Customer-driven technology in reducing risks and improving management in the insurance and healthcare markets: a case study of a ChatBot startup

Authors:[1]

Dr. Luca Federico Battanta, (University of Milan- Bicocca)

Orcid: 0000-0002-8242-1874 l.battanta@campus.unimib.it

Dr. Luis Augusto De Freitas Cordeiro, (Politecnico di Milano) luis.a.f.cordeiro@ducamail.com

Prof. Dr. Giuliano Lancioni (Università Roma Tre) giuliano.lancioni@uniroma3.it

1 Conceptualization – L.F.B.; Methodology - L.F.B., L.A.F.C.; Validation - L.F.B., L.A.F.C.; Formal Analysis – L.A.F.C.; Investigation - L.F.B., L.A.F.C.; Writing – Original Draft – L.F.B.; Writing – Review & Editing - L.F.B., L.A.F.C., G.L.; Visualization - L.F.B., G.L.; Project Administration – L.F.B; Supervision: G.L.

Abstract

InsurTech startups often perceive regulatory compliance as a barrier to innovation and to success, integrating with traditional insurance incumbents requires overcoming significant trust deficits (Stoeckli et al., 2018). The purpose of this study is to explore how fully customer-focus and regulatory compliance can instead act as a strategic enabler for InsurTechs' startups seeking to collaborate with risk-averse incumbents. Adopting a qualitative case study design (Yin, 2018), the research tracks the evolutionary trajectory of Spixii, a UK-based InsurTech firm, from 2018 to 2024. The methodology triangulates two structured interviews with CTO's startup executive, from which we coded them using an inductive method ("*in vivo*" coding) to identify correlated subjects and topics to establish key-categories, alongside an analysis of corporate documents, that supported our findings and conclusions. The main findings reveal two critical strategic pivots, they (1) centered their innovation focus heavily on customer experience and (2) made their ChatBot solution fully compliant with the strictest privacy rules in force today, e.g., GDPR, Solvency 2 and ISO certifications, which functioned as a "legitimacy bridge" that allowed the startup to secure trust from established partners like Allianz. In conclusion, the deliberate mirroring of incumbent standards—termed "regulatory isomorphism"—is not merely a functional cost of doing business, but a primary driver of operational scalability. Besides that, the research revealed that survival and growth of startups inside markets as InsurTech and Healthcare are also deeply tied to customer experience while using the available technology. This paper offers high relevance for practitioners and researchers, demonstrating that proactive regulatory alignment is essential for

sustainable ecosystem integration with incumbents and driving new technologies to really offer good experience to end customers generates opportunities.

Keywords: InsurTech, compliance, B2B, incumbents, insurance, marketing

JEL: G22 – Insurance • Insurance Companies • Actuarial Studies; O33 – Technological Change: Choices and Consequences • Diffusion Processes; M13, Privileged access E.N. 18– New Firms,

Startup

Acknowledgements

The authors declare that no financial support or funding was received for the research, authorship, and/or publication of this article from any university, granting agency, or the companies analyzed in this case study. Access to the case organization was facilitated through the authors' professional network, which allowed for a detailed longitudinal study; however, the authors confirm that this relationship did not involve any financial compensation, consultancy agreements, or any other benefits that could influence the objectivity and independence of the research. The authors would like to express their gratitude to the executives and participants who generously provided their time and insights during the interview process.

We also state that the comparative texts in the paper used to verify the statements made by CTO and co-founder Alberto Pasqualotto may have been developed using artificial intelligence, as the company itself develops texts using AI for its reports and materials.

Therefore, we would like to reiterate our previous statement that we have not received any financial resources, commercial incentives, advertising funds or any other kind of support to promote their services.

1.Introduction

Few sectors have resisted digital transformation as stubbornly as the insurance industry. Yet, the rise of the "InsurTech" phenomenon is forcing a reconfiguration of legacy business models (Stoeckli et al., 2018); (Riikkinen et al., 2018); (Al Rifai & AlBaker, 2025). While Artificial Intelligence (AI) and chatbots were once seen merely as support tools (Ngai et Al., 2021), they have evolved into critical instruments for operational efficiency and for shaping satisfactory customer experiences (Hao & Li, 2025); (Alghamdi, & Abdelwahed, 2024). However, despite the market enthusiasm surrounding digital disruption, many startup ventures fail to scale effectively.

A distinct literature gap exists in understanding this failure; previous research has focused predominantly on user psychology and technological novelty rather than the macro-level ecosystem dynamics that govern market entry. Consequently, the central aim of this research is to challenge the prevailing thesis that strict regulation inherently stifles innovation and that customer focuses does not plays a relevant hole in that matter. To address this gap, this paper investigates the strategic shift of startups from a pure "technology-centric" consumer offerings to join the "technology-centric" with "compliance-centric" partnership models. Specifically, this study poses the following research questions: (1) How does the relationship between an InsurTech startup and incumbents evolve over time pre and post pandemic?, (2) What role does regulatory assessment (e.g., FCA compliance, GDPR) play in enabling a fruitful cooperation between startups and incumbents? and (3) Do AI chatbot technologies enhance the consumer experience help foster business relationships between startup companies and incumbent?

To establish a theoretical and conceptual framework, this study relies on ecosystem theory, institutional isomorphism, and service-dominant logic to analyze the structural barriers of the insurance market. Methodologically, this research adopts a longitudinal qualitative case study design tracking Spixii evolution, a UK-based InsurTech firm, between 2018 and 2024. Data collection triangulates both semi-structured interviews with the top management of SPIXII coding them according to an inductive method (“in vivo” coding) to identify correlated subjects and topics to establish key-categories which supported the conclusions.

The main findings reveal that overcoming the liability of newness in high-reliability markets requires profound institutional alignment. The primary theoretical contribution of this study is the conceptualization of regulatory compliance as a "legitimacy bridge"—demonstrating that adherence to stringent frameworks is not merely a bureaucratic cost, but a fundamental strategic enabler for

scaling innovation in a insurtech startup company. The second contribution identified is that customer-driven technologies enhance that scalability even in the strictest regulated markets as InsurTech and Healthcare. The relevance and significance we provide with this study lie are actionable insights for policymakers, incumbents, and tech entrepreneurs on how custom-focused technologies and deliberate regulatory mirroring (regulatory isomorphism) facilitates sustainable company and insurance ecosystem integration.

The structure of this paper is as follows. Section 2 reviews the relevant literature. Section 3 analyses the methodology that has been used to conduct empirical research on the role of regulatory compliance in the integration between InsurTech startups and incumbent firms. Section 4 presents the results. Section 5 provides the discussion. Section 6 presents the conclusion.

2. Literature review

This section establishes the theoretical foundation for the study by exploring the existing literature at the intersection of InsurTech innovation, customer-centric technologies, and regulatory compliance. To contextualize the empirical findings, the review is structured around three key thematic streams. First, it examines the evolving dynamics between InsurTech startups and traditional incumbents, highlighting the challenges of ecosystem integration and trust-building. Second, it explores the technological shift towards Conversational Process Automation (CPA) and its role in fostering customer-driven value co-creation. Finally, it addresses the theoretical debate on regulatory compliance, framing it not merely as a legal barrier, but as a strategic enabler for institutional alignment and market legitimacy.

2.1 The InsurTech Phenomenon and Incumbent Adaptation

The concept of "InsurTech" describes the phenomenon of technology-driven innovation in the insurance industry, aiming to optimize savings and efficiency within the traditional insurance model (Stoeckli et al., 2018);(Sosa Gómez & Montes Pineda, 2023). InsurTech represents a fundamental shift in how value is created, distributed, and captured and it is not a routine upgrade. For incumbent insurers, this shift presents a strong dichotomy. While they possess established customer bases, historical data, and regulatory licenses, they are often hindered by "legacy silos" and a risk-averse culture that

decelerates digital adoption (Riikkinen et al., 2018). The survival of these traditional giants depends on their ability to integrate external innovations rather than competing against them. Recent studies validate this cooperative shift, demonstrating that strategically integrating financial technologies significantly improves the operational efficiency and risk management capabilities of traditional, highly regulated financial institutions (Huang & Said, 2025). In this scenario AI integration supports a comprehensive, timely, and proactive approach to sustainability reporting, meeting the rising demands for transparency and accountability from stakeholders and regulators (Correia & Água, 2024).

2.2 Service-Dominant Logic and Value Co-creation

To deeply understand the evolving relationship between startups and incumbents, this paper applies service-dominant logic (SDL) (Vargo & Lusch, 2004). Traditionally, the insurance industry operated on a Goods-Dominant logic, where value was embedded in the static insurance policy. Conversely, SDL shifts the economic focus to the co-creation of value through collaborative, service-oriented networks (Wieland et al., 2012); (Grönroos, 2008) (Lusch and Nambisan, ,2015).

In the modern ecosystem, this co-creation relies heavily on reciprocal data exchange (Grönroos & Ravald, 2011; Saarijärvi et al., 2014). For InsurTech startups, this dictates a migration from static form-filling to dynamic. This implies also real-time dialogue via automated interfaces, such as chatbots. However, a tension emerges between personalization and privacy. With more and more unstructured data an algorithm ingests to map customer behavior, the higher the liability. Consequently, for an Insurtech startup's true competitive advantage in the B2B space is no longer solely the sophistication of its code, but the robustness of the compliance architecture that protects it. Under SDL, technology acts as a resource integrator where the startup provides agility (operant resources) and the incumbent provides the regulatory shield (operand resources).

2.3 Institutional Isomorphism in Regulated Industries

While in the traditional innovation literature emphasizes differentiation, high-reliability organizations such as insurance often require conformity to achieve legitimacy; institutional Theory provides a lens to understand this paradox. Through the concept of "isomorphism," defined by DiMaggio and Powell (1983) the paradox is explained as the constraining process that forces one unit in a population to resemble other units facing similar environmental conditions. Traditional risk governance demands careful management of institutional and instrumental interdependencies to optimize decision-making under risk (Gleißner & Ulrich, 2025). Organisational legitimacy depends on compliance with the regulatory, normative and cognitive-cultural pillars that define the scope of action (Scott, 2013).

In the context of the InsurTech ecosystem, startups face three distinct forms of isomorphic pressure.

The first form is Coercive Isomorphism. This stems from political influence and legal mandates. For InsurTechs, this manifests in the strict requirements of regulatory bodies (e.g., the FCA) and data protection legislation (e.g., GDPR). Unlike unregulated tech sectors, non-compliance in insurance represents an existential threat (Rana et al., 2025).

The second is “Mimetic Isomorphism” (Dua, 2022). Under conditions of environmental uncertainty, organizations tend to model themselves on successful peers. Startups may initially mimic the disruptive ethos of Silicon Valley. In the rea world survival often dictates a shift toward mimicking the structural stability of the incumbents they wish to partner with to signal reliability.

Finally, there is “Normative Isomorphism” (Teodoro, 2014). The pressure arises from professionalization. As actuaries, data scientists, and compliance officers transition from traditional insurers to startups, they bring established industry standards and professional norms with them, further aligning the startup's operational logic with that of incumbents.

2.4 Regulatory Isomorphism and the Legitimacy Bridge

Building upon institutional theory, this study introduces the concept of “Regulatory Isomorphism” based on “Coecitive Isomorphism” (Othman et Al., 2011) specifically applied to the startup and InsurTech market. This concept can be defined here as the deliberate process by which new ventures mirror the regulatory, structural, and risk-management standards of established incumbents to gain market acceptance. By proactively adopting rigorous standards, startups construct a legitimacy bridge. We conceptualize this bridge as a strategic mechanism, following theory, wherein adherence to stringent compliance frameworks acts as a conduit of trust, allowing an unproven, agile entity to safely integrate with a highly regulated partner. Thus, rather than viewing regulatory compliance as a barrier to innovation, it emerges as a critical strategic enabler for ecosystem survival.

3. Research Methodology

This section outlines the methodological approach employed to conduct the qualitative case study. To provide a clear and transparent overview of the research process we divide the methodology is structured into three main subsections. **Section 3.1** details the research design and the rationale behind the case selection. **Section 3.2** describes the data collection process, which encompasses longitudinal interviews and internal corporate documentation. Finally, **Section 3.3** explains the data analysis procedure, highlighting the inductive "in vivo" coding process used to derive the theoretical framework from the empirical data.

3.1 Research Design and Case Selection

To investigate the complex evolutionary dynamics of the InsurTech ecosystem, this research adopts a longitudinal, qualitative single-case study design (Yin, 2018), focusing on Spixii, a UK-based InsurTech firm. The selection of a single-case design was deliberate and aligns with Seawright and Gerring's (2008) framework for qualitative case selection. Spixii represents a "deviant case" within the ecosystem; whereas prevailing industry narratives anticipate antagonistic disruption, Spixii demonstrates cooperative, compliance-driven integration.

The selection of Spixii as a primary case study was further supported by **privileged access** to the firm data. We are in contact with the company's leadership through the authors' professional network. This access ensured the collection of high-quality, longitudinal data and internal documentation that would otherwise be difficult to obtain, while maintaining full research independence and absence of any financial or commercial conflict of interest.

We examined alternative to our metholology. Alternative methodologies—such as large-N cross-sectional quantitative surveys or a purely theoretical systematic literature review—were considered but they were deemed unsuitable for this inquiry. A systematic literature review would be insufficient because the InsurTech B2B integration phenomenon is still emerging and requires primary, real-world data. This methodology consequently is not the deepness to understand its operational friction. Furthermore, quantitative survey approaches frequently obscure the complex, underlying mechanisms of institutional logic and cultural alignment required for ecosystem integration. Conversely, a qualitative

case study facilitates the "thick description" (Gaya & Smith, 2016) necessary to decode the nuanced, step-by-step processes of regulatory isomorphism.

3.2 Data Collection and Mitigating Bias

To address potential single-source bias and ensure robust empirical validity, data collection triangulated multiple primary and secondary sources. Initially, the study relied on semi-structured "elite interviews" with a key internal informant (the Spixii Co-founder and CTO).

To balance this perspective and prevent an over-reliance on internal narratives, the primary data was extensively triangulated with secondary sources, including independent reports and official documentation regarding their partnerships with incumbents like Bupa and Allianz.

Furthermore, to offset the reliance on internal corporate documents e.g., Spixii white papers (Spixii, 2022), secondary data collection was broadened to include independent, third-party industry reports (e.g., McKinsey ecosystem analyses, 2023), regulatory publications from the Financial Conduct Authority (FCA), and external press releases. This triangulation ensures that the findings reflect the objective realities of the ecosystem rather than promotional corporate messaging.

3.3 Data Analysis and Coding Procedures

The analysis of the collected qualitative data followed an inductive "in vivo" coding approach, which is particularly suited for exploring emerging phenomena where existing theory may not fully capture the nuances of the field (Strauss & Corbin, 1998). The process was structured into three systematic phases to ensure analytical rigor:

The Phase 1 is Open Coding and Identification. In this initial stage, the transcripts from the longitudinal interviews (2018–2024) and internal corporate documents were scrutinized to identify recurring concepts. This generated a pool of 24 distinct "in vivo" codes that reflected the specific language of the InsurTech ecosystem, such as "validity gap," "compliance-by-design," and "operational friction."

Phase 2 is Axial Coding and Categorization. The 24 initial codes were then compared and grouped based on their conceptual relationships. This led to the emergence of four core thematic categories. The first is Market Dynamics and the Validity Gap, the second Regulatory Isomorphism as a Trust Mechanism, the third is Operational Efficiency and Scalable Architecture, and fourth is focused on Customer-Centric Value Co-creation.

Finally the Phase 3 regards Triangulation and Theoretical Synthesis. To minimize researcher bias and ensure the validity of the findings, the results were triangulated across multiple sources. Specifically, the qualitative insights from the interviews were cross-referenced with Spixii's internal white papers (2025c) and official project documentation from partners like Bupa and Allianz. This allowed for the identification of "regulatory isomorphism" as the primary driver for the startup's successful integration into the incumbent's value chain.

The qualitative data analysis followed a highly structured, inductive coding process to ensure transparency and analytical rigor (table 1).

First-Order Analysis (In-Vivo Preservation): Initial coding avoided pre-existing theoretical categorizations. Extracts from interview transcripts and documents were labeled using the exact vernacular of the participants (e.g., "tech-first mindset," "plugging into legacy systems"). This ensured that the foundational data remained strictly faithful to the participants lived realities.

Second-Order Analysis (Thematic Clustering): The raw in-vivo codes were subsequently analyzed for patterns and relationships. Isolated terms were aggregated into broader "nascent themes"—such as the tension between speed and safety, and the necessity of process-centric adaptation—identifying the specific friction points that forced the startup's strategic pivot.

Aggregate Dimensions (Theoretical Elevation): Finally, these secondary themes were distilled into the core theoretical constructs of the study. This synthesis mapped the firm's transition not merely as a change in business model, but as a shift in institutional logic—culminating in the theoretical dimension of "regulatory isomorphism." Representative quotations are provided in the results section to maintain a transparent chain of evidence from raw data to theoretical conclusions.

Table 1 Data Structure displaying the progression from raw data to theoretical dimensions.

1st Order Concepts (Representative Evidence)	2nd Order Themes	Aggregate Dimensions
"Our proposition was very B2C, we wanted to go to the end customer..." "We build chatbots" (focus on novelty) "You can't enter the insurance world with the idea of revolutionizing it or destroying it..."	A. Recognition of Market Misalignment (Initial failure of the disruption narrative and B2C model)	STRATEGIC PIVOT (From Disruption to Alignment)
"To sell our chatbot to an insurer takes two years..." "We are a software provider... with contracts based on policies sold" "Value proposition shifted from 'engaging the user' to 'solving the user's problem'"	B. Process-Centric Adaptation (Shifting focus to solving structural inefficiencies for incumbents)	
"Insurance regulation is written in small print" "What we did was plug in our automated chat that shows the quote and allows payment" (requires security) "Adhering to strict ISO 27001 standards and FCA regulations"	C. Compliance as a Capability (Treating regulation as a feature, not a bug)	REGULATORY LEGITIMACY (Isomorphism as a Bridge)
"You need to have excellent knowledge of insurance products" "To have an automated insurance company that operates seamlessly within the regulatory framework" "Evolved into a sophisticated diagnostic instrument"	D. Institutional Alignment (Deep integration with the incumbent's cultural and operational logic)	

As illustrated in Figure 1, the data structure clarifies how the initial friction experienced by Spixii (Theme A) drove a strategic pivot (Theme B), ultimately leading to the adoption of compliance as a core legitimacy mechanism (Themes C and D).

In our work we analyze the data from the two interviews separately, first the 2018 interview and then the 2024 interview, in different paragraphs.

We interviewed Alberto Pasqualotto, CTO and co-founder of SPIXII, twice over the space of five years to understand how his company has evolved in the market regarding technology, solutions, market approach, clients and other relevant aspects.

During the first interview it was possible to understand how SPIXII is a success case among all recently established start-ups that aim to grow in the Chatbot market solutions area and become a provider for companies working in the financial insurance market (InsurTech). Besides that, when it started its activities, it was present only in London with the main focus of offering its software (app) to enterprises interested in improving their sales and, at the same time, acquiring more knowledge about their customers. In the space of a few years, the company has expanded its activities also into the health

insurance market and is now also present in Switzerland, showing that its Chatbot has enjoyed wide acceptance also in a fresh new market that was not the original target of the founders.
The interview is transcribed in text and then analyzed and processed to extract the main points and concepts encompassed in the current status of SPIXII as a success case in the Chatbot solutions market.

3.3 Data analysis procedure

Our analysis of the longitudinal data followed an inductive "in vivo" coding approach (Strauss & Corbin, 1998). This process was structured to identify recurring concepts. Then we synthesize them into core thematic categories. To maintain the readability of the manuscript, the detailed description of the phase coding process and the comprehensive coding matrix are provided in Appendix A.

4. Results

The qualitative analysis of the interviews and corporate documents over the 2018–2024 period yielded a robust framework for understanding the strategic evolution of the InsurTech startup. As previously illustrated in **Table 1** (see Section 3.3), the inductive coding process synthesized the initial *in vivo* codes into four core thematic dimensions. This section presents the empirical findings organized according to these emerging categories.

To ensure the readability of the manuscript, we have used an appendix with the complete coding matrix detailing the *in vivo* codes, sub-categories. We also provide the exhaustive list of verbatim quotes from the participants in the **Appendix A.** We propose the Appendix A is at the end of this document. The core empirical results synthesized from this inductive process highlight four key evolutionary steps, which are summarized in the following subsections.

Section 4.1 examines the strategic pivot from a standalone B2C model to a B2B ecosystem integration. Section 4.2 discusses the technical maturation of the firm, highlighting the transition from simple chatbots to Conversational Process Automation (CPA). Section 4.3 analyzes how regulatory compliance was proactively leveraged as a mechanism for institutional trust-building. Finally, Section 4.4 details the tangible operational and economic impacts, including the significant efficiency gains and cost savings observed by the incumbent partners.

4.1 The Strategic Pivot from B2C to B2B Process Integration

The longitudinal data reveals a distinct evolutionary trajectory in the startup's business model, characterized by a shift from a technology-driven, direct-to-consumer (B2C) approach to a process-oriented, business-to-business (B2B) integration model. During the initial phase of observation in 2018, the firm’s primary value proposition was centered on the technological novelty of its automated chatbot interface aimed directly at policyholders. However, early market data and internal reviews indicated that the customer acquisition costs associated with a standalone B2C model were economically unsustainable in a market dominated by established legacy brands.

The data from the 2024 consolidation phase demonstrates a complete strategic pivot (see Figure 1). Rather than attempting to bypass incumbents, the startup reoriented its technology to integrate deeply within the existing value chains of established insurers. As illustrated in Figure 1, this transition structurally repositioned the firm's technology from a standalone direct-to-consumer interface into an integrated business-to-business (B2B) operational bridge. Interview data from incumbent executives confirmed that the startup's value was no longer perceived in terms of front-end user acquisition, but rather in its ability to resolve structural back-office inefficiencies, specifically within claims management and policy administration workflows.

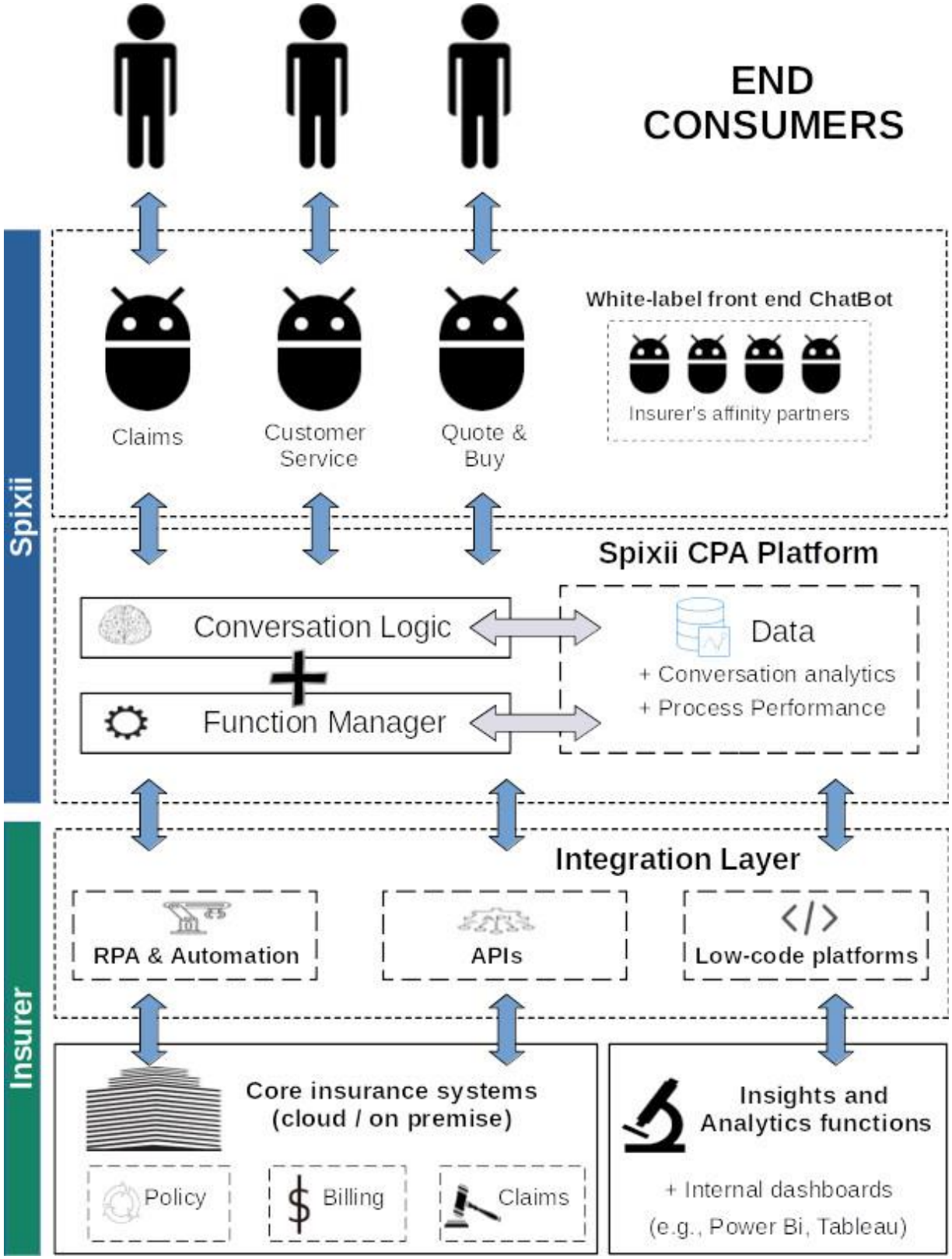

Figure 1, The strategic pivot from a standalone B2C model to a B2B ecosystem integration model. Own elaboration from (Spixii, 2025b) retrieved 10 June 2025

4.2 From Chatbots to Conversational Process Automation: Technical and Regulatory Maturity

Our findings reveal that Spixii's survival was predicated on a fundamental management approach and technical evolution. The startup shifts from simple "decision-tree" chatbots to a sophisticated "Conversational Process Automation" (CPA) framework.

Artificial intelligence in services is evolving from simple information-based interactions to systems capable of handling complex, personalised transactions, thereby reducing human error (Davenport et. Al., 2020)

The company, unlike early-stage bots that provided mere information, offers the CPA model is designed to execute high-value transactions useful for claims filing and travel insurance issuance. The startup integrated the CPA directly within the conversational interface.

The evolution of the company during the years was supported by a transition to a "neuro-symbolic" AI architecture. As highlighted in the 2024 interviews, the company's hybrid approach combines the flexibility of Natural Language Processing (NLP) with the rigidity of structured symbolic logic. This approach ensures that while the interaction feels human and "customer-driven," the underlying software execution remains strictly within the "guardrails" of regulatory requirements (e.g., GDPR and Solvency II) and risk management.

For incumbents, this technical and risk management maturity resolved the "validity gap" identified in the early stages of the startup's life. By adopting a "compliance-by-design" philosophy, the startup transformed its technology into a risk-mitigation tool for the partner. The data shows that by integrating these compliant-driven interfaces, incumbents were able to automate back-office processes that were previously manual and prone to error. This maturation was not just about better code, but about aligning the software's architecture with the institutional logic of the insurance and healthcare markets (Schillaci et Al., 2024), where auditability and data integrity are non-negotiable prerequisites for partnership.

4.3 Overcoming the Trust Deficit through Isomorphic Alignment

The triangulated data demonstrates that the relationship between the startup and traditional insurers

evolved from an initial posture of "market disruption" to one of "ecosystem collaboration." The friction of integrating agile, cloud-native technology with legacy mainframe systems was mitigated by repositioning the startup as a secure, compliant B2B enabler.

This repositioning the startup as a secure, compliant B2B enabler creates an alignment reflects that the practical application of regulatory isomorphism. The startup did not merely adjust its software; it structurally mirrored the compliance and risk-management protocols of its target partners (e.g., Allianz). Our data shows that this deliberate strong mirroring functioned as a critical trust mechanism, or more specifically a legitimacy bridge. The legitimacy brodge permits to neutralize the perceived operational risk of collaborating with a new, unproven venture. Last but not least the results indicate that for InsurTechs, the capacity to seamlessly map onto the incumbent's compliance processes is the primary determinant of successful ecosystem integration.

4.4 Economic and Operational Impact: Efficiency Gains and Market Savings

The coding analysis of the 2024 data reveals that the transition to a B2B "compliance-by-design" model generated measurable economic benefit for both the startup and its incumbent partners. The findings identify three primary areas of impact: operational velocity, industry-wide cost reduction, and customer retention.

First, the integration of Conversational Process Automation (CPA) into high-value insurance workflows—specifically claims and policy administration—demonstrated a radical increase in operational velocity. The empirical data and internal performance benchmarks indicate that these automated systems can execute complex transactions up to ten times faster than traditional legacy channels (Spixii, 2025b; 2025c). For incumbents like Bupa and Allianz, this speed represents a fundamental reduction in manual labor costs and a mitigation of the "operational friction" that typically characterizes large-scale insurance management.

Second, the research highlights a significant macroeconomic implication. By streamlining regulatory compliance and automating the customer journey, the widespread adoption of these AI-driven tools is estimated to generate industry-wide savings of approximately $1.4 billion by reducing administrative overhead and optimizing Customer Acquisition Costs (CAC) (Spixii, 2025c). The coding results indicate that by "outsourcing" the front-end compliance and data collection to a specialized InsurTech partner, incumbents can refocus their resources on core risk assessment.

Finally, the data suggests a strong correlation between these efficiencies and customer satisfaction. The automation of claims leads to a more seamless "self-serve" experience for the policyholder. The analysis

of the interviews and project brochures confirms that this efficiency contributes to higher retention rates and improved Net Promoter Scores (NPS) (Spixii, 2024); (Spixii ,2022).

Consequently, the findings demonstrate that the startup's pivot was a value-creation strategy that aligned the economic interests of the startup, the incumbent, and the end-customer.

5.Discussion

5.1 Rethinking Disruption and the Legitimacy Bridge

This study offers a distinct counter-narrative to the prevailing theory of "disruptive innovation" (Christensen et al., 2015). In industries with high barriers to entry and strict regulations, a strategy of cooperation with established players is often more effective than one of direct competition (Gans, 2016).

“Disruptive innovation" traditionally posits that new entrants leverage agile, cost-effective technology to gradually displace legacy organizations. From this case the empirical evidence demonstrates that within the high-reliability insurance ecosystem, this disruptive trajectory is fundamentally constrained. Rather than acting as a mechanism for market displacement, technological innovation in this sector must be coupled with institutional alignment.

The paper’s findings indicate that a company which operates in a strict regulatory framework (e.g., GDPR, Solvency II) do not merely have to face with the regulations but it functions as bureaucratic barriers to entry in the market. The high regulated framework act as rigorous structural filters that separate viable, long-term ecosystem partners from high-risk technical experiments. By voluntarily adopting heavy compliance standards needed in healthcare and insurance sectors, such as strict data integrity protocols and ISO 27001 certifications, prior to any formal regulatory mandate, the startup constructed what this study terms a "legitimacy bridge." This bridge neutralized the perceived operational risk of collaborating with a new venture. The data supports the concept of industry "re-bundling" (Stoeckli et al., 2018) where startups supply the technological agility that legacy systems lack. From the other side, incumbents provide the essential capital, regulatory licenses, and market access, resulting in a highly symbiotic relationship.

5.2 The Mechanism of Regulatory Isomorphism

Our findings extend the theoretical framework of institutional isomorphism (DiMaggio & Powell, 1983). The novelty is applying it to the modern digital financial ecosystem. We find that the strategic pivot observed in the case firm was not merely a functional adaptation to market conditions. The results instead show a profound shift in institutional logic. The startup engaged, to secure trust, in regulatory isomorphism the deliberate, strategic mirroring of the internal risk-management and compliance architectures of its incumbent partners.

The startup, by mapping its operational processes directly onto the governance structures of established firms, to effectively bypassed the corporate "immune system" that typically rejects external innovation in risk-averse organizations. Mirroring incumbent stability, in this market context, is not a capitulation to bureaucracy, but a sophisticated survival mechanism. Our last evidence show that the data indicates that in highly regulated sectors, achieving isomorphic alignment with an incumbent is the absolute prerequisite for effectively deploying technological capabilities at scale.

5.3 Strategic Evolution and Implications

In this study we observed an evolutionary trajectory underlines that digital transformation in regulated sectors necessitates a transition from "technology-push" to "market-pull" dynamics (Li et al., 2023). The continuous exercise of dynamic capabilities, allowing and pushing ventures to reconfigure their resources from front-end interface design to the engineering of secure, auditable back-office architectures.

Strategic Imperatives for Startups: The widely popularized "move fast and break things" ethos is fundamentally incompatible with the risk-aversion of the insurance sector. Founders must adopt "regulatory-by-design" architectures as a core value proposition. In complex B2B2C integration models, compliance must be reframed from an administrative burden to a primary competitive differentiator that drastically lowers the transaction costs of partnership formation.

We find strategic Imperatives for Incumbents and for Regulators and Policy Makers.

For Incumbents they can optimize their digital transformation by utilizing fully compliant InsurTechs as "decoupled laboratories" for rapid, secure experimentation. To facilitate this without compromising systemic security, incumbents should implement "internal sandboxes" that facilitates integration environments where novel data pipelines can be tested against the incumbent's rigid legacy frameworks (Battanta & Magli, 2023).

For Regulators and Policy Makers, the findings hold significant implications for regulatory bodies such as the Financial Conduct Authority (FCA). The data validates the efficacy of the "regulatory sandbox hypothesis" confirming that state-led innovation pathways are critical catalysts for de-risking emerging technologies (Wechsler et Al., 2022). However, regulators must recognize the dual nature of compliance: if regulatory burdens become excessively heavy, they risk stifling independent innovation entirely "(Cornelli et Al., 2020).

Consequently, regulatory frameworks should evolve from testing isolated technologies toward facilitating "Partnership". This study suggests that regulatory frameworks should evolve from testing isolated technologies toward facilitating "Partnership Sandboxes". These collaborative environments would allow startups and incumbents to safely test B2B integration protocols, data sharing, and liability management prior to full market deployment, ensuring the ecosystem benefits from agility without compromising systemic stability.

Beyond the institutional necessity of building a "legitimacy bridge," the integration of conversational AI and automated compliance processes offers substantial economic incentives. The deployment of AI-driven chatbots is estimated to result in significant cost savings for the broader insurance industry, projecting up to 1.4 billion USD in savings across various segments. For incumbents, partnering with compliant startups allows them to capture these macroeconomic savings—drastically reducing their Customer Acquisition Costs (CAC) and operational overhead—while simultaneously offering policyholders a faster, more personalized customer journey.

6. Conclusion

This study set out to challenge the prevailing narrative that regulatory compliance acts primarily as a barrier to technological innovation within high-reliability markets. By tracking the evolutionary trajectory of Spixii from 2018 to 2024, the findings reveal that the long-term sustainability and scalability of InsurTech ventures are increasingly decoupled from mere technological novelty. Instead, survival and growth are fundamentally tied to a startup's capacity to align with the institutional logic of incumbent firms. The longitudinal analysis demonstrates that proactive adherence to stringent regulatory

frameworks—such as GDPR, Solvency II, and ISO 27001 certifications—functions as a critical "legitimacy bridge." Through the mechanism of regulatory isomorphism, compliance transforms from a bureaucratic burden into the primary strategic driver of B2B partnership formation. The empirical evidence confirms that while customer-driven technology (such as NLP ChatBots) provides the initial market value, prosaic attributes like data integrity, auditability, and strict risk governance constitute the fundamental pillar of trust within the digital insurance (InsurTech) and healthcare ecosystems.

This study set out to explore the strategic evolution of InsurTech startups and their integration with traditional incumbents by addressing our three primary research questions (RQs).

Regarding **RQ1** (*How does the relationship between an InsurTech startup and incumbents evolve over time pre and post pandemic?*), our findings indicate that the relationship matures from a fragmented vendor-client dynamic into a deeply integrated B2B2C partnership with the incumbent. The longitudinal data (2018–2024) shows a deeply integrated B2B2C partnership, especially in the post-pandemic landscape. In post pandemic scenario, where the demand for digital self-service accelerated, the startup had to pivot from a standalone B2C model to becoming a structural ecosystem partner for incumbents.

Addressing **RQ2** (*What role does regulatory assessment play in enabling a fruitful cooperation between startups and incumbents?*), the analysis reveals a counterintuitive dynamic for an InsurTech startup: rather than acting as a barrier to innovation, strict regulatory adherence (e.g., GDPR, FCA standards, ISO 27001) serves as a crucial strategic enabler. The enabler is possible with the adoption of a "compliance-by-design" approach, the startup achieved regulatory isomorphism, effectively bridging the initial trust deficit and validating its operational reliability to risk-averse incumbents.

Finally, concerning **RQ3** (*Do AI chatbot technologies enhance the consumer experience and help foster business relationships between startup companies and incumbent?*), the empirical evidence provides another confirmation. The technical evolution from simple chatbots to Conversational Process Automation (CPA) dramatically improved the end-customer experience. This is clear because is evidenced by seamless self-serve journeys and higher Net Promoter Scores (NPS). The customer-centric success directly fostered stronger business relationships with incumbents, as the technology aligned the interests of both parties by delivering tangible economic value. The value is not only economical for the incumbent and for the startup: include a tenfold increase in operational velocity and significant market cost savings.

Our results, theoretically, provide a profound shift in how both scholars and practitioners should manage an ecosystem integration. Considering the practical side the growth in highly regulated sectors requires a process of organizational maturation. Startups in those sectors must shift their strategic focus from the direct solicitation of end-user attention (the B2C disruption model) toward the resolution of structural, back-office inefficiencies, from the client side and company side, within the incumbent's value chain. It is a migration to the B2B collaboration model. This paper advances institutional theory by introducing "regulatory isomorphism" into the digital platform discourse especially in high regulated context. The article demonstrates that mimicking the structural and regulatory stability of risk-averse incumbents is not a capitulation to legacy bureaucracy. It is instead a sophisticated, necessary survival mechanism that neutralizes the perceived operational risk for incumbent of collaborating with new ventures.

Consequently, this paper holds significant importance for future research by challenging the universally applied "move fast and break things" paradigm of the broader tech industry. By establishing a compliance-first theoretical framework, this study provides future scholars with a novel lens through which to evaluate why certain financial and health technology startups successfully scale while others fail. It posits that future academic models of startup success must weigh regulatory alignment equally alongside technological capability and market fit.

While this research provides actionable, empirical insights into the evolutionary dynamics of the digital insurance ecosystem, several limitations must be acknowledged to contextualize the findings. First, as a qualitative single-case study situated specifically within the United Kingdom’s progressive Financial Conduct Authority (FCA) regulatory framework, the findings may lack immediate generalizability to jurisdictions characterized by more restrictive or less developed financial innovation policies. The UK's unique "regulatory sandbox environment undoubtedly facilitated a smoother integration pathway than might be available globally. Second, despite efforts to triangulate data through independent documentation and incumbent executive feedback, qualitative case research inherently carries a degree of interpretative subjectivity. These limitations, however, present clear and necessary avenues for future research. Scholars should prioritize multiple-case study designs across diverse international regulatory regimes to comparatively assess how different legal environments impact the necessity and effectiveness of regulatory isomorphism. Furthermore, quantitative methodologies and large-N cross-sectional surveys should be employed to statistically validate the broader impact of early compliance adoption on startup survival rates and integration success across the wider financial and healthcare technology sectors.

Declaration of Conflicting Interests - *’The Authors declares that there is no conflict of interest’*.

References:

1. AlGhamdi, Z. K., & Abdelwahed, N. A. A. (2024). Developing consumers' experience with ChatGPT towards customer digital marketing satisfaction strategy. *Corporate & Business Strategy Review, 5*(3), 36–46. https://doi.org/10.22495/cbsrv5i3art4
2. Al Rifai, M., & AlBaker, Y. (2025). The role of financial technology in enhancing financial inclusion: A regulatory perspective on current industry trends. Corporate & Business Strategy Review, 6(1), 43–52. https://doi.org/10.22495/cbsrv6i1art4
3. Battanta, L., & Magli, F. (2023). RegTech: Analysis of the aggregators in the Swiss startups' ecosystem during the pandemic. *Risk Governance & Control: Financial Markets & Institutions*, *13*(3) https://doi.org/10.22495/rgcv13i3p4 .
4. Christensen, C. M., Raynor, M. E., & McDonald, R. (2015). What is disruptive innovation? *Harvard Business Review*, 93(12), 44–53.
5. Cornelli, G., Doerr, S., Gambacorta, L., & Merrouche, O. (2020). Regulatory sandboxes and fintech funding: evidence from the UK. *BIS Working Papers*, No 901.
6. Correia, A., & Água, P. B. (2024). Harnessing artificial intelligence for enhanced environmental, social, and governance reporting: A new paradigm in corporate transparency. In Ž. Stankevičiūtė, A. Kostyuk, M. Venuti, & P. Ulrich (Eds.), *Corporate governance: Research and advanced practices* (pp. 92–98). Virtus Interpress. https://doi.org/10.22495/cgrapp15
7. Davenport, T., Guha, A., Grewal, D., & Bressgott, T. (2020). How artificial intelligence will change the future of marketing. *Journal of the academy of marketing science*, *48*(1), 24-42.
8. DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2), 147–160.
9. Dua, G. K. (2022). Analysis on institutional theory, mimetic isomorphism, and firm performance. *International journal of health sciences*, *6*(S3), 5821-5832.
10. Gans, J. (2016). *The disruption dilemma*. MIT press.
11. Gaya, H. J., & Smith, E. E. (2016). Developing a qualitative single case study in the strategic management field. *International Journal of Business and Management*, 11(2), 24.
12. Gleißner, W., & Ulrich, P. (2025). Governance, risk, compliance and controlling: Institutional, cultural and instrumental interdependencies from a German perspective. *Corporate Ownership & Control, 22*(2), 41–52. https://doi.org/10.22495/cocv22i2art4

13. Grönroos, C. (2008). Service logic revisited: who creates value? And who co-creates? *European Business Review*, 20(4), 298–314.
14. Grönroos, C., & Ravald, A. (2011). Service as business logic: implications for value creation and marketing. *Journal of Service Management*, 22(1), 5-22.
15. Hao, R., & Li, C. (2025). How AI chatbots shape satisfactory experiences: A combined perspective of competence expansion and emotional extension. *Technological Forecasting and Social Change*, 212, 123979.
16. Huang, X., & Said, F. F. (2025). Assessing the impact of financial technology on the efficiency of banks: A systematic literature review approach. *Risk Governance and Control: Financial Markets & Institutions, 15*(4), 85–96. https://doi.org/10.22495/rgcv15i4p8
17. Li, C. Y., Fang, Y. H., & Chiang, Y. H. (2023). Can AI chatbots help retain customers? An integrative perspective using affordance theory and service-domain logic. *Technological Forecasting and Social Change*, 197, 122921.
18. Lusch, R. F., & Nambisan, S. (2015). Service Innovation: A Service-Dominant Logic Perspective. *MIS Quarterly*, 39(1), 155–175.
19. McKinsey & Company. (2023). *The United Kingdom: The Nexus of Insurtech*. McKinsey & Company.
20. Ngai, E. W., Lee, M. C., Luo, M., Chan, P. S., & Liang, T. (2021). An intelligent knowledge-based chatbot for customer service. *Electronic Commerce Research and Applications*, 50, 101098.
21. Othman, S., Darus, F., & Arshad, R. (2011). The influence of coercive isomorphism on corporate social responsibility reporting and reputation. *Social Responsibility Journal*, *7*(1), 119-135.
22. Rana, S., Singh, S. K., & Chandel, A. (2025). AI in Customer Service Automation: Balancing Efficiency With Human Touch. In *AI, Corporate Social Responsibility, and Marketing in Modern Organizations* (pp. 173-194). IGI Global Scientific Publishing.
23. Riikkinen, M., Saarijärvi, H., Sarlin, P., & Lähteenmäki, I. (2018). Using artificial intelligence to create value in insurance. *International Journal of Bank Marketing*, 36(6), 1145-1168.
24. Saarijärvi, H., Grönroos, C., & Kuusela, H. (2014). Reverse use of customer data: implications for service-based business models. *Journal of Services Marketing*, 28(7), 529-537.
25. Schillaci, C. E., De Cosmo, L. M., Piper, L., Nicotra, M., & Guido, G. (2024). Anthropomorphic chatbots for future healthcare services: Effects of personality, gender, and roles on source credibility, user satisfaction, and intention to use. *Technological Forecasting and Social Change*, 199, 123025.
26. Scott, W. R. (2013). *Institutions and organizations: Ideas, interests, and identities*. Sage

publications.

27. Seawright, J., & Gerring, J. (2008). Case selection techniques in case study research: A menu of qualitative and quantitative options. *Political Research Quarterly*, 61(2), 294-308.
28. Sosa Gómez, I., & Montes Pineda, Ó. (2023). What is an InsurTech? A scientific approach for defining the term. *Risk Management and Insurance Review*, *26*(2), 125-173.
29. Spixii. (2022). *How to enable true self-serve in insurance* [EBook]. Spixii.
30. Spixii. (2024). *How Bupa trialled the UK's first ever health insurance chatbot to transform digital healthcare* [Brochure]. Spixii.
31. Spixii. (2025a). *Claims and benefits*. Retrieved from https://www.spixii.com/high-value-processes/claims-benefits
32. Spixii. (2025b). *CPA work flow integration strategy*. Retrieved from https://www.spixii.com/platform
33. Spixii. (2025c). *White Paper*. Spixii.
34. Stoeckli, E., Dremel, C., & Uebernickel, F. (2018). Exploring characteristics and transformational capabilities of InsurTech innovations to understand insurance value creation in a digital world. *Electronic Markets*, 28(3), 287-305.
35. Strauss, A., & Corbin, J. (1998). Basics of qualitative research techniques.
36. Teodoro, M. P. (2014). When professionals lead: Executive management, normative isomorphism, and policy implementation. *Journal of Public Administration Research and Theory*, *24*(4), 983-1004.
37. Yin, R. K. (2018). *Case Study Research and Applications: Design and Methods* (6th ed.). Sage.
38. Vargo, S. L., & Lusch, R. F. (2004). The four service marketing myths: remnants of a goods-based, manufacturing model. *Journal of service research*, *6*(4), 324-335.
39. Wechsler, M., Perlman, L., & Gurung, N. (2018). The state of regulatory sandboxes in developing countries. *Available at SSRN 3285938*.
40. Wieland, H., Polese, F., Vargo, S. L., & Lusch, R. F. (2012). Toward a service (eco) systems perspective on value creation. *International Journal of Service Science, Management, Engineering, and Technology (IJSSMET)*, *3*(3), 12-25.

Appendix A

This appendix provides a comprehensive overview of the qualitative analytical framework, detailing the systematic coding process and the empirical evidence that supports the findings discussed in the main text.

1.Interview 2018

As previously mentioned, we have interviewed the CTO and co-founder of SPIXII, an InsurTech company that provides its customers with Chatbot solutions to improve their sales and to acquire more knowledge regarding their clients ("knowing the client"). The interview is transcribed in text and after that an analysis is performed to extract the main points and concepts encompassed in company's history of success as business model.

The CTO, Alberto Pasqualotto, told us how SPIXII's vision is "consumer centric" rather than "technology centric", the old bureaucratic style, and talked about the need to improve clients' selling processes. Alberto proposes a new business model based on Chatbots and the digital innovation of the incumbents, reporting that he is more likely to obtain resources from business accelerators or incubators than venture capital. The other products offered on the market now are less efficient than theirs, Chatbots need to be focused on the customer experience, and their processes should be guided and tracked, enabling their solution to represent the "state of art" of available technology.

According to Alberto, social media platforms are not ready to sell insurance because they are limiting their Chatbots, also due to the GDPR - the European privacy legislation - which is not fully adapted to this scenario.

The interview was held in Italian and so we completely translated the transcript of the conversation, evaluating any potential bias encompassed in it, and then evaluated its content, extracting valuable data and information. The coding procedure used to analyze the interview is based on the inductive method following the steps described below:

1. Based on the transcription of the interview, we proceed with a content analysis, identifying patterns and words related to the same topic, grouping them under the same main topic. We started doing this using relevant words as codes, e.g. needs, insurance, Chatbots, clients, etc.
2. We used the "*in vivo codes*" methodology, where codes are the wording that participants use in the interview and which have relevance in the context of analysis.
3. The codes we identified were related to behaviors, events, activities, strategies, relationships, conditions and consequences. Words related or correlated to the same subject or topic covered in the interview are merged (word grouping).

4. As part of the coding process and to achieve the desired results, which were the categories, we have used the process of coding tree 2, which is based first on the identification of the words (codes) after merging them in related groups (see Table 2), then the definition of the final categories (see Table 3).

WORD FREQUENCY (GROUPING WORDS BY SIMILARITY)			
Words translated from Italian	**Length**	**Count**	**Similar Words (Italian and English)**
main market	10	77	mondo assicurativo, mondo finanziario, mondo fintech, insurtech, assicurativo, segmento, America, UK, Londra, Francia, mercato, milione, Zurich
partner	6	71	Accenture, Allianz, collaborando, collaborarci, collaborare, collaborativo, collaborazione, collaborazioni, corporate, Facebook, grosso, grossi, incorporato l'azienda, LinkedIn, incumbent, Oracle, partner, piccolo agente, scouting, whatsapp
customer	8	55	cliente, clienti, customer, persona, persone, utente, utenti
business	8	54	azienda, brand, business, compagnia, contratto, exit, futuro, internamente, partecipazione, start-up, visione
product	7	45	prodotti, prodotto, benchmarking, funzionale, idea, idee, informazione, nata, segmentazione, giusto
insurance	9	36	assicurazione, bene, regolamento, scritto in piccolino, compliance, insurance, regolamentata, regolamentazione, governo
chatbot	7	25	chat, chatbot, robot, prototipo
automation	10	23	automatizza, automatizzare, automatizzata, automatizzati, automatizzazione, funzionare, sistema, macchina, macchine
impact on technology	18	22	impatto sulla tecnologia, innovazione, tecnologia, incredibile
process	7	21	processare, processi, processo, gestione, framework, lavori, interno
app	3	19	app, flessibilità, model, rispondere, use case
sales	5	15	vende, vendere, venderti, vendevano, vendita, vendite, venduta, vendute
accelerator	11	15	acceleratore, acceleratori
database	8	15	database, dati
price	5	14	prezzi, prezzo, quote, tabelle, tabella, compliant

experience	10	12	esperienza, user experience, validation, conversazione
adaptation	10	12	cambi, cambia, cambiano, cambiare, comportamento, imparare, psicometriche, psicometria
incubator	9	12	application, Boot camp,
accessible	10	11	Accessibile, 70 pagine, forma
needs	5	10	bisogna, bisogni, comfort zone, informazioni
competitors	11	9	competitor, competere, competizione,
anonymization	13	6	anonimizzato, anonimizzazione, indipendente, indipendenti, impersonali, dati sensibile
personal	8	5	personale, essere umani
service providers	16	4	amazon web service, cambiato

Table 2. word frequency (grouping words from original Italian language by similarity into English)

The interview is exploratory because SPIXII is a unique case of a start-up fully compliant with the regulation and with concrete interactions with insurance incumbents. As such, we aim to explore these aspects in its work and in its characteristics as a "unique" start-up that has successfully applied this kind of technology in this sector.

As mentioned, we used inductive coding, which means that we started the coding process taking the research questions as our reference. We took lots of notes and made observations while we were reading the text resulting from the transcription of the interview, and grouped homogeneous and/or related codes (words), categorizing them under the main aspects identified during the interview and then interpreting and abstracting the main questions and the conclusion.

The results obtained are aligned with what we were exploring in the research.

CATEGORIES							
MARKET		**INNOVATION**		**CUSTOMER EXPERIENCE**		**COMPETITIVE ADVANTAGES**	
main market	77	chatbot	25	customer	55	product	45
partner	71	automation	23	sales	15	app	19
business	54	impact on technology	22	price	14	incubator	12
insurance	36	process	21	experience	12	accessible	11
competitors	9	accelerator	15	needs	10	anonymization	6
service providers	4	database	15	personal	5		
		adaptation	12				

TOTAL WORDS	**251**	**TOTAL WORDS**	**133**	**TOTAL WORDS**	**111**	**TOTAL WORDS**	**93**

Table 3 – Final categories resulting from the coding procedure implemented

The first finding is that for SPIXII the client is the center of its innovation process and the data provider. Technology is only the means that improves the interactive communication between the insurance company and its customers.

Chatbot technology could be better to analyze the profile of a customer than asking them to fill out a long printed contract or a long online form full of questions, because the questions and the relative answers could be analyzed and easily evaluated online and could direct each specific customer to the solution that best fits their needs, improving the final results for both the customer and for the insurance company, in a real win-win scenario.

The second finding is the importance of compliance with the regulation regime - a major problem for all Chatbot start-ups. SPIXII is the only Chatbot start-up whose primary concern is the use of an in-house system (IT system developed internally) compliant with the privacy rules, particularly with the GDPR and Solvency 2 (A specific bundle of financial rules to protect customers of an insurance company), which has become a major competitive advantage over competitors.

Below we present some of the key phrases from the transcribed interview which corroborate the findings mentioned above:

1. Related to the "Market": "*We are a software provider with the difference that we have contracts based on policies sold*".
2. Related to "Innovation": "*To sell our chatbot to an insurer takes two years, two and a half years*".
3. Related to "Innovation": "*My vision is to have an automated insurance company*".
4. Related to "Innovation": "*What we did was plug in our automated chat that shows the quote and allows payment within the chat*".
5. Related to the "Customer Experience": "*Our proposition was very B2C, we wanted to go to the end customer and have a direct relationship with the user*".
6. Related to the "Customer Experience": "*We start from user experience, you need to have excellent knowledge of insurance products*".

7. Related to the "Customer Experience": "*We haven't found anyone yet with our approach to the customer experience*".
8. Related to "Competitive Advantages": "*You can't enter the insurance world with the idea of revolutionizing it or destroying it from the outside*".

These phrases represent the core aspects of the business model, vision, challenges, and strategic approach of the SPIXII start-up in the InsurTech sector.

2. 2024 interview

CTO Alberto Pasqualotto underlined how SPIXII did not change its vision, meaning that throughout these years it has continued to pursue a "consumer centric" approach rather than a "technology centric" approach, promoting a game change in the old bureaucratic style and creating new opportunities to improve its clients' selling process. Alberto reaffirmed that as its Chatbot is focused on the customer experience, guided and tracked to promote the best experience for end customers, its solution is still to be considered as a "state of art" Chatbot technology.

In addition, as its solution respects the GDPR and Solvency 2, it had the opportunity to expand into the health insurance market and open a new business unit in Switzerland due to the simple fact that its software is fully compliant with the strictest privacy rules in force today.

The interview was held in Italian and so we completely translated the transcript of the conversation, evaluating any potential bias encompassed in it, and then evaluated its content, extracting valuable data and information. The coding procedure used to analyze the interview is based on the inductive method following the steps described below:

1. Based on the transcription of the interview, we proceed with a content analysis, identifying patterns and words related to the same topic, grouping them under the same main topic. We started doing this using relevant words as codes, e.g. needs, insurance, Chatbots, user experience, process, clients, etc.
2. We used the "*in vivo codes*" methodology, where codes are the wording that participants use in the interview and which have relevance in the context of analysis.
3. The codes we identified were related to behaviors, events, activities, strategies, relationships, conditions and consequences. Words related or correlated to the same subject or topic covered in the interview are merged (word grouping)
4. As part of the coding process and to achieve the desired results, which were the categories, we have used the process of coding tree 2, which is based first on the identification of the

words (codes) after merging them in related groups (see Table 4), then the definition of the final categories (see Table 5)

WORD FREQUENCY (GROUPING WORDS BY SIMILARITY)			
Words translated from Italian	**Length**	**Count**	**Similar Words (Italian and English)**
customer (≅ B2C)	8	35	cliente, clienti, customer, personalizzato, persone, utente, cultura, accedere, acquisire
process	7	25	processi, processo, processi, gestione, interazione, operazione, flussi, building, programmato,
business	8	23	azienda, contratto, contratti, start-up, ambiente, ambienti
second main market	16	21	mondo della salute, mondo della salute, Italia, italiani, Svizzera,
insurance	9	21	assicuratore, assicurazione, compliance, insurance, regulator, regole, affidati, dati sensibili
product	7	19	prodotti, prodotto, proprio, idea, giusto
first main market	15	11	insurtech, mondo assicurativo, mondo finanziario, mondo fintech, segmento, Inghilterra, Regno Unito, mercato
chatbot	7	11	chat, chatbot, prototipo, demo
experience	10	10	user experience, conversazione, tempo
automation	10	9	automatizzare, sistema, Integrare,
sales	5	8	domanda, soldi
impact on technology	18	7	tecnologia, intelligenza artificiale
app	3	7	features, rispondere, problema
needs	5	7	informazioni
accelerator incubator	20	6	acceleratore, kickstart
database	8	6	dati
adaptation	10	6	cambia, cambiate, cambiare, imparare
client (≅ B2B)	6	5	allianz, collaborazioni, grossi, grande gruppo
service providers	16	5	cloud

Table 3. Word frequency (grouping words from original Italian language by similarity into English)

The interview is exploratory because SPIXII is a unique case of a start-up fully compliant with the regulation and with concrete interactions with insurance incumbents. As such, we aim to explore these aspects in its work and in its characteristics as a "unique" start-up that has successfully applied this kind of technology in this sector.

As mentioned, we used inductive coding, which means that we started the coding process taking the research questions as our reference. We took lots of notes and made observations while we were reading the text resulting from the transcription of the interview and grouped homogeneous and/or related codes (words), categorizing them under the main aspects identified during the interview and then interpreting and abstracting the main questions and the conclusion. The results obtained are aligned with what we were exploring in the research.

CATEGORIES							
MARKET		**INNOVATION**		**CUSTOMER EXPERIENCE**		**COMPETITIVE ADVANTAGES**	
business	23	process	25	customer (≅ B2C)	35	product	19
second main market	21	chatbot	11	experience	10	app	7
insurance	21	automation	9	sales	8	accelerator, incubator	6
first main market	11	impact on technology	7	needs	7	service providers	5
client (≅ B2B)	5	database	6				
		adaptation	6				
TOTAL WORDS	**81**	**TOTAL WORDS**	**64**	**TOTAL WORDS**	**60**	**TOTAL WORDS**	**37**

Table 4 – Final categories resulting from the coding procedure implemented.

The first finding is that for SPIXII the end customer is still its center of innovation and diversity is a competitive advantage. Therefore, for those companies that need to have high standards of compliance regarding privacy, its solution produced the best results, mainly for the data provider. Its technology improves the interaction and communication between the company and its customers.

In general, the incumbents are focused on the product and the technology itself. Alberto shows that its focus on the clients of insurance companies, extracting valuable data from them, is the best way to improve and modernize the insurance sector. Communication is more effective and reliable with the use of Chatbot technology and is better for analyzing the profile of a customer than asking them to fill out a long printed contract or a long online form full of questions, because the software can easily evaluate and extract valuable information from the questions answered, redirecting each specific customer to the best fit for their needs, improving in this way the final result for both the customer and for the insurance company itself, once again confirmation of a real win-win scenario.

One noteworthy aspect when comparing the results from the first and second interviews is that the "price" aspect has not come to light as in the first conversation. This indicates that its clients already perceive the real value behind the solution, significantly reducing discussions about this aspect compared to when the startup was founded and no one knew their software. A second aspect that we could raise regarding this same argument is that clients do not find competitors with equivalent solutions to offer and, therefore, do not have much to say about its prices anymore. And lastly, SPIXII has improved its operations, significantly reducing its costs, also through the use of cloud services.

The second finding is the importance of compliance with the regulation regime - a major problem for all Chatbot start-ups. SPIXII is the only Chatbot firm whose primary concern is the use of an in-house system compliant with the privacy rules, particularly with the GDPR and Solvency 2, which has become a major competitive advantage over competitors.

It is also possible to confirm that as its Chatbot is rigorously compliant with the strictest privacy rules in force today, it allowed them to acquire clients from a completely new market, the health insurance market. This would also seem to explain why the vector "anonymization" has not come to light in this second interaction.

Below we present some of the key phrases from the transcribed interview which corroborate the findings mentioned above:

1. Related to the "Market": "*Many customers arrive without knowing exactly what they are looking for*"
2. Related to the "Market": "*After starting out in the insurance world we moved onto the health world*".
3. Related to the "Market": "*We also expanded in Switzerland*"
4. Related to "Innovation": "*Operational efficiency and the fact that a great deal of traffic is*

reduced from their call centers and agents, allowing them to save money".

5. Related to "Innovation": "*This has always been one of our priorities: automating high-value processes*".
6. Related to the "Customer Experience": "*For the past couple of years, the ultimate criterion by which we are able to pivot and win customers is definitely a good user experience*".
7. Related to the "Customer Experience": "*Let's try to build together a system that works and responds well to end consumers*".
8. Related to "Competitive Advantages": "*We went from the innovation world to the operation world*".
9. Related to "Competitive Advantages": "*We went for the cloud because it obviously had very low costs*"

These phrases represent the core aspects of the business model, vision, challenges, and strategic approach of the SPIXII start-up in the InsurTech and Health Insurance sectors.