What future for Intelligent Automation in Aerospace and Defence?

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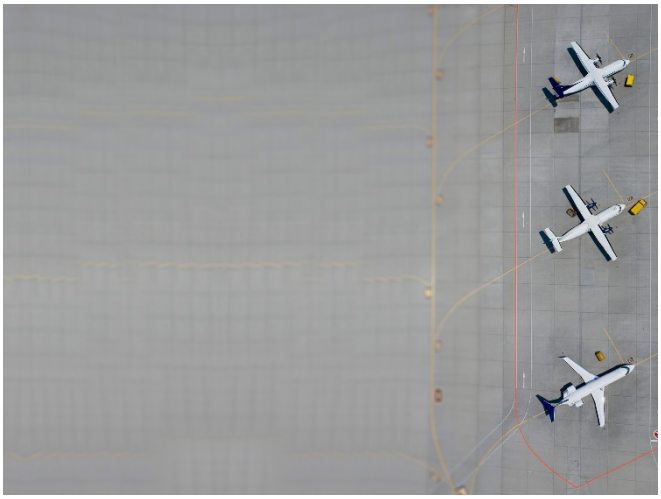
The Aerospace and Defence (A&D) sector is on the brink of unprecedented change and opportunity in an era defined by rapid advancements in technology. Like other sectors of the economy, the A&D industry is being redefined by innovation-fueled competition as manufacturers build up new portfolios of products and services - such as unmanned systems, cyber services and predictive analytics - to keep pace with a fast-changing business environment.

Advances in artificial intelligence (AI) have been significant. Notably, the integration of AI and computational power has pioneered "intelligent automation" and its most advanced category, "cognitive automation". This technological leap brings significant implications to the products and services strategies of major A&D players. Businesses who rethink their current and future capabilities amid disruption will be better positioned for growth in the digital age. In the previous issue of Canadian Defence Review we described the impact of Industry 4.0. We now turn to the opportunities and challenges in intelligent automation.



The intelligent (r)evolution

Intelligent automation is the convergence of robotic process automation (RPA) and cognitive technologies, including natural language processing, machine learning, data analytics and probabilistic reasoning. Cognitive software can now mimic human activities and, when combined with RPA, these systems can be trained to execute judgment-intensive tasks and perform tasks that have historically required human intelligence and situational analysis.

The A&D sector already has a track record of using intelligent automation, including so-called "smart" weapons by top-tier militaries or space programs driven by advanced technologies. That innovative spirit will continue to drive the development of new and exciting ways to bring value to domestic and global A&D supply chains. Indeed, the use cases of intelligent automation are impressive, from using deep neural networks to process and translate reams of data into valuable analytics, to guiding autonomous vehicles (AVs) and advanced robots.

KPMG's 2017 Global CEO Outlook discusses how disruption has become a fact of life for CEOs and their businesses as they respond to heightened uncertainty. Titled Disrupt and Grow, the report notes that 60 percent of executives worry about integrating cognitive processes and AI into their businesses. To stay ahead of the curve, the majority of CEOs surveyed plan to add headcount and boost related investments within three years.

Journey to automation: Going big on innovation

A&D organizations are gearing up for the future in a technology-driven industry. According to KPMG's Accelerating Automation report, more than half (55%) of global corporations are exploring new automation opportunities. Businesses will pursue different types of automation to achieve different objectives, but in all cases thorough planning is critical. Implementing intelligent automation is about more than just technological change; it could affect components across a company's operating model. The report suggests a 100-day action plan to introduce automation and scale it up to production. A summary of milestones along the journey to automation includes:

- Days 1-30: Engage a strong sponsor to raise awareness, align functions and mobilize;
- Days 30-60: Assess initial opportunities and conduct proof-of-concept; and
- Days 60-100: Assess results from the proof-of-concept, build governance capability and agree on a roadmap to begin development at scale.

As competition increases, innovation becomes a critical differentiator to gain market leadership. A&D businesses must remain at the leading edge of product and services development. Through targeted investments in intelligent automation, organizations can:

- Free up the workforce from doing significant transactional work in order to focus on higher value work and innovation;
- Streamline transactional work with improved quality and outcome consistency, while also reducing delivery costs; and
- Enhance core business process service delivery models.

Trust in the digital age

As businesses deploy intelligent automation, the need for strategic approaches and proactive governance to build and maintain trust increases exponentially. Trust is a defining factor in a company's success or failure as it underpins reputation, customer satisfaction and loyalty. In the digital era, the trustworthiness of data and analytics (D&A) is paramount.

In a 2018 report titled Guardians of Trust, KPMG Global Lighthouse, our Center of Excellence for Intelligent Automation and Data & Analytics, surveyed almost 2,200 executives across nine countries. The study shows that executives are struggling to build trust amid fears and uncertainties due to data breaches, machine-based decisions, and the rise of robotics and fully automated decision-making. Interestingly, 61 percent of executives see building trust as a top three priority for their organization; yet only 35 percent of IT leaders have a high level of trust in their organization's analytics.

The governance of machines has become a core part of governance for the whole organization. Intelligent automation will push the boundaries of possibility, but with that comes a responsibility to protect data in a digital world fraught with risk. *The question is, are you ready?*

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