

A network diagram with yellow nodes and lines on a dark gray background. The diagram features a central cluster of eight nodes connected in a circular pattern, with additional lines radiating outwards to other nodes, creating a complex web-like structure.

# Data Driven Intelligence: Knowing Your Clients Better Through FPTM Datasets

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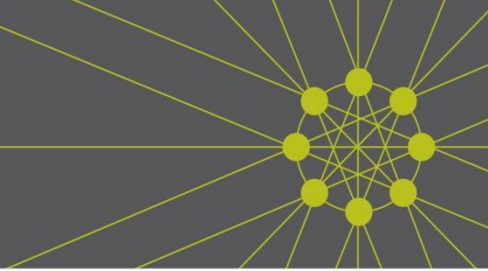
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# Purpose



- Create a side-by-side view of anonymized CRA and ESDC datasets.
  - Enhance the value of the core dataset by adding data from participating provincial and territorial jurisdictions.
- Promote the use of e-Vulnerability Index (EVI) for provinces and territories.
- Identify benefits of joining federal and provincial/territorial datasets with EVI.
- Advance Joint Councils' Open Data and Channel Shifting priorities using data driven intelligence.

# Project Background



- Following the DMs' meeting in May, CRA and ESDC were asked to help build momentum and demonstrate results.
- It was agreed that ESDC, CRA and participating jurisdictions could build anonymized datasets to create insights into how Canadians use digital platforms.
- It was agreed that understanding clients channels of choice could better support channel shifting efforts in support of the Joint Councils, PSSDC, and FPT DMs' Table objectives.

# The Business Case - Project Benefits



Using CRA/ESDC datasets provides one example of how jurisdictions can add their own data on services to ESDC's EVI to demonstrate **how likely clients will face challenges when it comes to filing taxes online and the factors that drive this phenomenon** in a single score.

This could be replicated with other services allowing CRA, ESDC and participating jurisdictions to:

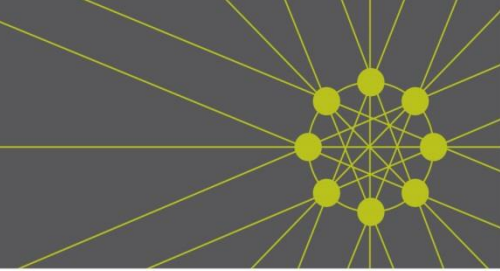
- Target populations with channel shifting for a greater chance of success.
- Design program interventions for the harder to reach populations using specific socio-geographic factors.
- Ensure that services are accessible to clients who face challenges completing online transactions.

# Anonymized CRA Tax Filer Data



- The CRA regularly publishes datasets that meet the criteria for release through the Open Data portal.
- The CRA datasets can be packaged using standardized groupings allowing them to be added other federal and jurisdictional datasets.
- One example is the publically available Individual Statistics by Tax Filing Method (online and paper).
  - All personal information about the approximately 27 million tax filers has been removed from the dataset.

# The e-Vulnerability Index: Data Innovation



- Given the shift to digital services, it is important to understand the impact it will have on clients.
- Greater vulnerability among the local population to the move to online service delivery creates greater demand for services.
- A new dataset linking Statistic Canada's 2011 National Household Survey (NHS) with Service Canada's In-Person Points of Service (POS) location database was created to identify every household within 50 kilometers of each Service Canada Centre (SCC).
- Subsequent analysis of the socio-demographic profiles generated too many statistics, requiring an index to reduce the indicators into some key findings to inform decision making (Annex A).

# Components of e-Vulnerability Index



The 2011 NHS does not contain metrics related to e-Vulnerability. Highly correlated demographic factors (age, education, low income, etc.) were extracted from the NHS, the Canada Internet Use Survey (CIUS) and Programme for the International Assessment of Adult Competencies (PIAAC) to generate e-Vulnerability indicators for every adult (16 +) in the NHS.

- Access: Do potential clients have the means to access online services?
- Competencies: Do potential clients have the skills to access online services?
- Comfort: Do potential clients have the desire to access online services?

Core Vulnerability	Moderate Vulnerability
No Internet use No home Internet access Low computer skills Not comfortable with online banking Not comfortable with interacting with gov. online	No smartphone use Modest to moderate computer skills

(Majority of the weight of the index driven by Core Vulnerability)

# Measuring e-Vulnerability



The EVI provides a score between 0 (lowest) and 100 (highest) for every in the NHS. An average EVI score of the population living within 50 km radius of each SCC has been calculated and mapped.

Service Canada Centre:  
Shoal Lake  
(MB)



Population within 50km	8600
Average EVI score of population	52.38
Population with high vulnerability	1505

What's driving the **high** index score?

- High proportions of seniors in area (23.2%)
- High low-income rate (28.8%)
- Highly rural population (99.8%)
- High proportion of aboriginal (20.5%)

Service Canada Centre:  
Winnipeg La  
Verendrye  
(MB)



Population within 50km	754980
Average EVI score of population	37.17
Population with high vulnerability	54740

What's driving the **low** index score?

- Low proportions of seniors in area (13.1%)
- Lower low-income rate (15.6%)
- Mostly urban population (90.6%)
- Lower proportion of aboriginal (11.2%)

# Factors driving a high score of the EVI



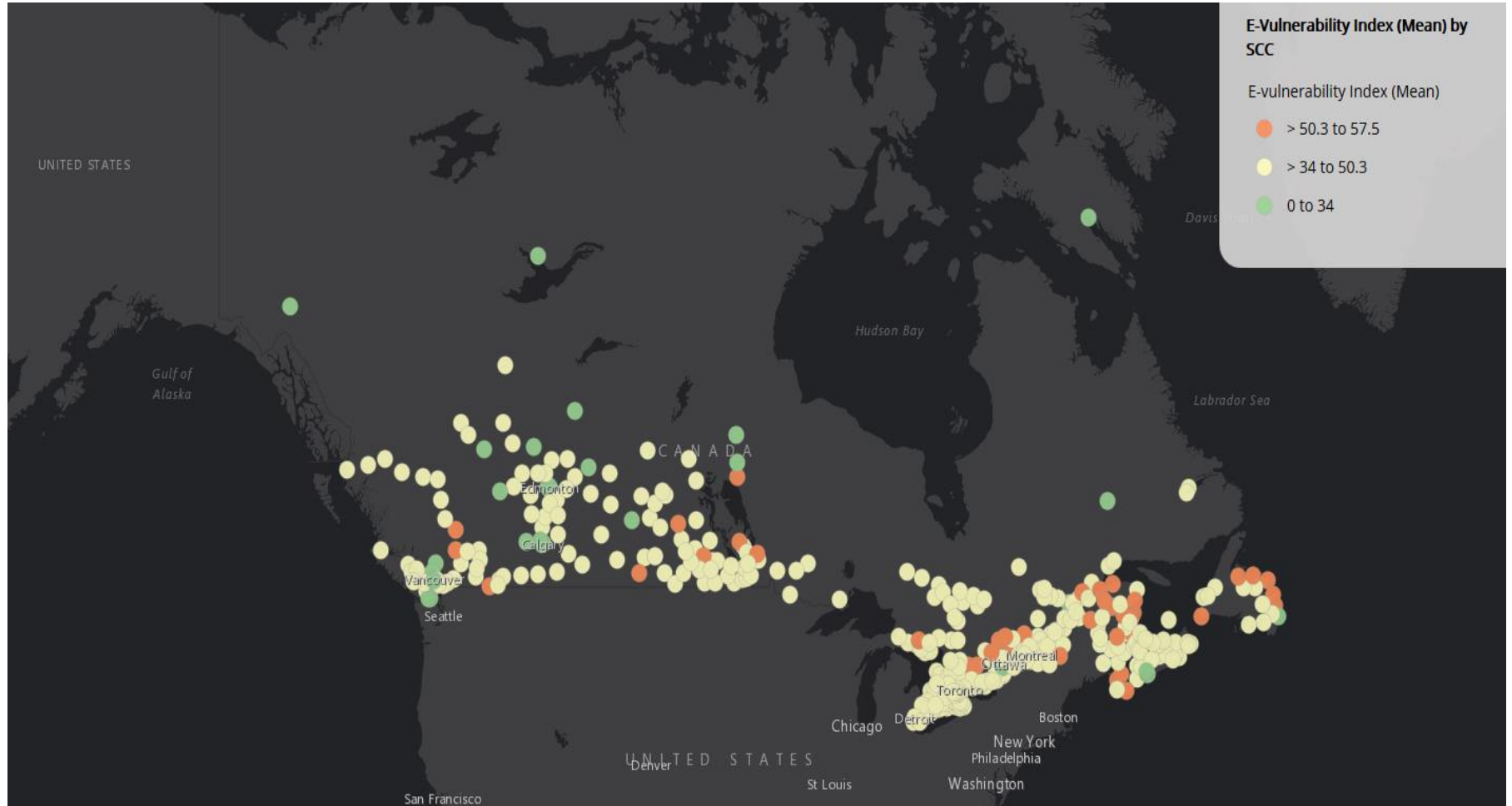
- Old age
- low income
- low level of education
- recent immigration
- Living in rural areas

# EVI: Data Generated

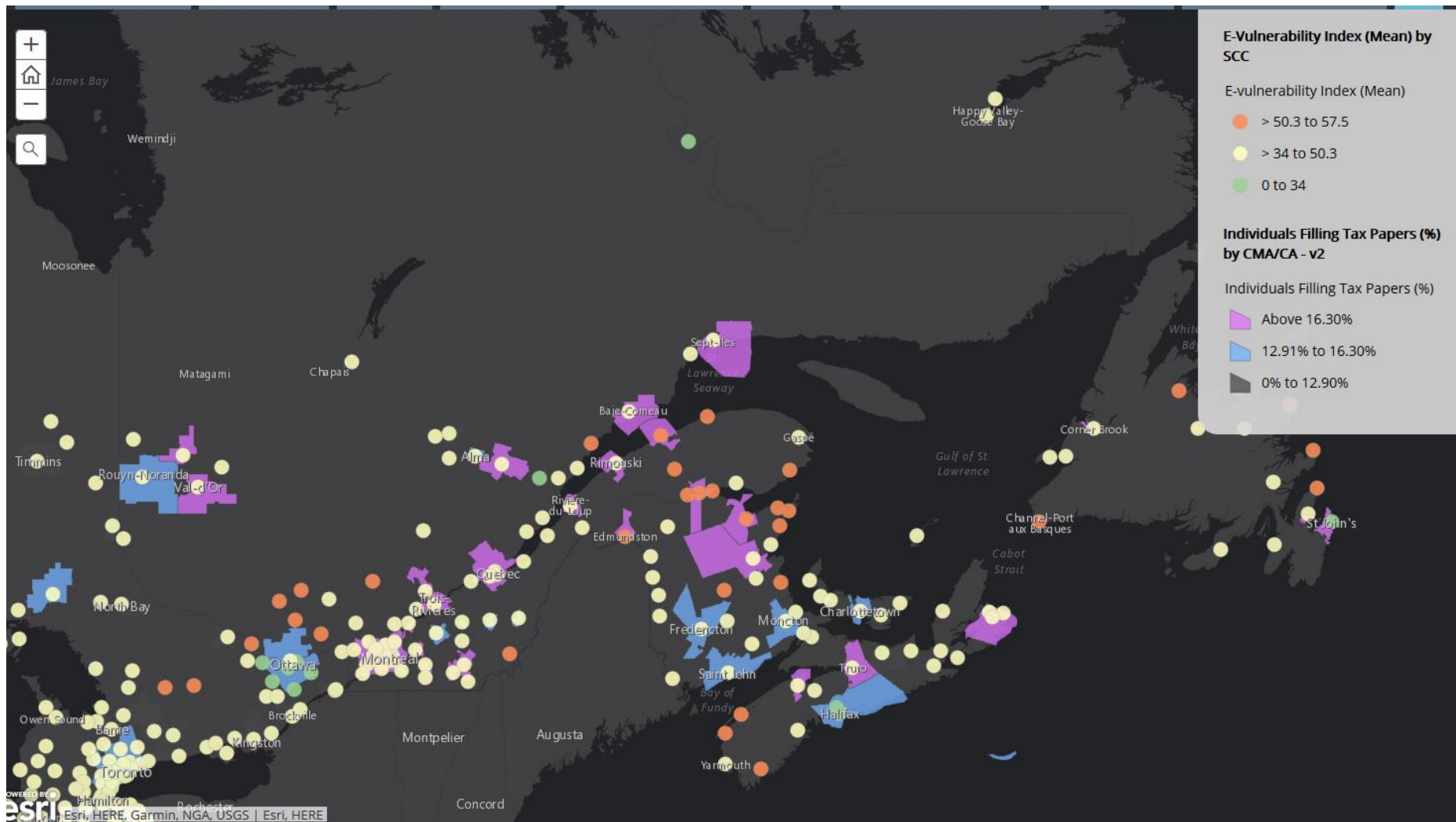


Service Canada Centers (SCC) information					Socio-Demographic variables												
SCC No.	SCC Name	SCC type	SCC's province	Population within 50 km	Male	Age - 65 +	Rural	Aboriginal	No HS Diploma	HS Diploma	Speaks Eng. & Fr.	HH income Low	Unemployed	Lone Parent	Single	Recent Immigrant	Disability
RC1103	Port Aux Basques	SCC	NL	8130	48	18,5	53,1	2,7	43,4	20,4	1,3	17,9	12,2	9,8	10	0,1	14,51
RC1104s1	Old Perlican	SO	NL	9760	48,3	20,9	81	1	33,5	25,7	1,3	25,7	7,5	10,6	10,5	0	14,14
RC1127	Placentia	SCC	NL	7130	50,5	19,6	57,2	1,9	29,6	17,6	1,2	18,6	9,7	6,5	11,8	0	15,29
RC1128	St. John's	SCC	NL	196880	48,3	11,9	15,3	2	16,6	24,2	7,1	13,8	4,3	12,6	9,8	1,1	10,65
RC1140s	Bonavista	SO	NL	7610	51	19,7	59,2	0,4	40,2	21,4	1,5	28,7	15,4	12,6	12	0	13,14
RC1141	Happy Valley	SCC	NL	9280	48,9	7,8	31,9	60,2	28,2	17,1	4,8	13,1	6,3	13,7	6,3	0,6	7,65
RC1141s	Sheshatshiu	SO	NL	9280	48,9	7,8	31,9	60,2	28,2	17,1	4,8	13,1	6,3	13,7	6,3	0,6	7,65
RC1143	Clarenville	SCC	NL	14370	48,4	18,2	70,9	1,3	38,7	22,0	2,6	20,8	7,8	12	7,6	0,6	15,73
RC1144	Marystown	SCC	NL	12480	49,8	13,4	67,8	1,4	31,9	19,0	3,4	19,2	9,1	12,1	8,1	0,2	13,38
RC1146	Gander	SCC	NL	15190	49,3	14,2	23,7	4,7	24,4	23,0	5	14,8	6,6	10,5	8,9	0,7	12,24
RC1148	Grand Falls-Windsor	SCC	NL	20090	48,3	17,3	20,3	4,6	31,0	22,8	3,1	21,5	7,5	11,4	9,4	0,5	15,33
RC1153	Harbour Grace	SCC	NL	41530	49,1	17,6	56,8	1	31,1	24,1	2,5	20,7	7,6	10,7	8,4	0,1	13,60
RC1154s	Lumsden	SO	NL	5360	48,3	17,9	100	1,9	40,2	25,2	0,6	16,1	9,7	5,4	6,5	0	12,13
RC1154s2	Twillingate	SO	NL	5910	49,9	19,7	100	1,7	45,5	21,7	1,3	26,7	9,6	10,4	7,8	0	16,75
RC1158	Stephenville	SCC	NL	16580	47,6	17,1	54,9	36,9	32,8	21,4	6,3	31	7,6	18	12,1	0,2	17,25
RC1158s	Port au Port	SO	NL	15820	47,7	17,3	52,8	37,1	33,9	21,4	8,1	32,2	7,5	17,8	12	0,2	17,38
RC1160	Corner Brook	SCC	NL	32410	48,9	16,3	26,6	15,7	25,6	22,8	3,7	16,8	6,9	12,6	9,1	0,3	13,17
RC1162	Springdale	SCC	NL	5670	49	20,9	51,5	0,7	40,0	27,6	1	21,4	7,7	9,3	8,7	0	14,46
RC1186	Labrador City	SCC	NL	9190	52,3	5,8	ND	3,3	15,6	23,2	10,2	5,8	3,3	8,7	6,9	1,2	6,31
RC1502	Kentville	SCC	NS	76720	48,8	17,7	56,8	2,5	25,1	23,8	7,7	18,9	5,4	11,9	11,1	1,1	18,82
RC1503	Bridgewater	SCC	NS	51640	48,9	20,4	72,4	3	27,7	21,9	5,8	19,7	10	10,1	11,9	1,5	19,40
RC1505	Dartmouth	SCC	NS	392420	48,5	12,2	21,9	2,4	15,9	24,2	12,1	14,7	4,2	11,6	11,9	3	13,73
RC1515	Halifax	SCC	NS	392290	48,5	12,2	21,9	2,4	15,9	24,2	12,1	14,7	4,2	11,6	11,9	3	13,72
RC1520	Port Hawkesbury	SCC	NS	20140	49,4	19,2	83,5	5,3	25,6	20,6	19,3	15,7	6,7	12,8	11,3	0,8	16,24
RC1523	Glace Bay	SCC	NS	93250	47,5	19,1	22,9	3	25,1	25,1	4,3	21,1	7,4	18,9	12,4	0,6	20,97
RC1524	Inverness	SCC	NS	8890	50	20,2	85,1	13,2	27,4	21,9	9,9	20,8	7,1	14,9	10,9	0,8	15,52
RC1538	Windsor	SCC	NS	109840	49	14,7	52	2,4	22,9	24,5	7,8	15,1	4,6	11,8	9,1	1	16,72
RC1540	New Glasgow	SCC	NS	47570	48,7	17,8	50,5	2,5	25,2	24,0	4,9	17,2	5,7	13,2	12,1	0,6	17,72
RC1541	Amherst	SCC	NS	23740	47,5	20,9	41,6	1,8	27,9	24,2	5	22,3	4,9	11,7	13,6	0,6	21,69
RC1545	Antigonish	SCC	NS	23050	48,3	15,7	78,5	4,3	21,1	22,4	8,9	14,6	5,6	12,3	10,9	1,2	13,32
RC1546	North Sydney	SCC	NS	94140	47,5	19,1	23,6	3	24,9	24,9	4,2	20,9	7,5	18,7	12,3	0,6	20,88
RC1556	Guysborough	SCC	NS	14990	49,3	17,5	98,5	6,4	29,8	20,1	8,2	17,4	5,7	10,8	9,9	0,6	15,21
RC1559	Sydney	SCC	NS	96210	47,6	19	25,2	3	25,0	24,9	4,2	21	7,6	18,7	12,3	0,6	20,86

# The EVI mapped



# Tax filler data mapped with the EVI



# EVI Impact on Client Services



- Evidence base for policy and operations to know the demographic of their clientele within a given radius of service centers.
- Better picture of the impact on individuals & SCCs with the move to digital services.
- EVI is available to be shared with service partners to inform their and potentially modify their own services.
- Sharing datasets unlocks additional potential of the index.

# EVI Impact on Client Services (Cont.)



- Federal and jurisdictional datasets improve the delivery of services.
  - Better insight on the impact of services and the characteristics of those who access them.
  - More informed design and delivery of service programs particularly those that target specific segments of the Canadian population.
- Federal and jurisdictional datasets improve the business value of both federal and jurisdictional information.
  - In line with the principle of Open Government.
  - More transparency, accountability and citizen engagement in the socio-economic services that they receive.

# Questions/Next Steps



- Any questions about the presentation?
- Are you interested in using and/or sharing data on e-services to know your clients better?
- Has the business case been made clear enough ?