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How should NATO measure innovation? By harnessing innovation metrics to better appreciate the value of its outputs.

Innovation occurs on a daily basis within each nation's armed forces from their innovative use of equipment to meet changing mission requirements to innovative mission planning and innovative capability development based on operational needs. Some may call it creativity, but innovation means more than looking at something differently. It involves critical thinking among all stakeholders providing a foundational role in change management and transformation. How can we develop innovation metrics to measure innovation? What are the benefits particularly during austere economic times where the battle space changes frequently? Four articles based on innovation metrics have been reviewed to provide potential answers.

Innovation Metrics Development

Muller, Välikangas, and Merlyn (2005) revealed the need for a sustainable innovation policy to create and maintain an organisation's influence. In turn, this policy requires development of innovation capabilities to provide advantages over other organizations. Commanders see these innovation advantages for and against them as they win and lose ground in the battlespace between allied forces and the enemy.

However, in austere economic times, innovation programs rapidly become budget fodder. To avert budget challenges, leaders should realize that, designed properly, innovation metrics can aid decision making based on objective data and align goals with strategic objectives.

The authors found innovation metrics allow leaders to assess the organisation's strategy decay. To avoid excessive or rapid decay, they highlighted the need for an innovation framework consisting of resources, capabilities, leadership, and processes.

Additionally, the authors offer guidelines for developing metrics focusing on the inputs, processes, and outputs. They caution leaders to avoid focusing on a single or small group of metrics.

Measuring the Innovation Process

Once an organization develops its innovation framework, Morris (2008) offered a nine-stage innovation process graphically represented as a funnel (Fig. 1). Each stage consists of soft (qualitative) and hard (quantitative) metrics. At the Strategic Thinking stage, many ideas are proposed and become goals and requirements.

These ideas are then funnelled down through the next stages under careful management. Morris recognizes the importance of managing innovative ideas through a portfolio requiring research. The Ideation stage represents the sand box where ideas take shape as concepts for further development.

He recommended the aggressive pursuit of insight for the concepts, sparking development of usable products. Targeting the products into a portfolio of ideas under development, sets the stage for rapid prototyping and the Innovation Development stage. The resulting completed innovation products are then ready for marketing and implementation.

This process offers many innovation metrics adaptable to NATO ACT's strategic thinking, training, and capability development outputs.

Innovation Metrics

Now that an organziational innovation framework and process exist, Kaplan and Winby (2007) provided discussion on how to define appropriate benchmarks for innovation metrics. They caution against using the traditional Research and Development (R&D) flavoured metrics such as R&D headcount, number of active R&D projects, and number of R&D ideas submitted. They argued that these metrics may be useful in some areas but offer a limited view of innovation. Instead, they advocated development of a family of innovation metrics mirrored to the organisation's strategy and spans across the organisation. They divided the metrics into input and output categories under a framework similar to Muller et al.

The input metrics focus on budgetary investments, use of resources, and skills and behaviours related to innovation that drive the development of outputs. The output metrics answer the expected results.

The Innovation Scorecard

Combining the framework, process, and metrics into a useful tool for leadership and management, Gama, Mira da Silva, and Ataíde (2008) described the innovation scorecard (ISC). Based on the Balanced Scorecard (BSC) developed in the early 1990s, the ISC was designed to combine the BSC framework with innovation metrics to measure the added value of innovation and to ensure its alignment with organisational goals and objectives.

Developed using a real world case study, the ISC was found to provide a systematic approach to measuring innovation. It forced organisations to create a coherent portfolio of innovation metrics. It proved to be "a comprehensive management tool for measuring and managing many different aspects of innovation." Lastly, the ISC offered an easily implemented and powerful tool that can measure all types of innovation.

Conclusion

For Allied Command Transformation, the usefulness of defining innovation metrics within a process and framework culminating in an ISC will provide return on investment within the three ACT transformational output areas: Strategic Thinking; Capability Development; Education and Training. Additionally, the advent of ACT's Innovation Hub could provide development and resource cost benefits for the products from the three output areas.

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