

## HICSS-57: Minitrack Introduction: Enterprise Ecosystems: The Integrated Enterprise, Levels of Information Systems Research (Process, Enterprise-, Ecosystem- & Industry-Level)

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### Abstract

*While Information Systems Research exists at the individual and workgroup levels, research on IS at the enterprise level is less common. The potential synergies between the study of enterprise systems (ES) and related fields have been underexplored and often treated as separate entities.*

*The ongoing challenge is to seamlessly integrate technological advances and align business processes across organizations. While systems integration within an organization is common, changes occur when industry and ecosystem perspectives come into play. The four selected papers address different facets of the future role of enterprise ecosystems, including implementation challenges, ecosystem boundaries, and B2B platform specifics.*

**Keywords:** Information Systems Research, ERP, Enterprise-level, Enterprise Systems

### 1. Introduction

The evolving needs of business strategy and operations require rapid and continuous adaptation of enterprise systems. However, the study of enterprise information systems (EIS) at the enterprise level is less common than the analysis of IS design and use at the individual and team/workgroup levels. Given the multifaceted nature of enterprise IS, encompassing various levels, processes, interfaces, and interactions, a diversified approach to study is warranted. The intrinsic complexity and boundary-spanning nature of enterprise systems requires a multifaceted analysis from different viewpoints and perspectives.

The potential synergies between the study of Enterprise Systems (ES) and related fields have been underexplored and often treated as separate entities.

ES, including ERP, CRM, and related systems, have historically served as the operational foundation for many organizations. Given today's complex business dynamics, effective management of backstage integration, along with the need for adaptive decoupling between backstage and front-stage ES, has become paramount.

The ongoing challenge of seamlessly integrating technological advances and aligning business processes persists within and across organizations. While the quest for integration is commonplace, it diverges slightly when considered from an industry and ecosystem perspective. The quest to enrich an enterprise information system (EIS) with new innovations and interfaces poses multiple challenges that span the enterprise and inter-organizational ecosystem levels. The intricate merging of business processes and systems within and across organizations remains complex and arduous. Organizational challenges include not only internal and external integration, but also the exploration of novel IT infrastructure business models.

This Minitrack seeks to address contemporary issues related to the advancement of integrated information systems (IS) from both academic and practitioner perspectives. This Minitrack continues to evolve and expand the Enterprise Eco-System domain as technologies emerge and businesses advance their integrated systems. We enthusiastically embrace a range of topics that revolve around the internal and external integration of information systems. We position each paper within categories of an organizing ERP Review paper [1].

### 2. Contributions

In the paper: *A Theoretical Lens on Maturity Models as Boundary Objects*, the authors look at

maturity models (MMs), widely recognized artifacts of business information systems, to explore their importance as boundary objects between academic and professional domains. Despite their long existence, numerous variations, and impact in practice, the potential of MMs as bridging objects has not been sufficiently explored. This paper fits into the ERP Research Framework [1] category of ERP Organizational Impact, within the subcategory of Organizational Control Strategies by exploring boundary conditions between interacting elements across the enterprise system. Using a theory development approach, the study positions MMs as boundary objects that add value by facilitating interaction between stakeholders. The paper further develops the MM concept by introducing ten meta-design principles that are distributed across three levels of knowledge boundaries: informative, interpretive, and pragmatic. These principles help extend the capabilities of MMs by addressing structure, flexibility, and legitimacy. It also explores how MMs facilitate communication across intra- and inter-organizational boundaries.

The paper: *Paving the way for ERP Implementation in Higher Education Institutions - A Review of Critical Success Factors* explores Enterprise Resource Planning (ERP) implementations in higher education. This paper fits into the ERP Research Framework [1] category of ERP Critical Success Factors within the sub-area of Business Processes and Change Management related to Enterprise Systems and seeks to evaluate ERP systems success factors in the unique domain of higher education institutions which their siloed departments, disparate goals and highly distributed decision making. These higher education ERP projects have a higher failure rate compared to other industries. Existing research has primarily focused on commonly cited critical success factors (CSFs), neglecting lesser known but critical factors for specific domains. To address this gap, this systematic literature review investigates and categorizes CSFs unique to ERP implementation in higher education. Utilizing a systematic review approach, CSFs that emerged primarily from case studies are explored. The study reveals a comprehensive set of CSFs critical to ERP implementation in higher education. It enriches the understanding of the field by bridging the gap between commonly recognized and less frequently mentioned factors. The study underscores the strategic importance of CSFs, enabling better prepared ERP projects in higher education and reducing the risk of implementation failure.

The paper: *Behind the Curtain: Private Properties of a B2B Platform* explores the dual nature of these platforms by analyzing their shared and private properties - elements that are openly shared and those that are strategically hidden. While the prevailing view presents platforms as socio-technical constructs, this study illuminates their nuanced dynamics in the context of business-to-business (B2B) interactions. This paper therefore is positioned within the ERP Economic Impact [1] category in the sub-area of Internal Firm Benefits. It examines a digital platform ecosystem to identify the interplay between common and hidden facets. Through empirical observation, this study examines a digital platform ecosystem, crossing conventional boundaries by exploring both common and hidden dimensions. It focuses on B2B environments and explores the motivations underlying private efforts, which are often central due to different business models. The study highlights that platform actors strategically leverage private aspects to gain competitive advantage. By providing insights into how actors navigate between the two domains, this research sheds light on the complexity of B2B digital platforms.

The position paper *Enterprise-Level IS Research – Need, Conceptualization, Exemplary Knowledge Contributions and Future Opportunities* focuses on the transformative impact of enterprise solutions that enable seamless integration of business operations. These solutions have evolved beyond their original boundaries to encompass various aspects such as customer activities, supply chains, and platform ecosystems. This paper is best located within the ERP Economic Impact [1] category in the sub-area of External Firm Benefits. The paper highlights the paradigm shifts brought about by both technological advances and management as well as organizational boundaries that not only expand the possibilities of business solutions, but also challenge traditional design and coordination approaches. The position paper highlights the complexity and coordination challenges associated with the design and management of information systems on the enterprise-level. It provides insights into how to address these challenges, presents enterprise-level lessons for coordinating and managing information services, and calls for advancing a comprehensive body of knowledge in this important area.

## References

- [1] S.V. Grabski, S. A. Leech, and P. J. Schmidt, "A Review of ERP Research: A Future Agenda for Accounting Information Systems", *Journal of Information Systems*, 25(1), 2011, pp. 37-78.