CASE STUDY

Efficient and accurate artillery for the modern battlefield

ADGA helps Canadian Army meet its NATO obligations anywhere in the world

ADGA helps Canadian Army meet its NATO obligations anywhere in the world

Customer Challenge

Modern artillery consists of increasingly sophisticated and integrated technology platforms. From mortars to howitzers, these GPS-guided systems are designed to deliver pinpoint accuracy at ranges of up to 30 kilometers. Ensuring efficient and accurate fire is critical to guarantee decisive and cost-effective results, while minimizing the risks of collateral damage. There is seldom an acceptable margin for error.

As one of the 29 member countries that make up NATO (North Atlantic Treaty Organization), Canada must integrate its operations with those of its allies. A Canadian contingent on deployment can be called upon at any time to provide artillery support to an allied force or may in kind have the need to call in such support.

Any response must address all the complex mathematical variables that affect the calculation of the ideal firing solution. This poses substantial technical challenges. NATO allies use artillery systems and related software from different suppliers that do not easily communicate with each other. This raises the risk that artillery support will miss the target, be delivered at the wrong time, fail to yield the desired effect and/or cause unacceptable collateral damage.

Approach

ADGA's multi-disciplinary Weapon Systems Management (WSM) team provides the in-house software engineering capability for the Canadian Army to manage, develop and evolve government-owned software essential to artillery ballistics and fire control software that is interoperable with Canada's NATO allies.

Since the mid-1980s, ADGA has been a WSM professional services contractor of choice to the Government of Canada. Today, almost 200 ADGA personnel are embedded with the Canadian Army's Land Software Engineering Centre (LSEC) under the terms of the WSM Contract.

ADGA's work at the LSEC initially focused on supporting the computerized fire control systems for the Royal Canadian Artillery. As the Canadian Army's command and control (C2) software has evolved, the LSEC has played a critical role assisting with the integration of the Army's weapons systems into what is now referred to as the Canadian Army Land Command Support System (LCSS). Over time, the LSEC expanded to include other essential services and tasks and is now subsumed into the WSM Contract. The software development component of the WSM Contract is now referred to as the Defence Software Engineering Facility (DSEF).

Outcome

Today, ADGA provides the following services under the WSM Contract:

- Requirements, architecture, system, software, specialty, production, and/or test engineering
- Modelling and simulation
- Prototyping
- Independent verification and validation (IV&V) testing
- Qualification testing

- Systems engineering
- Software engineering
- Software production
- Program management
- Installation and configuration of COTS software

In addition, ADGA's WSM personnel regularly represent Canada by providing technical assistance and field service in trials and tests with NATO allies, both domestically and internationally.

ADGA does not supply the software systems on which its WSM team works. Instead, it works with whatever third-party systems have been procured by Canada's military from qualified OEMs. This puts ADGA in the unique position of being completely objective, arms-length, and agnostic. The WSM client group can rely on ADGA's highly capable and security-cleared project management and engineering support experts to be completely unbiased in their development and support work for the LCSS and its adjacent sub-systems and dependencies.

ADGA's long-standing relationship with the Canadian Army through the WSM contract, its untarnished status as a trusted and un-biased partner, and its consistent service in support of Canada's NATO obligations, is a testament to the expertise and character of its team. ADGA has the depth of talent and experience to support all in-house software engineering needs for Canada's security and defence requirements.

ADGA's CONVERGED SECURITY SOLUTIONS

ADGA's Converged Security Solutions offering is unique in Canada, providing a peerless combination of **ADGA** and **Presidia** capabilities to address your unique security challenges. These areas of expertise include Personnel Security, Cyber Security and Physical Security, all supported by a robust security program and enterprise risk management framework. This framework ensures a holistic approach to security and identifies risk relative to organizational objectives, producing cost-effective response strategies and tangible, validated results. This full-stack approach provides "one-stop shopping" for custom-made security solutions for both large and small organizations and delivers world-class security expertise and services – enriched by a global network of trusted industry partners – to government, corporate, private and non-profit organizations. Employing a discreet, confidential and consultative approach, we work closely with our clients to protect their people, information, assets, facilities and reputation in today's dynamic and complex threat and risk landscape.

Founded in 1967, ADGA is a leading Canadian provider of technology solutions, consulting and professional services. Headquartered in Ottawa, with offices across Canada, we are a privately owned and operated company with over 800 technical consultants and subject matter experts delivering strategic insight, world-class capabilities and service excellence to clients within the following industries:

· Defence	· Mining
· Education	· Public Safety
· Energy & Utilities	· Public Sector & Government
· Health Care	· Real Estate
· Media & Telecommunication	· Transportation & Aviation

Our services are organised internally through industry-focused Business Services teams as well as capability-driven Consulting Practices, which ensures that clients benefit from robust service delivery frameworks as well as specialist technical knowledge and expertise.

Presidia Security Consulting
MEMBER OF THE ADGA GROUP

Presidia Security Consulting Inc. (Presidia) provides security, intelligence and investigation services with related marketing and communications strategies to support them. With extensive executive experience within the Canadian security and law enforcement communities, Presidia principals have led the development of strategic research and policy documents and have implemented innovative security solutions that are now cornerstones of key business processes. Our team members have developed best practices – both at home and abroad – to protect people, assets, operations and reputations.

ADGA

We develop innovative ideas and integrated technologies made in Canada,
for the protection and security of Canadian governments and industry.