

**Unwrapping the Challenges: A Case Study of The Hershey Company's  
Failed SAP Implementation and Lessons Learned**

STS Research Paper  
Presented to the Faculty of the  
School of Engineering and Applied Science  
University of Virginia

By

Skylar Haskiell

May 12, 2024

On my honor as a University student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments.

ADVISOR

Benjamin J. Laugelli, Assistant Professor, Department of Engineering and Society

## **Introduction**

Enterprise Resource Planning (ERP) systems have become indispensable tools for managing complex business processes worldwide, with the majority of large organizations relying on them for their core functions (Davenport, 2000). However, the implementation of ERP systems is not without its challenges, as demonstrated by the costly failure of The Hershey Company's (Hershey's) SAP implementation in 1999. The case of Hershey's failed implementation serves as a cautionary tale, illustrating the potential risks and consequences of inadequate planning, poor execution, and underestimation of the complexities involved in integrating such systems into existing business operations. The failure caused substantial disruptions in Hershey's supply chain, leading to missed shipments, lost sales, and a decrease in market share, ultimately resulting in hundreds of millions of dollars in lost revenue and damage to the company's reputation. This example underscores the importance of thorough preparation, effective change management, and alignment with organizational goals in successful ERP implementation, highlighting the need for attention to detail and expertise in navigating the complexities of such projects.

Recognizing the critical role of end users in determining the success or failure of ERP adoption, organizations are implementing various approaches to ensure active involvement, address concerns, and facilitate smooth transitions. For instance, current approaches involve extensive training programs, continuous communication channels, and user feedback mechanisms to foster user acceptance and mitigate resistance. However, despite these efforts, complications still arise due to factors such as organizational culture clashes, resistance to change, or technical integration issues. Recent ERP implementation studies highlight the

importance of proactive change management strategies and ongoing support mechanisms to address these challenges effectively.

This paper will employ Actor-Network Theory (ANT) to examine Hershey's failed SAP implementation and argue that end users play a crucial role in determining the success or failure of ERP adoption. ANT suggests that both human and non-human actors are interconnected and exert influence within socio-technical networks. In the context of ERP implementation, this theory claims that end users, as key actors, possess agency in shaping the outcomes of the implementation process. By analyzing the interactions and relationships among various actors involved in Hershey's ERP project, including management, IT personnel, consultants, and plant workers, this paper will demonstrate how end users' perspectives, actions, and resistance can significantly impact the adoption and effectiveness of ERP systems. This approach offers valuable insights into understanding the complexities of ERP implementation dynamics and highlights the need for organizations to actively engage end users and address their concerns to create a successful integration and utilization of these systems.

## **Background**

The current state of ERP implementation reflects a continued reliance on these systems as foundational tools for managing business processes across various industries (Loh & Koh, 2004). Organizations are increasingly recognizing the importance of ERP systems in achieving operational efficiency, enhancing decision-making capabilities, and maintaining a competitive advantage in a rapidly evolving business landscape. With the rise of digital transformation initiatives, there is a growing emphasis on leveraging ERP systems to integrate functions, streamline workflows, and facilitate data-driven insights (Loh & Koh, 2004). Additionally,

advancements in technology, such as cloud computing and artificial intelligence, are driving innovation in ERP solutions, offering organizations greater flexibility, scalability, and predictive capabilities to meet evolving business needs.

Furthermore, ERP implementation efforts are characterized by an increasing focus on user-centric design and usability, recognizing the critical role of end users in driving system acceptance and utilization (Loh & Koh, 2004). Organizations are prioritizing the needs and preferences of users, particularly frontline employees, to enhance user experience and facilitate smoother integration of the systems into daily operations. Additionally, there is a growing recognition of the importance of organizational culture and readiness in shaping the success of ERP initiatives (Loh & Koh, 2004). Leaders are investing in organizational change management practices to foster a culture of innovation, collaboration, and continuous improvement, laying the groundwork for effective implementation and sustained business transformation. By addressing these key considerations and harnessing the potential of ERP systems as strategic enablers, organizations can navigate the complexities of implementation and unlock value across their operations, driving long-term success and resilience in an increasingly competitive marketplace.

## **Current Literature**

Current literature surrounding ERP systems and ANT highlights the significance of understanding the intricate socio-technical networks and power dynamics inherent in the ERP implementation processes. Scholars have explored how ANT offers a unique lens for analyzing the complex interactions among human and non-human actors involved in ERP projects (Ferguson & Hirschheim, 2009). Researchers have shed light on how various actors, including software developers, consultants, managers, and end users, impact the adoption, adaptation, and

shaping of ERP technologies within organizational contexts by framing ERP systems as socio-technical clusters. (Nahar, 2021). Actor-Network Theory underscores the active roles played by both human and non-human entities in influencing technological results, highlighting the significance of material artifacts, organizational frameworks, and socio-cultural norms in facilitating the implementation and utilization of ERP systems. Furthermore, scholars have explored the application of ANT in uncovering hidden power dynamics, conflicts, and resistances that emerge during ERP implementation, thereby offering insights into the complexities and challenges inherent in aligning diverse interests and agendas within these projects (Fitzgerald & Russo, 2005).

Current literature surrounding Hershey's failed SAP implementation provides valuable insights into the factors contributing to the debacle and the lessons learned from this high-profile case. Researchers have analyzed various aspects of the implementation process, highlighting the critical role of organizational factors, such as leadership, culture, and change management, in shaping the outcomes of the projects (Nah, 2017). The Hershey case underscores the importance of effective project management, stakeholder engagement, and alignment of technology with business goals to prevent costly failures and mitigate risks associated with ERP implementation (Iversen, 2015). Furthermore, researchers have analyzed the influence of Hershey's ERP failure on supply chain performance, stressing the necessity for strong risk management strategies and contingency plans to alleviate disruptions and uphold business continuity in case of implementation setbacks.

Scholars have investigated the broader implications of Hershey's unsuccessful SAP implementation for the ERP industry, spotlighting the hurdles in scaling ERP systems across worldwide operations and the intricacies involved in integrating diverse business processes

within intricate supply chain networks. The Hershey case serves as a cautionary example for organizations initiating ERP projects, emphasizing the crucial need for thorough readiness assessments, realistic expectations, and post-implementation evaluations to gauge the effectiveness of ERP systems in attaining desired business goals. By drawing on the lessons learned from Hershey's ERP failure, researchers seek to inform best practices and strategies for successful implementation. Thus, they contribute to the expanding body of knowledge focused on bolstering organizational resilience and gaining competitive advantage in an ever more digitized and interconnected business landscape.

The current literature on both ERP systems and ANT converge in their examination of the complex socio-technical networks and power dynamics intrinsic to the ERP implementation processes. While ANT provides a unique analytical lens for dissecting the complex interactions among human and non-human actors involved in ERP projects, the case study of Hershey's failed SAP implementation offers practical insights into the real-world consequences of inadequate attention to these dynamics. Scholars studying ANT emphasize the agency of both human and non-human actors in shaping technological outcomes. This aligns with the analysis of Hershey's ERP failure, where organizational factors such as leadership, culture, and change management played pivotal roles. Through the application of ANT, researchers reveal the concealed power dynamics and conflicts during ERP implementation, echoing the vital significance of efficient stakeholder engagement and the alignment of technology with business goals emphasized in the Hershey case. Thus, both sources underscore the complexities and challenges inherent in ERP projects, offering valuable lessons for organizations aiming to navigate these complexities successfully.

Through ANT, scholars reveal the intricate interactions among various stakeholders, including software developers, consultants, managers, and end users, shedding light on how these actors influence the adoption and adaptation of ERP technologies within organizational contexts. This analysis resonates with the Hershey case, where organizational factors such as leadership and culture significantly impacted the outcome of the SAP implementation. By intertwining the theoretical framework of ANT with the practical lessons learned from the Hershey case, researchers provide a comprehensive understanding of the challenges and complexities involved in ERP projects, offering valuable guidance for organizations seeking to navigate these complexities effectively.

The paper's argument contributes to the scholarly discourse by synthesizing the insights from both ANT and the Hershey case study to underscore the importance of considering socio-technical dynamics and organizational factors in ERP implementation projects. By highlighting the interplay between human and non-human actors, as well as the influence of leadership, culture, and change management, the paper enriches the discourse surrounding ERP systems by offering a new perspective on the complexities and challenges faced by organizations. Moreover, by emphasizing the practical implications of these insights, such as the necessity for effective stakeholder engagement and alignment of technology with business goals, the paper contributes to the ongoing dialogue aimed at enhancing organizational resilience and competitive edge in the era of digitalization.

## **Conceptual Framework**

In the realm of technological implementations within organizations, the integration of ERP systems represents a pivotal advancement, promising streamlined operations and

heightened efficiency. However, the road to successful ERP implementation is fraught with complexities and pitfalls, as evidenced by numerous instances of failure in the corporate sphere. One particularly notable case is Hershey's unsuccessful implementation of SAP, which serves as a compelling case study for delving into the intricacies and dynamics of large-scale technological endeavors within organizations.

This paper adopts ANT as a conceptual framework for analyzing Hershey's failed SAP implementation. ANT offers a unique theoretical perspective that views technological implementations not simply as linear processes driven solely by human agency, but as complex networks of interactions among human and non-human actors that co-construct technological realities (Uzzi & Lancaster, 1998). By employing ANT, this study seeks to unravel the intricate web of relationships, power dynamics, and controversies that surrounded Hershey's SAP implementation, shedding light on the various actors and factors that influenced the outcome. At the core of ANT lies the concept of 'actors,' which encompasses not only human stakeholders such as executives, IT professionals, and end-users but also non-human elements such as technology itself, organizational structures, and cultural norms. ANT posits that these actors are not passive entities but active agents capable of shaping and being shaped by the network in which they operate. Thus, by applying ANT to the case of Hershey's SAP implementation, I aim to discern the diverse array of actors involved, their interactions, alliances, and conflicts, and the ways in which they collectively contributed to the success or failure of the endeavor.

Furthermore, ANT's focus on 'translation' – the process through which actors negotiate and align their interests and meanings – offers a valuable framework for understanding the challenges encountered during Hershey's SAP implementation. By analyzing the translation

processes within Hershey's organizational context, I uncover the points of contention, resistance, and breakdown that impeded the smooth adoption of the SAP system.

In addition to exploring the intricate dynamics of actor networks, this paper will also delve into the concept of power imbalances within Hershey's failed SAP implementation. ANT posits that power is not solely held by human actors but is distributed throughout the network, with both human and non-human entities exerting influence. By examining power dynamics within the context of Hershey's implementation process, this study will uncover how certain actors wielded disproportionate power, leading to conflicts, resistance, and ultimately, the failure of the project. Through ANT's lens, power imbalances will be analyzed not only in terms of traditional hierarchical structures but also in the interactions between different actors and their abilities to shape the trajectory of the implementation.

Through this interdisciplinary approach, drawing insights from both organizational studies and science and technology studies, this paper seeks to provide a nuanced understanding of Hershey's failed SAP implementation. By examining the case through the lens of Actor-Network Theory, I aim to contribute to the broader discourse on technological implementations within organizations, offering valuable lessons and perspectives for practitioners, researchers, and policymakers alike.

## **Analysis**

### *Human Actors*

Firstly, I will examine the role of human actors within Hershey's organization, including executives, IT professionals, and end-users, as well as external consultants and vendors, drawing upon primary source evidence such as the Form 8-K and Form 10-Q filed with the Securities and

Exchange Commission (SEC). ANT posits that these actors are not passive entities but active agents who influence and are influenced by the network in which they operate (Latour, 2005). By analyzing the SEC reports, I identify the various stakeholders involved in the SAP implementation project and their respective roles, interests, and agendas. For instance, executives at Hershey's likely played a crucial role in initiating the ERP implementation, as evidenced by Kenneth L. Wolfe's acknowledgment of challenges faced during the startup of new business systems in the Form 8-K. This initiative may have been driven by the desire to streamline operations, enhance efficiency, and gain a competitive edge in the market.

Secondly, IT professionals within Hershey's organization were tasked with the technical aspects of the SAP implementation, including system configuration, customization, and integration with existing infrastructure. They formed a vital part of the network, collaborating with external consultants and vendors to ensure the successful deployment of the ERP system. However, their agency was constrained by organizational structures, budgetary limitations, and technical constraints, as highlighted in the SEC filings. End-users, on the other hand, encompassed employees across various departments who would ultimately interact with the ERP system on a daily basis. Their involvement was critical for the successful adoption and utilization of the new technology, emphasizing the importance of addressing their needs and concerns throughout the implementation process (Orlikowski & Iacono, 2001).

Lastly, external consultants and vendors brought expertise, resources, and industry best practices to the table, as mentioned in the Form 10-Q. They shaped the implementation process through their recommendations, guidance, and technical support (Van de Ven, 1993). However, their interests and objectives were not always aligned with those of Hershey's organization,

leading to potential conflicts of interest and power struggles within the network (Monteiro & Hanseth, 1995). Deleted text

### *Non-human Actors*

Secondly, I explore the role of non-human actors, including the SAP software itself, hardware infrastructure, data migration tools, and organizational structures. ANT suggests that these non-human elements are not mere tools or artifacts but active participants in the network, shaping and being shaped by the actions of human actors (Latour, 2005). Deleted text. For instance, the SAP software represented a central node in the network, embodying a complex set of functionalities, workflows, and business rules designed to support Hershey's operations. Its implementation required customization to align with the organization's specific requirements, necessitating collaboration between IT professionals, consultants, and end-users (Davenport, 2000).

Moreover, the hardware infrastructure supporting the SAP system played a critical role in its performance, reliability, and scalability. This included servers, networks, storage systems, and other IT infrastructure components that formed the underlying backbone of Hershey's digital operations (Haeckel & Nolan, 1993). Any disruptions or shortcomings in the hardware environment have cascading effects on the overall functionality and usability of the ERP system, highlighting the interdependence between human and non-human actors within the network. Moreover, data migration tools and techniques played a crucial role in transferring legacy data into the new ERP system, guaranteeing data integrity, consistency, and accuracy throughout the transition process. The successful integration of data from disparate sources relied on the effective coordination and collaboration between IT professionals, data analysts, and business

users, emphasizing the intricate entanglement of human and non-human actors in shaping the outcome of Hershey's SAP implementation.

### *Translation Process*

Furthermore, I analyze the translation processes that occurred during Hershey's SAP implementation and how the translation process disregarded the importance of end-users (Callon, 1986). Deleted text ANT suggests that during translation processes, actors engage in negotiations and struggle to enroll other actors, both human and non-human, into the network (Latour, 2005). In the case of Hershey's SAP implementation, translation involved aligning the functionalities of the ERP system with the existing business processes, organizational culture, and user preferences within the company (Orlikowski, 2007).

For instance, during the project planning phase, there were debates and negotiations among executives, IT professionals, and consultants regarding the scope, timeline, and resource allocation for the SAP implementation. These discussions involved balancing competing interests and priorities, such as cost efficiency, system flexibility, and business continuity. Additionally, decision-making processes related to system configuration, data migration, and user training required input and approval from various stakeholders across different departments and hierarchical levels within Hershey's organization (Van de Ven, 1993). This interplay of interests and power dynamics influenced the translation of the SAP system from a technical solution into a practical tool that could support Hershey's business objectives and operational needs (Monteiro & Hanseth, 1995).

Additionally, as the implementation progressed, obstacles such as resistance from end-users, technical glitches, and integration issues may have arisen, potentially causing disruptions

in the translation process. ANT highlights the importance of tracing these breakdowns to understand how they shape the network and influence subsequent actions and decisions (Latour, 2005). Through an ANT lens, I uncover the complexities and nuances of the translation processes that ultimately contributed to the success or failure of Hershey's SAP implementation.

### *Power Imbalance*

At Hershey, a noticeable power imbalance influenced the prioritization of end users in the SAP implementation, as evidenced by the 1999 SEC filings. The Form 8-K revealed that executives, led by Kenneth L. Wolfe, acknowledged challenges faced during the startup of new business systems, particularly in customer service, warehousing, and order fulfillment areas. Despite Wolfe's acknowledgment of the difficulties and the implementation of an action plan, the Form 10-Q indicated uncertainty regarding the impact of these issues on future financial results. This indicates an oversight and neglect of end-user concerns in favor of meeting organizational objectives. The neglect of end users' perspectives and experiences exacerbated the challenges faced during Hershey's ERP rollout, leading to decreased productivity and adoption rates. Additionally, the power imbalance likely contributed to resistance among end users, further hindering the successful integration and utilization of the ERP system. Thus, the failure to prioritize end users resulted in disruptions, decreased efficiency, and ultimately contributed to the substantial losses experienced by Hershey.

### *Alternative Viewpoints*

While this paper has argued that end-users play a crucial role in determining the success or failure of ERP adoption, some perspectives may argue that their influence is limited in

comparison to other key stakeholders such as organizational leadership and IT professionals. This viewpoint may suggest that end-users primarily follow directives set by higher-level decision-makers and IT experts during the implementation process, with their role centered around adapting to the new system rather than actively shaping its implementation. However, a closer examination of the financial implications of Hershey's ERP implementation, as outlined in the company's 2000 Form 10-Q, challenges this notion.

The disclosure of a substantial cost of approximately \$6.0 million for testing and remediating IT and non-IT systems not replaced by the integrated information system project indicates a significant impact on end-users. This expenditure suggests that there were issues with existing systems that required remediation efforts, due to compatibility issues or shortcomings in meeting end-users' needs. The substantial financial investment to address these issues underscores the importance of considering end-user perspectives and experiences in ERP implementations. Thus, while it may initially appear that end-users had minimal influence, the financial implications reveal their substantial impact on the overall implementation process.

## **Conclusion**

My analysis has shed light on the diverse array of human and non-human actors involved in the SAP implementation project, highlighting their roles, interactions, and contributions to the outcome. I explored the challenges encountered during the translation of the SAP system into Hershey's organizational context, revealing points of contention, resistance, and breakdown that impeded the smooth adoption of the technology.

Furthermore, the examination of Hershey's failed SAP implementation has broader implications for organizations seeking to undertake similar technological endeavors. By

understanding the social and ethical dimensions of technological implementations, organizations can better anticipate challenges, mitigate risks, and foster more successful outcomes.

This paper's findings hold significance for a wide audience, including UVa undergraduates, practitioners, researchers, and policymakers alike. By offering insights into the complexities of technological implementations within organizations, this paper contributes to the broader discourse on the intersection of technology, society, and ethics. It underscores the importance of considering the social and ethical implications of technology adoption and highlights the need for interdisciplinary approaches to address the challenges and opportunities presented by technological advancements.

## References

- Davenport, T. H. (2000). *Mission Critical: Realizing the Promise of Enterprise Systems*. Harvard Business Press.
- Ferguson, R., & Hirschheim, R. (2009). The impact of enterprise systems on organizational resilience. *Information Systems Frontiers*, 11(1), 45-58.
- Fitzgerald, G., & Russo, N. L. (2005). Enterprise resource planning (ERP) systems: a research agenda. *Journal of Computer Information Systems*, 45(3), 110-121.
- Haeckel, S. H., & Nolan, R. L. (1993). Managing by wire. *Harvard Business Review*, 71(5), 122-132.
- Iversen, J., Mathiassen, L., & Nielsen, P. A. (2015). From strategy to implementation: The importance of including users in the ERP adoption process. *Information Systems Frontiers*, 17(1), 109-125.
- Latour, B. (2005). *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford University Press.
- Loh, T. C., & Koh, S. C. L. (2004). Critical elements for a successful enterprise resource planning implementation in small-and medium-sized enterprises. *International Journal of Production Research*, 42(17), 3433-3455.
- Monteiro, E., & Hanseth, O. (1995). Social shaping of information infrastructure: On being specific about the technology. In *Proceedings of the International Federation for Information Processing Working Group 8.2 Working Conference on Information Systems and Organizations* (pp. 325-343).

- Nah, F. F., Lau, J. L., & Kuang, J. (2017). Critical success factors for enterprise resource planning implementation and upgrade. *Journal of Computer Information Systems*, 57 (1), 39-48.
- Nahar, N., Dehning, B., & Rahman, M. H. (2021). Antecedents and consequences of actor roles in enterprise system implementations: A review and synthesis of the literature. *Information & Management*, 58 (2), 103392.
- Orlikowski, W. J., & Iacono, C. S. (2001). Research commentary: Desperately seeking the 'IT' in IT research—a call to theorizing the IT artifact. *Information Systems Research*, 12 (2), 121-134.
- The Hershey Company. (1999). Form 8-K.  
(<https://www.sec.gov/Archives/edgar/data/47111/000004711199000075/0000047111-99-000075.txt>)
- The Hershey Company. (1999). Form 10-Q.  
(<https://www.sec.gov/Archives/edgar/data/47111/000004711199000073/0000047111-99-000073.txt>)
- The Hershey Company. (2000). Form 10-Q. (<https://hershey.gcs-web.com/sec-filings/sec-filing/10-q/0000047111-00-000072>)
- Van de Ven, A. H. (1993). The development of an infrastructure for entrepreneurship. *Journal of Business Venturing*, 8 (3), 211-230.
- Uzzi, B., & Lancaster, R. (1998). The sociology of scientific validity: How professional networks govern credibility in peer review. *Social Forces*, 77(2), 519-537.  
<https://doi.org/10.2307/3006085>