

# DevSecOps – Security at the Speed of Code!

BC Security Day  
November 8, 2017

# Introduction – Today's Speakers



**Michael Aldor – Twitter @michaelaldor**

- MNP's DevOps Practice Lead
- Lead's MNP's client facing solution delivery teams
- Has delivered solutions in various industries including: government, crown corporations, health, insurance, finance, and manufacturing.



**Jeff Michaud**

- MNP's DevOps Team Member
- Has delivered solutions in various industries including: government, crown corporations, municipalities, education and Non-profits

# Tell me about you...



# A little about MNP

- Largest Canadian owned accounting and consulting services firm
- Over 100 offices across the country
- 4,500+ team members





# A little about MNP Technology Consulting

- Over 200 Technology consulting practitioners
- National service offering within MNP Consulting
- Servicing clients across Canada, the United States and Europe
- Expertise in various industries, including:
  - Provincial Governments
  - Municipal Governments
  - Crown Corporations
  - Insurance
  - Healthcare
  - Agriculture
  - Natural Resources

# MNP Technology Consulting

## Strategic

- Architecture
- Governance
- IT Business Strategy Definition/Business Process Redesign
- Project Direction
- IT Organizational Design and Analysis
- IT Change Management
- Portfolio Management

## Tactical

- Project Management and Administration
- Requirements Definition
- Analysis
- Design
- Development
- Database Administration
- Implementation Planning
- Agile enablement
- DevOps enablement

## Operational

- Deployment
- Technical Support
- Troubleshooting and Tuning
- Project Delivery
- Testing
- Emergency Services
- On Demand Support
- Temporary Help

# Who has heard the term DevOps?



# Today's Topic: DevSecOps – Security at the Speed of Code!

- Why are we here?
- Why should you care?

A brown thought bubble with a white outline, containing the text "...and i should care, why?" in a white, handwritten-style font. The bubble is positioned in the center-right of the slide, overlapping a background of faint, light gray circuit-like lines.



# Challenges we see

- Need to deliver value quickly in a changing environment
- Lack of alignment between development and operations
- Security tests are typically left until late in the process
- Complex environments and ever changing security concerns
- Use of Opensource libraries and cloud infrastructure needs review



# DevOps Results (2016)

High-performing teams deploy more frequently and have much faster lead times.



200x more frequent deployments



2,555x shorter lead times

They make changes with fewer failures, and recover faster from failures.



3x lower change failure rate



24x faster recovery from failures

Source: State of DevOps Report 2016

# What is DevOps?



## Question:

What is the biggest challenge in incorporating DevOps and DevSecOps?





# Question:

How do you implement DevOps?

# The three ways of DevOps

## Way #1

### Accelerate Flow

- Left to right
- Systems thinking
- Increase visibility
- Just in time deployments
- Shorten lead time

## Way #2

### Feedback Loop

- Right to left
- Many short feedback loops
- Learn faster
- Fix defects faster

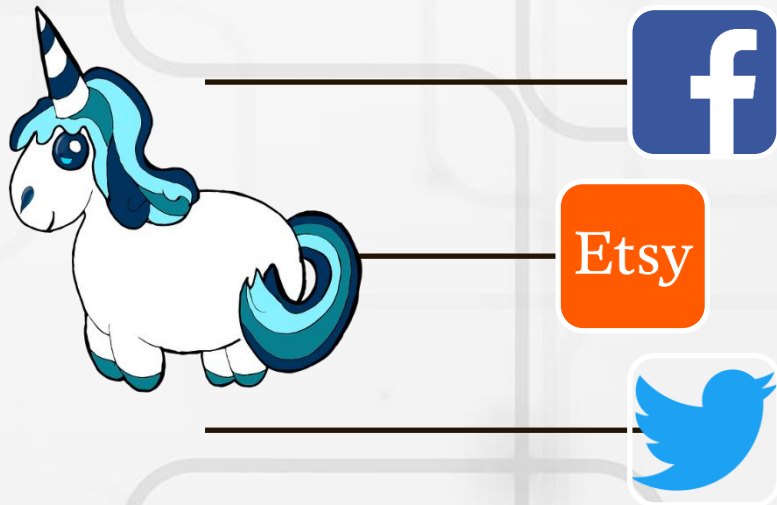
## Way #3

### Continuous Innovation

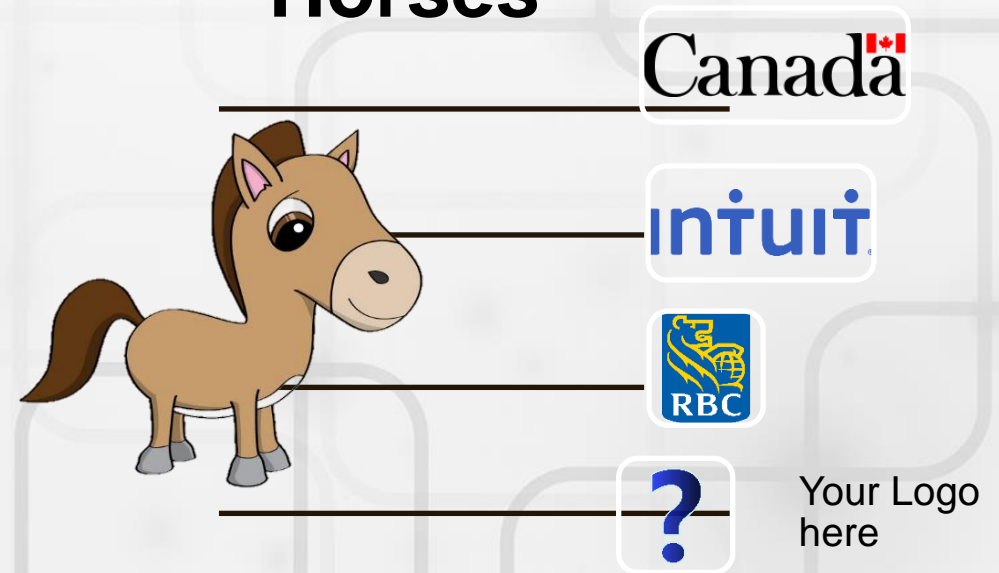
- Continual experimentation
- Measure success
- Learn from failures
- Repeat and practice dev/ops

# Not just for Unicorns anymore

## Unicorns



## Horses

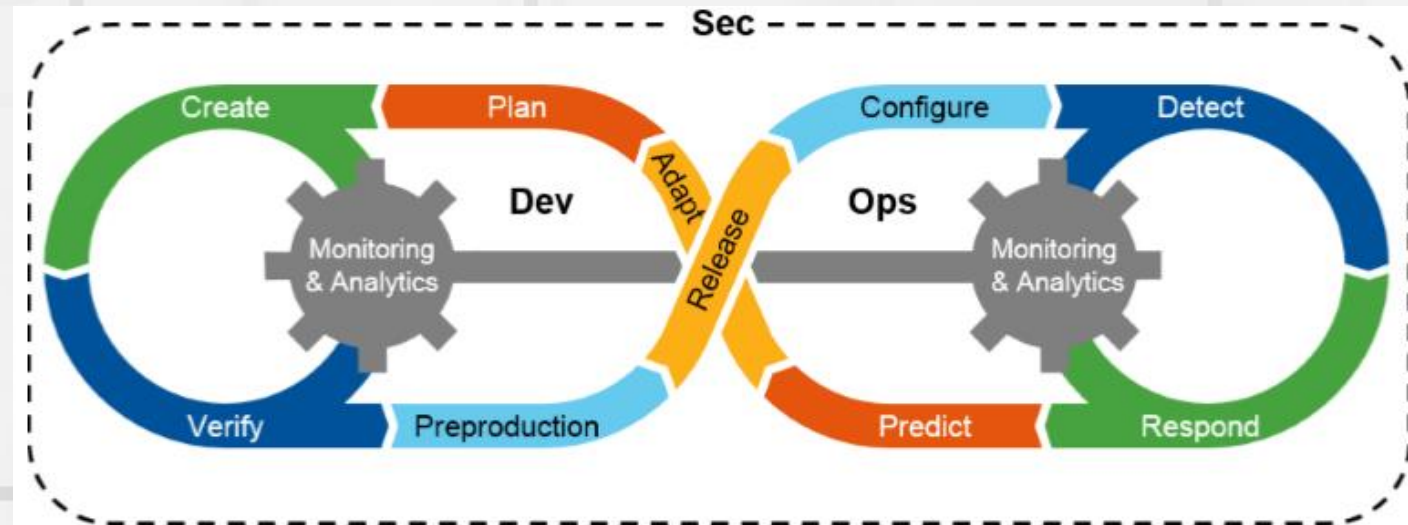


## Question:

How do I am make sure my DevOps processes are secure?

# Introducing DevSecOps

- DevSecOps is an objective where security checks and controls are applied automatically and transparently throughout the development and delivery of IT-enabled services in rapid-development DevOps environments
- Make security a shared responsibility



Source: Gartner (September 2016)



## Question:

What is the role of security professionals in DevOps/DevSecOps?

# Roles and Activities for your Cross Functional Team

## DevSecOps

Roles:

Security  
Engineering

Security  
Operations

Compliance  
Operations

Security  
Science

Activities:

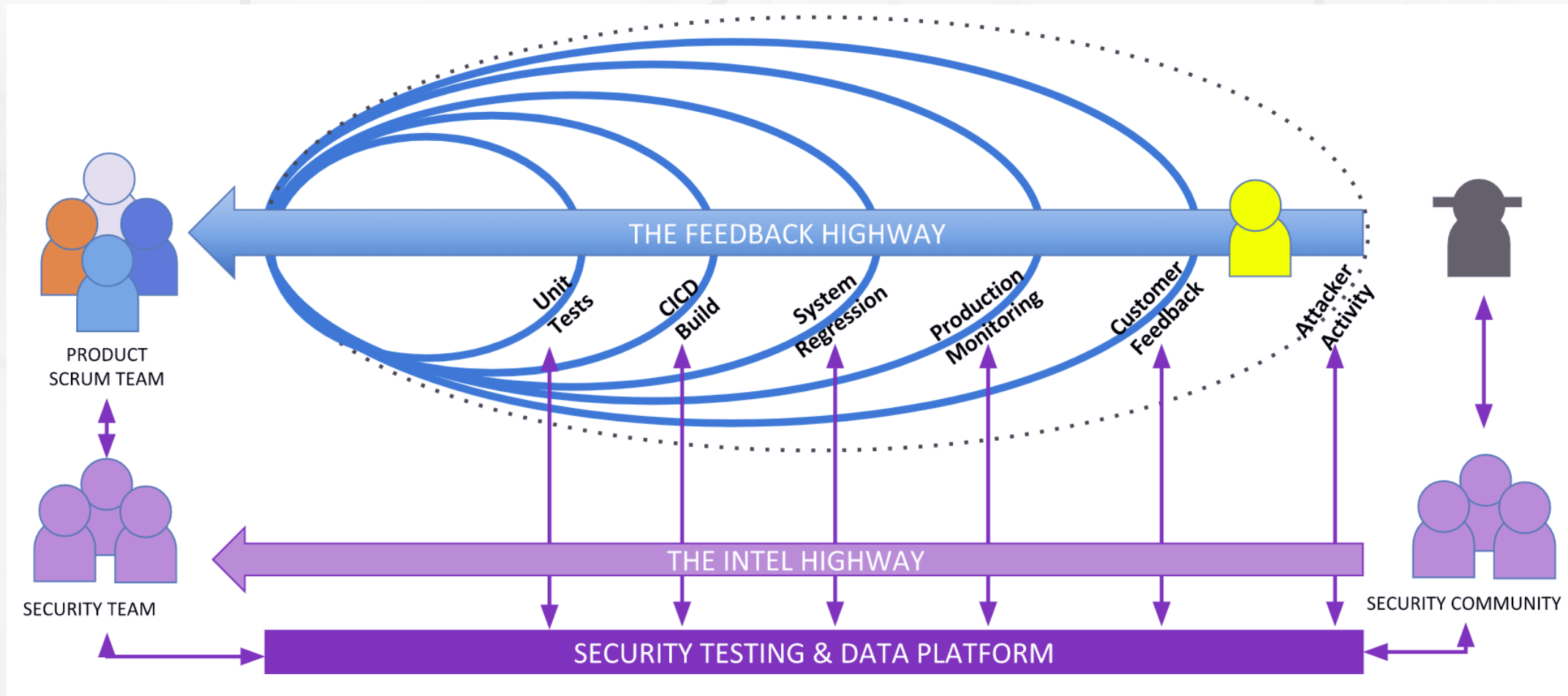
Experiment,  
Automate,  
Test

Hunt,  
Detect,  
Contain

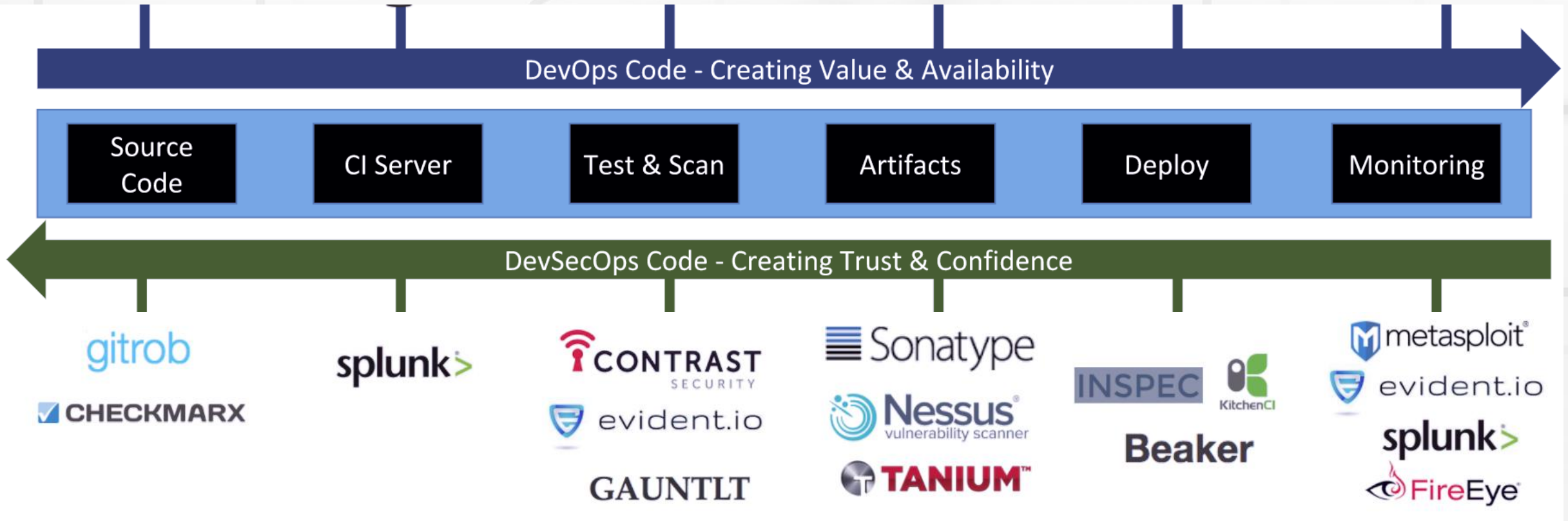
Respond,  
Manage,  
Train

Learn,  
Measure,  
Forecast

# Use tools and practices to get feedback



# There are tool chains to help automate



## Question:

Are the core practices of DevSecOps that much different then what we do today?



## Core differences:

- Tightly integrated collaborative team
- Automation
- Visibility
- Results

# Common DevSecOps adoption practices

1. Security controls are programmable and automated wherever possible
2. Use identity access management and role-based access control to provide separation of duties
3. Implement a simple risk and threat model for all applications
4. Scan custom code, applications and APIs
5. Scan for open source software issues in development
6. Scan for vulnerabilities and correct configuration in development
7. Measure system integrity and ensure correct configuration at load
8. Assume compromise; monitor everything; architect for rapid detection and response
9. Lock down production infrastructure and services

## Parting Thoughts:

- DevOps principles help organizations deliver value faster with greater reliability.
- DevSecOps applies DevOps practices to securely deliver and maintain solutions.
- To do this, it takes everyone working as a team.

# What we covered

- Understand why we are talking about DevOps and DevSecOps
- What is DevOps?
- Understand the 3 principles of DevOps: flow, feedback, continuous innovation
- What is DevSecOps?
- Some practices to adopt

# Recommended reading

## The Phoenix Project

A Novel About IT, DevOps, and Helping Your Business Win

Authors: Gene Kim, Kevin Behr, and George Spafford

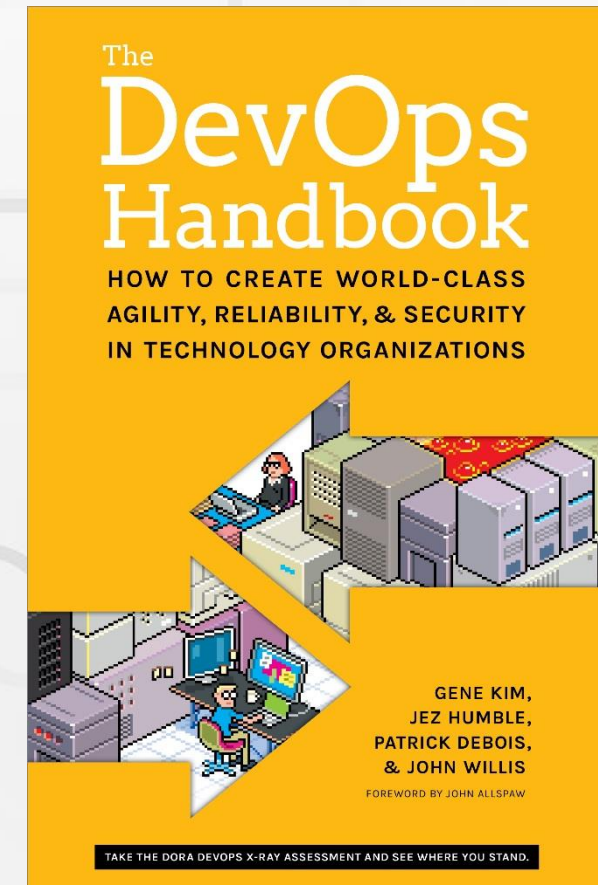


# Recommended reading

## The DevOps Handbook

How to Create World-Class Agility,  
Reliability, & Security in Technology  
Organizations

Authors: Gene Kim, Jez Humble, Patrick Debois, John Willis



# Contacting Us



**contact us**

Michael Aldor

- Email: [Michael.Aldor@mnp.ca](mailto:Michael.Aldor@mnp.ca)

Jeff Michaud

- Email: [Jeff.Michaud@mnp.ca](mailto:Jeff.Michaud@mnp.ca)



# Questions



# Thank You!



- Please Submit your evaluations forms!