

The Power of Exploratory Scenario Planning

Strengthening Piney's Wildfire Preparedness

Manitoba Planning Conference 2026



CONSORTIUM FOR
SCENARIO PLANNING

Lincoln Institute of Land Policy



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Rural Municipalities
PINEY

LAND ACKNOWLEDGMENT

We acknowledge that we gather, plan, and work on lands within Manitoba that are part of the Treaty Territories and the ancestral homelands of Indigenous Peoples, including the Anishinaabe, Cree, Dakota, Dene, Inuit, and the Métis Nation.

Since time immemorial, Indigenous Peoples have lived in respectful relationship with the land, water, and ecosystems, guided by deep intergenerational knowledge.

We are grateful for the opportunity to work and plan on these lands and honour the original Peoples and ongoing stewards of this place.



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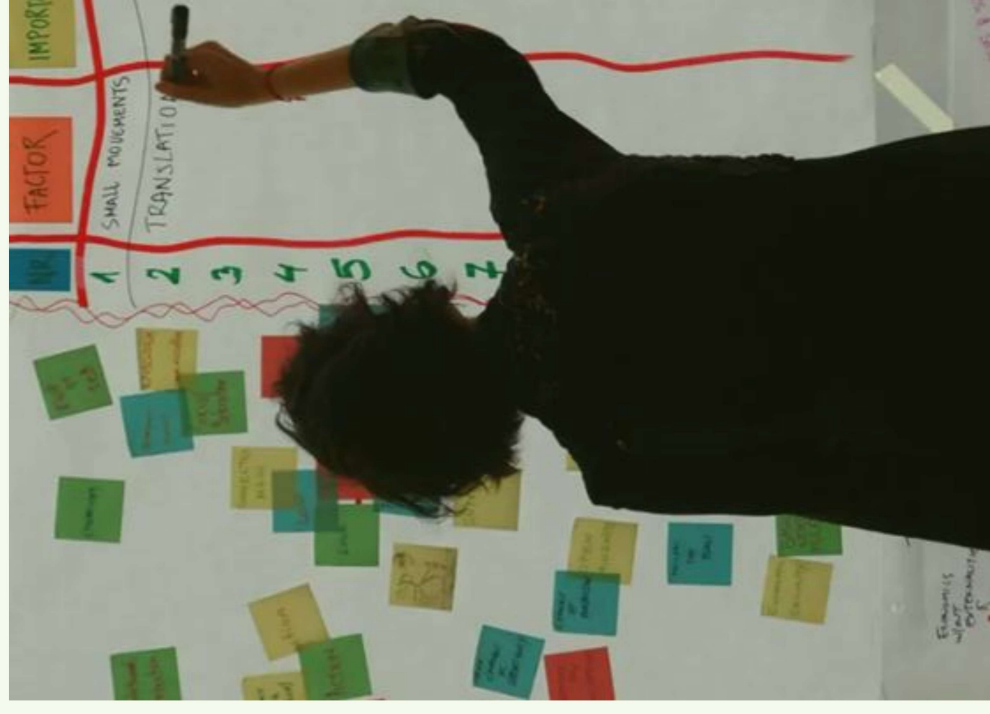
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Planning for the Expected Unexpected

Agenda

- Understanding Scenario Planning
- Piney's Journey with Scenario Planning
- Scenario Planning for Community Planning
- Key Takeaways



PART ONE

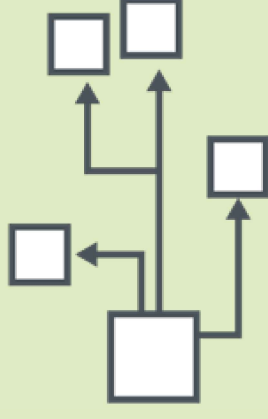
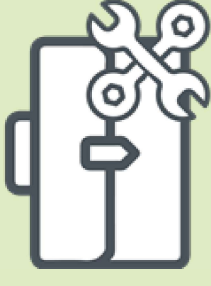
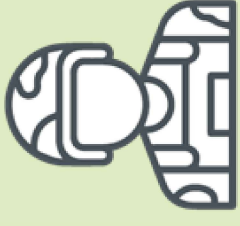
Understanding Scenario Planning

What it is, where it came from, and how it works

HISTORY

Scenario Planning

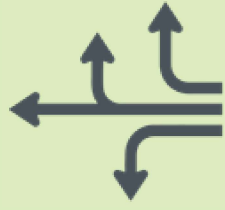
- ❑ Started as a military practice.
- ❑ It then was used as a business tool.
- ❑ Adapted into planning practice as a way to plan for multiple different futures.
- ❑ Today it ranks among the top ten management tools in the world in terms of usage.



TOP10

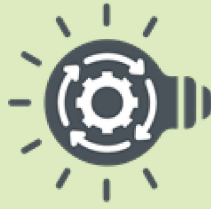


WHAT IS SCENARIO PLANNING?



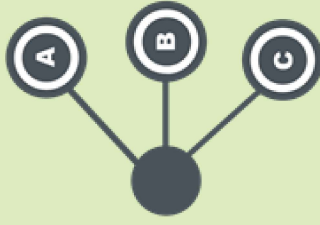
1

Scenario planning is a practice through which communities plan for an uncertain future by exploring multiple possibilities of what might happen.



2

It is a structured process to support decision making that helps navigate the uncertainty of the future in the short and long term.



3

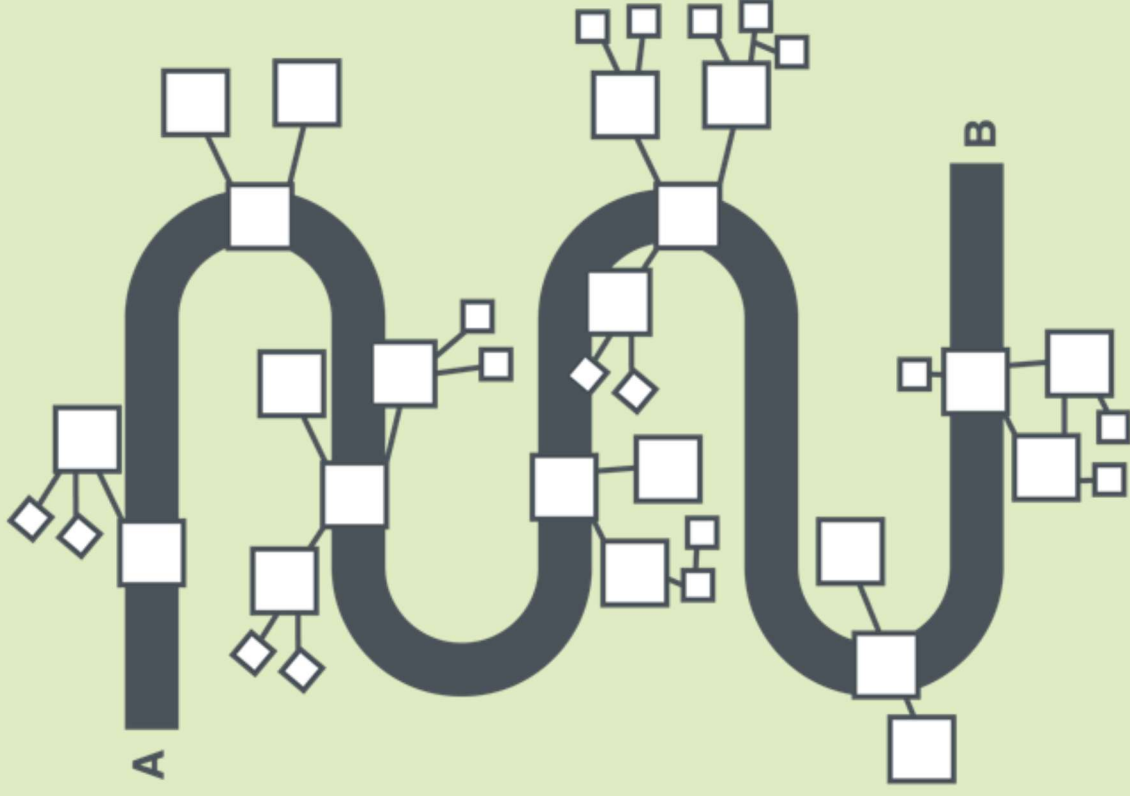
Scenario planning involves the creation (often collaboratively) of plausible future states by selecting combining and extending drivers of change. The scenarios lay out a groups future and predict what might happen. Stakeholders can discuss outcomes presented by the scenarios and debate the merits of trade-offs.

WHAT IS SCENARIO PLANNING?

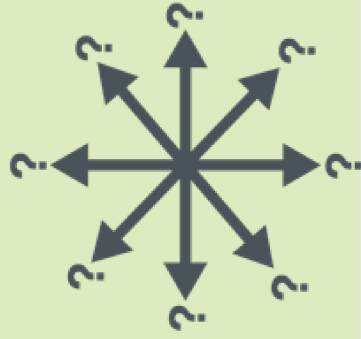
<https://vimeo.com/371935801>

HOW DOES IT DIFFER FROM TRADITIONAL PLANNING?

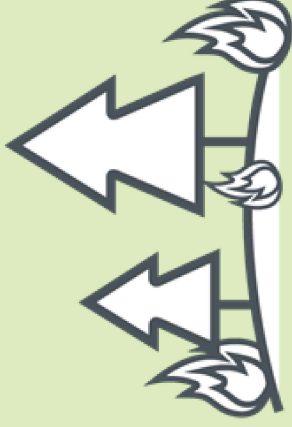
- Traditional planning processes follow the “predict-and-plan” model.
- Exploratory scenario planning, plans for multiple plausible futures and plans for all of them.



WHY SCENARIO PLAN?



Explore various futures
and what might happen



How do we plan for the
unexpected?



Provides opportunity
to be prepared for uncertain
times

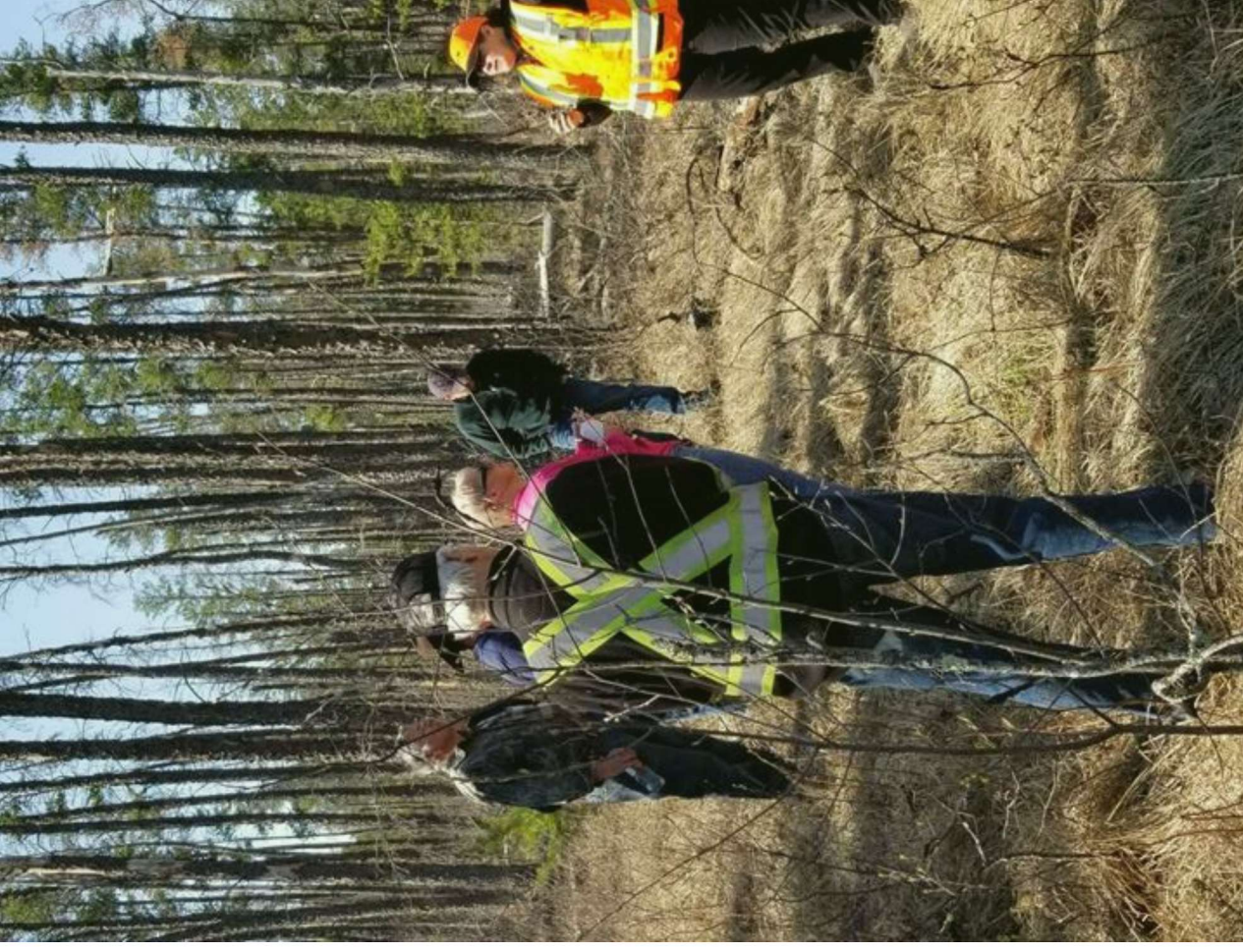
HOW DOES IT WORK?

- Exploratory scenario planning processes begin with the development of qualitative scenarios that describe some plausible future conditions for a community.
- The scenarios are developed through group and stakeholder discussions of key future uncertainties and planning analysis.



HOW DOES IT WORK?

- For example, if a community's stakeholders identify population change as a key uncertainty, the scenarios would describe a plausible range of population changes under different future conditions.
- These scenarios are then used to engage the public to develop plans, policies and strategies.



PART TWO

Piney's Journey with Scenario Planning

How the Rural Municipality of Piney applied exploratory scenario planning to prepare for wildfire risk in a changing climate

RM OF PINEY

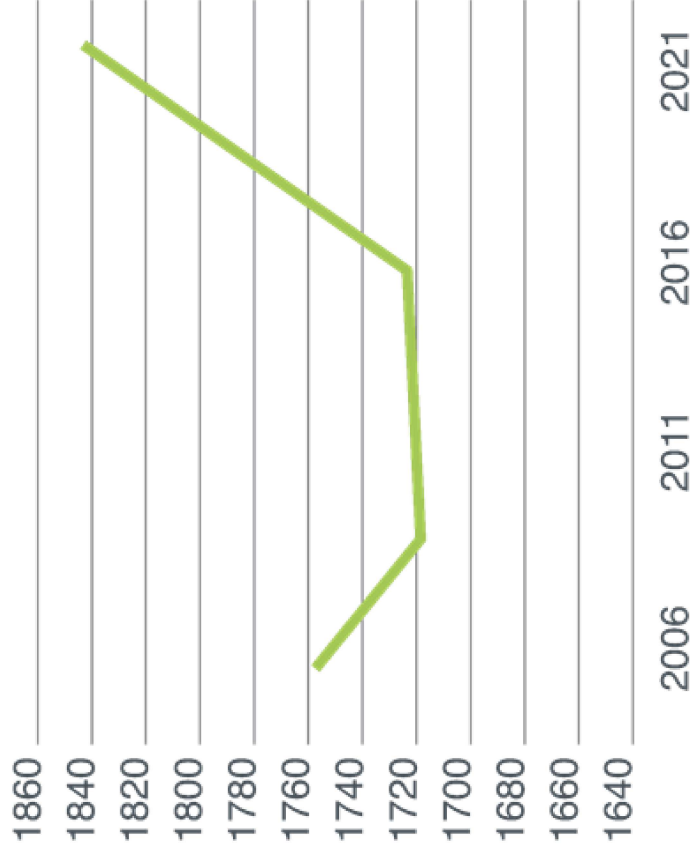
The RM of Piney covers an area of 608,997 acres or 2,400 square kilometers and is located in Southeast Manitoba



RM OF PINEY CHARACTERISTICS

Rich in resources from forestry to open space, agricultural land, peat moss, and gravel.

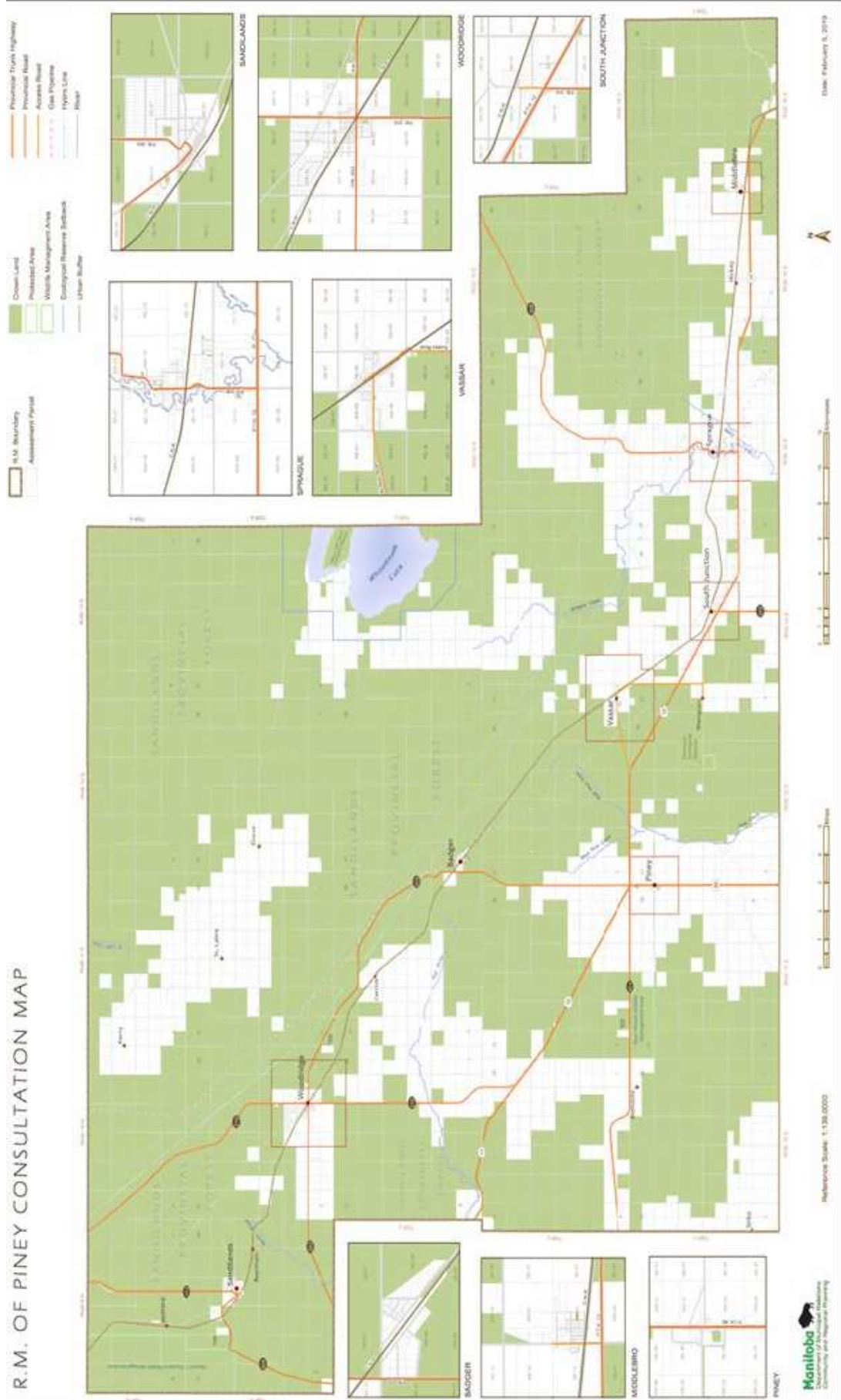
The population has resurged with a population increase in the last census.



	Piney		Manitoba	
	2006	2021	2006	2016
0-14 years	17.7%	15.4%	19.6%	19%
15-64 years	62.1%	58.7%	66.3%	65%
65 and older	20.2%	25.5%	14.1%	16%

LAND OWNERSHIP CHARACTERISTICS

R.M. OF PINEY CONSULTATION MAP



Land Ownership

75% of the land is held by the crown

RM OF PINEY PROTECTIVE SERVICES

- 911 and ambulance
- RCMP
- Fire services (Piney, Sprague & Woodridge)
- Disaster Management



Polar vortex breaks temperature records across Prairies, bitter cold expected to linger

Environment Canada has issued a cold weather warning for Alberta, Saskatchewan and Manitoba

Mickey Djuric · CBC · Posted: Feb 08, 2021 7:39 AM CST | Last Updated: February 8, 2021

Manitoba's winter road system finally opens for season about a month late

Construction fell behind due to warmer temperatures in December and January

CBC News · Posted: Feb 17, 2021 7:35 AM CST | Last Updated: February 17, 2021

Manitoba floods continue to wreak havoc on communities across the province



By Sam Thompson · Global News

Posted May 4, 2022 9:30 am · Updated May 4, 2022 9:31 pm

Pothole season hits Manitoba drivers in the pocket, leads to spike in claims to public insurer

324 pothole-related claims last month, compared to 56 in March 2021, MPI says

Jenn Allen · CBC News · Posted: Apr 21, 2022 4:22 PM CDT | Last Updated: April 21, 2022

Wildfires continue to cause air quality issue northern Manitoba

Kayla Rosen
CTVNewsWinnipeg.ca
Published July 22, 2022 8:20 a.m. CDT

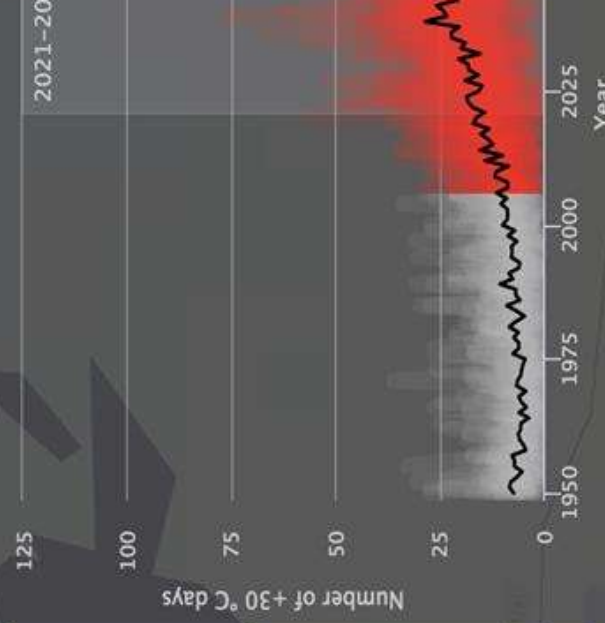
Examples of
Climate-Related Hazards
Affecting Manitoba
in Recent Years

Region
KENORA

Projected change in mean
Number of +30 °C days
High Carbon → More climate change

1976-2005 2021-2050
7.5 → **21.1**

Up ▲
+13.6



KENORA

CLIMATE CHANGE ⓘ

LESS MORE

TIME PERIOD ⓘ

RECENT PAST 2021-2050 2051-2080

Variable	Recent past (1976-2005)	Near term forecast (2021-2050)	Change
Hot Weather Very hot days (+30)	7.4 days	21.1 days	Increase 13.1 days 177% increase
Hot Weather Longest spell +30	2.2 days	5.7 days	Increase of 3.5 days 159% increase
Hot Weather Heat Waves	0.9	2.9	Increase of 2 222% increase
Hot Weather Average length of heat wave	2.2 days	4.5 days	Increase 2.3days 104% increase
Cold Weather Cold days (-30)	17.1 days	8.3 days	-8.7 days 50% decrease
Cold Weather Frost days	190.6 days	170.7 days	19.9 days 10% less frost days
Temperature Annual Mean Temperature	2.6 C	4.9 C	2.3 C 88% increase
Precipitation Mean spring precipitation	125mm	135mm	9mm increase 7% increase
Precipitation Heavy Precipitation days	14.1 days	15.5 days	1.4 days increase 10% increase
Agriculture Frost free season	126.5 days	147.5 days	21 days 16% longer
Agriculture Date of first frost	September 25	October 7	Increase 12.3

OUR 8-STEP SCENARIO PLANNING PROCESS



STEP 1

Develop a Focal Question/ Scope of Work

This is the question that guided all the work.

In our case:

“In the face of a changing climate, how can the Rural Municipality of Piney prepare and plan for the uncertain futures of wildfire frequency and intensity over the next 25 years?”

“Given the Federal and Provincial government control of land and fire mitigation in the RM of Piney, what can the RM of Piney do to reduce the risk of fire and prepare for the potential of more wildfires over the next 25 years?”

STEP 2

Identify the driving forces of change

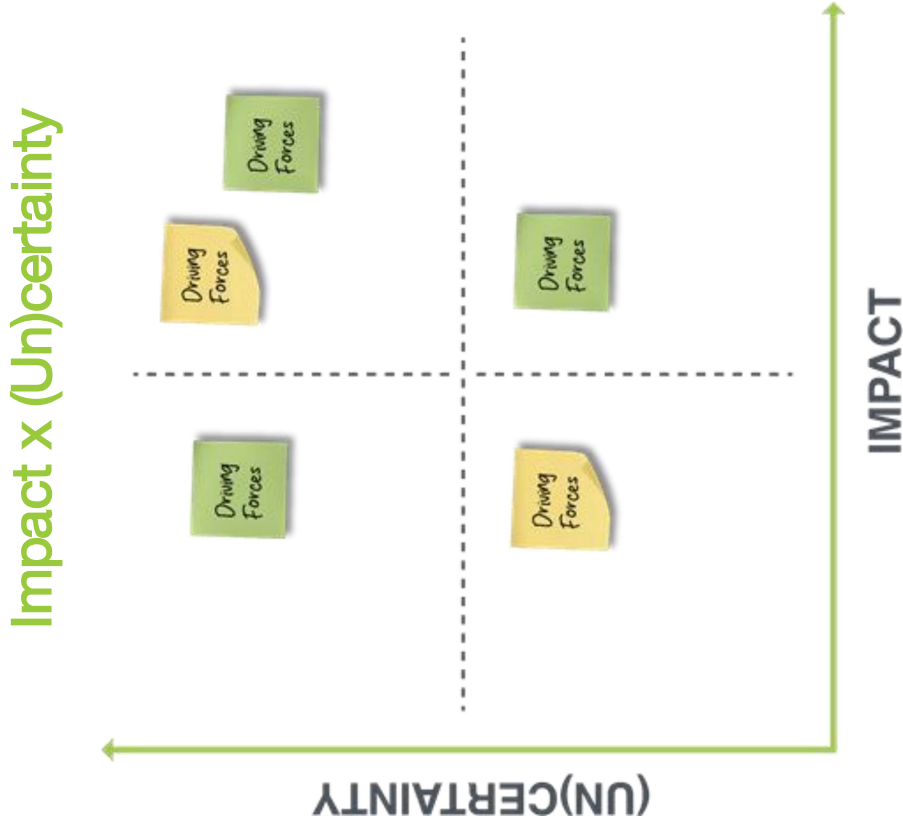
- Identify the driving forces through a mind mapping / brainstorming exercise
- Driving forces are “occurrences that push forward trends.”
- Discuss the challenge in the focal question and what are the driving forces behind it.
- Using a **PESTLED** (Political, Economic, Social, Technical, Legal, Environmental, and Demographics) model identify driving forces



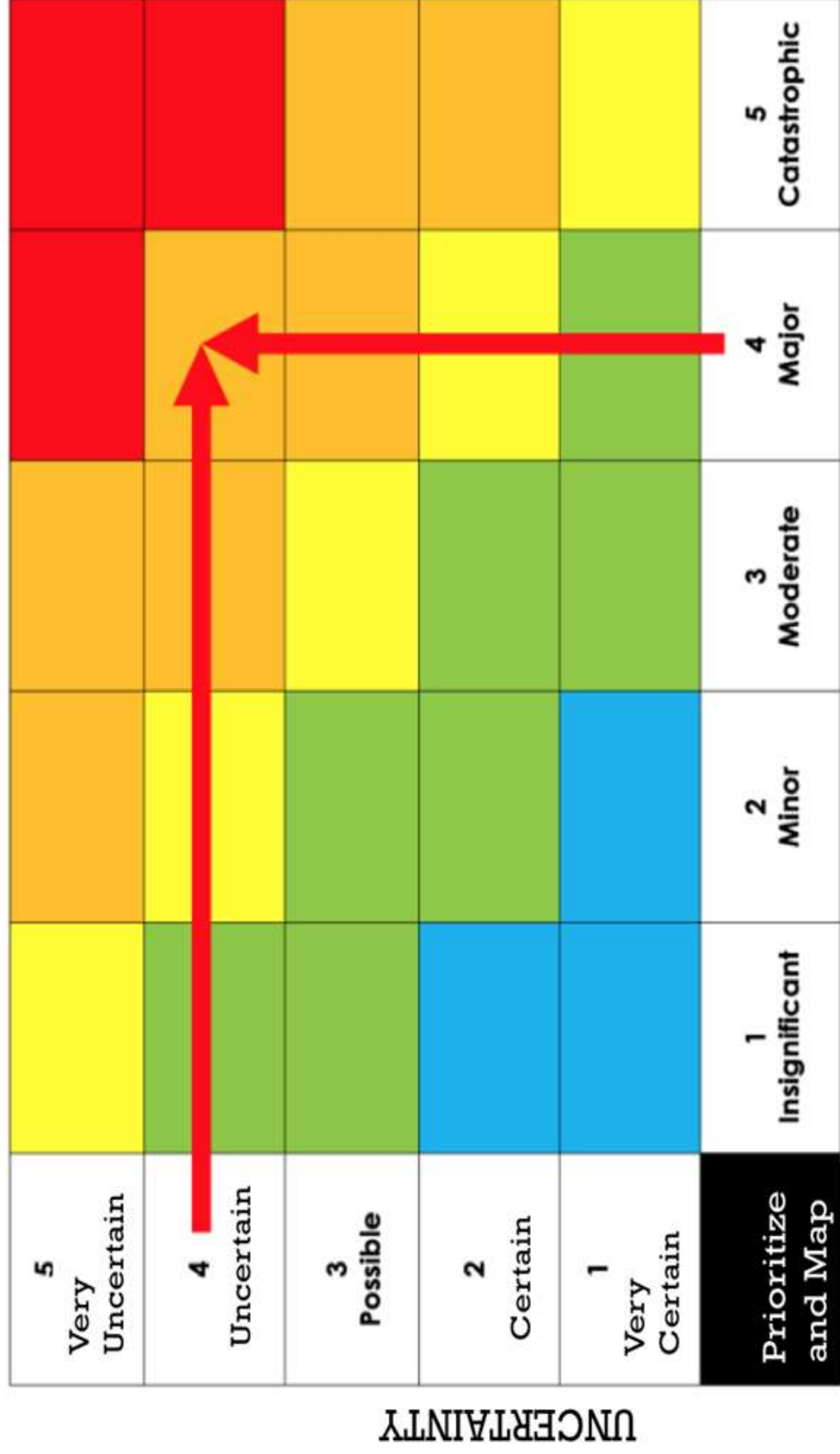
STEP 3

Prioritize and Map

- Rank the driving forces
- Which ones are more impactful/
less certain?
- Create two lists- critical certainties and
critical uncertainties

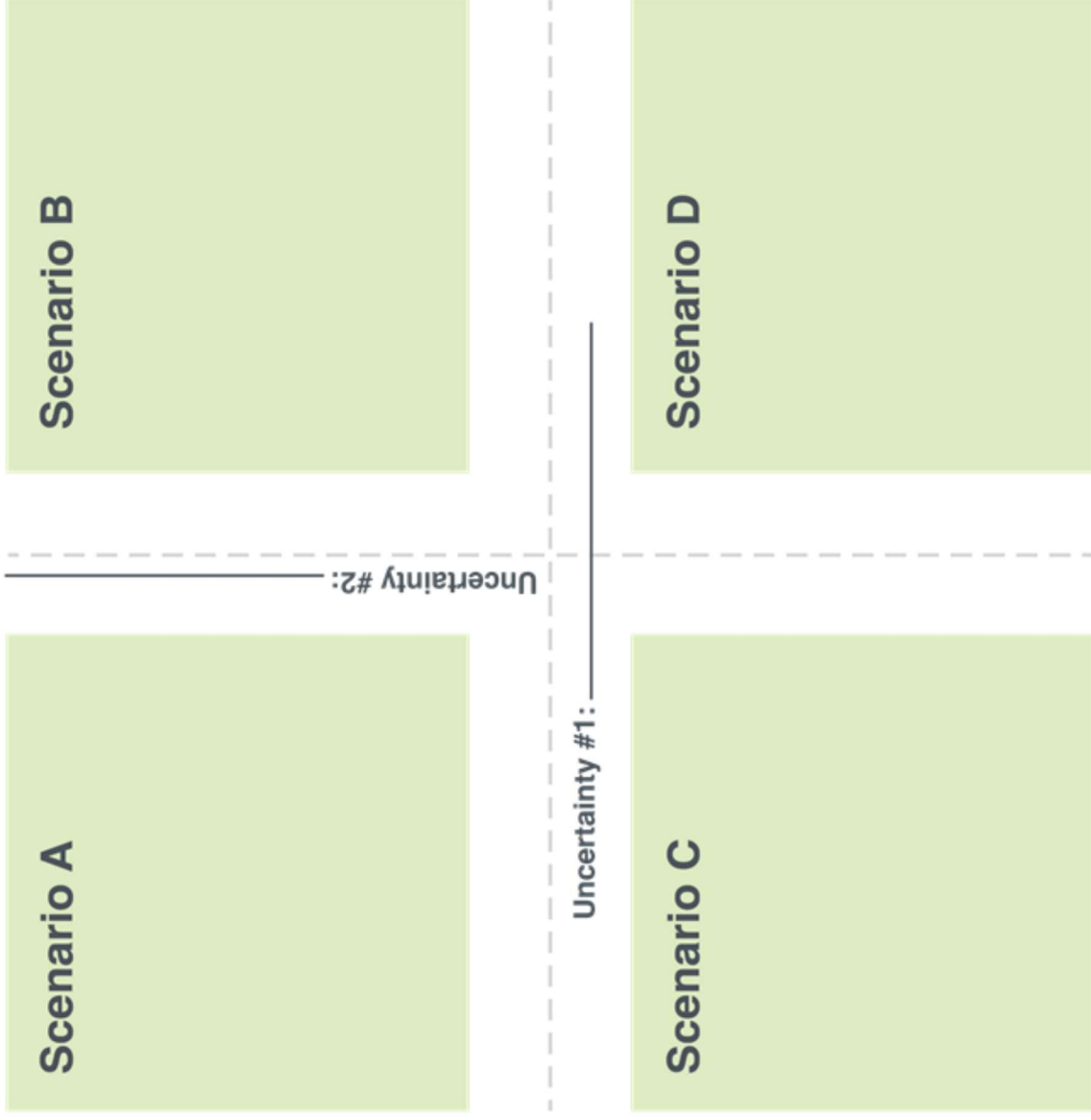


Revised - STEP 3: Prioritize and Map



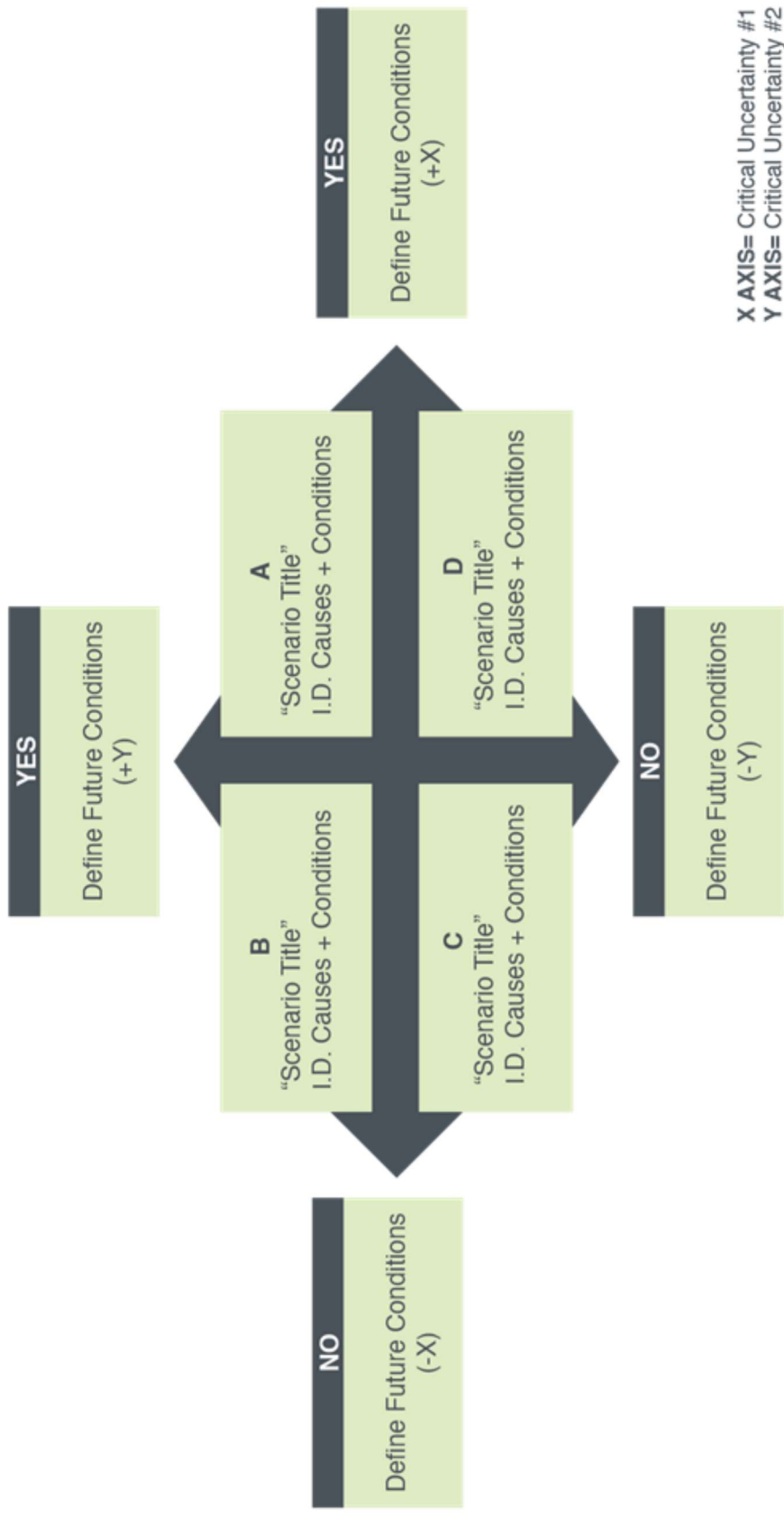
IMPACT

Step 4: Create Scenario Matrices



STEP 5

Develop Scenario Narratives



STEP 6

Explore Implications

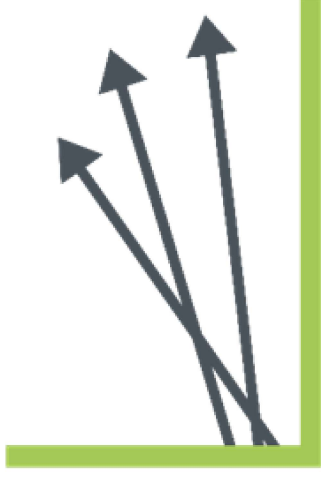
When you look at the narrative –
What are the implications?

Specifically implications to:

- Community and people
- Critical services
- Buildings and infrastructure
- Local economy
- Natural environment
- Wildfire risk/ recovery

How can we address implications?

Discuss
Implications & Paths



STEP 7

Identify Strategies

- Identify a strategy for each implication
- Review list of strategies
- Identify common strategies
- Which strategies work in all scenarios?



STEP 8

Develop a Plan

- After the workshops are over a plan will be created for how to implement the strategies that have been identified.
- The draft plan will be shared and circulated for feedback and input.
- The plan will help ensure the municipality is prepared and ready for climate hazard resiliency and recovery.

STAKEHOLDER SCENARIO PLANNING PROCESS OVERVIEW

Workshop 1

Develop a Focal
Question



Mind Mapping &
Brainstorming



Map Future
Possibilities



Workshop 2

Develop Scenario
Narratives



Create Matrices

Workshop 3

Explore
Implications



Identify
Strategies



WORKSHOP 1

Agenda

Agenda Item	Time	Item Details
Introduction	10 minutes	<ul style="list-style-type: none">-Name-Connection to the Municipality-Community you live in-What you hope to get out of this process
Introduction to Scenario Planning	10 minutes	<ul style="list-style-type: none">- What is scenario planning?-How does it differ from traditional planning?-Why do scenario planning?-How does it work?
Scenario Planning Process Overview	20 minutes	<ul style="list-style-type: none">-Introduce the RM of Piney 7-step scenario planning process-Introduction to the RM of Piney statistics
Develop a Focal Question	20 minutes	<ul style="list-style-type: none">-Discussion on wildfire resiliency-Discussion wildfire recovery-Discuss draft focal questions
Identify Driving Forces of Change	40 minutes	<ul style="list-style-type: none">-Explain PESTLED model-Use PESTLED model to identify driving forces-Discussion on driving forces
Prioritize and Map	40 minutes	<ul style="list-style-type: none">-rank driving forces based on uncertainty and impact

WORKSHOP 1

Step 1 Discussion on the Focal Question

- Discussion on resiliency and recovery
- Discussion on Focal Question

Why this question?

- RM of Piney has a history of wildfires
- Wildfires were listed as a primary concern in the climate adaptation action plan process
- Project was for disaster recovery and resiliency

Discussion on Focal Question

WORKSHOP 2

Agenda

Agenda Item	Time	Item Details
Introduction	5 minutes	-Welcome back
Review of last session	10 minutes	-Any changes -Focal question -Uncertainties
Prioritize and Map	20 minutes	-Use Dotmocracy Process to vote on the top uncertainties
Create Matrix	40 minutes	-create the matrices based on the uncertainties
Develop Narratives	40 minutes	-Break into 2 groups -create narratives for two quadrants -consider community, environment, buildings,
Share Narratives	20 minutes	-rank driving forces based on uncertainty and impact

WORKSHOP 2

PRIORITIZE THE UNCERTAINTIES

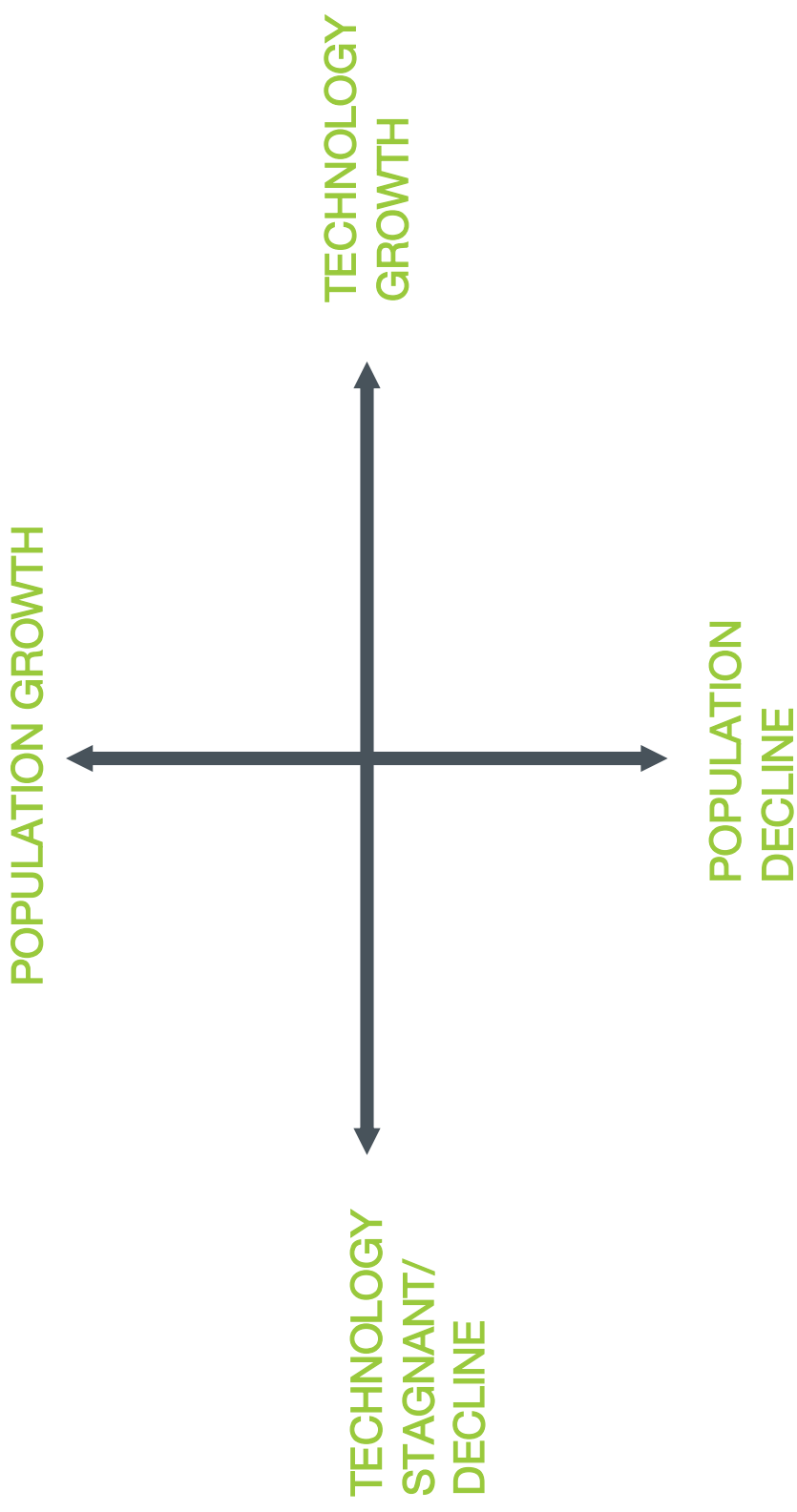
Dotmocracy- Vote with your dots on the two that you think are the most impactful and that you feel are the most uncertain.

After voting the two driving forces were:

- Population growth ↑ and decline ↓
- Technology acceleration ↑ and collapse/stagnancy ↓

WORKSHOP 2

Create a Matrix



WORKSHOP 3

Agenda

Agenda Item	Time	Item Details
Introduction	5 minutes	-Welcome back
Review of last session	10 minutes	-Review Summary of Workshop 1 and 2 -Focal question, uncertainties -Matrix, Scenarios & Narratives - Update
Identify Implications	40 minutes	-Break into 2 groups -Each group Identify Implications for 2 Narratives -consider community, environment, buildings, people, infrastructure
Share Implications	40 minutes	-come back to 1 group -review implications -amend implications
Identify Strategies	40 minutes	-Break into 2 groups -create strategies
Share Strategies	20 minutes	-come back to 1 group -review strategies -amend strategies

WORKSHOP 3

Brainstorm Actions to Address Implications

Brainstorm Actions or Strategies to Address Implications

COMMUNITY AND PEOPLE

Implication

Strategy

LOCAL ECONOMY

Implication

Strategy

BUILDING AND INFRASTRUCTURE

Implication

Strategy

NATURAL ENVIRONMENT

Implication

Strategy

CRITICAL SERVICES

Implication

Strategy

How can Piney be more resilient and prepared for wildfire recovery?

Workshop 4

Summary of Sessions one- three:

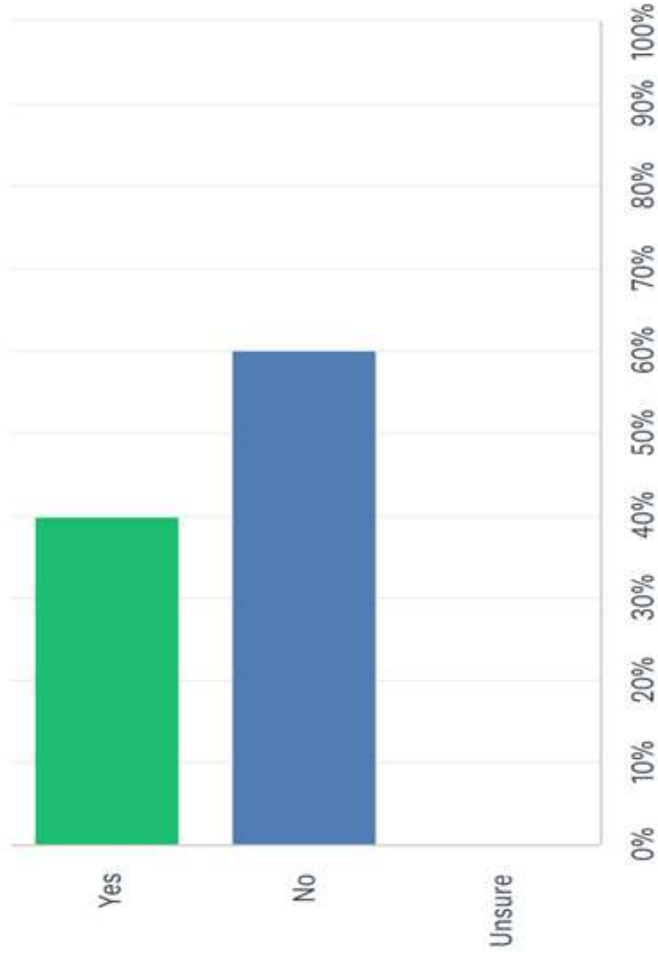
- Review of work to date
- Create an action plan



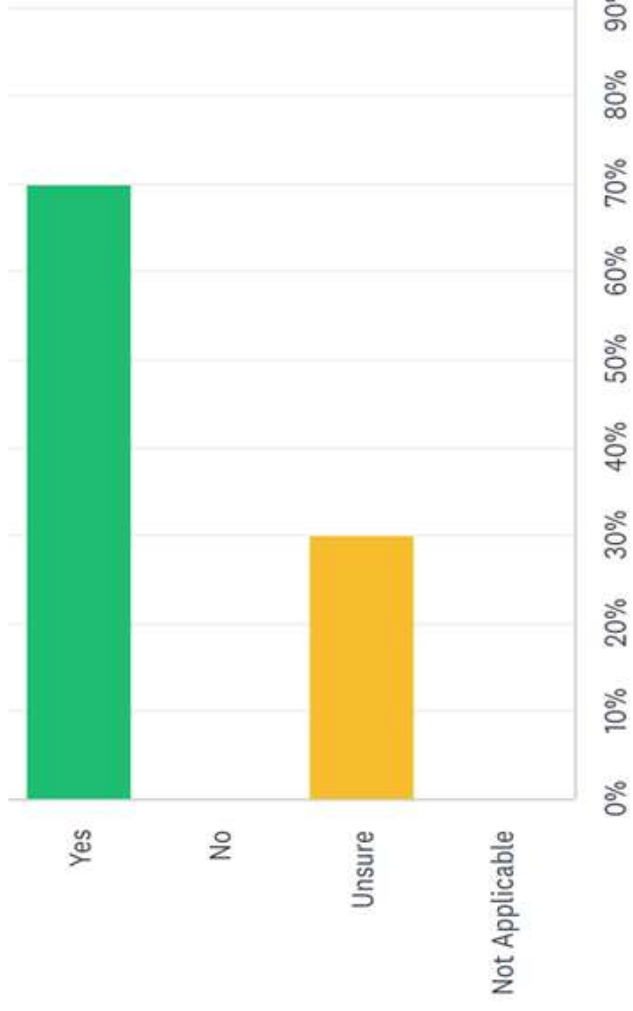
LESSON LEARNT

Feedback from participants on Scenario planning:

Had you heard about scenario planning before?



Are you likely to use scenario planning again?



PART THREE

Scenario Planning for Community Planning

A tool for creating effective, resilient community plans

FROM PINEY TO YOUR COMMUNITY

What we learned from Piney's experience applies far beyond wildfire preparedness.

1

Participatory

Brings together local expertise, diverse perspectives, and lived experience — creating plans that reflect the whole community, not just technical assumptions.

2

Uncertainty-Ready

Instead of relying on a single forecast, scenario planning tests decisions against multiple plausible futures — so plans hold up when conditions change.

3

Practical & Low Cost

The process uses facilitated workshops, existing data, and community knowledge. No expensive software or consultants required — just structured conversation.

WHERE SCENARIO PLANNING FITS

Scenario planning complements and strengthens many areas of planning practice.

Development Plans

Explore how different population, economic, and environmental trends might shape land use patterns over 20-25 years.

Growth Management

Test growth projections against multiple scenarios — rapid growth, slow growth, or decline — to build flexible servicing strategies.

Climate Resilience

Anticipate a range of climate impacts and develop robust strategies for adaptation, mitigation, and recovery.

Infrastructure Planning

Stress-test infrastructure investments against multiple futures to ensure long-term value regardless of which scenario unfolds.

Strategic Plans

Align municipal priorities with plausible future conditions, ensuring strategic plans remain relevant as circumstances change.

Economic Development

Identify economic opportunities and risks across different scenarios to build diversified, resilient local economies.

TRADITIONAL PLANNING VS. SCENARIO PLANNING

Why scenario planning gives communities an edge in uncertain times.

Traditional Planning

Predicts a single future

Plans for what we expect

Expert-driven analysis

Static, fixed document

Extends current trends forward

Reactive to change

Scenario Planning

Explores multiple plausible futures

Prepares for what we don't know

Community-driven participation

Living, adaptable framework

Tests decisions against uncertainty

Proactive and resilient

DEVELOPMENT PLANS & GROWTH MANAGEMENT

Scenario planning transforms development planning from a static exercise into an adaptive, forward-looking process.

- Create policies that work with different growth trajectories and a variety of uncertain futures
- Explore how demographic shifts (aging population, immigration, urban migration) affect housing and service needs
- Evaluate infrastructure investments under both growth and decline scenarios
- Build flexibility into plans
- Create strategies that work under a variety of conditions

The Cape Cod Lesson

In the 1980s review of the Cape Cod's development plan data showed that the population was aging. Traditional planning suggested that the schools should be converted into seniors housing — but completely missed the scale of population growth.

Scenario planning led to a realization that there was a need for younger people to provide services for the aging population. This led to building more schools to accommodate the younger population that supported the aging population.

Scenario planning asks not just "where are we going?" but "where could we go — and how do we prepare?"

CLIMATE RESILIENCE & DISASTER PREPAREDNESS

Climate change is creating planning conditions where the future is deeply uncertain. Scenario planning is built for exactly this challenge.

Before: Building Preparedness

- Identify wildfire, flood, and extreme weather risks across multiple climate futures
- Develop evacuation and emergency response plans that work under different conditions
- Engage community members so they understand and can act on preparedness strategies
- Stress-test land use and building policies against worst-case scenarios

After: Guiding Recovery

- Rebuild with future scenarios in mind — not just restoring what was there before
- Adapt recovery plans as new information emerges about changing conditions
- Ensure recovery investments are resilient across multiple future scenarios
- Use the Jasper wildfire lesson: lack of preparedness for unexpected conditions was a key finding

STRATEGIC & ECONOMIC DEVELOPMENT

Scenario planning strengthens strategic decision-making by anticipating change rather than reacting to it.

Municipal Strategic Plans

Align council priorities with plausible future conditions. Test whether strategic investments hold up under different economic, demographic, and environmental scenarios. Create adaptive strategies with built-in triggers for when conditions change.

Economic Development

Explore diverse economic futures — from industry growth to sector decline. Identify which industries and investments are robust across scenarios. Help rural municipalities diversify beyond single-industry dependence.

Post-Disaster Rebuilding

Communities recovering from disaster often rush to restore what was lost. Scenario planning helps them ask: given the future we're building toward, how should we rebuild differently? This shifts recovery from reactive to strategic.

THE POWER OF CHALLENGING ASSUMPTIONS

In Cape Cod, there was a widely held belief that an aging population meant converting schools into nursing homes. Through scenario discussions, a different insight emerged: an aging population requires a younger workforce. That led to investing in schools to attract younger families.

Scenarios create space to question assumptions

When diverse stakeholders explore multiple futures together, deeply held assumptions surface and can be tested. This leads to more creative, resilient solutions that a single expert analysis might miss.

Community knowledge drives better outcomes

In Piney, participants brought local expertise about fire behavior, land conditions, community dynamics, and resource constraints that no technical analysis could replicate. The result was a plan grounded in real community knowledge.

GETTING STARTED WITH SCENARIO PLANNING

A practical roadmap for bringing scenario planning to your community.

- 1 Define Your Challenge**
Identify the planning question or uncertainty your community faces. What keeps you up at night?
- 2 Assemble Your Stakeholders**
Bring together diverse voices — residents, business owners, service providers, elected officials, youth, and experts.
- 3 Identify Driving Forces**
Use PESTLED or similar frameworks to brainstorm the forces shaping your community's future.
- 4 Build Your Scenarios**
Select the most impactful uncertainties and create a scenario matrix with four plausible futures.
- 5 Explore & Strategize**
Discuss implications of each scenario. Identify strategies that work across multiple futures.
- 6 Create Your Action Plan**
Translate strategies into concrete, implementable actions with timelines and responsibilities.

LESSONS FROM PINEY FOR YOUR COMMUNITY

Compensation Matters

Offering compensation helped ensure consistent attendance across all workshop sessions. Rural participants travel significant distances — acknowledging that commitment builds trust and engagement.

Summaries Between Sessions

Providing written summaries after each session kept participants informed and allowed for corrections. This was especially important when sessions were spaced weeks apart.

Adapt the Process

Our original prioritization step was too complex. We shifted to a "dotmocracy" approach that was more intuitive and engaging. Be ready to adjust the methodology to fit your community.

A Fourth Workshop Emerged

Participants wanted to see the process through to an action plan. We added a fourth session to translate strategies into implementation steps. Follow the energy of your participants.

KEY TAKEAWAYS

- Scenario planning is a proven methodology — from Shell Oil in the 1970s to municipal planning today, it has consistently helped organizations navigate uncertainty.
- The RM of Piney demonstrated that scenario planning works for small, rural communities — not just large cities and regions.
- The process is highly participatory, low-cost, and builds plans grounded in community knowledge and local expertise.
- Scenario planning applies to development plans, growth management, climate resilience, infrastructure, strategic plans, and economic development.
- In today's planning environment — with climate change, shifting demographics, and economic uncertainty — planning for one future simply isn't enough.

THANK YOU

Thank you to the Lincoln Land Institute for their support
and guidance.

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