The Data-Science Process

Explanation

1 Introduction
Please view section 1.1 on the next page.

2 Management actions/results
Data-science driven value is about management actions. Data in itself doesn't directly add financial value. From Data insights are extracted and insights lead to new management actions. The implementation of these actions then lead to financial value. Therefore the process starts here with the top priority the management actions and actual financial results. The further goal of the Data-science process is to enhance the management actions and financial results.

Also from a Lean/Agile/Scrum perspective the management actions/actual results are put first to keep the focus on efficiently enhancing actions/results and keep delivering actual timely (financial) results.

In this part of the process new management actions are described and existing management actions are refined.

3 Implementation
In this part of the process for each management action a detailed step-wise implementation is described in an implementation plan.

4 Monitoring/Forward look
In this part of the process the results and actions of the previous iteration(week/month) are discussed and next steps are formulated in a forward look. The monitoring/forward look discussions lead to new problems, new questions, new goals and new hypotheses and next steps.

5 Frame
In this part of the process the next steps from the monitoring/forward look discussion are inputted in the process frame (New problems, goals, management questions, hypotheses etc.)

The frame provides the focus/scope for the further process.

6 Desk-research
In this part the Data-Scientists perform desk-research to answer new questions.

Important to note is that the paragraph topics start broad and are then funneled to more specific paragraph topics.

7 Field-research
In this part the Data-Scientists perform field-research (Interviews/conversations within or outside the organization) to answer new questions.

8 Results
In this part the results of the desk and field-research are combined and the results are described.

9 Conclusion
In this part the results are translated to conclusions. These conclusions should answer the questions formulated in the framing phase (part 5).

10 Data-science insights
In this part the new insights are translated to new data-science actions for the Data-Science unit. For example new (or new enhancements to) models, dashboards, apps, reports etc.

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12 Management insights

In this part new management insights are formulated

The new management actions(models, dashboards, apps, reports etc) provide new management insights for the business units/departments.

Then the management insights are the input for part 2 Management actions. There the management insights are translated again into management actions. And the process repeats itself and the output/results are continually optimized.

1.1 Conceptual model

This is a general conceptual model of the Big-Data-Science function within organizations.

Big-data has a central position in the organization and feeds the BU's with relevant data/information. The data-scientists analyze the data and transform the data into management insights. They also translate the management insights into management actions. These management actions can then be implemented and the implemented actions then lead to better financial/management results.

In the most clear way the Big-Data-Science unit first has a responsibility to be profitable as a unit themselves. Then there task is to enhance the profitability of the other business units/departments.

They do this with turning Big-Data into Management actions that enhance the KPI's/profitability of each unit.

In the data-driven management actions they describe, they describe the concrete financial drivers(How do specific actions drive financial results/profitability of the business unit or business unit project.

Its's important for Big-Data-Scientists to focus on results and to communicate clear management actions that drive financial results with the managers.