

REVIEWER'S REPORT

Manuscript No.: IJAR-59399

Title: Digital Transformation of Supplier Collaboration: A Case Study on Migrating Legacy SNC system to SAP BTP

Recommendation:

Accept as it is
 Accept after minor revision.....
Accept after major revisionyes...
 Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality			Y	
Techn. Quality			Y	
Clarity			Y	
Significance			Y	

Reviewer's ID: JPR-Dr.Shaweta Sachdeva

Detailed Reviewer's Report

1. The manuscript addresses an important practical problem in digital procurement; however, the research objectives and research questions should be explicitly stated at the end of the Introduction to provide a clearer direction for the study.
2. The authors claim that the study provides empirical evidence of digital transformation, but the methodological details are insufficient to establish the robustness of the findings. Please provide the sample size, number of participating suppliers, organizational units involved, and duration of data collection.
3. The manuscript adopts a mixed-methods case-study design, but the qualitative component is not adequately explained. The authors should describe the interview protocol, participant selection criteria, number of interviews, coding procedure, and approach used for thematic analysis.
4. The quantitative findings require stronger empirical support. Please provide the actual baseline and post-implementation values, denominators, measurement units, and calculation methods for supplier adoption, onboarding time, support-ticket reduction, and ASN error reduction.
5. The manuscript reports a 40% increase in supplier adoption within 90 days, but the definition of adoption is unclear. The authors should specify whether adoption refers to registration, activation, frequency of use, or the proportion of suppliers actively completing procurement transactions.
6. The reported reduction in supplier onboarding time from five working days to one hour is substantial. Please explain how onboarding time was measured, whether the same process boundaries were used before and after implementation, and whether the comparison accounts for differences in supplier complexity.

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7. The manuscript reports a 10% reduction in ASN errors and a 60% reduction in onboarding errors. The authors should clarify whether these figures represent relative percentage reductions or percentage-point changes and provide the corresponding baseline and final error rates.
8. The results section contains several additional performance claims, including a 35% improvement in purchase-order acknowledgment speed, a 28% improvement in document-exchange efficiency, and a 15% reduction in master-data exceptions. These outcomes should be supported by clearly defined metrics, numerical data, and an explanation of the measurement procedures.
9. The manuscript describes a 90-day parallel run but does not provide sufficient detail about the comparison design. Please explain whether both systems processed comparable transactions, how differences in transaction volume were controlled, and whether the observed changes can reasonably be attributed to the new platform.
10. The study primarily uses descriptive statistics. The authors should consider reporting appropriate measures of variability, confidence intervals, and statistical tests where the data and study design permit. If inferential analysis is not appropriate, this limitation should be explicitly acknowledged.
11. The Technology Acceptance Model (TAM) is presented as a theoretical foundation, but the manuscript does not sufficiently explain how perceived usefulness and perceived ease of use were operationalized. Please identify the indicators or interview questions used to assess these constructs and demonstrate how the findings relate to them.
12. Similarly, the application of Digital Transformation Maturity Models (DTMM) requires further clarification. The authors should identify the specific maturity model adopted, its assessment dimensions, and the criteria used to determine changes in digital maturity.
13. The manuscript attributes improvements to mobile accessibility, unified identity management, real-time synchronization, and centralized master-data governance. However, these interventions were introduced together. The authors should discuss the difficulty of isolating the contribution of each component and avoid making causal claims that the research design cannot establish.
14. The technical architecture requires a more detailed explanation. Please include an architecture diagram showing the relationships among SAP BTP, SAP S/4HANA, SAP Ariba Network, SAP Cloud Integration, SAP PI/PO, OData services, and the seven supplier-facing applications. The principal data flows and integration mechanisms should also be explained.
15. The manuscript repeatedly describes the platform as cloud-native and the integration as real-time. The authors should provide the technical criteria supporting these descriptions, including synchronization latency, transaction-processing performance, system availability, and any relevant scalability measurements.
16. Security and compliance are important in oil and gas procurement environments. The manuscript should provide additional information about authentication, authorization, identity management, data protection, audit logging, and the handling of sensitive supplier information. These aspects would strengthen the practical value of the proposed transformation.
17. The Literature Review covers several relevant themes, but it is largely descriptive and repetitive. The authors should critically compare previous studies, identify contradictory findings or unresolved

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challenges, and explain more precisely how the present study advances existing knowledge beyond reporting an individual enterprise implementation.

18. The manuscript claims that its framework is replicable across asset-intensive industries. Since the study examines a single enterprise, the authors should qualify this claim and identify the organizational, technological, and regulatory conditions required for applying the framework in other contexts.

19. The ethical compliance statement refers to research involving human participants, while the methodology describes supplier interviews and feedback sessions. Please clarify whether institutional ethics approval or an exemption was obtained, how informed consent was handled, and how participant confidentiality was maintained.

20. The Discussion and Conclusion repeat many of the findings already presented in the Results section. These sections should be streamlined to emphasize the interpretation of the results, theoretical contributions, practical implications, limitations, and implications for future research rather than restating the same performance improvements.

21. The limitations section should be expanded to address potential selection bias, changes in transaction volumes, concurrent organizational initiatives, the short observation period, and the possibility that training and change-management activities contributed to the reported improvements.

22. The manuscript contains grammatical errors, inconsistent spacing, awkward sentence construction, and inconsistent terminology. Examples include "The (DTMM)" and "The SAP Activate provides." A thorough language and copy-editing revision is required throughout the manuscript.

23. The title, abstract, and conclusion emphasize measurable improvements, but the abstract does not sufficiently communicate the study's sample, measurement procedures, or analytical approach. The authors should revise the abstract to include the essential methodological details and present the findings in a concise, verifiable manner.

24. The reference list and in-text citations should be checked carefully for completeness, consistency, and accuracy. The authors should verify that every cited source directly supports the associated claim and that all references follow the journal's prescribed citation style.

25. Overall, the manuscript has practical relevance and potential value for digital procurement research. However, substantial revisions are needed to improve methodological transparency, substantiate the reported performance gains, strengthen the theoretical contribution, and ensure that the conclusions remain proportionate to the evidence presented.

Suggested reviewer recommendation: Major Revision. The manuscript may become suitable for publication after the authors address the methodological gaps, provide verifiable quantitative evidence, strengthen the theoretical analysis, and improve the overall presentation.