

Safe-DEED

Data Driven Business Canvas



How to use
Template
Example

Data Driven Business Canvas

The Safe-DEED Data Driven Business Canvas helps you to develop a data-driven service innovation. The five main sections of the canvas support you to structure and concretise a data-driven use case idea including first financial considerations. The provided descriptions and examples facilitate the work in interdisciplinary teams on future data-driven services.

Tips for use

You can fill out the Data Driven Business Canvas by yourself but it is more effective if done by an interdisciplinary team consisting of people e.g. from IT, Business Development, Sales and Finance.

Make a large print of the Data Driven Business Canvas to use in a brainstorm. Use sticky notes to easily move and change your inputs. Since the tool is also available as a pdf form (template), you can also fill it out collaboratively in e.g. a video conference.

Get inspired by the example from a Bakery Chain which is using this service. The data service was realised by the analytics company www.meteolytix.com

How to use

The Data Driven Business Canvas consists of five main sections. The **data sources** (which could be transferred from Safe-DEED Data Map), the needed **analytics** methods (e.g. regression analysis, classification or privacy-preserving methods) to process

the data, the **data product** - representation of the service (e.g. dashboard, report etc.), the intended **customer benefit** and lastly the **financial implications** in terms of expected revenues and costs.

Basically, it does not matter in which order you fill the different columns of the canvas. In practice, however, three promising variants have been identified to develop a data service by using the canvas.

Customer Benefits

Start with Customer Benefits (Needs): In this variant, start filling out the canvas with column “*Customer Benefit*” by taking a close look at customer needs and added value you want to offer your customers. Try to answer the question: What added value and what advantages should the data service generate for your customers? Think about topics such as an increase of quality or customer satisfaction, cost reduction or acquisition of new customers etc.

Data Product

After that work through the canvas to the right and think of ways to make the data service available to your customers. This could be e.g. a report, a dashboard or transferring data via API to the customer. Note your ideas in the column “*Data Product*”.

Analytics

After that try to find out what analytics method you could apply to gain insights and benefits from the data. Do you want to predict something, you could use a regression analysis. Do you want to find and sort information, a cluster analysis could help. For filling out the related column “*Analytics*” you maybe need support from experts in data science.

The development of this tool is based on a publication of Fruhwirth, M. et al. (2020) “The Data Product Canvas. A Visual Collaborative Tool for Designing Data-Driven Business Models.” The present further development of the canvas was supported by the European Union’s Horizon 2020 project www.safe-deed.eu under grant agreement No 825225.

Data sources

Next, check out what data sources you need to create the develop the expected data service. Our tool Safe-DEED Data Map could assist you in this part. Think of internal data sources, data from your partners, from data market places or maybe you could use open data provided by governments or research institutions. List your ideas in the field “*Data Sources*”.

Financial implications

Finally, check out financial implications in terms of expected revenue types (e.g. subscription or licence fee, pay per use, etc.) and costs factors (development, hosting, maintenance etc.). Write down your ideas in the box “Financial Implications”.

Two alternative variants:

Start with an already existing service: Starting point in this variant is the central column “Data Product” where you briefly describe the existing service. Hereafter you add your improvement ideas in the concerned columns of the canvas.

Start with data: Start filling out the canvas from left to right.

data driven business canvas

name _____

date _____

We create the data analytics solution ...

... for the following customers and users ...

What is the name of our data product?

For whom do we create our data analytics solution? Who is our customer?

Data Sources

What data sources do we need to create customer value?



Analytics

What data analytics methods do we need to apply to gain insights and benefits from the data?



Data Product

In what form do we make the service available to our customers and users?



Customer Benefit

What added value and what advantages does the data service generate for our users and customers?



Financial Implications

What types of revenue streams do we expect?



What are the most important cost factors for our data solution?



Example Bakery Chain

industry Food Production

products & services Bakery products

size of business Industrial bakery (> 250 employees)

revenue > 25 mio €

location Central bakery with many bakery stores in different geographic locations



Did you know that the weather influences what kind of bread and pastries we buy? A bakery and a data analytics company found out that when temperatures rise, people eat less black bread. On the other hand, the baker sells more rolls as soon as people are on holiday. Rain, however, is good for cake sales. The data analytics company Meteolytix evaluates weather data and weather independent influencing factors for calculating a sales forecast per store and product. Through a combination of various data sources and application of advanced data analytics methods, valuable benefits for the bakery are created.

The Data Driven Business Canvas

The basis for the bakery data service is, of course, the right data sources like own data (sales and production history data), data from 3rd parties (weather data, calendar data, geolocation data) or user-generated data like social media data. All these data sources are listed up in the first column of the DDB Canvas. Based on these data a lot of analytics needs to be done (see column Analytics) before the final result in form of a decision support tool (software for production planning and sales forecast per shop) can be used by the bakery (see column Data Product). The most important success factor of a data service is a measurable benefit which is outlined in column Customer Benefit. Our bakery data service provides many benefits such as an increase in customer satisfaction (provide the right amount of bread and pastries) and reputation (throw away less food) and cost savings (OPEX) through better production and sales planning. These benefits lead to financial implications which are outlined in the last column. In general, the Data Driven Business Canvas helps to structure and concretise a use case idea and provides a solid basis for the implementation.

data driven business canvas

name Bakery
date _____

We create the data analytics solution ...

... for the following customers and users ...

Sales and Production Forecast

What is the name of our data product?

Bakery (Chain) with many shops in different geographic locations

For whom do we create our data analytics solution? Who is our customer?

Data Sources

What data sources do we need to create customer value?

- Mobile Payment System Data
- Sales History Data per shop
- Production History Data
- Promotional Activity Data
- Customer Satisfaction data
- Social Media Data
- Customer Ratings (Yelp, Google)
- Weather Data (weather forecast)
- Geo Location Data (street maps)
- Calendar Data (public holidays, holiday seasons, school holidays)
- Demographic Data (income, population)
- Mobile phone motion data

Analytics

What data analytics methods do we need to apply to gain insights and benefits from the data?

- Factor Analysis (identification of relevant influencing factors)
- Designing, training and evaluation of a prediction model (e.g. regression, machine learning algorithms)



Data Product

In what form do we make the service available to our customers and users?

- Decision support tool for production and sales planning in form of:
- Dashboard for production forecast
- Dashboard for sales forecast per shop for upcoming days



Customer Benefit

What added value and what advantages does the data service generate for our users and customers?

- Weather dependend production and sales optimization leads to:
- Increase in customer satisfaction (meet customer needs)
- Cost reduction (OPEX) through better planning
- Increase of reputation (throw away less food)
- Transparency



Financial Implications

What types of revenue streams do we expect?

- Indirect monetization (increase in sales, cost savings)



What are the most important cost factors for our data solution?

- development costs for forecasting model
- Software license costs

