

Acceptance versus passive resistance: How academics in a higher education institution make sense of strategic change

Master Thesis

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Abstract

Research Objective

Strategic change often fails during its implementation phase due to the lack of sufficient employee engagement. Especially higher education institutions (HEIs) encounter challenges in achieving employee engagement due to aspects like their academics' high value of their autonomy. Despite the practical relevance of the topic, pertinent research on this topic is lacking. Building on sensemaking and strategic change literature, this research explores the factors triggering academics at HEIs to either engage in or resist strategic change implementation.

Method

The study was conducted at the University of Twente (UT) in the Netherlands, which has recently introduced a new university strategy. 29 full-time academic staff members in different positions from all faculties were interviewed using semi-structured interviews. The obtained data was analyzed applying inductive and deductive content analysis.

Results

Academics engaged in change accepting behavior or passive change resistance. Change accepters were more likely to have a positive change perception whereas passive change resisters were more likely to have a negative change perception. 16 sensemaking influence factors were identified, either contributing to a positive or negative change perception. The predominance of positive or negative sensemaking influence factors was critical for academics' change perception.

Conclusions and Implications

This research is one of the first detailed investigations of academics' responses to strategic change. The key contributions are the identified context-specific sensemaking influence factors relating to two types of change responses and practical implications for the HEI management on how they can use communication to achieve change accepting behavior. Moreover, the results lay the ground for future research on strategic change implementation in HEIs.

Keywords: strategic change implementation, sensemaking, higher education institutions

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1. Introduction

To adjust to their constantly changing environments, organizations regularly undergo strategic changes. Strategic changes are substantial organizational changes such as alterations of organizational strategies (Singh, Klarner, & Hess, 2020; Gioia, Thomas, Clark, & Chittipeddi, 1994). Strikingly, research reveals that up to 70% of strategic change initiatives fail during the implementation phase (Cândido & Santos, 2015). One dominant cause for this high failure rate is the lack of employee engagement (Kieran, MacMahon & MacCurtain, 2020; Borges & Quintas, 2020). Thus, knowing the factors that cause employees to engage in or resist strategic change implementation is highly important for organizations.

The practical relevance of the topic has increasingly attracted the interest of academics. A small but growing research body has applied a sensemaking approach to explore the factors causing employee participation and resistance in strategic change implementation (Sonenshein, 2010; Sloyan, 2009). Sensemaking theory proposes that when persons are confronted with novel and ambiguous events such as strategic organizational change, they try to attribute meaning to them by engaging in sensemaking (Weick, Sutcliffe, & Obstfeld, 2005). Sensemaking involves for example the enactment of one's environment and the interpretation of events and situations based on knowledge, experience, values, and beliefs (Weick et al., 2005). Therefore, taking a sensemaking perspective might allow to gain in-depth insights into employees' motives to participate in or resist strategic change.

Past research findings indicate that sensemaking theory can be applied effectively to understand employees' causes for their type of change behavior. Sonenshein and Dholakia (2012) demonstrate that the interplay of knowledge on strategic change and psychological resources were indicators of employees' type of change behavior in strategic change. Despite the increasingly acknowledged effectiveness of sensemaking theory in strategic change implementation research, empirical research zooming in on individual employees seems scarce. Instead, research focuses predominantly on the role of managers and middle managers (e.g. Kieran et al., 2020). The need for focusing on employees becomes clear, as they are usually responsible for the main implementation (Maitlis & Sonenshein, 2010). Consequently, more research is needed that applies sensemaking to investigate causes of employee participation and resistance in strategic change implementation.

An interesting research context to investigate employee change behavior are higher education institutions (HEI). Research reveals that especially the senior management in HEI encounters challenges in achieving employee engagement in strategic change implementation

due to the complex organizational structure, high number of diverse individuals who guard their autonomy, as well as the dominant role of tradition in these institutions and the right of academic freedom (Akella & Khoury, 2019; Lozano, 2006; Mintzberg, 1979). Moreover, academics tend to identify stronger with their academic discipline than their university (Schneckenberg, 2009), which might challenge the management's change efforts to create a unified organizational identity. Therefore, HEI are an interesting research context to investigate employee change behavior.

Despite the practical relevance of achieving employee engagement in strategic change initiatives in HEI, research seems surprisingly scarce. Pertinent research taking a sensemaking perspective mainly focuses on the planning phase of strategic change initiatives (Degn, 2014). This research gap provides an interesting research direction.

The aim of this research is to investigate how employees at HEI make sense of strategic change, thereby identifying the factors causing employees to engage in or resist strategic change implementation. The following research question has been formulated:

What factors influence employees at higher educational institutions to engage in or resist strategic change implementation?

1. Theoretical framework

Through the lens of sensemaking theory, this research examines the factors based on which employees at a HEI either engage in or resist in strategic change implementation. The first section of this chapter introduces sensemaking and sensegiving during strategic change. The second section elaborates on different employee responses to strategic change. The subsequent sections elaborate on sensemaking influence factors relating to different employee change responses. Figure 1 at the end of this chapter provides a visualization of the theoretical framework.

2.1 Sensemaking and sensegiving during strategic change

Sensemaking literature is strongly influenced by the work of organizational theorist Karl Weick. With his book “Sensemaking in organizations”, in which he introduced a sensemaking framework, Weick laid the foundation for empirical research in the field (Mills, Thurlow & Mills, 2010). Over the years, various definitions of sensemaking have found their way into the literature, however, there is no consensus on one definition (Brown, Colville & Pye, 2014). In this regard, Maitlis and Christianson (2014) advise to define sensemaking according to the specific research context. In the context of strategic change, Gioia and Chittipeddi (1991, p. 442) define sensemaking as organizational members’ creation and recreation of meaning in order to develop a meaningful mental framework for understanding the strategic change. Giuliani (2017, p. 221) describes the relation between sensemaking and a person’s decision making in organizations as “infrastructure of the decision-making process”, as a person would make sense of reality and based on this reality, make decisions, and take actions.

A concept that is intertwined with sensemaking is sensegiving. Literature attributes the task of sensegiving in the context of strategic change mainly to the senior management of organizations (Balogun & Johnson, 2005). In their seminal paper, organizational scholars Gioia and Chittipeddi (1991, p.442) define sensegiving as “attempt to influence the sensemaking and meaning construction of others toward a redefinition of organizational reality.” Thus, by means of sensegiving, the senior management of an organization attempts to shape employees’ interpretations of strategic change (Giuliani, 2017; Fiss & Zajac, 2006). This includes the senior management’s communication of a vision or strategic plan (Gioia & Chittipeddi, 1991). Recent studies showed that sensegiving is not only about communicating one ultimate meaning of the change but also about providing employees with a guideline on how to make sense of the change (Logemann, Piekkari, & Cornelissen, 2019). Sensegiving is central for successful

change implementation, as research shows that when the top management fails in its sensegiving efforts, the change initiative can be doomed to failure (Kihlberg & Ola, 2020).

To shape employees' meaning of the strategic change, the senior management needs to master several obstacles along the way. For example, employees might interpret and experience the communicated sensemaking cues differently than the senior management intended (Balogun & Johnson, 2005). Moreover, employees often respond differently and even in conflicting ways to strategic change, depending on the meaning they attach to it (Ericson, 2001; Yilmaz & Kılıçoğlu, 2013; Sloyan, 2009). Thus, understanding how individual employees make sense of strategic change is important when attempting to comprehend their behavioral response to it.

The senior management's sensegiving efforts might be ignored or enhanced by employees' organizational identification. Research shows that in the context of HEIs, many academics rather identify with their research field than with the university (Schneckenberg, 2009), thus they might lack interest in strategic decisions on university level. This lack of interest might lead to ignoring the sensegiving efforts of the senior management which presume that activities on university level are perceived as important by academics. In contrast, sensegiving efforts might be enhanced by high levels of organizational identification. Research shows that when employees identify with their organization, they are more likely to act in favor of the organization and support the change implementation (Michel, Stegmaier & Sonntag, 2010; Jimmieson & White, 2011; Men & Yue, 2019; Sung et al., 2017). Hence, organizational identification might have influence on the success of sensegiving efforts.

2.2 Employee change responses

Strategic change literature provides various conceptualizations of employee engagement in change implementation. Different theoretical perspectives produced various definitions with differing antecedents (Kim, Hornung & Rousseau, 2011). In line with the seminal research by Herscovitch and Meyer (2002), this research conceptualizes employee engagement as change championing behavior and change accepting behavior. The authors define change championing behavior as discretionary behavior guided by enthusiasm that is the engagement in actions that go beyond what is formally required to make the change implementation a success, including the encouragement of others to support the change. They define change accepting behavior as focal behavior that relates to the implementation of all necessary adjustments to implement the change (Herscovitch & Meyer, 2002). This conceptualization is especially relevant in the context of HEI, as it considers that employees can contribute to the successful strategic change

implementation by doing all necessary adjustments for example in the form of aligning their department strategy with the organizational strategy, but also engage in actions that go beyond strategy compliance by joining a change related initiative or motivating others to engage in the change implementation.

Past research classifies change resistance into active and passive resistance (Self & Schraeder, 2009; Rosenberg & Mosca, 2011). While active resistance includes actions such as hindering the implementation by lowering work effort (Van Dijk, & van Dick, 2009), employees engage in passive resistance by not contributing to the change implementation and engaging in actions such as raising objectives to the change initiative (Eryilmaz & Eryilmaz, 2015; Herscovitch & Meyer, 2002; Self & Schraeder, 2009).

2.3 Sensemaking influences

In the process of making sense of strategic change, employees draw on several influences. As stated earlier, the senior management's change communication plays a central role in employees' sensemaking of strategic change and ultimately their change behavior. To examine the interplay of sensegiving and sensemaking, managerial change communication is investigated as influence factor. Next to the relevance of managerial change communication, researchers note that during strategic change, the opinion of colleagues can also serve as important sensemaking source (Degn, 2014; Fiss & Zajac, 2006). Therefore, the perception of the managerial change communication and the frequency and type of communication with colleagues might offer insights in the sensemaking process of employees.

The three influences that emerge recognizably in several studies investigating change engagement are change-related self-efficacy, affective change commitment and expectations. The three influence factors were firstly introduced together in Weick's (1988) model of sensemaking (Helpap & Bekmeier-Feuerhahn, 2016). Although Weick developed the model for the context of organizational crises, the similarities between organizational crises and strategic changes stimulated researchers to apply the model in the strategic change context (Maitlis & Sonenshein, 2010). Organizational scholars such as Sonenshein and Dholakia (2012) have used the factors to examine employees' engagement in strategy implementation. The authors referred to the three influences as psychological resources, which has been picked up by other researchers such as Helpap and Bekmeier-Feuerhahn (2016) and which will also be used as generic term in this research.

The three psychological resources are relevant for investigating change behavior based on cognitive processes, as psychological resources are attributes that are positively linked to a

person's ability to deal with uncertain and ambiguous situations such as strategic change implementation (Taylor, Kemeny, Reed, Bower & Gruenewald, 2000). Different levels of psychological resources can thereby lead to different change responses (Weiser, 2020). In contrast to higher-order personality traits, psychological resources are subject to change and can be influenced through communication (Sonenshein & Dholakia, 2012; Chreim, 2002). This makes psychological resources especially interesting in the context of strategic change, as it might allow to gain insights into the relation between the management's change communication efforts in terms of sensegiving on the one hand and the sensemaking of employees on the other hand.

In addition to the consideration of the three psychological resources and the change communication, a closer look is taken on the role of employees' values and goals. Research findings demonstrate that in the context of sensemaking and responding to strategic change, employees draw on personal values, beliefs, and goals (Bien & Sassen, 2020; Rosso, Dekas & Wrzesniewski, 2010; Giuliani, 2017). Insights show that a person is most likely to be intrinsically committed and engaging when the strategic change matches their personal values and goals (Upadhyay, Upadhyay & Palo, 2013). Based on these insights, considering employees' value and goal congruence with the strategic change might bring relevant insights for this research.

2.3.1 Change communication with management

In the context of strategic change, employees primarily search for sensegiving cues in the change communication with the senior management (Logemann et al., 2019), which makes the managerial change communication an important source for sensemaking. Several scholars distinguish communication from information providing. For example, van Vuuren and Elving (2008) describe that information providing includes sending or receiving large amounts of information about the strategic change, whereas communication aims for building a relationship founded on a mutual understanding. This distinction gains specific importance from a sensemaking perspective, as the theory postulates that employees not only need to have essential information available but also understand it (Kraft, Sparr, & Peus, 2016). Nevertheless, researchers found that the complementary use of top-down and participatory communication is most effective in employees' sensemaking and is consequently more likely to result in change supporting behaviors (Mills, 2009).

The information provided by the management helps employees to understand the strategic change (Gioia & Chittipeddi, 1991) and attribute meaning to it by identifying stressors

and benefits (Sonenshein & Dholakai, 2012). Accordingly, Christensen (2014) notes that insufficient and incomplete information can increase resistance among employees. Regarding the content of the communication, various authors state that it needs to address employees' concerns and offer justifications for the change (Simoes & Esposito, 2014; Behery et al., 2016). Moreover, Sherman and Roberto (2020) report that employees search for cultural norms to understand which activities are expected, rewarded, or punished. On the same topic, Ahmadi, Salamzadeh, Daraei, and Akbari (2012) describe that when employees cannot identify cultural cues in the communication, they experience increased uncertainty and ambiguity. Effective and thereby meaningful change communication can lead to outcomes such as increased benefit finding (Sonenshein & Dholakia, 2012), commitment to change (Appelbaum et al., 2017; Petrou, Demerouti, & Schaufeli, 2016), strategy knowledge (Tawse & Tabesh, 2020), change supportive behaviors (Chesley & Wenger, 1999) and decreased change resistance (Simoes & Esposito, 2014; Lozano, 2016; Jones & van den Ven, 2016). Hence, to create a positive meaning of the change and engage in its implementation, employees need to hold a positive perception of the managerial change communication.

2.3.2 Change communication with colleagues

Next to the communication between the management and employees, the communication with colleagues is essential in employees' sensemaking process. Stensaker, Balogun, Langley (2020) report that when employees are confronted with uncertainty and ambiguity of change, they try to develop logical explanations by discussing and interacting with others. This notion can be found by Degn (2014), who states that due to the interaction with colleagues and supervisors, and the imagined expectations of them, sensemaking is a social process. Employees create and recreate meaning by considering fictitious scripts with others and their mental modes (Degn, 2014). Moreover, Fiss and Zajac (2006) describe that during changes, persons often try to influence other persons' sensemaking in their favor. This highlights the characterization of change as social process. Thus, to understand how employees respond to strategic change, it is necessary to understand when they engage in communication about the strategic change with colleagues and supervisors and when they do, how they perceive the communication.

2.3.3 Value-goal congruence

In their everyday decision making, humans are guided by their values and goals (Moran & Brightman, 2000; Upadhyay et al., 2013). As a strategic change often involves a change in

organizational values and goals, employees often reassess the degree to which they fit the organization (Caldwell, Herold, & Fedor, 2004). Therefore, for strategic change implementation to be successful, it is important that employees share the same values and goals as those transmitted by the strategic change.

Employee value and goal congruence fit was found to have several benefits for organizations. For example, research shows that employees are more attracted to organizations whose goals fit the personal goals they want to achieve (Schneider, Goldstein & Smith, 1995). In his seminal framework of change acceptance and resistance, Coetsee (1999) describes that shared goals and values lead to change acceptance. A study by Guth and Macmillan (1986) shows that the extent to which employees are willing to invest in implementing a strategy depends on their perceived level of goal alignment. The presented studies emphasize the importance of shared goals and values of employees and the strategic change.

Having the same values and goals seems especially relevant in the context of HEIs. For example, Billot (2009) describes that when academics experience conflicts between their expectations and those of the institution, they are likely to resist to institutional demands. Kapaanda and Benedict (2020) explain that academics are motivated by their own interests regarding research publication, which can lead to conflicts with a strategy if the strategy does not align with personal goals of the researchers. Moreover, Bien and Sassen (2020) found in their study on implementing a sustainability strategy at a German university that when a strategic change in HEI involves the violation of academic core values and objectives such as autonomy, influence, high quality research and teaching, academic staff is likely to resist strategic change implementation. Thus, it can be inferred that the degree to which employees perceive alignment between the strategic change and their personal goals and values can lead to different change responses.

2.3.4 Affective change commitment

Affective change commitment can influence employee sensemaking and consequently change responses. For example, Sonenshein and Dholakia (2012) and Helpap and Bekmeier-Feuerhahn (2016) recognize affective change commitment as crucial resource of sensemaking in employees' change behavior. Herscovitch and Meyer (2002, p. 475) define affective change commitment as the intrinsic motivation to support the change based on its perceived benefits. Thus, employees with affective change commitment have a desire that the change becomes a success.

In their seminal study on the effect of change commitment on employee change responses, Herscovitch and Meyer (2002) found that intrinsically motivated employees are more likely to engage in change championing behavior as they have an intrinsic desire to perform. The findings by Sonenshein and Dholakia (2012) confirm these insights as the authors found that employees with affective commitment associated more benefits with the change and hence were more likely to engage in change championing behavior. An additional research study that demonstrated the relevance of affective change commitment in relation to employee change response was conducted by Helpap and Bekmeier-Feuerhahn (2016). The authors found in their research on the influence of psychological resources on resistance intention that affective change commitment decreased employees' intention to resist the change. Based on these empirical insights, it can be expected that the level of affective change commitment influences employee change responses.

2.3.5 Positive expectations

Literature indicates that the number of employees' perceived benefits to strategic change can lead to different change responses. Armenakis, Bernerth, Pitts and Walker (2007 p. 488) define employees' perceived benefits of strategic change as "the attractiveness that is associated with the perceived outcome of the change." In a case study to investigate the factors influencing acceptance of strategic change initiatives, Sloyan (2009) identified employees' positive beliefs in the change initiative as one of the most crucial factors to achieve employee accepting behavior. Moreover, Weiser (2020) points out that identifying benefits is not only essential at the beginning but throughout the whole implementation process as employees continuously reflect on perceived benefits of the strategic change during the implementation process. Thus, when employees associate benefits with the implementation of the strategic change, they are likely to engage in change accepting behavior.

In contrast, perceived disadvantages can lead to change resistance. On this topic, van Dijk and van Dick (2009) describe that when employees perceive disadvantages with the change, they are likely to resist the change. Likewise, Oreg (2006) found that employees resist change when they do not perceive it as beneficial for the organization. Moreover, research shows that negative experiences throughout the change process can outweigh positive expectations and lead to change resisting behavior. For example, Konlechner, Latzke, Güttel and Höfferer (2019) found in their research on employees' sensemaking during strategic change that when participants' initial high expectations towards the change are outweighed by the accumulation of negative experiences during the strategic change implementation,

employees are less likely to participate in the implementation. Thus, when the number of perceived disadvantages outweighs the number of benefits, employees are likely to resist the change implementation.

2.3.6 Change-related self-efficacy

Depending on their perceived level of change-related self-efficacy, employees might be more likely to engage in change accepting or change resisting behavior. Jimmieson, Terry, and Callan (2004) define change-related self-efficacy as employees' conviction to be able to fulfill the situational demands of organizational change. Next to situational demands, Wanberg and Banas (2000) mention that the concept also refers to the extent to which employees perceive themselves as able to fulfill their job despite demands of the change. This includes the perception of having the skills and abilities to do the activities necessary for the change implementation (Holt, Armenakis, Feild & Harris, 2007). Thus, change-related self-efficacy relates to employees' perceived ability to contribute to strategic change implementation.

Different levels of change related self-efficacy can lead to different employee change responses. In his seminal paper, Weick (1988) describes that employees with low change related self-efficacy will be more likely to resist the change as compared to employees with high levels of change related self-efficacy. Likewise, Armenakis, Harris, and Mossholder (1993) found that persons will avoid tasks that they perceive to exceed their abilities but will perform those they perceive themselves as being capable of. Moss, Sanchez, Brumbaugh and Borkowski (2009) found that employees with sufficient levels of change-related self-efficacy are likely to engage in change accepting behavior. This finding aligns with the results of Boswell (2007) who found that when employees understand the organization's objectives and how to contribute to it, it is more likely that they will align their behavior with the strategy. In a more recent study, Yang, Choi and Lee (2018) also found that sufficient levels of change-related self-efficacy led to change accepting behavior. Investigating the effects of psychological resources on resistance intention, Helpap and Bekmeier-Feuerhahn (2016) found that the perception of change-related self-efficacy led to a decreased likelihood of employees' resistance intention. Accordingly, in their research on strategic change, Gioia and Chittipeddi (1991) found that organizational members who struggled with understanding their new tasks and roles were likely to resist to change. Therefore, the extent to which employees perceive themselves as capable to contribute to the implementation of the strategic change might explain their change response.

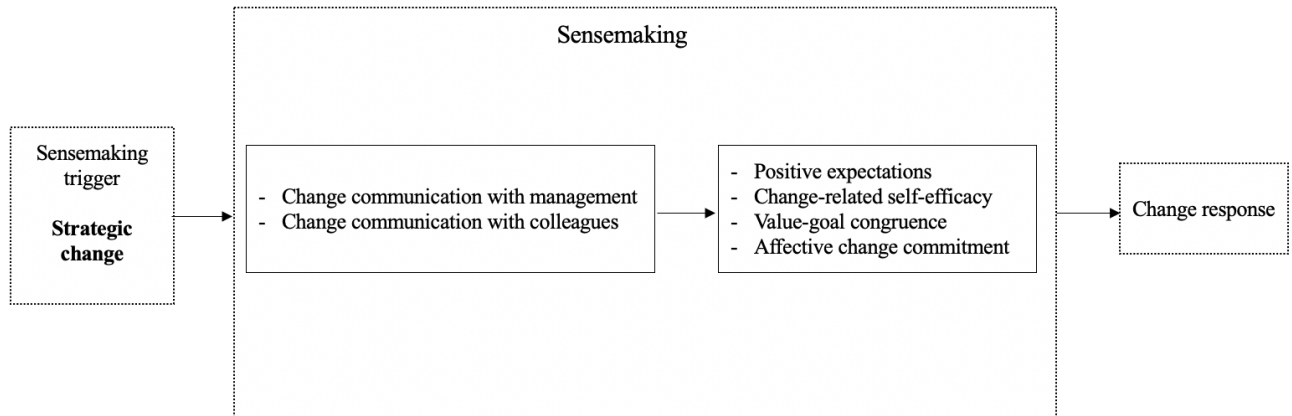


Figure 1: Theoretical framework

2. Method

3.1 Research context

The research was conducted within the context of the implementation of the organizational strategy ‘Shaping2030’ at the University of Twente (UT) in the Netherlands. All information presented in this section was retrieved from the university website (<https://www.utwente.nl>). The UT was founded in 1961 as “Technische Hogeschool Twente” and was renamed to “University of Twente” in 1986. Initially, only technical subjects were taught. Since the 1990s, subjects in behavioral sciences and social sciences have been increasingly added, along with additional technical areas.

Today, the UT focuses in its research and education on the combination of technology with human behavior and social relevance, as well as the relationship between scientific knowledge with social and economic developments. Research and education take place in the five faculties (1) Geo-Information Science and Earth Observation, (2) Science and Technology, (3) Engineering Technology, (4) Electrical Engineering, Mathematics and Computer Science, and (5) Behavioral, Management and Social sciences. For about 35 years, the UT has been following an entrepreneurial concept, so that academics and students collaborate with multiple public and private organizations. In 2021, the UT was awarded for the fifth time the most entrepreneurial university of the Netherlands.

To develop the ten-year strategy Shaping2030, the senior management of the university followed a bottom-up approach. Interested employees including support staff and academics, were invited to participate in the planning process of the strategy. In January 2019, the creation process of the strategy document was initiated. Multiple sessions were organized and attended by 650 employees and students. Subsequently, a series of round table sessions were conducted, with the goal to collect detailed information on different challenges and focus areas. Additional strategy fora, meetings, think tanks and advisory panels produced the draft of the new mission and vision in May 2019. Before the end of the academic year, four working groups focusing on the strategic themes (1) open, (2) sustainable, (3) personalized and (4) way of working developed a three-year plan to support the realization of the vision. Based on the input of the working groups, an expert writing team created a draft mission, vision, and strategy. This draft was finalized considering additional advice and input of various staff members. In December 2019, Shaping2030 was approved by the University Council of the UT. At the start of the data collection for this research project, the implementation phase of the strategy had been ongoing for three months and was in the early stage of implementation.

Shaping2030 combines the goal to serve society with contemporary themes such as sustainability (Shawe, Horan, Moles & O'Regan, 2019). An overview of the strategy can be found in Appendix A. The mission of the UT is to become *the ultimate people-first university of technology and to empower society through sustainable solutions*. The vision is *to contribute to the development of a fair, sustainable, and digital society between now and 2030*. The three values are *entrepreneurial, inclusive, and open*. Next to that, they formulated three strategic goals, which are *shaping society, shaping connections, and shaping individuals*. Instead of imposing specific research and education themes, the strategy mainly relates to the way of working and studying at the UT. The only exception is a commitment to sustainability and challenge-based research. However, both formulations are intentionally formulated in such a broad way, that they leave room to interpretation for the individual researchers. Figure 2 shows the strategic goals.

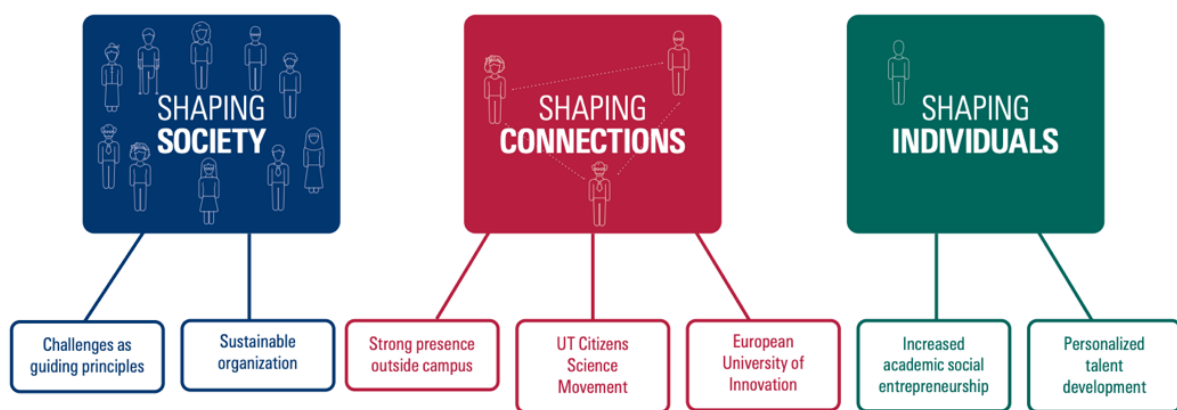


Figure 2: Excerpt from the official strategy infographic of the UT (University of Twente, 2020)

The strategic change at the UT provided a relevant research context, as a considerable proportion of the academic staff had not been involved in the implementation of the strategy yet, however their motives for that were unknown to the management. Investigating how the employees made sense of the strategic change allowed to obtain knowledge on the factors that motivate employees in HEI to engage in strategic change implementation and those that trigger their resistance.

3.2 Research design

To find out what factors influence employees at higher educational institutions to engage in or resist strategic change implementation, a series of semi-structured interviews were conducted with the approval of the university's ethics committee. Semi-structured interviews can be

characterized by the combination of a prepared set of opening questions and improvised follow-up questions based on the participants' responses (Babbie, 2017). The limited number of pre-defined questions provided the opportunity to dive into interesting themes that arose during the interviews thereby gaining in-depth insights into participants' social world. Due to the COVID-19 restrictions, all interviews were held via the online video platform Zoom. The length of interviews ranged between 26 minutes and 51 minutes, (on average 41 minutes).

3.3 Participants

All participants were part of the academic staff at the UT, including full professors, associate professors, and assistant professors. The participation criteria were full-time employment and having worked at the UT for at least five years. It was aimed to achieve an equal distribution of participants over the five faculties in order to be able to compare the employee change responses and influence factors among the different faculties. To achieve this equal distribution, the participants were recruited by means of stratified sampling. From each of the five faculty websites, six participants were randomly selected from the list of employees meeting the inclusion criteria. Participants were approached via email and subsequently invited to participate in a video interview on Zoom. In total, 101 potential participants were approached, of which 61 did not respond to the interview request and 11 indicated that they were not available in the proposed time frame due to their high workload.

In the end, 29 academics participated in the research. Participants were almost equally distributed over the five faculties: six participants in four faculties and five participants in one faculty. Of the 29 participants, nine participants were female, and 20 were male. This gender distribution aligns with the overall gender distribution of employees at the UT, which consists of 30 percent female employees and 70 percent male employees (University of Twente, 2020). The distribution of academic degrees was 13 full professors, eight associate professors, and nine assistant professors.

3.4 Interview guide and procedure

Prior to the start of the interview, the participants were informed about the objective and the procedure of the interview. They were also asked for permission to record the interview for the purpose of transcribing. After giving their consent to the recording, the participants were briefed about their rights and asked to sign an informed consent form, ensuring that their data will be treated confidentially and anonymously. After giving their verbal consent to participate, the researcher started the interview.

Each interview consisted of two parts. In the first part, participants were presented with an outline of the university strategy to ensure that everyone was able to answer to the content-related questions about the strategy in the second part of the interview. During the researcher's presentation, the official infographic of the strategy (Appendix A) was displayed on the screen. This first part was relatively short with an average duration of roughly two minutes per interview.

At the beginning of the second part, the participants were presented with general questions such as "Can you shortly introduce yourself?" and "Why did you choose to become an academic?" These questions were posed with the aim to make participants feel comfortable, and to enable a transition to the first question relating to academic value and goal congruence. After the introductory questions, each participant was presented with the same set of open questions. Table 1 provides an overview of example questions by theme. The complete interview guide can be found in Appendix B.

Table 1: Example questions by interview theme

#	Theme	Example Question
1	Academic value-goal congruence	"To what extent do your values as an academic match with Shaping2030?"
2	Change commitment	"To what extent was the strategy change necessary?"
3	Positive expectations	"Which benefits do you associate with Shaping2030 for your work?"
4	Change-related self-efficacy	"What does the vision mean for your work?"
5	Organizational identification	"How connected do you feel to the UT?"
6	Collegial change communication	"To what extent do you talk with your colleagues about the strategy?"
7	Managerial change communication	"How effective do you perceive the communication by the UT in explaining why there is a new strategy and what opportunities it has for the individual?"
8	Change championing behavior	"To what extent are you currently involved in Shaping2030 activities?"
9	Change accepting behavior	"Has the strategy been integrated into your department strategy?"

3.5 Data analysis

All interviews were transcribed. Then, the data was analyzed by means of deductive and inductive content analysis (Babbie, 2017, p. 332; Azungah, 2018). In total, three rounds of coding were conducted. In the first round of coding, the researcher coded five of the 29 interview transcripts inductively and deductively by assigning the codes derived from literature on factors influencing sensemaking with link to change behavior (Weiser, 2020; Sloyan, 2009; Coetsee, 1999) and codes that derived from new themes emerging in the data. After the first coding round, the codebook was adjusted by adding new codes and categories. The researcher then re-read the five interviews, considering the refined codebook. Next, the codebook was discussed with a second coder to ensure an objective understanding of the codes. After the researchers agreed on the codebook, five interviews were coded by the two researchers independently to test the intercoder reliability. After achieving sufficient Cohen's kappa values for the different concepts, the remaining interviews were coded.

3.5.1 Codebook

The codebook included seven higher order categories including (1) academic occupation influences (2) psychological resources, (3) managerial communication, (4) communication with colleagues (5) change process influences, (6) change experience influences and (7) change engagement (see Appendix C). An example of a code that was developed through inductive coding is "demands external stakeholders" which refers to employee's perceived alignment between the university strategy and requirements of external stakeholders like funding agencies.

3.5.2 Intercoder reliability

To test the intercoder reliability, a sample of 17% ($n=5$) of the interview transcripts were coded independently by the researcher and the second coder. The intercoder reliability for each category can be found in table 2. To ensure that the selected transcripts represented a reliable sample of the data, the chosen transcripts included participants of all five faculties and job levels so that at least one member of each group of the stratified sample was represented (O'Connor & Joffe, 2020). In addition, the sample included transcripts of participants who were highly positive about the change and those who were negative about it, so that different viewpoints were represented.

In total, two coding rounds were conducted. At the end of each coding round, the intercoder reliability was tested by calculating the Cohen's kappa (MacPhail, Kohza, Abler &

Ranganathan, 2016). In the first coding round, not all categories achieved sufficient values, requiring clarifications in the definitions of codes. In the second coding session, the intercoder reliability was sufficient for the seven categories as all values were meeting the minimum requirement of 0.6 (MacPhail et al., 2016).

Table 2: Intercoder reliability by category

#	Category	Codes	Cohen's kappa
1	Occupation related influences	40	.68
2	Psychological resources	91	.77
3	Managerial communication	21	.67
4	Collegial communication	12	.76
5	Change process influences	8	.61
6	Change experience influences	19	.62
7	Change engagement	12	.85

3. Results

This chapter describes how change accepters and passive change resisters made sense of the new university strategy. As the two change response groups “active change resisters” and “change champions” could, contrary to the expectation, not be identified, this chapter does not further deal with them. The main factors positively and negatively influencing the sensemaking of the interviewed academics are displayed in table 3. Value-goal congruence and affective change commitment were considered as one positive influence factor, as in this research, interviewees expressed their intrinsic motivation to embrace those values and goals of the strategy that matched their personal values and goals. At the beginning of each change response section, the composition and characteristics of the response group is described. It is further elaborated on the interrelation of positive and negative influences for change accepters and passive change resisters, followed by an in-depth description of the individual factors.

Table 3: Main factors positively and negatively influencing sensemaking

Positive influences	Positive perception managerial change communication
	Positive or neutral collegial change communication
	Personal benefits
	Change-related self-efficacy
	Change is bottom-up initiative
	Value-goal congruence and affective change commitment
	Congruence with requirements of external stakeholders
	Continuance change commitment
Negative influences	Negative perception managerial change communication
	No or negative collegial change communication
	Negative expectations
	Lack of change-related self-efficacy
	Change is top-down initiative
	Core task prioritization
	Change fatigue
	Change cynicism

4.1 Change accepting behavior

In this work, academics who have actively started activities to implement Shaping2030 on the department or research chair level are considered to engage in change accepting behavior. This section describes how these academics made sense of the new university strategy. This group consisted of 15 academics, of which all had knowledge about Shaping2030 before the interview. Moreover, seven academics stated to identify with the university. One academic in

this group participated in the change planning process. Table 4 gives an overview of the group composition.

Table 4: Composition of change acceptor group

	Number of persons
Full professor	7
Associate professor	4
Assistant professor	4

All academics engaging in change accepting behavior mentioned that their research group first looked at the demands of their discipline and then either looked for matching interests with the strategy, or how adjustments could be made that a fit with the university strategy was established. As described by one academic (interview 24, full professor): “*we had our ambitions and then we went to shaping and looked for ways to enrich and finetune.*” 13 of 15 change accepters had a positive perception of the new university strategy (typical change accepters). These academics mentioned more positive sensemaking influence factors than negative sensemaking influence factors (see table 3). Two of the 15 change accepters had a negative perception of the change (atypical change accepters). For them, negative sensemaking influences outweighed the positive sensemaking influence factors. Table 5 gives an overview over the frequencies of sensemaking influence factors for both types of change accepters.

Table 5: Frequencies of sensemaking influence factors for change acceptor types

#	Influence factor	Typical change acceptor (n=13)		Atypical change acceptor (n=2)	
		Number persons*	Topics per person**	Number persons*	Topics per person**
1	Neg. perception manag. change communication	0	0	2	2
2	Pos. perception manag. change communication	13	1	0	0
3	Pos. or neutral colleg. change communication	9	2	0	0
4	No or neg. colleg. change communication	4	1	2	3
5	Value-goal congruence and affective change commitment	13	5	2	2
6	Congruence requirements external stakeholders	7	1	0	0
7	Personal benefits	13	2	0	0
8	Change-related self-efficacy	13	2	2	1
9	Lack change-related self-efficacy	2	1	2	6
10	Continuance change commitment	1	1	1	1
11	Bottom-up initiative	8	1	0	0
12	Top-down initiative	1	2	2	1
13	Change cynicism	5	2	2	2

*Number of change accepters addressing the influence factor

**Average number of topics mentioned by change accepters addressing the influence factor

During the analysis of the interviews, relations between some of the influence factors emerged. These relations could be detected by zooming in on the content of academics' statements regarding the single sensemaking factors. Table 6 gives an overview over the identified interrelations and corresponding statements of typical change accepters. For the two atypical change accepters, an overview over the relations of influence factors and corresponding statements is not presented, as the statements might allow the reader to infer their identity.

Table 6: Interrelations between factors for typical change acceptor

#	Interrelation	Example statement
1	Positive perception of managerial change communication with strategy knowledge	"I appreciate the fact that the information is readily accessible. When I want to refresh, I go check the website and re-read whatever, I read it again. And for me, that's the right level of accessibility and engagement, because yeah, I feel like I am good."

2	Positive perception managerial change communication with bottom-up initiative	"I feel that I am quite involved and then I have a lot of access to those types of documents. And I have to admit that we are often asked for input."
3	Positive collegial change communication with strategy knowledge	"One of our colleagues in our group is very much on top of this. And then [name] informs us if things happen. So [name] points us to the relevant websites, this brochure for instance."
4	Strategy knowledge with congruence requirements external stakeholders	"[...] If you read policy documents of the European union, it is all going in that direction of green transition plus the third industrial revolution with more fair, more equal, and more responsibly working with other countries. So, I think it is a trend that is ongoing, and I am happy with it."
5	Strategy knowledge with value-goal congruence and affective change commitment	"This idea of students being able to go to different places and get credits from different universities and bring it together as one degree. It is a wonderful ambition. [...] It is good to recognize that people learn in different ways throughout their life."
6	Strategy knowledge with change-related self-efficacy	"When we developed our department strategy, we tried to connect it. And I do see links, I can interpret it into some of the aspects."
7	Value-goal congruence and affective change commitment with personal benefits	"I look at how it aligns with my personal goals, and it makes it easier now to argue with people: why."
8	Value-goal congruence and affective change commitment with change-related self-efficacy	"I think the way how I work fits within this mission. So, I can find a place. In that sense, yeah, I can work within the context of the mission of the university."
9	Value-goal congruence and affective change commitment with bottom-up initiative	"When I read it for the first time, it really felt like coming home. It felt like a perfect fit for what we were already doing, and I think it is great if we can get a bigger, more critical mass of the UT to also have similar goals." (<i>Interviewee elaborates later</i>): "I know that some of my colleagues were involved in coming up with the strategy document [...]."

Typical change accepters had a positive perception of the new university strategy, as positive influence factors outweighed negative influence factors. Figure 3 gives an overview of the interrelation of the different influence factors. The managerial communication during

the planning and implementation of the change was perceived as positive. However, the typical change acceptor regularly mentioned that the managerial change communication could be improved in order to reach academics in lower hierarchy levels. Furthermore, typical change accepters have discussed the university strategy with colleagues during the implementation process on department or research chair level, and with other academics on the same management level. Based on the information provided by the university management and the communication with direct colleagues, typical change accepters developed profound knowledge on Shaping2030. The level of strategy knowledge enabled the typical change accepters to identify multiple matches between personal goals and values, the requirements of external stakeholders, and the new university strategy, and they felt confident to contribute to the mission, vision and strategic goals. Based on their value-goal congruence, typical change accepters perceived personal benefits with the implementation of strategic themes. The positive perception of the new university strategy was reinforced by the feeling that the academic staff was sufficiently considered in the change process, including the perception that the university management offered them the possibility to participate in the planning. Typical change accepters were either not cynical about the change or only regarding one or two certain strategic themes, so that their overall positive perception of the new university strategy was not impaired.

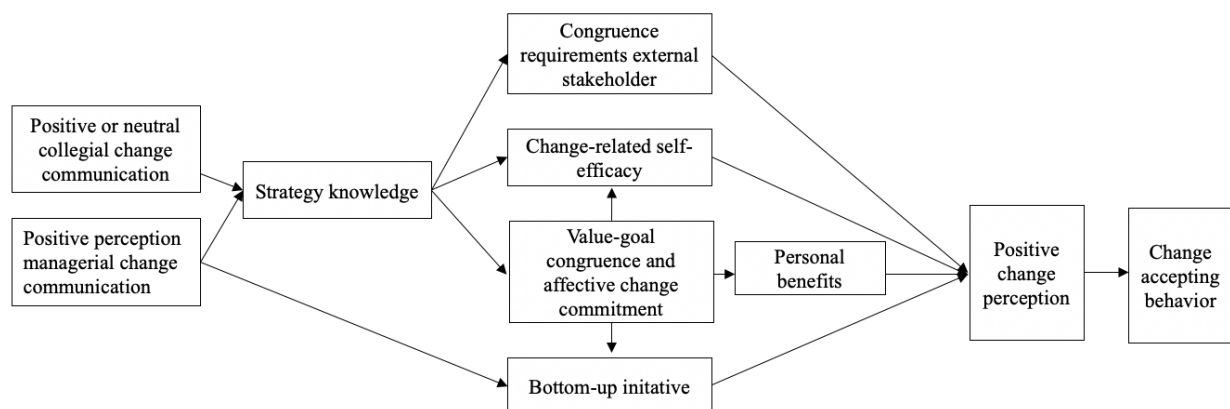


Figure 3: Interrelation of sensemaking influence factors for typical change accepters

The two atypical change accepters held a negative perception of the new university strategy. Figure 4 visualizes their sensemaking process. For these two academics, the negative sensemaking influence factors outweighed the positive influence factors. The foundation for their negative perception was the negative perception of the managerial change communication. The first time that atypical change accepters were confronted to deal with the

new university strategy was at the beginning of the implementation phase. Consequently, they felt excluded from the change process and perceived the change as entirely top-down initiative. The negative perception of the managerial change communication reinforced their perception of the change as top-down initiative and triggered them to doubt the success of the strategy implementation. Although they studied the information about Shaping2030 thoroughly and discussed it with direct colleagues, the information provided about the strategy in documents and newsletters was perceived as in certain parts contradicting and confusing and unrelated to personal values and goals. Consequently, the atypical change accepters did not consider themselves able to contribute to the implementation of most strategic themes. The perceived incongruence of values and goals with the strategy was mentioned in relation to the failure to associate personal benefits with implementing the strategy on department level. Despite their negative change perception, atypical change accepters started activities to implement the university strategy at department level. Reasons for this engagement were the perceived responsibility related to their management position, or their fear of negative consequences for their discipline when ignoring the new strategy. Due to the perceived incongruence of values and goals, and the perceived ambiguities and contradictions in the management communication, however, atypical change accepters could not complete the implementation activities.

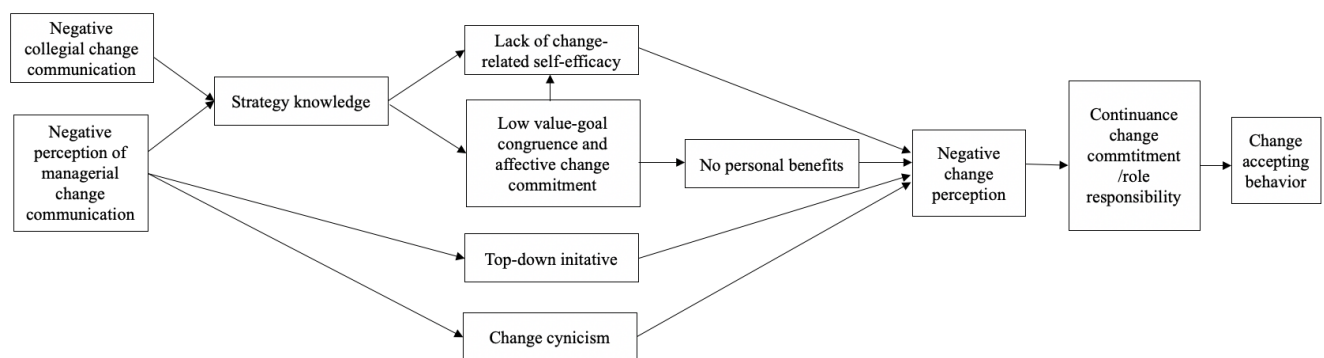


Figure 4: Interrelation of sensemaking influence factors for atypical change accepters

The following sections elaborate on the individual sensemaking factors of all change accepters in detail.

4.1.1 Managerial change communication

Managerial change communication refers to the change communication by the university management. All change accepters have read the strategy document about the new university strategy provided by the university management. Six of the 13 typical change accepters

expressed strong appreciation of the information provided by the university management and the communication measures. The main arguments of the academics for their positive perception were that they were satisfied with the amount of information about the strategy and the easy access on the website of the university to it, as for example described by one interviewee (interview 20, full professor):

“So, I think if you want to know more, that is not a problem, all the information is very easily findable. We have received e-mails, and if you go to the UT website, it is all there. So, that is not a problem.”

Seven typical academics mentioned that they were content with the managerial change communication but that they perceived single points of improvement. The two atypical change accepters also mentioned points of improvement, but in contrast to the typical change accepters, they based these on their expressed dissatisfaction with the senior management’s change communication. The points of improvements that were mentioned the most were (1) finding ways to create more awareness about the strategy, especially among those who were not part of the management team, (2) communicating clearer what is expected from the individual researcher to do, for example, by giving examples of ongoing incentives (3) communicating how the successful implementation would be assessed, and (4) reminding people of the necessity of the different strategic goals, such as the involvement of the university in the European University of innovation initiative. The following quote illustrates the argument relating to the assessment of the implementation (interview 23, full professor):

“One of the things that we need to ask ourselves is: how are you going to evaluate this? You know, how are we are going to say in 2030 that we achieve our goals.”

4.1.2 Collegial change communication

Eleven academics stated that they have discussed the university strategy with their direct colleagues. These included nine typical change accepters and two atypical change accepters. The two atypical change accepters described the communication about the strategy in their department as negative, while the typical change accepters regularly referred to it as neutral or positive. Eight of the 11 change accepters stated to be in a management position of a department, including the two atypical change accepters. Only one change acceptor and one atypical change acceptor described to talk about the change with colleagues who were not in

management positions but participated in a strategy working group. Therefore, whether colleagues talked about the change was mainly triggered by two criteria, which were (1) being part of the management team of a department or faculty and (2) the involvement of a direct colleague in a strategy related initiative. Two academics stated that they discussed the new strategy within their management team but not so much with their entire research group because they perceived that the university strategy was too high level for academics who were not involved in managerial tasks. The following quote gives an example of this argumentation (interview 10, full professor):

“But as part of the management team, what we always do is making sure it fits. You know, you can see that this is a contribution to a particular goal or strategy. So, we do it in the management team, but I don’t often do it, talking day to day with staff. It is too high level to have this part of a daily conversation.”

Six typical change accepters mentioned that they felt informed about the new strategy but had the perception that academics in their research group at lower hierarchical ranks, did not have enough knowledge.

4.1.3 Value-goal congruence and affective change commitment

All change accepters identified matching values and goals. Typical change accepters identified on average five matches, and atypical change accepters identified on average two matches. Academics who shared to a large extent the same values and goals as the university, stated to be intrinsically motivated to live up to values that were congruent with the university’s, and therefore showed affective change commitment. In the interviews, all 15 strategic themes of Shaping2030 were mentioned at least once in relation to value-goal congruence. The three strategic themes mentioned the most by far were (1) focusing research and education on societal challenges and sustainable solutions, followed by (2) personalized talent development, (3) and the values entrepreneurial and open. The following quote exemplifies how one academic describes value and goal congruence with the theme sustainable solutions, and her resulting commitment towards the goal (interview 26, assistant professor):

“I also liked the aspect ... okay, it is a key term. It is a catch all term, sustainable. But I find this very important, given the challenges linked with climate change and loss of biodiversity [...]. So, I find this term of adding sustainability to your vision, I find this important as well.”

The high number of thematic matches among the group of typical change accepters indicated their high level of agreement with the content of the strategy. It was noticeable that for the themes matching the interviewees' values or goals, they emphasized their strong relation to these and repeated their perceived importance throughout the interview.

4.1.4 Congruence requirements external stakeholders

During the interviews, seven typical change accepters compared the content of the new university strategy with the values and goals of their external stakeholders. They indicated that much of the research in their faculty was already focusing on topics such as societal challenges and sustainable solutions as it was a requirement by external stakeholders like governmental institutions and funding agencies. The following quote illustrates this argument in relation to the theme sustainable solutions (interview 8, assistant professor):

“Sometimes we are kind of guided by for example research programs. So, if there is a call for research proposals then already in the proposal there is a kind of request to fulfill some sustainable development goals or something. So, in that sense you need to think about how your research can fit in the proposal.”

Two of the seven academics argued that their disciplines as well as the strategy directly related to societal challenges or national policies, so that they were naturally involved in the implementation of the topics. For example, one academic explained: *“My chair is a huge societal challenge. It is one of the United Nations' sustainable development goals [...]”*

4.1.5 Personal benefits

Regarding their expectations towards the implementation of the new university strategy, typical change accepters mentioned on average two personal benefits, while atypical change accepters did not identify any. Especially those academics who perceived an overlap between their research field, the strategy and the requirements of funding agencies and governmental institutions as well as those who perceived a high number of matches with personal values and goals and the strategy also perceived a high number of benefits with the strategy implementation. The personal benefits named most often in this regard were (1) organizational support for personal goals in the form of resources (2) reassurance that their employer wants them to continue working on the topics they were already working on and (3) support in arguing why their personal values and goals were important. The following quote gives an example of

a positive expectation (interview 25, assistant professor): *"It could provide some opportunities to get more funding or possibilities or options to do the kind of work that we usually do. Also, in relation to other things than the university."*

4.1.6 Change-related self-efficacy

When the interviewees were asked how they as a person could contribute to the mission and vision of the strategy, all typical change accepters were able to make sense of how they could be part of the mission and vision. On the topic of their overall perceived ability to contribute to the university strategy, two of the typical change accepters argued regarding the value "inclusive - student over system" that although inclusiveness matched their values and goals and that they were personally committed to live up to it as much as they could, they felt that they as individual could not fulfill the goal as the system needed to be changed by the university management. This argument is exemplified in the following quote (interview 15, associate professor):

"If you for example want to do the student over system, then there has to be a structural change, you can't just say okay, from now on in my teaching I will use student over system. That is not something that I feel an individual can change."

The two atypical change accepters could not make sense of how to contribute to the mission and vision. For example, one academic argued (interview 18, full professor): *"Also the Shaping Connections. It is a lot about the how (...) Yes, that can be a goal, but how can I help? What should I do? That is very unclear."* Both explicitly mentioned the implications of the terms "sustainable" and "people-first" in the vision and mission as being ambiguous. More specifically, the two academics described that (1) the content of the strategy document was too vague to be translated into concrete actions and (2) that the management would not offer the departments the necessary support to implement the strategy. For example, one academic argued in about the perceived ambiguity of the term sustainable solutions (interview 19, full professor): *"What I would like to have as (...), in which direction we have to train our students, and what kind of research we have to do."*

4.1.7 Continuance change commitment

One typical and one atypical change accepter claimed that the apprehension of negative consequences was the main motivation of their research chairs to engage in formal activities to align their strategic plan with Shaping2030. One of the two academics described that due to

structural changes in the research chair that might affect the survival of the research group, it was important that the research chair's strategic planning aligned with the new university strategy. The academic further elaborated that Shaping2030 naturally aligned with the ambitions and activities of the research chair, so that the implementation was just an act of formality. The atypical change acceptor mentioned to have been initiating activities to implement the strategy on research chair level, as the contribution would be important for its survival. The following quote illustrates the feeling of continuance change commitment (interview 16, associate professor): *"We need to be aware of this if we want to survive as a group, to put it very boldly."*

4.1.8 Top-down vs. bottom-up initiative

Eight typical change acceptors explicitly mentioned that they had the perception that the management put sufficient effort to include all interested academics in the change process. One interviewee noted (interview 28, associate professor): *"I know that some of my colleagues were involved in coming up with the strategy document, because Shaping 2030 had quite a strong bottom-up involvement, I think in defining it."* These eight change acceptors mentioned high value-goal congruence, especially with the mission, vision, and values, and also understood how to contribute to it.

Three change acceptors felt that the opinion of the scientific staff was not sufficiently considered during the change process. Two of these three change acceptors were the atypical change acceptors, who perceived that the strategy did not match their values and goals and consequently faced challenges in making sense of how they could contribute to it. The third academic perceived that specific themes of the strategy, especially the focus on societal challenges was neither applicable to all research groups equally, nor to their personal research field. These interviewees argued that in their view, the higher management did not visit the faculties, did not listen to the opinion on strategic decision of academics and did not put enough effort to include the academics in the decision-making process. The second argument is exemplified in the following quote (interview 19, full professor): *"[...] when they were making that they invited a lot of people. But if they listened to them, that is another topic."*

4.1.9 Change cynicism

Five typical change acceptors and two atypical change acceptors were pessimistic about the implementation of single strategic themes. In total, nine themes were mentioned in relation to change cynicism. The theme mentioned most often was the disbelief in the management's

efforts to make the necessary investments to successfully implement the change. This argument emerged mainly in relation to the value “inclusive – student over system” and the strategic goal “personalized talent development.” Arguments that were only mentioned by the two atypical change accepters and the one academic who perceived the change initiative as top-down initiative, related to a perceived discrepancy between the strategy and the interests of the faculties and the perception that most of the scientific staff was not yet aware of the new strategy. The following quote exemplifies the disbelief for management’s change efforts (interview 18, full professor):

“Yet, academics are judged on the number of papers and outputs. Not so much on how inclusive we are. And we are judged on an individual level. Not on team levels. So, sometimes I think, what the university wants us to do should also provide us the tools and the judgments and the assessments corresponding to it.”

4.2 Passive change resistance

The next sections elaborate on how passive change resisters made sense of the new university strategy. Academics engaged in passive change resistance, when they did not start any activities with the intent to implement the new university strategy on department or research chair level. In total, 14 academics engaged in passive change resistance, of which two participated in the planning process and four had knowledge about Shaping2030 before the interview. Eight of the 14 academics mentioned to feel strongly attached to the university. Table 7 gives an overview over the composition of the research group.

Table 7: Composition of passive change resister group

	Number of persons
Full professor	5
Associate professor	5
Assistant professor	4

Passive change resisters who had knowledge about Shaping2030 before the interview had a negative perception of the overall change, as positive sensemaking influences outweighed factors positively influencing sensemaking. Passive change resisters who firstly were confronted with the new university strategy during the interview did not have a typical change perception. Their sensemaking process took place during the interview, leading to either a

positive change perception or a negative change perception. With two exceptions, passive change resisters held a negative perception of the university management's change communication. Table 8 gives an overview over the frequencies of passive change resisters.

Table 8: Frequencies of influence factors for passive change resisters with and without prior strategy knowledge

#	Influence factor	Academics with no strategy knowledge (n=10)		Academics with strategy knowledge (n=4)	
		Number persons*	Topics per person**	Number persons*	Topics per person**
1	Neg. perception manag. change communication	7	2	4	2
2	Pos. perception manag. change communication	3	1	0	0
3	Pos. or neutral colleg. change communication	0	0	2	1
4	No or neg. colleg. change communication	10	1	2	2
5	Value-goal congruence and affective change commitment	9	3	4	5
6	Matches with requirements external stakeholders	3	1	1	1
7	Personal benefits	8	1	2	1
8	Negative expectations	4	1	3	2
9	Change-related self-efficacy	9	1	1	1
10	Lack change-related self-efficacy	10	2	3	3
11	Bottom-up initiative	3	1	0	0
12	Top-down initiative	5	1	2	4
13	Core task prioritization	6	1	2	2
14	Change cynicism	6	3	4	4
15	Change fatigue	3	1	1	1

**Number of passive change resisters addressing the influence factor*

***The average number of topics mentioned by passive change resisters addressing the influence factor*

The following two paragraphs give an example of the interrelation of factors for one academic with no prior strategy knowledge before the interview and for one academic with strategy knowledge before the interview. As the examples relate to one interviewee each, an overview of the statements referring to the relations between the factors is not presented as it might reveal the identity of the interviewees.

The first example relates to the sensemaking of an academic with a negative change perception, who did not have prior knowledge about Shaping2030 before the interview. Figure 4 is a visualization of the interrelation of the different sensemaking factors for this academic. The academic perceived the managerial change communication as negative as it was only experienced as taking place via one-way communication channels such as e-mails and information on the university website. This perception contributed to the impression of Shaping2030 as senior management activity, that does not consider the opinion of the academics. The strategy has not been discussed with colleagues on department or research chair level. Overall, advancing research and education in the field is perceived as more important to get involved in the university strategy. Moreover, the university strategy is seen as marketing initiative. The academic dealt for the first time with the strategy during the interview and had consequently no strategy knowledge. Based on the lack of knowledge, the academic perceived to be uninformed and not able to contribute to the implementation. The academic asserted to maybe be able to find congruence with the mission as such but could not identify any values and goal congruence or personal benefits. Based on the knowledge gained about the strategy during the interview, the academic had negative expectations with the implementation of the strategy.

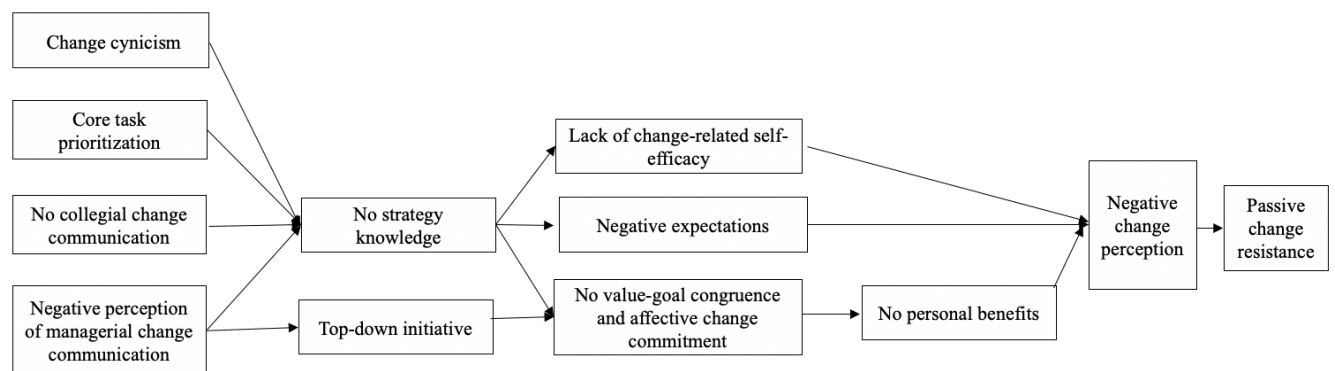


Figure 4: Example of the interrelation of sensemaking influence factors for a passive change resister without knowledge about Shaping2030 before the interview.

A second sensemaking example is used to describe the sensemaking process of one passive change resister with knowledge about Shaping2030 before the interview. Figure 5 illustrates the relations of the sensemaking influence factors. The academic had a negative perception of the managerial change communication and claimed that direct colleagues mentioned to have the same perception. This negative perception developed through negative experiences as regards contributing to the change planning and implementation and triggered

the academic's impression of the change as top-down initiative. Based on the strategy knowledge, the academic pointed out disadvantages with the implementation of one strategic theme, mentioned to feel able to contribute to most strategic themes of Shaping2030, identified high value-goal congruence as well as many matches with requirements of external stakeholders. The high personal value-goal congruence and congruence with stakeholder requirements led to the academic's perception that the new university strategy was not a change and made the academic doubt the senior management's intentions to really want to change something. As Shaping2030 was perceived as status quo, the academic did not identify personal benefits with it and was cynic about the implementation, as the implementation of the vast majority of topics was perceived as redundant.

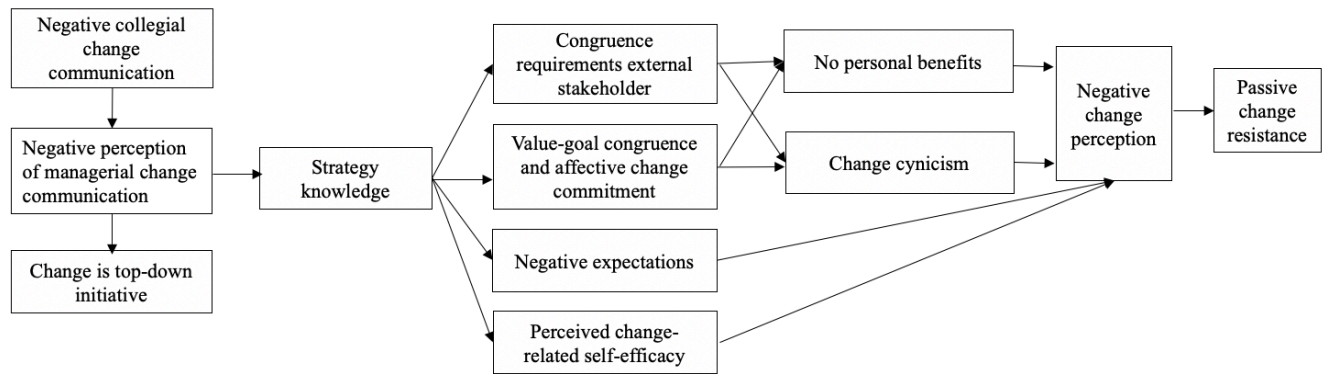


Figure 5: Example of the interrelation of sensemaking influence factors for a passive change resister with knowledge about Shaping2030 before the interview

4.2.1 Managerial change communication

With three exceptions, passive change resisters had a negative impression of the change communication by the senior management. The three academics appreciating the managerial communication mentioned that although they were satisfied with the communication, they did not engage in change accepting behavior as they perceived the strategies of the university in general as too distant from their everyday decision making.

Seven of the 11 academics with a negative perception of the change communication mentioned to experience the communication only taking place via one-way communication channels such as newsletters sent via e-mail and information on the employee website. These academics further elaborated that this way of communication was ineffective to catch their interest in inventively engaging in actions to contribute to the change implementation and that they either did not read the information about the change sent via e-mail or on the websites at all, only scanned through it or did not even remember receiving information about the new

university strategy. As typical explanations for the perceived ineffectiveness, the academics mentioned their high workload and lack of interest in higher management activities. Nevertheless, the academics noted that if the university strategy would be explained in a meeting on faculty or department level, they would be willing to attend that meeting and consider getting formally involved in the implementation. This argument is for example made by one interviewee (interview 29, associate professor):

“(...). If it is just another e-mail, it is going to be deleted. But if it would be a meeting of my dean, telling me: hey, this and this is going on. Just to inform me, then I would have listened, I would have gone to such an online meeting.”

Regarding the information itself, eight academics named aspects that would help them to better understand how to contribute to the change implementation. Five of these eight academics did not read information about the strategy before the interview, and three other academics reported to have been reading the strategy documents in detail. All eight academics mentioned that in their perception, the management needed to communicate more clearly their expectations of academics regarding the change implementation. In relation to this argument, four interviewees argued that informing about ongoing activities in relation to certain strategic themes would increase their ability to understand the strategy and engage in the implementation. This argument is expressed in the following quote (interview 27, associate professor):

“So, the problem I think for the management is, you present something like this to the groups and you say to the groups: implement it. Then of course, they will implement it. They will just reshape whatever they are doing under these new headings. So, if as a management, you want some change, then you should be a bit more specific about in what direction you want the change to happen.”

Five academics who reported not to be involved in management activities described that because nobody from the management level discussed the strategy with them, they did not need to get involved in the implementation process. This argument is exemplified in the following quote (interview 9, assistant professor): *“I can’t recall that I have heard a lot about it. And I haven’t been motivated or inspired or whatever to look for it actively by myself.”*

4.2.2 Collegial change communication

Passive change resisters with no prior strategy knowledge did not discuss the change with colleagues. Only three of the four passive change resisters with prior strategy knowledge mentioned to have been talking about the new university strategy with colleagues, but only with other managers. One of these academics stated to have discussed the personal difficulties to understand the content with colleagues and that the colleagues had the same perception. The other two academics discussed the new university strategy with their colleagues on faculty management level. The remaining 11 passive change resisters asserted that they have not talked about the strategy with their colleagues within their department. One academic who mentioned not to be in a management position described the collegial communication in the department as follows (interview 22, assistant professor): *“So, on our level, pretty little actually. Probably because it has not to do with the implementation. So, I guess, if there are things to be implemented, then that’s the moment we will notice.”*

4.2.3 Value-goal congruence and affective change commitment

Passive change resisters without prior strategy knowledge identified on average three matches with the new university strategy, while those with strategy knowledge identified on average five matches. In total, passive change resisters mentioned 13 themes in the interviews in relation to value-goal congruence. The themes that were mentioned most often related to the strategic goal “shaping individuals” and “sustainable solutions” interpreted as environmentally friendly. When a theme matched their personal values or goals, the interviewed academics mentioned to be intrinsically committed to the fulfillment of the goal or living up to the value. The following quote exemplifies the value and goal congruence and the resulting affective commitment of one academic with the strategy’s goal to transform the university into a sustainable organization (interview 17, assistant professor):

“Another thing is that I really think that the entire sustainability focus makes absolute sense and I think that is something that really should be forced upon staff. And I think that it is really important that we reduce the number of useless conferences we go to the other side of the world for and these kinds of things. And if it is really necessary somehow, we try to compensate this.”

Three academics who identified an above-average number of value and goal matches argued that the strategy content reflected the status quo, so that they questioned whether they had to

take actions to formally implement some of the strategic themes. Two of the three stated to have been studying the strategy document in detail, while one based the conclusion on the information provided in the interview. This argument is illustrated in the following quote (interview 12, full professor):

"And yeah, for the other three things, it is so obvious, that really can't excite me, honestly. No, it is so obvious, it is such an open door that it is ... yeah come on. We always do shaping society, shaping connections, shaping individuals."

4.2.4 Congruence requirements external stakeholders

Four academics mentioned that strategic themes of Shaping2030 matched with the demands of funding agencies, so that they considered the goals societal challenges, sustainability, and societal relevance anyway. Consequently, they argued that the strategic goal to have 70% of the research and education challenge-based by 2030, was already reached in their faculty. Based on their perception to already have been achieving the goal, they argued not to understand the why this was included as strategic goal for 2030. This argument is exemplified in the following quote (interview 27, associate professor):

"If you look at programs that are funded at the moment, I would say the majority of the money is already going to projects that are in that sense challenge-based. Either of direct relevance to society or are partially paid by industries."

4.2.5 Personal benefits

On average, passive change resisters perceived one personal benefit with the implementation of single strategic themes or the overall change. Four of the 14 academics were not able to identify personal benefits with the implementation of the overall university strategy. Two of these four were passive change resisters who mentioned to have been studying the strategy documents in detail, and one was content with the information but perceived the demands of the discipline as more important than the university strategy. As argumentation while the change would not bring personal benefits, one academic argued that the new university strategy reflected the status quo.

4.2.6 Negative expectations

During the interviews, seven of the 14 academics expressed concerns with the implementation of single strategic themes. Four of the seven have not been studying the information about the new university strategy before the interview. The other three stated to have been reading all provided information in-depth. The four themes they mentioned related to (1) education and research quality concerns caused by individualized talent development as well as the strong focus on societal challenges in educational programs and (2) increasing competition among academic staff due to the emphasis on individual researchers and (3) too much invasion in academic autonomy (4) not all research fields are mentioned. The following quote illustrates the research quality concern caused by the focus on societal challenges (interview 3, assistant professor):

“But I think of course it is a benefit if certain research has direct application, but research can also be much more fundamental. And this is what I don’t really like about all this Shaping2020, 2030 ideas and the strategic goals, that they try to involve companies and society maybe too much, which is not beneficial for fundamental research.”

4.2.7 Change-related self-efficacy

Ten of the 14 academics mentioned during the interview that they understood how to contribute to parts of the mission or vision, while they perceived it easier to make a connection to the vision than the mission. Academics used two distinct interpretations of the term “sustainable solutions” in the vision. The largest group of academics understood sustainable solutions as contributing to a green transition. The second, significantly smaller group understood the term as providing future-proof solutions, as demonstrated by this quote (interview 4, full professor):

“So, let me go back to my expertise. I am good at teaching (...). And probably my contribution should be to teach it in such a way that the right use of ideas that penetrates it becomes future proof in the heads of my students so that they can take it further and hopefully together we will achieve something.”

Although the majority perceived themselves as able to connect to parts of the mission and vision statements, 13 of the 14 academics mentioned not to understand how to contribute to one or more of the strategic themes. The only interviewee who perceived to understand all aspects of the strategy was one of the academics who stated to have been studying the

information about the strategy in detail. In total, ten of the 15 strategic themes were mentioned in relation to lack of change-related self-efficacy. The themes mentioned most often related to (1) the meaning and implementation of the value inclusive – student over system (2) the implications of the overall content, and (3) the implications of fair and definition of society. An example of the implication of society is exemplified in the following quote (interview 12, full professor): *“But yeah, what is society? That is such a wide concept, it is so wide, it could be anything.”*

4.2.8 Top-down vs. bottom-up initiative

Three academics perceived that the senior management put efforts in including all interested academics in the planning and implementing process. In response to the follow-up question about the reason for this perception, one academic answered that the management communicated clearly how and when one could participate and to have been personally participating in two working groups. Strikingly, the other two academics stated that they also perceived that the management put effort in including academic staff in the planning and implementation, but they personally did not feel interested to get involved in the university strategy. These two academics mentioned earlier in the interviews that they were satisfied with the managerial communication around the strategy, but they felt university strategies as something somewhat distant from their daily research and education activities.

Seven academics perceived the change as senior management initiative that did not consider the opinion of academics sufficiently. Five of the seven academics stated to have not been dealing with the university strategy before the interview. The other two academics belonged to the group read the information provided by the management in detail. Noticeably, one of the academics participated in the working groups in the planning process and one was in contact with the working groups due to voluntary committee work. The academics used two arguments in relation with this viewpoint, which were (1) the perception that their opinion was not valued during the process, and (2) the conditions for participating in the planning process were incompatible with their high job demands. The following quote illustrates the argument that the academics’ opinions were not valued during the planning process (interview 14, associate professor):

“I went there once, but actually already there, the content was more or less set in stone and everyone in that meeting was suggested to confirm with that. So, I went there just once, then I was not involved anymore.”

4.2.9 Core task prioritization

Core task prioritization is a factor only mentioned in this group. Eight academics reported that doing good research and education was more important for them than working on the strategy implementation. This perception was held by five academics who did not read the information about the new university strategy before the interview and two academics who read the information in detail. Contradictory, one of the academics who read the information in-depth stated to feel that the opinion of academics was not sufficiently considered in the change process, but when the academic was approached to participate, the academic perceived that personal core activities were more important. The other academic who studied the information in-depth stated that especially the COVID-19 situation brought new more imminent problems that had to be solved than making sure that the university strategy is implemented on department level. Overall, common arguments regarding core task prioritization were (1) developing a personal academic profile guided by a personal mission and vision was more important than working according to the mission of the university, and (2) the pandemic situation required to put additional resources in keeping education ongoing, as well as (3) restructuring processes in faculties. For example, one academic asserted (interview 3, assistant professor):

“I think it is just down to the problem that I am not in higher management, that we don’t really care about these kinds of things. We have to be so busy with our own individual career and research that we hardly care about what happens at the university level.”

4.2.10 Change fatigue

In total, four academics expressed that the university introduced too many changes in recent years. All academics described not to be in a management position. Three of the four academics mentioned to not have been reading the information about the new university strategy before the interview, while one studied the information in detail. None of the academics was in the position of full professor. Academics who experienced change fatigue stated that they were not willing to put a lot of effort in the successful implementation, as illustrated by the following quote (interview 14, associate professor):

“Because university tends to change strategy quite often, for a strategy, I think all faculties, but in any case, our faculty is quite in a reactive mode. They will

just see what happens and will adjust their wordings accordingly, because basically, this strategy doesn't change anything except wording."

4.2.11 Change cynicism

Ten academics mentioned change cynicism, including the four academics who had knowledge about the university strategy before the interview. Passive change resisters were pessimistic about the successful implementation of several single strategic themes or the overall change. In total, 11 themes were mentioned in the interviews. The arguments that were mentioned at least twice in relation to change cynicism were (1) a perceived distance between the strategy and the faculties (2) unrealistic goals (3) the disbelief in the management's efforts to make single strategic themes such as inclusion and individual talent development a success. Five of the seven academics who did not read the information about the strategy provided by the management argued that the only purpose of the strategy was to create a positive image to external stakeholders, whereas its actual influence on their daily activities was limited or lacking completely. This view is for example illustrated by the following quote (interview 9, assistant professor):

"(...) it feels like something that the board and some visionary people, who find themselves visionary, draw up and make nice infographics about. And then is used by communication. But that's about it."

4. Discussion

This chapter starts with the discussion of the main findings, followed by an elaboration on theoretical and practical implications. After that, limitations of the research are described, and directions for future research proposed. The chapter ends with a conclusion.

5.1 Main findings

The goal of this research was to study factors influencing employees' change responses in the context of HEIs. To answer the research question, a series of semi-structured interviews was conducted with 29 academics of the UT in the Netherlands on the topic of the UT's new strategy Shaping2030. The main findings are presented in the following four sections.

5.1.1 Managerial change communication

The findings highlight the outstanding role of managerial change communication for academic sensemaking and behavior. When academics perceived research and education activities as higher prioritized than the university strategy, when they felt not responsible for the strategy implementation and/or perceived the university strategy as marketing initiative only, they were not likely to feel addressed by one-way communication, such as newsletters and information on websites. Especially academics at a lower organizational hierarchy level often perceived that the communication and thus the university strategy and its implementation was directed towards academics in management positions. This finding is in accordance with the work of organizational scholars like Mills (2009), who demonstrated that managerial change communication positively influences sensemaking when the senior management in its role as sensegiver serves both vertical and participatory communication channels.

This study further showed that when academics studied the provided information but perceived it as quantitatively overwhelming, contradictory and/or ambiguous, this negative impression was likely to set the foundation for a negative perception of the overall change. This effect relates to previous work from researchers like Gioia and Chittipeddi (1991) that identified managerial change communication as main source for employee sensemaking during strategic change. Ambiguities and confusions in the communication as well as the perception to be uninformed about the change are likely to contribute to a negative perception of the change and result in resistance (Christensen, 2014; Lane, 2007; Nilsen, Schildmijer, Ericsson, Seing & Birken, 2019).

5.1.2 Collegial change communication

One conclusion can be made on the results on collegial change communication. Most academics only talked about the university strategy within their management team at department or faculty level, so that participatory strategy communication did not often get through to academics at lower hierarchical positions, reinforcing the perception of academics at lower hierarchical positions that the strategic change only concerned the management. Hence, the interaction or lack of interaction with colleagues played a role in the academics' sensemaking process. This finding is in congruence with the findings of Degn (2014), who described in her case study on sensemaking in HEIs that the opinion and imagined opinion of colleagues influences a person's sensemaking. A possible explanation why in this specific research context the perception that strategy communication mainly took place at management level exists could be that the organizational structure of the UT attributes strategy activities at university level to academics with management responsibilities.

5.1.3 Change accepting behavior

Five conclusions can be drawn on the sensemaking of change accepters. First, although academics might have been pessimistic about the successful implementation of single strategic themes or perceived that the managerial change communication could be improved in some respects, they still created a positive perception of the change when they identified high value-goal congruence, affective change commitment, personal benefits, and felt able to contribute to most strategic themes. This finding aligns with the corresponding sensemaking literature (see 2.3.3 – 2.3.6), indicating that these sensemaking influence factors apply to the context of academics in HEIs.

Second, the perceived congruence with goals of external stakeholders positively influenced sensemaking. One explanation for the relevance of this influence factor on a positive change perception might be that academics are in a unique situation where they receive their salary from the university but are also dependent on research funding from external parties, so that they are required to consider the interests of external stakeholders. Perceived congruence between the interests of the university as employer on the one hand and the interests of external stakeholders on the other hand might facilitate serving the interests of both parties.

Third, the feeling of continuance commitment motivated academics to engage in change accepting behavior despite potentially having an overall negative change perception. This finding conforms to the results of the seminal research on change commitment by Herscovitch

and Meyer (2002), asserting that the fear of negative consequences in case of refusal is a strong motive for employees to engage in change supportive behavior.

Fourth, perceiving the change as bottom-up initiative positively influenced academics' sensemaking and related to change accepting behavior. This finding falls in line with the study of Lewis (2007), indicating that employees appreciate when their input is valued by their employer. This result is also congruent to the results of Nilsen et al., (2019). In their study on the change response of health care professionals to organizational change, the authors found that health care professionals were more likely to engage in change accepting behavior when they perceived the changes as initiated by themselves (Nilsen et al., 2019).

Fifth and last, roughly half of the academics who engaged in change accepting behavior did not feel strongly attached to the university. This finding contradicts previous findings, stating that employees are more likely to engage in change implementation and act in favor of an organization when they feel strongly attached to the organization (see 2.1). One explanation for the observed effect might be that the implications of this particular change were perceived positively for the academics personally or their research field.

5.1.4 Passive change resistance

Four conclusions can be made on the sensemaking of passive change resisters. The first conclusion is that for academics with prior strategy knowledge, negative sensemaking influence factors outweighed positive influence factors, resulting in a negative change perception. This result is equivalent to the findings on change accepters' positive change perception (see 5.1.3). The contrasting perceptions of change accepters and passive change resisters confirmed the principle of sensemaking theory according to which employees in the same organization engage in different change behavior when they hold a different perception of the change (Ericson, 2001; Yilmaz & Kılıçoğlu, 2013; Sloyan, 2009).

The second conclusion involves that more than half of the academics engaging in passive change resistance identified with the university. This finding is surprising as it contradicts with the notion that employees who resist change implementation are less likely to identify with their organization (see 2.1). The explanation for this result might be similar to the explanation for change accepters without strong attachment to the university, entailing that for change behavior, the implications of the change are perceived as more important than the feeling of organizational identification. One argument for this explanation is that four of the eight passive change resisters who expressed organizational identification had knowledge about the strategy before the interview and held an overall negative change perception.

The third conclusion refers to the influence factor perceiving the change as top-down initiative. Overall, this finding corresponds to the influence factor perceiving the change as bottom-up initiative, which was often referred to among change accepters. One explanation for this result can be found in the literature on academic culture. In her article, Park (2013) describes that traditionally, university professors were strongly involved in the decision-making of most internal and academics matters in HEIs. The author further explains that top-down management is consequently often perceived as “undemocratic and non-participatory” (Park, 2013, p. 184). A more general explanation is offered by Armenakis et al. (1993). The authors describe that employees resist to change, when they feel that their input is not valued.

The fourth conclusion is that the factors change cynicism, change fatigue, and core task prioritization, which were unrelated to Shaping2030 itself, influenced the sensemaking of passive change resisters in addition to the negative impression of the communication of the university management and the lack of collegial change talk within the research groups.

The significance of the factor core task prioritization falls in line with research on academic identity and the relation between academics and the senior management at universities. Many academics perceive themselves as scientists, not managers, but HEIs have been giving them more and more managerial and administrative tasks, besides research and education, causing potential conflicts (Ylijoki & Ursin, 2013). This tension between the interests of academics and the senior management is for example addressed by Akella and Khoury (2019). In their study on academics’ resistance to organizational change, the authors assert that academics primarily want to be good on their subjective disciplines while the university administration wants to respond to external forces. A consequence of this difference in interests can be that academics prioritize research and education activities over university strategy activities.

The result that change fatigue was mainly expressed by assistant professors aligns with the article by Elving, Hansma and de Boer (2011), who noted that change fatigue is higher among employees at lower positions, as they usually have less access to information and must deal therefore with more uncertainty.

The high influence of change cynicism towards the overall change in this group is congruent with the organizational change literature. Research indicated that change cynicism is especially high among change resisters (Thundiyil, Chiaburu, Oh, Banks & Peng, 2015; Stanley, Meyer & Topolnytsky, 2005). An additional explanation for the high level of change cynicism can be the finding by Akçay (2017) that academics at universities are often cynic towards the university management activities in general.

5.2 Theoretical implications

By exploring the influence factors of employee change responses in HEIs, this research offers relevant contributions to strategic change literature. In recent years, organizational scholars have acknowledged the need for research on strategic change implementation. Among other authors, Kohtamäki, Kraus, Mäkelä, and Rönkkö (2012) indicated that strategic change literature has focused disproportionately on the planning phase of strategic change and have called for more research on the implementation phase. By zooming in on the role of the individual employee in the process of strategic change implementation, this research adds knowledge on one crucial subject area for successful strategic change implementation.

The intensified competition between HEIs for students and academics as well as the increasing requirements of institutions such as the United Nations has led to a greater focus on topics such as the planning and implementation of university strategies (Musselin, 2018; United Nations, 2015). As a response to the growing relevance of the topic, several researchers have begun to address the issue. For example, one research stream is dedicated to the question of how to plan and implement a sustainability strategy in universities (e.g., Ramísio, Costa Pinto, Gouveia, Costa & Arezes, 2019; Sady, Žak & Rzepka, 2019). However, to date only few studies have looked at the role of the individual academics in the successful implementation of a university strategy and the few studies that did, focused on influences of academic change resistance (Akella & Khoury, 2019, Chandler, 2013). By identifying multiple factors relating to academics' change engagement and passive change resistance, this research provides organizational scholars with a set of influence factors that can be used in future research investigating academics' responses to strategic change.

Finally, this research is among the first studies to take a sensemaking perspective to explore academics' change responses. In this regard, this study adds especially to the research by Weiser (2020), Sloyan (2009), Sonenshein and Dholakai (2012) who explored different sensemaking influence factors to explain employee responses to strategic change. The results of this research demonstrate that taking a sensemaking perspective is also useful to identify the factors triggering different academics' change responses in the context of HEIs.

5.3 Practical implications

The findings of this research offer practical implications for the senior management of HEIs. The results revealed that implementing a university strategy can be challenging, however, considering certain aspects in the communication can help academics to experience positive

sensemaking influence factors that contribute to a positive change perception and lead ultimately to change accepting behavior.

Most importantly, managerial change communication is not effective when academics are addressed mainly only by one-way, non-personal communication channels. This is especially relevant for academics on lower hierarchical level. Therefore, it is important to provide additional face-to-face sessions for example in the form of workshops with participants of different hierarchical levels in which the new university strategy is introduced and academics can give feedback. To reach as many academics as possible, it should be clearly communicated that due to the relevance of the change for every academic, the participation in the discussion sessions or workshops is strongly desired or even mandatory.

By means of participatory communication, is recommended that the senior management explains clearly why the new university strategy as a whole is good for the university, the individual faculties and research groups and mentions examples of ongoing initiatives. Moreover, the senior management is advised to support academics in finding ways to translate the strategy to their personal work situation. During this translation, the identification of the positive sensemaking influence factors including for example shared values and goals with the strategy and personal benefits with contributing to the implementation should be triggered. Addressing and offering explanations for ambiguous terms can help academics in the translation of the university strategy to their individual situation. It is important that the senior management focuses on helping academics to overcome challenges such as possible concerns, lack of benefit finding, and the inability to find shared values and goals, so that the development of a negative change perception can be counteracted. The consideration of these communication aspects can help academics to develop a positive perception of the change which in turn can lead to change accepting behavior.

5.4 Limitations

This research has limitations that need to be considered when interpreting the findings. The limitations concern the change itself, the research sample, and the interviewees' strategy knowledge.

The first limitation is that the strategy used for this change context consisted of several strategic themes that are a complete change itself. To gain a holistic view on sensemaking of strategic change and resulting change behavior, this research has attributed only one behavior type to every academic, which might have led to a distortion of reality, as it was observable

especially among passive change resisters that some were committed to one theme but indicated rejection of another theme.

The second limitation concerns the research participants. Many of the approached academics who cancelled their participation or did not respond to the invitation e-mail may have cancelled because they had no interest in contributing to the strategy or due to personal experiences. Therefore, important motives for passive change resistance may not have been captured.

The third limitation refers to interviewees' strategy knowledge. Roughly a quarter of the interviewed academics indicated during the interview that this was the first time they dealt with the strategy content. This outcome may have affected the results, as those interviewees might have identified more benefits or disadvantages if they had more knowledge about the strategy than the key information that was provided during the interview.

A fourth limitation was that this research only considered the strategic change at one HEI. Contexts, conditions, and interactions might have been different in the context of another university, so no generalizations should be made that go further than this research context (Mohajan, 2018).

5.5 Future research directions

This research offers several implications for future research directions. As one of the first studies to take a sensemaking approach to investigate how academics in HEIs respond to strategic change, more research is needed in this direction to validate the results.

As this research only investigated current change behavior, future research might explore change behavior over a longer period of time. It would especially be interesting to gain knowledge on whether the academics who engaged in passive change resistance engaged in change accepting behavior over time and if they did, which factors influenced this change of behavior.

In light of the research goal, this study foremost focused on the identification of sensemaking factors in relation to change responses. Nevertheless, the gained insights on the interrelations of sensemaking influence factors might invite researchers to dive deeper into the topic.

Overall, it was noticeable that most academics who expressed criticism regarding the change initiative, the university management, or the change process, added that their colleagues had the same view. Language-wise, they usually changed during the critical statement in their language from the use of the pronoun "I" to "we". This behavior indicates an interesting

research direction to explore the sensemaking dynamics within individual research groups. Possible ways to achieve this could be to focus more on the role of collegial communication, for example by analyzing focus groups to identify dominant group views and group dynamics.

Based on the limitation that the strategy change used for this research was treated as one big change and not a collection of various small changes, it is recommended for future research to consider each strategic theme as change on its own and subsequently analyze if a person is mainly accepting or resisting, to achieve a more holistic view of a person's change behavior.

The results revealed that the implementation of university strategies can bring contradicting main interests between academics and the university management to the surface. Several academics who only had access to managerial change communication through one-way communication channels did not acknowledge the sensegiving efforts of the university management, but instead either ignored the information provided in e-mails and on websites, or just quickly scanned through it. Nevertheless, they stated to consider engaging in the strategy implementation when the change and its implications was communicated to them by means of participatory face-to-face communication. This finding offers an interesting research avenue, as it might be exciting to explore whether academics with high levels of core task prioritization and change cynicism would indeed be more likely to engage in change accepting behavior when they had access to participatory face-to-face change communication.

5.6 Conclusion

This study contributes to the literature on sensemaking and change responses of employees during the implementation of strategic changes. One addition to the academic discourse is the identification of HEI context-specific sensemaking influence factors for two types of change responses. The findings showed that the senior management's change communication served as main source for academics' sensemaking. In the sensemaking process, academics engaging in change accepting behavior or passive change resistance draw on the personal perception of multiple influence factors. In this research, 16 sensemaking influence factors could be identified. Based on the results, HEI managers are advised to focus increasingly on participatory communication channels. Subsequently, it is recommended to guide academics in translating the strategic change to their personal field of work, thereby addressing positive and negative sensemaking influence factors. This research offers suggestions for future research directions on the topic of strategic change implementation in HEIs.

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Appendix A: Infographic “Shaping 2030”

MISSION

THE UNIVERSITY OF TWENTE IS THE ULTIMATE **PEOPLE-FIRST** UNIVERSITY OF TECHNOLOGY.
WE **EMPOWER SOCIETY** THROUGH **SUSTAINABLE SOLUTIONS**.

VISION

WE CONTRIBUTE TO THE DEVELOPMENT OF A
FAIR, SUSTAINABLE AND DIGITAL SOCIETY BETWEEN NOW AND 2030

ENTREPRENEURIAL COURAGE OVER COMFORT

Inspiring a new generation by pushing our renowned entrepreneurial attitude to new levels to inspire and guide our technological society.

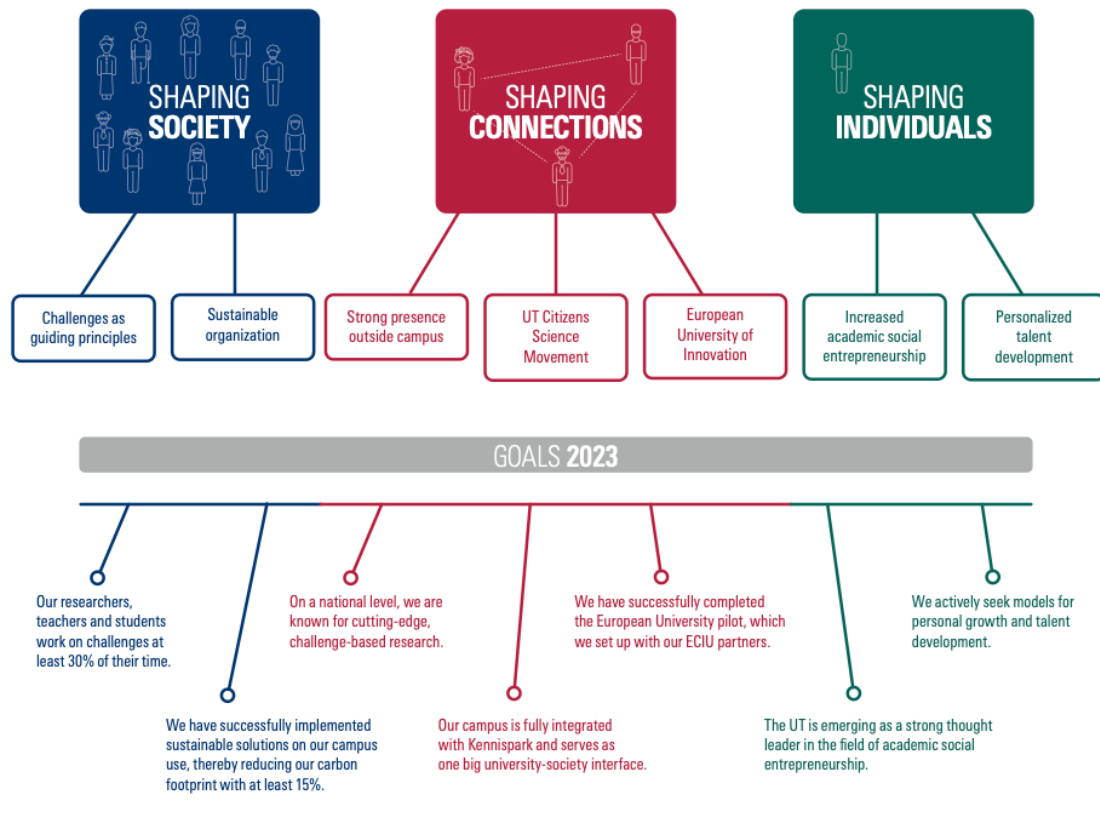
INCLUSIVE STUDENT OVER SYSTEM

Everyone in our community is learning, and is therefore a student. This thriving, talented community of unique individuals is our most crucial asset in serving society.

OPEN COMMUNITY OVER CAMPUS

Collaboration is essential and we will be trusted partners in our connections. The campus remains our hub, but we reach out far beyond it.

STRATEGIC GOALS



HIGH TECH HUMAN TOUCH

UNIVERSITY OF TWENTE.

Appendix B: Interview Scheme

Introduction

- Introduction of researcher
- Introduction of research goal: investigating employee change behavior in higher educational institutions; new university strategy “Shaping 2030” as research context, collaboration with Strategy & Policy department
- Purpose of interview: gaining knowledge on participant’s opinion, insights and first experiences of Shaping 2030 to help UT better understand and respond to needs and concerns of employees regarding strategy implementation
- Requesting permission for recording interview for transcribing; ensuring deletion of recording after transcription
- Mentioning recording starts from now on
- Presenting conditions stated in informed consent form, asking for vocal confirmation and signature of document
- Description of interview process; first short presentation of strategy, then open questions about it

Presentation core aspects of Shaping 2030 (about two minutes)

- The mission of the University of Twente is to be the ultimate people-first university of technology and to empower society through sustainable solutions.
- The vision is to contribute to the development of a fair, sustainable and digital society between now and 2030. The vision considers three main values, which are entrepreneurial (courage over comfort), inclusive (student over system) and open (community over campus).
- The vision has been translated into three strategic goals, which are Shaping Individuals, Shaping Connections and Shaping Society. With Shaping Society, the UT wants to set a strong focus on serving society. That is for example reflected in the goal that by 2030, the UT wants to have their research and education challenge-based and also want to be sustainable organization. With Shaping Connections, the UT wants to become a really highly networked organization, meaning not only a strong presence outside campus, but also on campus. So, for example by means of the UT Citizen Science Movement, the UT wants to bridge possible gaps between new innovations and society. Then, the UT also wants to have a leading role in the development of the European University of Innovation network. With Shaping Individuals, the UT wants to increase academic social entrepreneurship and also follow a personalized talent development approach.

Interview phase

Introductory questions:

- Can you shortly introduce yourself?
 - Why did you choose to become an academic?

Topic 1: Value and goal congruence and organizational identification

- **Looking at these strategic goals, of course every academic has their personal goals. What are your personal goals as academic, what do you want to achieve?**
 - How do the goals match with Shaping 2030?
 - How can Shaping 2030 help you to achieve your goals?
 - How connected do you feel to the UT?
 - To what extent do your values as academic match with Shaping 2030?
 - What do you think about strategies at universities in general?

Topic 2: Positive expectations

- **What benefits do you associate with Shaping 2030?**
 - To what extent has the strategy been integrated into your faculty strategy?
 - How have you experienced the implementation of Shaping 2030 in your research group so far?
 - What expectation do you have regarding the implementation?

Topic 3: Commitment and organizational identification

- **To what extent was the strategy change to Shaping 2030 necessary?**
 - Is there a topic that you like to see manifested in the strategy?
 - What aspects of the strategy do you consider as most important?
 - Does the strategy miss a topic that is really important for you and you think should have been included in such a strategy?

Topic 4: Change engagement and change-related self-efficacy

- **To what extent are you currently involved in Shaping 2030 activities?**
 - What does the UT's mission mean for you?
 - What does the UT's vision mean for you?
 - Are you involved in a Shaping related initiative?
 - Has the strategy been integrated into your department strategy?
 - What can the UT do to support you becoming active in the strategy?
 - How do you see your involvement in relation to the resources that you have?

Topic 5: Managerial and collegial communication

- How effective do you perceive the communication by the UT regarding individual opportunities and its necessity?
- To what extent have you received sufficient information about the strategy to work with it?
- To what extent do you talk with your colleagues about the strategy?
- What have you heard others say about the strategy?

Appendix C: Codebook

1. Academic occupation influences

1.1 Value and goal congruence	The participant's personal values and goals match with the organization's new values and goals.
1.2 Link to existing activities	The participant signs up for a strategy related activity behavior because the strategy is linked to his/her daily activities.
1.3 Congruence requirements external stakeholders	The participant perceives alignment between strategic themes and the demands of external stakeholders such as funding agencies.

2. Psychological resources

2. 1 Positive expectations	The participant associates personal or organizational benefits with the implementation of the strategic change.
2.2 Negative expectations	The participant associates disadvantages with the change implementation.
2.3 Change-related self-efficacy	<p>The participant feels able to implement the change.</p> <p>Includes:</p> <ul style="list-style-type: none"> - Translating mission/vision to personal situation - Contributing to strategic themes and strategy in general
2.4 Lack of perceived change-related self-efficacy	<p>The participant does not feel able to implement the change.</p> <p>Includes</p> <ul style="list-style-type: none"> - Perceived inability to translate mission/vision to personal situation - Perceived inability to contribute to the implementation of a certain strategic theme - Perceived inability to align strategic plan department with university strategy - Perceived inability to understand the meaning of terms and formulations

2.5 Affective change commitment	The participant is intrinsically motivated to support the change based on its perceived benefits.
2.6 Continuance commitment	The participant is aware of costs associated with failure to provide support for change.
2.7 Organizational identification	The participant feels a strong sense of belonging to the organization

3. Managerial change communication

3.1 High quality communication	The participant is positive about the managerial change communication.
3.2 Improvement communication strategy	The participant perceives the managerial communication strategies and channels as ineffective to engage him/her in the change implementation.
3.3 Improvement communication content	The participant mentions points of improvements regarding the communication content.

4. Collegial change communication

4.2 Collegial change communication	The participant is discussed among colleagues.
4.3 No collegial change communication	The participant has not explicitly discussed the change with colleagues.

5. Change process influences

5.1 Top-down initiative	The participant perceives the strategic change as bottom-up initiative.
5.2 Bottom-up initiative	The participant perceives the strategic change as top-down initiative.
5.3 Core task prioritization	Research and education have higher priority for the participant than strategy related activities.

6. Change experience influences

6.1 Change fatigue	Due to the experience of numerous changes, the participant is not willing or feeling able to put an effort into the change.
6.2 Change cynicism	Due to experiences with past change initiatives, the participant is pessimistic about the successful change implementation.

7. Change engagement

7.1 Change championing behavior	<p>Participant engages in actions that contribute to making the change implementation a success.</p> <p>Includes:</p> <ul style="list-style-type: none">- Talking positive about change to colleagues- Involvement in change related initiatives and working groups
7.2 Change accepting behavior	<p>Participant makes all necessary adjustments to implement the change.</p> <p>Includes</p> <ul style="list-style-type: none">- Alignment of strategic plan department with university strategy- Adjustment of job as required by change