# Vibe Coding, Domain Expertise, and Generative AI: What the "Gary" Case Reveals for Managers

**Sidney Shapiro**
*University of Lethbridge, Canada*

**Daniel Pearson**
*University of Lethbridge, Canada*

*Abstract*

*This case examines how a non-technical musician used iterative prompt-based "vibe coding" to develop Gary, an AI-driven music tool, illustrating how accessible generative AI enables domain experts to create functional applications without formal programming skills. The analysis utilizes the Balanced Scorecard and ambidextrous organization concepts to illustrate how exploratory, sandbox-based innovation diverges from the structures necessary for scaling and operational reliability. The case identifies factors that supported progress, such as iterative experimentation, creative ownership, and low-cost prototyping, alongside challenges including scalability constraints, role ambiguity, and limited governance. The study concludes with managerial insights on how organizations can support grassroots AI innovation by aligning resources, clarifying roles, and establishing frameworks that allow non-technical innovators to experiment safely while preparing for responsible and sustainable growth.*

Digital transformation is crucial not just for the manufacturing industry but also for service-oriented companies to gain a competitive edge.[1] Innovation is essential for organizations to remain competitive and responsive in today's rapidly evolving market landscape. This enables businesses to adapt swiftly to technological advancements, meet changing consumer demands, and maintain a strategic edge. Traditionally, innovation has been the domain of specialized research and development teams or

individuals with formal technical expertise, often limiting the scope and speed at which new ideas are developed and implemented in organizations. Digital innovation in SMEs is shaped by human, collaborative, technical, and innovative capabilities, which contribute to market offerings and the digital business process.[2] Innovation has now been found in workplace social media access[3] and management, with a focus on improving corporate-wide digital adoption.[4]

However, the emergence of accessible generative artificial intelligence (AI) tools, such as ChatGPT, has begun to democratize the innovation process. These tools enable individuals without formal programming backgrounds to make meaningful contributions to software development by translating their ideas into functional applications. A notable example of this shift is the rise of "vibe coding," a term coined by OpenAI co-founder Andrej Karpathy.[5] Vibe coding refers to using natural language prompts to guide AI in generating code, effectively shifting the developer's role from manual coding to high-level problem-solving and design guidance.[6] This approach has significant managerial implications, as it expands the pool of potential innovators within an organization and necessitates new strategies for managing and integrating contributions from non-traditional developers.

This case study examines the experience of Griffing, an independent musician without formal technical training, who successfully developed "Gary," an AI-powered music application. By leveraging generative AI tools through vibe coding, he overcame traditional barriers to software development and created a tool that enhanced his musical performances. This analysis highlights strategic insights into grassroots innovation enabled by generative AI, emphasizing the importance of organizations in recognizing and supporting such initiatives. Understanding his journey provides valuable lessons on fostering an inclusive innovation environment, adapting managerial practices to support non-traditional developers, and aligning organizational structures to accommodate the evolving landscape of AI-driven innovation.

## Background and Context

Generative artificial intelligence (AI) has increasingly permeated creative industries, significantly transforming how artists, musicians, and content creators approach their craft.[7] In music specifically, AI tools have moved beyond fundamental support roles, such as audio editing or sound enhancements, to actively collaborating in the creative process, composing original works, and performing live in conjunction with human musicians.[8,9] Such advancements enable musicians to experiment more freely and enhance their creativity, ultimately reshaping the music industry's landscape

by reducing barriers to complex technical tasks that were previously limited to individuals with formal programming skills.

Domain experts play a crucial role in driving innovation within organizations, leveraging their in-depth understanding of operations, customer needs, and specific industry challenges.[10] Unlike external consultants or general innovation teams, these individuals possess tacit knowledge and experiential insight that enable them to identify inefficiencies, design context-sensitive solutions, and adapt innovations to real-world constraints.[10] Their contributions are essential in translating strategic intent into practical action, particularly in dynamic or digitally transforming environments.[11]

Recent studies further highlight how domain experts, when empowered by artificial intelligence and no-code platforms, can become key contributors to innovation without relying on traditional programming skills.[12] These experts often serve as internal boundary-spanners, linking technical development with operational realities and ensuring that AI-enabled innovations remain grounded, relevant, and usable. As such, recognizing and supporting domain experts has become a strategic imperative for organizations seeking to embed innovation more deeply within everyday business operations.[10]

However, domain experts frequently encounter barriers due to the contrasting nature of technical skills such as programming and software development, which fall outside their specialized knowledge. Traditionally, the ability to implement innovative ideas independently has been heavily reliant on extensive technical training or collaboration with specialized technical teams. Recent advancements in generative AI tools, notably platforms like ChatGPT, have begun to overcome these limitations by enabling "vibe coding," a practice where natural language prompts replace formal coding processes. This shift dramatically lowers the technical threshold required to build sophisticated applications, empowering domain experts without formal technical backgrounds to independently realize and scale their creative visions. Griffing's experience in developing "Gary" exemplifies this trend, highlighting both the practical feasibility and managerial implications of supporting innovation through accessible AI tools. AI democratizes innovation by lowering traditional technical barriers, enabling individuals without programming skills to experiment, prototype, and develop functional tools.

### The Challenge: Creative Vision vs. Technical Limitations

Griffing began with a clear vision driven by his passion for music and creativity. Initially, his goal was relatively modest: he intended to build a

simple website that functioned as a personal music radio station for sharing his unreleased tracks. Reflecting on his early motivations, he recalled, "All I really wanted at first was a radio station; it was kind of just an experiment."[13] However, this exploratory project rapidly evolved as he envisioned a more dynamic and responsive tool that could augment his musical performances through real-time collaboration.

Despite Griffing's strong creative ambitions, he faced significant hurdles due to his lack of formal programming expertise. Traditional software development methods proved especially frustrating for him, with instructional resources often failing to meet his specific creative requirements. Griffing openly expressed his dissatisfaction with conventional coding education: "I really did not enjoy trying to learn to code before that... some of those code examples, it's like, these don't apply to what I want to do."[13] His sentiment highlights the common disconnect that non-technical innovators frequently experience when forced into rigid, generic coding frameworks that do not align with their unique creative goals.

His struggle with traditional software development was not unique; instead, it exemplified a broader challenge frequently faced by many domain experts across various industries. These individuals often possess deep insights into their respective fields but lack the technical programming skills typically required to realize their innovative ideas independently. Griffing pointed out that he experienced repeated dismissals from technical experts when seeking assistance, noting that traditional experts often told him something was impossible rather than exploring creative alternatives.

The turning point for Griffing emerged with the availability of generative AI tools, particularly ChatGPT, which fundamentally altered his approach to innovation. He explained how his frustrations shifted into productive experimentation using what he playfully termed "bashing:" "I call it bashing now... you see the wrong thing over and over until you get the right one."[13] This iterative process, combined with his persistence and creative thinking, allowed him to build functional prototypes progressively. He mentions that "the one thing that ChatGPT never says is that you can't do it. Even if it's wrong, it's got another idea."[13] Consequently, his story underscores a pivotal moment where accessible AI technologies began empowering non-technical domain experts, redefining what was possible in grassroots innovation.

Griffing's sandbox emerged from a loosely structured environment combining inexpensive hosting services, iterative AI-generated code snippets, and ad-hoc testing during musical rehearsals. This environment allowed rapid prototyping without documentation, governance, or performance requirements. The sandbox functioned as a learning space where Griffing incrementally added features, abandoned failed approaches,

and refined the interaction between Gary and his live performances. Understanding this environment is essential for interpreting the contrast between his highly exploratory workflow and the more structured, exploitation-oriented processes required in established organizations.

**Breakthrough: Leveraging Generative AI Tools**

Griffing's turning point came with his discovery of generative AI, specifically ChatGPT, which allowed him to experiment freely and intuitively. After previous frustrations with conventional coding methods, he recalled how transformative this initial experimentation was: "It just started this kind of iterative process... I could see the real-world examples of the code that I wanted, you know, I was more interested to learn."[13] This hands-on approach marked a significant departure from traditional coding education, enabling him to translate abstract coding principles into tangible outcomes closely aligned with his creative goals. This persistent trial-and-error loop allowed him to overcome technical barriers without becoming entangled in the rigid syntax typically associated with traditional programming, transforming mistakes into valuable learning opportunities.

An essential aspect of Griffing's breakthrough was his realization that generative AI could amplify his creative vision rather than diminish his role as an artist. Instead of using AI as a tool to automate creativity, he leveraged it as a responsive partner, enriching his creative inputs and maintaining artistic authenticity and control.

Griffing's successful experience with generative AI provided more than just a practical tool; it reshaped his entire creative mindset. Reflecting on this shift, he emphasized how AI's iterative capabilities opened entirely new ways of thinking about musical creation: "As an artist, I want to just use it. But as a programmer, I want to make it usable for others too."[13] This broader perspective bridged his dual identities as an artist and innovator, allowing him to conceive, develop, and refine "Gary" in ways that had previously seemed inaccessible, underscoring the potential of generative AI to democratize creative innovation.

**Strategic Implementation and Real-World Challenges**

Although Griffing encountered infrastructure, security, privacy, legal, and financial limitations, these challenges were typical for any early-stage digital product.[14,15] Their relevance in this case lies in how a non-technical innovator interprets and manages these constraints without formal organizational support. Addressing these concerns proactively through comprehensive guidelines and training ensures innovations remain robust, secure, and aligned with regulatory standards.[16]

The initial implementation of "Gary" was developed strategically, with careful risk management to ensure reliability during live performances. Recognizing the unpredictability of live music, especially when incorporating innovative technology, he meticulously developed backup plans. Griffing noted, "I always had backup plans because live music is unpredictable, especially when technology is involved."[13] His cautious approach proved effective, enabling a successful debut performance that reinforced both audience engagement and his confidence in his iterative, AI-driven development method.

However, as "Gary" evolved from an innovative personal experiment into a publicly accessible tool, Griffing confronted new complexities related to scalability and role ambiguity. Transitioning from musician to innovator posed a challenge, as he struggled to define his identity clearly within traditional professional boundaries. Reflecting this uncertainty, he candidly remarked, "It's still hard for me to call myself a coder… I don't feel like that's my path."[13] Additionally, the lack of formal organizational support exacerbated this ambiguity. He emphasized that although the direct out-of-pocket cost was modest—approximately $20 per month—the constraint was not the absolute dollar amount but the fact that he had no additional budget, sponsorship, or institutional support. The absence of financial resources limited his ability to invest in more robust infrastructure, experiment with alternative architectures, or purchase tools required to scale Gary beyond personal use.

The practice of vibe coding offered significant creative advantages by allowing Griffing to rapidly experiment with and refine his ideas without traditional coding constraints. This method empowered him to maintain artistic authenticity and foster a collaborative partnership with AI tools rather than replacing his own creative inputs. He emphasized this collaborative dynamic, explaining, "I didn't want to eliminate myself from the process… I can bring my own notes into the equation."[13] Despite its creative benefits, vibe coding introduced concerns for developers and industry stakeholders regarding quality assurance, reproducibility, and technical reliability at scale, as traditional software development best practices were often bypassed or altered significantly.

To assess the broader potential of innovations like Griffing's "Gary," organizations must carefully evaluate market size, scalability, and return on investment. Innovations that initially appear niche can have significant untapped potential if carefully scaled. For instance, the global market for AI-driven creative tools is projected to reach substantial valuation over the next decade, reflecting increasing demand and adoption across multiple creative industries.[17] If Gary were to move beyond a personal creative tool, Griffing

would need to consider whether the technical foundation could support additional users and ongoing operational needs.[18]

Griffing's development environment functioned as a personal sandbox, allowing continuous experimentation without external governance, deadlines, or resource constraints. This sandbox served as an exploratory space where he iterated rapidly, tested musical interaction concepts, and refined Gary's functionality based on the needs of live performance. Understanding this sandbox is essential because it represents an environment designed for exploration only. When examined through managerial frameworks such as the Ambidextrous Organization Model, the disconnect becomes clear: although his sandbox enabled experimentation, there were no exploitation-oriented structures to support standardization, scaling, or reliability. This bridge clarifies how a single individual's creative process can still illuminate broader organizational challenges. Vibe coding offers speed and creative flexibility during early experimentation, but introduces challenges related to scalability, consistency, and long-term reliability. These dynamics can be better understood through established managerial frameworks.

## Analysis Using Strategic Frameworks

### *Bridging Vision and Action: Balanced Scorecard Approach*

Kaplan and Norton's Balanced Scorecard (BSC) framework was developed to help organizations translate and align their mission and strategy into a coherent set of operational objectives and performance measures across four key perspectives: Financial, Customer, Internal Processes, and Learning & Growth.[19] These viewpoints are interconnected and contribute to a comprehensive understanding of performance while also ensuring strong internal consistency. Organizational success stems from the synchronization and alignment of resources among executive teams, business units, human resources, information technology, and financial assets with their strategic goals.[20]

Kevin Griffing's creation of the AI-powered music tool "Gary" reflects a compelling case of grassroots innovation where deep domain expertise intersected with emerging technology. His initiative illustrates the kind of bottom-up innovation organizations increasingly value. However, from a Balanced Scorecard perspective, Kevin's innovation lacked the systemic support necessary to transition from a promising prototype to a sustainable strategic asset.

From a financial standpoint, there were no revenue streams or funding in place to support or invest in Gary's development, which limited its potential for scale and integration into broader offerings. On the Customer side, while

Gary targeted a niche creative audience, there was no structured process to gather user feedback or refine the product based on actual needs. In terms of Internal Processes, Kevin worked in isolation without a development roadmap, feedback loops, or alignment with existing workflows, making it challenging to convert innovation into value at scale. Finally, under the Learning & Growth lens, there was a lack of formal mentorship, capability development, or role clarity to support Kevin's evolution from domain expert to internal innovator.

This analysis reveals a critical insight: while innovation may emerge organically, sustaining it requires deliberate alignment across the Balanced Scorecard dimensions. For managers, this means not only encouraging creativity but also establishing frameworks that allow promising initiatives to evolve into strategically supported innovations. The BSC provides a diagnostic lens for identifying where such support is missing and how to bridge the gap between vision and execution.

***Balancing Innovation and Execution: The Ambidextrous Organization Model***

The Ambidextrous Organization Model emphasizes the need for organizations to manage two distinct yet interdependent activities: exploration and exploitation.[21] Exploration refers to the pursuit of novel ideas, experimentation, and risk-taking in the search for innovation and long-term capabilities. In contrast, exploitation focuses on refining existing processes, ensuring consistency, and achieving efficiency in established operations. Achieving organizational ambidexterity—the ability to balance both modes effectively—is crucial for sustaining innovation while maintaining operational stability.

Kevin Griffing's development of "Gary" serves as an example of exploration. His iterative, trial-and-error approach, which he informally described as "bashing," allowed him to innovate freely, unbound by traditional development structures. This creative autonomy enabled rapid prototyping and learning, aligning well with the exploratory side of ambidexterity. However, as Gary began to gain recognition and the potential for broader adoption increased, Kevin encountered the absence of organizational mechanisms to support the transition from exploration to exploitation.

From an exploitation perspective, the infrastructure necessary to scale and stabilize Gary, including reliability protocols, quality control processes, user support systems, and role clarity, was lacking. Additionally, without formal ownership or integration pathways, Kevin remained in a liminal

space, caught between being a creator and a developer, with no defined path forward.

This tension illustrates a common challenge in ambidextrous organizations: how to support emergent innovations without prematurely forcing them into operational molds that stifle creativity. Kevin's case underscores the value of creating protected environments for innovation, such as internal incubators, innovation teams, or structured transition pathways. These spaces enable experimental ideas to evolve without being crushed by the immediate demands of performance metrics or scalability.

For managers, the implication is clear: supporting innovation requires more than just encouraging exploration, as it demands the intentional design of organizational systems that can flexibly accommodate both innovation and execution. The ambidextrous model offers a strategic lens for evaluating and managing these competing priorities, ensuring that grassroots innovations like Gary can mature into sustainable, operationally viable solutions.

**Lessons for Leaders: Managerial Implications**

Achieving operational alignment requires organizations to clearly define how innovative initiatives align with their strategic and operational frameworks. Practically, this can mean incorporating grassroots innovations into annual planning cycles, dedicating specific financial resources, or embedding innovation KPIs into performance metrics.[22] For example, companies like Amazon incorporate clear innovation targets into managerial scorecards, ensuring that innovation receives strategic attention at all organizational levels.[23] Explicitly aligning incentives, resources, and roles significantly enhances the viability and sustainability of innovations emerging from grassroots efforts.

Kevin Griffing's experience offers a valuable case study in the organizational dynamics that can either enable or inhibit grassroots innovation. One of the leading managerial takeaways is the necessity of establishing role clarity early in the innovation lifecycle. Innovators emerging from non-traditional backgrounds often face uncertainty about their authority, responsibilities, and position within the organization. In Griffing's case, the lack of a clearly defined role, oscillating between musician, developer, and innovator, created friction and hindered his ability to scale his initiative. For leaders, this highlights the need to proactively define and communicate expectations, ensuring that contributors understand how their work aligns with broader strategic objectives.

In addition to role definition, structured support systems are essential. Innovation rarely flourishes in isolation; it requires access to mentorship,

developmental resources, and safe environments to test and iterate. The absence of these mechanisms in Griffing's case highlights a common organizational blind spot: the failure to develop a flexible infrastructure that fosters bottom-up creativity. Incubators, innovation pathways, and internal grant programs can offer vital scaffolding, allowing exploratory initiatives to mature without being prematurely subjected to performance pressures or resource constraints.

Organizations successfully embracing grassroots innovation often create structured pathways for innovators. Companies like Google, Microsoft, and Spotify have implemented internal incubators and innovation labs explicitly designed to support bottom-up innovation, providing resources, mentorship, and clear operational frameworks to develop ideas from concept to implementation.[24] Implementing similar practices, such as "innovation sprints" or designated experimentation budgets, can significantly enhance organizational capacity for sustained grassroots innovation.[25]

Another critical implication involves cross-functional collaboration and the flow of knowledge. Griffing's progress was not solely a result of his individual effort; it was amplified by informal learning and experimentation. This highlights the broader value of organizational cultures that foster interdisciplinary engagement. Leaders should create deliberate opportunities for knowledge exchange across departments, enabling diverse teams to co-create solutions that are both technically robust and contextually relevant. Facilitated workshops, internal showcases, and digital collaboration platforms can serve as vehicles for such integration.

Finally, strategic intent must be backed by operational alignment. While many organizations publicly champion innovation, few effectively embed it into their planning, resourcing, or governance frameworks. Innovation cannot remain aspirational; it must be operationalized. This involves allocating a budget, aligning performance metrics, and incentivizing risk-taking in ways that reinforce, not just rhetorically, but materially, the organization's commitment to innovation. Griffing's story illustrates how even high-potential projects can falter without this alignment, and it challenges leaders to examine whether their systems genuinely support the innovation outcomes they seek.

## Discussion and Broader Implications

The growing accessibility of generative AI tools marks a fundamental shift in the innovation landscape, enabling domain experts across industries to contribute directly to technological development without formal programming expertise. This democratization of innovation breaks from traditional models that concentrate innovation within specialized technical

teams, instead inviting contributions from individuals embedded in diverse organizational functions. As a result, organizations are increasingly able to surface novel solutions informed by practical, on-the-ground insights that might otherwise remain untapped.

While Griffing's experience illustrates the power of grassroots innovation, similar instances can be found in various sectors, enhancing generalizability. For example, healthcare professionals are increasingly using generative AI to develop personalized patient-care applications without formal programming skills.[26] Similarly, educators utilize AI-driven no-code platforms to create tailored e-learning solutions, significantly reshaping educational technology.[27] By examining these diverse cases, organizations can better appreciate how widespread and impactful democratized innovation has become.

For leadership, this evolution signals an urgent need to rethink where innovation is expected to originate. By fostering environments that support experimentation, cross-functional collaboration, and iterative development, organizations can unlock a broader base of creative potential. Removing structural and cultural barriers such as rigid role definitions or limited access to technical resources will be crucial for cultivating inclusive innovation capacity.

Empowering domain experts to innovate using AI tools also raises essential ethical considerations. Unchecked innovation may inadvertently lead to biased or unfair outcomes, especially in sectors like hiring, healthcare, or finance.[28] Managers should develop clear ethical frameworks, incorporating responsible AI principles that guide domain experts' practices, ensuring innovations are equitable, transparent, and accountable.[29] Organizations adopting democratized innovation must simultaneously cultivate an ethical culture to mitigate these risks.

To sustain and scale this grassroots innovation, organizations must invest in systematic frameworks that identify and support non-traditional innovators. These may include internal incubators, lightweight funding mechanisms, or dedicated mentorship programs designed to guide promising ideas from concept to implementation. Equally important is the integration of these innovations into broader operational strategies through clear processes and evaluation criteria.

Organizations that proactively align their internal systems to support emergent, bottom-up innovation will be better equipped to adapt in dynamic markets, gain strategic advantages, and foster a culture of continuous learning and improvement. This broader shift not only redefines who can innovate but also challenges organizations to evolve how they support, manage, and integrate innovation across all levels.

## Conclusion

Griffing's journey illustrates the powerful potential of generative AI to democratize innovation, enabling individuals without formal programming backgrounds to develop sophisticated, practical solutions. His development of "Gary," an innovative music tool born from iterative experimentation and creative persistence, demonstrates that accessible AI tools can significantly lower technical barriers, empowering domain experts to become unexpected innovators. As Griffing reflected, this approach is fundamentally different from traditional coding practices: "You learn how to talk to [AI] in your own way... it's a totally different experience than most people have had coding up till now."[13]

Griffing's story also emphasizes the complexity inherent in grassroots innovation and the necessity for strategic organizational support to realize its full potential. Vibe coding, despite its creative advantages and accessibility, presents challenges regarding scalability, reliability, and integration within traditional organizational structures. Griffing acknowledged this tension himself, noting the difficulty of bridging creativity and operational realities: "I don't feel like that's my path... I'm gonna fail an interview process very quickly with some of the data structures and things that you have to know."[13]

Moving forward, organizations must carefully balance embracing accessible innovation methods like vibe coding with the practical considerations of scalability, quality assurance, and sustainable development. Hiring specialists and formally trained programmers remains important, particularly as innovations scale and become more complex. Yet, the real opportunity lies in recognizing the immense potential of non-specialist innovators like Griffing and strategically providing the necessary structural support, including clear roles, cross-functional collaboration, and resource alignment, to effectively harness their contributions.

As he looks toward the future, he envisions ongoing refinement and greater integration of AI tools into everyday creative practices, predicting a continued evolution where technology enhances rather than replaces human creativity: "What's going to happen is that the interface is going to get more and more aligned with how we make music... these tools are going to become more like what we're used to."[13] His experience thus provides a roadmap for leaders to strategically foster a culture where grassroots innovation is recognized, systematically integrated, and leveraged for organizational success.

## Discussion Questions

1. *What organizational changes should managers consider to effectively support domain experts like Griffing, who innovate without formal technical backgrounds?*
2. *How can organizations balance encouraging creative experimentation (exploration) and ensuring operational reliability (exploitation) when scaling grassroots innovations?*
3. *What actions can senior leaders take to define roles and align incentives to bridge the gap between strategic vision and grassroots execution?*
4. *In what ways does the rise of "vibe coding" and similar generative AI practices redefine traditional job roles within organizations, and how should managers proactively address the resulting ambiguities?*
5. *What are the potential ethical implications of empowering non-technical domain experts to create AI-driven solutions independently, and how should managers address these concerns proactively?*
6. *What structural frameworks or mechanisms should organizations implement to transition grassroots innovations from personal projects to scalable, enterprise-wide applications?*

## Authors

*Sidney Shapiro is an Assistant Professor of Business Analytics in the Dhillon School of Business at the University of Lethbridge, where he also holds an adjunct appointment in Computer Science. His work focuses on applied analytics, AI adoption, and the organizational conditions that shape digital innovation. Dr. Shapiro's research and teaching emphasize practical, data-driven approaches to solving managerial problems. Prior to joining academia, he served as a data science team manager in occupational health and safety, leading initiatives in predictive modeling, risk analytics, and workforce decision support. He holds a PhD in Social Network Analytics and has extensive experience collaborating with industry partners on AI strategy and digital transformation projects. His work bridges technical and managerial perspectives to help organizations understand their data. email: sidney.shapiro@uleth.ca*

*Daniel Pearson recently graduated with an MSc in Policy and Strategy from the University of Lethbridge's Dhillon School of Business. His graduate research examines how emerging technologies shape organizational strategy, with a particular focus on the managerial and policy implications of generative AI, grassroots innovation, and digitally enabled work practices. Pearson examines how non-technical professionals utilize AI tools to create operational value, and how organizations can design policies, governance structures, and strategic frameworks that safely support this activity. His academic work is complemented by experience in technology-enabled process improvement and organizational analysis, informing his interest in helping leaders translate technological potential into*

*practical, sustainable outcomes. Pearson's broader research interests include innovation strategy, digital capability development, and the ways policy environments influence technological adoption and workforce transformation.*
*email: d.pearson@uleth.ca*

## Endnotes

1. Shehadeh, M., Almohtaseb, A., Aldehayyat, J., & Abu-AlSondos, I. A. (2023). Digital transformation and competitive advantage in the service sector: A moderated-mediation model. *Sustainability*, *15*, 2077.
2. Nasiri, M., Saunila, M., Ukko, J., Rantala, T., & Rantanen, H. (2023). Shaping digital innovation via digital-related capabilities. *Information Systems Frontiers*, *25*, 1063-1080.
3. Garrido-Moreno, A., Martín-Rojas, R., & García-Morales, V. (2024). The key role of innovation and organizational resilience in improving business performance: A mixed-methods approach. *International Journal of Information Management*, *77*, 102777.
4. Chen, H., Zheng, Y., Zeng, S., & Yi, Y. (2024). When is digital technology beneficial toward corporate innovation? A meta-analysis. *IEEE Transactions on Engineering Management*, *71*, 5574-5587.
5. Karpathy, A. [@karpathy]. (2025, February 2). There's a new kind of coding I call 'vibe coding', where you fully give in to the vibes, embrace exponentials, and forget that the code even exists [Tweet]. *X*.
6. Williams, R. (2025, April 16). What is vibe coding, exactly? *MIT Technology Review*.
7. John, L. (2025, January 24). US$ 38.7 billion AI in music market forecast by 2033, cloud-based segment (71.4%), North America at 36.5% share. *EIN Presswire*.
8. Henkin, D. (2023, December 5). Orchestrating the future—AI in the music industry. *Forbes*.
9. Tencer, D. (2025, January 24). Universal Music enters into strategic partnership with AI music startup KLAY. *Music Business Worldwide*.
10. Franco, C., & Landini, F. (2022). Organizational drivers of innovation: The role of workforce agility. *Research Policy*, *51*, 104423.
11. Troise, C., Corvello, V., Ghobadian, A., & O'Regan, N. (2022). How can SMEs successfully navigate VUCA environment: The role of agility in the digital transformation era. *Technological Forecasting and Social Change*, *174*, 121227.
12. Sundberg, L., & Holmström, J. (2023). Democratizing artificial intelligence: How no-code AI can leverage machine learning operations. *Business Horizons*, *66*, 777-788.
13. Griffing, K. (2025). Interview with the author.
14. Golda, A., Mekonen, K., Pandey, A., Singh, A., Hassija, V., Chamola, V., & Sikdar, B. (2024). Privacy and security concerns in generative AI: A comprehensive survey. *IEEE Access*, *12*, 48126-48144.
15. Novelli, C., Casolari, F., Hacker, P., Spedicato, G., & Floridi, L. (2024). Generative AI in EU law: Liability, privacy, intellectual property, and cybersecurity. *Computer Law & Security Review*, *55*, 106066.
16. Arora, S., Chavali, D., & Reddy, N. S. (2025). Innovating responsibly: AI regulation, sustainable developments and challenges. *International Journal of Advanced Computer Theory and Engineering*, *14*, 1-11.
17. Amankwah-Amoah, J., Abdalla, S., Mogaji, E., Elbanna, A., & Dwivedi, Y. K. (2024). The impending disruption of creative industries by generative AI: Opportunities, challenges, and research agenda. *International Journal of Information Management*, *79*, 102759.

18. Gutta, L. M. (2024). A systematic review of cloud architectural approaches for optimizing total cost of ownership and resource utilization while enabling high service availability and rapid elasticity. *International Journal of Statistical Computation and Simulation*, *16*, 1-20.
19. Kaplan, R. S., & Norton, D. P. (1996). Linking the balanced scorecard to strategy. *California Management Review*, *39*, 53-79.
20. Kaplan, R. S., & Norton, D. P. (2001). The strategy-focused organization. *Strategy & Leadership*, *29*, 41-42.
21. O'Reilly, C. A., III, & Tushman, M. L. (2004). The ambidextrous organization. *Harvard Business Review*, *82*, 74-81.
22. Dana, L.-P., Gurău, C., Hoy, F., Ramadani, V., & Alexander, T. (2021). Success factors and challenges of grassroots innovations: Learning from failure. *Technological Forecasting and Social Change*, *164*, 119600.
23. Radu, C. (2024). The role of innovation as a mechanism of enhancing organizational performance. *National Journal of Quality Innovation and Business Excellence*, *1*, 7-15.
24. Addanki, S. (2024, May). *Dynamics of corporate entrepreneurship in technology companies: A study of strategic practices and governing frameworks shaping entrepreneurial ecosystems* [Doctoral dissertation, Massachusetts Institute of Technology].
25. Azzolini, D., Doppio, N., Kraus, S., Mion, L., Russo, I. Q., & Tomelleri, A. (2025). Empowering digital innovation in SMEs: Experimental evidence from design sprint innovation contests. *Technovation*, *144*, 103239.
26. Reddy, S. (2024). Generative AI in healthcare: An implementation science informed translational path on application, integration and governance. *Implementation Science*, *19*, 27.
27. Pope, N., Vartiainen, H., Kahila, J., Laru, J., & Tedre, M. (2024). A no-code AI education tool for learning AI in K-12 by making machine learning-driven apps. In *2024 IEEE International Conference on Advanced Learning Technologies (ICALT)* (pp. 105-109). IEEE.
28. Gholidoust, A. (2025). Unleashing creativity: The interplay of innovation and diversity. In *Mastering innovation in business* (pp. 47-76). IGI Global.
29. Díaz-Rodríguez, N., Del Ser, J., Coeckelbergh, M., López de Prado, M., Herrera-Viedma, E., & Herrera, F. (2023). Connecting the dots in trustworthy artificial intelligence: From AI principles, ethics, and key requirements to responsible AI systems and regulation. *Information Fusion*, *99*, 101896.