Methodology assignment 1 – BIT & IEM module 1

Deadline 1ˢᵗ attempt:	Friday the 08ᵗʰ of September before 11:59pm	
Group size:	Your project group	*(approximately six students)*
Grading:	Pass/Fail	*(one resubmission possible)*

1. The assignment

In this assignment, the group plays the role of a consultancy firm. Consultants may be confronted with various types of assignments, originating from a wide range of industrial disciplines. Sometimes, the context is a given, including straightforward research objectives. For example, a company that suffers from IT failures should search for solutions that involve IT and not, for example, finding new customers. In some cases, however, the client of a consultant (the principal) does not know which problem needs to be solved. He or she knows that the company's performances can be improved, that some things are not going well, but it is not known what the problem is exactly. Even if a client thinks to know which problem needs to be solved, it is prudent for a consultant to 'step back' and investigate whether there are other problems that need to be solved, and which may be more urgent than the problem perceived by the client. That is what you are going to do in this assignment.

This assignment is linked to the module's project, and concerns the **Ahold case.** As an introduction to the module's project, you will start **investigating Ahold's logistical challenges** that accompany the journey of a bottle of wine from grape to glass. The main objective of this assignment is to familiarize yourselves with various problem identification techniques (e.g., problem cluster, problem statements). The Ahold supervisors have shared a list with initial problem statements on Canvas already, you can use this file as input for this assignment. Note that you are allowed to search for related problems yourselves as well(e.g., literature search, checking the company's website, search for recent news articles, etc.), given that you include proper references of course. Hopefully, you will understand the problem context better by completing this assignment, so that you are well prepared for the **guest lecture on the 12th of September 2023**. During the guest lecture, the Ahold supervisors will provide more insights into their process, logistics, IT, challenges and opportunities. Use this assignment to prepare some specific questions regarding the problem context, so you can get the most out of this guest lecture.

At this early stage of your research, you should focus on searching for problems only, not solutions! For example: IEM students will perform a bottleneck analysis and develop a KPI dashboard, while BIT-students develop a new application during this module. However, that does not say anything about the underlying problem(s) that these products should solve. So: forget the application or dashboard developments and concentrate on identifying problems only.

2. Study material

2.1. Book "Research Methods" by Saunders et al. (2019)

- Chapter 01: "*Business and management research*"
- Chapter 02: "*Choosing a research topic*" → Focus on Section 2.4. only

2.2. MPSM microlectures

You can also use the online microlectures regarding the Managerial Problem Solving Method (MPSM) for additional theory. For this assignment, you only need to review the following topics (links are included):

- MPSM introduction:
  - ○ Short version
  - ○ Long version
- MPSM types of problems
- MPSM research cycle
- Problem solving and research – a practical example
- MPSM phase 01

Website URL: https://vimeo.com/album/2938606/page:2/sort:preset/format:thumbnail.

Note that the microlectures are based on the MPSM book 'Solving management problems systematically' from Heerkens and van Winden (2017). If you would like to read more regarding the problem identification phase, you can read chapter 1 up to and including chapter 4 from the MPSM book as well:

- Chapter 1:   Methodology introduction "A Framework for The Best Solution"
- Chapter 2:   Type of problems "Untroubled Problems"
- Chapter 3:   An MPSM example "A Trouble-Shooter's Log"
- Chapter 4:   MPSM phase 1 "In Search of the Core Problem"

2.3. Information literacy microlectures

- Information literacy microlectures (**1st series**):
  - ○ B1-1: Scientific information
  - ○ B1-2: Introduction to databases
- Information literacy microlectures (**2nd series**):
  - ○ B2-1: Focusing your research
  - ○ B2-2: Choosing the right databases
- Information literacy microlectures (**3rd series**):
  - ○ B3-1: Information need – alternative sources

3. Deliverables

In the module materials and the (guest) lectures during the second week, you will find all information regarding the **Ahold** use case. The first step is to identify various problems for multiple stakeholders perspectives (e.g., management, employees, customers, suppliers, municipalities). It is your task to select one of these problems to solve during the upcoming weeks. For this, take the following steps.

1. Make an **initial list** of all problems that you can find in the **Ahold** use case. It is best if each group member does this individually, after which the results are merged into one list for the whole group.
2. **Clean up** your list of initial problem statements:
   a. Eliminate duplicates;
   b. Provide clear definitions for problems;
   c. Make sure that all problems include one variable only;
   d. Leave out problems that are irrelevant on second thought. For example, because the discrepancy between norm and reality is insignificant.

    e. Only consider problems if you are sure they actually exist, you have to prevent yourselves from solving non-existing problems to save both time and resources. In case of doubt, you can make a separate list of excluded problems instead, you can ask the problem owner to justify the existence of those excluded problems in more detail at a later stage.

3. Search for causal relationships between the 'cleaned-up' problems by means of a **problem cluster**.
4. **Choose a core problem** by applying the following guidelines:
    a. Leave out what you don't know. Only consider problems if you are sure they actually exist, you have to prevent yourselves from solving non-existing problems to save both time and resources. In case of doubt, you should eliminate the problem from your cluster in the first place (see step 2).
    b. Go back into the causal chain, potential core problems have no causes themselves.
    c. Leave out what you can't influence. It is impossible to search for solutions if you cannot influence the problem at all. Consider both internal and external factors!
    d. Select one problem of the remaining candidates, and explain why this option is best to investigate further. For example, prioritize all potential candidates, or make a cost-benefit analysis, as far as you can judge at this point in time.
5. Properly **define the core problem** that you have selected by filling in Table 1:
    a. Highlight the variable of interest as accurately, precisely and unambiguously as possible. Briefly explain how the variable can be measured, you may need to use one or multiple indicators to actually measure anything.
    b. Express both the norm and reality by means of your variable. You can highlight the performance gap in relative terms in case you need to measure the norm and reality still.
    c. Identify the problem owner; the person responsible for solving the problem.
    d. Merge all the above elements into a single problem statement.

Variable	Norm	Reality	Problem owner
Action problem statement			
Variable + (norm-reality) + problem owner			

Table 1: Action problem template

4. Report

Write a report in which you discuss all deliverables separately. Write concisely and businesslike, but do not confine yourself exclusively to listings and telegram style. Strike a balance between efficiency and readability. Use a logical structure that takes the reader from one point or paragraph smoothly to the next. The best thing you can do is to structure your report according to the deliverables addressed in this assignment. Please take the following additional guidelines into account as well:

- Write your paper by using a **maximum of 1500 words** (approximately 3 pages), excluding a possible front page, reference list and appendices. Make sure that your paper is submitted in either Word- or PDF-format.
- If you think that essential information is missing that would be available in real life, you are allowed to make assumptions, provided you mention them explicitly.
- You are allowed to search for additional information on the internet (we even recommend this), provided that you mention the source of your information.
- The various bits and pieces of information in the assignment's use case material may be inconsistent or even contradictory. This is how it often is in real life. Judge for yourself the validity of information, and, if needed, make motivated choices about which information to use or discard.
- The various parts of the assignment may not seem too difficult in isolation, but the devil is in the details. Making some general choices is not hard, but to adjust all components relevant for the assignment to each other is very challenging. You are bound to observe that, on certain occasions, your options are limited because of earlier choices, or that you have to discard and re-do some earlier work

5. Hand-in

Hand in your work via Canvas at the end of this week (**Friday the 08th of September before 11:59pm**). The document that you hand in should be a Word- or PDF-file. Make sure that you clearly mention your study program, your group number and the names of all group members within your report (e.g., front page, header, footer, etc.). Include the group number and the study program within the filename (e.g., IEM01_MethodologyAssignment1 or BIT99_MethodologyAssignment1)

6. Grading

Your work is graded as either sufficient or insufficient and does not influence your grade for the Methodology part of the module (except for the feedback issue; see the document in Course materials). Work graded as insufficient has to be resubmitted. There is one opportunity for resubmission for each assignment. All assignments need to be sufficient in order to pass the Methodology part of the module.

Take note: during the tutorial you get feedback on your work and you can ask questions. When the assignment is graded as insufficient you do not get extensive feedback, just a few pointers on what is wrong with it. You will have to make an improved version without further assistance from the instructors. So, make maximum use of the opportunity to improve on your assignment during the tutorial.

7. References

- **Mandatory study material:** Saunders, M. N. K., Lewis, P., & Thornhill, A. (2019). Research Methods for Business Students 8th Edition, Harlow: *Pearson Education Limited, England*
- **Recommended study material:** Heerkens, H. met Winden, A. van (2017). Solving Management Problems Systemetically Groningen: Noordhoff Uitgevers. ISBN: 978-90 01-88795-7.

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