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Innovation Ambidexterity and the Three-Legged Stool: The Value of Business Processes

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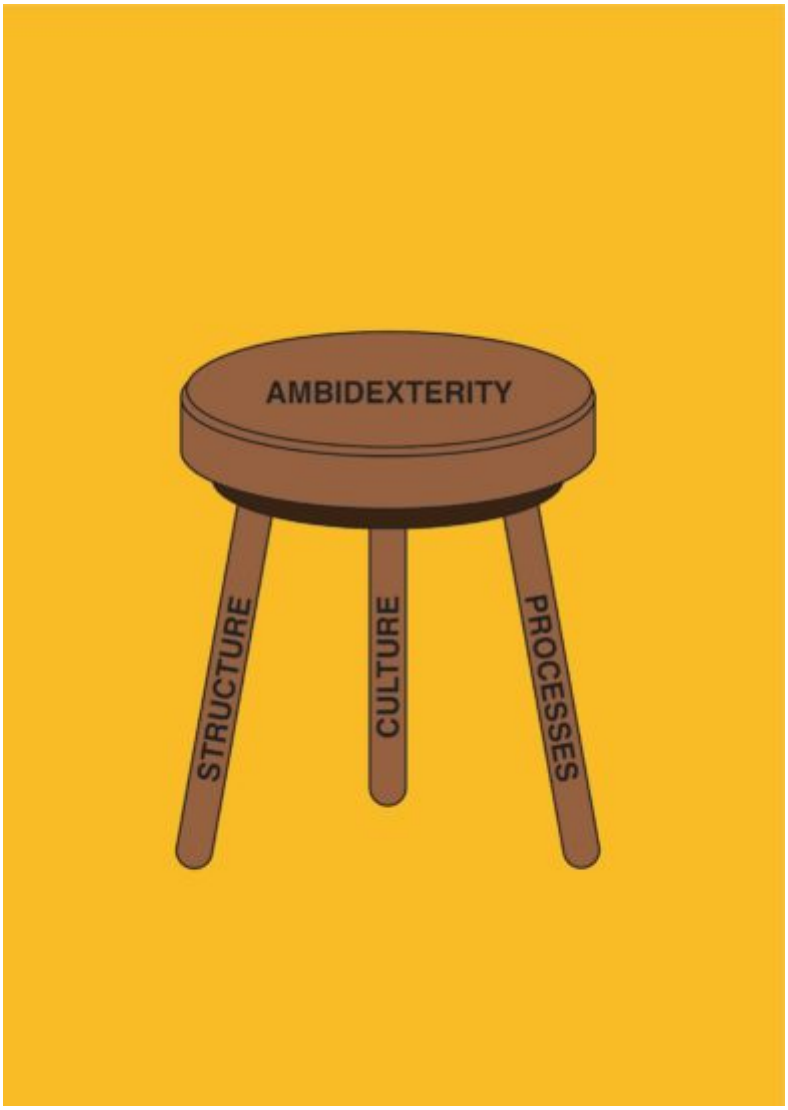
Innovation Ambidexterity and the Three-Legged Stool

The Value of Business Processes

By Janet Tinoco, PhD

Successful accomplishment of ambidexterity in innovation was, and remains today, a perplexing and challenging task for many firms, especially those in the competitive high-technology climate. Ambidexterity in this context is the ability to create radical product innovations for the future while also developing incremental product innovations for short-term return. Each type of innovation requires different—often opposing—*structures, cultures*, and *processes*. Thus, to become ambidextrous, companies must create a balanced mix of all three, each a leg in a three-legged stool (see Figure 1).

Figure 1: The Ambidexterity Stool



Regardless of size or age, ambidexterity starts with the strategic decision to be both a radical *and* an incremental innovator simultaneously. What typically follows is a structuring of the organization and creating a culture to support both strategies. Yet, the stool cannot stand on structure and culture alone. Implementing the correct business processes to support both types of innovative activity is the must-have third leg of the three-legged stool. In fact, while it is common knowledge that an organization's culture and structure allow for multiple strategic paths,[1] [2] most companies give little credence to the impacts their business processes have on the success or failure of their innovation strategies.

With this understanding, this article discusses the benefits of innovation ambidexterity and how to build the capability, focusing on business processes. Examples of success are given for both large and small companies. The article closes with nine steps applicable to any company that needs guidance on creating the third leg of the ambidexterity stool.

Innovation Ambidexterity and Its Benefits

The ability to drive both types of innovation strategies is visible in high-technology companies, large and small. Lockheed Martin Corporation, Apple, Inc. and Pfizer, Inc., as well as smaller and younger companies, such as Marlin Steel, have found ways to drive markets with radical new products and hold onto dedicated customers with incremental improvements to their best sellers. However, it is not only high-technology companies. It is well known that Procter & Gamble (P&G) has similarly attained ambidexterity with its approach to innovation in its brands and product lines.

All of these companies know that top performance can be achieved with ambidexterity. High-technology company CEOs and other top executives from over 240 U.S. manufacturing firms of different sizes, ages, and performance responded to a survey investigating their innovation strategies. Ambidextrous firms, which accounted for 1/3 of these firms, outperformed their non-ambidextrous counterparts in return on sales (ROS) and profitability, among other indicators, *ceteris paribus*. These companies set a course for innovation ambidexterity and then put the best organizational structures and cultures in place to support the dual directions. Furthermore, they also incorporated the right mix of business processes to influence both types of innovation.[3]

If ambidexterity is prevalent in the most prosperous firms, why do some firms still focus on one type of innovation over the other? Because effective ambidexterity is one of the most challenging capabilities for management and leadership to successfully implement within their organizations.[4] This article concentrates on business processes and the path a company should take to create the best process mix for ambidexterity. The challenge for all companies is how. How do you create the last leg of the ambidextrous stool?

Business Processes – The Third Leg

We begin to understand process influences on innovation if we categorize core business processes into three main areas: product development management (PDM), supply chain management (SCM), and customer relationship management (CRM).[5] Processes within PDM, SCM, and CRM that are known to influence either radical innovation, incremental innovation, *or both* add tremendous value to a firm reaching for ambidexterity. The balance of the three main process categories is shown in Figure 2:

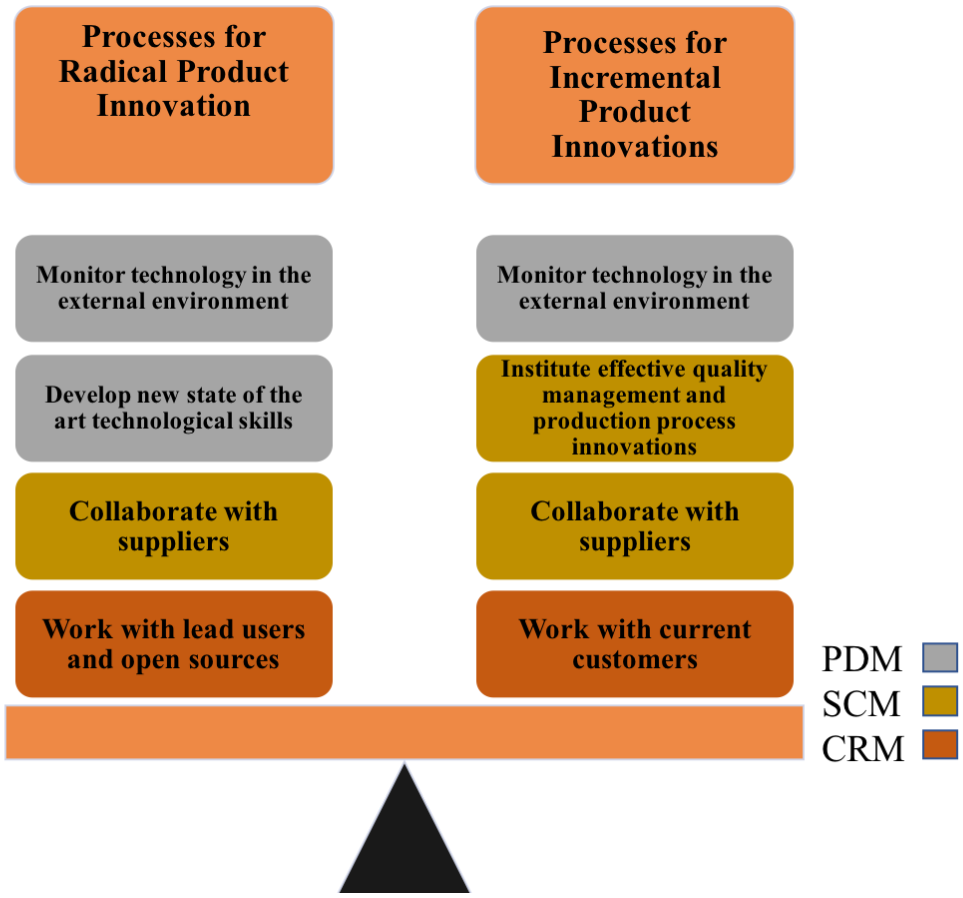
- Relevant PDM processes for innovation include employing new technology skills and expertise that monitor and push state-of-the-art technologies in the environment to

revive aging products and influence new radical directions.[6] [7]

- Pertinent SCM processes include collaborations with suppliers and the quality process management (QPM) activities and production process innovations that are involved in manufacturing and assembly. QPM processes, including production process innovations, are clearly geared toward smoothing operations, decreasing costs, and increasing product reliability. However, the supply chain is a recognized source for both types of product innovations. Suppliers can be involved in the manufacturer's innovation and technology development from its early stages in conceptualization and design of new innovative products and production processes.[8] [9]
- Lastly, CRM processes applicable to innovation include activities to determine the needs of existing and potential new customers through focus groups, market experiments, collaborations with lead users, and open innovation sources.[10]

Processes impact radical and incremental innovation in their own way, and, by their very nature, require different ways of thinking, different capabilities, and different resources. Incremental improvements require cost-effective and efficient operations and are driven by requirements and needs of current customers. Conversely, radical product innovations require new state-of-the-art expertise and skills, relying on input from lead users and open sources of innovation ideas. However, monitoring new technological advances outside the firm is crucial to both types of innovations. Furthermore, the cumulative benefit is that implementation of all of these processes allows firms to pursue both radical and incremental innovations simultaneously.[11] [12]

Figure 2: A Balance of Business Processes for Innovation Ambidexterity



Successful Companies – Large and Small

Regardless of size and age, companies are capable of creating ambidexterity. Lockheed Martin Corporation has successfully attained ambidexterity with a wise collection of core business areas, organized and supported by the appropriate structures and cultures for their strategies. Looking deeper, we can see that the company has also implemented the associated processes.[13] Top examples are outlined as follows:

- Strong technology skills, keen technology monitoring, and integration of new designs and innovations from outside the company, whether through outsourcing or partnerships and alliances;
- Specialized research and development (R&D) centers (such as Skunk Works®) linked with processes that push the state of the art;
- Exceptional understanding of current and future needs of their customers and end users;
- Strong production planning and control processes underpinned by such tools as Material Requirements Planning (MRP); these are integrated with SCM processes for clean, efficient operations and innovative production processes.

Other high-technology companies, such as Apple, Inc. and Pfizer, Inc., operate similarly to achieve ambidexterity. Use of internal R&D centers, collaborations with outside entities, understanding current customers while pushing new emerging markets with state of the art, and strong SCM processes contribute to their success.

In other sectors, P&G, once relying solely on internal R&D efforts, took the leap to look outside the company for new ideas and open innovation sources. This strategic decision buoyed their innovations beyond the incremental. To that end, the company created the Connect+Develop Program, tripling the success rate of its innovations.[14] Further, it highlights innovation, productivity, consumer understanding, and brand building, among others, as core strengths[15]—all hallmarks of successful ambidexterity in innovation.

The above examples just scratch the surface of the business processes integrated within large corporations. But what about smaller companies? Successful companies recognize that ambidexterity is achievable regardless of size and begins at the top of the organization with leadership vision and intent. Marlin Steel, led by visionary Drew Greenblatt, has been recognized as one of Forbes' 2018 small "giants."[16] At one time the company focused on producing and selling metal baskets for bagels. With increased foreign competition and climbing steel prices, the company recognized the need to change to survive.[17] Now, Marlin Steel sells innovative custom-engineered metal products while simultaneously offering off-the-shelf baskets for a growing number of sectors beyond the food industry, such as aerospace, defense, medical, science, and research, among others.[18]

Some small companies may have more of a challenge with limited resources, but these challenges can be overcome with changes in perspective and wise choices. Interviews with leaders of both medium- and small-sized enterprises indicated a "strategic stickiness" and tunnel vision based on what had been done in the past. Case in point: For one such organization that viewed itself as already successful in product innovation, improvements in quality management and production process innovations were not even on the executive's radar. When production quantities needed to be increased, new workers were added in lieu of innovative processes which would have allowed for more efficient operations. Their ability, then, to become more successful in ambidexterity was limited by the thinking of management, not by size.

Smaller organizations should also look to their external environment for outsourcing and partnership opportunities to support ambidexterity, filling in a potential gap. They should analyze activities of large corporations for business process ideas and scale them down for their size and capabilities. Regardless, for any company, vision and honest assessment of the innovation strategies, necessary business processes, structure, and culture are the first steps. *Selective* integration of core business processes can be completed in an incremental fashion as the company grows, just as structure and culture changes with growth. Smart review of the processes in Figure 2 would aid organizations in identifying those that would have the highest return on investment based on the innovation strategies targeted.

Nine Steps to Creating the Business Process Leg

For any organization that desires innovation ambidexterity or wishes to improve the outcome, the following steps are provided as guidance:

1. **Recognize** that the addressed business processes are naturally opposed, and be prepared for the tension they create in strategy, as well as resources, capabilities, and competences. Be in it for the long term. Firms must first make the strategic decision to become ambidextrous in innovation. Employing multiple processes within the firm can aid in this first strategic step by ensuring the natural bias toward one or the other is reduced.
2. **Build** your organization's skills and expertise in technology that push the state of the art. It is your future. Firms that actively incorporate this intangible process in their activities will not hinder ambidexterity in innovation but help it. On the other hand, firms high in technology competence that push the technological frontier without considering smaller technology advances will hinder incremental innovation efforts. By building your technology competence and by listening to your current and potential market segments, you can avoid the natural inclination to "stay the course."
3. **Monitor** your external environment for new technological advances, inside and outside your industry. This process positively impacts both radical and incremental product innovation.[19] [20] As a search process, it enables a business to compete by sensing new technologies fundamental to radical innovation development also essential for new paths of incremental change. Without employing this process key to innovation in general, incremental production innovation may be damagingly reduced to improvements based solely on a firm's prior efforts and experience. While cost savings may occur, competitive advantage may be lost, evidenced in declining sales.
4. **Understand** that quality process management techniques, by their very nature, promote stability and repeatability, leading to incremental innovation behavior.[21] [22] Ambidextrous firms can and do overcome this bias using quality process management to their benefit.
5. **Collaborate** with your suppliers on new innovations. Tap into their knowledge base and develop win-win partnerships built on trust, communication, collaboration, and cooperation. As technology product life cycles shorten and R&D budgets shrink, high-technology

manufacturers turn to critical suppliers they can trust for new ideas, information, and expertise.[23] [24]

6. **Listen** to current customers and lead users. Identify open innovation sources of knowledge, easily accessible via social media and the Internet. Management must take a proactive approach with the firm's customer base and address the product needs of its current customers but also prepare for the future by concurrently collaborating with lead users. Open innovation sources need to be monitored and scrutinized with a discerning eye on key trends and likely successes. These sources of information can aid product innovation as well as positively impact other business processes.[25]
7. **Infuse** the philosophy of innovation ambidexterity and the benefits of diverse business processes throughout the organization. Within the firm, different functional departments naturally "own" the business process, yet each function can benefit from the knowledge it generates, even as each process pulls for capital and human resources. Once in place, business processes can evolve into core and distinctive competences, striking a sustainable competitive advantage due to inimitability or lack of a clear substitute.
8. **Explore** compensatory processes for the most efficient and effective business process network. Research indicates that some strong CRM processes may be substituted for some weaker PDM and SCM processes (and vice versa) for similar outcomes.[26] Further, this network allows for positive influential connections between processes. For example, collaborations and communications with current customers and lead users have positive effects on building the technology competence of the firm, and researchers urge supplier input, not only for SCM but for PDM as well.[27] [28]
9. **Implement** those business processes that have the greatest benefit for your organization and institute key performance metrics to analyze and track your return on investment. Do what makes sense for your company and industry. For example, while some companies solicit ideas from outside inventors—e.g., P&G—others do not, such as Lockheed Martin. However, the defense company has enhanced SCM by building special pages in their website for current and potential suppliers to enhance communication and build relationships.

Conclusion

There are clear advantages to successful attainment of ambidexterity. Business processes bring knowledge that is instrumental to effective innovation strategy decision making—knowledge that is crucial for competitive advantage and increased firm performance. Innovation requires change—changes in products, changes in business processes, changes in skills and expertise, and changes in the organizational structure and culture—to explore new directions and exploit opportunities. Regardless of size or age, firms can transform and achieve ambidexterity in innovation by employing prudent business processes that cumulatively impact radical and incremental innovation, thereby building the essential third leg of the stool.

REFERENCES

[1] Gibson, C., & Birkinshaw, J. (2004). “The Antecedents, Consequences, and Mediating Role of Organizational Ambidexterity.” *Academy of Management Journal*, *47*(2), 209-226.

[2] Duncan, R. B. (1976). “The Ambidextrous Organization: Designing Dual Structures for Innovation.” *The Management of Organization Design: Strategies and Implementation (Vol. I).* Ed. Ralph H. Kilmann, Louis R. Pondy and Dennis P. Slevin. New York: North-Hollard.

[3] Tinoco, J. K. (2009). “Dual Focus in Exploration and Exploitation: The Strategic Path to Sustainable Competitive Advantage.” *World Review of Science, Technology, and Sustainable Development, 6*(2/3/4), 217-232.

[4] O’Reilly, C. A., & Tushman, M. L. (2004). “The Ambidextrous Organization.” *Harvard Business Review*, *82*(4), 74-81.

[5] Srivastava, R. K., Shervani, T., & Fahey, L. (1999). “Marketing, Business Processes, and Shareholder Value: An Organizationally Embedded View of Marketing Activities and the Discipline of Marketing.” *Journal of Marketing, 63*, 168-79.

[6] Tinoco, J. K. (2009). “Strategic Ambidexterity: An Indispensable Capability in the Face of Change.” In Proceedings of the 2009 Atlanta Conference on Science and Innovation Policy, ed. Susan E. Cozzens and Pablo Catalán. IEEE. Retrieved from http://ieeexplore.ieee.org/xpl/RecentCon.jsp?punumber=5353037.

[7] Tinoco, J. K. (2007). *Accomplishment of Dual Focus in Exploration and Exploitation: The Influential Role of the Customer Relationship Management (CRM) Process*. Published dissertation, Orlando, FL: University of Central Florida.

[8] Tinoco, 2009.

[9] Henke, Jr., J. W., & Zhang, C. (2010). “Increasing Supplier-Driven Innovation.” *MIT Sloan Management Review*, *51*(2), 41-46.

[10] Tinoco, 2009.

[11] Ibid.

[12] Tinoco, 2007.

[13] Lockheed Martin. (2017). “Who We Are.” Accessed November 9, 2017 at https://www.lockheedmartin.com/us/who-we-are/organization.html.

[14] Fine, C. (2018). “Procter & Gamble’s New Approach to Product Development.” Accessed May 11, 2018 at https://executive.mit.edu/blog/bringing-process-innovation-and-creativity-into-operations#.WvWKJogvxPY.

[15] P&G. (2018). “Our Core Strengths.” Accessed May 10, 2018 at https://us.pg.com/who-we-are/our-approach/core-strengths.

[16] Feldman, L., Burlingham, B., Adams, S., Sorvino, C., Strauss, K., Klich, T., & Mandelbaum, R. (2018). “Small Giants: The Best Small Companies of 2018,” Accessed June 11, 2018 at https://www.forbes.com/feature/small-giants/#255f414c4612.

[17] Ibid.

[18] Steel, M. (2018). “Marlin Steel Clients: Top Quality Custom Engineered Stainless Steel Wire Forms and Steel Wire Products.” Accessed June 11, 2018 at https://www.marlinwire.com/clients.htm.

[19] Tinoco, 2009.

[20] Tinoco, 2007.

[21] Tinoco, 2009.

[22] Benner, M. J., & Tushman, M. L. (2003). “Exploitation, Exploration, and Process Management: The Productivity Dilemma Revisited.” *Academy of Management Review*, *28*, 238-56.

[23] Henke & Zhang.

[24] Tinoco, J. K., & Ambrose, S. (2017). “Collaborative Customers and Partners: The Ups and Downs of Their Influence on Firm Technology Competence for New Product Development.” *Journal of Marketing Development and Competition*, *11*(4), 66-78.

[25] Lockheed Martin. (2017). “Who We Are.” Accessed November 9, 2017 at https://www.lockheedmartin.com/us/who-we-are/organization.html.

[26] Tinoco, 2007.

[27] Henke & Zhang.

[28] Tinoco & Ambrose.

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