

The role of a Data Science Team in a Data Driven Organization

In this post I'd like to present kind of a methodology I've created to give an answer to a very simple yet challenging question. In a business department supposed to be "data driven", where everybody is basing their decisions -at least on the paper and to certain extent- on data, **what's the "role" of a dedicated Data Science team?**

The MKFS Framework

In order to tackle this question, we need to break down the different dimensions of data-driven and analyze them in a stand-alone way for each and every department in the organization. I suggest 4 dimensions that build upon each other and provide a quite holistic view of the data driven orientation across departments:

- **Metrics** - Understanding what is it that each and every team is measuring
- **KPIs** - Understanding how performance is defined based on the previous metrics
- **Faceting** - Understanding how these KPIs can be applied to smaller segments for better performance
- **Steering** - Understanding the existing levers to increase performance

To bring the point across, I know I have to put more flesh on the bones.. Let me come up with one example very close to my working environment. Let's have a look at a typical *Online* department of a big company, with a dual focus on eCommerce and Customer Care activities.

The figure below shows the MKFS entries for typical departments within the aforementioned Online organization. **Sales** (or traffic generation) is steered in such a way, that the maximum high-quality traffic volume is driven to the portal, **Marketing** then takes over with the best pricing and offer strategy to make visitors convert, **Services and Social Media** come into picture to pursue the call avoidance -digitalization of touch points- and the loyalization of customers and, behind the scenes, the **Portal Development** team makes sure all sites and the underlying technical structure work properly and the different portals keep been developed to satisfy the sales, marketing and services requirements.

Easy, isn't it? And all teams having their all metrics, defining their own performance indicators, following faceting strategies to understand performance variations and pulling their own levers to improve their performance... All of that in different maturity degrees... but *where does the Data Science Analytics Team fit into this picture?*

The two sides of the coin - In-house supplier vs. Own roadmap

After discussing the MKFS framework for the different departments, the question that remains open is how exactly a data science team fits into this picture.

The first decision or discussion point delves with the **double role** of such a team. Business decisions are taken by the different departments, that's clear and that's how it should work. In order to move away from older approaches (gut feeling, HIPPO -*H*ighly *P*aid *P*erson *O*pinions, credit to [Avinash](#)- or just "experience") and embrace a more *data-driven decision making*, these business departments need the support of an analytics team.

This support is to be understood as a *taking and giving* relationship, which is very different from an client-supplier setup. The difference can be appreciated from the win-win perspective:

The more the analytics team knows about the business decisions, the better insights for business decision making can be created. The more the business teams works with data insights, the more relevant and important the collaboration with the analytics team is going to be.

A way to ensure from the governance perspective a healthy cooperation between both can be for example through a *target sharing* setup. The performance of the analytics team is assessed based on their contribution to business KPIs. That requires to be very specific quantifying to which extent a piece of insights helped improving a business decision. In an upcoming post we are going to cover the concept of "insights logbook", which in a simple way is a place where all actionable business insights created by the analytics team are kept together with their impact after being taken into action.

Apart from this "supplier" role, the Data Science team needs an own road-map, with a set of projects from which all business departments are going to benefit as well in the end. These projects can be insights-generation projects, data-automation tools, visualization frameworks, etc., all of them "enablers" required for a better analytical support to the particular ad-hoc business decision making questions. The Data Science team should be responsible for creating and prioritizing their own road-map of enablers, but also to explain how the business is going to benefit from these "enablers".

In addition to these projects, the data scientists shall be considered as the engine for the adoption of a data-driven paradigm all across the business. It translates into a set of "duties" to be achieved out of this team: sourcing the required data to cover all business questions, keeping the data quality standard all across the sources, establishing best practices and providing coaching on how to extract and use insights, double-checking insights created in the business departments, continuous data science education, etc... just to name a few.

In the figure below, again referred to the case of Online department, you can see an example of what both data science team contribution to the different departments and own tasks could look like:

The *raison d'être* of a Data Science Team within a Business Unit

So far we have been talking about particular projects and discipline where the data science team pays a contribution. Yet, if we abstract away the details of the concrete project, we come to another, more generic definition of role of a dedicated analytics team in the entire construct:

The "Data Science" team aims at providing answers to these 3 questions:

- What happened and why? (**descriptive analytics**)
- What would happen and why? (**predictive analytics**)
- What should we do and why? (**prescriptive analytics**). The outcome of "Prescriptive" analytics is just "informative" => the accountability for the decision is within each department

Getting to a fully operative in-business data science team in a data-driven culture requires an enormous mindset change and cultural transformation. The post [8 conversations between a data scientist and his boss](#) analyzes typical examples of situations that usually manifest in a transition phase when business units start having a dedicated data science team but the data driven culture is not quite there yet. Certainly worth reading :)

Some takes away

Just 5 points for those who found this post useful, and for all to open a debate:

- Data-driven needs to happen where the business decisions are made and cannot be centralized, yet you need a team to provide the expertise, the tools and the coaching.
- To understand how data insights are used across the business teams, the Metrics, KPIs, Faceting, Steering framework is a simple yet powerful tool
- To avoid a silo insights entity, the data science team shall be assessed by their contribution to the business goals
- The data science team plays a double role, in-house insights supplier and data insights enabler with autonomy on their own road-map
- The data science team raison d'être within a business unit is to provide descriptive, predictive and prescriptive insights to steer the entire business.

As usual, looking forward to having people rebating, enhancing, commenting, challenging or even ignoring the content of this post :)