

Data Science Workshop

Lecture 9: Business problem definition and solution

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Version 1.1
November 19, 2020



**European
Funds**
Knowledge Education Development

**Warsaw University
of Technology**

European Union
European Social Fund



**MSc program in Data Science has been developed
as a part of task 10 of the project
„NERW PW. Science - Education - Development - Cooperation”
co-funded by European Union from European Social Fund.**

Business issue



Source: *Dilbert.com*

Description of business problem

- The problem must be precisely formulated.
 - The meaning of the problem must be clear to management.
- The problem definition must reach the core of the issue.
 - The problem cannot be formulated too generally.
- We cannot solve global problems, but we can solve their local manifestations.

Issues

- Wrong issues
 - *We cannot finish the project.*
 - *People are inefficient.*
 - *We must work harder.*
- Better issues
 - *We lack paint.*
 - *We need some specialistic courses.*
 - *We need additional stuff.*

5 Why questions

- 5 Why questions is a tool that allows us to reach the core of the problem.
 1. A first version of the problem is defined.
 2. A moderator asks "Why?"
 3. In the discussion, the team finds an answer to the question.
 4. The moderator asks "Why?" once again, but this time, the answer is the base for the discussion.
 5. The process repeats no more than five times.
 6. Finally, the team obtains a re-defined problem.

5 Why questions benefits

- The method re-defines the problem.
- Additionally, it allows us to discuss the problem intensely.
- Moreover, various teams can obtain different re-definitions.
- Instead of linear construction, we can build a whole tree of the problem re-definition.
 - If there is more than one answer for a *Why?* question, we can discuss alternatives.

Task

- In group
 - Re-define the problem in your project using the 5 Why questions method

1. The first definition of the problem
 - Why it is a problem?
2. A new definition of the problem
 - Why it is a problem?
3. A new definition of the problem
 - Why it is a problem?
4. A new definition of the problem
 - Why it is a problem?
5. A new definition of the problem
 - Why it is a problem?
6. The final definition of the problem

Solutions



jellesmarbleruns.com

Solution of business problem

- A solution cannot be presented in isolation from the costs.
 - Some creative solving problems methods – such as Design Thinking – do not bring up the cost issue.
 - It is because they are just a part of a design process.
- The solution must be approved by the board.
 - It must be intelligibly presented.
 - It contains business options.

Business options

1. Do nothing
2. Do the minimum
3. Do something

Do nothing

- The starting option.
- The basis for quantifying the other options.
- Describes the effects of the problem.

Do the minimum

- The minimum costs solution.
- Usually, with low benefits.
- This option can be attractive when we cannot ignore the problem, but our resources are limited.

Do something

- A solution with higher benefits.
- In this case, the problem is perceived as a chance.
- Still, as cheap as it is possible.
 - Business do not want to create the most expensive solution.
 - The aim is to create the most profitable solution.
 - Cutbacks are a way to maximise benefits.

Example

- According to the new regulations at the same university cannot exist two or more courses with the same name.
 - At a university, 'Computer Science' is given at three faculties.
1. Do nothing
 - By law, all courses will be merged into one.
 2. Do the minimum
 - The most prominent faculty keeps the old course name.
 - The other faculties will change the name according to the schema 'Computer Science in X', where X is a field of study at the faculty.
 3. Do something
 - Each faculty will point unique features of their course.
 - In a public debate, new names of the courses will be selected according to courses uniqueness to help applicants in the faculty selection.

Business options benefits

- The analysis of each option provides the board with sufficient information to judge which option presents the best value for the organisation.
- The most desirable option is selected after discussion of
 - the level of investment,
 - the anticipated benefits,
 - the viability,
 - the achievability.

Task

- In group
 - Prepare three business options of the solution for your problem.
1. Do nothing
 2. Do the minimum
 3. Do something

References



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