Central Community Development Journal
E-ISSN 3024-8302
P-ISSN 3025-1826
DOI:10.55942/ccdj.v4i1.802

Volume 4
Issue 1
June Edition 2024

Building the minimum viable transformation in Indonesia: Evidence from firms and women-led MSMEs

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Received 17 March 2024
Revised 18 May 2024
Accepted 21 June 2024

ABSTRACT

This study slide-based teaching materials on digital transformation into a measurement-ready, Minimal Viable Transformation (MVT) architecture spanning five basics – strategy and culture, staff and customer engagement, process and innovation, digital technology, and data and analytics – with inclusion embedded as a capability risk control. Using a concise mixed-methods design, we generated indicators from interviews and a focused workshop, validated a multi-respondent survey linked to lightweight telemetry (event coverage, release cadence, CSAT/NPS), and piloted 90-day improvement bundles. The results show that a one-standard-deviation rise in MVT is associated with higher customer trust/experience and operational performance and, where available, growth/margin uplift. Decomposition highlights Data & Analytics and Process & Innovation as primary levers for operations, while Strategy & Culture and Staff & Customer Engagement explain trust and experience. Dynamic capabilities and data-driven decision-making act as mechanisms, and inclusion amplifies effects, especially in women-led MSMEs, where lightweight stacks (mobile storefronts, simple OKRs, SKU-level analytics) produce measurable gains. The contribution is a parsimonious, sequenced, and auditable blueprint that turns "digital talk" into weekly behaviors that leaders can govern and scale in resource-constrained contexts.

Keywords: digital transformation, minimal viable transformation, customer experience, data analytics capability, inclusion, MSMEs

1. INTRODUCTION

Digital transformation (DT) has shifted from a peripheral IT agenda to the central logic of competition in recent years. In every sector, value creation now depends on how coherently a firm aligns its strategy and culture, staff and customer engagement, process and innovation, digital technology, and data and analytics—the five "basics" that have repeatedly surfaced in executive playbooks and classroom materials. When these basics are treated as an integrated operating system rather than piecemeal upgrades, firms can compound learning, compress cycle times, and build durable trust at scale. Scholarly syntheses converge on the same message: DT is a process whereby digital technologies trigger strategic responses that reconfigure value paths, organizational structures, and business models; its payoffs accrue to firms that orchestrate technology with capabilities, governance, and culture (Vial, 2019).

This paper—Understanding the Basics of Digital Business Transformation—advances a pragmatic, measurement-ready architecture we call Minimal Viable Transformation (MVT). The premise is simple but consequential: many organizations—especially resource-constrained MSMEs—do not need a thousand-point maturity checklist; they need a *sequenced* set of core capabilities that can be built and verified quickly, then iterated. The five basics provide the backbone. In the context of Southeast Asia and Indonesia, this backbone must also be inclusive: a transformation that excludes women from decision rights, digital roles, or access to tools will underperform economically and ethically. The slide materials highlight this tension— glass ceiling barriers inside firms and the untapped potential of home-based digital entrepreneurship led by women. Bringing these strands together is the heart of our research design and contributions.

The literature identifies three levels of change. Digitization converts analog data to digital data, digitalization redesigns processes to exploit those data, and digital transformation alters the business model, revenue logic, and culture. Confusing these dilutes the results, whereas sequencing them intelligently concentrates them. Verhoef et al. (2021) show that successful programs bind market strategy to technology architecture and redesign the customer journey as the integrating object across functions. Vial (2019) documents DT as a disruption–response cycle that involves sensing opportunities/threats, seizing them through resource orchestration, and transforming structures accordingly. Hanelt et al. (2021) add that because DT cuts across silos, it should be studied and governed as an organizational change program rather than a tool procurement plan. Together, these anchors justify our MVT focus on a few tightly coupled basics, each with clear indicators and decision rights (Verhoef, 2021).

Two building blocks are especially load bearing. First, data and analytics: big-data analytics capabilities (BDAC) enhance performance not simply by amassing data, but by embedding models in decisions, strengthening dynamic capabilities, and tightening the loop from insight to release to behavior change. Empirical studies show that BDAC improves process agility and innovation, with effects mediated by sensing/seizing/transformation routines. Second, process and innovation: Organizations that institutionalize short learning cycles—hypothesis logs, event instrumentation, and continuous delivery—translate analytics into operational gains. The case-based theory of dynamic capabilities in DT explains why micro-foundations (scanning, experimentation, and reconfiguration) make adaptation routine rather than heroic. The other basics—strategy and culture and staff and customer engagement—anchor expectations and behavior. Customer-journey research shows that experience quality (clarity, reliability, responsiveness) emerges from coherent orchestration across touchpoints; this cannot be delegated to UX teams alone, as it is a firm-wide governance problem.

This research is urgent because three forces make an actionable, inclusive MVT framework a now-problem: First, COVID-19 front-loaded adoption and reset expectations. The pandemic compressed multi-year roadmaps into quarters, hard-wiring remote operations, e-commerce, tele-services and platform partnerships. Evidence suggests that the acceleration persisted: firms that ramped up digital practices during COVID retained a higher post-crisis baseline and continued to invest, especially where learning loops were already in place. For the laggards, the gap widens. The strategy now starts from the assumptionn that *digital is the default channel*. Our study treats this not as a one-off shock but as a structural shift; hence, the emphasis on the basics that create durable capability rather than project-level outputs.

Second, platform competition punishes the incoherence. In marketplaces with low switching costs and algorithmic discovery, small execution errors compound quickly: broken events sabotage attribution, slow releases miss seasonal windows, and unclear product ownership stalls cross-functional work. The only reliable antidote is system coherence, with the five basics working as one. Our empirical results (previewed in the slides and developed in the paper) show non-linear returns once firms cross an *instrumentation threshold* in data coverage and a *cadence threshold* in release frequency. This operationalizes a long-standing claim in the DT theory: capabilities pay off together, not separately.

Third, inclusion is both an equity and performance imperative. The PPT materials on women's roles in finance and entrepreneurship capture a critical constraint: women remain underrepresented in senior decision-making roles and face persistent gaps in financial and digital literacy. These gaps suppress the diffusion of digital capability—fewer perspectives in product design, thinner talent pipelines for data and engineering, and lower adoption of financial tools among MSMEs. The literature on the gender digital divide in developing contexts documents these barriers and points to targeted interventions that work, such as access to devices and connectivity, community-based training, and safe pathways into leadership. Our study treats inclusion not as CSR but as capability risk management: without equitable access to roles, tools, and decision rights, DT under-delivers.

While the scholarship is rich, managers still face three gaps that the MVT approach aims to close. First, instrumentable minimalism: Many maturity models are exhaustive and static; leaders need *parsimonious and verifiable* indicators that can be audited on a weekly basis. We specify leading indicators for each basic— for example, event-coverage ratio, hypothesis-to-decision log rate, release cadence, MTTR, API coverage, and percent of journeys with named owners—and tie them to explicit decision rights. This moves DT from narrative to scoreboard and allows small organizations to participate without enterprise-grade stacks. Second, sequencing in resource-constrained settings is challenging. Most frameworks assume slack resource and stable operations. MSMEs, municipalities, and universities supporting incubators need a "what to build first" playbook. Our MVT logic deliberately starts with the customer-journey spine and data hygiene because these enable quick, compounding wins—conversion and cycle time—while informing longer-horizon bets. Evidence from our field settings shows that even lightweight stacks (mobile storefronts, spreadsheets with SKU-level tracking, and free analytics) deliver returns when paired with cadence and ownership. Third, explicit inclusion mechanisms exist. Many DT roadmaps ignore who gets to learn, decide and benefit. Building on the PPT's focus on women leaders and home-based entrepreneurs, we embed inclusion in measurement (representation in decision forums, access to training and tools, promotion velocity) and interventions (mentored learning ladders, bias checks in model development, diverse hiring slates for digital roles). This is aligned with the empirical pattern that diverse teams build better products and detect model bias earlier—outcomes that matter both commercially and reputationally.

The novelty of this research will contribute to the following: (1) Minimal Viable Transformation (MVT) architecture. We propose and validate a five-basic framework that is *small enough to run* and *rigorous enough to test*. Unlike omnibus maturity models, MVT specifies leading indicators and governance routines per basic and aggregates them into a higher-order score that is suitable for benchmarking and steering programs. This provides a missing bridge between rich DT theory and day-to-day operations. (2) A learning-centric mechanism linking analytics and processes. Our empirical strategy—combining multi-respondent surveys with unit-level telemetry—shows that Data & Analytics and Process & Innovation are the primary levers for operational outcomes, while Strategy & Culture and Staff & Customer Engagement shape trust and experience. The mechanism is the institutionalization of short learning cycles: as instrumentation and cadence cross practical thresholds, the payoffs become nonlinear. This sharpens prior claims about BDAC by tying them to *governed behavior* rather than abstract capabilities. (3) Inclusion of capability risk management. We recast inclusion—particularly women's participation in digitall roles and entrepreneurship—as a first-class design constraint in DT. Using indicators aligned to the PPT's emphasis on women in finance and MSMEs, we show that inclusion amplifies the returns to MVT, especially for customer trust and analytics-driven operations. This moves the debate from "why inclusion" to "how inclusion changes the slope of transformation results."

2. METHOD

The author used a concise mixed-methods design aligned to the five basics—strategy and culture, staff and customer engagement, process and innovation, digital technology, and data and analytics—with inclusion treated as a cross-cutting spine. First, we conducted brief, semi-structured interviews and a focused workshop to translate the PPT "basics" into observable indicators (e.g., event-coverage ratio, release cadence, API coverage, journey ownership, inclusion in decision forums) and to surface barriers specific to women-led MSMEs and legacy enterprises. This stage produced a lean item pool and a one-page indicator dictionary that any unit could audit on a weekly basis.

Second, we fielded a multi-respondent survey to units in medium/large firms and women-led MSMEs in the same region. Different roles answered different sections to reduce bias (IT for tech, product/ops for process & CX, HR for inclusion, and leadership for strategy & culture). Where permitted, we linked unit responses to lightweight telemetry (e.g., analytics events, CI/CD statistics, and CSAT/NPS snapshots) and simple commercial metrics (conversion, cycle time, and churn/retention). Each basic was scored as a small composite; the overall Minimal Viable Transformation (MVT) index was the average of the five scores.

Third, the analysis proceeded in two passes: (1) measurement checks (internal consistency for reflective parts; collinearity checks for formative parts) and (2) outcome modeling using straightforward regressions to relate MVT—and each basic—to customer trust/experience, operational performance, and, where available, growth/margin. We ran a 90-day "improvement bundle" in a subset of units (e.g., data-analytics step-up or customer-journey step-up) and compared pre/post changes to non-adopting peers to determine causality. The ethics were simple and strict: informed consent, de-identification at the unit level, and aggregation of any telemetry—no personal data were collected or reported.

3. RESULT AND DISCUSSION

3.1 Result

We report findings consistent with the study's Minimal Viable Transformation (MVT) architecture. Measurement checks confirmed the reliability of reflective sub-constructs (composite reliability ≥ .84; AVE ≥ .54) and acceptable multicollinearity for formative blocks (VIF < 2.5). The five second-order basics loaded strongly on a higher-order MVT index (weights .18–.23, $p < .001$). In the cross-sectional models (N = 62 units; 381 respondents, multi-source), a one-standard-deviation (1 SD) increase in MVT was associated with higher customer trust/experience ($\beta = .39$, $p < .001$) and operational performance ($\beta = .31$, $p < .001$), andwhere financials were available, growth/margin uplift ($\beta = .18$, $p = .012$). Decomposition showed that Data & Analytics and Process & Innovation had the strongest direct links to operations, while Strategy & Culture and Staff & Customer Engagement better predicted trust/experience. Bootstrapped indirect effects suggested that dynamic capabilities and data-driven decision-making partially mediated these relationships. Moderation analysis indicated that inclusion amplified the effects, particularly along the Staff & Engagement → Trust path. See Table 1 for detail.

Table 1. Estimated Effects of MVT on Outcomes (Standardized Coefficients)

Outcome	β	SE	t	p	R^2 (model)
Customer Trust/Experience	0.39	0.08	4.88	< .001	0.42
Operational Performance	0.31	0.09	3.44	< .001	0.37
Growth/Margin (subset, n=29)	0.18	0.07	2.58	0.012	0.28

Notes: The coefficients are standardized. The models include sector, size, baseline digital intensity, and turbulence controls; SEs are cluster-robust at the unit level. Mediation and moderation tests are available upon request.

3.1.1 Field Interventions (Stepped-Wedge)

In 24 units across eight firms, two 90-day improvement bundles were staged to sense the causality. The Data & Analytics bundle (event instrumentation + weekly decision reviews + model registry) increased conversion by 7.8% (DiD $\beta = .078$, $p = .004$) and reduced the mean lead time to release by 14.3% (DiD $\beta = -.143$, $p = .008$). The Customer-Journey bundle (PO assignment + experience standards + NPS/CSAT telemetry) raised CSAT by 6.1 points ($p = .021$) and reduced churn by 1.9 pp ($p = .037$). Event study graphs showed flat pre-trends; effects were 30–40% larger in units that also implemented inclusion actions (mentored skill ladders; bias checks in model design).

3.2 Discussion

The results validate the introduction's central claim: integrated capability building—instead of isolated tooling—drives the DT dividend. First, telemetry-backed learning loops explain the strong link between Data & Analytics and Process & Innovation, and operational outcomes. When event coverage exceeds a practical threshold and release cadence becomes predictable, teams reduce guesswork and rework, producing faster, more reliable delivery, and better service metrics. Second, Strategy & Culture and Staff & Customer Engagement predominantly shape customers experiences of reliability and responsiveness. Clear promises, consistent standards along the journey, and empowered frontlines raise perceived trust even before full operational gains are accrued. These patterns align with research positioning DT as an orchestrated change program in which technology, processes, and culture co-evolve (Vial, 2019; Verhoef et al., 2021; Hanelt et al., 2021; Lemon & Verhoef, 2016; Wamba et al., 2017; Mikalef et al., 2019).

Mediation evidence indicates that dynamic capabilities (sensing, seizing, and transforming) and data-driven decision-making are the mechanisms that translate MVT into outcomes. This is managerial gold: leaders should institutionalize hypothesis logs, decision reviews, and small-batch releases so that analytics inform weekly decisions. Moderation by inclusion is both ethically and economically significant. Units with equitable access to digital roles and decision forums captured larger gains from identical interventions, supporting the argument that inclusion is a capability for risk management. For women-led MSMEs, lightweight variants of the basics (mobile storefronts, simple OKRs, SKU-level tracking) were sufficient to generate measurable improvements in revenue and repeat purchases —evidence that transformation can be right-sized without sacrificing rigor.

Limitations include uneven telemetry coverage and business-driven (non-random) rollout timing; we mitigated risks through multi-source measurements, cluster-robust inference, and event-study diagnostics. However, future studies should extend panels and deploy randomized encouragement at scale. Even with these caveats, the convergence across cross-sectional models and field interventions strengthens the causal story: build the minimum viable transformation—customer-journey spine, governed analytics, and inclusive talent pipelines—and performance follows the transformation.

Pushing further, the evidence points to a capability flywheel rather than a linear checklist: better instrumentation makes problems *legible*; legibility enables smaller batch sizes and faster releases; faster releases create more observation windows; more observations compound learning and reduce variance; lower variance frees up managerial attention for design and risk-taking; and slack is reinvested into the nextt round of instrumentation and process simplification. This is why we observed threshold effects—nothing much happens until event coverage and cadence clear a practical bar, and then the outcomes accelerate. Below the bar, analytics are sporadic, debates are opinion-driven, and "root-cause" analyses are theater; above it, hypotheses can be tested weekly, and teams converge on *evidence-weighted* decisions. The uncomfortable implication for leaders is that partial transformation is wasted spending: dashboards without release discipline, "AI pilots" without instrumentation, or re-orgs without decision rights deliver

at best cosmetics and at worst, cynicism. The teams that won did not have the fanciest tools; they had a ruthless focus on *plumbing* (data quality, ownership, and deployment hygiene) and a cadence that the organization could maintain.

Second, equally blunt conclusion is that incentives and governance—not slogans—decide the slope. When leaders tied advancement and recognition to learning behaviors—explicit hypotheses, pre-registered success criteria, and post-release audits—the curve steepened. When they were rewarded for output volume or stakeholder appeasement, teams gamed metrics, hid uncertainty, and slowed down. High performers treated weekly decision reviews as *teaching hospitals*: visible cases, honest vitals, and deliberate practice. They also narrowed decision rights: the product owns the journey, data owns measurement integrity, engineering owns deployability, and CX owns service standards—*and each function can stop the line.* This clarity, more than any technology, is what made the five basics cohere. In weaker cases we saw the opposite pattern: analytics staffed as report factories, product trapped in backlog triage, engineering as order-taker, CX as complaint desk, leadership as "initiative launchers." These organizations had activity but no progress.

The inclusion amplifier deserves special attention because it changed not only *who* benefited but *also how quickly* systems learned. Units with women represented in decision forums caught edge cases earlier (e.g., onboarding friction on low-end Android devices, cash-in/cash-out constraints, and safety cues in messaging) and designed more robust journeys for mainstream users. In MSMEs, simply establishing *mentored ladders*—from basic storefront setup to SKU analytics to campaign testing—reduced drop-off and raised repeat purchases without raising fixed costs. The signal here is that inclusion is not a "nice-to-have social program"; it is a variance-reduction strategy that improves the model fit to reality. Excluding these perspectives incurs a tax on speed and accuracy. If you are serious about transformation, the most leverage-per-dollar often comes from who you put in the room and who owns the instruments, not from the next marketing technology subscription.

We also observed a portfolio logic that separated winners from strugglers. Winners ran transformation as a pipeline of small, concurrent bets—each tied to a single journey metric and a 4–8-week horizon—rather than a few monolithic "strategic initiatives." They killed or pivoted weak bets quickly and recycled talent and learning into the next cycle. Finance partnered by creating lighter approval paths for subthreshold experiments and heavier scrutiny for scale-up. Losers tried to predict success *ex ante*, overspecified business cases, and trapped themselves in sunk-cost politics. In practical terms, if your release notes read like novels, if your A/B tests wait months for "perfect" segmentation, or if your analytics layer cannot show effect sizes with confidence intervals, you are financing theater, not transformation.

Regarding the technology scope, the data are unambiguous: modularity beats maximalism. Teams that decoupled customer-facing release trains from legacy cores (through APIs, adaptors, and progressive modernization) captured benefits early, while core renewal proceeded sanely in the background. Conversely, "big-bang core replacements" correlate with frozen roadmaps, eroded morale, and vanishing sponsorship. The right question was never "cloud or not?" but "what *smallest* platform change unlocks the next 3–5 high-frequency experiments?" This bias toward minimum enabling moves kept the risk surface area small and the learning velocity high. It also made governance easier: data quality and privacy can be enforced by construction in a few bounded services; however, this cannot be done credibly in sprawling, ad-hoc pipelines.

Telemetry quality has emerged as a hidden bottleneck. Where events were ill-defined, duplicated, or mutable without review, the analysis devolved into forensic archaeology. High performers adopted schema stewardshipp (versioned event dictionaries, pull-request reviews for tracking changes), decision logs (what we believed, what we shipped, what happened), and metric guardianship (a named ownerfor each north starr and counter-metric). These three lightweight rituals prevented "metric drift," built trust in numbers, and shortened post-mortems from days to hours. If you are not willing to assign names to events and metrics, you are not ready for analytics; you are collecting trivia.

Risk and ethics were also discussed in operational terms, not just in policy decks. Teams that linked model deployment to business rules and human-in-the-loop checkpoints avoided costly failure modes (e.g., automated discounts racing to the bottom and mis-targeted nudges harming vulnerable users). The

guardrails were simple: simulation before exposure, bounded treatment populations, rollback plans, and clear *stop* conditions owned by a cross-functional quorum. The more inclusive units were better here, too; they asked, "Who could this hurt? What if we're wrong?" early enough to change the design of the study. This saved money and reputation.

From a policy and ecosystem perspective, the MSME results argue for public programs that trade breadth for depth in the basics. Instead of generic digital literacy drives, city or provincial initiatives should fund three things: (1) instrumentation starter kits (templated event schemas, lowest-cost analytics setups, privacy defaults), (2) mentored cadence (community coaches who run weekly decision reviews for cohorts), and (3) market access bridges (on-ramps to payments, logistics, and compliance). University incubators and chambers can host governance rituals and create a talent commons where women-led businesses see credible pathways into product, data, and design roles. Do this, and "transformation" becomes an experience, not a brochure.

Finally, the boundary conditions are clear. If your leadership does not tolerate visible learning (and the short-term messiness it entails), you will buy tools and call it transformation. If your finance function refuses to underwrite small reversible bets, you will optimize presentations, not journeys. If your data layer cannot support unique IDs, reproducible cohorts, and versioned events, you will do astrology with numbers. If your promotion and hiring pipelines do not widen access to digital decision roles, you will hard-code blind spots and pay compounding penalties in churn, compliance, and brand trust. The fix is not mystical: pick one journey, create a weekly decision forum, assign metrics and event owners, ship every two weeks, publish hypotheses and results, and seat diverse talent at the table. In 12 weeks, you will know whether your organization is capable of transformationor merely capable of talking about it.

4. CONCLUSION

The evidence is unequivocal: integrated capability building—not isolated tools—drives the dividend of digital transformation**.** Organizations that (i) instrument key journeys, (ii) institutionalize short discovery-to-release cycles, and (iii) democratize access to digital roles and decision forums convert data into faster learning, steadier operations, and stronger customer trust. We observed threshold effects: once event coverage and cadence clear practical bars, performance accelerates as hypotheses are tested weekly and rework collapses. Inclusion is not a side program; it is a variance-reduction strategy—units with equitable participation learn faster, design more robust journeys, and capture larger returns from the same intervention. For women-led MSMEs**,** simple ladders—mobile storefronts, SKU-level tracking, and mentored cadence—prove sufficient to raise revenue and repeat purchases without heavy infrastructure.

Practically, leaders should start with a customer-journey spine**,** assign named owners to events and metrics, run weekly decision review**s**, and ship in small, reversible batches**.** Governance—not slogans—determines slope: tie recognition to learning behaviors and guard telemetry quality through versioned schemas and metric stewardship. Policymakers and incubators can magnify impact by funding instrumentation starter kits**,** mentored operating cadence**, and** market-access bridges (payments, logistics, compliance) targeted at women-led businesses. Limitations include uneven telemetry and non-random rollouts; future work should extend panels and deploy randomized encouragement at scale. Even so, the convergence of cross-sectional estimates and field pilots supports a clear directive: build the minimum viable transformation first—then scale it inclusively.

Ethical Approval
Not Applicable

Informed Consent Statement
Not Applicable

Disclosure Statement
The Authors declare that they have no conflict of interest

Data Availability Statement
The data presented in this study are available upon request from the corresponding author for privacy.

Funding
This study did not receive any external funding.

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References

Amankwah-Amoah, J., Khan, Z., Wood, G., & Knight, G. (2021). COVID-19 and digitalization: The great acceleration. *Journal of Business Research, 136*, 602–611. https://doi.org/10.1016/j.jbusres.2021.08.011

Antonio, A., & Tuffley, D. (2014). The gender digital divide in developing countries. *Future Internet, 6*(4), 673–687. https://doi.org/10.3390/fi6040673 MDPI

Hanelt, A., Bohnsack, R., Marz, D., & Marante, C. A. (2021). A systematic review of the literature on digital transformation: Insights and implications for strategy and organizational change. *Journal of Management Studies, 58*(5), 1159–1197. https://doi.org/10.1111/joms.12639 ciencia.ucp.pt

Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing, 80*(6), 69–96. https://doi.org/10.1509/jm.15.0420 SURFconext

Mikalef, P., Krogstie, J., Pappas, I. O., & Pavlou, P. A. (2019). Big data analytics capabilities and innovation: The mediating role of dynamic capabilities and the moderating effect of the environment. *British Journal of Management, 30*(2), 272–298. https://doi.org/10.1111/1467-8551.12343 Wiley Online Library

Seetharaman, P. (2020). Business models shifts: Impact of COVID-19. *International Journal of Information Management, 54*, 102173. https://doi.org/10.1016/j.ijinfomgt.2020.102173 PubMed

Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Qi, J., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research, 122*, 889–901. https://doi.org/10.1016/j.jbusres.2019.09.022 ScienceDirect

Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *The Journal of Strategic Information Systems, 28*(2), 118–144. https://doi.org/10.1016/j.jsis.2019.01.003 ScienceDirect

Wamba, S. F., Gunasekaran, A., Akter, S., Ren, S. J-F., Dubey, R., & Childe, S. J. (2017). Big data analytics and firm performance: Effects of dynamic capabilities. *Journal of Business Research, 70*, 356–365. https://doi.org/10.1016/j.jbusres.2016.08.009 IDEAS/RePEc

Warner, K. S. R., & Wäger, M. (2019). Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. Long Range Planning, 52(3), 326–349. https://doi.org/10.1016/j.lrp.2018.12.001