

CLOSING THE GREEN GAP: HARMONIZING PROJECT AND PROCESS APPROACHES IN HIGHER EDUCATION VIA SUSTAINABLE LEADERSHIP AND DIGITAL INTERNAL MARKETING

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ABSTRACT

Higher Education Institutions (HEIs) are currently navigating the complexities of the global “Twin Transition” (green and digital). However, a significant “implementation gap” persists between strategic sustainability declarations and operational reality. This paper scrutinizes this phenomenon within the University of Hradec Králové (UHK), analyzing the misalignment between the university’s “Sustainable Development Strategy 2030” and actual workforce perception. Drawing on the duality of project and process approaches in institutional adaptability, this study utilizes qualitative data from 15 in-depth semi-structured interviews. The findings delineate a critical asymmetry: while respondents widely recognize tangible infrastructure improvements (“hardware”) such as waste sorting stations and energy-saving technologies, they report a profound lack of awareness regarding the strategic vision. The analysis identifies key barriers preventing behavioral adoption, specifically “bureaucratic inertia” where digital goals clash with persistent analog administrative processes, and a “skill gap” where staff lack the know-how to operate new technologies (e.g., smart thermostats), leading to frustration and disengagement. The study argues that without addressing the behavioral dimension through specific internal marketing strategies, the potential of green infrastructure remains untapped, resulting in institutional decoupling. The paper concludes that leadership must pivot towards an Industry 5.0 mindset, leveraging digital tools not just for management, but as internal marketing instruments to “nudge” the sustainable workforce towards active participation.

Keywords: change management, institutional adaptability, Industry 5.0, internal marketing, organizational efficiency, green nudging, sustainable workforce

JEL Code: I23, M14, M31, Q01



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1 INTRODUCTION

In the contemporary landscape of tertiary education, Higher Education Institutions (HEIs) are increasingly recognized not merely as centers of knowledge creation but as critical drivers of the global sustainability transition. Following the framework of the UN Agenda 2030, specifically Sustainable Development Goals 4 (Quality Education) and 12 (Responsible Consumption and Production), universities are expected to transcend their traditional pedagogical roles to become living laboratories of sustainable practice. As highlighted by Purcell *et al.* (2019), universities act as the “engine of transformational sustainability”, bearing the responsibility to model best practices for the wider society.

However, the adoption of ambitious sustainability declarations does not automatically translate into institutional reality. A growing body of literature suggests that HEIs are particularly prone to a “rhetoric-reality gap”, where high-level policy commitments fail to permeate the daily operational fabric of the institution (Aleixo *et al.*, 2018). Recent reports highlight that a significant challenge facing universities in the post-pandemic era is the “implementation gap”—the profound disconnect between policy intentions and practical execution. This gap represents a failure of institutional adaptability—the capacity of the university to adjust its internal operations, culture, and governance structures to meet external strategic goals.

While university leadership may formulate ambitious policies aligned with the European Green Deal, these strategies often face substantial barriers during the deployment phase, leading to stalled initiatives and wasted resources. This paper approaches sustainability through the dual lens of change management and internal marketing, specifically examining the dichotomy between the *project approach* (technical execution) and the *process approach* (people-side adoption).

The research focuses on the University of Hradec Králové (UHK) as a representative case study of a Central European public university facing these transition challenges. The central research question driving this study is:

Does the current internal marketing strategy effectively support the process side of change, ensuring the adaptability of the sustainable workforce, or does it contribute to institutional decoupling and sub-optimal asset utilization?

2 THEORETICAL BACKGROUND

To understand the mechanics of the implementation gap, this study synthesizes theories from change management, sustainable leadership, and the emerging paradigm of Industry 5.0. The proposed theoretical framework posits that institutional adaptability is contingent upon the harmonization of project and process management styles. Higher Education Institutions (HEIs) are characterized by complex governance structures, often described as “loosely coupled systems”, making them historically resistant to rapid transformation (Cai & Mehari, 2015). Within this context, a core theoretical distinction exists between project and process approaches to change. The Project Approach is primarily focused on technical deliverables, rigid timelines, budgets, and the installation of physical “hardware”, such as thermal insulation, solar panels, or new waste containers. As noted by Hornstein (2015), project management provides the structure and discipline required for

execution. In the context of university sustainability, this relies heavily on “Hard” change management tools and is often perceived as the straightforward component of transformation.

In contrast, the Process Approach focuses on the “people side of change”, addressing the intangible but critical elements of organizational culture, resistance management, and behavioral adoption. As Al-Haddad and Kotnour (2015) argue, effective change requires the seamless integration of these two approaches; without the process dimension, sustainability initiatives remain superficial “bolt-on” projects rather than “built-in” adaptive capabilities. Furthermore, an exclusive focus on project management risks creating a ‘compliance culture,’ whereas a process approach aims for a ‘commitment culture’ where sustainable behavior is internalized. Stouten *et al.* (2018) emphasize that while project management ensures the installation of change, process management ensures the realization of benefits. The disconnect between these two approaches is often where the implementation gap widens.

Transitioning towards a sustainable university requires leadership that acts as a “change agent” to bridge this dichotomy. Sustainable leadership focuses on developing a “sustainable workforce”, where employee competencies, well-being, and engagement are directly correlated with organizational performance. According to Di Fabio and Peiró (2018), “Human Capital Sustainability Leadership” is essential for promoting healthy and resilient organizations, fostering an environment of trust rather than relying solely on transactional models. In the context of HEIs, where the workforce possesses a high degree of autonomy, leaders must facilitate rather than command. However, significant barriers remain; Blanco-Portela *et al.* (2017) identify that the lack of clear communication channels and resistance to change are primary barriers to institutionalizing sustainability. This resistance often stems from a lack of understanding of why the change is necessary, pointing to a failure in internal marketing.

To bridge the gap between vision (project) and engagement (process) and overcome these barriers, effective communication is essential. Internal marketing views employees and students as “internal customers” whose buy in is a prerequisite for external success. If internal marketing fails, the institution suffers from institutional decoupling, a state where the formal structure (strategy) is detached from daily work activities. Papadas *et al.* (2019) introduce the concept of “Internal Green Marketing Orientation”, suggesting that for an organization to achieve competitive advantage through sustainability, it must first successfully market these values internally. However, traditional internal marketing is frequently insufficient in the digital age. This is where the concept of Industry 5.0 becomes relevant. Unlike Industry 4.0, which focused heavily on automation, Industry 5.0 places the human being back at the center of the production process, emphasizing well-being and resilience (Breque *et al.*, 2021). In an HEI context, this means leveraging technology not to replace human decision-making, but to “nudge” it. While current literature defines Digital Twins primarily as models of physical assets, this paper proposes a theoretical extension: the use of digital feedback loops as internal marketing tools. By moving from passive dissemination to active, data-driven behavioral influence (digital nudging), universities can effectively close the process gap.

3 METHODOLOGY

To deeply investigate the “implementation gap” and the misalignment between strategic intent (Project Approach) and operational reality (Process Approach), a qualitative research strategy was deemed most appropriate. Unlike quantitative methods, which might measure the volume of energy saved, this qualitative inquiry seeks to understand the underlying reasons behind workforce behavioral adoption or resistance. Consequently, this research employs a qualitative single-case study design focusing on the University of Hradec Králové (UHK). The choice of a single-case study is justified by the need for a “thick description” of the organizational context (Rashid *et al.*, 2019), allowing for an in-depth exploration of the complex social dynamics that quantitative methods might miss. This qualitative inquiry serves as a necessary exploratory phase to identify latent behavioral variables, such as cognitive dissonance in bureaucracy. UHK, as a dynamic mid-sized public university in the Czech Republic, serves as a representative example of an institution undergoing rapid modernization while grappling with historical administrative legacies. The university has recently adopted a rigorous “Sustainable Development Strategy 2030”, making it an ideal environment to test the alignment between strategic intent and operational reality.

The data collection was conducted between September and November 2025 using a design that consisted of two distinct phases to ensure methodological triangulation. First, a comprehensive document analysis was performed, reviewing the *Sustainable Development Strategy of UHK until 2030*. This analysis aimed to identify key strategic goals across the university’s strategic pillars and establish the “Project” baseline - essentially mapping what the university claims it is achieving regarding green infrastructure and digitalization. The second phase involved collecting primary data through semi-structured interviews with a purposive sample of 15 internal stakeholders (N=15). The sample was constructed to ensure maximum heterogeneity and avoid echo chambers, consisting of three distinct cohorts: Academic Staff (R1–R5), whose perspective was crucial for understanding the “frontline” implementation of sustainability in education and research; Administrative Staff (R6–R10) from the Rectorate and Faculty offices, who provided insights into the operational and bureaucratic bottlenecks; and Student Representatives (R11–R15), who represented the voice of the primary “customer” of the university’s services.

To ensure the data collected was sufficiently granular, the interview protocol was designed based on the ADKAR model (Awareness, Desire, Knowledge, Ability, Reinforcement) as suggested by Hiatt (2006), utilizing six thematic blocks to assess the maturity of the process approach. The specific inquiries included questions on *Awareness & Leadership* (e.g., “How well were you acquainted with the Sustainable Development Strategy?” and “Do you perceive that the university management actively supports and communicates this strategy?”); *Alignment & Communication* to identify gaps between rhetoric and reality (e.g., “Do the marketing campaigns correspond to the strategic goals?” and “Does the campaign appear authentic to you, or do you perceive it as greenwashing?”); *Engagement & Participation* to assess the “people side” of change (e.g., “Do you feel, as an employee/student, part of the change towards sustainability?” and “Was there space to participate in the strategy or activities?”); and finally, *Impact & Reinforcement* to evaluate tangible results (e.g., “Have you noticed specific changes in operations, communication, or infrastructure?” and “What should the university change in communicating the topic of sustainability?”).

The interview transcripts were subsequently analyzed using Reflexive Thematic Analysis following the updated guidelines by Braun and Clarke (2022). This involved a recursive six-phase process: familiarization with the data, generating initial codes, searching for themes (such as “bureaucratic frustration” or “visible hardware”), reviewing themes, defining and naming themes,

and producing the report. Data were manually coded using a semantic approach to identify latent themes regarding organizational behavior. To ensure the trustworthiness of the findings, the study adopted the criteria proposed by Nowell *et al.* (2017). Credibility was established through prolonged engagement with the field and investigator triangulation, ensuring that the findings reflected the participants' reality, while transferability is supported by the detailed description of the organizational context. Ethical considerations were strictly adhered to; participation was voluntary, and all data were anonymized. Finally, regarding the use of technology, generative AI tools were utilized during the preparation of this manuscript exclusively for linguistic refinement and stylistic editing to enhance the clarity, flow, and readability of the text. The author verified the AI-generated output to ensure it accurately reflected the original research findings, and the study design, data collection, analysis, and final scientific conclusions remain the original work of the author, who assumes full responsibility for the content.

4 RESULTS

The thematic analysis revealed a stark dichotomy between the physical transformation of the university and the behavioral adaptation of its workforce. The findings are summarized in Table 1 and categorize the current state into two main themes: the success of the “Hardware” (Project Approach) and the failure of the “Software” (Process Approach).

In terms of the Project Approach, respondents universally recognized the tangible, physical changes occurring on campus. Investments in infrastructure—such as thermal insulation, photovoltaic panels, and visible waste sorting stations—were widely cited as evidence of the university's commitment. One participant remarked, “*When I see the new solar panels on the roof, I feel the university is taking it seriously*” (R3). This sentiment was echoed across all respondent groups, indicating that the university excels in the visual legitimacy of sustainability (Miotto *et al.*,

Tab. 1 The Asymmetry between Project and Process Approaches at UHK

Dimension	Project Approach (Hardware & Strategy)	Process Approach (Software & Behavior)	Representative Evidence / Quote
Visibility & Perception	High Visibility: Tangible assets are prominent (solar panels, insulation, waste stations).	Low Awareness: Strategic goals are abstract; internal marketing is viewed as “spam”.	<i>“When I see the new solar panels, I feel the university is serious... but I don't know the plan.”</i>
Administrative Workflow	Digital Goals: “Digital Strategy 2030” and ERP systems are technically implemented.	Analog Reality: Persistent bureaucracy requiring paper forms and physical stamps.	<i>“It is schizophrenic... We have smart lights, but I need a physical stamp for a digital ticket.”</i>
User Interaction	Automated: Smart technologies (blinds, thermostats) operate on algorithms.	Resistant: Users lack training and override systems due to frustration.	<i>“The automatic blinds go down... so I turn on artificial lights. It's absurd.”</i>
Change Management	Delivery-Focused: Projects are completed on time and within budget (CAPEX).	Adoption-Lag: Behavioral change is neglected, leading to low utilization (ROI).	<i>“Tech is ready, people are not.” (Observed gap in skills)</i>

Source: Author's own processing

2020). The physical assets serve as powerful symbols. This observation aligns with recent research by Vaverková *et al.* (2023), which suggests that visible waste management infrastructure acts not only as a functional tool but as a primary pedagogical instrument for environmental awareness on campuses. Consequently, UHK demonstrates high competence in delivering technical solutions on time and within budget; the “Hardware” is effectively installed.

Conversely, the “human side” of the transition revealed significant deficiencies, hindering true institutional adaptability. A primary driver of this failure is bureaucratic inertia, which creates a state of *cognitive dissonance* for employees who are asked to be sustainable but are forced by internal processes to be wasteful. Despite strategic goals emphasizing digitalization, administrative processes remain rigid and paper-heavy, a phenomenon partly attributed to the path dependency often observed in post-socialist Central European institutions. The most frequently cited example was the travel order process. “I fill out the digital request in the ERP system, but then I must print it, sign it, and carry it to three different offices for physical stamps. It makes the strategy feel like a marketing façade”, noted one administrative staff member (R6). Another respondent (R8) highlighted the absurdity of the situation: “We have smart lights in the hallway, but I need a physical stamp to approve a digital conference ticket. It is schizophrenic.” This paradox undermines the credibility of the internal marketing narrative, causing employees to disengage and view sustainability as a management buzzword rather than a core organizational value.

Furthermore, beyond administrative hurdles, the study identified a critical lack of behavioral adoption regarding green technologies. Interviews revealed that employees often lack the specific know-how to interact with new energy-saving systems, leading to a loss of control and frustration. For instance, staff members reported fighting with automated systems: “The automatic blinds go down when the sun shines to save cooling costs, but I need light to work. So I turn on the artificial lights. It’s absurd”, noted a researcher (R4). Similarly, a skill gap was observed in waste management; while sorting stations are present, unclear rules for specific materials (e.g., coffee cups with plastic lining) lead to the contamination of recycling bins. This evidence confirms that while the “project” (delivery of the new thermostat or blinds) was completed, the “process” (training, adoption, and habit formation) was neglected. Without the “soft skills” to operate the “hard tech”, the technology remains underutilized, indicating a clear implementation gap where top-down goals are met, but bottom-up adoption lags significantly.

5 DISCUSSION AND CONCLUSIONS

The findings of this study provide critical insights into the dynamics of institutional adaptability and the role of internal marketing in the sustainability transition. The results confirm that UHK faces an “implementation gap” caused by a significant imbalance between project and process management. While the university demonstrates high *technical adaptability*, evidenced by the successful installation of physical infrastructure, it exhibits low *social adaptability*. This misalignment supports the theory of institutional decoupling, where strategic ambitions remain detached from daily operational reality. More importantly, this gap poses a severe threat to the strategic effectiveness of the institution. Unlike passive infrastructure, such as thermal wall insulation which delivers benefits independently of user behavior, active technologies—like smart thermostats, sensor-based lighting, and advanced waste sorting—depend entirely on workforce interaction to function correctly.

As noted by organizational theorists, “culture eats strategy for breakfast”. In the context of university sustainability, we can add that culture also determines the utility of technical innovation. If internal marketing fails to secure buy in and behavioral change, the actual utility of green investments remains unrealized (Bromley & Powell, 2012). A smart building filled with users who behave “dumbly” (due to lack of training or motivation) is not a smart building; it represents a failure of resource utilization. This emphasizes that physical assets cannot become a source of advantage unless they are complemented by the necessary organizational capabilities and “human software”.

To address this operational disconnect, the identified failure of traditional internal marketing points to a need for a shift in leadership style and tools. Leadership must move from passive dissemination of information to active behavioral influence. This is where the transition from Industry 4.0 to Industry 5.0 offers a viable solution. While Industry 4.0 focused on digitizing processes, Industry 5.0 focuses on the collaboration between humans and machines to enhance human well-being and sustainability (Psarommatis *et al.*, 2020). In this context, the study proposes the implementation of a “Behavioral Green Digital Twin”. Just as digital twins in industry optimize machinery by using real-time data, a digital twin of employee behavior allows for personalized, non-intrusive feedback. Unlike industrial systems that monitor machine health, a ‘Green Employee Digital Twin’ would aggregate anonymized behavioral data to provide gamified feedback. Instead of a reprimand, the system might suggest: “*You utilized 10% less paper than last month – you saved 2 kg of CO₂.*”

The psychological impact of such a system is profound. It shifts the locus of control from external regulations (compliance) to internal motivation (commitment), fostering a sense of ownership over the university’s carbon footprint. This concept relies on Nudging theory, altering the “choice architecture” to guide behavior without forbidding options (UNEP, 2020). As demonstrated by Hummel and Maedche (2019), digital nudging can significantly enhance user compliance and adoption rates. Consequently, to close the “Green Gap”, university leadership must adopt a multi-faceted strategy. Internal marketing should be viewed strictly as a crucial management tool to prevent asset underutilization. Furthermore, resources must be harmonized; for every unit of effort spent on “Hardware”, a proportional investment must be made in the “Software” of training and adoption, as the “Sustainable Workforce” must be cultivated, not just bought. Finally, the current state of “bureaucratic schizophrenia”, where digital goals clash with analog processes, must be resolved by leveraging these Industry 5.0 principles to “nudge” employees towards sustainable habits without intrusive surveillance (Adam *et al.*, 2021).

6 DISCUSSION AND CONCLUSIONS

This study evaluated the alignment between UHK’s sustainability strategy and workforce perception, contributing to the broader discourse on institutional adaptability in Higher Education. The research concludes that while the project approach has successfully delivered green infrastructure, the process approach lags behind due to ineffective internal marketing and insufficient focus on behavioral change. By harmonizing these approaches and leveraging digital internal marketing, universities can transform from mere purchasers of green technology into truly adaptive, sustainable organizations, thereby securing the ROI of their green investments.

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