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FUTURE OF WARFIGHTING

Building a future-ready military workforce

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The Future of Warfighting

The Deloitte Center for Government Insights is undertaking a yearlong research project focused on helping defense organizations prepare for the next 15 years of defense challenges. While defense challenges are ever shifting, our research has identified interoperability—within militaries, within government, between nations, and within industry—as being key to meeting uncertain threats.

Through more than 60 experts representing 12 countries across North America, Europe, and Asia, this research will produce more than a dozen insights articles offering ways of improving interoperability across key military areas. Research will detail how specific defense organizations can improve interoperability across defense challenges based on country-level expertise. The four leading defense challenges assessed from strategy documents of the 12 countries include near-peer warfare, grey zone threats particularly from technology, limited scale warfare, and defending the rules-based international order. The goal is to not only promote discussion at the international and intra-national levels, but demonstrate, in part, how greater interoperability can occur.

Visit www.deloitte.com/futureofwarfighting to access the Future of Warfighting collection and the interactive Interoperability index.

Future of Warfighting Interoperability Index

In focus: Workforce, Skills, and Culture

FIGURE 1

The demands of interoperability vary with defense challenge
Assessed level of interoperability needed

■ Gray zone threats   ■ Near-peer/peer warfare   ■ Defending rules-based international order   ■ Limited-scale warfare

	1 Baseline	**2** Joint/Service	**3** Intranational	**4** Intercountry	**5** Systemic
Development and acquisition	· Repeatable, transparent acquisition processes	· Ability to own and share technical data for select acquisition programs (e.g., via digital or model-based systems engineering) · DevSecOps, Agile, or other iterative models of production used for select software development · Mechanism for joint requirements development/coordination (e.g., JROC in the United States) · Standards for joint interoperability of key systems · Services have access to technical baseline data · Flexible acquisition processes operating at the speed of technology	· Ability to own and share technical data for all major acquisitions (e.g., via digital or model-based systems engineering) · DevSecOps, Agile, or other iterative models of production used for all software development · Mechanism for efficient and timely intragovernment coordination · Open architectures to ensure better interoperability even of proprietary systems · Services have access to live data from systems · Enhanced and inclusive mechanism for government/industry coordination · Shared curriculum to educate leaders on emerging technology	· Ability to rapidly share technical details between/among government and industry to allow for distributed production (e.g., using common digital engineering tools) · Open architectures with international standards to ensure better interoperability even of proprietary systems · Mechanism for coordinating international rapid acquisition coordination · Mechanism for international authentication of trusted vendors and sharing of IP · International program for tech education and advancement	· Ability to share consumption/use data from tactical edge to inform network of international producers (e.g., common digital thread) · Allies iterative development of shareable systems · Mechanism for coordinating defense innovation with allies and partners
Resilient operations	· National forces can move to a conflict, sustain and protect themselves, and apply force to an adversary	· Common operational standards for common tasks such as air support · Ability to leverage other services'/central military capabilities for transport, fires, or logistics · Joint capabilities to protect integrity of force, including from industrial threats (e.g., suppliers or knowledge of suppliers)	· Shared appreciation of problem sets across government · Understanding the capabilities that industry/government can bring to bear · Process to leverage those capabilities form industry/government	· Shared understanding of allied forces' incentives, risks, and goals · Common operating picture for allied/partner/commercial military-relevant capabilities · Shared international standards for key components (types of fuel, size of pallets, radio encryption, data formats, permission, etc.)	· Ability to seamlessly drive tactical data between countries, agencies, and even industrial bases to coordinate responses · Integrated information systems that can share data according to need and clearances · Ability to visualize and tap into military, allied, capabilities in real time at the tactical level
Workforce, skills, and culture	· Defined and accountable organizational culture in defense organizations · Recruitment sufficient to maintain desired end-strength and contemporary skills	· Talent management to account for individual workforce skills and needs · Capacity to quickly organize cross-functional teams · Agile hiring policies to attract and retain top talent in emerging skills · Change in mindset from "know it all" to "learn it all" · Joint standards for use of automation	· Talent management for interagency assignments · Shared skills and experiences between government and industry via rotation and new talent models · Government, industry, and academic collaboration to shape talent pipeline · Clearly defined inherently government functions and understanding of comparative advantage for all other functions	· Talent management that takes into account allied skills and capabilities · Shared skills and experiences between ally and partner industry, academia, and government · Create cross-functional allied/partner teams and automation	· Cultivate a culture of shared defense across nations, industry, and militaries · Workforce where military/civilians can leave and return to service · Shared understanding among allies/partner of appropriate use of human vs. automation (e.g., AI ethics principles)
Decision-making	· Secure, reliable information systems · Trustworthy data · Timely data collection and analysis · An understanding of policy and legal boundaries/permissions	· Coordinated architectures for interservice information management systems · Timely access to mission-relevant joint data · Joint leadership development curriculum tailored to the spectrum of defense priorities · Culture of trust to enable faster decision-making	· Common operating pictures for key issues shared across government agencies · Information management systems capable of bidirectional sharing of data operating in both connected and disconnected modes · Timely access to interagency mission-relevant data · Process for coordinating tasks based on agency legal/policy authorities · Interagency leadership development curriculum tailored to shared-mission areas	· Information and data management for seamlessly sharing information with allies/partners according to their clearance and immediacy of need without manual processes · Ability to visualize impacts to national interests across social, political, economic, and other dimensions (e.g., via narrow-scope AI tools) · Process for coordinating tasks based on international legal/policy authorities · International leadership development curriculum tailored to specific mission areas	· Ability to coordinate international response to threat in minutes or hours · Automated information and data management system for combined common operating picture tailored to mission need and permissions (e.g., via general-purpose AI tools) · Shared culture of trust/risk-taking · Adaptable policy and legal permissions for combined operations

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As introduced in the article *Sum of its parts: Military interoperability and the future of warfare,* militaries are facing new defence challenges with increasing scope and scale that require new ways of working to maintain operational readiness and a relative edge. Success against today's national defence and security challenges requires militaries to operate outside themselves, to be interoperable with other nations, other government agencies, and even commercial industries in new ways. The variety of missions that militaries are called upon to support is also broadening across the spectrum of direct military conflict, peacemaking or peacekeeping, and crisis response. This evolution in the character of warfighting and the role of militaries is further compounded by the technological, social, and economic disruption that has had significant implications for the work, workplace, and workforce of militaries around the world.

Given the nature of military workforce management today, and perhaps most notably the long-standing practice of hiring almost exclusively at the entry level, who militaries recruit today and how they develop that talent over time has direct impacts downstream to their workforce of the future. It also means that influencing the workforce composition can take years. This is a huge risk for militaries as the pace of change—and the ability of our adversaries to adapt—is relentless.

To maintain operational readiness now and in the future, militaries need to take action today by redesigning traditional military personnel strategies to build their workforce, and continuously assess and adapt skills and culture to remain on point and future-ready. Most notably, these areas include rethinking workforce planning, recruiting, development and management of the military workforce to help meet the needs of tomorrow.

Article elements

- Talent, Workforce, Culture
- Future Defence Challenges
- Canada perspective

Key topics

- Talent composition, recruitment, training
- Organization of the workforce
- Military diversity, equity, and inclusion

Building a future-ready military workforce requires redesigning traditional military personnel strategies

Workforce Planning
Building a future-ready military workforce starts with **planning** for future needs

Recruiting
Rethinking how and who the military **recruits** is critical

Development
Learning must be modernized to meet current and future **development** needs

Career Management
Improving career **management** will be a key enabler of the future-ready military workforce

Building a future-ready military workforce starts with planning for future needs

Building a future-ready military workforce starts with understanding and planning for the skills and capabilities needed to meet challenges now and in the future. Even in traditional domains that are likely to endure, such as sea, land and air combat, the work activities being performed at any given level will continue to evolve throughout a servicemember's career. Beyond this steady evolution, new domains will also drive disruptive changes, both as streams of work in and of themselves and for their disruptive impact on traditional domains (e.g., cyber disruption of logistics and the impact on traditional operations).

The understanding that a military workforce needs to be able to steadily adapt to ensure relative advantage in future conflict is key to workforce planning and development strategies. Militaries need to deliberately identify and recruit for the enduring capabilities that enable an individual to adapt and thrive regardless of how the mission changes. Bringing in individuals with capabilities such as intellectual flexibility, a learning and growth mindset, resilience, and teaming frame of mind will enable the military workforce to become increasingly adaptable and effective in the future operational environments.

From a skills perspective, this has significant implications for the military learning strategy. Training will be less about perfecting a skill through repetition, and much more about training to react and adapt to new situations. And, education will need to set the overarching conditions for tactical excellence, as well as leader transition from tactical-level employment to institutional-level leadership.

Increased interoperability with other nations, government agencies, and commercial industries adds another dimension, as militaries will need to understand and take into account allied skills and capabilities, and develop their workforce to support multilateral efforts as a strategic advantage.

So, how can militaries plan for skills they will need 10 years from now? They can deploy military, technology, and geo-political scenarios to forecast likely futures; build on top of those scenarios strategies and tactics for response; and translate those into future skill requirements. These steps put them in a position to deploy skills analytics with the future in mind, and decide exactly who needs to learn those skills and when. This isn't a one-time exercise, but a need for rolling analysis. While militaries may already be using scenarios for operational planning, they are often not directly and consistently applied to workforce planning.

Skills and enduring capabilities

It is worth defining what we mean by skills and by capabilities, because they're not the same thing. Skills refer to the tactical knowledge or expertise needed to achieve work outcomes within a specific context. Skills are specific to a particular function, tool, or outcome, and an individual applies those skills to accomplish a given task. Driving, for instance, is a skill. Enduring capabilities, on the other hand, are observable human attributes that are demonstrated independent of context—such as empathy. Unlike skills, capabilities don't become obsolete; they endure. Moreover, they help us adapt our skills and acquire new ones as we respond to new challenges and opportunities.

Source: John Hagel III, Maggie Wooll, John Seely Brown, "Skills change, but capabilities endure: Why fostering human capabilities first might be more important than reskilling in the future of work", Deloitte Insights, August 2019, https://www2.deloitte.com/ us/en/insights/focus/technology-andthe-future-of-work/future-of-workhuman-capabilities.html, Accessed on January 2021.

Rethinking how and who the military recruits is critical

Recruitment is one of the primary levers that militaries have in building their workforces of the future. However, changes in the nature of careers, including the explosion in contingent workers, generational changes and worker expectations, and the declining birth rates in many developed countries, mean that the size of the labour pool from which militaries traditionally recruit is shrinking. Therefore, militaries that attempt to maintain traditional recruiting practices will be at increasing quality, quantity, and diversity risk.

Given this reality, one shift that militaries can make in recruiting practices is from purely ***acquiring* talent to *accessing* talent**. Leveraging partnerships with industry, academia, and allies, militaries can access skills and expertise without needing to develop them internally, for defined activities, time periods, or specific challenges. Beyond just accessing this talent, militaries can also **rethink the pattern of hiring primarily at the entry level**. A significant number of military trades (e.g., logistics, intelligence, cyber practitioner, etc.) could have some form of lateral entry wherein a certain percentage of intake joins with experience at an elevated rank, based on the transferable knowledge and skills gained in their external occupations. An example of this being done in recent past is a member of the Marine Engineering Branch who attended a College Marine Engineering Programme, entering the two-year course as a recruit and exiting as a Master Sailor, effectively skipping three ranks.

Beyond broadening the pool of talent the military has access to, these strategies can infuse the organization with knowledge of industry best practices, how other militaries operate, and new ways of thinking that can introduce new skills, foster innovation, enable enhanced interoperability, and support greatly accelerated diversity, equity and inclusion objectives. While the Canadian military has experience doing this in bespoke ways with lateral hires from its allies and in a few more technically-specific trade intake programs, there is an opportunity to explore this recruiting innovation at scale.

In addition to workforce advantages, such a shift in recruiting practices would also have significant financial benefits. Militaries invest millions of dollars in the training and education of their servicemembers. For every lateral entry from industry, the public service, or a foreign military, there would be cost savings reflective of years of investment in that individual's development. For example, the CAF is growing by 3,500 to 71,500 Regular Force and by 3,000 to 30,000 Primary Reserve, and to sustain this sizeable and growing military force, the CAF will need to recruit between 6,500 – 7,500 recruits per year. If even five percent of these recruits were hired as lateral entries, this could represent tens of millions of dollars in savings.

Another shift that militaries can make in recruiting practices is to **reevaluate the physical eligibility requirements** for some occupations or skillsets. For example, could someone in a wheelchair or with type II diabetes not engage in cyber conflict? While physical fitness is important – and absolutely mandatory for some occupations or purposes— there is an opportunity to rethink who is considered hirable into the uniformed service to tap into a broader talent pool and help create and sustain the military workforce needed for the future.

Finally, and perhaps a capstone to all the considerations above, **diversity, equity and inclusion is no longer a check box exercise, but an operational force multiplier and imperative**. Strong, Secure, Engaged, Canada's Defence Policy, outlines this clearly, stating that "we need a military that looks like Canada." While representation of women and visible minorities continues to be an important priority, our research reveals that high-performing teams are both cognitively and demographically diverse and, combined with an inclusive culture, can dramatically shape organizational outcomes. For example, diversity of thinking has been found to enhance innovation by about 20%; organizations with inclusive cultures are 6x more likely to be agile; and an increase in individuals' feelings of inclusion translates into an increase in perceived team performance (+17%), decision-making quality (+20%), and collaboration (+29%).

To help drive these outcomes, militaries need to deliberately seek out and recruit diverse hires (e.g., by partnering with their respective government departments responsible for immigration and citizenship to offer potential employment with public service or enrollment within the military). By actively building such approaches into their recruiting strategies, militaries can proactively evolve their personnel base and culture to capitalize on the benefits of diversity. Tactics like targeted sourcing and the use of artificial intelligence in screening to reduce unconscious bias can help militaries build these diverse, equitable and inclusive workforces. An example of this in practice is Canada's Department of National Defence Visible Minorities Recruitment Campaign, an external pilot recruitment campaign aimed at increasing the representation of visible minorities within the civilian executive cadre. Engaging external agents to assist the military or to take over recruiting may also introduce needed agility and performance, as has been observed in the United Kingdom and Australia who have both outsourced recruiting to positive effect.

Modernizing learning to meet current and future development needs

In addition to recruitment, learning and development is another major lever that militaries have in building their workforces of the future. The World Economic Forum called reskilling a crisis, saying that 42% of the core skills required to perform existing jobs are expected to change in the next few years. If a military maintains a workforce model of hiring primarily at the entry level, it by default takes on 100% of the cost of building the talent it needs, as well as total ownership for upskilling or reskilling servicemembers over the course of their careers. This is a huge investment – billions of dollars over the course of Canada's current defence policy – and militaries need to ensure they're getting the best return for that investment.

The essential evolution of skills and capabilities required to meet defence challenges now and in the future has significant implications for the military learning strategy. Training and education efforts will have difficulty maintaining pace at scale if not redesigned to embed learning in the flow of work and throughout one's military career.

In support of this, military personnel functions need to work in conjunction with key Service and Joint organizations within Defence – the Army, Navy, Air Force, Special Forces Command and major joint organizations (e.g., CF Intelligence Command and Canadian Joint Operations Command) in the case of the CAF – to rethink where, when, and how learning takes place – both in terms of training and education. This includes modernizing the learning strategy in a way that's relevant and enables servicemembers to acquire the skills they need when they need them, and develop the capabilities they'll need to continue to grow and adapt over time towards increasing institutional and joint position requirements.

Militaries should incorporate four principles into their learning approach to drive practical applications and tangible outcomes:

- **Make learning experiential:** Connecting to human emotion and relevant experience is key to committing learning to memory. As an example, the tradition of a post activity or exercise summary, or hot wash-up, is an organization-centric example of an activity to learn from successes and mistakes. How can such efforts be re-oriented to create personal learning on the heels of important operations, exercises, and other training to also improve the individual and not simply the unit?

- **Integrate work and learning:** Providing learning to servicemembers when they need it during their day-to-day work makes that learning more applicable, efficient, and memorable. Why is military coursing predominantly done through a formal in person qualification level structure that follows a rigid and slow-to-adapt Qualification Standard and Plan (QSP) model? Is there a better way to conduct training at the unit level that does not require the personnel and financial burden while providing training and education more often and for shorter periods of time, improving value to the individual and the unit?

- **Use blended experiences:** Delivering learning through a mix of digital and hands-on experiences makes it more accessible and scalable. Can militaries more fully embrace a deliberate mix of modern distributed learning and traditional in-person training and education methodologies? There is core value in developing relationships and fostering teamwork, not to mention security and other training elements, all which require in-person training and education. However, there are a host of other training and education courses that could be done using more advanced remote learning methodologies at a fraction of the effort and cost, all while avoiding development-related separations, postings and/or travel.

- **Make it lifelong:** Offering professional and personal development that contributes to servicemembers' ongoing future employability ensures that workers remain relevant and perceive the learning as having particular value. How can the military incentivize the value of learning in support of operational and institutional objectives? Structured effectively, continuous learning throughout one's career creates organizational value, and provides meaningful motivation in a very competitive fight for talent retention.

Improving career management to enable the future-ready military workforce

Modern warfare requires that militaries quickly bring together teams from within and across their own services, enabled by technology and assets, working with allies, government agencies, industry, academia, and sometimes even the public, to complete missions. This 'super-team' practice will likely increase over time as a hedge to more complex defence challenges. To operate effectively and efficiently in this system, militaries need to manage their workforces with increasing agility and flexibility.

This requires rethinking the planning engine that enables this: military career management that goes beyond mechanistic matching of personnel-to-positions. Shifting the mindset around how technology, data and analytics can be used to enhance posting and placements, as well as the servicemember experience, redesigning career management that fully leverages digital and human capital opportunities will be a critical enabler to building and sustaining a future-ready military workforce. There is an abundance of tools available to support this – from real-time skills tracking, to internal talent marketplaces, to relocation optimization – the question is whether militaries are prepared to take advantage of the opportunity these present.

Technology enabled workforce

To date, organizations have largely viewed technology as a way to improve the speed and efficiency of work by streamlining and automating processes, and eliminating tasks that used to be performed manually. Yet these same technologies also enable companies to completely reimagine and redesign work itself, in a way that enables their human and technological workforces to focus on the tasks at which they excel. Humans can perform those requiring empathy, connection, and imagination, while robots, algorithms, and other technologies can handle routine but vital processes, and make sense of oceans of data far faster and more accurately than any human.

Source: Kathy Woods, "Building the future-ready workforce: Unleash the potential of your organization and people," Deloitte Canada report, 2021, https://www2.deloitte.com/ca/en/pages/consulting/articles/future-ready-workforce.html

Where to go from here

Ultimately, to maintain operational readiness now and in the future, militaries need to take action today by redesigning traditional military personnel strategies to build the workforce, skills and culture to be future-ready. This could include reviewing trades against a number of dimensions including the right balance between capacity (military vs. civilian vs. reserve vs. industry), recruitment, learning, and career progression.

Military personnel functions need to work in conjunction with the key Service and Joint organizations within Defence to consider how they plan for workforce needs, recruit, develop, and manage their workforces and, more broadly, consider how they work in partnership with other defence organizations, government agencies, industry, and academia, to improve their human capital interoperability posture and build their future-ready workforce.

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