘new production lines’ like in the ‘Steam Vs Electricity’ story where the manufacturers (the Insurer) can

- a) create new types of product to mine microsegments of business
- b) extend its production line out to more partners
- c) Therefore extend its reach in the market. In other words, build and own a platform ecosystem

The difference is that in the past it has been hard to achieve this with any fluidity because of the problem of getting mixed IT systems to work seamlessly and now microservices make it possible relatively easily.

### **Finally, applying the Bluff to your business**

Now imagine for a moment that it did not matter what state your existing insurance systems are in – good or bad - and that you could apply the above Netflix analogy to your business.

You would have a platform with a personal logon a bit like Netflix. Then instead of a library of films – you get access to an on demand digital library of preconfigured Insurance system parts. These can be reassembled into different combinations to create new products to be distributed through your existing or, new digital partners to extend your ecosystem.

### **Take-aways from The Bluffers guide to microservice platforms for Insurance**

- There is no doubt that platforms have worked well for platform owners like Airbnb, Facebook, Uber, Netflix, etc.
- What all of these platforms do is exponentially increase the efficiency of the interaction between providers and consumers.
- Platforms are collections of re-useable digitised capabilities allowing scale, reach and near zero-unit cost.
- The underlying IT of these platforms are microservices which are a collection of small pieces of configurable code.
- Configurable is good because actual coding really takes time and money.
- Microservices can be chained together and accessed from other applications via an API e.g. Moonshot<sup>(4)</sup>
- Think ‘Netflix for Insurance’ if you want a good working analogy that could be applied to insurance

## **References & further reading**

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- (3) 'From Netflix to insurance: the latest big thing in tech' about Microservices and their potential significance to the Insurance Industry, Lucy Hook, January 2018 Insurance Business <https://goo.gl/KR23Vj>
- (4) Moonshot Press Release, Société Générale November 2017 <https://goo.gl/PLg5bN>

## **ABOUT EBAOTECH CORPORATION**

eBaoTech's mission is to "make insurance easy." Since its founding in 2000 and its pioneering of 3G insurance tech, or Java-based core insurance system, eBaoTech is leading globally again in moving to the 4G insurance technology, which is cloud native and microservices based.

eBaoTech's two lines of businesses are: eBaoCloud and eBao Software. eBaoCloud is an Open API platform that provides real connectivity and enablement for insurers, traditional channels, affinity partners and FinTech startups. eBao Software mainly includes core system suites for life, general and health insurers, as well re-insurers. Find more information at [www.ebaotech.com](http://www.ebaotech.com).

### **Author - Pete Roberts**

LinkedIn Profile here – <https://goo.gl/yLs1Zd>

Contact here – [peter.roberts@ebaotech.com](mailto:peter.roberts@ebaotech.com)



## **Local Offices**

### **London**

eBaoTech UK

5th-6th Floor, Tower 42,

25 Old Broad St,

London EC2N 1HN,

United Kingdom

+44 (207) 816 5954

+44 (207) 816 5900

### **Zurich**

eBaoTech EMEA

Beethovenstrasse 43, CH-8002

Zürich, Switzerland

+41 (43) 497 23 50

+41 (43) 497 23 51