



**MODERNIZATION THROUGH ENTREPRENEURSHIP:
PRINCIPLES FROM BUSINESS APPLICABLE TO THE CAF**

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JCSP 50

Service Paper

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MODERNIZATION THROUGH ENTREPRENEURSHIP: PRINCIPLES FROM BUSINESS APPLICABLE TO THE CAF

AIM

1. The issue this paper aims to address is modernization. An organization such as the Canadian Armed Forces (CAF) must evolve to modernize and remain effective. In many ways, the CAF has been unable to evolve quickly enough which has impacted critical elements such as retention. Rather than present a single solution that modernizes the CAF and solves all the issues that stem from it, this paper will present small, incremental solutions, that can be implemented at any level. The audience of this paper is not simply senior management. The aim is to be able to disseminate these ideas to any CAF member, irrespective of rank or position, who can glean insights drawn from successful entrepreneurs and determine how these concepts could be implemented within their organization. By integrating tested and validated incremental changes, the CAF will benefit from the immense value derived from its dedicated personnel, thereby propelling forward its journey towards modernization and continuous improvement.

INTRODUCTION

2. Definition of modernization in the context of the CAF is not specific due to the constant change across domains over time. For instance, the CAF Pan-Domain Force Employment Concept references modernizing capabilities, modernizing contribution to alliances, and modernizing planning and operations.¹ The CAF Chief of Force Development mentions modernizing force development and design, and modernizing strategic practices and processes.² Understandably, these modernization examples are very broad. Modernization in the context of this paper will be focused on the process of starting to use the most recent methods and ideas in an incremental manner.³

3. Many large organizations, including the CAF, can be very resistant to change. Change is necessary in order to evolve and modernize. Industry, for instance, is a good petri dish for studying companies who have found ways to evolve in the face of peril. Therefore, it behoves the members of the CAF to study the stories and tribulations from successful entrepreneurs and organizations to determine if their solutions are applicable within their own organization. In many ways, industry is similar to the CAF, such as its hierarchy, its processes, and its financial constraints. In other ways, it has demonstrated to be much more agile, better able to evolve and modernize to stay ahead of its competition. The term entrepreneur was first coined by French economist J. B. Say in 1800 meaning: one who shifts economic resources out of an area of lower and into an

¹ Canadian Armed Forces Pan-Domain Force Employment Concept: Prevailing in a Dangerous World. 2023.

² Canadian Armed Forces Chief of Force Development Concept Note 22-01: A PRIMER ON CONCEPTS 2022 – 2023.

³ “Modernization Definition & Meaning,” Cambridge Dictionary, <https://dictionary.cambridge.org/dictionary/english/modernization>

area of higher yield.⁴ This demonstrates the ability to create, grow and improve. Looking at an entrepreneur, founder, or leader of successful companies, one can draw ideas and tested strategies that can be applicable for solving some of the CAF's problems.

DISCUSSION

IDEA MERITOCRACY

4. The strict and hierarchical nature of the CAF can create environments where junior members are uncomfortable presenting ideas to senior members. This can stifle innovation and has a tremendous opportunity cost. A possible solution is fostering an idea meritocracy as described by entrepreneur Ray Dalio in his company Bridgewater Associates. An idea meritocracy is a system that encourages thoughtful disagreements and weighs people's opinions in proportion to their merits, as opposed to an autocracy in which one leads and others follow, and as opposed to a democracy in which everyone's vote is equal.⁵ An idea meritocracy embraces truth and transparency, cultivates a culture of openness and feedback, and leads to decision making based on logic and reason. "To have a real idea meritocracy, there must be transparency so that people can see things for themselves".⁶ Dalio advocates for open-mindedness, humility, and the willingness to consider alternative perspectives that can significantly challenge one's own beliefs.

5. This can be beneficial in the CAF since senior leaders can sometimes become disconnected, or at times shielded, from the ground truth. Dalio's company uses "the idea meritocracy of radical truth and radical transparency to bring problems and weaknesses to the surface to prompt forthright dealing with them".⁷ Young NCMs and officers hold the potential to introduce tangible solutions that can affect change, with their leaders evaluating these proposals based on their inherent merits, rather than mere hierarchical rank. One example of a grassroots initiative is additive manufacturing. This is an idea that developed into a deployable capability within the Canadian Army that was not a strategically imposed decision from the top-down. Rather, it was a ground level idea that grew with leadership support.⁸ Ultimately, empowering junior members with the authority and responsibility to develop their ideas or solutions within their organization would ignite unparalleled motivation and instill their work with profound meaning.

VALIDATED LEARNING AND THE MINIMUM VIABLE PRODUCT

6. Very valuable lessons can be learned from the startup industry regarding implementation of ideas or solutions. In the CAF, as in a startup company, resources are scarce and must be carefully allocated for specific tasks. This requires a deliberate type of management. Startups also require innovation for growth in the same way that the CAF

⁴ Timothy Ferriss. *The 4-Hour Workweek: Escape 9-5, Live Anywhere, and Join the New Rich*. (New York: Penguin Random House, 2007), 11

⁵ Ray Dalio. *Principles*. (New York: Simon & Schuster, 2017), 74.

⁶ Dalio. *Principles*. 135.

⁷ Dalio. *Principles*. 175.

⁸ Maj A. Chan, teleconference, February 17, 2024.

requires modernization for continuous effectiveness. In a world rife with uncertainty, implementing this specific type of management hinges on embracing the concept of validated learning and constructing a Minimum Viable Product (MVP).⁹ The MVP is an initial version of a product that can be built with the smallest amount of time and resources which can be tested through a build-measure-learn feedback loop.¹⁰ This process allows an organization to test a hypothesis before committing a large amount of resources. In the CAF, this can be implemented through lean pilot projects that can be measured based on specific criteria that will allow the organization to learn quickly and determine whether it is worth pursuing at a larger scale. The goal of the MVP is to begin the process of learning and is designed to test fundamental business hypotheses.¹¹

7. Building an MVP is not, however, devoid of its risks. For instance, an MVP could result in a false negative due to a flawed MVP that is too small or too limited to fully test its capability.¹² This can be overcome through proper planning of the conditions for the pilot project and the testing criteria to be measured.

SYSTEMS APPROACH

8. Once initiatives gain momentum and learning is attained, CAF members typically suffer the consequences of being posted into a different role every few years as part of normal career progression. This undoubtedly hinders the learning ability of the organization when testing new ideas. Members try their best by conducting detailed handovers, however a better solution is approaching this problem from a systems approach. Small business revolutionary, Michael E. Gerber, argues that each position and responsibility should have its own system, or an operations manual, with specific objectives for the position as if it were a franchise prototype.¹³ This comprehensive approach enables the position to transcend any individual's tenure by meticulously outlining the tasks, responsibilities, and checklists in alignment with the successful execution of duties by the predecessor.

9. Understandably, detailed handovers and writing operations manuals for a position can fall in the priority list compared to other more pressing operational tasks. However, a conscious effort to “work on [the] business rather than in it”,¹⁴ can be an investment that will pay future dividends for the organization. Similarly, one can work on the business by creating systems that outlast their eventual departure through automation.

⁹ Eric Ries. *The Lean Startup*. (New York: Penguin Random House, 2011), 134

¹⁰ Ries. *The Lean Startup*. 134

¹¹ Ries. *The Lean Startup*. 163.

¹² Ries. *The Lean Startup*. 196.

¹³ Michael E. Gerber. *The E-Myth Revisited: Why Most Small Businesses Don't Work and What to Do About It* (New York: HarperCollins, 1995), 180.

¹⁴ Gerber. *The E-Myth Revisited*. 98.

AUTOMATION

10. Automation stands as a pivotal element of modernization, harnessing the transformative power of technology. According to the entrepreneur Timothy Ferriss, removing the human element can be done after designing a self-correcting business architecture that runs itself.¹⁵ For instance, a planning cell responsible for synchronizing the training calendar of soldiers undergoing their developmental periods at training establishments often use Microsoft Excel. This is a software that many are familiar with but that requires a tremendous amount of time and effort. An alternative could be utilizing Python programming language, which is available within the Defence Information Network, to create an executable file that can take input data from Excel and make decisions based on certain criteria.¹⁶ Implementing this approach would result in substantial time and effort savings, streamlining the synchronization and management of a vast array of soldiers' training courses.

11. Another example is utilizing Power Business Intelligence software that can compile, analyze and produce reports based on predetermined queries using SQL programming language.¹⁷ Further iterations could use machine learning to devise or further streamline processes that economize time and personnel resources.

12. Unfortunately, there are drawbacks from the automation examples proposed above, such as the lack of computer literacy within the CAF, the ability to troubleshoot and maintain lines of code and the frequent postings that remove this level of expertise from an organization. This could be mitigated by using civilians, reservists or contractors with the appropriate level of expertise. The benefit of this concept lies in its universal applicability across all levels of the organization, driven by a specific objective, and requiring no endorsement from the highest echelons of management.

ELIMINATION AND THE PARETO PRINCIPLE

13. An integral precursor to automation is the notion of elimination. The Italian economist, Vilfredo Pareto, discovered the 80/20 principle that bears his name.¹⁸ This principle can be summarized as: 80% of the outputs are generated by 20% of its inputs.¹⁹ This means that 80% of the results are generated by 20% of the tasks. If this principle is applied to the CAF, there are many tasks that are either not important, or could be eliminated all together. If CAF organizations conducted an 80/20 analysis of the tasks that are carried out, there would be a significant number of tasks, likely due to bureaucracy, which could be removed. This would result in a much better use of time for the limited number of personnel resources available. Often CAF members strive to do more with less to economize in resources, however a detailed analysis with the objective of elimination would bear greater results for the organization. Implementing this strategy

¹⁵ Ferriss. *The 4-Hour Workweek*. 201.

¹⁶ Maj M. Chapeau, teleconference, February 18, 2024.

¹⁷ Maj M. Chapeau, teleconference, February 18, 2024.

¹⁸ Ferriss. *The 4-Hour Workweek*. 70.

¹⁹ Ferriss. *The 4-Hour Workweek*. 71.

could lead to a reduction in burnout and stress levels, fostering heightened job satisfaction among personnel.

COMMUNICATION STRATEGIES FROM MARKETING

14. Another incremental step that could be taken towards modernization is improving communication. While communication is an extremely broad topic, some lessons could be learned from industry that could be applicable to improving communication in the CAF. For instance, marketing theory is directly related to effective communication. Marketing expert, Seth Godin, argues that marketing is understanding the customers' worldview and desires so that one can connect with them, providing them with more than they expect, and receive their volunteered commitment.²⁰ This emphasizes the importance of communicating to understand the needs, wants, and motivations of one's target audience and empathizing with them.²¹ Successful entrepreneurs create products and services that genuinely address their customers' problems and fulfil their aspirations.

15. In the context of the CAF, this concept holds immense potential to enhance the leader-subordinate relationship by forging emotional connections and fostering deeper understanding. Moreover, the target audience could extend to serving members who may feel disenfranchised, encompassing a broader spectrum of individuals. The message could intricately illustrate how continuous service holds profound meaning and fulfills their deepest aspirations. Marketing specialists Chip and Dan Heath also emphasizes the power of storytelling in marketing. Compelling narratives engage audiences on an emotional level, making messages more memorable and impactful.²² This serves as an exceptionally potent tool for communication, particularly for those occupying leadership roles within the CAF, whether engaging in one-on-one discussions or addressing expansive audiences.

CONCLUSION

16. The Canadian Armed Forces (CAF) faces the imperative of modernization to remain effective in a rapidly changing world. This paper aims to address the challenges of modernization by presenting incremental solutions that can be implemented at various levels within the organization. By drawing inspiration from successful entrepreneurs and organizations, the CAF can embrace change and foster a culture of innovation and adaptation.

17. Novel concepts drawn from the crucible of entrepreneurship highlight the importance of idea meritocracy to foster innovation from the ground levels. The concept of validated learning through Minimum Viable Products (MVPs) offers avenues for testing and implementing ideas effectively. Additionally, systems thinking, automation,

²⁰ Seth Godin. *This is Marketing: You Can't Be Seen Until You Learn to See* (New York: Penguin Random House, 2018), 24.

²¹ Godin. *This is Marketing*. 94

²² Chip Heath and Dan Heath, *Made to Stick: Why Some Ideas Survive and Others Die* (New York: Penguin Random House, 2007), 431.

and elimination using the Pareto principle present opportunities for streamlining processes and optimizing resource allocation.

18. Furthermore, effective communication, rooted in understanding the audience's worldview and desires, can foster stronger connections and meaningful relationships within the organization. The power of storytelling and marketing principles can be harnessed to engage both internal and external stakeholders, enhancing morale among serving members. When good ideas spread, they can develop into something people would miss if it were gone, something that gives them meaning, connection and possibility.²³

RECOMMENDATION

19. As the CAF navigates the complexities of modernization, embracing change and fostering a culture of continuous improvement will be paramount. By empowering individuals at all levels to contribute to the modernization efforts, the CAF can adapt, evolve, and thrive in an ever-changing landscape, ensuring its continued relevance and effectiveness in serving the nation's interests.

20. In essence, it is recommended that the journey toward modernization is not a solitary endeavor, but a collective effort fueled by innovation, collaboration, and a shared commitment to excellence. The incremental solutions outlined in this paper won't serve as a panacea for modernization, but they represent small steps toward its realization. Drawing inspiration from the warriors of industry, a plethora of innovative solutions await discovery, poised to be tested and refined within the dynamic landscape of the CAF with steadfast support across all echelons.

²³ Godin. *This is Marketing*. 25.

BIBLIOGRAPHY

- Cambridge Dictionary. "Modernization Definition & Meaning," <https://dictionary.cambridge.org/dictionary/english/modernization>
- Canadian Armed Forces Chief of Force Development Concept Note: Concept Note 22-01: A Primer On Concepts 2022 – 2023.
- Canadian Armed Forces Pan-Domain Force Employment Concept: Prevailing in a Dangerous World. 2023.
- Chan, Maj A., teleconference with CAF Electrical and Mechanical Engineering Officer, February 17, 2024.
- Chapeau, Maj M., teleconference with Director Land Equipment Program Staff 5-5, February 18, 2024.
- Dalio, Ray. *Principles*. New York, New York: Simon & Schuster, 2017.
- Ferriss, Timothy. *The 4-Hour Workweek: Escape 9-5, Live Anywhere, and Join the New Rich*. New York: Penguin Random House, 2007.
- Gerber, Michael E. *The E-Myth Revisited: Why Most Small Businesses Don't Work and What to Do About It*. New York: HarperCollins, 1995.
- Godin, Seth. *This is Marketing: You Can't Be Seen Until You Learn to See*. New York: Penguin Random House, 2018.
- Heath, Chip and Dan Heath, *Made to Stick: Why Some Ideas Survive and Others Die*. New York: Penguin Random House, 2007.
- Nambisan, Satish. "Digital Entrepreneurship: Toward a Digital Technology Perspective of Entrepreneurship." *Entrepreneurship Theory and Practice* 41, no. 6 (2017): 1029-1055. <https://journals-sagepubcom.cfc.idm.oclc.org/doi/full/10.1111/etap.12254>
- Ojo, Sanya. *Global Perspectives on Military Entrepreneurship and Innovation. 1st ed.* Hershey: IGI Global, 2021.
- Ries, Eric. *The Lean Startup*. New York: Penguin Random House, 2011.
- R. Duncan M. Pelly. "How can Lean Six Sigma Foster Organizational Entrepreneurship in a Military Bureaucracy?" *Dyskursy o Kulturze (Łódź. 2014)* 2021, no. 16 (2022): 55-80. <http://dyskursy.san.edu.pl/abs/dyskursy16-2.pdf>

Welter, Friederike, Ted Baker, David B. Audretsch, and William B. Gartner. "Everyday Entrepreneurship—A Call for Entrepreneurship Research to Embrace Entrepreneurial Diversity." *Entrepreneurship Theory and Practice* 41, no. 3 (2017): 311-321. <https://journals-sagepub-com.cfc.idm.oclc.org/doi/full/10.1111/etap.12258>