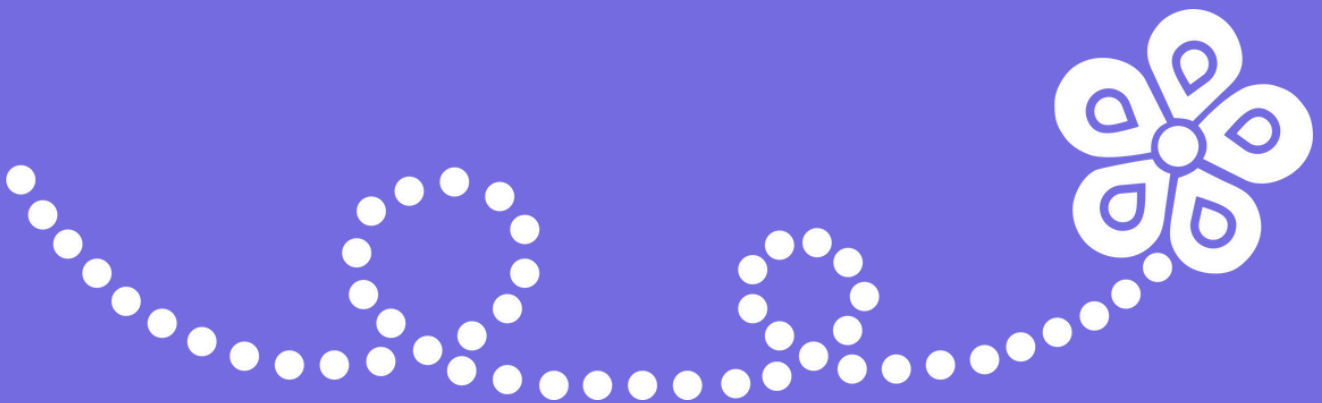




RALLIEMENT NATIONAL DES  
**MÉTIS**  
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# THINK GROWTH

Building 21st Century Métis Economic  
Infrastructure: Drone Delivery




## Key Takeaways

- Remote Métis communities face significant food insecurity due to historical displacement, geographical isolation, limited infrastructure, high transportation costs, environmental degradation, infringement of Métis rights, and declining access to traditional foods.
- Proposed Solution: Developing Métis-owned and operated Remotely Piloted Aircraft System (RPAS) infrastructure using Beyond Visual Line of Sight (BVLOS) delivery capabilities to transport food and other goods to rural and remote Métis communities.
- Benefits: This initiative is projected to improve access to nutritious foods (including traditional foods), enhance food security by reducing reliance on weather-dependent transportation, improve health outcomes by reducing diet-related illnesses, create jobs and stimulate the local economy and strengthen cultural practices.
- Regulatory Challenges: Current Canadian Aviation Regulations, while recently updated, still present barriers to RPAS/BVLOS industry growth, which hinder Métis ownership and operation of BVLOS infrastructure.

The purpose of this policy brief is to provide recommendations to develop Métis-owned and operated Remotely Piloted Aircraft System (RPAS) infrastructure using Beyond Visual Line of Sight (BVLOS) delivery capabilities to transport food and other goods to rural and remote Métis communities.

## Background

Remote Métis communities face significant challenges in accessing affordable and nutritious food, stemming from a complex interplay of historical, geographical, and socioeconomic factors. The colonial legacy of displacement from traditional lands has profoundly disrupted established Métis food systems and hunting practices. This disruption is compounded by the remote locations of many Métis communities, often situated far from major urban centers and accessible only by air or seasonal roads. The harsh northern climate further exacerbates the issue, with extreme weather conditions limiting the growing season and complicating food transportation.



Limited infrastructure, including a lack of adequate storage facilities, climate change and unreliable power supplies, hinders food preservation efforts within these communities. High transportation costs, which can increase food prices significantly during crises, make nutrient-dense options unaffordable and inaccessible for many families and individuals. This economic hardship is further intensified by limited employment opportunities and high unemployment rates, reducing purchasing power for quality food. The challenges of a subsistence economy are also significant, as climate change and industrial development impact traditional activities like hunting, gathering, trapping and fishing.

Consequently, many communities rely heavily on imported foods with long shelf lives, leading to nutritional deficiencies due to limited access to fresh produce. This dependence on external food sources underscores a lack of food sovereignty, diminishing community control over food choices and quality. Ultimately, these interconnected factors create a persistent cycle of food insecurity, leading to poor health outcomes within remote Métis communities

Solution: Develop a Métis Remotely Piloted Aircraft System (RPAS) infrastructure, drawing upon Beyond Visual Line of Site (BVLOS) delivery capabilities to serve Métis citizens.

## **Evidence Base**

The evidence supporting this proposal is rooted in the rapidly evolving UAV industry and its potential for economic growth. The Ontario Society of Professional Engineers has reported that drone services could benefit industries contributing over \$600 billion to Canada's national Gross Domestic Product. In Ontario alone, the aerospace industry created over 22,000 jobs in 2019, highlighting the sector's job creation potential.

Furthermore, Transport Canada has approved over 190 Special Flight Operations Certificates (SFOCs) for lower-risk BVLOS operations, demonstrating growing demand and readiness for expanded UAV operations. This experience has provided valuable insights for developing a safe and effective regulatory framework.

The international context also supports this proposal. Canada's initiative to develop BVLOS regulations positions it as one of the first countries globally to propose comprehensive rules for routine BVLOS drone operations. This leadership role can potentially attract international investment and expertise to the Canadian UAV sector.

## Expected Outcomes

### Enhanced Food Security:

Reducing dependency on weather-dependent transportation like ice roads and seasonal barges creates a more resilient food supply chain. This enhanced resilience minimizes vulnerability to disruptions from climate change or other crises, enabling quicker responses to food shortages or emergencies.

### Cultural Significance

Increased access to traditional foods supports cultural practices and knowledge transmission. Métis communities are empowered through ownership and control of food distribution systems, creating opportunities for asserting Métis self-determination and intergenerational knowledge sharing through community engagement in the program. This ultimately contributes to improved well-being.

### Economic Benefits:

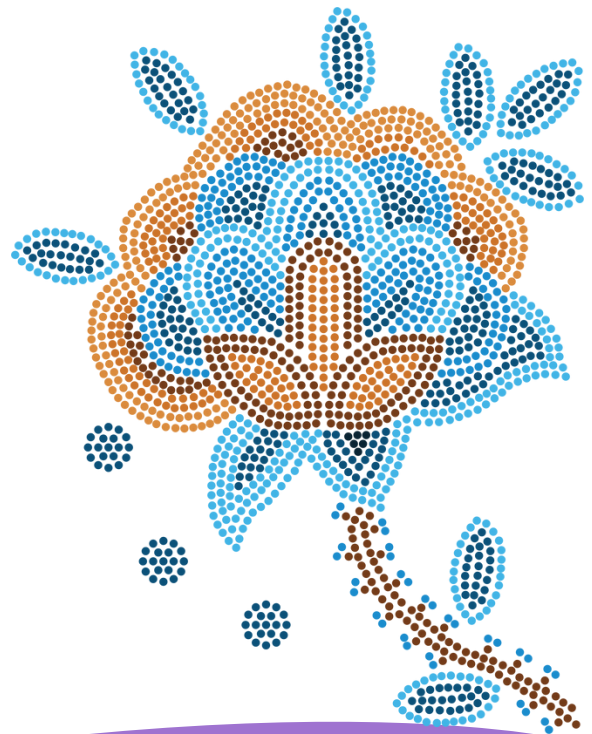
This initiative creates jobs within Métis communities for drone operators, logistics managers, and support staff, fostering economic diversification through the development of a Métis-owned technology sector. Reduced food costs for community members further benefit household finances, freeing up income for other needs.

### Health Improvements:

Improved access to nutritious foods has the potential to reduce diet-related health issues such as diabetes and obesity. Better nutrition, particularly during pregnancy and early childhood, contributes to improved maternal and child health. Furthermore, reducing food insecurity-related stress enhances mental health and overall well-being.

### Improved Access to Nutritious Foods:

Increased availability of fresh fruits and vegetables in remote communities is achieved through more frequent deliveries, reducing reliance on processed foods. This also improves access to traditional foods, supporting cultural practices and addressing specific nutritional needs.



## Required Regulatory Change

Regulations Amending the Canadian Aviation Regulations were released to the public via the Canada Gazette on June 24, 2023. However, these regulatory changes do not encourage the growth of the RPAS/BVLOS industry. Instead, these regulators continue to hinder the deployment of this proven, game-changing technology by continuing to require BVLOS operations with drones up to 150 kg over sparsely populated areas, at low altitudes, and in uncontrolled airspace. These changes are as follows:

# 1

### **Stringent medical requirements:**

Proposed medical requirements for Level 1 Complex BVLOS operations pose significant barriers by potentially reducing the available workforce due to stringent medical standards, increasing compliance costs for operators, slowing the onboarding and deployment of new pilots, and reducing inclusivity and accessibility for certain groups. These barriers, if unaddressed, may limit the competitiveness of the Canadian RPAS industry, delay innovation, and hinder Canada's leadership in BVLOS technology development.

### **Thickening the barriers to entry:**

The establishment of a new class of pilot certification for BVLOS operations introduces additional training and certification processes. Additionally, the proposal includes updates to existing service fees and the introduction of new fees for services provided to the RPAS sector. These new measures thicken the barrier to entry for Métis RPAS BVLOS operators and hinders the rapid adoption and deployment of BVLOS technologies.

# 2

# 3

### **Line-of-Sight requirements in certain conditions:**

Even for BVLOS operations, there are requirements to maintain contingency procedures for transitioning to Visual Line-of-Sight (VLOS). However, the new regulations do not clearly define at what distance a RPAS BVLOS must transition to VLOS and to what extent these requirements apply in rural and remote areas (Level 2 and Level 3 Operations).



## Recommendations for Changes to Increase Métis Ownership of RPAS BVLOS Infrastructure

### Streamlined certification and reduced fees:

Transport Canada needs to develop a more efficient and affordable pilot certification process and reduced or waived fees for Métis operators, particularly in remote service areas. This would lower the barrier to entry and encourage Métis participation. This could include advocating for specific exemptions or streamlined processes for Métis-owned businesses operating in remote communities.

### Clarification of VLOS transition requirements:

Clearer guidelines regarding when BVLOS operations must transition to VLOS, especially in remote and rural areas. This would provide greater operational certainty for Métis businesses operating in these regions.

### Pilot projects:

Transport Canada should work with the Métis Nation to co-develop a regulatory sandbox specifically for Métis communities. These would allow for testing and development of BVLOS operations in a controlled environment, providing valuable experience and data while minimizing regulatory burdens.

### Expand the Indigenous Loan Guarantee Program to attract capital and private investment:

Explore partnerships with private investors, venture capitalists, or impact investors who are interested in supporting Indigenous economic development and innovative technologies. This could involve developing compelling business plans and demonstrating the social and economic benefits of Métis-owned RPAS operations.

### Develop community-owned cooperatives or social enterprises:

This model would allow Métis communities to pool resources and collectively own and operate RPAS businesses, sharing profits and benefits within the community.

### Strategic partnerships:

Explore partnerships between Métis entrepreneurs, industry experts, educational institutions, and government agencies to develop and deliver targeted training programs for Métis individuals interested in becoming RPAS pilots, technicians, and managers. These programs should consider cultural context and community needs.



### **Facilitate access to technology and infrastructure:**

Support the development of shared-use infrastructure, such as Métis droneports or maintenance facilities, specifically in or near Métis communities. This reduces individual startup costs and promotes efficient resource utilization. Explore partnerships with technology providers to secure discounted or subsidized access to RPAS equipment and software for Métis operators.

### **Conclusion: A Path to Meaningful Economic Reconciliation**

Implementing a Métis-owned and operated drone delivery system for food distribution to remote communities presents a transformative opportunity to address long-standing food security issues. By leveraging innovative technology, empowering Métis communities, and prioritizing health and cultural needs, this initiative has the potential to significantly improve the well-being of remote Métis populations. The expected benefits in terms of improved nutrition, enhanced food security, and community empowerment make this a compelling policy direction worthy of serious consideration and support.