Insurance Analytics:
Organizing Analytics capabilities to get value from Data Analytics solutions
A Deloitte point of view on Data Analytics within the Dutch Insurance industry
Introduction
The use of data is at the heart of each Insurance firm. For a very long time, insurers have for example been using data in underwriting. More recently, technology developments, like more computing power and readily available predictive algorithms, allowed to build more sophisticated Data Analytics solutions, like: improving the customer experience by better customer segmentation and targeted offers, enhancing risk assessment in underwriting, reducing the cost of claims and identifying new sources of sustainable growth.

Over the last years most insurers have invested in Data Analytics solutions and understand that investing in Data Analytics is key to survive in a fast changing environment. However, a recent study among 68 EMEA Insurance companies showed that 90% of interviewed EMEA insurance firms struggles to see a positive business case on data analytics solutions. Insurance companies are facing multiple challenges that prevent them for reaching the potential of Data Analytics solutions:

1. Data Analytics experts are scattered across the organization; each unit or function has their own expertise and activities are not optimally coordinated
2. There is a gap between Data Analytics expertise and business sense
3. Data Analytics solutions are not implemented into business processes, therefore using the solution is too cumbersome and people stop using it
4. The value of Data Analytics solutions is not defined or not measured structurally, therefore it is unclear if the investment and maintenance is justified
5. There is no company-wide vision and strategy for Data Analytics, therefore direction and drive for initiatives is missing
6. New technology developments like Big Data and AI give even more potential of using Data Analytics. Insurers feel that they have to jump in to not get behind of competition or behind of InsurTech startups, but forget that in order to profit from these technologies they will need a solid Data Analytics capability first

This blog series is set up to answer on the challenges described above. This first blog aims to explain the process and options for the design of the Data Analytics operating model. Secondly, the process for selecting the most valuable use cases will be discussed.

Our next blogs will give real world examples by explaining how Data Analytics has delivered value to our clients. After describing these use cases, the difference between Data Analytics, Big Data and Artificial Intelligence will be explained, as well as the added business value. This blog series will end with a concrete roadmap to become an Insight Driven Insurer and the role of a Data Analytics manager in an Insurance firm.

Our framework and approach: the insight driven insurer
Within Deloitte we have developed the Insight Driven Organization (IDO) framework that helps insurers develop and organize their Data Analytics capabilities along five pillars: Strategy, People, Process, Data and Technology. Insight Driven Insurer's see Data Analytics as a core capability across their organisation to provide insights from data to support the decision making process; to tackle their most complex business problems; and to address the growing market competition. In addition, through asking the right questions and applying advanced analytical techniques, decision making processes can be made more efficient and effective, letting people focus on making decisions and acting on them, rather than collecting and analysing data.
Each pillar consists of multiple components that are required for an optimal Data Analytics capability. On purpose, the first theme is Strategy because the data and technology part cannot be developed successfully if the Data Analytics strategy is not aligned with the company strategy, or when there is no definition of how Data Analytics value will be measured. For an overview of all components, see the image below.

The approach for becoming an Insight Driven Insurer is built on two parallel workstreams that allow for building the Data Analytics capability for the long term while directly demonstrating the added value: design and implementation of the Data Analytics capability (1) and developing Data Analytics solutions (2). In the first workstream all the components within the five themes are designed and implemented. In the second workstream direct value is defined and delivered by developing and implementing Data Analytics solutions, using the approach designed in the first workstream. The next paragraphs will go into some details of these two workstreams.
The picture below shows the phases of this approach.

**Data Analytics operating model**

One very concrete part of the design of a Data Analytics capability is the operational form of the Data Analytics team. Considerations should be made for centralization versus having a more dispersed ‘business-side’ team. There is no ‘one size fits all’ with this; the best operating model depends on factors like organizational size, range of products, Data Analytics maturity, existing Data Analytics network and existing Data Analytics ecosystem. Also, other factors like existing shared service models and existing IT system landscape should be considered.

Therefore, to get at an optimal operating model, multiple interviews and workshops are required with both Technology and Business stakeholders. However, the first step is to know what Data Analytics components are already in place and which previous initiatives have already been completed. A current state assessment focusing on existing Data Analytics strategy, people, process, data, and technology will give that required starting point. For example, (potential) ‘customers’ of Data Analytics within the company are interviewed, these are people that have previously worked or would like to work with Data Analytics solutions. These people can give very valuable feedback on what went well and what didn’t in the past and what their requirements are.

At the same time, the vision and ambition for Data Analytics should be defined. The vision is based on the company strategy and is detailed in one or more workshops with business and technology stakeholders. A Data Analytics vision gives direction and drive to Data Analytics initiatives. Example of a Data Analytics Vision: “... to build an analytics capability that allows us to improve customer service
whilst reducing cost-to-serve, by treating data as an asset and continually improving the ability to generate insight 

The overview of the current state and a vision for Data Analytics makes up the required input for making a decision on the level of centralization. Still, the ultimate choice can depend on preference and the result of multiple discussions between Business and Technology stakeholders. Facilitating these discussions and coming to agreements is done in various workshop exercises.

Next step is to design the ‘operating model construct’, which gives more details on the operating model. An ‘operating model construct’ refers to the design of the people and the services of the team and a guide on the collaboration model. Let’s start with the services. Based on the vision and current state assessment, a catalogue can be created of the services and products that should be delivered by the team. Examples of services: developing dashboards, developing predictive models, setting up a KPI framework. At the same time, the team might need functions like stakeholder management, business development, project selection board, etcetera. The complete list will result in a Data Analytics service catalogue.

Then people. A Data Analytics team should have both business expertise as technology expertise. Business expertise refers to people that know the business language and processes and are able to implement data analytics solutions into a business process and manage projects. Technical expertise refers to both IT system knowledge as well as Data Analytics skills. The resulting mix of required skills is referred to as a purple skillset, which can exist within one person or within a team.
As mentioned earlier, not all people need to sit in a central team. A collaboration model defines how all Data Analytics roles will work together, which role is responsible for which component and if roles will be placed centrally or decentrally. Putting it all together creates an operating model construct which acts as a blueprint for the detailed design of the Data Analytics capability. Parts of the detailed design are for example a design of the repetitive process for delivering Data Analytics solutions; an organization design, a RACI, a charging model, etcetera.

**The value of Data Analytics solutions**

The second workstream starts with defining a list of use cases together with Business stakeholders. Deloitte always brings in examples of use cases that have been developed at other Insurance firms. All use cases are then rated on expected value and investment. In order to do this, the meaning of value and the connection to Company strategy has to be known. For example, one company may want to focus on increased revenue, while another finds customer satisfaction more important.

More on defining and monitoring the value will be discussed in one of our next blogs on the business case for Data Analytics.

Next, the most valuable cases are selected that can be developed in a given timeframe. Maintaining a formal selection process where business stakeholders have influence on in one way or another, is very important to keep Business stakeholders involved. While selecting use cases for the second workstream, this selection process is also formalized so that it can be used (and further improved) for selecting new Data Analytics projects afterwards.
To give an example of a use case that was developed for one of our clients: the client wanted to assess the effectiveness of given loadings to life insurance policy holders by analyzing claim behavior. The results from the analysis showed for example that the increased premiums were not justified by an increase in claims for loaded policies and that claim incidence for exclusions was still higher than standard. The client was able to use the result to improve loadings and with that set more competitive pricing and make the acceptance process easier.

The results of the Data Analytics use cases are monetized into a business case. This business case justifies the further development and implementation of the Data Analytics capability.

**Conclusion and follow up**

This article is the first in a series of blogs on Data Analytics in the Dutch Insurance market. In this article the need for a Data Analytics organization was explained as well as a framework and approach to set up a Data Analytics organization. Finally, the need for defining and monitoring the value of Data Analytics projects was explained and a formal project selection procedure linked to the value.
Contacts

**Robert Collignon**  
**Director**  
Phone: +31882880754  
Email: rcollignon@deloitte.nl

**Joep Dekkers**  
**Senior Manager**  
Phone: +31882883815  
Email: jdekkers@deloitte.nl

**Johan van Veen**  
**Manager**  
Phone: +31882882081  
Email: jvanderveen@deloitte.nl

**Dennis Scheeren**  
**Manager**  
Phone: +31882886404  
Email: dscheeren@deloitte.nl
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