From Unsolvable Tasks to a Scorecard Approach:
An Altered View on HEI Reputation Measurement

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Abstract
This conceptual paper addresses the strategic marketing challenge that Higher Education Institutions (HEIs) face in measuring and monitoring their reputations. A monitoring tool, the HEI Reputation Scorecard, is presented as a solution to the ongoing debates on how to capture the construct of reputation in the context of HEIs with just one or two indicators. Therefore, the construct of HEI reputation is discussed and divided into four sub-categories which are related to the main parts of HEIs: teaching, research, transfer and administration. The main part of the paper argues for the need and challenge of measuring HEI reputation. Based on the four sub-categories of HEI reputation, a scorecard approach to monitoring HEI reputation is developed. The anatomy of the tool, appropriate indicators and relevant procedures are outlined in detail. In addition, the process of developing a customised HEI Reputation Scorecard that takes into account different stakeholders is exemplified. The advantages of using the Reputation Scorecard and how to implement it in the HEI management process demonstrates the practical impact of the tool. Several implications for further research and practical application are highlighted.

Keywords: Reputation, Higher Education, Measurement, Controlling, Scorecard, Higher Education Management, Higher Education Marketing

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Introduction: Focusing HEI Reputation and Its Control

Though managing and controlling the reputation of Higher Education Institutions (HEIs) seems to be a much-discussed topic, there are hardly any realizable approaches yet. Such necessity arises from the increasing competition in the educational market (Bagley & Portnoi, 2014; Musselin, 2018; De Wit & Albach, 2021) caused, among others, from deregulation (Hemsley-Brown & Oplatka, 2006; de Boer et al., 2007), globalization and increasing student mobility in its wake (Gibney, 2013), the funding of research and also of teaching (McGaffery, 2019). Musselin postulated the new forms of competition in higher education as "simultaneously individual, institutional, national and international" (Musselin, 2018, p. 660 f.). Whereas Wedlin (2008, p. 144) critically pointed out: "Marketization is a far-reaching process currently running through many societal spheres, including the university sector, and involving a widespread and deep transformation of society with economic, social and political dimensions.". HEI have to face the challenges of the HEI marketplace (McGaffery, 2019).

In such a competitive, international HEI marketplace, prospective and current students (Hemsley-Brown, 2012; Munisamy et al., 2014; Suomi, 2014; Suomi et al., 2014; Plewa et al., 2016), professors, or companies might rely on the reputation of an HEI as a criterion when choosing where to study, to work, or to corporate with an HEI (Lafuente-Ruiz-de Sabando et al., 2018), analogous to the idea of the reputation construct from business science.

This paper proposes a different way in measuring and monitoring HEI reputation. As HEI can be considered a subtype of *scientific organizations* (SO), the many particularities that have been discussed for SO thus also apply to HEI. Undoubtedly, SO have been characterized as having various features (e.g. Kotler & Fox, 1985; Finholt, 2003; Hoyle, 1982; Courtney et al., 1998; Musselin, 2006; Redler & Morschheuser, 2017; Ressler & Abratt, 2009; Leitner & Warden, 2004) which distinguish them from business or other administrative organizations. The definition of SO of Redler and Morschheuser (2017) shall serve as a starting point:

> *SO are tetra-sectional social systems that act goal-oriented, (that) produce knowledge or know-how, (that) use and defend scientific methods, (that) share their insights and ways of research with the public for the purpose of discussion, quality control and stimulation of further research, and (that) are embedded in a complex network of stakeholders.*

However, HEI are a particular subtype of SO, characterized by a) a stress on the educative section in the tetra-sectional system (by offering different degrees after at least two to three years of study), b) a high complexity and a comparatively large size of the organization, and c) a micro-structure which is based on experts rather than formal authority in loosely coupled spheres (Redler & Morschheuser, 2017).

General Perspectives of Measuring HEI Reputation

HEI Reputation

As outlined by Amado and Juarez (2022), *corporate reputation* started to be taken into consideration in the early 1970s (e.g., Spence, 1973; Caves & Porter, 1977). Many researchers have conducted research in this area (e.g. Fombrun 1996; Fombrun & Shanley,1990; Walker, 2010; Fombrun et al., 2000; Fombrun & van Riel, 2003; Rao, 1994;

Carpenter, 2010; Bromley, 1993, 2002; Grunig & Hung, 2002; Deephouse, 1997, 2000; Gotsi & Wilson, 2001; Walker, 2010; Lange et al., 2011; Barnett et al.; 2006). An overview can be found in Redler & Morschheuser (2024).

However, research on *HEI reputation* management and monitoring is rather underdeveloped (Morschheuser & Redler, 2015; Watkins & Gonzenbach, 2013). This seems to be a significant shortcoming as, in an era of ongoing marketization, reputation is becoming a key *strategic objective* for managing HEIs, and as such needs to be subject to professional *monitoring*, accordingly, with adequate *measures* for HEI reputation also needed. Indeed, the measurement issue is pivotal to a reputation management logic (Waeraas & Byrkjeflot, 2012).

Measuring HEI Reputation: No Light at the End of the Tunnel

It is controversial whether reputation should be measured reflectively (e.g., Agarwal et al., 2015; Helm, 2005; Rossiter, 2002) or formatively (e.g. Fleuren et al., 2018; Diamantopoulos et al., 2008; Rossiter, 2002). Another point of discussion concerns the database used for reputation measurement, whether based on more "subjective" data (e.g., Kaiser, 2005; Siefke, 1998) or more "objective" data (e.g., Hinterhuber & Matzler, 2006; Siefke, 1998). Further discussions center on the measurement dimensions of reputation: Reputation as a first-order or a second-order construct (e.g. Agarwal et al., 2015; Dong et al., 2019; Walsh and Beatty, 2007; Yang et al., 2008a; Yang et al., 2008b; Danneels, 2016; Potter, 1991), using single or multi-item measures (e.g. Bergkvist and Rossiter, 2007; Bowling, 2005; Diamantopoulos et al., 2012; Loo, 2002; Sarstedt & Wilczynski, 2009; Svensson, 2008: Rossiter, 2002). Research on measuring the reputation of universities seems to be mired in endless debate (Redler & Morschheuser, 2024).

An Alternative Measurement Approach for HEI Reputation: The HEI Reputation Scorecard

The discussion by Cornelissen and Thorpe (2002) has thus far demonstrated that the objective of identifying theoretically sound methods for measuring the reputation of HEI (in their research: business schools) remains a challenging endeavor. As shown, several challenges are at play in the attempt to do justice to the specifics of HEI, to integrate different dimensions of reputation, to meet the psychological quality of the construct, to find a valid measurement approach against the background of multiple and competing ideas and to satisfy the need to include qualitative ways of measurement. Indeed, the discussion on how to measure HEI reputation is still ongoing (see e.g., Verčič et al., 2016), but it is not delivering applicable frameworks for HEI reputation monitoring routines.

It is for these reasons that (as an alternative) a scorecard (SC) method is now introduced in order to break free from debates that seem to have reached a deadlock. The approach is based on the definition of HEI reputation according to Morschheuser and Redler (2017): *HEI reputation is the collective representation of an HEI that its multiple stakeholders hold over time and that leads to respect, trustworthiness, attraction, and support for the HEI.*

As will be shown, the SC angle is valuable in that it allows for many distinctive requirements to be combined into one tool. In particular, the proposed framework takes into account the multidimensionality of reputation; and it explicitly caters to the principles by Cornelissen and Thorpe (2002):

- Tangible and intangible pillars of reputation are included (principle 1) such as financial and non-financial or psychological indicators. Image factors are important psychological indicators and to be part of the framework - so it is clearly distinguished from reputation (principle 3).
- It also considers qualitative factors that complement quantitative indicators (principle 4).
- As different stakeholders have different information needs (e.g., for applying at a HEI as a student or employee), perspectives for various stakeholders are incorporated (principle 2).

The SC concept is not only a theoretically well-grounded framework but also has clear advantages in terms of applicability in HEI management practice for measuring and controlling reputation. This will be outlined in the next sections.

Foundations of Scorecards as a Monitoring Tool for HEI Reputation

Generally, a SC compiles and monitors the most important key figures in a specific area. As innovative approach of a performance measurement system, the *balanced scorecard (BSC)* dates back to Kaplan and Norton (1992). The developers point out that "measurement was as fundamental to managers as it was for scientists" (Kaplan, 2009, p. 1253).

The main idea of the BSC is to improve the strategic management process by providing several key measures from dependent areas. For several years, Kaplan and Norton have developed and optimized the BSC tool. The newer versions include four perspectives: the financial, the customer, the internal processes, and the learning/growth perspective. Within these, quantitative and qualitative data, monetary and non-monetary figures, lagging, and leading indicators based on a hierarchical, causal system are combined (Kaplan & Norton, 1992). The causal system (the strategy map) as the underlying framework illustrates how the financial results can be achieved to create value for its shareholders if the organization is focused and strategically aligned. To generate shareholder value, a customer-focused organization operates with optimized internal processes implemented by motivated and engaged employees. This reflects the four BSC perspectives mentioned above.

In research and in practice, contributions of the BSC tool have already been discussed from different angles (e.g., Papenhausen & Einstein, 2006; Hladchenko, 2015; Taylor & Baines, 2012 or esp. Al-Hosainin & Sofian, 2015, provide a comprehensive review). For example, some authors analyzed a transfer of the BSC concept to state universities with different priorities. Then, Bauder and Jungen (2015) developed two extended BSC variants for research units and for teaching units. Based on economic efficiency aspects, they define and draw their findings from the demand-related economy (Bauder & Jungen, 2015). Beard (2009) came up with a multitude of measures that are used at two HEI: Based on an "adapted form of the BSC", as an integrated approach of performance management of the Malcolm Baldridge National Quality program, they developed a BSC based on six yield categories (p. 276) in the light of the ideas of Karathanos and Karathanos (2005). Another interesting idea was out forward by Reda (2017) who discusses "the congruence between the balanced scorecard and the quality assurance practices in higher education institutions" (p. 498). In total, the numerous and different approaches focus on performance management, another strategic perspective or discuss the adaption of the key perspectives of the BSC.

Deriving a Scorecard for HEI Reputation

The initial considerations of this paper acknowledge HEI as subtypes of SO and refer to a definition of HEI reputation that adapts the (above introduced) understanding of SOs´ reputation by Morschheuser & Redler (2015).

Following the SC view has several advantages. The SC will help to operationalize the construct reputation so that measures evolve, as a first plus. As a second benefit, the SC solution with its underlying idea of being grounded in a strategy map (that managers need to have a clear idea of) will help to increase awareness of priorities within the multitude of suitable measures. The third advantage is that the SC approach is linked to the process-character of reputation building and management, so that putting the emphasis on strengthening the reputation is supported as a matter of course. On the other hand, the HEI Reputation Scorecard (HEI RepSC) is a rather pragmatic and heuristic way to pave the way towards HEI reputation monitoring. Above all, it is an alternative way of thinking that may lead a way out of the deadlock mentioned above.

The structure and use of a SC in general follows a simple scheme. Each of the four perspectives is assigned to approximately five key figures or metrics. In use, target values are defined for each key performance indicator (KPI), and the actual values are measured. Based on target-actual comparisons, (strategic) activities are derived to better achieve the target values.

As explained earlier on, the reputation of HEI builds on four sub-reputations (perspectives) depending on the main (strategic) focus of the HEI: Reputation in teaching, research, transfer, and administration (RepT, RepR, RepTr, RepA; Morschheuser & Redler, 2015, 2017). Taking these sub-reputations as the inherent perspectives in the HEI RepSC concept, the sub-reputations can be characterized by several key figures or indicators. Further, different strategic foci may result in different HEI RepSCs. E.g., a more research-oriented university might be particularly interested in achieving research reputation, because that is the focus or the strategic alignment. Therefore, indicators such as the number of publications or the acquired research funds will be prominent in this specific HEI RepSC. Other HEIs with an emphasis on innovative teaching techniques and methods might rather find indicators for subject area and higher education didactics competences their more suitable indicators.

In order to apply the HEI RepSC idea, HEI managers need to follow steps (a) – (c) as explained below. Firstly, possible key figures, (a) indicators and measurement methods need to be assigned to the four perspectives RepT, RepR, RepTr, RepA, without asserting completeness. It is worth mentioning that from the multitude of possible indicators, only those should be selected that seem suitable for the HEI in question and also express its strategic orientation. Then, a procedure model of a HEI RepSC (b) needs to be set up that outlines a viable reputation management process. Finally, for the chosen perspectives and indicators, actual values (c) have to be collected, target values have to be defined and activities for achieving these target values have to be derived. Consequently, feasible indicators related to the four perspectives of HEI reputation are briefly drafted.

Indicators of Teaching Reputation (RepT)

Indicators which refer to good or bad teaching reputation can be found in different studies or rankings (e.g., QS, 2019; Collins & Park, 2016). If stakeholders search for HEI with a good

teaching reputation, most of them look at rankings. A prominent example is the Times Higher Education Ranking. It offers different types of rankings with a variety of perspectives (overall, teaching, research subdivided for e. g. undergraduate, master, doctorate). It combines five factors to generate a teaching ranking reputation survey: 15%, Staff-to-student ratio: 4.5%, Doctorate-to-bachelor's ratio: 2.25%, Doctorates-awarded-to-academic-staff ratio: 6%, Institutional income: 2.25% (THE, 2020). As "measuring scholarly reputation is now being challenged, changed, and widened by Science 2.0 developments, which harness information-sharing and collaboration activities" (Nicholas et al., 2015, p. 169), corresponding indicators need to be integrated, e.g., offered MOOCs, videocast, podcasts.

Furthermore, surveys are proven instruments that can be used in the context of reputation. In addition to institution-specific surveys, cross-national surveys may serve as indicators, e.g., the National Survey of Student Engagement (NSSE). "The survey assesses the extent to which students engage in educational practices associated with high levels of learning and development" (National Survey of Student Engagement, 2021). The instrument is administered annually in the United States and Canada. Further surveys for measuring student's engagement are presented by Lutz and Culver (2010), or by Gakhal (2018) for teaching excellence, as an example.

Indicators of Research Reputation (RepR)

To measure the reputation of research, the impact factor is one idea. The more often an article is quoted, the more important the article seems to be. The original idea was developed by Garfield (2006). "It is widely accepted in academia that journal publishing is a very good example of output being an indicator of reputation" (Baden-Fuller et al., 2000, p. 629). Their research over four years analyzed authors and business schools mentioned in selected business journals and compared the results with business school rankings. Thelwall and Kousha examined "that rankings based on ResearchGate statistics correlate moderately well with other rankings of academic institutions, suggesting that ResearchGate use broadly reflects the traditional distribution of academic capital". (2015, p. 876). Meanwhile, a controversial debate has been waged (e. g. Bornmann & Marx, 2013). To focus only on bibliometric data won't address the manifold aspects of research reputation. The storm of outrage over the University of Liverpool's decisions to cut research positions fueled the discussion that resulted in a manifesto back in 2005 (Hicks et al., 2005) to consider qualitative criteria as well.

Indicators of Transfer Reputation (RepTr)

The transfer sector has only recently been given greater importance. Since 2014, for example, transfer has been included in a ranking initiated by the EU, U-Multirank, with indicators of regional engagement and knowledge transfer. A total of over 100 indicators are included (U-Multirank, 2021). Reputation in the transfer sector can be seen in the quantity and quality of cooperation with companies, start-ups or patents used in products. Another criterion could be the number of start-ups arising from the university environment, which is fostered by the large network of affiliations and cooperation. The application of research in practice, in particular, has the potential to positively influence the attention and reputation of the HEI. In the more market-oriented Anglo-Saxon world, universities have always been more closely integrated into economic and social contexts with third mission activities (education programs, services, community activities or third stream) (Himpsl, 2017).

Indicators of Administration Reputation (RepA)

High economic performance, short processing times or customer friendliness can influence the reputation of an administration for HEI, too. HEI reputation is certainly enhanced when programs are successfully and expeditiously accredited or when private donations are profitably invested to fund scholarships. Harvard Business School, e.g., is known for its investment strategy of their endowments (Azlen & Zermati, 2017).

Support for disadvantaged students, diversity, and inclusion of students and also employees also contribute to reputation. As an example, the Diversity Audit of The Stifterverband advises universities as to designing structures, instruments, and measures to include diverse groups of people in everyday university life (Stifterverband, 2021).

The Stakeholder-Sector Grid As Developing Basis for HEI RepSC

The previous sections argued how the SC idea can be applied to the challenge of controlling and measuring HEI reputation. For that, four SC sections have been proposed which correspond to the sub-dimensions of HEI reputation. In addition, possible indicators for each section were presented as examples. The following passages will now look at how to connect the SC with the various stakeholders that need to be considered, and the procedural approach that is inherent in the SC theory. Also, a brief example is given.

Relating the different stakeholder perspectives relevant to the HEI reputation to the specific sub-reputations discussed above results in the stakeholder-sector grid as depicted in Figure 1. The exhibit also illustrates potential indicators that might influence the specific sub-reputations and that cater to the various stakeholders. Some of the indicators refer to all stakeholders (they are designated as general indicators and may be found in the first column of the grid in Figure 1).

Stakeholder Sectors	Students, Prospective students, alumni	Prospective employers, Companies	Academic employees, Non-academic employees, Professors	Ministry of science, Research funding institutions	Society
Administration • Cost per student • Invest in Infrastructure • Number of staff	• Evaluation of Admin • Student-Staff-ratio • Diversity • Inclusion • Scholarships	• Survey • Customer orientation	• Institutional Income per staff • Student-staff ratio • Study/Survey	• Economic Performance • Attaining objectives • Institutional Income	• Economic Performance • Funding Programs
Transfer • Number of Cooperation • Number of Start-ups	• Evaluation of Transfer • Alumni as founders	• Successful Cooperation • Media analysis	• Amount of funding obtained • Survey	• Cooperation partner • cooperation projects	• Third Mission Contribution • Extra-University Engagement •
Research • Research funding • Number of Patents • Number of Publications	• Evaluation of Research • Lectures at Conferences • ResearchGate, Academia membership	• Media analysis • Well known Researcher •	• Journal Impact Factor (JIF) • h-index • Qualitative Survey • Number of Conferences • ResearchGate, Academia membership	• Patents • Awards • Media analysis • Qualitative Survey	• Awareness for Research (Media analysis) • Awards for Research • Scientific advisory functions •
Teaching • Number of Teaching awards • Mentoring ratio • Days for qualifications	• Evaluation of Teaching • Invest in library • Academic grades • Number of MOOCs, Videocast, Podcast • Recommendation of alumni • Survey	• Survey • Alumni as employees	• Teaching hours • Teaching resources and support • Survey • Invest in digital equipment	• Time to graduation • Drop-out-rates	• Awards for Teaching • Well known Alumni •

Figure 1: Stakeholder-Sector-Grid

Overall, the stakeholder-sector grid suggests a range of qualitative and quantitative as well as monetary and non-monetary criteria. According to the discussion of corporate reputation measurement by Baumgartner et al. (2022) relying on Bayer et al. (2017), distinguishing between direct or indirect content factors, the following grid mainly contains indirect reputation criteria which refer to the dimensions of reputation (e.g., cooperation partners as indirect factor). Backward and forward locking criteria as discussed in Bayer et al. (2017) are also included in the grid (e.g., vision and goals as forward looking criteria).

The stakeholder-sector grid (see Figure 1) contains various factors or KPI that can impact on the (sub-)reputation. This KPI collection is to be completed successively and serves as a source of ideas for creating a specific HEI RepSC for a specific HEI. Moreover, the grid also makes clear that the KPIs are to be viewed and collected from the perspective of various stakeholders. *The grid serves as a starting point for developing an individual, specific reputation SC for HEI.* Figure 2 depicts an example of a fictitious HEI RepSC. As seen, it brings together four viewpoints on reputation that refer to four sub-reputations. Each is represented by several indicators which are expressions of the relevant perspective.
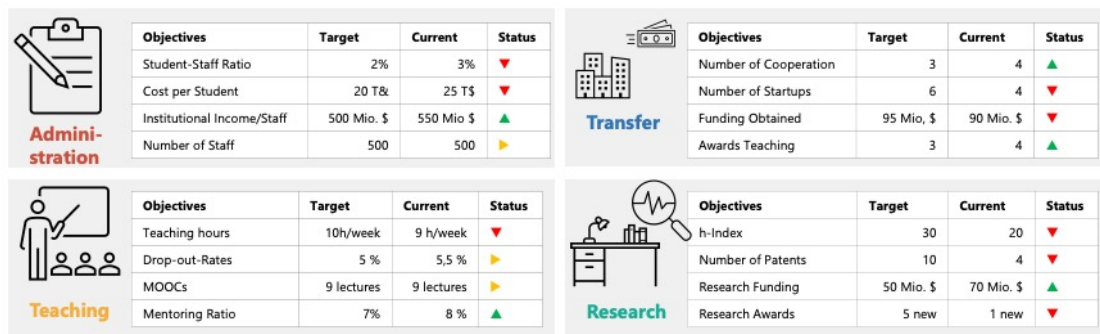
Figure 2: Example Rep Scorecard

All stakeholders should be involved in the development of a HEI RepSC. This is the only way to develop a comprehensive yet specific instrument. The starting point of the process is the strategic orientation of the HEI to define how important which sub-reputation is and whether there is a focus, if necessary, e.g., on teaching. How these considerations might be implemented into practical application in HEI management will be exemplified in the following section.

A Proposal for an HEI RepSC Process

As argued, the stakeholder-sector grid (Figure 1) serves as a basis and inspiration for deriving a specific HEI RepSC. This needs to be rooted in the strategy process as mentioned above. During the strategy development process of an HEI, the reputation status quo should also be discussed as HEI reputation reflects the collective perception of its stakeholders. The HEI RepSC process is embedded in the strategy process of HEI. Based on strategic management methods like SWOT analysis, stakeholder analysis, or competitor analysis, the key objectives and the strategy of the HEI are developed. Furthermore, a clear picture of the relevant stakeholders of the HEI needs to be developed. It goes without saying that the strategy management process and the reputation management process are closely linked. The strategic orientation and the associated strategic goals are reflected in the desired reputation or sub-reputations (see Figure 3).
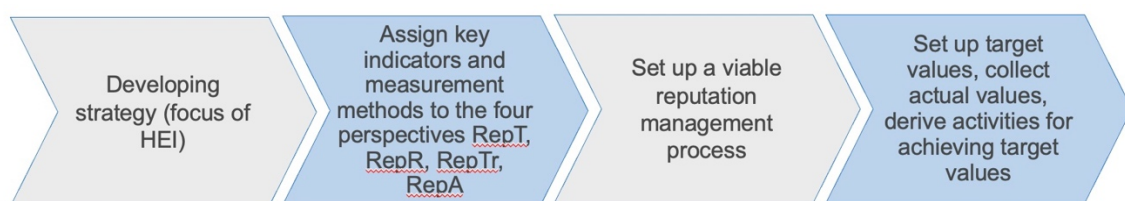

Figure 3: Reputation Process

As a starting point for the reputation process, criteria, or indicators per sub-reputation and per stakeholder group are discussed and derived in a joint workshop with representatives of the various stakeholder groups. In doing so, the stakeholder-sector grid can serve as a basis for the discussion. It is important that the requirements for the indicators are taken into account accordingly. The relevant indicators can then be deduced and specified for the four sectors of the HEI RepSC. A set of 3-5 KPIs per sub-reputation should then be available as a result of the workshop. For this set of factors, the first HEI RepSC, the *current values* are then determined, and the results recorded (*HEI SC t=0*) (see Figure 4).
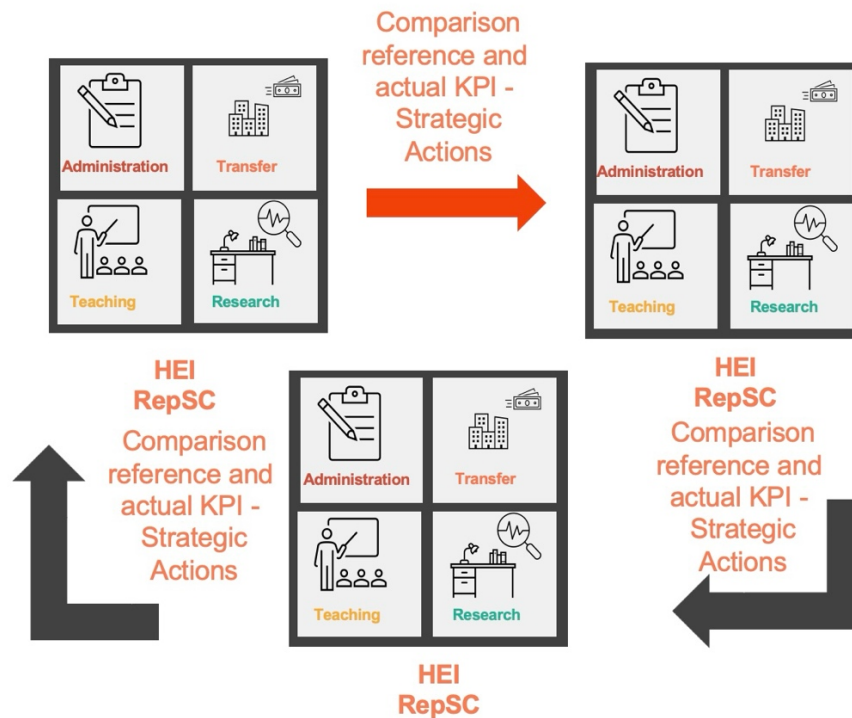
Figure 4: Reputation Process

The resulting first HEI RepSC serves as a measuring and controlling instrument and should be used in a cyclic approach. This procedure compares to the process of the BSC (e.g., Butler et al., 1997). In other words, the application of a HEI RepSC is to be seen as a continuous process. Building on *an initial status measurement* of the HEI RepSC indicators (*t=0*), the HEI management is to discuss objectives for each included indicator. Based on these and the strategy or vision of the HEI, tailored reputation initiatives should be defined and implemented by the organization. As a result, a new status will follow in the subsequent time period (t=1), and so on (see Figure 5). This will also allow for bringing together reputation-related efforts, on the one hand, and reputation change, on the other hand. Of course, a time-lag must be taken into account.

HEI RepSC: A Conclusion

In conclusion, our elaboration tried to clarify the architecture of a HEI RepSC and its application as a monitoring tool. The proposed concept, moreover, encompasses relevant perspectives of reputation, potential indicators, and significant stakeholders. In addition to this, particular emphasis was placed on the procedures which are inherent in the approach. All in all, the HEI RepSC approach is a smooth but comprehensive tool to measure, track, and manage HEI reputation with its multiple facets and complex interdependencies. The altered perspective might serve to avoid and escape from the dead end resulting from the measurement debate reported in the first part of this paper.

Using this HEI RepSC, university managers will be able to track the reputation status and to use it as a controlling tool. The HEI RepSC also provides a focused and transparent overview of the current reputational situation. Depending on the stakeholder group, some criteria may have conflicting characteristics, which need to be reflected and discussed in a workshop setting.

However, the offered concept can only serve as a first and still rough sketch and is intended to stimulate further discussion.

Implications

HEI face increasing global competition. This is only one reason why HEI need to improve their strategic orientation - and need to put a clear focus on reputation management, trying to outshine and outdo others with a good and unique reputation. The latter requires tools to monitor reputational performance.

As a starting point, it might be recommended that HEI managers take reputation into serious account as an important asset that needs careful and committed management and control. Additionally, managers should be open to deal with the complexity of the topic and try to come to terms with it rather than following wrong simplifying solutions. There is no reason to get intimidated by the many "That does not work" calls out there. In particular, the HEI management should be careful not to blunder into the trap of focusing on one or two sub-dimensions of reputation only, or to only focus on a small selection of stakeholders. Rather, managers are encouraged to take a sophisticated approach and to use the SC to cover different angles and thus get a holistic measurement of the valuable reputation asset. For this purpose, HEI management is encouraged to work on monitoring HEI reputation with the help of the HEI RepSC. As is so often the case, this means not taking the easy way but working on a HEI-specific strategy map first. Such a map should be seen as a core requirement for managers to understand how qualitative drivers influence quantitative indicators - as well as market and financial performance. Doing so, executives will find a HEI-specific SC architecture. HEI managers could start with core indicators for the several perspectives a SC has, first of all. If they bear in mind that these need not only be quantitative indicators, and if they could try to advance the tool step by step, quick wins might be gained. However, they should, by all means, avoid overloading the SC. Using a SC usually means to identify the key focus. Finally, the discussions showed that it might be of more benefit to implement a reputation management process which complements the strategic management process. This might help to showcase the influence and the impact of each organizational unit on the reputation of a HEI. Transparency will thus be fostered, and performance monitoring will then be easier.

However, the HEI RepSC as presented in this paper is only a starting point for further elaboration and practical testing. Considering this, important limitations need to be recognized.

Disclosure Statement

The authors report there are no competing interests to declare.

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