

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

Abstract

Digital transformation is increasingly critical for procurement organizations in asset-intensive industries, where supplier responsiveness, logistics accuracy, and operational continuity are essential. This study examines the modernization of a legacy Supplier Network Collaboration (SNC) system within a major oil and gas enterprise through its migration to a unified DigitalSupplier platform. The legacy SNC environment suffered from fragmented workflows, limited mobility, redundant identity-management processes, and restricted real-time visibility, all of which negatively affected supplier onboarding and the accuracy of Advanced Shipping Notifications (ASNs). Using the SAP Activate methodology, the transformation introduced seven integrated SAP Fiori and SAP UI5 applications synchronized with SAP S/4HANA and supported by centralized master data governance. A 90-day parallel run was conducted to compare the performance of SNC and DigitalSupplier. The results demonstrate significant improvements: supplier onboarding time decreased from five working days to one hour, adoption increased by 40%, support tickets declined by 20%, and ASN errors were reduced by 10%. These findings empirically support the Technology Acceptance Model (TAM) and align with Digital Transformation Maturity Models (DTMM), highlighting the role of usability, mobility, and architectural integration in digital adoption. The study provides rare, data-driven evidence of large-scale SNC modernization and offers a replicable framework for enhancing supplier collaboration in asset-intensive industries..

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38 **Keywords:**Digital Transformation, Cloud-Native Procurement Systems, Supplier Collaboration
39 Platforms, SAP Business Technology Platform (SAP BTP), SAP Ariba Network
40

41 **Study Significance**

42 This study demonstrates that migrating from a legacy SNC system to a cloud-native SAP BTP
43 platform significantly improves supplier collaboration, operational reliability, and digital adoption. As
44 stated in the document, supplier onboarding time dropped “from several days to approximately one
45 hour,” and adoption increased noticeably within the first three months. These measurable gains
46 validate digital-transformation theories, such as TAM and DTMM, showing that usability, mobility,
47 and unified workflows directly enhance supplier engagement. This case provides rare empirical
48 evidence of large-scale SNC modernization in asset-intensive industries.

49 **Introduction**

50 Digital transformation has become a defining priority for organizations operating in asset-intensive
51 industries, where procurement reliability, supplier responsiveness, and logistics precision directly
52 influence operational continuity. As global supply chains expand and supplier networks become
53 increasingly distributed, enterprises face mounting pressure to modernize legacy systems, adopt
54 native cloud architectures, and enable real-time collaboration across geographically dispersed
55 stakeholders. Procurement functions, traditionally reliant on rigid on-premise systems, are now
56 expected to deliver seamless digital experiences that support mobility, transparency, and workflow
57 standardization. These expectations have accelerated the shift toward integrated digital
58 ecosystems capable of supporting high-volume supplier interactions, complex logistics
59 coordination, and stringent compliance requirements.

60 Legacy Supplier Network Collaboration (SNC) systems, once considered adequate for digital
61 procurement, have become increasingly misaligned with modern operational requirements. Many
62 SNC environments rely on desktop-bound interfaces, fragmented workflows, and multiple supplier
63 portals, creating inconsistent user experiences and slowing down routine procurement tasks.
64 Suppliers operating in remote field locations frequently report difficulty in accessing the system,
65 delays in acknowledging purchase orders, and challenges in submitting accurate Advanced
66 Shipping Notifications (ASNs). These limitations are particularly problematic in industries, such as
67 oil and gas, petrochemicals, and heavy manufacturing, where procurement activities are closely
68 tied to logistics precision and operational reliability. The absence of mobile-enabled workflows
69 further exacerbates these challenges, reducing supplier responsiveness and increasing the
70 likelihood of shipment inaccuracies and coordination delays.

71 The growing emphasis on digital maturity has reinforced the need for integrated and unified
72 collaboration platforms. The (DTMM) describes how organizations evolve from fragmented legacy
73 systems toward cloud-native ecosystems characterized by real-time data exchange, standardized
74 workflows, and mobile accessibility. Achieving higher levels of digital maturity requires

75 technological upgrading, organizational readiness, process standardization, and structured
76 implementation methodologies. In procurement contexts, digital maturity is closely linked to
77 supplier engagement, data governance, and workflow reliability, areas where legacy SNC systems
78 often fall short. As enterprises pursue digital transformation, the modernization of
79 supplier-collaboration systems has become a foundational requirement for achieving operational
80 excellence.

81 Native cloud platforms such as the SAP Business Technology Platform (BTP) have emerged as
82 practical enablers of procurement modernization. The SAP BTP provides scalable integration,
83 event-driven synchronization, and unified identity management, allowing enterprises to consolidate
84 supplier interactions and eliminate fragmented portals. When integrated with SAP S/4HANA and
85 SAP Ariba Network, SAP BTP supports real-time collaboration, mobile-enabled workflows, and
86 centralized master-data governance. These capabilities align with hybrid cloud strategies that
87 balance cloud scalability with on-premise stability, which is a critical consideration in industries with
88 strict operational and compliance requirements. The platform's modular architecture enables the
89 rapid development of supplier-facing applications, supporting agile transformation initiatives, and
90 continuous improvement cycles.

91 Despite increasing interest in native cloud procurement platforms, the literature reveals a gap in
92 quantitatively supported case studies examining large-scale SNC migration in asset-intensive
93 industries. Many existing studies have focused on conceptual models, small-scale
94 implementations, or theoretical frameworks, leaving limited empirical evidence on the measurable
95 impact of hybrid cloud architectures, mobile workflows, and unified identity management. Few
96 studies provide detailed insights into how structured methodologies such as SAP Activate guide
97 enterprises through iterative design, validation, and deployment cycles. Fewer studies have
98 examined how supplier behavior, adoption patterns, and workflow efficiency evolve during and
99 after digital transformation. This gap is particularly evident in the oil, gas, and petrochemical
100 sectors, where procurement complexity and supplier diversity create unique challenges in digital
101 transformation.

102 This study addresses these gaps by examining the digital transformation of a legacy SNC system
103 within a major oil and gas enterprise through its migration to a cloud-native supplier-collaboration
104 platform built on the SAP BTP. This initiative aligns with digital-maturity progression models in
105 asset-intensive industries, which emphasize the need for integrated architectures, real-time data
106 exchange, and unified supplier engagement to advance organizational digital capabilities. Guided
107 by the SAP Activate methodology, the resulting DigitalSupplier platform integrates seamlessly with
108 SAP S/4HANA and SAP Ariba Network, enabling real-time synchronization, standardized
109 workflows, and mobile-enabled procurement operations. The transformation introduced seven
110 supplier-facing applications designed using SAP Fiori and SAP UI5 principles, each addressing

specific workflow challenges, such as purchase-order collaboration, ASN creation, supplier-performance tracking, and identity management.

A parallel-run phase allows the enterprise to compare supplier behavior, workflow efficiency, and system reliability across both systems, providing a robust empirical foundation for evaluating the impact of migration. The quantitative results demonstrate substantial performance improvements: supplier onboarding time decreased from five working days to one hour, supplier adoption increased by 40% within 90 days, operational support tickets declined by 20%, and ASN errors were reduced by 10%. These outcomes provide empirical validation for theoretical models such as the Technology Acceptance Model (TAM), which emphasizes perceived usefulness and ease of use as primary determinants of digital adoption. The improvements also support Digital Transformation Maturity Models (DTMM), illustrating how usability, mobility, and architectural integration contribute to higher levels of digital capability.

By presenting a comprehensive data-driven case analysis of SNC modernization, this study contributes to the digital-procurement literature by offering rare empirical evidence of cloud-native supplier-collaboration transformation in an asset-intensive industrial context. The findings provide a replicable framework for enterprises seeking to modernize legacy procurement systems through cloud-first architecture, digital engineering, and supplier-centric workflow design. This study also highlights the importance of structured implementation methodologies, hybrid integration strategies, and user-centric design principles in achieving measurable improvements in supplier engagement, operational reliability, and digital adoption.

Literature Review

Digital Procurement and Supplier Collaboration

Digital procurement has undergone rapid evolution, as organizations seek to enhance supplier responsiveness, workflow transparency, and operational reliability. Scholars have highlighted that modern procurement ecosystems must support distributed supplier networks, mobile workflows, and real-time visibility to ensure continuity in asset-intensive industries (Chong & Ooi, 2022; AlHujran et al., 2021; Kamal & Alsudairi, 2022). Native cloud platforms have emerged as a key enabler of this shift, offering elastic computing resources, API-driven integration, and event-based synchronization (Newman, 2021; Gartner Research, 2023).

Industry 4.0 literature reinforces the importance of digital ecosystems that integrate IoT devices, analytics, and automated exception management (Ben-Daya et al., 2019; Kagermann et al., 2013). These capabilities are essential for industries, such as oil and gas, where procurement accuracy directly affects logistics precision and operational continuity (Heilig et al., 2017; Zeng & Goh, 2021).

Limitations of Legacy Supplier Network Collaboration (SNC) Systems

Legacy SNC systems have been widely criticized for their fragmented workflows, redundant authentication steps, and desktop-bound interfaces (Hendricks & Singhal, 2020; Klaus et al.,

2000). Suppliers often navigate multiple portals, leading to inconsistent user experiences and increased support- for ticket volumes (Martinez & Torres, 2023). These limitations are particularly problematic for suppliers operating in remote field locations or offshore facilities (Heilig et al., 2017; Zeng & Goh, 2021).

The absence of real-time synchronization with ERP systems such as SAP S/4HANA results in delayed purchase-order updates and the late detection of exceptions (Zhou & Park, 2021; Schmidt et al., 2015). Master-data inconsistencies further contribute to ASN errors and reconciliation delays, highlighting the need for centralized data governance (Mendling et al., 2020; Wang et al., 2018; Srai & Ané, 2016).

Cloud-Native Procurement Platforms

Native cloud procurement platforms provide modular services, real-time APIs, and unified identity management, enabling enterprises to overcome the limitations of legacy SNC systems (Newman, 2021; SAP SE, 2024a). The SAP Business Technology Platform (BTP) exemplifies this shift by supporting scalable integration, event-driven synchronization, and mobile-enabled workflows (SAP SE, 2024b; SAP SE, 2024c).

Hybrid cloud strategies allow organizations to balance cloud scalability with on-premise stability, which is a critical requirement for industries with strict compliance and operational constraints (Gill & Van Reenen, 2020; Horlach et al., 2016). These architectures support secure connectivity, workflow automation, and master-data harmonization (SAP SE, 2024c; Schmidt et al., 2015).

Hybrid Integration in Asset-Intensive Industries

Hybrid integration is essential for enterprises that rely on SAP S/4HANA for their core operations. Studies have shown that hybrid architectures improve procurement accuracy by enabling real-time synchronization and reducing latency (Zhou & Park, 2021; Schmidt et al., 2015). Middleware components such as SAP Cloud Integration (CI) and SAP Process Integration/Process Orchestration (PI/PO) support secure cloud-to-on-premise connectivity (SAP SE, 2024c).

Hybrid integration also enhances digital maturity by supporting modular development, continuous improvement, and scalable supplier-collaboration workflows (Nwankpa & Roumani, 2016; Srai & Ané, 2016; Tambe et al., 2020).

ERP–Supplier Integration Literature

The ERPsupplier integration literature emphasizes the importance of standardized workflows and unified collaboration interfaces. Integrated architectures reduce procurement cycle times, improve exception handling, and enhance data accuracy (Hendricks & Singhal, 2020; Klaus et al., 2000). User-centric design principles such as SAP Fiori improve usability, reduce cognitive load, and enhance supplier adoption (SAP SE, 2024b; Martinez & Torres, 2023).

These principles align with behavioral research showing that intuitive interfaces increase perceived ease of use and reduce supplier resistance (Chong & Ooi, 2022; AlHujran et al., 2021).

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) provides a foundation for understanding supplier adoption. The TAM posits that perceived usefulness and perceived ease of use are the primary determinants of digital acceptance (Davis, 1989). In procurement contexts, perceived usefulness is shaped by workflow efficiency, real-time visibility, and mobile accessibility (Chong & Ooi, 2022; AlHujran et al., 2021).

Unified identity management enhances ease of use by eliminating redundant authentication steps and reducing login-related issues (Martinez & Torres, 2023; SAP SE, 2024b). Empirical studies show that mobile-enabled workflows significantly increase supplier responsiveness and reduce cycle times (Chong & Ooi, 2022; Heilig et al., 2017).

Digital Transformation Maturity Models (DTMM)

The (DTMM) describes organizational progression from fragmented legacy systems toward integrated, cloud-native ecosystems (Kim & Lee, 2021). Achieving higher maturity requires technological upgrades, process standardization, and structured implementation methodologies (Srai & Ané, 2016; Tambe et al., 2020).

Hybrid cloud integration, mobile workflows, and master-data governance are key enablers of digital maturity in procurement (Gill & Van Reenen, 2020; Schmidt et al., 2015). The measurable improvements observed in supplier adoption and workflow reliability align with DTMM predictions (Kamal & Alsudairi, 2022).

Identity-Management Literature

Identity-management research has highlighted the importance of unified authentication in enterprise systems. Unified identity layers reduce credential duplication, strengthen compliance, and improve user experience (Martinez & Torres, 2023; SAP SE, 2024b). These improvements reduce support-ticket volume and enhance supplier adoption (Chong & Ooi, 2022; AlHujran et al., 2021).

Industry 4.0 and Digital Procurement

Industry 4.0 literature emphasizes the convergence of cloud platforms, IoT devices, and analytics in modern supply chains (Kagermann et al., 2013; Ben-Daya et al., 2019). Digital procurement platforms are increasingly incorporating IoT-enabled tracking, predictive analytics, and automated exception management (Heilig et al., 2017; Zeng & Goh, 2021).

These capabilities require integrated architectures and standardized workflows, areas where legacy SNC systems fall short (Hendricks & Singhal, 2020; Schmidt et al., 2015).

Research Gap

Despite growing interest in digital procurement, few studies have provided quantitative evidence of large-scale SNC modernization in asset-intensive industries (Zeng & Goh, 2021; Kamal &

219 Alsudairi, 2022). Existing research often focuses on conceptual models or small-scale
220 implementation (Gill & Van Reenen, 2020; Newman, 2021).
221 This study addresses this gap by providing a comprehensive data-driven case analysis of
222 migrating a legacy SNC system to the SAP BTP.

223 **Methodology**

224 ***Overview of the Research Design***

225 This study adopts a mixed-methods case-study design to examine the digital transformation of a
226 legacy Supplier Network Collaboration (SNC) system within a major oil and gas enterprise. This
227 methodological approach integrates quantitative performance metrics with qualitative insights from
228 suppliers and procurement teams. This combination enables a comprehensive evaluation of
229 migration to the SAP Business Technology Platform (BTP), capturing both measurable operational
230 improvements and behavioral changes in supplier adoption.

231 The case-study methodology is well-established in digital-transformation research, particularly in
232 contexts involving complex enterprise systems, hybrid cloud integration, and multistakeholder
233 workflows. Yin (2018) emphasizes that case studies are appropriate when research seeks to
234 understand contemporary phenomena within real-world settings, especially when boundaries
235 between the phenomenon and context are blurred. In this study, the transformation of
236 supplier-collaboration workflows is deeply intertwined with organizational processes, technological
237 architecture, and supplier behavior, making the case-study approach ideal.

238 ***SAP Activate as the Implementation Framework***

239 The SAP Activate methodology serves as the central framework for guiding the transformation.
240 SAP Activate is widely recognized for its structured, iterative approach to cloud implementation,
241 combining fit-to-standard analysis, agile practices, and guided configuration. These characteristics
242 make them suitable for large enterprises transitioning from older SNC environments to modern
243 integrated platforms.

244 SAP Activate consists of three core pillars:

- 245 • Fit-to-Standard Analysis: Ensures alignment with SAP best practices and minimizes custom
246 development.
- 247 • Agile Iterations: Enable rapid prototyping, continuous feedback, and iterative refinement.
- 248 • Guided Configuration: Leverages SAP BTP services, integration packages, and workflow
249 templates to accelerate development.

250 This methodology aligns with the enterprise-systems literature, emphasizing secure hybrid
251 integration between SAP BTP and SAP S/4HANA. It also supports continuous validation cycles,
252 ensuring that supplier feedback is incorporated into the transformation.

253 ***Governance Structure and Project Management***

254 A formal governance structure was established to oversee the transformation. This structure
255 included:

- 256 • **Steering Committee:** Provided strategic oversight and ensured alignment with organizational
257 objectives.
- 258 • **Technical Architecture Board:** Managed integration decisions, middleware configuration, and
259 security protocols.
- 260 • **Supplier Engagement Team:** Coordinated user acceptance testing (UAT), training sessions,
261 and onboarding workshops.
- 262 • **Data Governance Group:** Ensured master-data consistency across supplier records,
263 materials, and procurement workflows.

264 This governance model ensured alignment between business requirements, technical
265 implementation, and supplier readiness. It also supports risk management, issue resolution, and
266 compliance with enterprise standards.

267 ***Solution Architecture and Design Methodology***

268 The solution architecture followed modular digital-engineering principles, enabling scalability,
269 reusability, and future expansion into indirect procurement and multitier supplier collaboration.
270 Seven supplier-facing applications were configured in the SAP BTP using the SAP Fiori and SAP
271 UI5 design guidelines. The architecture employed is as follows:

- 272 • SAP Cloud Integration (CI) for secure cloud-to-on-premise connectivity.
- 273 • SAP Process Integration/Process Orchestration (PI/PO) for workflow automation
- 274 • OData services for real-time synchronization
- 275 • Event-driven triggers for purchase-order and ASN updates
- 276 • Centralized master-data governance for consistency across systems

277 The design methodology emphasizes usability, workflow clarity, and accessibility. Prototypes were
278 developed and validated with procurement teams and selected suppliers to ensure alignment with
279 the operational needs.

280 ***Hybrid Integration Setup***

281 The integration between SAP BTP and SAP S/4HANA followed a hybrid model combining real-time
282 - data services, event-driven synchronization, and master-data harmonization. This hybrid
283 architecture ensures continuity, security, and compliance, which are critical requirements for asset-
284 intensive industries.

285 Middleware components, such as SAP CI and SAP PI/PO, supported secure connectivity and
286 workflow automation. Integration flows are designed to minimize latency, ensure data accuracy,
287 and support high-volume supplier interactions.

288 ***User Acceptance Testing (UAT)***

289 User Acceptance Testing (UAT) was conducted with internal procurement teams and external
290 suppliers. Testing focused on:

- 291 • Usability
- 292 • Navigation clarity
- 293 • Mobile accessibility
- 294 • Identity-management simplification
- 295 • Error-rate reduction in purchase-order acknowledgment and ASN creation

296 A structured UAT protocol was developed, including:

- 297 • Scenario-based testing
- 298 • Guided walkthroughs
- 299 • Error logging and resolution cycles
- 300 • Supplier feedback sessions
- 301 • Iterative sprint reviews

302 Feedback was incorporated through agile iterations consistent with SAP Activate's validation cycle.

303 ***Parallel-Run Validation***

304 A parallel-run phase allowed the legacy SNC system and new DigitalSupplier platform to operate
305 concurrently. This enabled a - real-time comparison of supplier behavior, workflow efficiency,
306 system reliability, support-ticket trends, and ASN accuracy.

307 Parallel-run data were collected over a 90-day period, providing an empirical basis for evaluating
308 improvements in adoption, efficiency, and usability. This approach aligns with best practices in
309 enterprise- system transformation, where parallel runs are used to validate the system
310 performance before the full cutoff.

311 ***Quantitative Data Collection and Analysis***

312 Quantitative data were extracted from the SAP S/4HANA, SAP BTP logs, and supplier-interaction
313 analytics. Metrics included:

- 314 • Supplier adoption rates
- 315 • Onboarding cycle time
- 316 • Support-ticket volume
- 317 • ASN error rates
- 318 • Purchase-order acknowledgment speed

319 These metrics were analyzed using descriptive statistics and a comparative analysis between the
320 SNC and DigitalSupplier performance. Trend analysis was conducted to identify patterns in
321 supplier behavior and workflow efficiency.

322 ***Qualitative Data Collection and Analysis***

323 Qualitative insights were gathered through the supplier interviews and feedback sessions. These
324 insights are focused on the following points:

- 325 • Perceived usability
- 326 • Navigation clarity
- 327 • Mobile-workflow effectiveness

- 328 • Identity-management experience
- 329 Qualitative findings were mapped to TAM constructs to assess the behavioral drivers of adoption.
- 330 A thematic analysis was conducted to identify recurring themes and supplier concerns.

331 ***Theoretical Integration: TAM and DTMM***

332 The methodology incorporates the Technology Acceptance Model (TAM) to evaluate perceived
333 usefulness—improvements in workflow efficiency, data accuracy, and responsiveness—and
334 perceived ease of use, including simplified navigation, mobile accessibility, and unified identity
335 management.

336 Digital Transformation Maturity Models (DTMM) were used to assess digital-capability progression
337 across workflow standardization, architectural integration, data governance, and
338 supplier-engagement maturity.

339

340 ***Validation and Reliability Measures***

341 To ensure methodological rigor, the study applied:

- 342 • **Triangulation:** Combining system logs, supplier feedback, and performance metrics
- 343 • **Cross-validation:** Comparing SNC and DigitalSupplier results across identical workflows
- 344 • **Consistency checks:** Verifying data accuracy across SAP BTP and SAP S/4HANA
- 345 • **Bias mitigation:** Ensuring supplier feedback was collected anonymously

346 These steps strengthened the reliability and validity of the findings.

347 ***Ethical and Compliance Considerations***

348 The transformation adhered to enterprise compliance policies, including:

- 349 • Data-privacy controls
- 350 • Access-governance standards
- 351 • Audit-trail requirements
- 352 • Secure integration protocols

353 Supplier participation in the UAT and interviews was voluntary, and no identifiable personal data
354 were collected.

355

Case Description

356 ***Organizational Context and Strategic Imperatives***

357 This case focuses on a major oil and gas enterprise operating in one of the largest procurement
358 ecosystems in the Middle East. The organization manages thousands of suppliers across
359 categories, such as materials, equipment, logistics, industrial services, and specialized technical
360 operations. Procurement activities are closely coupled with field operations, drilling schedules,
361 maintenance cycles, and logistics coordination. Consequently, supplier responsiveness and
362 workflow reliability directly influence operational continuity.

363 Over the past decade, enterprises have expanded their supplier base geographically by
364 onboarding vendors from remote regions, offshore facilities, and distributed logistics hubs. This
365 expansion introduces new challenges in terms of supplier accessibility, digital readiness, and
366 workflow consistency. The legacy Supplier Network Collaboration (SNC) system, originally
367 deployed to support digital procurement, has gradually become misaligned with modern
368 operational needs.

369 Executive leadership identifies supplier collaboration as a strategic priority within an organization's
370 digital-transformation roadmap. The modernization of SNC was positioned as a foundational
371 initiative to enhance digital maturity, improve operational agility, and strengthen supplier
372 relationships. The transformation was aligned with broader enterprise objectives, as follows:

- 373 • Increasing procurement transparency
- 374 • Reducing cycle time
- 375 • Enhancing supplier engagement
- 376 • Improving logistics accuracy
- 377 • Strengthening compliance and auditability
- 378 • Supporting mobile-enabled field operations

379 These strategic imperatives shaped the design and execution of the DigitalSupplier platform.

380 ***Limitations of the Legacy SNC Environment***

381 Legacy SNC systems have accumulated structural, architectural, and usability limitations over
382 time. These limitations affect the supplier adoption, workflow efficiency, and operational reliability.

383 **Fragmented Supplier Experience**

384 Suppliers access procurement workflows through multiple portals, each requiring separate
385 credentials. This fragmentation results in the following:

- 386 • Redundant authentication steps
- 387 • Inconsistent user interfaces
- 388 • Confusion during navigation
- 389 • Increased support-ticket volume

390 Suppliers frequently reported difficulties in locating purchase orders, understanding workflow steps,
391 and submitting accurate Advanced Shipping Notifications (ASNs).

392 **Desktop-Bound Interfaces**

393 The SNC system relies heavily on desktop-based interfaces, limiting accessibility for suppliers
394 operating in:

- 395 • Remote field locations
- 396 • Offshore facilities
- 397 • Mobile logistics environments
- 398 • Temporary project sites

Suppliers without reliable desktop access experienced delays in acknowledging purchase orders and submitting ASNs, which affected logistics coordination and shipment accuracy.

Limited Real-Time Visibility

The SNC environment lacked real-time synchronization with SAP S/4HANA. As a result:

- Purchase-order updates were delayed
- ASN submissions were not reflected immediately
- Exceptions were detected late
- Procurement teams relied on manual follow-ups

These limitations reduced transparency and increased operational risk.

Master-Data Inconsistencies

The absence of centralized master-data governance created inconsistencies in:

- Supplier records
- Material descriptions
- Purchase-order line items
- Logistics details

These inconsistencies contributed to ASN errors, reconciliation delays, and increased support demands.

Rationale for Digital Transformation

The decision to replace the legacy SNC system was driven by several factors:

- **Operational inefficiencies:** Delays in PO acknowledgment and ASN creation affected logistics precision.
- **Supplier dissatisfaction:** Suppliers reported usability challenges and inconsistent workflows.
- **Digital-maturity gaps:** The SNC system does not support mobile workflow or unified identity management.
- **Architectural rigidity:** The system lacked modularity, scalability, and integration flexibility.
- **Compliance requirements:** Auditability and data governance needed modernization.

The enterprise recognized that modern supplier collaboration required:

- Cloud-native architecture
- Unified supplier access
- Mobile-enabled workflows
- Real-time synchronization
- Standardized processes
- Scalable integration with SAP S/4HANA

These requirements shaped the design of the DigitalSupplier platform.

The DigitalSupplier Platform

434 The DigitalSupplier platform was built on the SAP Business Technology Platform (BTP), leveraging
435 native cloud services, modular architecture, and event-driven integration. The platform introduced
436 seven supplier-facing applications designed using SAP Fiori and SAP UI5 principles.

437 **Unified Supplier Access**

438 Suppliers accessed all workflows through the SAP Ariba Network, eliminating reliance on multiple
439 portals. Unified identity management reduces credential duplication and simplifies authentication.

440 **Mobile-Enabled Procurement Workflows**

441 The platform introduced mobile accessibility for:

- 442 • Purchase-order acknowledgment
- 443 • ASN creation
- 444 • Document exchange
- 445 • Supplier-performance tracking

446 Mobile workflows improved supplier responsiveness, especially in remote and field-based
447 environments.

448 **Real-Time Synchronization with SAP S/4HANA**

449 Integration with SAP S/4HANA was achieved through:

- 450 • OData services
- 451 • Event-driven triggers
- 452 • SAP Cloud Integration (CI)
- 453 • SAP PI/PO middleware

454 Real-time synchronization ensures consistent PO updates, accurate ASN submissions, and
455 reliable supplier-performance metrics.

456 **Standardized Procurement Workflows**

457 The seven applications standardized procurement interactions, reduced process fragmentation,
458 and improved usability. Guided navigation and intuitive interfaces reduce cognitive load and
459 enhance supplier adoption.

460 **Centralized Master-Data Governance**

461 Master-data harmonization ensured consistency across:

- 462 • Supplier records
- 463 • Material descriptions
- 464 • PO line items
- 465 • Logistics details

466 This governance reduced exceptions, improved data quality, and strengthened compliance.

467 ***Transformation Execution***

468 The transformation followed the SAP Activate methodology, which provides structured planning,
469 iterative design cycles, and phased deployment.

470 **Solution Design**

471 Business requirements were mapped to SAP best practices through fit-to- the standard analysis.
472 The prototypes were developed and validated using procurement teams and selected suppliers.

473 **Hybrid Integration Setup**

474 Integration between SAP BTP and SAP S/4HANA followed a hybrid model combining:

- 475 • Real-time OData services
- 476 • Event-driven synchronization
- 477 • Master-data harmonization

478 Middleware components supported secure connectivity and workflow automation.

479 **Application Development**

480 Seven supplier-facing applications were developed using SAP Fiori and SAP UI5. The design
481 emphasized:

- 482 • Usability
- 483 • Workflow clarity
- 484 • Mobile accessibility
- 485 • Error-rate reduction

486 **User Acceptance Testing (UAT)**

487 UAT involved both internal procurement teams and external suppliers. Testing focused on:

- 488 • Usability
- 489 • Navigation clarity
- 490 • Mobile accessibility
- 491 • Identity-management simplification
- 492 • ASN accuracy

493 Feedback was incorporated through agile iterations.

494 **Parallel-Run Phase**

495 A 90-day parallel run allowed SNC and DigitalSupplier to operate simultaneously. This enabled the
496 - real-time comparison of

- 497 • Supplier adoption
- 498 • Workflow efficiency
- 499 • System reliability
- 500 • Support-ticket trends
- 501 • ASN accuracy

502 Parallel-run data provided empirical evidence of improvements.

503 **Supplier Engagement and Change Management**

504 Supplier-engagement activities included:

- 505 • Training sessions
- 506 • Onboarding workshops
- 507 • Communication campaigns

508 • Guided walkthroughs
509 These efforts ensured supplier readiness and reduced resistance.

510 ***Operational Outcomes***

511 The transformation delivered measurable improvements:

- 512 • Supplier onboarding time decreased from five days to one hour
- 513 • Adoption increased by 40% within 90 days
- 514 • Support tickets declined by 20%
- 515 • ASN errors reduced by 10%
- 516 • PO acknowledgment speed improved significantly

517 These outcomes validate the effectiveness of the cloud-native architecture, mobile workflows, and
518 unified identity management.

519 ***Strategic Impact***

520 The DigitalSupplier platform strengthened:

- 521 • Supplier collaboration
- 522 • Operational reliability
- 523 • Digital maturity
- 524 • Workflow standardization
- 525 • Data governance
- 526 • Compliance and auditability

527 This transformation positioned the enterprise as a leader in digital procurement within asset-
528 intensive industries.

529 **Results**

530 ***Overview of the Transformation Outcomes***

531 The digital transformation initiative delivered measurable improvements in supplier adoption,
532 workflow efficiency, data accuracy, and operational reliability. These outcomes reflect the
533 combined impact of native cloud architecture, mobile-enabled workflows, unified identity
534 management, and standardized procurement processes. The results were derived from system
535 logs, supplier-interaction analytics, and comparative performance data collected during the 90-day
536 parallel-run period.

537 The findings demonstrate that the migration from the legacy Supplier Network Collaboration (SNC)
538 system to the DigitalSupplier platform built on the SAP Business Technology Platform (BTP) was
539 not merely a technical upgrade, but a comprehensive transformation of supplier-collaboration
540 workflows. The improvements validate theoretical models such as the Technology Acceptance
541 Model (TAM) and Digital Transformation Maturity Models (DTMM), illustrating how usability,
542 mobility, and architectural integration contribute to higher levels of digital capability.

543 ***Supplier Adoption and Engagement***

Supplier adoption increased significantly following deployment of the DigitalSupplier platform. Within the first 90 days, adoption increased by **40%**, driven largely by improved usability, simplified navigation, and mobile accessibility. Suppliers reported fewer difficulties in accessing the system, particularly those operating in remote or field-based environments.

Adoption Trends Across Supplier Categories

Adoption varied across supplier categories:

- **Material suppliers:** 45% increase
- **Logistics providers:** 38% increase
- **Industrial-services suppliers:** 41% increase
- **Technical-equipment suppliers:** 36% increase

Material suppliers showed the highest adoption increase due to frequent purchase-order interactions and the need for real-time visibility into logistics workflows.

Behavioral Indicators of Adoption

Behavioral indicators included:

- Increased frequency of PO acknowledgments
- Reduced delays in ASN submissions
- Higher engagement with mobile workflows
- Lower reliance on support channels

Suppliers have reported that mobile accessibility significantly improves their ability to respond quickly to procurement tasks, especially in field-based operations.

Onboarding Efficiency

Supplier onboarding time decreased dramatically from **five working days to one hour**. This improvement is driven by the following factors:

- Unified identity management
- Simplified registration workflows
- Guided onboarding steps
- Automated validation processes

Reduction in Onboarding Errors

Onboarding errors decreased by **60%**, including:

- Credential mismatches
- Portal-navigation errors
- Incomplete registration forms

Unified identity management eliminates redundant authentication steps, reducing login-related issues and credential-management errors.

Supplier Feedback on Onboarding

Suppliers described the onboarding process as:

- “Clear and intuitive”

- 581 • “Much faster than the old system”
582 • “Easier to complete without support”

583 These qualitative insights align with TAM constructs related to perceived ease of use.

584 ***Workflow Efficiency Improvements***

585 Workflow efficiency improved across all procurement processes, including purchase-order
586 collaboration, ASN creation, and document exchange.

587 **Purchase-Order Acknowledgment Speed**

588 PO acknowledgment speed improved by **35%**, driven by:

- 589 • Mobile accessibility
590 • Real-time synchronization
591 • Guided workflow steps

592 Suppliers were able to acknowledge POs directly from mobile devices, reducing the delays
593 associated with desktop-bound interfaces.

594 **ASN Creation Accuracy**

595 ASN errors decreased by **10%**, including:

- 596 • Incorrect quantities
597 • Missing line items
598 • Invalid delivery dates

599 Guided workflows and real-time validation reduced the likelihood of ASN inaccuracies.

600 **Document-Exchange Efficiency**

601 Document-exchange efficiency improved by **28%**, driven by:

- 602 • Unified access
603 • Standardized workflows
604 • Real-time synchronization

605 Suppliers reported fewer delays in submitting certificates, inspection reports, and compliance
606 documents.

607 ***Support-Ticket Reduction***

608 The support tickets declined by **20%**, reflecting improvements in usability, navigation clarity, and
609 identity-management simplification.

610 **Reduction in Login-Related Tickets**

611 Login-related tickets decreased by **50%**, driven by:

- 612 • Unified identity management
613 • Elimination of redundant credentials
614 • Simplified authentication workflows

615 **Reduction in Workflow-Navigation Tickets**

616 Navigation-related tickets decreased by **30%**, driven by:

- 617 • SAP Fiori design principles
 - 618 • Guided workflow steps
 - 619 • Mobile-friendly interfaces
- 620 Suppliers reported that the new interface was “much easier to navigate” and “more intuitive than
- 621 the old SNC system.”

622 ***Real-Time Synchronization Performance***

623 Real-time synchronization between SAP BTP and SAP S/4HANA significantly improved data

624 accuracy and workflow reliability.

625 **Reduction in Data-Synchronization Delays**

626 Synchronization delays decreased from **several minutes to under five seconds**, driven by:

- 627 • OData services
- 628 • Event-driven triggers
- 629 • SAP Cloud Integration (CI)

630 **Impact on Procurement Accuracy**

631 Real-time synchronization improved:

- 632 • PO update accuracy
- 633 • ASN validation reliability
- 634 • Supplier-performance tracking

635 Procurement teams reported fewer exceptions and reduced reliance on manual follow-ups.

636 ***Master-Data Quality Improvements***

637 Master-data harmonization improves data consistency across supplier records, materials, and

638 procurement workflows.

639 **Reduction in Master-Data Exceptions**

640 Master-data exceptions decreased by **15%**, including:

- 641 • Incorrect material descriptions
- 642 • Inconsistent supplier records
- 643 • Invalid PO line items

644 **Impact on Workflow Reliability**

645 Improved master-data quality enhanced:

- 646 • ASN accuracy
- 647 • PO collaboration reliability
- 648 • Supplier-performance metrics

649 These improvements strengthened compliance and auditability.

650 ***Supplier-Experience Enhancements***

651 Qualitative feedback from suppliers highlighted significant improvements in:

- 652 • Usability

653 • Navigation clarity
654 • Mobile accessibility
655 • Workflow transparency
656 Suppliers described the new platform as:

- 657 • “Much easier to use”
- 658 • “More reliable than the old system”
- 659 • “Better suited for field operations”

660 These insights validate TAM constructs related to perceived usefulness and ease of use.

661 ***Procurement-Team Experience***

662 Procurement teams reported improvements in:

- 663 • Exception handling
- 664 • Workflow monitoring
- 665 • Supplier communication
- 666 • Data-driven decision-making

667 Real-time visibility into supplier interactions enables faster resolution of issues and improved
668 coordination across procurement workflows.

669 ***Strategic Outcomes***

670 The transformation delivered strategic benefits, including:

- 671 • Enhanced digital maturity
- 672 • Improved supplier collaboration
- 673 • Strengthened operational reliability
- 674 • Reduced procurement cycle time
- 675 • Improved compliance and auditability

676 These outcomes position the enterprise as a leader in digital procurement in asset-intensive
677 industries.

678

679 **Discussion**

680 ***Overview of the Transformation Impact***

681 The digital transformation of the legacy Supplier Network Collaboration (SNC) system into the
682 cloud-native DigitalSupplier platform represents a significant milestone in the enterprise’s
683 procurement modernization journey. The results demonstrate that migration was not merely a
684 technological upgrade but a comprehensive reengineering of supplier-collaboration workflows, data
685 governance, and operational practices. The improvements observed in supplier adoption,
686 onboarding efficiency, workflow reliability, and data accuracy reflect the combined influence of
687 architectural modernization, user-centric design, and structured implementation methodologies.

688 The discussion in this section synthesizes the quantitative and qualitative findings, contextualizes
689 them within the existing literature, and interprets their implications for digital procurement, supplier
690 behavior, and organizational digital maturity. The analysis also highlights the strategic significance
691 of native cloud platforms in asset-intensive industries and identifies key lessons for enterprises
692 pursuing similar transformations.

693 ***Interpreting Supplier Adoption Through TAM***

694 The substantial increase in supplier adoption—40% within the first 90 days—provides strong
695 empirical support for the Technology Acceptance Model (TAM). The TAM posits that perceived
696 usefulness and perceived ease of use are the primary determinants of digital adoption. The
697 DigitalSupplier platform improved both constructs.

- 698 • **Perceived usefulness** increased because of real-time synchronization, mobile workflows, and
699 standardized processes.
- 700 • **Perceived ease of use** was improved through intuitive SAP Fiori interfaces, unified identity
701 management, and guided navigation.

702 Suppliers reported that the new platform was “much easier to use” and “more reliable than the old
703 system,” indicating a positive shift in user perceptions. These behavioral changes align with the
704 TAM literature, which emphasizes the importance of usability and workflow clarity in digital
705 procurement adoption.

706 Adoption trends also reveal differences across supplier categories. Material suppliers showed the
707 highest adoption increase owing to frequent interactions with purchase orders and logistics
708 workflows. This suggests that suppliers with higher transaction volumes are more sensitive to
709 improvements in the usability and workflow reliability.

710 ***Digital Maturity Progression Through DTMM***

711 The transformation reflects a significant progression in the enterprise’s digital maturity, as
712 described by Digital Transformation Maturity Models (DTMM). Migration from a fragmented,
713 desktop-bound SNC system to a cloud-native, mobile-enabled platform represents advancement
714 across several maturity dimensions:

- 715 • **Technological maturity:** Adoption of SAP BTP, data services, and event-driven integration.
- 716 • **Process maturity:** Standardization of procurement workflows and reduction of process
717 fragmentation.
- 718 • **Data maturity:** Centralized master-data governance and improved data accuracy.
- 719 • **User maturity:** Enhanced supplier engagement and improved digital readiness.
- 720 • **Organizational maturity:** Structured governance, agile iterations, and continuous validation.

721 These improvements demonstrate how native cloud architectures and user-centric designs
722 contribute to higher levels of digital capability. This transformation also highlights the importance of
723 hybrid integration strategies in industries with strict operational and compliance requirements.

724 ***Architectural Implications of Cloud-Native Procurement***

725 The migration to the SAP BTP introduced several architectural enhancements that significantly
726 improved workflow reliability and data accuracy. Real-time synchronization between SAP BTP and
727 SAP S/4HANA reduces delays in purchase-order updates and ASN submissions, enabling
728 procurement teams to detect exceptions earlier and respond more effectively.

729 The use of OData services and event-driven triggers ensured that supplier interactions were
730 immediately reflected across the systems. This architectural shift reduced reliance on manual
731 follow-up, improved transparency, and strengthened operational continuity. Improvements in the
732 master-data quality further enhance workflow reliability, reduce exceptions, and improve
733 compliance.

734 The modular architecture of the SAP BTP also enabled the rapid development of supplier-facing
735 applications, supporting agile transformation initiatives, and continuous improvement cycles. This
736 flexibility is particularly valuable in asset-intensive industries, where procurement workflows must
737 adapt to the evolving operational needs.

738 ***Behavioral Insights from Supplier Feedback***

739 Qualitative feedback from suppliers provides valuable insights into the behavioral impact of
740 transformation. The suppliers described the new platform as follows.

- 741 • “Clear and intuitive”
- 742 • “Much faster than the old system”
- 743 • “Better suited for field operations”

744 These insights highlight the importance of usability, mobile device accessibility, and workflow
745 clarity in supplier-collaboration systems. The reduction in login-related issues and navigation errors
746 reflects the effectiveness of unified identity management and SAP Fiori design principles.

747 Improvements in supplier behavior, such as increased frequency of PO acknowledgments and
748 reduced delays in ASN submissions, demonstrate how digital procurement systems can influence
749 operational practices. These behavioral changes contribute to improved logistics coordination,
750 reduced cycle time, and enhanced operational reliability.

751 ***Operational Implications for Procurement Teams***

752 This transformation delivered significant operational benefits to the procurement teams. Real-time
753 visibility into supplier interactions enables faster resolution of issues and improved coordination
754 across procurement workflows. The reduction in support tickets—20% overall and 50% for login-
755 related issues—freed resources for strategic activities.

756 Procurement teams reported improvements in:

- 757 • Exception handling
- 758 • Workflow monitoring
- 759 • Supplier communication
- 760 • Data-driven decision-making

761 These improvements reflect the value of native cloud platforms in enhancing operational efficiency
762 and supporting proactive procurement practices.

763 ***Strategic Implications for Asset-Intensive Industries***

764 This transformation has strategic implications for asset-intensive industries, where procurement
765 reliability and supplier responsiveness directly influence operational continuity. Improvements in
766 onboarding efficiency, workflow reliability, and data accuracy strengthen an enterprise's ability to
767 manage complex logistics networks and maintain operational stability.

768 The DigitalSupplier platform enhances:

- 769 • Supplier collaboration
- 770 • Operational reliability
- 771 • Digital maturity
- 772 • Compliance and auditability
- 773 • Logistics accuracy

774 These strategic benefits position the enterprise as a leader in digital procurement in the oil and gas
775 sector.

776 ***Lessons Learned from the Transformation***

777 Several key lessons emerge from the transformation:

778 **Importance of User-Centric Design**

779 Usability and workflow clarity are critical for supplier adoption. The SAP Fiori design principles and
780 guided navigation significantly improve supplier engagement.

781 **Value of Hybrid Integration**

782 Hybrid integration strategies enable secure ERP continuity while supporting modern collaboration
783 workflows. Real-time synchronization is essential for procurement accuracy.

784 **Role of Structured Methodologies**

785 The SAP Activate provides a structured framework for planning, design, validation, and
786 deployment. Agile iterations ensure continuous improvement and integration of supplier feedback.

787 **Need for Master-Data Governance**

788 Centralized master-data governance is essential for workflow reliability and compliance. Improved
789 data accuracy reduces exceptions and enhances the operational transparency.

790 **Importance of Supplier Engagement**

791 Training sessions, onboarding workshops, and communication campaigns are critical to supplier
792 readiness and adoption.

793 ***Limitations of the Transformation***

794 Despite the significant improvements, the transformation has limitations:

- 795 • The study focuses on a single enterprise, limiting generalizability.
- 796 • Supplier feedback may contain bias despite anonymization.

- Hybrid integration complexity may vary across industries.
- The 90-day parallel-run period may not capture long-term behavioral trends.
- The study does not evaluate indirect procurement or multi-tier supplier collaboration.

These limitations highlight the need for further research on digital procurement transformations in asset-intensive industries.

Summary of Discussion

The transformation from SNC to SAP BTP has resulted in substantial improvements in supplier adoption, workflow efficiency, data accuracy, and operational reliability. These improvements validate theoretical models such as TAM and DTMM and demonstrate the value of native cloud procurement systems in asset-intensive industries.

The findings provide a replicable framework for enterprises seeking to modernize legacy procurement systems through cloud-first architecture, digital engineering, and supplier-centric workflow design.

Conclusion

Summary of the Transformation Journey

This study examines the digital transformation of a legacy Supplier Network Collaboration (SNC) system within a major oil and gas enterprise through its migration to a cloud-native supplier-collaboration platform built on the SAP Business Technology Platform (BTP). This transformation represented a comprehensive modernization effort that addressed the structural, architectural, and usability limitations inherent in the legacy SNC environment. The DigitalSupplier platform significantly enhances supplier engagement, operational reliability, and digital maturity by introducing mobile-enabled workflows, unified identity management, real-time synchronization, and standardized procurement processes.

The findings demonstrate that migration was not merely a technical upgrade, but a strategic shift toward a more integrated, scalable, and user-centric procurement ecosystem. The improvements observed in supplier adoption, onboarding efficiency, workflow reliability, and data accuracy validate theoretical models such as the Technology Acceptance Model (TAM) and Digital Transformation Maturity Models (DTMM). These models provide a robust framework for interpreting the behavioral and organizational impacts of digital procurement transformation.

Key Achievements of the Transformation

The transformation delivered measurable improvements across several dimensions:

Supplier Adoption

Supplier adoption increased by **40% within 90 days**, driven by improved usability, mobile device accessibility, and unified identity management. This increase reflects a significant shift in supplier behavior and digital readiness.

Onboarding Efficiency

833 Supplier onboarding time decreased from **five working days to one hour**, demonstrating the
834 effectiveness of the simplified registration workflows and automated validation processes.

835 **Workflow Reliability**

836 Workflow reliability improved across purchase-order collaboration, ASN creation, and document
837 exchange. Real-time synchronization reduces delays and enhances the procurement accuracy.

838 **Support-Ticket Reduction**

839 The support tickets declined by **20%**, including a **50% reduction** in login-related issues. These
840 improvements reflect the value of unified identity management and user-centric design.

841 **Master-Data Quality**

842 Master-data harmonization improved data consistency across supplier records, materials, and
843 procurement workflows, reducing exceptions and strengthening compliance.

844 These achievements demonstrate the strategic value of native cloud procurement systems in
845 asset-intensive industries.

846 **Theoretical Contributions**

847 This study contributes to the digital-procurement literature by providing rare data-driven evidence
848 of large-scale SNC modernization in an asset-intensive industrial context. These findings validated
849 several theoretical constructs.

850 **Technology Acceptance Model (TAM)**

851 Improvements in usability, mobile accessibility, and workflow clarity have enhanced the perceived
852 usefulness and ease of use, driving supplier adoption.

853 **Digital Transformation Maturity Models (DTMM)**

854 Migration reflects significant progression in digital maturity across the technological, process, data,
855 user, and organizational dimensions.

856 **ERP–Supplier Integration Literature**

857 This study demonstrates how integrated architecture and standardized workflows enhance
858 procurement accuracy and operational reliability.

859 These contributions strengthen the theoretical foundation for future research on digital
860 procurement transformation.

861 **Practical Implications for Enterprises**

862 The transformation offers several practical insights for enterprises pursuing digital procurement
863 modernization:

864 **Importance of User-Centric Design**

865 Usability and workflow clarity are critical for supplier adoption. SAP Fiori design principles
866 significantly improve supplier engagement.

867 **Value of Hybrid Integration**

Hybrid integration strategies enable secure ERP continuity while supporting modern collaboration workflows. Real-time synchronization is essential for procurement accuracy.

Role of Structured Methodologies

The SAP Activate provides a structured framework for planning, design, validation, and deployment. Agile iterations ensured continuous improvement.

Need for Master-Data Governance

Centralized master-data governance is essential for workflow reliability and compliance.

Importance of Supplier Engagement

Training sessions, onboarding workshops, and communication campaigns are critical to supplier readiness and adoption.

These insights provide a replicable framework for enterprises seeking to modernize legacy procurement systems.

Strategic Implications for Asset-Intensive Industries

This transformation has strategic implications for industries in which procurement reliability and supplier responsiveness directly influence operational continuity. Improvements in onboarding efficiency, workflow reliability, and data accuracy strengthen an enterprise's ability to manage complex logistics networks and maintain operational stability.

The DigitalSupplier platform enhances:

- Supplier collaboration
- Operational reliability
- Digital maturity
- Compliance and auditability
- Logistics accuracy

These strategic benefits position the enterprise as a leader in digital procurement in the oil and gas sector.

Future Work

Although the transformation delivered significant improvements, several opportunities exist for future enhancement and research.

Expansion into Indirect Procurement

Future work may explore the extension of the DigitalSupplier platform into indirect procurement workflows, including service procurement, contract management, and vendor-managed inventory.

Integration with IoT-Enabled Logistics Tracking

IoT-enabled tracking can enhance real-time visibility of shipments, improve logistics accuracy, and support predictive analytics for supply-chain optimization.

Predictive Analytics for Supplier Performance

Machine-learning models can be integrated to predict supplier performance, identify risk patterns, and support proactive decision-making.

Multi-Tier Supplier Collaboration

Future research could explore collaboration across multi-tier supplier networks, enabling visibility in upstream and downstream supply-chain activities.

Longitudinal Studies on Digital Maturity

Long-term studies can examine how digital maturity evolves over time, and how enterprises sustain digital-transformation momentum.

Cross-Industry Comparative Studies

Comparative studies across industries can identify the best practices and highlight unique challenges in digital procurement transformation.

Final Remarks

The migration from a legacy SNC system to the SAP BTP represents a significant digital-transformation milestone for enterprises. The DigitalSupplier platform delivers measurable improvements in supplier adoption, onboarding efficiency, workflow reliability, and ASN accuracy. These outcomes validate theoretical models, such as TAM and DTMM, and demonstrate the value of native cloud procurement systems in asset-intensive industries.

The study provides a replicable framework for enterprises seeking to enhance supplier collaboration through cloud-first architecture, mobile workflows, and unified identity management. As digital transformation continues to reshape procurement ecosystems, native cloud platforms will play an increasingly critical role in enabling operational excellence, supplier engagement, and strategic agility.

Data Availability

All data generated or analyzed during this study are included in the manuscript. Interview insights were anonymized in accordance with approved ethical protocols and could not be publicly released because of confidentiality agreements. No external dataset was used in this study. Additional methodological details and model specifications are available from the corresponding author upon request.

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