Open Insurance:

A foundation for platform ecosystems

Fouad Husseini

Open Insurance

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The Open Insurance Initiative (OPIN) has sought with its first whitepaper to redefine the economics and mechanics of serving large number of customers and has been working towards defining a common and open standard for the sector using a community approach.

This paper in its entirety focuses attention on the main demands and factors necessary for platform ecosystem development.

We hold the belief that in the future, no individual company could possess all of the resources, time or capabilities required for success and will rely ever more on connectivity and interoperability. When incumbents create vibrant ecosystems around their insurance platforms, they can tap into the most valuable new technologies, data sources, services, distribution channels and more without the multiplication of complex and costly individual relationships.

This is the second published work for the Open Insurance Initiative in a sequel of whitepapers developing an understanding of the many facets of open innovation, so I am sure some readers may find some of the topics very conceptual. But that's necessary food for thought in order to explore potential opportunities as well as challenges in this shift towards the platform economy. Add to that, the fact that the paper intentionally diverges from considering a specific data protection framework in developing its ideas and continues on the path of neutrality set out by the OPIN whitepaper. Any reference to GDPR or similar regulation is used in the context of supporting the ideas presented. However, this will begin to change as we publish the next batch of research papers.

Access to data is a key component of open insurance and for good reasons. Tomorrow, we will see a huge amount of data in transit, requiring speed and performance which will demand a new way of thinking. Incumbents need to gear up for a world where insurance products will be distributed and promises are fulfilled in a matter of milliseconds rather than weeks, days or even minutes.

As the intelligent connectivity of devices, vehicles and machinery grows in volume and sophistication, insurance will move into a state where most of the processes of today become autonomous much like the assets it protects. Therefore, the overriding belief held by the initiative remains, that innovation across all of the layers of the organization, enabled by digital transformation, is the future of the industry.

This paper is intended to be a defining document delivering consistent views of the main aspects of Open Insurance and its goals. It is also unique in merging the role of common open insurance interfaces with the demands of platform ecosystems.

In an effort to find a practical way of enhancing consumer data literacy, the concept of OPIN Dashboards is introduced and we hope that it will help insurers build more trust with customers.

All signs to date indicate that we are at the nascent stages of open API adoption in the sector. Continuing to work on fulfilling the objectives of this industry initiative, on a global scale, has meant engaging in hundreds of discussions with regulators, insurers, startups, technology vendors and various open source initiatives to gain valuable knowhow for creating, adopting and sharing common standards.
The journey for Open Insurance has just begun.

With the launch of the OPIN Innovation Lab, we look forward to driving more engagement with incumbents and startups and crucially, more coordination with regulators and policy makers to make sure we build a common and effective open standard and avoid duplicated efforts.

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Founder, The Open Insurance Innovation Lab

The Open Insurance Initiative (OPIN) was conceived as an industry driven initiative to allow for data to be securely shared with third parties using open Application Programming Interfaces (APIs) with the hope of accelerating the adoption of innovative ideas and technologies leading to an extended market reach and an enhanced customer experience.

Open APIs are in the simplest of terms an interface that is designed to be easily accessible by any user of the web. These APIs have to be on public facing portals and designed as per the needs of external partners. All functionality should be highly discoverable, allowing client applications to fully utilize it. A key factor will be the ability to design processes that improve security and reliability without sacrificing speed.

Adopting a common and open API approach will mean streamlining signing up, setting up and integrating with insurers platforms, removing friction in creating new applications and features. OPIN aims to have the standard collaboratively designed and made available for anyone to use and distribute.

Opening up to third parties, means allowing complementors, which may well also include competitors to get access and receive customer data in machine readable format to offer these customers a wider choice of solutions, better coverage and prices.

This inter-connectivity has the effect of transforming the insurance industry from tight vertical integration to horizontal, cross-sectoral, interoperability. This ecosystem state, allows all participants to contribute to value creation, fostering diversity and growth.

The rising importance of APIs comes from the fact that they are the connective tissue between the different participants through which data is transited and services rendered as an aggregated set of APIs. This resulting bundle of solutions will help reduce the complexity and inefficiencies inherent in transacting insurance.

Platform interoperability and open protocol support is better for the ecosystem of consumers and business. And as more devices join the ecosystem, and businesses reorganize themselves around a real time economy, the need for complex real time infrastructures is intensified. Organizations will need infrastructures that can meet not only today's data-streaming needs but also those for a future where everyday services rely on data constantly in transit.

Like opensource software, transparency, accessibility and community support are common denominators with open standards. An open standard is defined as "a document that provides requirements, specifications, guidelines or characteristics that can be used consistently to ensure that materials, products, processes and services are fit for their purpose"[1].

[1] Institute of Environmental Sciences and Technology

1.1 - What defines an open standard?

An insurance standard[2] would define a format or protocol that is intended to give guidance to insurers, intermediaries, vendors, and implementors in the development of APIs.

There are various organizations[3] that provide guidance and platforms for the development and promotion of open standards projects. However, definitions of what set of features open standards should possess defer.

From the perspective of the Open Insurance Initiative and as a preliminary definition of an open insurance standard, it is necessary to clarify and reinforce its constituent parts:

- Open

Refers to openness of standard. The resulting standard should be publicly available, free to view, implement and extend. There are no associated fees to pay (Certification of Compliance[4] may be an idea that is worth exploring).

- Standard

The standard involves application programming interfaces as an enabling technology. A range of committees ranging from technical to legal, will work together to reach consensus on the development and maintenance of a standard. Participation in committees is open to OPIN community members.

Any Intellectual property rights that are essential to the implementation of the OPIN standard, should be licensed to all users on a worldwide non-discriminatory basis, free of royalty for the life[5] of the standard.

Organizations outside the sector are increasingly going beyond the limited and expensive choices of build or buy. Instead, they are deploying best in class opensource solutions to focus on their core competencies and ramp up their time to market.

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[2] Join the effort by clicking here

[3] Such organizations include; The Eclipse Foundation, The Free Software Foundation Europe and The Organization for the Advancement of Structured Information Standards (Oasis).

[4] Refer to definition of open standards by Bruce Perens.

[5] Refer to definition of open standards by the Indian government

The insurance sector has followed a similar pattern. Research conducted by the OPIN Innovation Lab provided insights of how incumbents and startups adopt[6] an extensive array of opensource applications and data software (ASP.NET, Apache HTTP Server, Nginx, Ubuntu, Bootstrap, PowerShell, Gatsby), utilities (Elasticsearch, Jupyter), devOps (Git, Docker, Kubernetes, Gulp) and business tools (WordPress, Drupal, Ghost). Interestingly, AI and data science platforms distributed under opensource licenses (TensorFlow, Keras, H2O.ai, Rasa) are also being deployed by some in the sector. Additionally, opensource API gateways (KrakenD, Tyk, Kong, WSO2) are gaining wider adoption.

The OPIN Lab forecasts that, insurance related opensource software, including core insurance systems, will increasingly play a prominent role in the digitization of smaller and medium sized insurers going forward.

Major insurance players are slowly turning in this direction as well. APOSIN[7], a project initiated by Allianz, will be offering parts of the Allianz Business System (ABS), as open source software covering the full spectrum of insurance lines, both life and non-life.

That's a big recognition of the importance of open source software that is developed and honed by external talent and a realization that the collaborative intelligence of a community of hundreds or even thousands of developers will ultimately out do the efforts of a single commercial organization in terms of quality and innovation. Another major advantage is of course that of shifting a major chunk of software development costs to external developers.
Additionally, that is a realization that the main competitive advantage lies in access to data rather than the technology itself.

[6] Findings of OPIN Innovation Lab research, The Nature and Use of Opensource Software in the Insurance Sector (2019), FH.

[7] An Association for the promotion of open-source insurance software and for the establishment of open interface standards in the insurance industry.
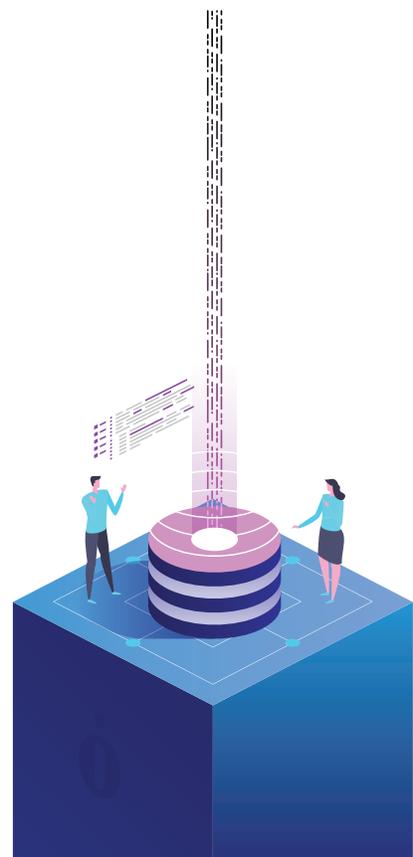
1.2 - Open platforms in the context of insurance

In the technology development arms race, insurance carriers will realize that it is one they could no longer win. Gone are the days when major insurers had to own everything. What was once considered a competitive edge, is now viewed as a hinderance.

Based on the OPIN Lab's analysis and assessment of a wide array of platform businesses across a range of industries, a model of features for an open insurance platform emerges and this includes:

Accessibility

• Easy access to a development environment that allows applications to be integrated and tested. Transition to the production environment is smooth and intuitive.
• They provide access to opensource and proprietary tools and test data.
• Innovations can originate from anywhere. Therefore, they create hubs that are international rather than local across all levels of expertise, from the hobbyist developer to the well-established of firms and businesses.

Ease of integration

• Platforms are about robust scaling and accelerated growth.
• They support integration of multitude of data sources, technologies, networks and devices in real time.
• Allow for seamless integration to unlock (some) data and share it across an ecosystem of partners and complementors.

Technical capability

• They overcome legacy infrastructures by investing to upgrade or extend the functionality of existing monolithic systems or by introducing replacement systems.
• Powerful technologies are not a make or break, proprietary or opensource, but a combination that provides elevated levels of experience to end users and complementors.
• They understand the broader risks of new technologies and are highly secure and compliant with data privacy and protection laws.

Evolve and expand

• Data types, tools and insights shape future experiences and services.

• Services and products flexibly transcend traditional sector lines through modular and reusable integrations.

• Consumers can freely and quickly shape their experiences and extend functionality with applications.

Community values

• They build networks to tap into the resourcefulness and the imagination of external developers and experts.

• They join forces with other communities and initiatives to co-develop new projects, conduct research and exchange expertise.

• Go beyond the proverbial developer-portal experience by extending support to innovation hubs, accelerators and the startup ecosystem at large.
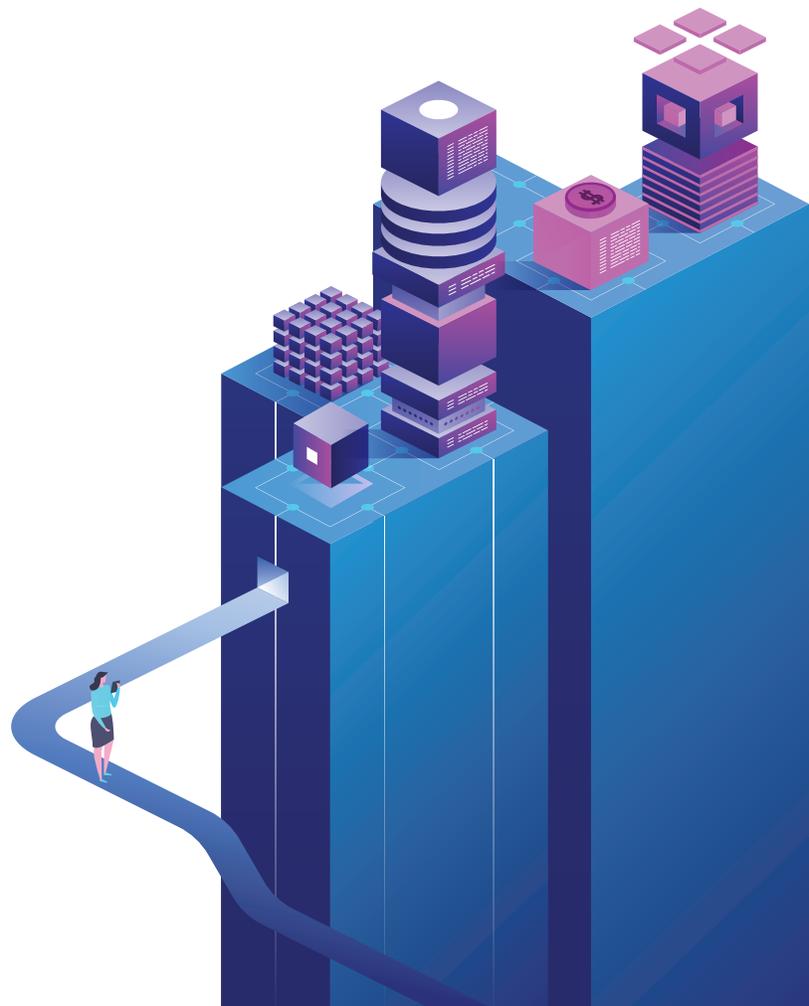
Insurer's systems are prime target for increasingly sophisticated cybercriminals, therefore, insurers must develop and maintain an effective approach to detect and limit the disruptive potential posed by cyber risks of hacks and virus attacks that may compromise personal data and undermine confidence in the insurance sector.

Cyber resilience is both a collective and an individual responsibility. Insurers and third parties, regardless of size, should have in place cybersecurity strategies and frameworks to support their operational security and protect policyholder data.

Insurers will find themselves competing to build a reputation for strong data privacy and security practices to further differentiate their offering and garner a competitive advantage to dominate the public trust game. In order to deliver an outcome of increased trust in Open Insurance, it is imperative that incumbent insurers take on much of the security responsibility as possible considering they are the largest of the stakeholders in terms of customer base and revenues. This view is poignantly supported by a survey finding that 74% of consumers would switch[8] their insurer in the event of a data breach.

Security programs must be commensurate with the size of the insurer, the nature of their products, its connectivity with and dependency on ecosystem participants, IoT devices and applications. Incumbents that are able to ratchet up security sooner and proactively, will reap the rewards of greater trust and contribute to the overall willingness of consumers to share access to data. The first OPIN whitepaper[9] details a range of standards for security including authentication and authorization frameworks (see sections 3.1.3 and 5.2).

Many insurance regulators around the world have identified cyber security as a key supervisory priority and exercise increased scrutiny to maintain the confidence of policyholders. Much of this scrutiny is obviously driven by the large stores of personal data that insurers accumulated over many years, a rather compelling reason for insurers to take on much of the security burden!

Regulators need to develop supervisory requirements and expectations in recognition of the diversity of systems, technologies and partnerships that the era of Open Insurance brings about. Data privacy regulations, (GDPR is one such example), will significantly improve the trust factor as transparency in handling data increases.

Regulated firms are additionally under pressure to avoid prohibitive fines and penalties that will result from compromised data. Redress for breaches of privacy, data mistreatment or non-compliance are expected to come under the remit of regulators and relevant national agencies.

Third parties should be cognizant of the necessity to proactively design and implement their own security programs with the objective of improving the overall resilience of the ecosystem.

[8] Capgemini Consulting, The Currency of Trust: Why Banks and Insurers Must Make Customer Data Safer and More Secure.

[9] Fouad Husseini, The Open Insurance Initiative, 2018.

Consumers must appreciate that they also have a role to play. The insurance sector as a whole, must play a part in enhancing user awareness in order to change security behaviors in a meaningful way.

Addressing security concerns effectively would help drive more consumers to online propositions. Platform ecosystems would provide reduced administration and distribution costs, since transaction costs are estimated to be 43 times greater[10] in a physical branch than via a digital channel.

As platform ecosystems advance there is the added worry of orchestrating cybersecurity measures across an ecosystem environment. Complementors, partners and developers will mean services are rendered and data is shared through thousands of connection points and applications simultaneously. It is likely that we will witness new patterns of insurance fraud through data and software manipulation.

This again brings to the fore the role that open standards and opensource software could play in reducing the number of risks which only a community like input could do to secure systems.

[10] The Financial Brand, Mobile Usage to Double.

As discussed and explored in the first whitepaper, consumer-data-literacy forms a key component of the OPIN concept. Open Insurance aims to empower consumers to access and use their data. The customer is at the center of this evolution.

Efforts must be made to engage and educate consumers in order to build trust in Open Insurance in how and why their data should be shared but they must also be aided to communicate their data as information to understand the opportunities and risks. Contrary to a widely held belief, data ownership does not necessarily facilitate data exchanges - it could actually limit them[11].

The idea for an OPIN dashboard (OPIN'D) stems from the fact that the customer has a need for and should be able view what data is being held and what information his data presents. The main purpose of OPIN'D is to provide a digital interface to make the insured aware of the growing range of data collected offline (forms and reports etc.), online (devices, machinery and vehicles).

Reading and translating data into a comprehensible risk profile, is a functionality that insurers could provide to their customers and should form part of the capability built into their platforms as they move from product orientation to platform orientation[12].

With open APIs, third parties have an opportunity to also participate and contribute a range of toolkits to expand on the functionality of insurer-provided dashboards.

An aspect that formed a key part of the Open Insurance whitepaper had been the exploration of the range of data that should be subject to shared access. Of course, many of the data types mentioned therein could be part of the information displayed in a dashboard including KYC data, information on the insurable interest, beneficiaries etc., however, the open insurance dashboard proposed provides a new level of information.

The intention is to provide a graphical and informational representation of data supplied and shared. Every insurance carrier should develop a single or a range of views (user interfaces) for the user to choose from. Notwithstanding, OPIN does not advocate a standardized dashboard design.

Time-to-market with OPIN'D is a key aspect here. Customers are unlikely to consolidate their policies in different tools several times. Thus, the first provider to offer compelling experiences is likely to retain and gain more customers.

[11] Célia Zolynski, on behalf of the French Digital Council
[12] Peter Bendor-Samuel, Why Your Business Needs to Master Digital Platforms Thinking and Design

3.1 - The scope of an open insurance dashboard

In the developing trend of platform ecosystems, dashboards should become the first building block of any insurance platform. The following serve as example functionality that dashboards could provide to customers.

3.1.1 - Claims payments and loss history analysis

In the most basic of setups, a user should be able to follow the status of outstanding claims and monitor claim payments. Parametric insurance policies will be an ideal product for these dashboards as claim notification, assessment and payment can be instantaneous and displayed immediately. The dashboard could allow for parametric insurance to gain a better footing as the policyholder will be able to see in real time policy updates.

3.1.2 - Trending value of assets protected

The effects of depreciation, accidents and inflation on the value of physical insured assets are measurable. There is scope for property appraisers and valuers to assist policyholders in estimating the value of property or asset by displaying the mean valuation for similar property (for P&C line of business) before or after an accident. Such information may be presented at inception or renewal of insurance cover.

3.1.3 - Natural hazard exposures

A visual interpretation of exposures to earthquake, flood, hail, wind or forest fire damage to fixed and moving property belonging to the policyholder within his regular zone of residence or work.

3.1.4 – Access to data from vehicles, machinery and devices

Connected vehicles supply ever growing amount of data. Driving behavior, odometer reading and fault detection are such examples. We're heading into a state where we will quickly lose track of what data is being collected, from which device and by whom. More profound though, has been the increasing adoption of ride sharing which has meant that the insured, from time to time, switches between the scope of private and commercial vehicle usage on a more regular basis.

Dashboards could provide customers with information on what device is being accessed and what data is being collected by the insurer and a mechanism to terminate such access.

3.1.5 - Discovery of complimentary and bundled coverages

Many service organizations, for example, online merchants, have for many years provided complementary insurance coverages as part of their service to introduce superior value and lock in their customers.

Similarly, some forms of coverage may be compulsory, requiring the service vendor to insure their customers against loss or damage. For instance, in some countries, tour operators are required to insure their travelers against emergency medical treatment during a trip. Others are however complimentary, for instance many credit card companies provide their higher tier clients with travel or purchase protection insurance but very few are aware that this privilege may be available to them.

With the power of open APIs, these dashboards should be able to search across market, retrieve and display information about complimentary or bundled coverages where the user is designated as an insured or even a beneficiary.

3.2 - Extensions to OPIN dashboards

OPIN Dashboards are part of the third key component of the Open Insurance Initiative (i.e. consumer data literacy) alongside open APIs and shared access to data.

The introduction of these dashboards will mean consumers improve their perception and gain better understanding of the value of Open Insurance in diagnosing and improving their risk profiles. Data will take on a new meaning for consumers with thorough and objective information. These dashboards will move closer to providing 360° view and provide wider functionality in many ways, for example:

3.2.1 – Better dashboard interfaces

Third party developers could develop plugins for user interfaces, diagnostic tools, risk prevention and mitigation aids, loss anticipation modules, predictive impact analysis and visualization components. Open APIs will clearly power many of these use cases.
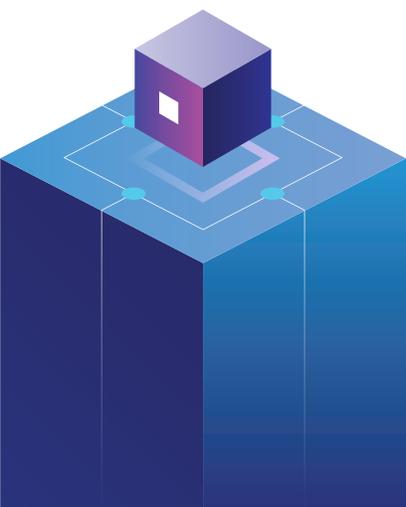
3.2.2 – Open Finance

There has been a growing trend in the sector to use publicly available information including social data profiles in underwriting various types of insurance covers. Information from social networks such as Instagram and Facebook, is used to determine more accurately the lifestyle, interests, preferences and habits of the insured. This data is then used in algorithms to determine the likelihood of claims, tailor products and obviously in pricing risk more accurately.

Similarly, various new initiatives now present the insurance sector with an opportunity to access and leverage new types of data that could produce new underwriting perspectives and result in API service aggregation at a whole new level.

This is an opportunity to expand the range of services offered, provide better interaction and elongated customer engagement, more comprehensive view of the financial position of the policyholder and automate additional friction points.

3.2.2.1 – Open Banking

With access to Open Banking APIs this offers the opportunity to extend OPIN Dashboards with aggregated bank account information, savings and mortgage interest rates to help customers get a consolidated view and optimize their financial position[13].

3.2.2.2 – Pensions Dashboard

In the UK, The Money and Pensions Service (MaPS) is responsible for setting the standards and regulatory controls for the development of the pensions dashboards. These dashboards will be designed to give people access and information about their retirement pots and entitlements across all pension providers in the UK; private, public and state pensions. Similar schemes already exist in Denmark, Sweden, Netherlands, Israel and Australia.

If the data in pensions dashboards were made available over open APIs then information such as fund/s value and projections, contribution history and rate could be fetched and integrated with OPIN dashboards.

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[13] Dominic Lindley, Delivering Pensions Dashboards in the public interest.

We have witnessed an increasing number of initiatives introduced by regulators to encourage innovation and increase competition. In an effort to allow small scale live testing of innovations, various regulatory authorities around the world have introduced sandboxes[14], innovation hubs and incubators for InsurTech startups to operate under and take advantage of special licenses and exemptions for a set period of time.

The UK's Financial Conduct Authority (FCA) was among the first to introduce a FinTech sandbox. The FCA remains an active player in producing recognized industry standards. The idea has spread to many regions including Australia, Canada, Hong Kong, Malaysia, Singapore, Switzerland and the UAE.

The FCA has also formed alliances with regulators in Canada, China, Japan, Hong Kong, South Korea and similarly the Singapore authority has notably signed fintech accords with Australia, France, Switzerland, Denmark, South Korea and the UK.

These regulatory facilitators aim to revise and shape existing frameworks by allowing for agility and more open dialogues. Sandbox environments could make substantive contribution towards the development of cross border authorization, reporting standards and certification solutions.

InsurTech startups will continue to develop strategies from the lessons already learnt to crack open one of heaviest regulated sectors that withstood digital transformation. The most notable positive effects of this ongoing transformation include; providing a wider choice to customers (consumers who stayed with the same provider for a long time paid on average significantly more for home insurance than newer consumers[15]), redefining the value of the distribution chain (increased transparency and better engagement), improvement in general quality of products (for example the pay-as-you-go insurance model) and hopefully, improved pricing practices as a result of better data assimilation and analytics driven by increased use of machine learning.

Unfortunately, the cost of acquiring data and compliance could rise significantly in the future as a result of major and well-established tech platforms continuing to scale by entering adjacent markets and deeply integrating FinTech components into their process flows. Many in the industry believe that these bigTech platforms will draw ever more antitrust scrutiny, the byproduct of which may result in additional regulatory hurdles.

[14] In 2015, the U.K. Financial Conduct Authority (FCA) coined the term "regulatory sandbox" (FCA 2015).

[15] General insurance pricing practices, October 2019. Interim report.

Several regulatory regimes have published rules specific to insurance price aggregators and blockchain driven businesses. Insurance platform ecosystems could also come under distinct open insurance rules. Indeed, a research document commissioned by the EU supports the idea of developing a differentiated regulatory framework for platform markets and also acknowledges data portability rights not only for personal data (article 20 GDPR) but also for non-personal data[16]. This could give rise to the development of various regulatory streams (initiatives) within such frameworks that focus on solving emerging concerns of technological innovation. Potential financial exclusion and other unforeseen ills as a result of profiling and discrimination by ML algorithms are serious concerns putting a certain spectrum of potential customers that were otherwise insurable at a disadvantaged position. Streams that encourage new entrepreneurial entrants focused on improving financial inclusion should enjoy enhanced regulatory guidance and flexibility, if by taking on more risks they promote fairer and a more competitive environment.

The movement towards open finance[17] and the emerging trend of Country-as-a-Platform model[18] could provide multi-dimensional frameworks supporting the development of new business models, foster easier and efficient entry to overseas markets and could potentially allow for collaborative (at least in theory) cross-country regulatory monitoring.

Notably, The European Union is aiming to reduce non-personal data[19] localization restrictions within the EU member states as well as promote data sharing among data controllers[20].

Open insurance platform ecosystems will not only make it easier to cross ever-thinning sector boundaries but they will also reshape the global flows in insurance transactions and cross border data flows. The OPIN initiative could play an important role in shaping a multi-country standard for digital insurance trade enabling multi-country-multi-platforms to share data and collaborate. "The free flow of data should be envisioned between online platforms and not only between states. These new forms of sharing are essential to the development of a European data economy", reports Célia Zolynski[21]. By removing cross-platform barriers, this could allow for the seamless management of multinational insurance accounts (policies) as an example.

The initiative holds the belief that innovation should not be contained within boundaries and the rise of cross border platforms in other sectors (in the EU, Amazon and Zalando are two of the largest cross border marketplaces[22]) supports the opportunity for the harmonization of secure international open standards in insurance.

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[16] Edited by Luca Belli and Nicolo Zingales, Platform regulations, how platforms are regulated and how they regulate us.

[17] Fingleton's report for the Open Banking Implementation Entity. It recommended an extension of Open Banking to insurance, savings and mortgages.

[18] Singapore, China and India are such examples.

[19] Non-personal data refers to data that is anonymized, non-identifying or is not defined as personal data under GDPR.

[20] Directive 2013/37/EU of the European Parliament and of the Council of 26 June 2013, amending Directive 2003/98/EC on the re-use of public sector information OJ L 175, 27.6.2013, p. 1–8

[21] Célia Zolynski, on behalf of the French Digital Council

[22] Cross-Border Commerce Europe, TOP 20 MARKETPLACES CROSS-BORDER EUROPE, 2019.

4.1 - The demands of hyper-connectivity

One aspect that could come under increased attention are potential stresses to insurance systems that could emanate from the increased demand for data and services resulting from the multiplication in product ranges and external partners through fully digital distribution and service channels.

The increasing intelligent connectivity of millions of vehicles, devices and machinery, with an estimated 1.3 billion 5G devices for enhanced mobile broadband will be connected by 2023[23], will also mean that systems will need to concurrently handle multiple requests at all endpoints to process data, effect insurance coverage, solve claims and process payments automatically or at much accelerated pace. Telemetry in Healthcare is a leading use case relying on 5G technology. Tasks may range from sharing video for diagnostic purposes, to controlling an insulin pump, or performing robotic surgery[24].

The technical performance and ability of any system to withstand a heavy load of on-demand services and transactions over a long period may well necessitate regulatory reporting of proof of testing under different conditions.

4.2 - Online Dispute Resolution (ODR)

It has been widely reported that eBay resolves more than 60 million disputes per year through ODR[25]. Similarly, the likelihood of disputes could, in theory at least, increase significantly as a result of the modularity factor (see section 5.3.1) built into insurance platform ecosystems by virtue of the fact that insurance services will increasingly become an amalgam of different integrated API solutions provided by a group of complementors rather than one organization.

ODR is an element that will increasingly become a matter of customer expectation. If customers are able to purchase coverage on a platform and smart contracts or devices are able to switch on/off coverage and have claims settled automatically (as in the case of parametric insurance) then, this will clearly give rise to an expectation that insurance disputes will be resolved in a similar responsive fashion; digitally, efficiently and on the same platform where the purchase occurred or where the dispute arose.

The most positive element may involve implementation of systems that automate the identification of problems early and attempt to resolve them before they become an issue or even a complaint.
In an insurance context, this is an exciting proposition but one obviously requiring deep analysis of how platforms will operate, however, the results will mean enduring customer trust and satisfaction.

It's an area where incumbents have a clear advantage over startups (and perhaps a monetization opportunity) if, data on past disputes is cross referenced with other data sets to generate predictive insights.

[23] Ovum. 5g network rollouts accelerate as LTE's long tail extends.

[24] 5G Americas. 5G-Services-Innovation

[25] PEW, Erika Rickard. Online Dispute Resolution Moves From E-Commerce to the Courts.

As courts of law across the world undergo transformation towards introducing digital courts (cyber courts, internet courts, mobile courts[26] and virtual judges[27]) for case handling, the functionality of ODR could be extended to insurance case handling.

Through open insurance APIs, courts and legal advisors, subject to explicit consent of the customer (unless for compliance with a legal obligation), could have access to clearer records of insurance policy data and claim files digitally which could help in concluding cases online, speeding up the delivery of legal remedy.
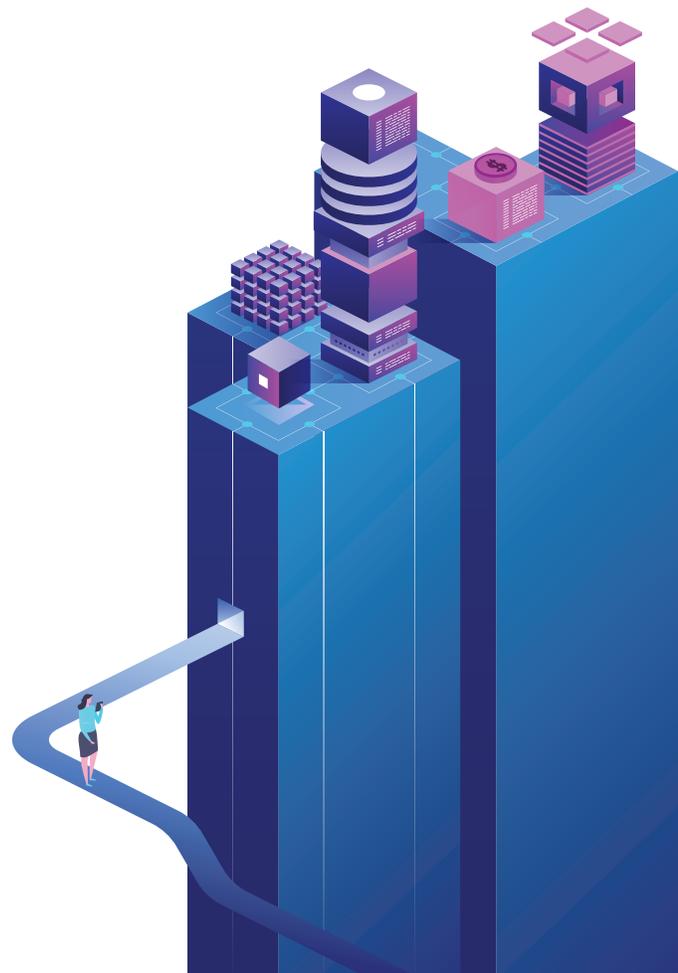
[26] The "mobile court" option on WeChat. Refer to MailOnline link below.

[27] MailOnline, China unveils its digital courts with AI judges and verdicts revealed on chat apps as Beijing introduces cyber justice to deal with backlog in cases.

The movement towards open insurance models seems inevitable, requiring incumbents to rethink their traditional roles and InsurTech startups to reposition themselves in this new environment. Interoperability is an engineering challenge and it will become a core competency but, it's only one milestone and not sufficient to create a modern business. It will take a new skillset to be able to create the great value exchange necessary for a multi-sided platform to scale.

A first-mover advantage presents itself to incumbents proactive and nimble enough to conceptualize innovative and appealing products and functionality that foster the creation of developer communities that are the cornerstone of open API proliferation.

Incumbents that were for so long considered insular, will offer integrated, end-to-end digital experiences and will explore a vast new scope for potential partnerships along the value chain. They will move closer to becoming ubiquitously embedded in the everyday life of customers.

In business, an ecosystem can be defined as an unlimited web of integrated service providers using technology to bring together and leverage the strengths of all participants, to deliver cheaper, better and more accessible services to customers and greater value to all suppliers.

Insurers, intermediaries and supporting services will be forced to reinvent their strategies. This is the challenge of transformation to the platform era and needless to say, APIs will play a big role in this respect.

An insurance ecosystem can be expressed in several ways. Taking a leaf out of academic literature, three distinct streams of ecosystems can be defined[28], classifying them as Business Ecosystems, Innovation Ecosystems or Platform Ecosystems. This paper focuses on the platform ecosystem stream.

5.1 - Reshaping business models with platform ecosystems

In insurance innovation, we tend to overestimate the extent of the structural transformation that the sector is undergoing. The sector has been a laggard. This leads to one important question, why has so many small and medium sized insurers (and to some extent larger ones) remained resistant or kept at arm's length digital transformation?

There could be many reasons for this. For one, unlike retail or telecommunication, the industry, to a large extent, is immune to transformative technology and processes by high regulatory barriers. Some incumbents realize that startups have an uphill struggle to convince and gain regulatory approval (this fact is country specific[29]) to allow them to introduce new concepts.

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[28] Michael G. Jacobides, Carmelo Cennamo and Annabelle Gawer. Towards a theory of ecosystems

[29] The author based this assertion on startup projects and interactions with various supervisory authorities in the Middle East.

Another reason could be the fact that other industries are already undergoing structural changes at the same time, most notably banking with open banking initiatives gaining wider adoption across the world. Unfortunately, it hasn't been plain sailing for these initiatives either. Only around one third (35 percent) of banks have so far positioned themselves to take on the role of third-party providers[30].

The telecommunication sector has already had its moment of structural transformation with the introduction of the smart phone and the developer-driven app stores. The retail industry has also been transformed by the mega platforms of Amazon and Ali Baba.

Structural evolution has the force of quickly fragmenting industries from tight vertical integration to broader, horizontal environments[31] of thousands of participants.

Looking at the insurance sector in its present form, we appear to be at the bottle neck leading to structural horizontal expansion. The sector in many respects enjoys the pretext of being tightly vertically integrated.

Much of the drag to disruption, as already mentioned, has been regulatory in nature. Virtually all aspects of running an insurance related activity has to undergo regulatory approval and oversight. However, many of the industries that were able to quickly force structural evolutions enjoyed much lower levels of regulatory burdens. In the telecommunications industry, the introduction of the iPhone in 2007 heralded a massive boom in personal communications and successfully cemented Apple's dominant platform model. The catalyst for Apple's[32] mega dominance had been the network effects resulting from thousands of developers producing millions of apps matching the growing demand with growth in the number of users. The result was the destruction of the telecommunications vertical and the emergence of a massive new ecosystem. This was a vertical that had for long been dominated by large carriers and telephone network infrastructure providers.

In the majority of today's insurance markets, the business environment is dominated by cartel like relationships between carriers and intermediaries. Notwithstanding, during the last few years we've seen new business models being leveraged not only by emerging startups but also by traditional but forward-looking carriers, with a keen interest in the possibility of adapting or replacing their core business models.

A sector built around open platforms could produce multiple outcomes including:

1. **Platform ecosystem orchestration** - Some incumbents and full stack neo insurers develop platform ecosys tem models to try and create winner takes all outcomes. These customer interface-controlling platforms are the focus of the second half of this paper.

2. **White label/Insurance in Everything -** The adoption of Insurance-as-a-Service business model as the most feasible way of remaining relevant in the future. A new breed of intermediaries could emerge, most notably insurance enabled non-finance marketplaces, with inhouse capabilities to design or influence the design of services and products leveraging own customer data.

[30] Sebastian Maus and Pontus Mannberg. PSD2: Bumpy start for open banking.

[31] Regina Herzlinger. Why Innovation in Health Care Is So Hard.

[32] Cornell University. Apple's Success and Network Effects.

Technically, both outcomes will share a minimum set of important features including:

- Highly secure and compliant with data protection and privacy laws
- A focus on developer self-service and streamlined integration to allow for co-innovation and joint development
- Integration capability with cloud applications, mobile and edge computing (as the computing power of IoT devices improves and 5G gains better footing)
- They will provide third parties with increasing access to data

A recent study[33] has found that only 7% of insurers currently operate platforms, 26% are experimenting with the concept and 21% intend to reallocate capital to build or expand platforms. This is further supported by the findings of another study[34], revealing that, 75% of insurance executives agree that digital ecosystems will have a transformative effect on the insurance sector and 70% of insurers agreeing that ecosystems are creating an environment for otherwise unlikely partners.

The transition from insurance-enabled-marketplaces to insurance-in-everything

For marketplaces, the most enduring strategy has been to continue to improve the customer experience by seamlessly funneling and capturing more on-platform transactions towards owning the whole supply experience.

The race by online marketplaces and digital platforms to capture more transactional opportunities will have profound effects on traditionally offline services. Incumbent insurance carriers that don't pursue a corresponding strategy will find themselves quickly out grown, in customer base size and market share by digital-first carriers.

Similarly, incumbent non-insurance marketplaces and platforms that do not recognize the role that embedded insurance solutions will play will find that marketplace startups equipped with a broad range of insurance components eating away at their market share.

We're also increasingly witnessing major FinTech components being built into non-financial platform ecosystems. Apple which is a predominantly tech platform, has introduced the Apple Card (a credit card) and Facebook, a social network, has launched the Libra cryptocurrency.

Tesla the electric vehicle manufacturer on the other hand, is a fantastic example of the move to incorporate insurance as a major component of its main offer being the manufacture and distribution of passenger vehicles. Its introduction of an auto insurance solution[35] avails its customers an aggregated experience on the premise of lower and personalized premiums. This is a unique and bold move capitalizing on Tesla's access to data captured by its vehicles.

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[33] Stefan Riedel and Jürgen Huschens. IBM, 2018. The new face of insurance: How platforms can modernize and transform insurance

[34] Jim Bramblet and Andrew Starrs. Accenture, Insurance Technology Vision 2017, AMP LIFYOU. A study of 563 insurance respondents from across the world.

[35] Financial Times, Musk moves into insurance to cut premiums for Tesla owners.

Similarly, entrepreneurial minds that are able to solve some of the tough hurdles in product complexity and compliance friction will be able to set the standard for the rest of the sector.

Platforms marketplaces will increasingly build the internal resources needed to co-develop with InsurTech startups or directly with carrier's the bespoke insurance solutions and automated underwriting processes their customers need.

The focus here, is the crucial role that new open technological interfaces will play in shaping the consolidated experience level offered to end customers.

Access to high speed telecommunication networks promised by the deployment of 5G will support distributed computing to bring data storage and analytics closer to the locations where they are needed, at reduced latency, without shifting much of the data into the cloud.

IoT sensing and control in cars, homes and mobile phones will possess more processing capabilities to execute complex analysis of data and improve decision making. In-home devices will transmit real time streams of events relating to overheating lamps, short circuits, burst pipes, gas leaks, motion in hallways, forced entry and so much more. But, all of this technology has until now lacked the compatibility of the different hardware to connect and communicate together efficiently and seamlessly, unless they come from the same manufacturer.

The best designed hardware will not operate at its full potential if it isn't able to integrate to an ecosystem of other hardware and exchange data and actions in real time.

For seamless communication to happen, all home systems from all manufacturers must be compatible with each other. Major manufacturers are quickly coming to the realization that open industry standards are crucial for the development of their businesses. Various home IoT open standards initiatives have recently been established and they include Mozilla's WebThings[36] and another called Connected Home Over IP[37] enjoys the participation of Google, Apple and Amazon. If these initiatives succeed, consumers will become more confident in their purchases and that the device or personal assistant of choice will be compatible with other home products.

Insurers must remain mindful and proactive in gearing up platform architectures with intelligent solutions, implement software components and tools to interact with smart analogue environments, battery-less devices or resource constrained sensors to derive data insights, monitor, alert, inform and automate the delivery of solutions that can transform the way we work, live and play.

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[36] Mozilla IoT team, announcement in April 2019. Introducing Mozilla WebThings.

[37] Apple, announcement in December 2019. Amazon, Apple, Google, Zigbee Alliance and board members form working group to develop open standard for smart home devices.

Insurers need to actively discover the interfaces of homes and cars of the future and assess if their solutions can interact with different modes of interaction including touch, gesture and voice that many of these things will come to rely on.

5.2 - Defining the different roles within a platform ecosystem

Platform owner: provides an extensible technological infrastructure[38] and a data hub channeling[39] core functionality to products and services for users and suppliers to integrate their applications or data with. The platform owner has to creatively and persistently create the ideal setting to attract both, users as well as suppliers simultaneously. The challenge lies in how and what value creation and value capture tools are needed so that an emerging platform can produce sustainable network effects. The platform must leverage opportunities in removing service friction and reduce barriers to entry to the insurance ecosystem.

Suppliers: are also referred to as complementors or third parties on the supply side. A platform owner must produce tools to attract peer suppliers, InsurTech startups and developers to innovate new applications and complementary solutions. At the basic level, insurance platform owners must introduce an interactive open interface and provide a great developer experience and resources to attract and retain suppliers to induce value creation at a large scale. A successful platform will shift much of value production to external suppliers allowing for co-innovation to produce disruptive user experiences.

Users: these are the insurance applicants, policyholders, customers and consumers of products and services across the ecosystem. There is a common misconception that the user is only the policyholder. Users, are those that consume a service on the platform. One distinguishing feature of platform ecosystems is that terms do mix. For instance, customers receive value and purchase products and at the same time they also produce value to the whole ecosystem by virtue of the data they impart. Likewise, complementors (suppliers) produce apps and therefore value but at the same time they are consumers of APIs. Similarly, users and producers can collectively be referred to as participants.

An important aspect of a platform ecosystem is platform governance, which describes access control, terms of use and enforcement for all users. This is an area of constant public debate influenced by security breaches, anti-trust fines, fake news and violation of user privacy[40]. Unfortunately, the topic will get increasingly more complicated in the future with the growing adoption of machine learning and the reliance on intelligent connectivity built into platforms making the determination of liability ever more difficult[41].

[38] Krista Sorri, Marko Seppänen, Kaisa Still and Katri Valkokari. Business Model Innovation with Platform Canvas

[39] Carmelo Cennamo, 2019. Competing in Digital Markets: A Platform-Based Perspective

[40] Jose van Dijck, Thomas Poell, and Martijn de Waal. The Platform Society: Public Values in a Connective World Read

[41] Fouad Husseini. The Challenges of Artificial Intelligence as a Source of Liability

It must be observed that in the over whelming majority of these ecosystems, platform owners, allow what are after all, independent complementors to set their prices, design and innovate new apps in a loosely-governed environment for the ecosystem to become interdependent. The subject of governance in an insurance platform context is quite large and complex requiring special attention and will be the focus of future research by the OPIN Lab.

5.3 - The main factors contributing to the success and growth of platform ecosystems

There is a growing body of literature analyzing and describing possible underlying dynamics that lead to intense value creation and help ecosystems to form successfully, however, convergence of opinion has revolved around several distinct aspects which we will explain below. Our focus will revolve around three main factors:

• Modularity, technological compatibility and standards
• Network effects
• Control points

5.3.1 - Modularity, technological compatibility and standards

In the context of platform ecosystems, modularity seems to draw various definitions by different researchers. The most simplistic of which is that where it allows a quick and free integration, similar to plug and play or a download of software driver. Others define it in much more granular terms across the organizational and service layers of the platform where it describes[42], an evolutionary module (platform innovation and development), a developmental module (services and products provided by third parties) and a fundamental module (e.g. hardware or telecommunication networks providing services to the entire ecosystem).

However, the common use of the term explains that digital products and services are made up of complementary inputs (applications, communications, content and devices) that work together in many different combinations to produce value and therefore gives consumers an unprecedented array of choices. It implies that consumers can use different combinations of products and services to achieve similar functional objectives. On the supply side, it implies that third parties offer products that satisfy the same or similar consumer needs by bundling different technologies together in different ways.

The main objective of modularity is to solve what in many instances is the complex and costly challenge of coordination[43] for inter-firm operability to enable independent but inter-dependent firms to connect to a central tech platform.

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[42] Yong Lin, Jing Luo, Petros Ieromonachou, Lin Huang. Modularity in Platform Competition
[43] Michael G. Jacobides, Carmelo Cennamo and Annabelle Gawer. Towards a theory of ecosystems

Consumers as a result enjoy a wide array of options to combine different services and products (e.g. applications) to satisfy their needs. They could also easily replace one service with another seamlessly without worrying about technical compatibility or security.

Technical compatibility, standards and governance allow this coordination to happen in either restrictive or completely offhand mode by the platform owner.

Compatibility also means a module or an app, can be reused without worrying about incompatibility with the platform, with other modules and possibly across platforms.

In insurance, the concept of regulatory separation in the roles and duties (examples include intermediaries and loss adjusters) introduces additional complexity due to regulatory licensing and authorization prerequisites to allow handling of regulated services and receive necessary access to customer data.

Successful platform ecosystems will be those that are able to handle industry peculiarities and solve many of the inefficiencies and complexities involved in underwriting, claims settlement and distribution within evolving regulatory environments.

The resulting direct network effects (network effects are described in section 5.3.2) can be very powerful when users and complementors are locked-in to a particular platform due to technical compatibility and interface standard. This dynamic encourages the developer community to innovate new products and more users to use the platform.

5.3.2 - Network effects

The principal architecture of a platform may be established by the insurance carrier but the scope of services and products offered should be decidedly driven by strong outside-to-inside dynamics. The value proposition of participating in an ecosystem will be determined by how many complementors are part of or are willing to become part of this ecosystem.

The extent of this complementarity will determine the strength or fragility of a particular platform ecosystem in orchestrating, defending and dominating the market. This explains how through the use of the phenomena called network effects, platforms have become a tool for startups to dislodge long established incumbents.
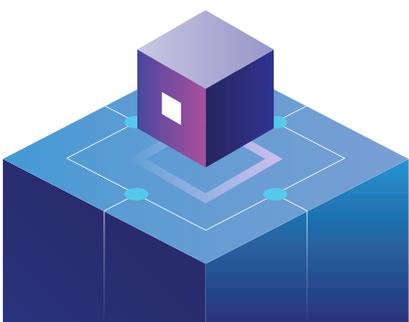
At their core, network effects induce the creation of a network of networks[44]. The phenomenon is centered around increasing the number of users to consume more of a service or product. The most obvious manifestation is social media content (Twitter is such an example). In its simplest form, the users of a service or product benefit from new users adopting this service or product. The key catalysts here are; connections building, speed of growth and co-creation.

These network effects[45] cause some or all of the value production to move outside the platform organization thereby value is created and customization[46] is influenced by complementors.

An interesting observation has been the interest of VCs' and investors[47] generally in this particular topic due to the critical role it plays, to the extent that many contribute directly to a growing body of literature on the subject.

As with any emerging field of study, there seems to be a growing list of network effects types[48]. We will focus on the two main types, the first is referred to as direct network effects and the second is indirect network effects.

Direct network effects

The addition of a new user to a network creates more value for all users. Good examples of these effects are emails and the world wide web (the internet). Therefore, the more users that join, the more value is created for everyone, existing and new.

We can extend the same concept to industry standards or formats (the OPIN standard is a case in point) whenever they are introduced. The more companies that adopt a particular standard, the more useful and feasible it intuitively becomes to adopt and obviously the more value those companies get out of using this standard.

Protocols and standards allow adopters to interact and interoperate more easily and efficiently. For example, the air travel ecosystem is built around international alliances between different airlines where code sharing is used to allow travelers to move from one airport to another seamlessly without having to collect their baggage and recheck in to catch connecting flights. Similarly, the mobile telecommunication operators operate under specific industry standards and conventions to allow the subscribers of different telecom operators to communicate with each other seamlessly.

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[44] In the context of open standards. Page 6, of RFC 1122 made in 1989 by the Internet Engineering Task Force, is interesting to read on how the internet architecture enable hosts (IP gateways) to build a network of networks.

[45] The concept of Network Effects is developed based on the research of Joseph Farrell, Michael L, Carl Shapiro and Garth Saloner in the 1990s.

[46] Source: Management Science. Marc Andreessen, Co-Founder, Netscape; General Partner, Andreessen Horowitz, USA

[47] Most notable authors are Li Jin and D'Arcy Coolican at Andreesen Horowitz and James Currier at NFX

[48] The venture capital firm NFX has published 14 different types of network effects.

Direct network effects are same-sided and depend entirely on the number of adopters. The size of the network matters in all respects.

Indirect network effects

Conversely, these effects are driven by externalities. Indirect network effects are created when the usage of a product or service increases the production of complementary products or services thereby increasing value to all users. This effect can also occur if a new service is dependent on the existence of another service.

Complementors look for incentives, primarily a faster return on investment via platform scale, they are therefore incentivized to create compatible services or products while the platform ecosystem owner aims to induce this supply side production to provide greater variety to end users (the demand side).

Subsequently, the more end users that join this platform ecosystem the more demand that is generated for compatible services and products and vice versa.

Mobile phone users of Android and iOS platforms, enjoy the benefits of the network effects generated through a stable operating system and the variety of competing complementors- the app makers. The end users are incentivized to use the mobile phone platform due to its versatile and rich ecosystem and the app makers are incentivized by the scale of its ecosystem.

Seller and buyer matching websites focus on building network effects by enrolling as many sellers as possible thereby attracting an ever-increasing number of buyers and vice versa. However, these marketplaces would have to include extensive value to sellers and they need to manage their control points (discussed in section 5.3.3 below) effectively to induce sellers to stay for the long term.

Attention of business is shifting from data collection to data sharing. While the past may have been characterized by scarcity in data, this will not remain the case in the future. Data networks effects are another and more recent form fueled by emerging technologies such as machine learning and blockchain. Network effects occur when additional users of a product yield more data for all existing users, the product improves with the more data it has available[49]. Users both contribute and consume the data that is generated by all users. A more simplistic and rather self-explanatory example would be that of Facebook.

The common denominator of network effects is the lock-in capability of both sides, demand as well as supply, in building these ecosystems. This is a crucial element in building defensibility, preventing disruption and generating a winner takes all dynamic, perhaps the clearest reason why VCs look for and search out startups that exhibit such dynamics.

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[49] See how Waze, x.ai and Sense360 harness the power of data network effects to improve their services.

5.3.3. - Control Points

These are functional areas in a value chain or network where power can be exercised to generate profits, hence their relevance and role in developing successful ecosystems.

The key characteristics[50] by which they are defined and evaluated are:

1. Replicability - the ease by which alternative players can own a similar control point

2. Demand - the extent to which a control point is accessed by players within a value chain

3. Value - as a function of replicability and demand, determining where and how value can be captured

4. Time – the above three characteristics are dynamic and may change over time

All of the mega platforms known to us, have established significant control points by developing exclusive dominance of customer-side value. Amazon with its warehousing network, Samsung with its proprietary mobile phone microchips and Google by its Android open source operating system.

For traditional insurers, a control point can be demonstrated by the quality and size of the distribution network comprised of agents, introducers and brokers. However, based on our characterization above, this would be considered a weak control point due to ease of replicability. Another would be a superior credit rating, for example an S&P rating of AAA is sought after by the best insurance carriers. Moreover, reinsurance treaties with large capacity allowing the carrier significant leeway to underwrite and compete for larger risks could be considered a significant control point.

However, in the digital era, these control points may not be sufficient to create effective lock-in and the defensibility required for a platform to succeed, scale and dominate the marketplace.

A different mode of thinking is needed. Control points can take many forms and include patents or intellectual property rights (IP). In insurance, the key challenges and difficulties around AI driven strategies are about how to acquire and use the technology to succeed.

Incumbents need to explore their data to create and control valuable IP that make every other platform, complementor or participant want to license the use of. Better still, as complementors increase their participation or use of the platform, they may begin to create IPs for and based on the platform itself.

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[50] B.D. Eaton, S.M. Elaluf-Calderwood, and C. Sørensen.
The Role of Control Points in Determining Business Models for Future Mobile Generative Systems

Open Insurance is an approach for promoting the inventive use of insurance products in all manners of technologies, applications and process flows.

The modern concept of open innovation is about looking outside the organization for technologies, solutions and ideas through leveraging access to customers, partners, experts, developer communities, inventors, startups, academics and a wide group of participants by giving them access to expertise and other relevant resources.

An open or collaborative innovation mindset involves actively eliciting third parties to perform external roles and produce differentiated ideas and deviances that better match the evolving competitive business landscape. This external resource overcomes the limitations of internal innovation teams, inhouse initiatives, brainstorm sessions[51] and R&D teams in generating superior ideas and solutions.

Some of the available routes for attracting third party innovation include:

- Insurer-startup partnership is a popular strategy in the sector involving cooperation on a limited scale to overcome a business challenge, source an external solution or to access a certain technology by relying on external expertise and talent in areas such as AI or distributed ledgers.

- Insurtech accelerators and incubation hubs are also popular and involve corporate capital to invest in and support promising startups. Projects could involve internal teams coordinating directly in giving access to expertise and knowhow to startups.

- Hackathons in the insurance sector are also being used by insurers to generate ideas and solutions over a short but intense period of time (can be as little as 24 hours) in return for cash prizes.

The collective intelligence of large crowds can generate large volumes of ideas for problems they care about[52]. Competitions through open innovation systems were shown to yield more comprehensive innovations if they include very specific problem statements and provide an incentive for superior entries[53].

The scale and diversity of ideas generated also present certain challenges which manifest in process management, evaluation and filtering of ideas to adopt, extend or neglect. One approach to this problem could be by way of using a combination of software and the crowd itself[54].

[51] Paulus & Nijstad, 2003

[52] Lakhani & Jeppesen, 2007

[53] Morgan & Wang, 2010

[54] https://www.researchgate.net/publication/316655436_A_Roadmap_for_Open_Innovation_Systems
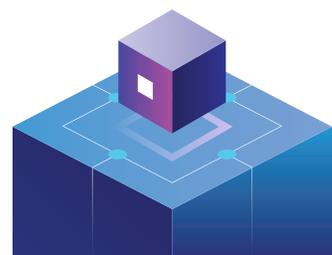
Open insurance allows platforms to become explicitly more open to external innovation by virtue of providing the necessary tools for complementors, as open APIs, modularity and compatibility would (SDKs have been a rear occurrence in the sector-OPIN Lab research)[55], in providing access to data and services. Invariably, a well-framed platform will have to provide additional resources other than technical resource to help complementors monetize their offering thereby facilitate their business success. This may include difficult to access reinsurance capacity, community resources and any other tools necessary to encourage entrepreneurs to invest their talent and resources (i.e. participate).

With the right ecosystem governance, a whole new level of open innovation is enabled between the platform owner and users, complementors among each other or other combinations.

There is a fine balancing act inherent in configuring platform openness. Platform owners need for example to balance the threat of sharing sensitive types of data and intellectual property with the opportunities of attracting external innovators. Competitors may in certain settings find it easy to fork[56] the platform and rapidly establish a competing advantage.

Open innovation however should not imply that it is a cheaper option than for example setting up an internal R&D department, though it could mean that the most genuine resource or talent emerges without risking recruiting expensive experts that end up with mediocre ideas.

Internal innovation remains an important aspect though, if it focuses on the creation of knowledge that cannot be found externally. It must be fostered to enable employees to present ideas and solutions and at the same time receive coaching and support to help their ideas succeed.

This invariably means that organizations need to evolve and track the state of their open innovation capabilities along the way to strategically engage large numbers, diversity and quality in complementors. The focus must always be on delivering additional business value and enhanced monetary performance.
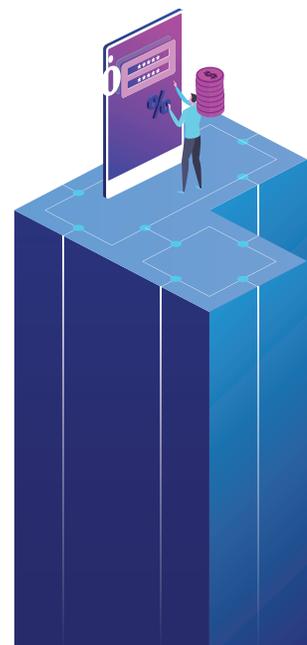
[55] Open insurance Innovation Lab research into the state of APIs in the sector, 2019.
[56] Satish Nambisan, Donald Siegel and Martin Kenney, 2018. On Open Innovation, Platforms, and Entrepreneurship

Among insurance incumbents, there is anxiety that platform models could one day render them obsolete and hence there is noticeable urgency to learn and understand their mechanisms and adopt strategies to protect their market share.

Despite the complexity of platform economies, incumbents still, have a lot going for them including brand power and the safety of large capital base, but, openness in its various forms, will become absolutely critical in delivering radical new alternatives to conventional business models.

The definition or classification of what makes a platform or marketplace is more of a range than a well-defined formula. Regardless of how they are classified, all successful platforms generate and rely on network effects, modularity, technical standards and control points. Ultimately, it's the strategy that is critical to creating interdependence and the evolution into ecosystems.

Transitioning to open insurance fosters the growth of platform ecosystems and allows incumbents to experiment with tech and data using applications created by third parties. This may mean experimenting with dozens of third-party applications at any one time. If many of the stakeholders in the insurance ecosystem undergo the same kind of experimentation, we can begin to visualize with some certainty, the accelerated pace of innovation that will result.

The digital space is becoming ever larger with bewildering variety. Open Insurance aims to make insurers able to scale from one platform to another, from any marketplace to the next and from any device to networks of intelligent connectivity.

New business models will also test the limits of existing regulatory frameworks almost by definition, notwithstanding, the industry must maintain a balance between speed of change and stability.

Perhaps the most comforting comment this paper will make is that incumbents should definitely assess the impact of Alphabet, Amazon or Facebook entering the insurance space but they should also recognize that users will care more about what the platform ecosystem offers and not the platform itself.

As we continue to envision a world converging towards new modes of operating enabled by technological advancements in virtual reality, blockchain and quantum computing, it may become harder to distinguish imagination from reality. There are many uncertainties and a lot of things to figure out that it becomes easy to forget that transformation revolves around the people. Innovation and change are driven by the people and it is the people where all the change happens.

About The Open Insurance Innovation Lab

We conduct research and experiment with digital service design, platforms and open innovation. In depth reports and analysis are available to members of the innovation lab.

We work with regulators, innovation hubs and numerous clients across the world. The OPIN Lab's pioneering vision and experience mean we understand the innovation challenges facing the sector and can assist in addressing them.

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