

TWO EYED SEEING NETWORK

LEARNING MATRIX

IN DRONE OPERATIONS

NETWORK DISCUSSION **FOUR**
MARCH 8TH, 2024



WELCOME & LAND ACKNOWLEDGMENT

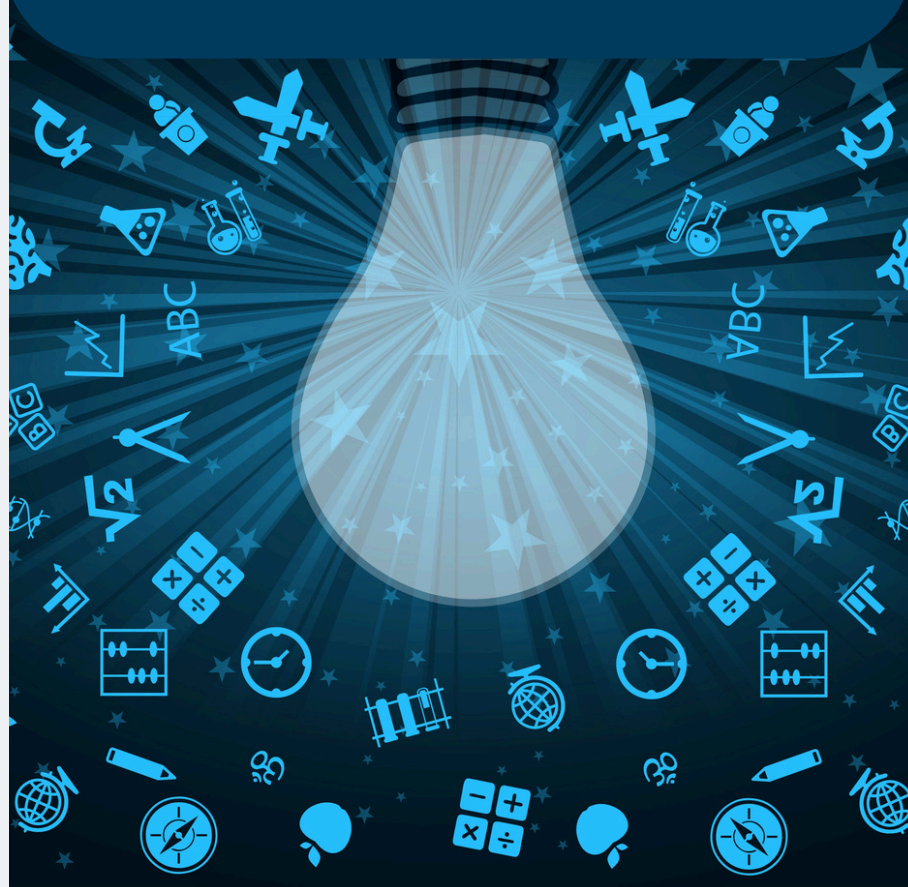
We thank, honour and acknowledge the Nations whose territories allow us to carry out our work and lead our lives on these lands.

We look forward to continuing this journey with you!



AGENDA

LEARNING MATRIX IN DRONE OPERATIONS



TRAINING FOR INDIGENOUS LEARNERS IN THE TECH SECTOR



COMPONENTS OF SUCCESSFUL TRAINING



METRICS FOR SUCCESSFUL TRAINING



LEARNING MATRIX IN DRONE OPERATIONS

DEFINING THE LEARNING MATRIX

The Learning Matrix aims to provide a comprehensive guide for both educators and learners, focusing on the integration of drone technology skills with respect for Indigenous knowledge and practices

TRACKING AND ASSESSING SKILLS FOR DRONE OPERATIONS

Canadian drone pilot certificates for both basic and advanced flyers are valid forever.

Pilots must keep up with the latest by fulfilling recency requirements.

Recency Options:

- ✈ Retake a training course
- ✈ Pass a Transport Canada examination
- ✈ Undergo a flight review



LICENSING



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APPLICATION IN VARIOUS SECTORS

Many drone training programs provide participants with the opportunity to gain insights and experiences across different industry sectors.

After securing their initial drone piloting certification, learners can further refine their expertise by engaging in specialized short courses, typically spanning 1-2 days, such as those focused on LiDAR and mapping technologies.

INDUSTRY SPECIFIC TRAINING

British Columbia Institute of Technology (BCIT):

- ✈ Focuses on successful RPAS application in surveying, emergency response, and equipment inspection.
- ✈ Courses align with industry needs and the evolving field of RPAS applications.

Northern Alberta Institute of Technology (NAIT)

- ✈ Comprehensive drone training certificates covering safety, air law, and air traffic regulations.
- ✈ Specialized Advanced sRPAS Regulation Training for professional mapping and surveying.

Northern Alberta Institute of Technology (NAIT)

- ✈ Comprehensive training in drone operation for sectors like agriculture, environmental and industrial monitoring, emergency response, and 3D mapping.
- ✈ Focuses on developing professional drone pilot skills, including drone construction, maintenance, inspections, and geomatics data processing.

TRAINING FOR INDIGENOUS LEARNERS IN THE TECH SECTOR



Tailoring Training Programs for Indigenous Communities

Cultural Agility and Inclusivity in Tech Training

Overcoming Challenges and Barriers



TAILORING TRAINING FOR INDIGENOUS COMMUNITIES

REVISITING THE MILESTONE BASED PATHWAY

The Milestone Based Pathway, created through our previous network discussions, is an important tool when tailoring training programs for Indigenous communities.

The pathway clearly identifies program activities and supports, allowing for the measurement and evaluation of progress towards meaningful employment and personal goals.

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ESSENTIAL SKILLS IN DRONE TRAINING

- 1 Technical Proficiency
 - UAC Operation
 - Camera and Sensor Operation
 - Maintenance Skills
- 2 Aeronautical Knowledge
 - Airspace Regulations
 - Weather Interpretation
 - Flight Planning
- 3 Safety and Emergency Response
 - Risk Assessment
 - Emergency Protocols
 - Safety Measures
 - Situational Awareness
- 4 Industry Specific Knowledge
 - Specialized Training
 - Regulatory Awareness
- 5 Data Analysis and Reporting
 - Data Processing
 - Report Generation
- 6 Planning and Execution
 - Objectives
 - Adaptability
 - Resource Management
- 7 Communication and Coordination
 - Team Coordination
 - Reporting
 - Airman/womanship
- 8 Soft Skills
 - Problem Solving
 - Attention to Detail

An aerial photograph of a winter forest. The ground is covered in a thick layer of snow, with some bare tree branches visible. Several evergreen trees, likely spruce or fir, are scattered throughout the scene, their dark green needles contrasting with the white snow. The lighting suggests a bright day, with some snow appearing slightly melted or disturbed.

TAILORING TRAINING FOR INDIGENOUS COMMUNITIES

COMMUNITY-DRIVEN APPROACH

- ✈ Direct Input from Indigenous Communities
- ✈ Engagement Throughout Planning
- ✈ Accessibility

HANDS-ON, PRACTICAL TRAINING

- ✈ Engages Learners
- ✈ Facilitates Skill Acquisition
- ✈ Aligns with Indigenous Learning Traditions

CULTURAL & ENVIRONMENTAL PRESERVATION

- ✈ Enhances Relevance of Education
- ✈ Encourages Innovation
- ✈ Strengthens Communities

CULTURAL AGILITY AND INCLUSIVITY IN TECH TRAINING

- Respecting Cultural Components
- Tailored Learning
- Collaboration with Communities
- Diverse Groups
- Flexible Learning Paths



NORTH SAANICH,
VANCOUVER ISLAND

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OVERCOMING CHALLENGES AND BARRIERS

- ✈ Collaborative approaches
- ✈ Financial support options
- ✈ Smaller class sizes
- ✈ Foundational skills programs

FALSE CREEK,
VANCOUVER

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COMPONENTS OF SUCCESSFUL TRAINING



DESIGNING EFFECTIVE CURRICULUM

Blending of theory and practical skills.

Covers drone laws and safety, flight operations, maintenance, and applications in various fields.

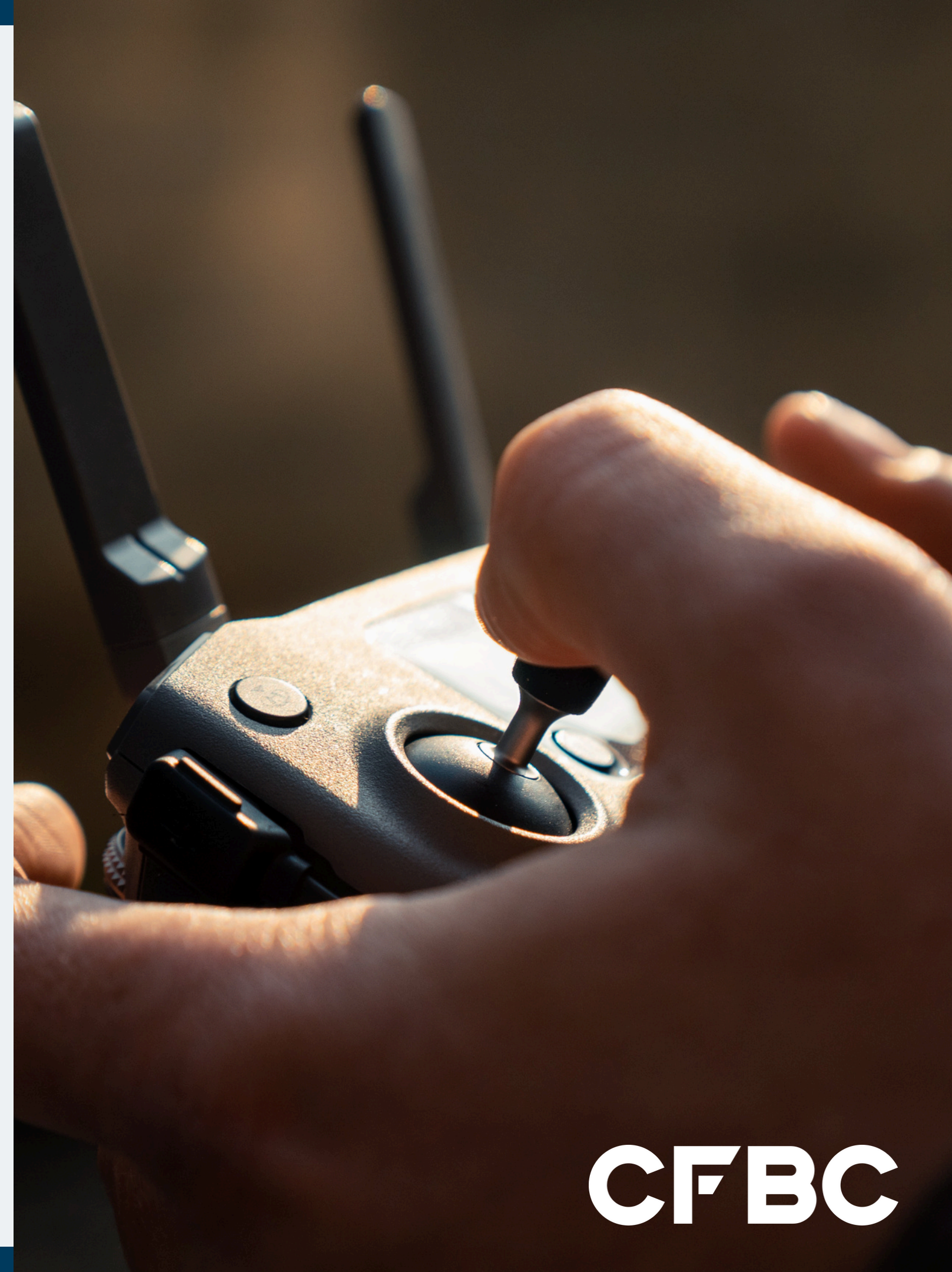
Builds competencies, hands-on learning and real-world scenarios, and includes assessments to evaluate progress.

Tailored to meet specific industry needs and incorporating feedback for continuous improvement.

INCORPORATING PRACTICAL EXPERIENCE

Hands-On Flying Time

Engage in hands-on training sessions with drones to master orientation, basic flight maneuvers, and more advanced flight modes. This approach allows for direct experience with drone operation under the guidance of experienced instructors.





PROVIDING MENTORSHIP AND SUPPORT

Mentorship and support are critical for successful curriculum design in drones and tech for Indigenous learners.

It involves transferring knowledge and skills directly, emphasizing safety and compliance with regulations, and ensuring cultural sensitivity.

This approach prepares learners for employment and community development, while building confidence and leadership skills.

It also fosters networking for professional growth and tailors learning experiences to meet the specific needs and interests of individuals and communities.

METRICS FOR SUCCESSFUL TRAINING

ESTABLISHING CLEAR LEARNING OBJECTIVES

Identifying specific skills and knowledge areas critical for drone operation

- ✈ regulatory knowledge
- ✈ safety procedures
- ✈ flight operation skills
- ✈ data collection techniques



MEASURING SKILL ACQUISITION

- Practical Flight Tests
- Written Examinations
- Simulation Assessments
- Project-Based Evaluation
- Feedback from Certified Instructors
- Portfolio Review (flight logs, reports, video footage of flights)



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MONITORING LONG-TERM CAREER SUCCESS

Tracking career progression of graduates

- ✈ employment rates in drone-related fields
- ✈ entrepreneurial ventures in drone services
- ✈ contributions to community projects using drones.

Assessing continuous education and certification renewal rates.

Engaging graduates through surveys to gather feedback on the impact of training on their professional development and adaptation to industry changes.



FUTURE MEETINGS

Fridays 10am-11:30m

~~DEC 8, 2023~~

~~Welcome back
and drone
overview~~

~~Jan 19, 2024~~

~~Applying our
knowledge~~

~~FEB 9, 2024~~

~~Industry
Opportunities~~

MARCH 8, 2024

Learning Matrix

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*Thank!
You!*

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