Metadata - Data Management Plan (DMP)

How Can an Organization Evolve to an Agile Organizational Culture through Digital Transformation?

Cultural Change Framework for a SME in Switzerland

Bern University of Applied Sciences

Business School

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1. Introduction

This metadata - data management plan refers to the master thesis of Nathalie Moser about the research question: *"How Can an Organization Evolve to an Agile Organizational Culture through Digital Transformation?"* The goal is to develop a Cultural Change Framework for a SME in Switzerland (named below as Company A).

2. Metadata - Data management plan (DMP)

This chapter includes an explanation of the research design and the procedure. The process of data collection and analysis as well as the methods used are also outlined.

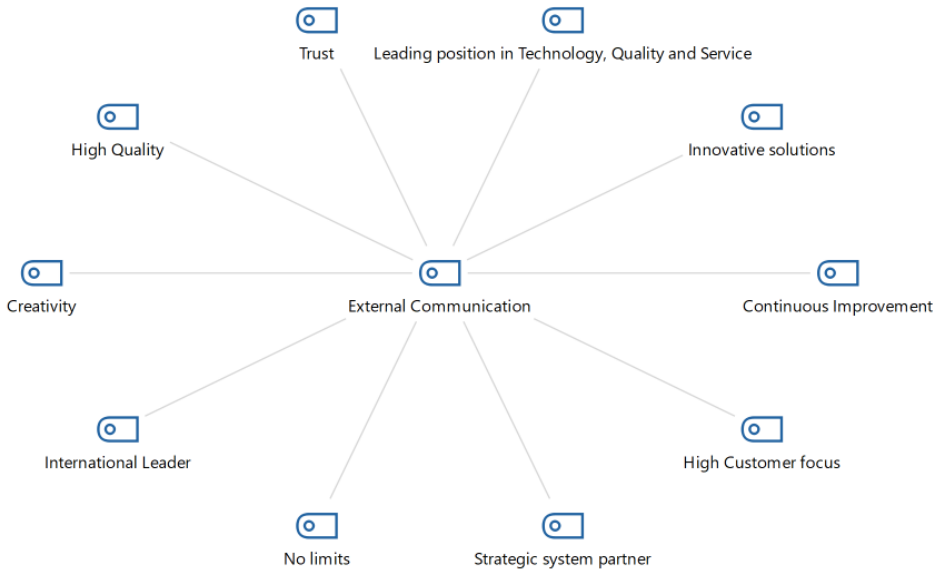
2.1 Research design

An explorative and qualitative research was conducted for this thesis using the grounded theory approach in order to obtain research results that were as holistic and comprehensible as possible and to derive a theory with practical recommendations (Glaser & Strauss, 1967). The single case study for building up an agile organizational culture is complex, and therefore the diversity of data collection is in the foreground. For this reason, the method of triangulation was chosen, which involves combining different methods (Bekhet & Zauszniewski, 2012), with the focus on data triangulation (Denzin, 2017). By using different data sources (time, location, personnel) of data triangulation, the biases of the different data materials (surveys, interviews and the literature review) could be balanced.

2.2 Data Collection – Pre-Analysis

The data collection occurred over a period of time from February to May 2022 and was characterized by multiple challenges. The first step was to tackle a comprehensive literature search on the topic. In order to gain an initial overview of the Company A, articles on the homepage, media releases and the organization's social media channels were analyzed.

Figure 1. Pre-Analysis – Document Review



Note: Figure based on Maxqda. Representation of the document analysis on the external communication.

This allowed initial insights to be gained and was supplemented by a literature review and scoping interviews (n = 5) with selected specialists and managers of the company to obtain an internal view and to complement the external view.

Table 1. Scoping Interviews with Participants

Nr.	Purpose	Hierarchy	Feedback/findings	Derived Action
P1	Scoping	Division Manager	No resources at Company	No further actions
P2	Scoping	Specialist	Complex structures	Start
P3	Scoping	Division Manager	Turbulent situation	Start
P4	Scoping	Team Leader	Difficult cultures	Start
P5	Scoping	Division Manager	More Innovation needed	Start

Note: Own table. Overview of participants in scoping interviews.

Figure 2. Pre-Analysis – Scoping Interviews

Note: Figure based on Maxqda. Graphical representation of the findings from the scoping interviews.

Based on these interviews, further procedures were determined and the research question was refined (Allen, n.d. 2017).

2.3 Data Collection – Main Analysis

Within data collection the Organizational Culture Assessment Instrument (OCAI) was used to assess the current and desired organizational culture of the selected medium-sized company. The corresponding survey can be found at the following link: https://de.surveymonkey.com/r/239D65M

By means of a survey, six aspects of culture were recorded with regard to current culture and desired culture. Specific questions were asked about the six categories such as the predominant characteristics, organizational leadership, employee management, glue of the organization, strategic focus, and success criteria. Each of the six categories included four statements (Cameron & Quinn, 1999). Any of these response options referred to one of the four cultural categories “Clan”, “Adhocracy”, “Market” and “Hierarchy”, which were developed within the framework of the Competing Value Framework (CVF) by Cameron and Quinn

(2006). These four cultural categories have an influence on many aspects within the company and thus determine organizational priorities. The questionnaire was conducted using the survey tool "SurveyMonkey". To ensure good comprehensibility, the OCAI questions were adapted and translated into German. The survey was divided into two main categories of current and desired ("Now" and "Preferred") organizational culture. For each of the two categories, the six subcategories mentioned above were then formed and the six OCAI questions with the four response options were integrated accordingly. The scoring was based on a 5-point Likert scale (ordinal scaled data). Prior to conducting the survey, the questionnaire was tested with selected employees. Based on their feedback, the questionnaire was then adjusted until the feedback was positive (Ghauri et al., 2020). The questionnaire was sent to those employees (n=10) who were then subsequently interviewed in the semi-structured interviews. The overview in Table 1 shows which employees of the company took part on the pre-test followed by the OCAI survey.

Table 2: Pre-test and data collection of the OCAI survey participants

Nr.	Purpose	Hierarchy	Feedback/findings	Derived Action
P2	Pre-Test 1	Specialist	Good questions Appropriate length	Let's start
P3	Pre-Test 1	Division Manager	No difficulties Understandable	Let's start
P2	Data Collection	Specialist		Analyze / Visualize
P3	Data Collection	Division Manager		Analyze / Visualize
P4	Data Collection	Team Leader		Analyze / Visualize
P5	Data Collection	Division Manager		Analyze / Visualize
P6	Data Collection	Division Manager		Analyze / Visualize
P7	Data Collection	Specialist		Analyze / Visualize
P8	Data Collection	Specialist		Analyze / Visualize
P9	Data Collection	Specialist		Analyze / Visualize
P10	Data Collection	Specialist		Analyze / Visualize
P11	Data Collection	Teamleader		Analyze / Visualize

Note: Own table. Overview of participants of the online OCAI survey and corresponding pre-test.

In order to collect data from semi-structured interviews, an interview guide was developed based on the analysis of the results of the OCAI survey and the literature review (DeCuir-Gunby & Schutz, 2017). The interview guide included questions about the current and desired organizational culture, with a focus on factors of the agile organizational culture and digital transformation. A pre-test was conducted with selected employees of the company,

whereby the questions were adapted until good comprehensibility was ensured. The interview questionnaire and corresponding interview guide can be found in Document A.

After the interview guide had been created, semi-structured interviews were conducted (n=10) with employees from different hierarchical levels (subject matter specialists, team leaders, and division leaders) at different sites. This hierarchical approach was taken so that the perspectives of both managers and employees were covered. The interviews lasted between 30–45 minutes, and conducted via MS Teams in German and recorded accordingly. The questionnaires were sent to the interview partners by e-mail one week before the interview, and a confidentiality agreement was signed by the respective interview partner before the interview took place. The privacy policy can be found in Document B as well as an overview of the interviews conducted in Document C. The overview in Table 2 shows which employees of the company took part the two pre-tests and the semi-structured interviews.

Table 3: Pre-test and data collection of the semi-structured interviews

Nr.	Purpose	Hierarchy	Feedback/findings	Derived Action
P2	Pre-Test 1	Specialist	Perform another test Time consuming Difficult questions	Reduce complexity New formulation
P3	Pre-Test 1	Division Manager	No questioning M&A	Reformulate questions
P2	Pre-Test 2	Specialist	Duration is ok Appropriate questions	Let's start
P3	Pre-Test 2	Division Manager	Duration is good Level appropriate	Let's start
P2	Data Collection	Specialist		Coding
P3	Data Collection	Division Manager		Coding
P4	Data Collection	Team Leader		Coding
P5	Data Collection	Division Manager		Coding
P6	Data Collection	Division Manager		Coding
P7	Data Collection	Specialist		Coding
P8	Data Collection	Specialist		Coding
P9	Data Collection	Specialist		Coding
P10	Data Collection	Specialist		Coding
P11	Data Collection	Teamleader		Coding

Note: Own table. Overview of participants of the online semi-structured interviews and corresponding pre-test.

2.4 Data analysis

Regarding the data analysis of the OCAI survey for each question, a letter (A / B / C / D) was assigned to the four answer options. Each of these letters was assigned a cultural archetype from the Competing Value Framework (A = Clan, B = Adhocracy, C = Market, D = Hierarchy). Subsequently, the points of the ordinally scaled scoring in the questionnaire were added for each answer option and the mean value was calculated from this. That is, for example, the “A” answers were added and divided by the total number of questions. This calculation was carried out for the current and the desired culture. In a further step, the results were converted because the format of the answers isn’t divided per percentage per area, but rather are independent ratings per item (Strack, 2012). Subsequently, the results were visualized using a spider diagram by superimposing the current and desired (“Now” and “Preferred”) results. The resulting difference between the two diagrams allowed the desired change in the organizational culture to be read off. A distinction was made between the four culture types (Adhocracy, Clan, Hierarchy, Market Culture) of the Competing Values Framework (CVF), which were grouped in a value circle with the axes external vs. internal orientation and formal vs. flexible orientation (Cameron & Quinn, 1999). The data analysis of the OCAI survey is located in Document D and is broken down into the individual folders. In the "Raw Data" folder, the raw data has been exported from the Survey Monkey tool. The questionnaire with the individual questions and answer options follows in a separate folder. The raw data of the individual answers were then transferred to the folder "Data - Now" and "Data - Preferred" and added up. In the "Data - graph" folder, the data was then analyzed and displayed in the "Graphs" folder.

The qualitative data were coded using approaches of the classical grounded theory of Glaser and Strauss (Glaser & Strauss, 1967) first openly, then axially and then selectively. The data evaluation was carried out in an iterative procedure until a certain degree of theoretical saturation was reached and the evaluations did not yield any new findings. The statistical tool

used for the data analysis was Maxqda. The codes generated from the data were then developed into categories. Subsequently, the categories and their relationships to each other were examined, which was then the basis for forming a theory. Throughout the process, memos were written in which the thought processes regarding the codes and categories and the resulting theory were recorded (Charmaz, 2012). The codebook with the corresponding memos on the coding process can be found in Document E. The coded segments can be found in Document F and the transcripts of all interviews in Document G.

2.5 Dataverse inventory

A	Metadata_DMP
B	Questionnaire_Guideline_Interviews
C	Privacy_Statement_Participants
D	Data_Analysis_OCAI_Survey
E	Codebook_Memos_Maxqda
F	Coded_Segments_Maxqda
G	Interviews_Transcriptions_all