Five steps to 'big data' nirvana

The explosion of data offers a threat and an opportunity to insurers, but few have really grasped the extent of the challenge. Patrick Maeder lays out the five areas where insurers should focus if they are to adapt successfully to the new information-centric world

Barely an hour goes by when each of us doesn't shed valuable data that can be collated to paint a picture of our lives, but more importantly, predict our futures.

Being privy to such information brings great power and insurance companies should act quickly to build five pillars to rebuff threats from data aggregators, such as Google.

The big data explosion has created a new ecosystem of data sources incorporating a diverse range of new players from telecommunications, retail and automotive companies, to domain-specific data providers and aggregators.

As well as acting as valuable sources for insurers, such organisations are building their own capabilities with an aim to enter the insurance market, potentially with the benefits of less legacy baggage and a set of market-disrupting data assets.

So, how can the insurance industry fully embrace the wealth of data now becoming available and translate it into business value? And how can insurance companies make sure they are not being left behind or locked out by new ecosystem players? BearingPoint undertook a study with 30 US and European insurance companies to answer these questions. This research encompassed their attitudes, strategies and activities with respect to big data and advanced analytics (BD&AA).

INSURERS ARE STILL AT THE STARTING BLOCKS

The research confirmed our main hypothesis derived from experiences on client projects: insurers are still at the starting blocks of exploiting the potential that big data can bring (see figure 1).

The majority of organisations that we researched were highly positive about what big data might be able to do for their company, with over two-thirds of respondents confirming big data's place as a 'value driver' and having a highly important future role.

However, less than a quarter felt that they were beyond the 'emerging' stage of experimenting with the capabilities, or had done anything beyond starting to explore opportunities.

How can insurers move beyond aspiration to exploitation? From analysis of the research and of our own client experiences, we believe the answer lies not in thinking about data as a mountain to be mined, but rather as a process to harness a growing number of powerful new sources of insight to the benefit of the insurer and its customers.

While new areas of benefit may emerge, a more logical starting point is the existing areas of the business – as David Castellani, business information officer, New York Life states, "Insurance companies expect from big data a risk reduction and enhancement of underwriting."[1]

Indeed, whilst we asked 12 questions about potential target areas for big data, the results grouped into three clear categories, in order of priority (see figure 2):
1. Identifying new opportunities and delivering new services to customers
2. Addressing internal efficiency and improving overall steering
3. Offering a strategic overview of existing and new business domains

A VICIOUS CYCLE

What is preventing insurers from moving ahead more quickly? Our research suggests

Figure 1: What stage is your company at in implementing a BD&AA strategy?
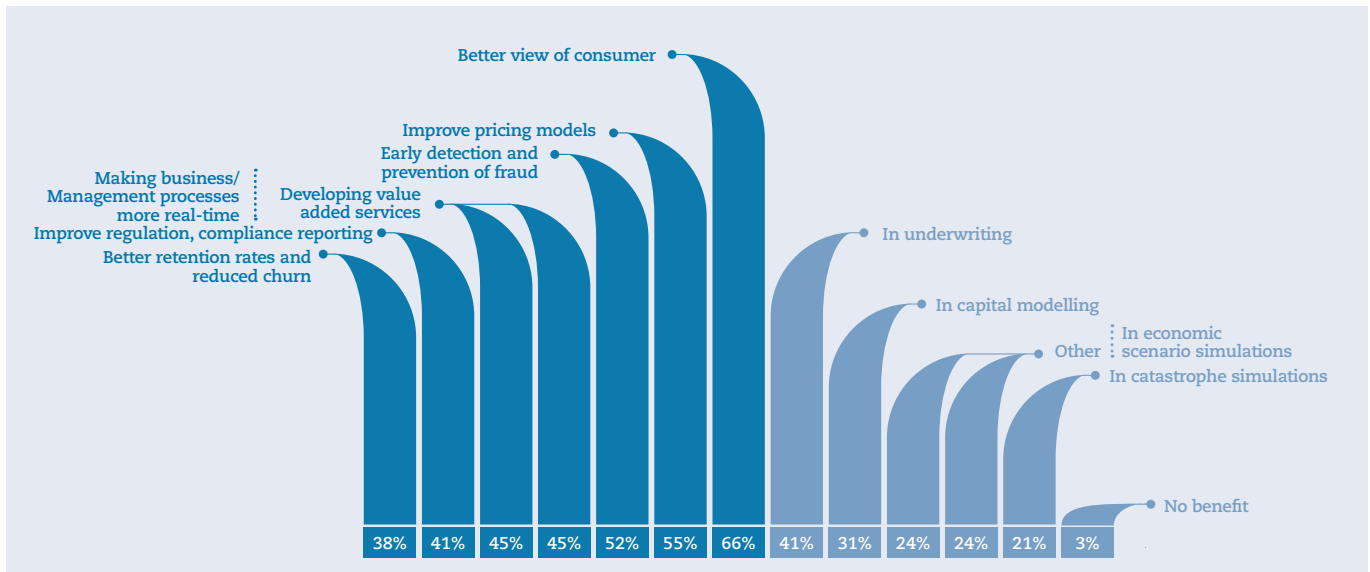*(source: BearingPoint Institute)*
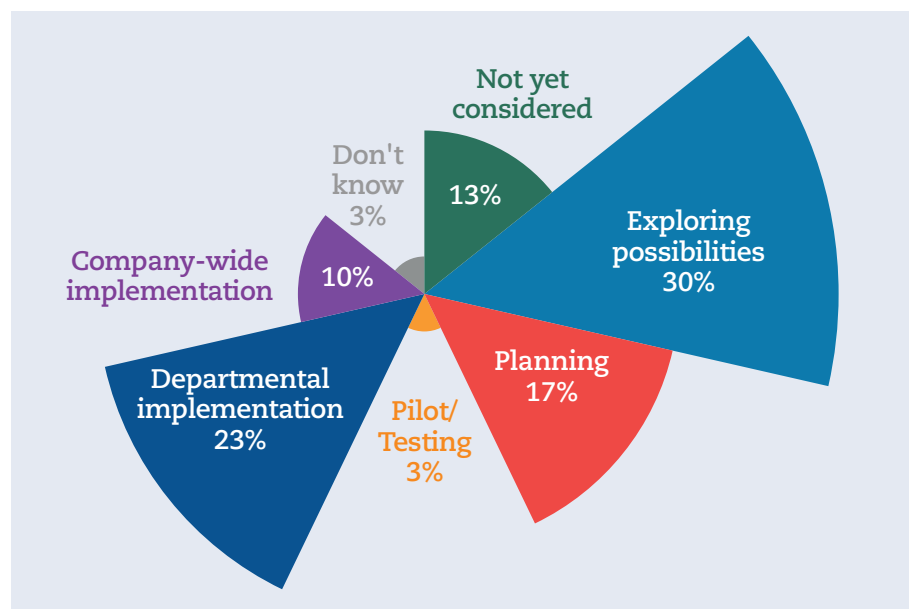
Figure 2: What do you perceive as the most important benefits of BD&AA? *(source: BearingPoint Institute)*

that no single issue is putting the brakes on the use of big data. Rather, the interaction of a number of challenges is resulting in a vicious cycle, which has the overall effect of slowing down progress. In turn:

- A lack of understanding still exists. The fact that very few respondents were able to clearly cite reasons why they could not move forward is a good indicator of inadequate experience and expertise: 16% of respondents said they simply "don't know enough".
- This limited understanding leads to a lack of common strategy across the business, resulting in plans being developed at a more tactical level within individual departments. Only 10% of respondents have implemented a company-wide big data strategy.
- As a result of the above, a lack of business ownership means that IT executives are left to tackle the opportunities of big data. Over half of respondents said their data strategy was owned by IT; the inevitable consequence of this attitude is that work in this area focuses on technical aspects more than business benefits.
- Insufficient business buy-in results in a low-risk threshold when it comes to big data initiatives, as business stakeholders are less able to balance the potential benefits with the risks. Only 37% of survey respondents judge their company to be ready to implement new ideas in connection to big data.
- Finally, the lack of business generated from the use of big data can result in insufficient skills and competencies – as illustrated by 53% of respondents,

insurers face difficulties identifying, recruiting and training appropriate people in ways to make the most of what big data can offer their businesses.

The overall consequence of this sequence of steps is that initiatives happen less often and with less energy – meaning that a lack of understanding remains. So, the cycle continues.

What is driving this cycle? No doubt typical reasons for slow technology adoption apply, such as the technical debt caused by existing systems, the quality and integrity of existing data, or the overheads of managing larger-scale change. We highlight a specific, extra factor that is adding to the backward inertia – the slower-moving nature of the insurance sector and existing operational models within the industry.

As one respondent commented, "Everything is based on the experience of local decision-making authority. This means that we do not know much about big data."

THE FIVE PILLARS OF BIG DATA
Despite the lack of progress, insurers remain upbeat about how they can make more of big data. For example, one respondent said, "Our company approach is integrating departments to improve the lines of communication; business analysts and software coders interact to break down departmental barriers."

This being the case, how can organisations break out of the cycle and turn good intentions into action? We believe

that big data success comes from pushing forward on five pillars: partnerships, data sources, speed, ethics and skills.

1. Partnerships and alliances
First and foremost, insurers need to engage with a broadening pool of data and solution providers across the ecosystem; not only information companies, such as Google, but also telecom companies, automotive industry players and retailers.

We should strike a warning: given the emerging state of the market, insurers risk being locked out if they do not act quickly enough. From analysing the research we know that more advanced insurers have already established alliances with data providers, whereas laggards are still exploring engagements and so risk being left behind.

2. Access to external data sources
Once partnerships are in place, insurers can gain new insights by combining their own data with data owned by others and publicly accessible sources. Figure 3 shows the diverse range of both structured and unstructured data sources becoming available.

Combining data sources offers a rich vein of opportunities. For example, Axa is using internal and external customer data to create predictive propensity models, helping to determine future product and service priorities for customer segments. As a result, participating financial advisors saw their sales averages increase by 40%.[2]

But most organisations are still working mainly with internal data. What is getting in

InsuranceERM
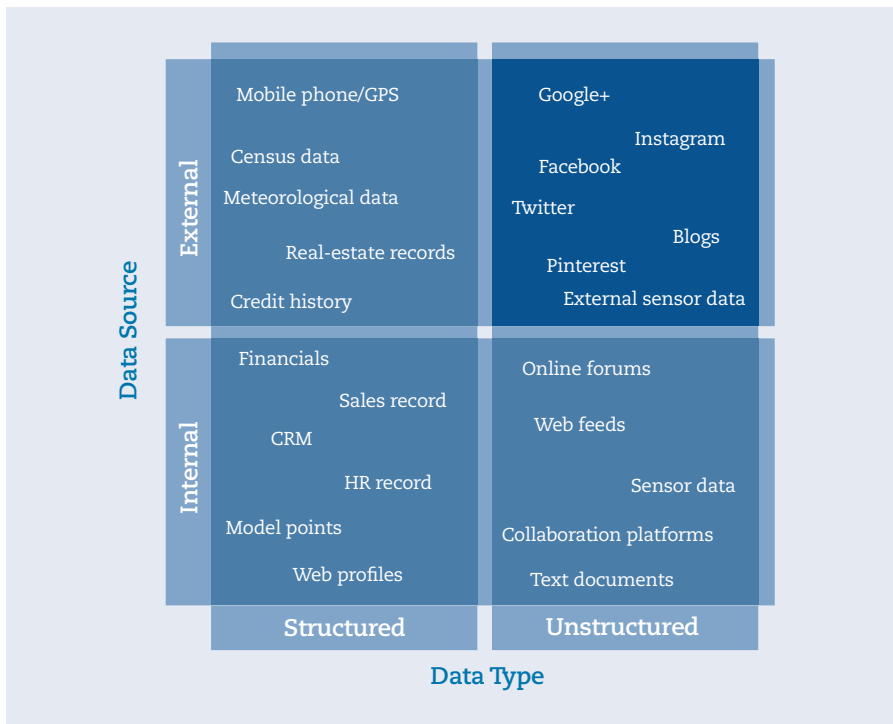The online resource for enterprise risk management

BearingPoint.

Figure 3: A diverse range of data sources is becoming available *(source: BearingPoint Institute)*

the way of external data use? Many factors are influential, but a crucial area is data quality.

3. Speed of access and failing fast

The new opportunities created by big data are fast moving and rapidly changing, meaning that organisations need to move quickly to exploit them.

To enable such speed, organisations need to change their cultures to allow failures to occur, for example by encouraging pilot studies. Whilst these will not always succeed, it is important to make sure that if initiatives fail, they fail fast so that lessons can be learned and fed into new projects.

In terms of approach, a number of insurers – including Axa, Aetna and MetLife – have chosen to create a dedicated lab or innovation centre to help initiate and carry out BD&AA pilots.[3]

4. Ethics and governance

The need for new insights and speedier decisions has to be balanced against good governance, to assure compliance and to mitigate reputational risk.

Insurers know how to walk the talk on ethics. However, the pervading attitude is not reflected much in current actions.

Whilst data leakage (at 43%), followed by privacy (at 35%) were seen as the biggest governance risks, only 23% of organisations confirmed they had big data or advanced analytics governance processes in place.

5. Skills and capabilities

Creating value from data requires a wide range of skills and expertise: from data integration and preparation, to architecting specialised computing environments, to data mining and intelligent algorithms.

Moreover, data analysis needs to take into account the broader context of business strategy. In consequence, a data scientist needs an assortment of technical, business and people skills. It is a unique combination that partly explains the shortage of high-quality data science professionals that is predicted for a few years' time.

From the research, while over 40% of organisations felt they had some advanced capability in terms of data skills, only a small proportion (6–7%) felt they were really on top of big data and advanced analytics. ▪

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The full report from the BearingPoint Institute, The smart insurer: more than just big data, can be downloaded from: www.bearingpoint.com/en-uk/7633-9413/the-smart-insurer-embedding-big-data-in-corporate-strategy/

Footnotes

1. Page 54, BearingPoint Institute Report Issue 004, *The Smart Insurer: embedding big data in corporate strategy.*

2. *AXA global insurance company adopts data analytics to reduce fraud*, Infosecurity, London, UK, web, news 17/01/12

3. Page 66, BearingPoint Institute Report Issue 004, *The Smart Insurer: embedding big data in corporate strategy*