

Insurance Practice

# Scaling the impact of advanced analytics in Iberian insurance

Although insurers within the Iberian Peninsula have embraced analytics, realizing the full value of new technologies will require a confident move from moderate pilots to enterprise-wide deployment.

*by Jorge Ferreira, Rui Neves, and Alfons Parramon*



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**The business potential** of advanced analytics (AA) is immense. This is especially true for the insurance industry, where prediction and assessment are hardwired into the business model. During the past year, many property and casualty insurers within the Iberian Peninsula have made progress in building analytics capabilities, deploying pilot cases, and building up new AA teams. Still, most Iberian insurers struggle to realize the full potential impact. To realize growth and productivity improvements beyond isolated AA use cases, they must move toward full-scale, enterprise-wide deployment.

Based on in-depth interviews with Iberian insurers (see sidebar, “About the research”), this article describes how the industry has been adopting AA, why full-scale adoption is still limited, and how insurers can advance through three levels of maturity in their AA scaling in the coming years. By overcoming challenges associated with strategic planning and operational readiness, insurers can ascend to higher levels of digital and analytics maturity across their entire organization.

## The state of advanced analytics in Iberian insurance

To measure the state of AA in Iberian insurers, we explored the current penetration of various use cases as well as the development of AA capabilities. Throughout the past few years, all the insurers

we interviewed have made progress in deploying and gaining insights from AA across a range of use cases. Yet only two companies reported value creation at scale—for example, by installing a center of excellence that drives a considerable pipeline of use cases while strengthening AA capabilities and mechanisms across the organization. No company reported having achieved full integration and automation—that is, the stage at which analytics is implemented across most customer and process decisions. For example, at this stage, a machine-learning model scans every claim and flags alarming scores to a triage team, or a machine-learning algorithm anticipates a customer’s need in a given situation and sends the precisely priced product offering in the exact right moment and channel.

### Current advanced analytics use-case delivery

AA stands to have a considerable impact across the insurance value chain, particularly in underwriting and pricing, marketing and sales, and claims and servicing. Iberian insurers report use cases across these domains, albeit with varying levels of penetration and success:

*Underwriting and pricing.* Analytics has experienced the highest penetration in underwriting and pricing, particularly in policy technical pricing. However, most such models lie within the realm of actuarial science rather than data science. The use of more advanced, machine learning–based tools

## About the research

**To determine the state** of advanced analytics across insurers in Iberia, we conducted in-depth interviews with some of the top analytics and data executives from seven companies throughout Spain and Portugal. These companies cover approximately 25 percent of the Iberian property and casualty insurance market,

and our work in the region and elsewhere indicates the insights detailed here are applicable more broadly across the European insurance industry.

The interviews covered overall situation, analytics strategy, assessment of key capabilities, roadblocks, and next steps

and ambitions. Some of the resulting insights are relevant to the entire insurance business, but most were focused on analytics use cases in property and casualty insurance.

# Realizing the full value of AA requires a redesigned, fully digitized, and likely automated claims journey.

remains low but could deliver huge value. Behavioral pricing, for example, builds on technical pricing to enable the insurer to optimize price customization for each customer. Still, few Iberian companies have taken steps toward developing this capability—even among direct insurers, for whom such capabilities are more intuitive given their digital backbone. In attempting to explain why, some interviewees noted that actuaries are reluctant to leave pricing decisions to data scientists, who may have less experience in this highly specialized domain.

**Marketing and sales.** Insurers' marketing and sales functions have benefitted from the AA experiences of other service-based industries, especially banking. Among the insurers we interviewed, two AA use cases in particular are widespread: retention management and cross-selling (or upselling). In both cases, AA can boost marketing return on investment by helping prioritize leads and products based on personalized offerings. Scaling isolated use cases, however, requires aligning incentives across the extended sales network as well as investing in front-office tools that effectively prioritize and track leads. This is where several insurers we interviewed face challenges. One interviewee states, "We face skepticism from our commercial management. They are believers in the traditional approach whereby the quality of the salesperson is almost the only driver of commercial success."

**Claims management.** Our interviewees' AA capabilities are least advanced in claims management. The only use case that has seen any significant progress is fraud detection, but even this space has considerable room for improvement in the breadth and depth of intelligent detection.

One interviewee noted, "The only use case in claims we have implemented so far is fraud in motor insurance, but it is a rule-based model, not really advanced analytics." The challenge lies in the fact that claims is such a complex system of interrelated, often manual processes, so AA bring little benefit to isolated use cases. To be truly transformational, AA will need to be embedded in multiple stages of the journey. Realizing the full value of AA requires a redesigned, fully digitized, and likely automated claims journey. For instance, in bodily-injury claims management, a model that estimates the best rehabilitation center for a claimant will have limited impact without an exhaustive collection of performance data across providers, as well as sufficient flexibility to allow for claimants to be allocated to appropriate providers.

## Capabilities to enable advanced analytics

Despite limited progress in AA implementation to date, all insurers are developing capabilities today to drive scale in the future. We found four capabilities—data richness and quality, modern modeling tools and techniques, analytics talent, and effective business integration—to be particularly crucial in driving this development going forward. Insurers show different maturity levels across these dimensions, but most have made sizable advancements in each:

**Data richness and quality.** Most insurers are investing in data lake technology—but few store data from across domains and functions. Even fewer have reached a level of maturity where the data lake is fully integrated with operations. In practice, this means that even if a model can be developed using all the available data, it is almost impossible to

use the model unless the data is continuously and automatically updated. One interviewee mentioned, “We have a data lake, but it still lacks synchronization with all transactional data sources. We can use it to develop models but only based on information several months old.” Some insurers are exploring or have even developed partnerships with data aggregators to acquire external information on customers and prospects—but to date, external data use is rare.<sup>1</sup>

**Modern modeling tools and techniques.** All the insurers we interviewed have ramped up their use of modern tools (such as Python, R, or Scala) and machine-learning techniques (such as random forest, gradient boosting, or deep learning). Again, the extent and scope of their applications vary considerably. In most cases, these capabilities are confined to specific domains or teams, though some have extended them more broadly across the organization. Some insurers have even started using platforms that automate the tasks of a data scientist, such as DataRobot.

**Analytics talent.** Although our interviewees employ in-house AA experts, the majority also recognize they do not have enough. In-house experts may lack the appropriate knowledge and authority necessary to effect change; as such, they struggle to meet the target pace of use-case implementation. With notably competitive recruitment of such talent, insurers must invest considerable resources to finding, securing, and retaining such talent. In addition, while insurers are working to incorporate data scientists into their ranks, they do not always focus on crucial complementary roles such as data engineers, data architects, workflow integrators, and business translators.

**Effective business integration.** Some AA models have been integrated effectively into the business, but there is still a long way to go, particularly

regarding decision-management processes and staff training. While connection between an insight-generating model and the decision-making process should be automatic, full integration is rare. For example, a model that aims to boost customer retention rates has little value if the list of prioritized customers is not properly integrated into a call center’s workflow. Updating end users with the new process often poses another roadblock. As the chief analytics officer of a leading health insurer observed, “Sometimes we prefer to defer model development, even at the cost of having our budget reduced, just because we do not want to push for something that neither the end users nor the technology is ready to digest.” Another interviewee commented, “The analytics teams believe their job ends once the model is developed, but no one is really taking care end to end to make the models work.” And a third said, “The challenge is not resistance to change, it’s lack of integration of the model into the workflow.”

## Challenges to scaling impact

AA’s current limited maturity is due not to insurers’ lack of conviction but to lack of strategic planning and low operational readiness.

### Lack of strategic planning

All insurance companies interviewed confirmed their desire to become at-scale players in analytics and have identified priority use cases for most business units. Only one insurer has defined a strategic plan with specific milestones to achieve that vision; none have a concrete road map for the next two to three years. As an interviewee discerned, “The CEO, the head of data analytics, and the COO decide what two or three use cases are a priority for the year based on business priorities, but without a program or any long-term perspective.” As a result, there are many individual use-case pilots but no sustained, strategic approach to building the pipeline of use

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<sup>1</sup> For more on the importance of building partnerships to tap customer data, see Chris McShea, “The looming tipping point: Is the insurance data moat still a competitive advantage?,” September 19, 2019, McKinsey.com.

cases. The lack of a road map also hampers insurers' ability to launch transformational projects to redesign an entire process flow or decision journey.

While most Iberian insurers say that AA is a strategic priority, their budget priorities often tell a different story. Other industries are more bullish about investment. For example, some banks have stated that they have increased their AA investments sevenfold in the past three years and expect them to keep growing significantly in the next two or three years.

Finally, only one interviewed insurer has a formal and rigorous impact- and feasibility-assessment process in place—a crucial component to planning strategic investments. AA budgeting, prioritization, and planning will seldom happen effectively if the value at stake and the complexity of realizing that value is not clear.

#### **Low operational readiness**

Interviewees highlighted several operational obstacles to their analytics aspirations—many of them revolving around talent, coordination, and integration of IT and data. The biggest hurdle is human capital; plainly stated, insurers noted they lack the necessary talent to build effective models that are technically compelling and relevant for the business. The lack of formal coordination among the business units, data science, and IT makes it difficult to deliver end-to-end use cases. One interviewee remarked, “The center of excellence has a very analytics-driven versus business- or impact-driven mindset. They make models, organize hackathons with universities . . . but their coordination with the business units and with IT to implement the models is weak.” A lack of IT-workflow integration means that despite a relevant pipeline of models, many of them will end up not being implemented at scale given their reliance on manual processes. Insurers cited difficulty securing resources to implement even those use cases with clear potential given other business priorities and budget constraints, as well as a lack of data integration that hinders the comprehensive view needed for modeling.

## **Realizing insurers' vision for advanced analytics transformation**

Scaling the impact of AA is necessary for insurers—both within Iberia and across the globe—that seek to secure sustainable profitability in the digital age. The vision and direction are clear, but the paths taken may differ. By looking at global best practices and paths to implementation, we have identified three stages of AA maturity that will help guide Iberian insurers to overcome present challenges and reach their vision:

**Stage 1:** Deploying tactical AA use cases

**Stage 2:** Enabling a radically redesigned customer journey through AA

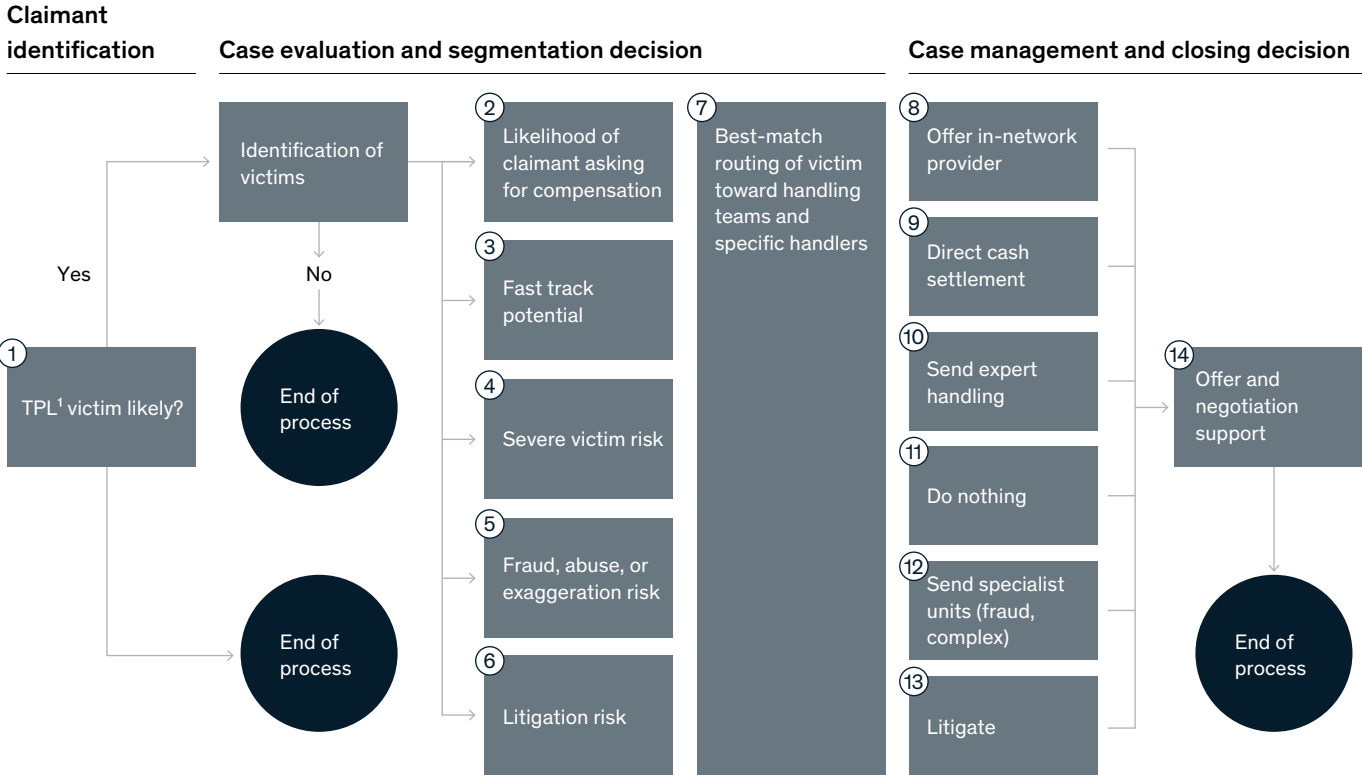
**Stage 3:** Expanding to ecosystem participation or orchestration

### **Stage 1: Deploying tactical advanced analytics use cases**

Most insurers currently deploy AA in discrete use cases across business journeys (for example, the underwriting, claims-management, or retention journeys). Such use cases can collectively have a significant financial impact by either growing revenue or reducing cost—although it should not be mistaken for a full-scale analytics transformation.

For instance, the bodily-injury claims journey in auto insurance offers several opportunities for the use of discrete AA use cases at key decision points (exhibit). Once the claim is initiated, AA can assist in several tasks such as assessing the severity of the injury or the likelihood of fraud or litigation. Then in case segmentation, AA can quickly sort out standard claims that can be straight-through processed from those that require a specialized handling unit. For the latter, AA can route specific claims to the right handler units as well as individual handlers based on a variety of performance indicators, such as the handler's success rate in resolving certain types of claims. Finally, case management can use AA to determine which handling action is most appropriate—for instance,

**Advanced analytics can empower a radical redesign of the journey with a completely different case segmentation and handling process.**



<sup>1</sup> Third-party liability.

sending to a medical expert or routing the claimant to an in-network provider—and provide a real-time performance dashboard to managers overseeing a given domain’s claims department.

Tactical deployment of AA use cases is particularly valuable if they serve as evidence of effectiveness in order to lay the groundwork for a more comprehensive transformation. However, insurers at this stage typically embody the challenges associated with strategic planning and operational readiness: lack of a long-term transformational road map, smaller budgets, fewer AA-dedicated employees, and incomplete operational-system integrations (due to limited levels of collaboration

with IT). Despite these obstacles, these insurers can still achieve incremental progress.

**Stage 2: Enabling a radically redesigned customer journey through advanced analytics**

A significant step up in maturity involves building an AA-enabled, end-to-end customer journey. This more ambitious AA transformation requires insurers to address shortfalls in their strategic planning and operational readiness head on, committing to a healthy budget and a realistic timetable that looks several years into the future, with clear milestones tied to specific key performance indicators in the interim.

In this approach, analytics is no longer a stand-alone effort generating impact at specific points in the journey. Rather it is now one of three elements—digital interactions, advanced analytics, and automation—that each play a specific role in pursuing an entirely optimized journey:

- Digital interactions increase availability of data, richness and exchanges of information, and connectivity among stakeholders
- Advanced analytics generate insights from the data to serve and optimize human and automated decisions
- Automation not only reduces costs but also improves customer and distributor experience and operational excellence

With this approach, the journey would be designed around the possibilities that AA offers. Building on the bodily-injury case example, the journey begins with an automatic notification of either an existing claimant or highly likely third-party claimant via a predictive model. This notification prompts a second, parallel set of predictive models to determine the optimal claims routing and automatically communicate next steps to the claimant. These communications may include a compensation offer or a request for an appointment with a provider such as a medical expert or rehabilitation center. Every time the information available changes significantly (for example, an emergency room report is received), the case is reevaluated by additional sets of models, reassessing the best next action for claim settlement.

As a result of the new journey, simple claims should be handled with little to no intervention, limiting the participation of traditional claims handlers to complex cases.

These first two stages require the underlying IT integration and talent to manage a single, consistent, and exhaustive view of the customer through high-quality, consistent data. In addition, a degree of flexibility and modularity in core technologies would allow analytics to be more easily embedded into the decision-making processes.<sup>2</sup> Given that the second stage requires not just automating existing processes but also changing the process steps themselves, insurers pursuing a redesigned, AA-enabled customer journey must avoid constraints such as confirmation bias—pointing to the need for design thinking and agile, at-scale ways of working.<sup>3</sup>

### **Stage 3: Expanding to ecosystem participation or orchestration**

A third, more ambitious stage takes the insurer beyond its core business. The aspiration is to build data ecosystems that broadly create additional value for the market—though, to maximize the value captured, the insurer should aim to lead or even orchestrate such an ecosystem.<sup>4</sup>

Ecosystems are created around data assets, but their structure can vary depending on the extent and the nature of alliances. Typically, we see one of two versions: the first is a vertical or “local” ecosystem in which data sharing and collaboration occur between companies within a single value chain (for example, health insurers and private hospitals within the health insurance value chain). The second is a many-to-many or “global” ecosystem, in which data sharing and collaboration occur between different sectors.

Achieving this level of AA maturity requires a robust technology architecture and a structure centered on a distinct platform—among other capabilities—as well as a razor-sharp focus on building an ecosystem-driven business model and end-to-end collaboration with partners. Strategic planning and operational

<sup>2</sup> For more, see “Platforms and modularity: Setup for success,” April 2017, McKinsey.com.

<sup>3</sup> For more, see John Edson, Garen Kouyoumjian, and Benedict Sheppard, “More than a feeling: Ten design practices to deliver business value,” December 2017, McKinsey.com and Daniel Brosseau, Sherina Ebrahim, Christopher Handscomb, and Shail Thaker, “The journey to an agile organization,” April 2019, McKinsey.com.

<sup>4</sup> For more about insurance ecosystems, see Tanguy Catlin, Johannes-Tobias Lorenz, Jahnavi Nandan, Shirish Sharma, and Andreas Waschto, “Insurance beyond digital: The rise of ecosystems and platforms,” January 2018, McKinsey.com.

readiness must be on par with top performers, with a budget and staff to match. An insurer with an outward mentality understands that an ecosystem's value comes from the network of partners, not just its own offering. And as such, an integrated view of the data collected throughout the ecosystem can help amplify the potential value captured.

An excellent example of successful ecosystem orchestration is South African insurer Discovery's Vitality loyalty platform. Customers acquire points for exhibiting healthy habits and good driving behavior and are then granted access to rewards and benefits (that scale according to their status), which are redeemed through an ecosystem of rewards partners. This gamified model redefines the customer-engagement concept and recognizes that consumers care more about their health than about their insurance policies. The additional data points insurers capture from their customers enable the development of insights at a level that no competitor can match. And customers benefit from better health outcomes and lower healthcare costs, including a

10 percent lower rate of chronic conditions compared with those who don't use the program as well as 28 percent shorter hospital stays. As the ecosystem orchestrator, Discovery holds a strong position to capture value created by that ecosystem, while maintaining a shared-value mindset to ensure that each of the stakeholders benefits and therefore continues to engage with the system.

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In our view, if Iberian insurers—and those across Europe—want to close the gap between the promise of AA and the value realized to date, they will need a bolder approach. The next 12 to 18 months will be critical. The value at stake is large, but first-mover advantage will be significant, particularly in the realm of ecosystem participation and orchestration. Our expectation is that those players that do act on analytics strategic planning and on operational readiness will start to close the AA value gap with banking, telecommunications, insurtechs, and other industries.

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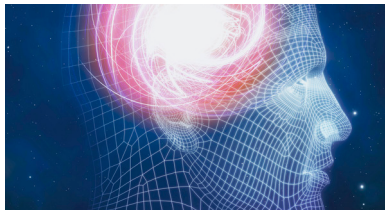
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