The Business Data Science Canvas

A journey into the creation of Data Science projects
through the arising questions of human and AI interactions.

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AI in swiss companies

- Multiple companies in switzerland
  - Industry
  - Energy
  - Transportation

- Meeting with
  - CEOs
  - R&D managers
  - Field experts

- Our role is to
  - Advise
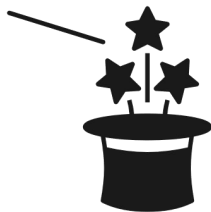 - Design
  - Lead data science projects

AI in swiss companies

We have observed a misconception on what AI
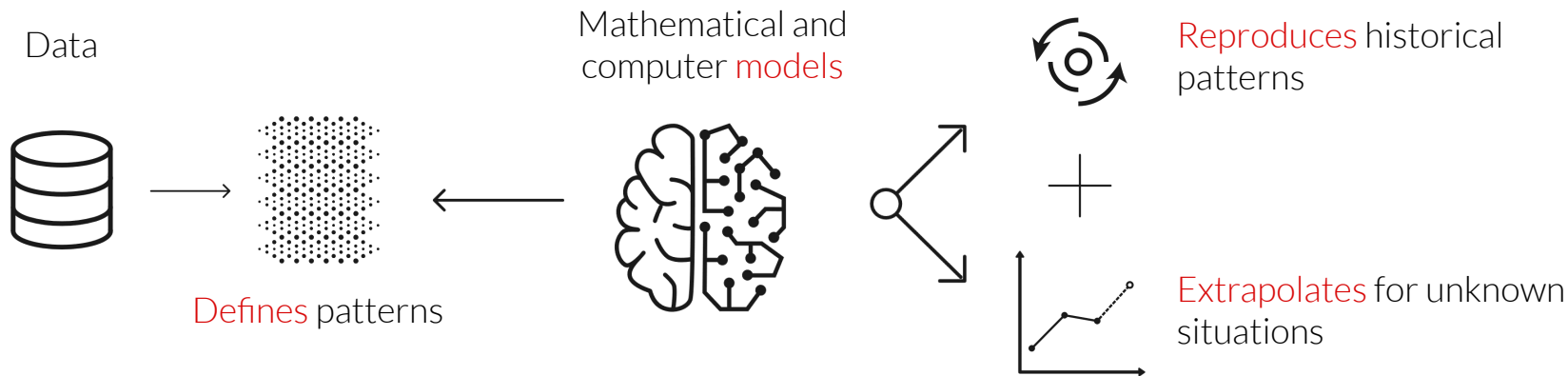
- represents

- can really do.

But most of all we have to explain that

AI is not magical

AI is only mechanics

Data

Mathematical and computer **models**

Reproduces historical patterns

Defines patterns

Extrapolates for unknown situations

Strengths

- Find complex and specific patterns
- Efficient to produce results
- Allows a certain degree of generalization

Weaknesses

- Designed for a unique task
- Highly depends on the input data
- Extrapolation and decision explanation can be a complex task

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Our analysis

Requirements

- A tool to structure the creation of Data Science Projects

- A medium that is understood by the decision-makers

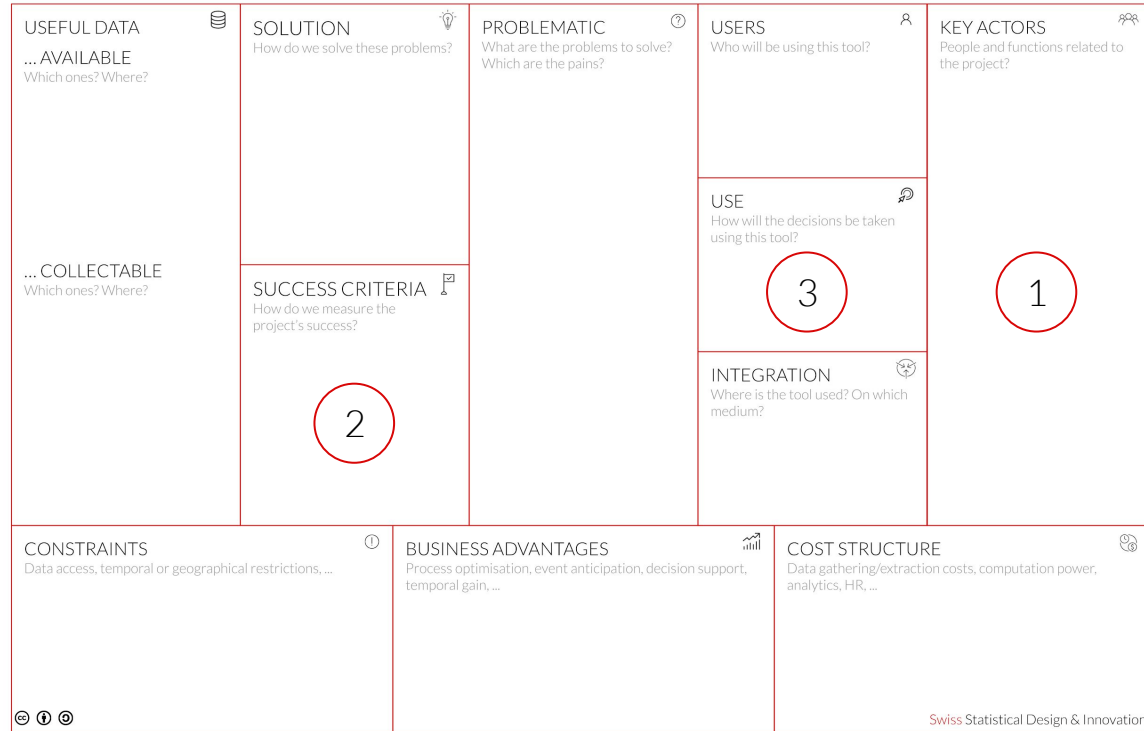- A bridge between the technical and the business teams

Our solution

- The Business Data Science Canvas

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The Business Data Science Canvas

The Business Data Science Canvas (v1.1)   Title:

USEFUL DATA	SOLUTION	PROBLEMATIC	USERS	KEY ACTORS
... AVAILABLE Which ones? Where?	How do we solve these problems?	What are the problems to solve? Which are the pains?	Who will be using this tool?	People and functions related to the project?

... COLLECTABLE
Which ones? Where?

SUCCESS CRITERIA
How do we measure the project's success?

②

USE
How will the decisions be taken using this tool?

③

①

INTEGRATION
Where is the tool used? On which medium?

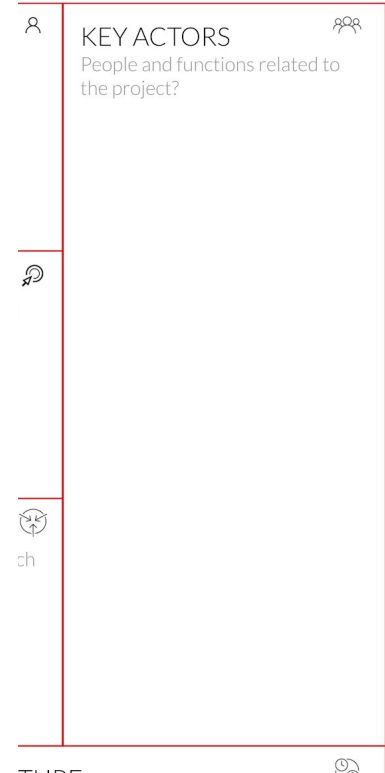| CONSTRAINTS	BUSINESS ADVANTAGES	COST STRUCTURE
Data access, temporal or geographical restrictions, ...	Process optimisation, event anticipation, decision support, temporal gain, ...	Data gathering/extraction costs, computation power, analytics, HR, ...

Swiss Statistical Design & Innovation

Focus on

1. **Key Actors**
   Will AI help us to be more human at the workplace?

2. **Success Criteria**
   What is AI's goal and what type of critical thinking skills do we need?

3. **Users, Use & Integration**
   How can we think about the human & AI interaction at the workplace?

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AI as the result of heterogeneous teamwork

Key Actors   - Will AI help us to be more human at the workplace?

- Data science projects are by essence the result of a gathering of various point of views

  - Data Scientists
  - Field experts
  - Business team
  - IT department

- AI development strengthens human to human interactions. It requires:

  - communication between various sectors
  - unification of the needs

KEY ACTORS
People and functions related to the project?

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AI as an optimization problem

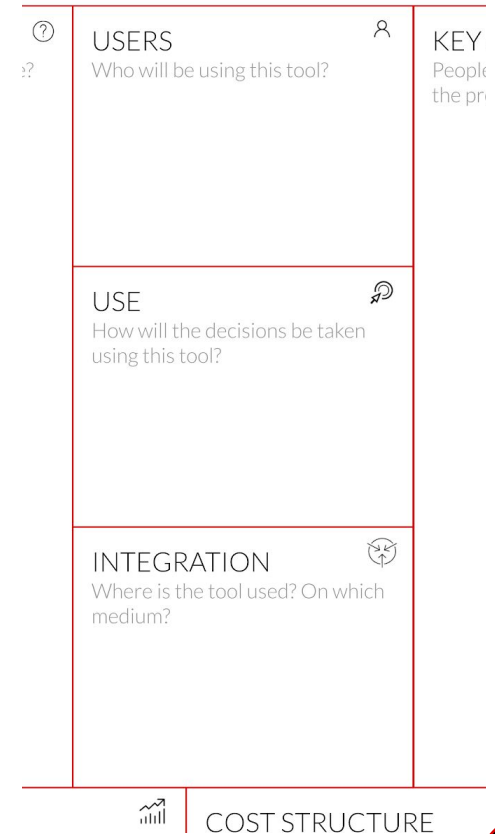## Success criteria - What is AI's goal and what type of critical thinking skills do we need?

- **Interface** between technic and business needs formulation

- **Mathematical representation** of business requirements

- AI model has only one goal

- Highly depends on input data

- Still need to be critical on the provided result

SUCCESS CRITERIA
How do we measure the
project's success?

BUSINESS AD

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Human interaction with the AI tool

Users, Use & Integration - How can we think about the human & AI interaction at the workplace?

- **Use** of a given AI tool differs depending on the **context** and the **user**

- Predictive maintenance example
  - Customer service VS machine operator

- Degree of **knowledge on the decision process** also varies

USERS
Who will be using this tool?

KEY
People
the pr

USE
How will the decisions be taken using this tool?

INTEGRATION
Where is the tool used? On which medium?

COST STRUCTURE

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AI feedback for better interactions

We have to develop tools that allow users

- **to interact** with the AI
- **to get answers** on how it works.

- This a new topic that needs **to be developed**.

- Tomorrow: **AI & Trust Track**
- Lea Strohm from Ethix will talk about **Algorithmic Bias** and the related **ethical questions**

ethix

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Take home message

- AI is not magic. It is a tool

- The BDSC helps to englobe all aspects of AI projects during the design process

- Human and AI interaction is a core element for successful AI projects

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