

# Recovery and Resilience “Index” (1.0)

Part of the

## ***Recovery and Resilience in a Regional Labour Market Project***

(funded by)

Ontario Ministry of Labour, Immigration, Training and Skills Development

Ontario East Municipal Conference  
2022

# The Resilience Index: What is it?

An idea that hatched in the early stages of the COVID-19 pandemic

- EOLC wanted to understand:
  - What the economic and labour market impact of the pandemic was “going to be” on the regional economy
  - What we might do in response
- Starting point was modelling impacts 9-12 months out (undertaken by Limestone Analytics)
  - Received an update report at each Board meeting
  - Later, added different policy scenarios to understand impact in a dynamic way

# The Resilience Index: What is it?

- A way to help communities or regions assess their ability to **absorb, recover from and adapt to an economic and/or labour market shock**
- Uses a **series of questions** to “walk us through”:
  - Goals
  - Types of shocks of most importance
  - All phases of a shock and recovery of importance
  - How we want to measure progress
- Self-generates graphs and charts that can be printed or incorporated into a PowerPoint presentation
- Let’s us “plot our current state” (baseline) against any comparators we choose to use, and set our own targets



# The Resilience Index: What is it?

In case you think someone must have already figured all of this out...

*“Finally, as yet, we have no universal means of measuring resilience (we are working on it!).”*

From Risk Management to Strategic Resilience  
Report by McKinsey & Company, March 9, 2022

<https://www.mckinsey.com/business-functions/risk-and-resilience/our-insights/from-risk-management-to-strategic-resilience>



# The Resilience Index: What is it?

A 15-part “index” of quantitative and qualitative measures that:

- Is based on literature reviews and quantitative analysis by three different organizations (Smith School of Business, Limestone Analytics, EOLC)
- Draws on data that should be available in future at low/no cost at the community and regional level
- Uses common software with file export possibilities (Excel)
- Does not require advanced data analytics skills
- Can tie directly into local/regional economic development and labour market strategies
- Allows community/region to set its own priorities and targets.

# Using The Resilience Index: Start by Identifying Goals (Examples Provided)



Eastern Ontario's  
**Leadership Council**  
Economic Development

## Identifying Our Resilience Goals

### Q1. What Aspects of Resilience Are Most (or Least) Important to Our Community/Region?

(no priority implied by order presented; allocate 80 points to the following goals of a resilience strategy)

#### Aspect of Resilience

A	Avoid shocks as much as possible
B	Better <i>anticipate</i> and prepare for shocks
C	Lessen <i>severity</i> of shocks (blunt the impact)
D	Lessen <i>duration</i> of shocks (bounce back faster)
E	Move to <i>higher level of performance</i> after recovery
F	<i>Survival</i> (keep businesses, organizations "alive")
G	Take opportunity to <i>leapfrog</i> ahead
H	Other _____
<b>Total</b>	

Points	Percentage of Total
4	7.4
7	13.0
8	14.8
7	13.0
8	14.8
10	18.5
6	11.1
4	7.4
<b>54</b>	<b>100</b>

Please complete only the Points column; the percentages will calculate automatically

These numbers are just for illustration. In the digital workbook, you can insert your own assessment numbers.

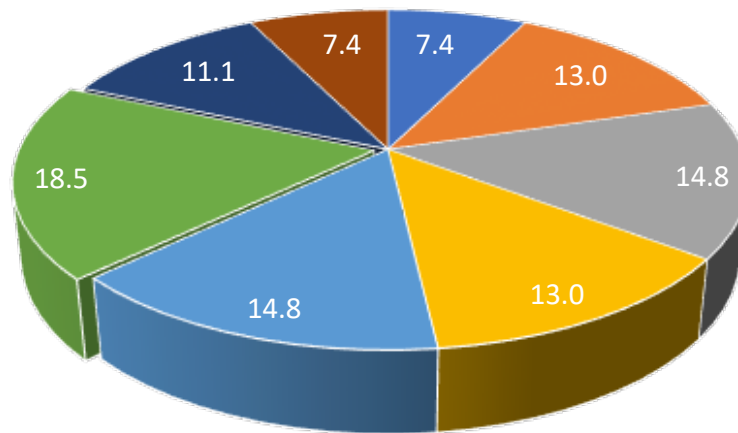
(write in your preference)

Totals should not exceed 80

# The Resilience Index: Translates Your Responses into Pie Chart

This graph is automatically generated when you enter your numbers for Question 1.

**Importance of Aspects of Resilience  
By Percentage of Total Points Allocated**



- Avoid shocks as much as possible
- Better anticipate and prepare for shocks
- Lessen severity of shocks (blunt the impact)
- Lessen duration of shocks (bounce back faster)
- Move to higher level of performance after recovery
- Survival (keep businesses, organizations "alive")
- Take opportunity to leapfrog ahead
- Other \_\_\_\_\_



# Helps You Prioritize Types of Shocks For Which You Want to Be More Resilient



## *Prioritizing Types of Shocks for Resilience Purposes*

### Q2. To What Types of Shocks Do We Want to Develop or Improve Resilience?

(Assign a number to the importance of each shock in terms of addressing it with the Resilience Thinking. Enter zero "0" for any type of shock you do not to include it in resilience analysis; enter 10 if the shock is of the highest importance for including in resilience analysis.)

#### Type of Shock

- A Natural disasters (ex. extreme weather events and aftermath)
- B Financial shocks (ex. inflation/deflation, capital/liquidity crises)
- C Community health (ex. pandemics or other biological agents)
- D Impacts of climate change (ex. local/regional effects)
- E Environmental shocks (ex. water supply/quality, air quality, biodiversity)
- F Economic shocks (ex. supply chain disruptions, policy-driven impacts)
- G Shocks to social or political stability (ex. referenda)
- H Labour market shocks (ex. major layoffs, judicial decisions)
- H Other \_\_\_\_\_

Enter number 0 to 10 for each type of shock

	8
	6
	9
	5
	7
	5
	5
	8
	3 (write in your preference)
Total	41   Maximum = 90

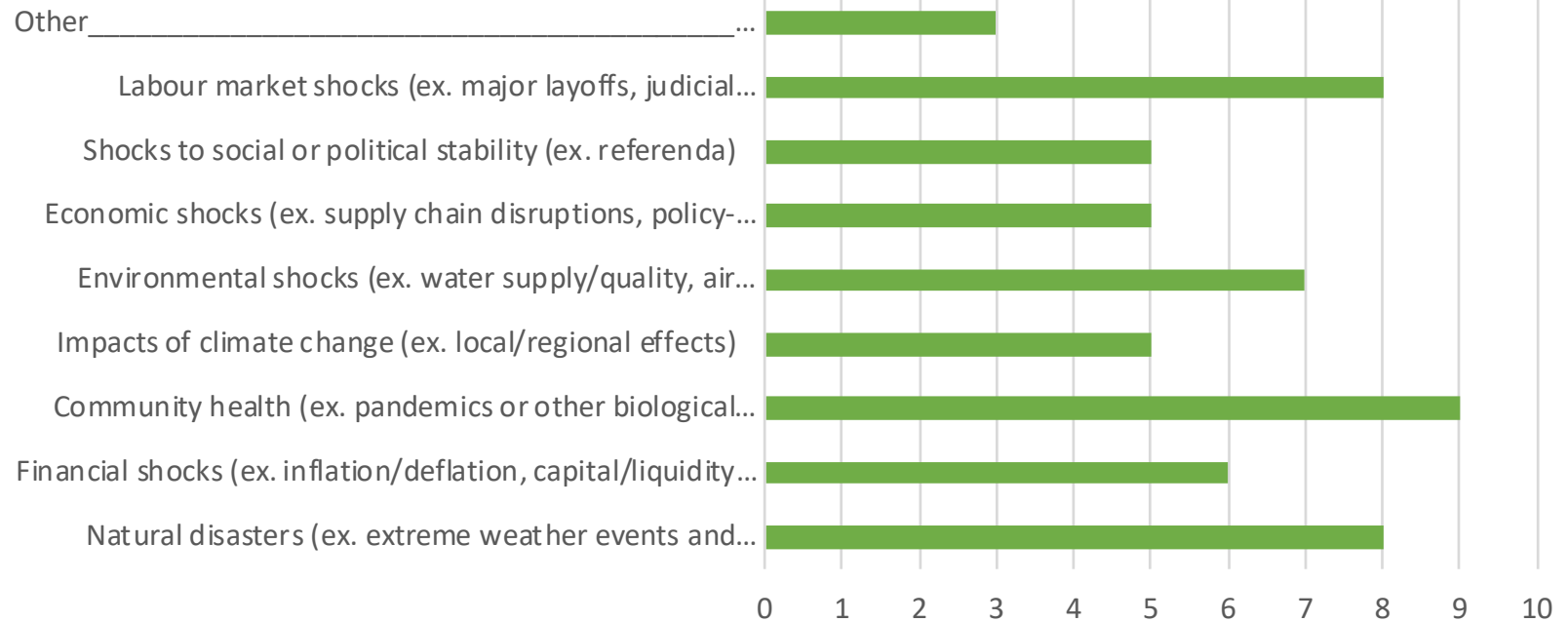
These numbers are just for illustration. In the digital workbook, you can insert your own assessment numbers.



# Translates Your Priorities into Chart Form

This graph is automatically generated when you enter your numbers for Question 2.

## Importance of Types of Shocks When Considering How to Develop or Improve Resilience (scale of 0 to 10 where 10 is most important)



# Helps You Focus on Key Phases of Economic Shock and Recovery



## The Phases of A Shock and Recovery That Resilience Thinking Could Influence

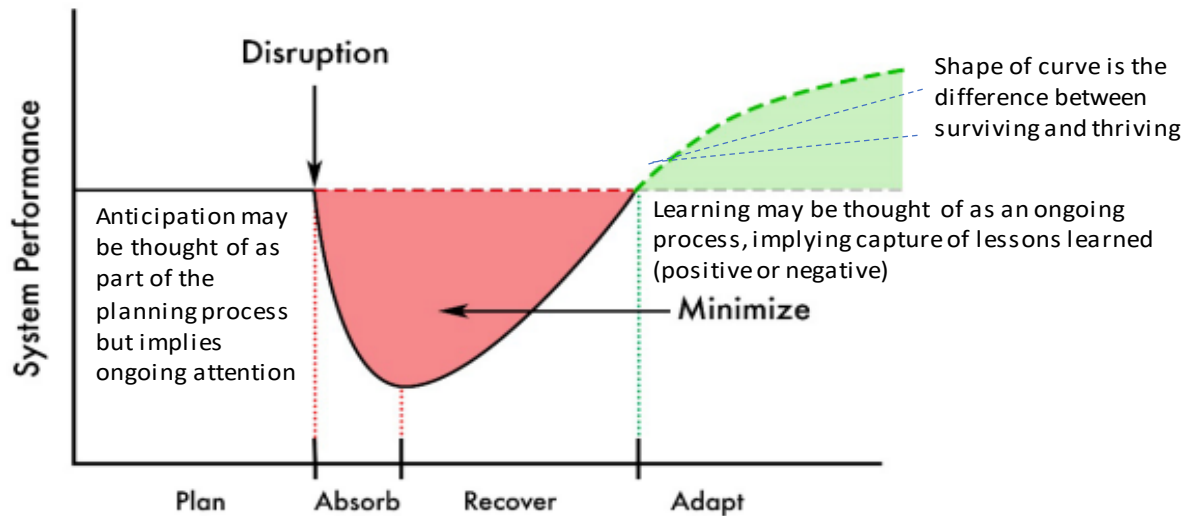
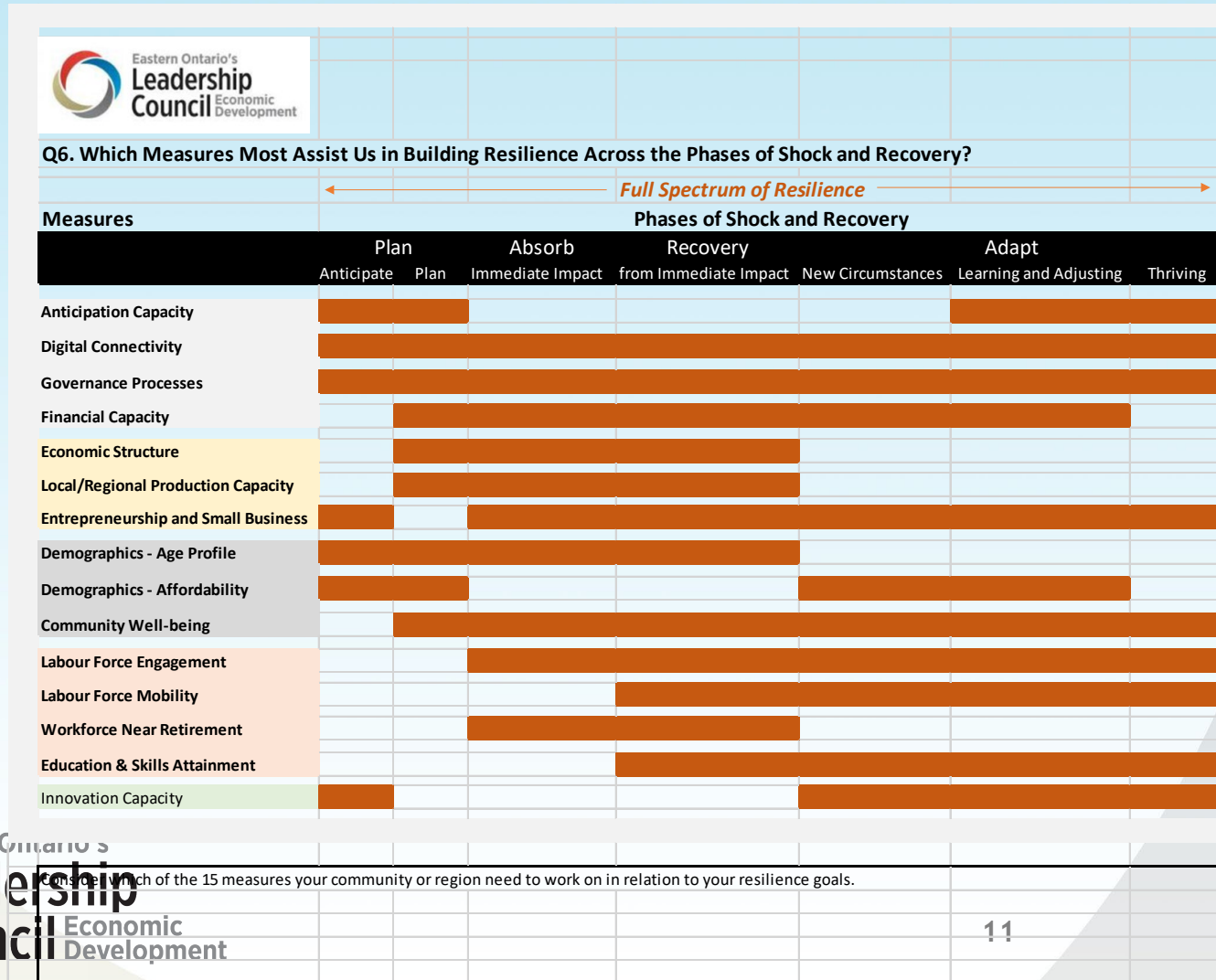


Figure 4: A broad understanding of disruption and resilience encompasses the full temporal dynamics of shock and recovery, and should consider the ability to anticipate, prepare for, mitigate, bounce back — and learn and improve — from economic shocks and disruptions. (Linkov, Trump, & Hynes, 2019)

# ... With Indicators Considered Most Important to Each Phase...



# ... And Identifies Which Measures You Want to Use Comparatively...



## Q3. What Types of Measures Will You Use to Determine If You're Making Progress on Resilience?

(Assign a number to the importance of each standard in terms of using it as way to measure development of Resilience in your community or region Enter zero "0" for any type of measurement or comparator you do not want to use in resilience analysis; enter 10 if the measurement or comparator is of the highest importance for use in resilience analysis.)

Type of Measure	
A	To own baseline only, over time
B	Compared to own long-term aspirations
C	To other similar communities or regions
D	To provincial average, median or other value
E	To national average, median or other value
F	To industry average, median or other value
G	To international standard or other value
H	Other _____
Total	

Enter number 0 to 10 for each type of measure

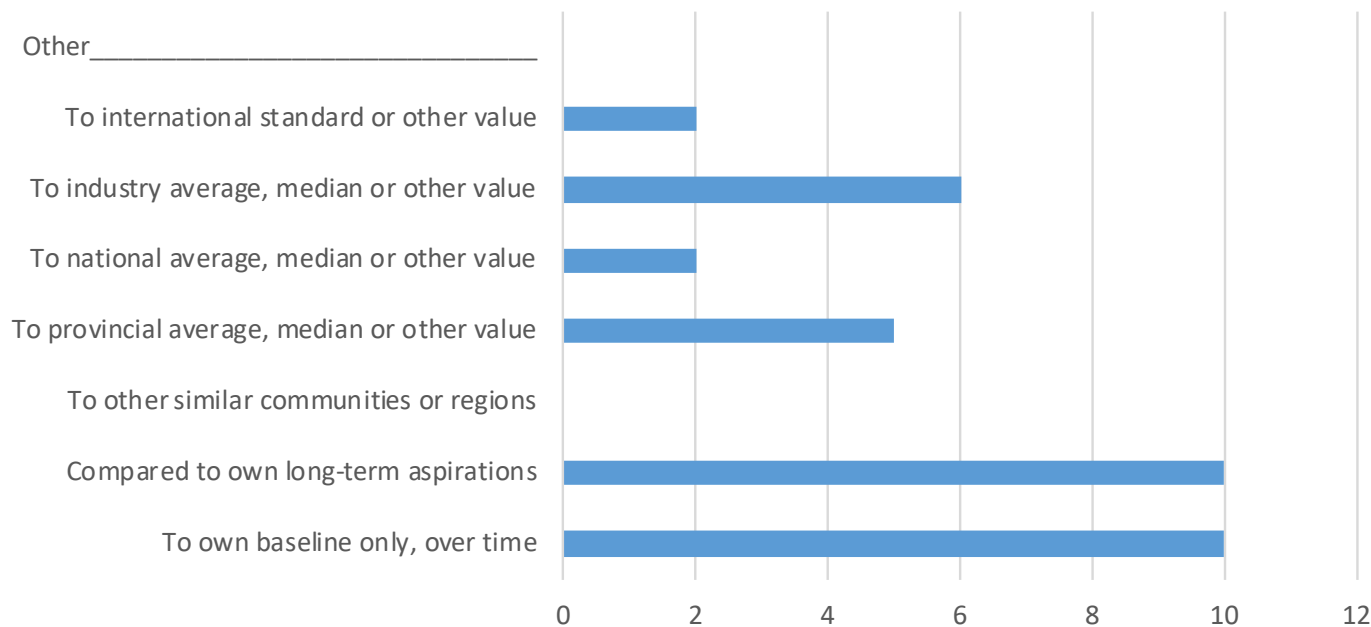
10
10
0
5
2
6
2
0 (write in your preference)
35 Maximum = 80

These numbers are just for illustration. In the digital workbook, you can insert your own assessment numbers. The total will be calculated automatically.

# ... Summarizing Your Importance Ranking in Chart Form

This graph is automatically generated when you enter your numbers for Question 4.

**Importance of Types of Measures in Determining Progress on Resilience**  
(scale of 0 to 10 where 10 is most important)



# What Are the 15 Resilience Measures?

## Governance & Leadership

- Anticipation Capacity\*
- Digital Connectivity
- Governance Processes\*
- Financial Capacity

## Economic/Sectoral

- Economic Structure
- Local/Regional Production Capacity
- Entrepreneurship and Small Business

## Economics & Social Vulnerability

- Demographics - Aging
- Demographics - Affordability
- Community Well-being\*

## Labour Market

- Labour Force Engagement
- Labour Force Mobility
- Workforce Near Retirement
- Education & Skills Attainment

## Innovation Capacity\*

*\* Refers to measures with five factors contributing to the assessment; other measures are single-measure calculations*

# Review Detailed Definitions to Ensure They Work for Your Community or Region

		Q5. Do the Recommended Indicators Work for Our Community or Region?
Indicator Category		Recommended Indicator
Governance & Leadership Defintion/Description	1	<b>Anticipation Capacity</b> (Five factor aggregate; access to data; forecasting capability; infrastructure planning; finance rating and/or stress test; storage capacity and/or supply chain redundancy)
Governance & Leadership Defintion/Description	2	<b>Digital Connectivity</b> (Proportion of geographic area served by 50/10 broadband)
Governance & Leadership Defintion/Description	3	<b>Governance Processes</b> (Five factor aggregate: Speed of response to shocks; provincial-federal collaborations; percentage of citizens voting; resilience strategy in place; relief funds available)
Governance & Leadership Defintion/Description	4	<b>Financial Capacity</b> (Dollar value of municipal reserves in relation to total operating budget)
Economic/Sector Defintion/Description	5	<b>Economic Structure</b> (Number of sectors with at least 5 per cent of the total labour force)
Economic/Sector Defintion/Description	6	<b>Local/Regional Production Capacity</b> (Percentage of total EXPORTS in agriculture, manufacturing, forestry, mining)
Economic/Sector Defintion/Description	7	<b>Entrepreneurship and Small Business</b> (Percentage of small businesses compared to total employment locations)
Economic and Social Vulnerability Defintion/Description	8	<b>Demographics - Aging</b> (Percentage of population 65 years of age or older)
Economic and Social Vulnerability Defintion/Description	9	<b>Demographics - Affordability</b> (Average sales prices of a home/Mean annual household income)
Economic and Social Vulnerability Defintion/Description	10	<b>Community Well-being</b> (Five factor aggregate - prevalence of NFPs & service clubs, availability of social services, primary care physician coverage, food bank(s), prevalence of homelessness)
Labour Market Defintion/Description	11	<b>Labour Force Engagement</b> (Percentage of persons aged 15 to 64 years as share of total population)
Labour Market Defintion/Description	12	<b>Labour Force Mobility</b> (Percentage of population that had moved within the past year --- place of residence)
Labour Market Defintion/Description	13	<b>Workforce Near Retirement</b> (Percentage of 55-64 Age Group As Share of Working Age Population)
Labour Market Defintion/Description	14	<b>Education &amp; Skills Attainment</b> (Use Percentage of Population 15 Years and Over without a certificate, diploma or degree; instead of Mean number of years of schooling)
Innovation Defintion/Description	15	<b>Innovation Capacity</b> (Five factor aggregate - presence of local/regional incubators and/or prototyping services, Intellectual Property guidance, angel investors and/or tech startup funding; business development supports; research-intensive colleges or universities;

# Input Your Data into Pre-Built Excel Spreadsheet (Downloadable)

#	Measure	Type of Indicator	[year] Baseline	[year] Compar.	[year] Target
1	Anticipation Capacity	5 factor aggregate (max score: 10)	5		
2	Digital Connectivity	Percentage of households with 50/10	87.0%	▼	▼
3	Governance Processes	5 factor aggregate (max score: 10)	10		
4	Financial Capacity	\$ municipal reserves/operating budget	\$ 0.04		
5	Economic Structure	# of Sectors with 5% of employment	9	▼	10
6	Local/Regional Production Capacity	% of <b>Sales</b> in 4 sectors	52.8%	▼	
7	Entrepreneurship and Small Business	% of Small Business/All Locations	95.7%		

Spreadsheet suggests data sources available to you at no/low cost.



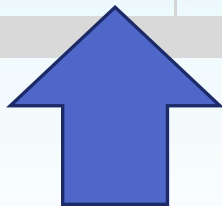
# Input Your Data into Pre-Defined Excel Spreadsheet (Downloadable)

#	Measure	Type of Indicator	[year] Baseline	[year] Compar.	[year] Target
8	Demographics - Age	% of population 65 years of age or older	24.5%		
9	Demographics Affordability	Ave sales price home/Mean annual hhld	7.0		
10	Community Well-being	5 factor aggregate (max score: 10)	5.0		
11	Labour Force Engagement	% 15-64 of Total Population	61.1%		
12	Labour Force Mobility	% of Population Moved Within Past Year	12.4%		
13	Workforce Near Retirement	% of 55-64 of Working Age Pop	26.7%		
14	Education and Skills Attainment	% of Pop 15 Years and Over with more th	73.7		
15	Innovation Capacity	5 factor aggregate (max score: 10)	5		

Set your target for several years out, and input data for any comparable jurisdictions (optional)

# Some Measures Require Calculation of Several Component Parts

Indicator: Anticipation Capacity						
Census Subdivision (note: this column is "frozen" so that you can keep your CSD in view as you scroll to the right)	Access to Data (2 pts)	Forecasting Capability (2 pts)	Infrastructure Planning (2 pts)	Finance Rating and/Or Stress Test (2 pts)	Storage Capacity And/Or Supply Chain Redundancy (2 pts)	Total - Anticipation Capacity (out of 10) This indicator autocalculates (below) once you input values into cells B5 to F5
<i>Where do you find the data?</i>	Local assessment	Local assessment	Municipal government	Municipal government (Credit score or Financial Information Return)	Local assessment (start with your Economic Development Office)	
[enter your CSD name here]	0	0	0	0	0	0
<b>Possible Comparators</b>						
Eastern Ontario						
ONTARIO						
CANADA						



Easily Build in Comparisons to Other Jurisdictions (Optional)

# The Resilience Index: 15 Measures, with Definitions...

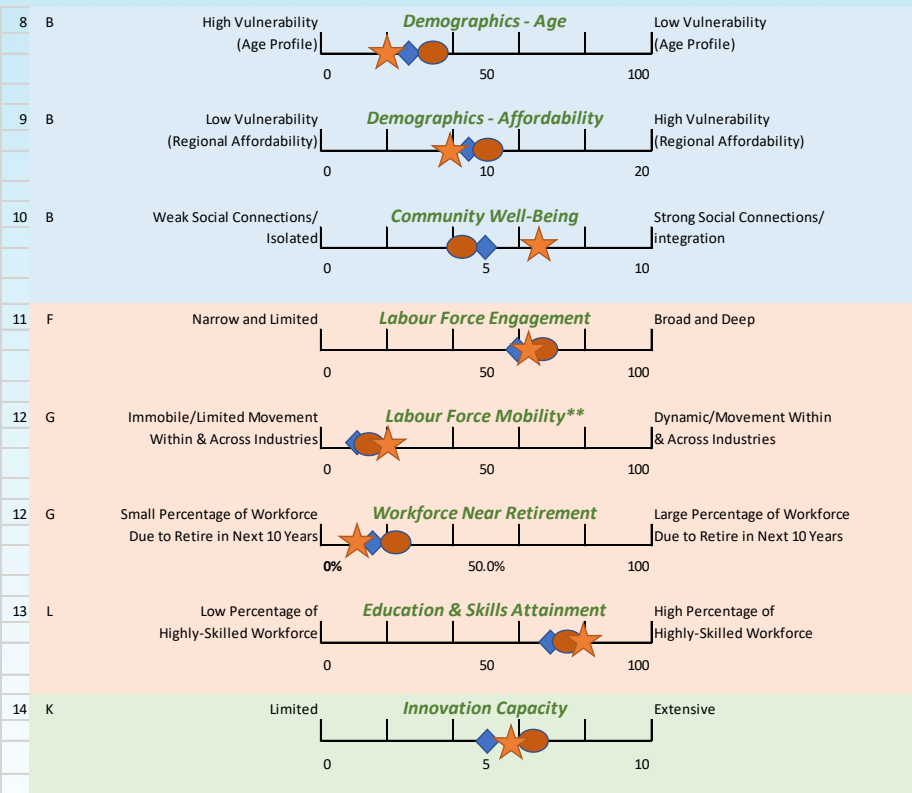
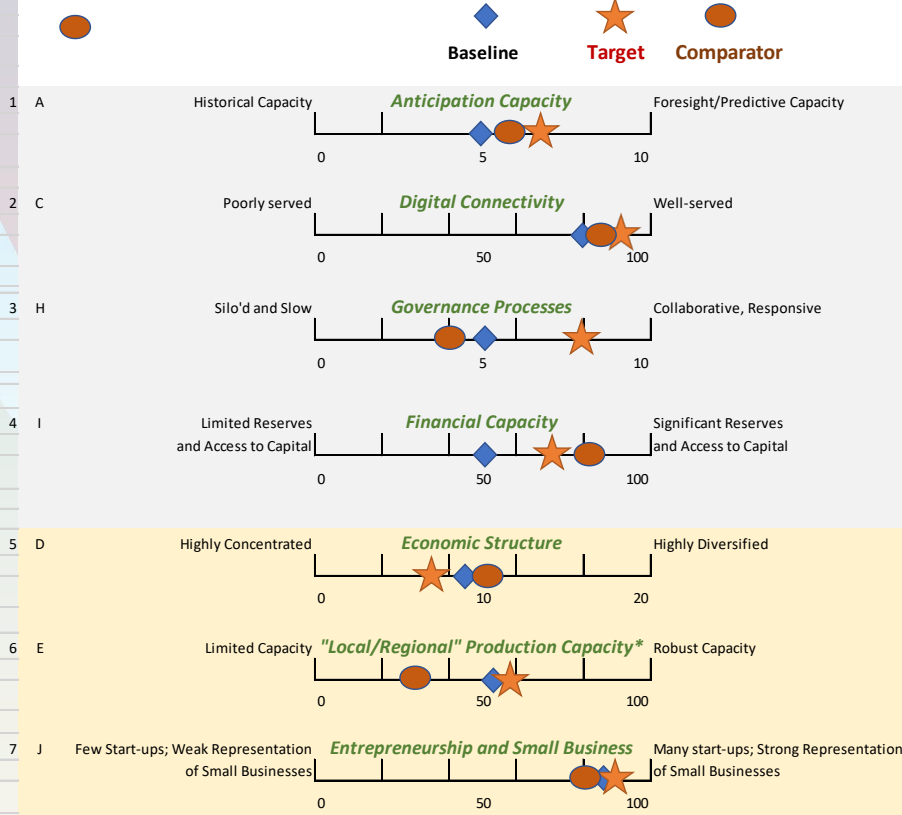
#	Measure	Type of Indicator	[year] Baseline	[year] Compar.	[year] Target	Access to Data	Forecasting Capability	Infrastructure Planning	Finance Rating/ Stress Test	Supply Chain Redundancy
1	Anticipation Capacity	5 factor aggregate (max score: 10)	5			1	1	1	1	1
2	Digital Connectivity	Percentage of households with 50/10	87.0%							
3	Governance Processes	5 factor aggregate (max score: 10)	10			Responsiveness	Prov-Fed Gov	Citizens Voting	Resilience Policy	Relief Funds
4	Financial Capacity	\$ municipal reserves/operating budget	\$ 0.04			2	2	2	2	2
5	Economic Structure	# of Sectors with 5% of employment	9	10		\$ Reserves	Annual Operating			
6	Local/Regional Production Capacity	% of Sales in 4 sectors	52.8%			\$ 9,000,000	\$ 250,000,000			
7	Entrepreneurship and Small Business	% of Small Business/All Locations	95.7%			Agr & Forestry	Manufacturing	Mining & Oil & Gas	Total (\$B)	
8	Demographics - Age	% of population 65 years of age or older	24.5%			\$ 1.3	\$ 28.1	\$ 0.3	\$ 56.3	
9	Demographics Affordability	Ave sales price home/Mean annual hhld	7.0			Businesses Under 50	Total Businesses			Excludes Indete
10	Community Well-being	5 factor aggregate (max score: 10)	5.0			32,833	34,293			
11	Labour Force Engagement	% 15-64 of Total Population	61.1%			Age 65 or older	Total Population			
12	Labour Force Mobility	% of Population Moved Within Past Year	12.4%			302,197	1,232,193			
13	Workforce Near Retirement	% of 55-64 of Working Age Pop	26.7%			Average Sales Price	Mean Annual HHLD Inc			
14	Education and Skills Attainment	% of Pop 15 Years and Over with more th	73.7			\$ 400,000	\$ 57,000			
15	Innovation Capacity	5 factor aggregate (max score: 10)	5			Prevalence of NFP	Avail of Social Serv	Primary Care Physi	Food Banks	Homelessness
						1	1	1	1	1
						15-64 Population	Total Population			
						753,432	1,232,193			
						Number Moved	Total Population			
						1,631,005	13,106,990			
						55-64 Population	Total Population			
						201,001	753,432			
						15+ with more H/S	Pop 15 and Over			
						777,777	1,055,629			
						Incubators	IP Guidance	Angels & Tech \$	Bus Dev Supports	Research PSE
						1	1	1	1	1

# The Resilience Index Applied: A Simple Summary

Use “drag and drop” icons to see the “distance” between your community’s baseline, target and any comparator jurisdiction.



## Q5. How Could We Set Targets and Assess Our Progress in Building Resilience?



\* This measure is "exports" out of region in productive industries; it is not directly comparable to provincial exports.  
 \*\*No available data to assess movement within & across industries so population movement across municipal boundaries could be a proxy.

# What Do We Do With This Now?

1. Work through the first three questions
2. Input your data and look at the results, including any comparative analysis
3. Decide what your priorities are (where do you want to focus your resilience-building efforts?)
4. Devise strategies that you think will help “move the needle”

*Example: if your community has low labour force engagement, an older-than-average labour force, and a higher-than-average percentage of the labour force retiring in the next 5 to 10 years... what might you do about that?*

*What happens if you do nothing?*



# Index Includes Fill-in-the-Blanks Strategy Development Template



Based on your ratings and calculations for each measure, decide if you want to take any action on that indicator.

Once you've prioritized any action on each measure, decide what your most important strategy is to move toward your target.

For the same measure, decide what your second most important strategy is to move toward your target.

# Measure	Strategic Assessment			Priority to Address		Top Strategy to Move Toward Your Target	Secondary Strategy to Move Toward Your Target
	(Strength, Weakness or Neutral?)	Opportunity? (Major, Moderate, Minor, None)	Threat? (Major, Moderate, Minor, None)	Considering Whether You are Addressing an Opportunity or a Threat		Considering Whether You are Addressing an Opportunity or a Threat	
1 Anticipation Capacity							
2 Digital Connectivity							
3 Governance Processes							
4 Financial Capacity							
5 Economic Structure							
6 Local/Regional Production Capacity							
7 Entrepreneurship and Small Business							
8 Demographics - Age							
9 Demographics - Affordability							
10 Community Well-being							
11 Labour Force Engagement							
12 Labour Force Mobility							
13 Workforce Near Retirement							
14 Education & Skills Attainment							
15 Innovation Capacity							

Thank you for  
spending time with us today.

Would you like to try out the Resilience Index  
within your organization?

Please feel free to contact us.

Kathryn Wood

EOLC Project Coordinator

contact@eolc.info 613-376-6006

[www.EOLC.info](http://www.EOLC.info)

Or for more information on our Working Group....

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(Chair, EOLC Workforce Development and Deployment Working Group)

