

Agile Systems Planning for Ending Homelessness

Navigating Technological and Data Challenges

to Drive Impactful Change

Jackie Liu

November 8, 2023 – CAEH (Halifax, NS)

Land Acknowledgement

Homeward Trust respectfully acknowledges our place here on Treaty 6 Territory, the traditional and ancestral lands of many First Nation, Métis and Inuit people. We acknowledge the diverse Indigenous Peoples of this land which include the Cree, Blackfoot, Dene, Iroquois, Anishinaabe/Saulteaux /Ojibwa, Nakota Sioux, Inuit, Métis and many others whose footsteps have marked this land for time immemorial. Those whose stories, languages and culture continue to thrive today. We acknowledge ourselves as visitors living and working in this Territory.

Overview

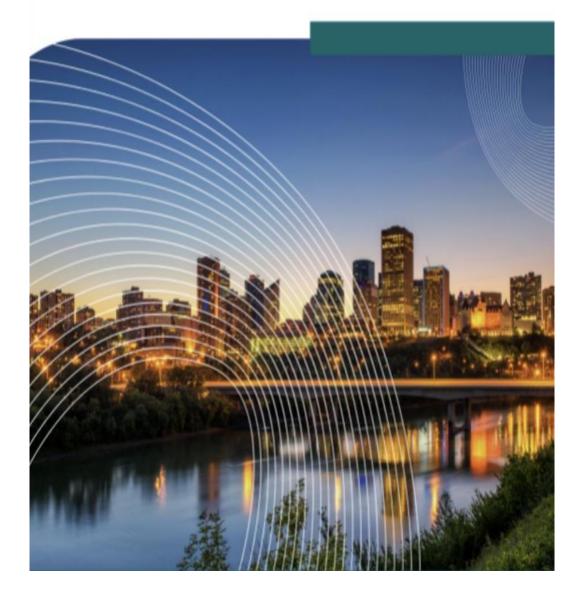
About Me & Homeward Trust

The Edmonton Context

Current State

AGILE Methodology

Future State



Jackie Liu

Chief Impact Officer, Homeward Trust Edmonton



Comprehensive Approach

Leads efforts to end homelessness in Edmonton

 Responsible for stewarding provincial and local plans to end homelessness

- System planning
- Community leadership
- Data and knowledge management (HMIS)
- Evaluation
- Innovation

- Stewards and directs funding from 3 orders of government to meet community priorities
- Ensures compliance and contract reporting
- Invests in programs, housing supply, and community capacity

Implementation

- Community planning and engagement
- Review and investment in what works
- Taking risks and learning



The Scale of the Work

Over 100 Programs, Projects & Interventions supported by Homeward Trust.

Less than 35 programs, projects and interventions were supported by the Edmonton Housing Trust Fund.

2023

Over 16,000 housings since the 1st housing first program

Over 1800 Individuals can currently be supported by housing programs with

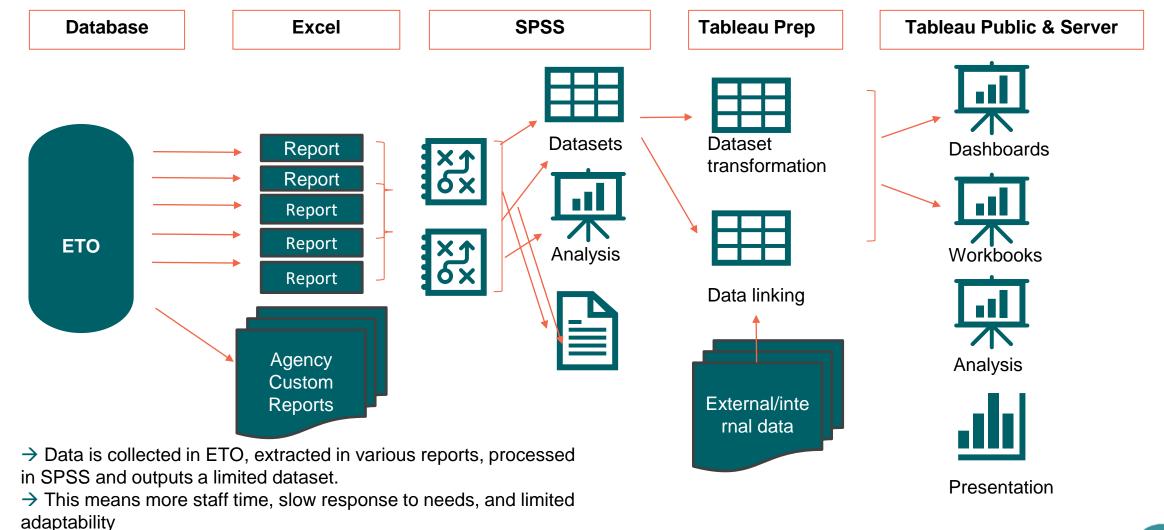
currently 644 Supportive Housing spaces, and

more are on the way



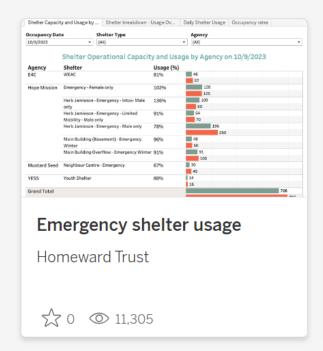


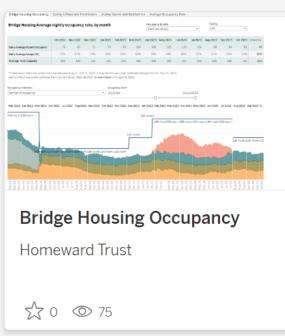
Current Data Ecosystem

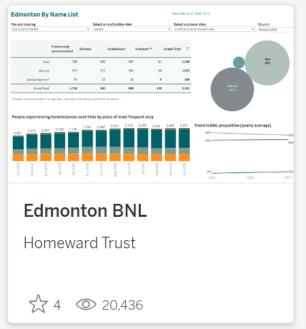




Current State.....







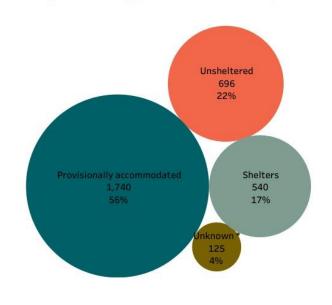


As of Date: Oct 10, 2023

16,324 people were housed through Housing First and related programs since 2009.

Experiencing homelessness 3,101

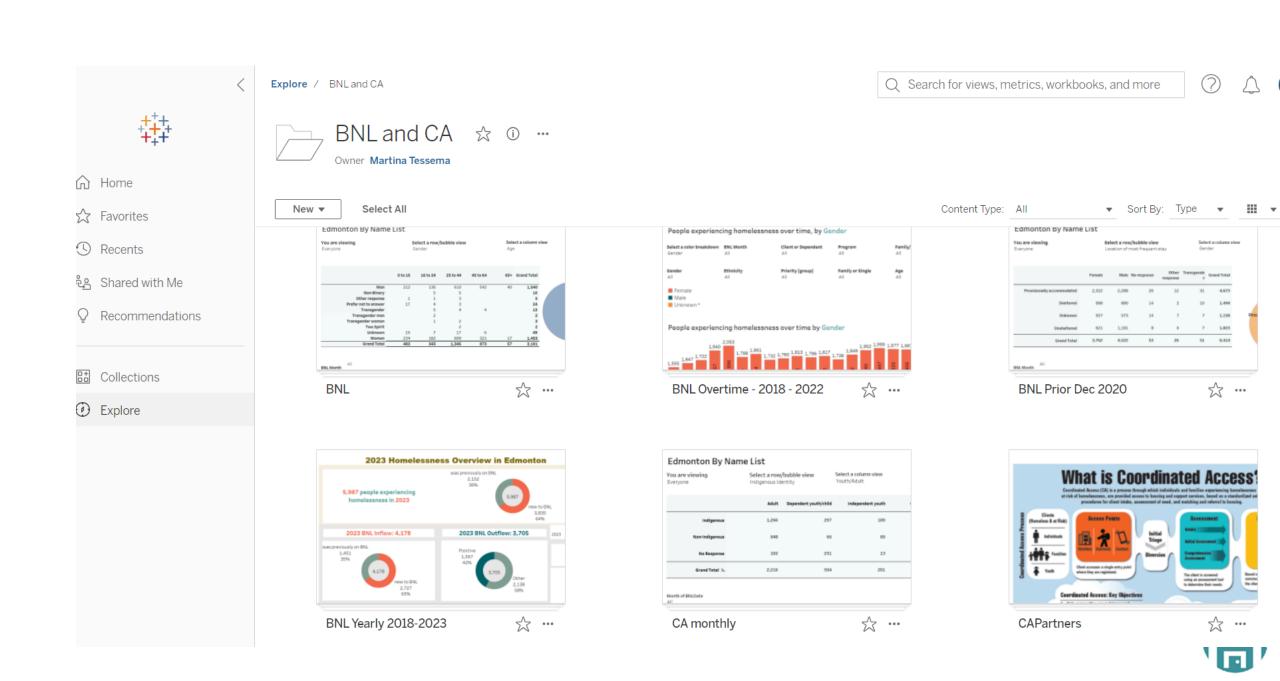




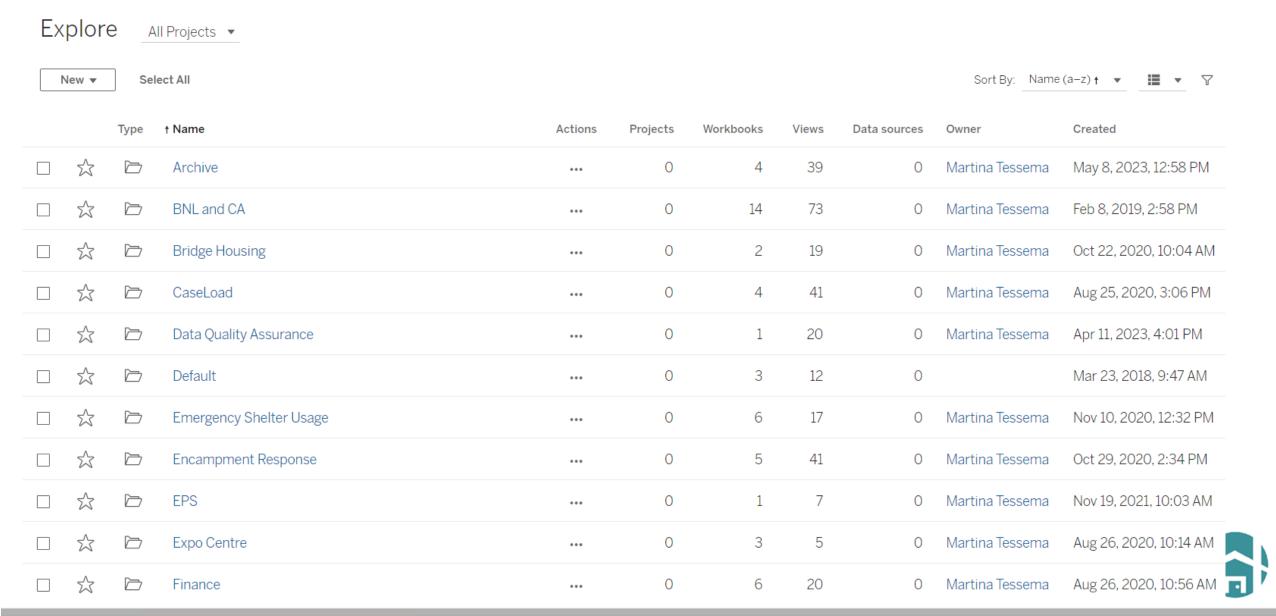
You are viewing a profile of People currently experiencing homelessness

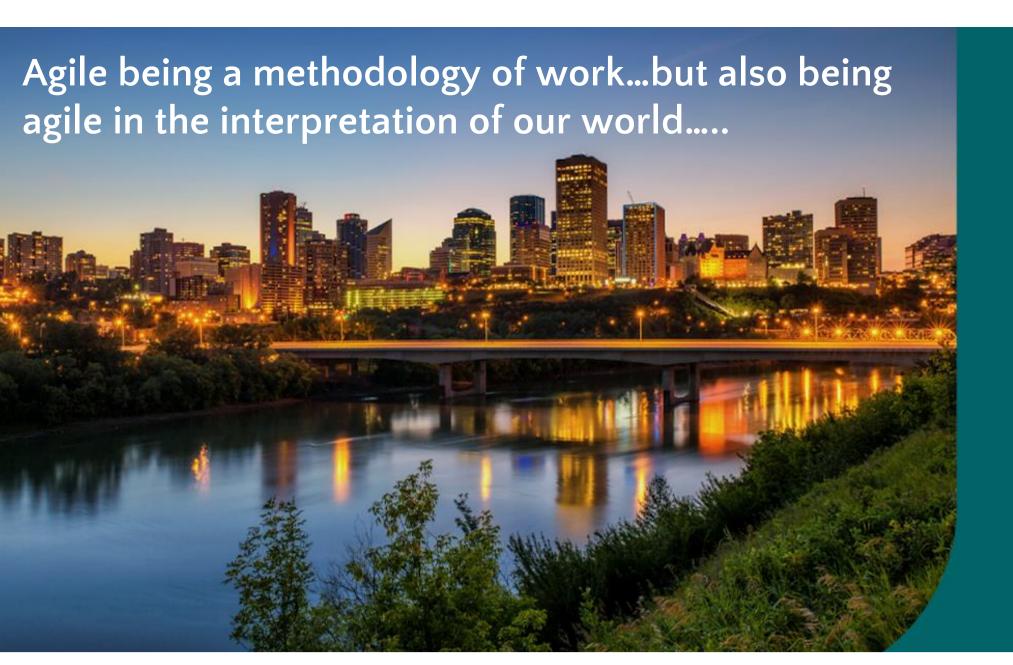






Drowning in Dashboards.....115 in total since 2018







About Edmonton Context

- → Economic Downturn: Job losses in oil & gas → Rise in homelessness and funding needs.
- → COVID-19: Economic impact → Affected housing supply & intervention delivery.
- → **Policy Changes**: Shifts in government → Affects funding and homelessness rates.
- → System Discharges: Increased exits from public systems → Higher demand for interventions.
- → Societal Attitudes: Growing awareness → Affects public support for strategies.
- → Housing Costs: Rising faster than incomes → More people need housing and funding.
- → Shelter Status: Increase in unsheltered, decrease in sheltered → Affects intervention types.





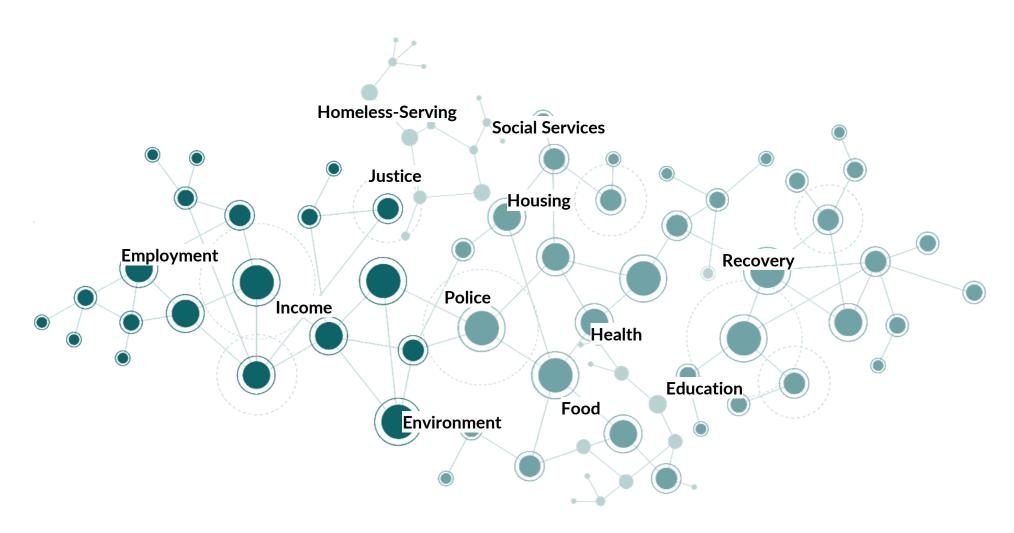
Systems Planning Framework 2023:

Systemic Shift to Using Data to Understand on-the Ground Changes



Homelessness Prevention & Response Ecosystem

Understanding our Role in Social Safety Net Ecosystem

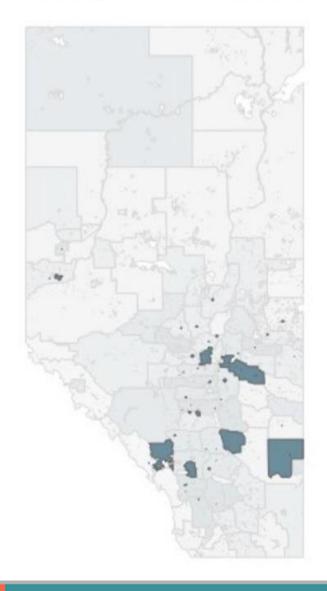


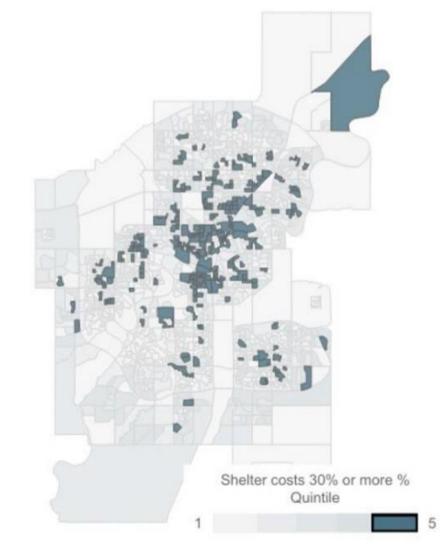


Edmonton in the Broader Context

Alberta Edmonton

HIGH concentration of core housing need (30%+ income on shelter)







Housing Affordability & Competition for Lower End Stock

Affordable Housing Crisis

- → Deepens due to COVID-19 impact.
- → 4,710 households in core housing need and experiencing deep poverty (<\$20,000 income).</p>

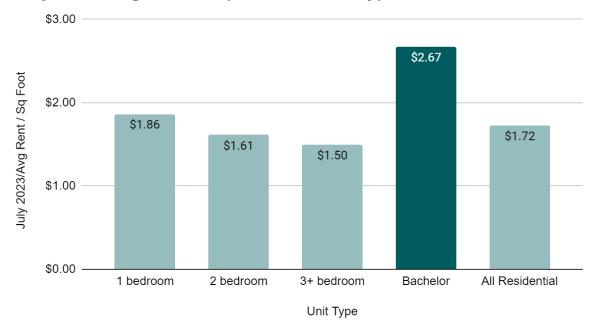
Edmonton's Growth & Unmet Needs

- → Among Canada's fastest-growing cities.
- → Pressure on low-end rental stock → Displacement.

Displacement & Homelessness

- → 70% have lived in Edmonton for 5 years or more (PIT 2022).
- Local displacement alongside migration into homelessness.

July 2023/Avg Rent / Sq Foot vs. Unit Type

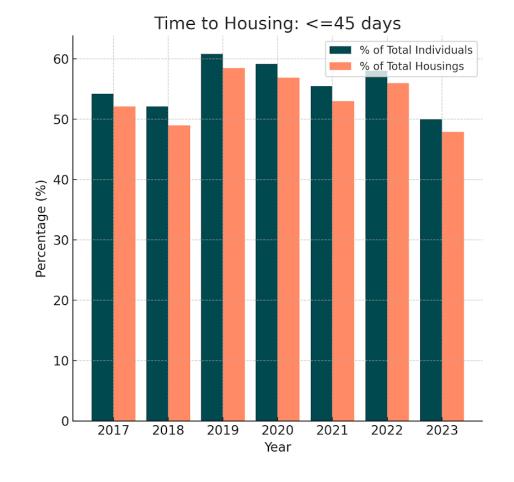




Speed to Housing Slowing > Bottleneck Effect

Slowed speed in time to housing in 2023 (60% vs 48% housed within 45 days 2019 vs 2023).

68% increase in inflow into homelessness (2019 vs. 2022) BNL.





Complexity Impacting Program & System Results

Significant variance in successful housing across program types at exit > Impacted by broader systemic factors.

Shelter & Encampment Crisis

100% fill rate in shelters as of July 2023.700 estimated sleeping rough in public spaces.

Synthetic Drug & Mental Health Crisis

84% report substance use; 66% report mental health issues. Increasing complexity in needs and chronic homelessness.

Hidden Homelessness & Support Networks

Fraying of informal support networks due to COVID.

Indigenous Overrepresentation

Ten-fold overrepresentation.

65% in violence-against-women shelters; 57% in correctional services are Indigenous.







Purpose of the Systems Planning Framework to A Wholeof-Systems Approach



An encompassing blueprint for stakeholders, focused on targeted and comprehensive programs, policies, and initiatives to address homelessness.

Importance of Systems Approach:

Holistic and integrated, recognizing the complex factors affecting homelessness.

Cross-sector collaboration among government, NGOs, and community organizations.

Key Components of Framework:

Range of program types, sub-types, and sub-sub-types.

Tailored to unique needs and circumstances of individuals and families.



Row Labels	▼ Count of Program Sub-Type
Assertive Community Treatmen	it 2
Clinical Support	1
Contingency Support Program:	1
Coordinated Access	1
Crisis Response Coordination	2
Financial Supports	2
Homelessness Diversion	19
Homelessness Prevention	2
Intensive Case Management	11
Interim Housing	8
Rapid Rehousing	7
Short-Term Supportive Housing	, 6
Supportive Housing	15
Supportive Services	2
Grand Total	79



Row Labels	▼ Count of System Component
■ Assertive Community Treatment	
Assertive Community Treatment	2
□ Clinical Support	
Clinical Support	1
■ Contingency Support Program:	
Exceptional Cost Assistance	1
■ Coordinated Access	
Coordinated Access	1
□ Crisis Response Coordination	
Encampments Response	2
☐ Financial Supports	
Rental Assistance	1
Support Services and Prevention	1
■ Homelessness Diversion	
Supported Referral	19
■ Homelessness Prevention	
Encampments Response	1
Prevention and Diversion Services for Yo	utł 1
■ Intensive Case Management	
Housing Outreach	2
Intensive Case Management	9
■ Interim Housing	
Bridge Housing	7
Short-Term Supportive Housing	1
■ Rapid Rehousing	
Intensive Case Management	1_
Rapid Rehousing	2
Youth Housing First	4
■ Short-Term Supportive Housing	
Short-Term Supportive Housing	6
■ Supportive Housing	
Affiliate Site	1
Scattered/Market Housing model	1
SLALA (Supportive Living) 2	1
SLALA (Supportive Living) 3	2
Supportive Housing 1	2
Supportive Housing 2	6
Supportive Housing 3	2
■ Supportive Services	
Supportive Services	1
Voluntary Trusteeship and Financial Lite	
Grand Total	79



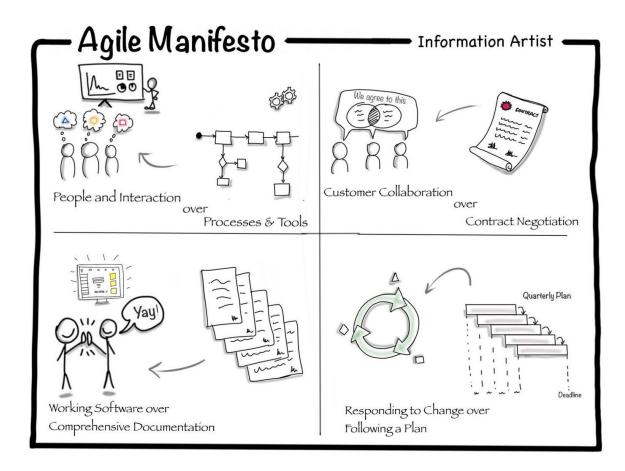




What Is Agile?

Agile is Principle- and Value-Based

https://agilemanifesto.org/principles.html



Source: https://medium.com/informationartist/agile-manifesto-explained-visually-d2fb07211373

12 Agile Principles

- Continuous customer satisfaction
- 2. Welcome changing requirements throughout
- 3. Frequent delivery of working solutions
- 4. Constant collaboration with the business
- 5. Support, trust, and motivate the people involved
- 6. Enables face-to-face interactions
- 7. Progress is measured by working solution
- 8. Agile processes to support a consistent pace
- 9. Attention to technical detail enhances agility
- 10. Simplicity Do just enough to get the job done
- 11. Self-organizing teams encourage great architectures, requirements, and designs
- 2. Regular reflections on becoming more effective

Agile Scrum Values

Courage

Scrum Team members have courage to do the right thing and work on tough problems

Focus

Everyone focuses on the work of the Sprint and the goals of the Scrum Team

Commitment

People personally commit to achieving the goals of the Scrum Team

Respect

Scrum Team members respect each other to be capable, independent people

Openness

The Scrum Team and its stakeholders agree to be open about all the work and the challenges with performing the work

Source: https://www.scrum.org/resources/blog/5-scrum-values-take-center-stage

Which value(s) do you resonate with the most?

Scrum Process At Homeward Trust **Scrum Review** Retrospective 2-Week Sprint **Scrum Master Product Owner** Team

Sprint

Backlog

Sprint 1

Start Date: March 23 End Date: Apr 5

Backlog Refinement

Sprint 2

Sprint

Planning

Start Date: Apr 6 End Date: Apr 19

Sprint 3

Start Date: Apr 20 End Date: May 3

Sprint 4

Start Date: May 4 End Date: May 17

Completed Work

Our Journey

Homeward Trust's Data & Analytics has a maturing scrum process, currently running at Sprint 16 (as of November 2023).

Corporate direction for all teams:

2-week Sprints

Owner	₹ Assignee	= Project =	Tasks =	Time Estimate =	Actual Time (F =	Political Priori \Xi	Urgency (1 drc \Xi	Status =
Liam, Alain, Tracy	Tracy	Shelter Interview Data	Test power automate so that the spreadsheet	automatically up	dates shelter map	ping data for Tab	leau	Not completed
Alain	Tracy	Test Data Team Member Ha	ar Find a method and test it out to see if it works	for easily creating	g and maintaining	a handbook for	how to jump into o	ongoing
Tracy	Tracy	Training	Technical training ongoing (SPSS, ETO, Table	eau) orientation to	fullset through ar	nnual review, den	2	Ongoing
Alain, Jackie, Alina	Tracy	Research Committee (Topic	Find out what we need to know to inform rese	earch agenda - int	ernally have discu	ussion		Started
Jackie, Alina, Alain	Tracy	Research Committee ACTI	start a spreadsheet with Rebecca V. to compi	le information abo	out current and up	coming research	projects in the co	Started
Jackie, Alina, Alain	Tracy	Research Committee ACTI	Prep to share the Al-generated literature review	ew from Karto at t	he next meeting for	or discussion.		Not Started
Jackie, Alina, Alain	Tracy	Research Committee ACTI	Update Jackie: committee will consider using	some of its comm	nunity research fu	nds to hire some	one locally to do a	Not Started
Jackie, Alina, Alain	Tracy	Research Committee ACTI	owork on designing a survey to gather informa	tion from other or	ganizations about	research they ar	e conducting.	Not Started
Alain, Jackie	Tracy	Participate Satisfaction	create a checklist to say what we need to do	to get it going (sir	nilar to ARCH che	cklist/workplans)		Not Started
Tracy	Tracy	ARCH Project Workplan	Continue to work on ARCH workplan/workstru	ucture				Ongoing
			completed an update and emailed it out regar	rding the ARCH a	pplication and pre	p for project start	tup	complete
Jackie, Alina, Alain	Tracy	ARCH Project Workplan	Get ready for next steps to take action on who	en we recieve app	proval to move for	ward with the pro	ject	Ongoing
			Started mapping out groups, individuals and	engagements with	nin the project to h	elp describe bett	er	Started
Jackie, Alina, Alain	Tracy	ARCH Project Workplan: In	d Use IAC briefing note to incorporate indigeno	us leardership su	pport into all stage	es of ARCH work	plans	completed
Jackie, Alina, Alain	Tracy	ARCH Project Workplan	Go through ARECCI online tool to ensure eth	ics is on track				Not Started
Jackie, Alina, Alain	Tracy	ARCH Project Workplan: C	Create templates for regular internal and com	mittee updates				Started
Jackie, Alina, Alain	Tracy	ARCH Project Workplan: C	Create boiler plates for introduction to the pro	ject in emails, slic	des, recruitment, c	alls for proposals	s, etc.	Started
Jackie, Alina, Alain	Tracy	ARCH Project Workplan: Te	a Update job descriptions for recruiting researc	h team with as m	uch experience in	Indigenous resea	arch as possible	Completed
Jackie, Alina, Alain	Tracy	ARCH Project Workplan: Pr	c Create call for proposals and criteria for vettir	ng/including progr	ams so that we ca	an get the most a	ppropriate progra	Started
Jackie, Alina, Alain	Tracy	ARCH Project Workplan: Si	upport Completion of signing agreement/answe	r Denis email abo	ut misalignment b	etween portal an	d budget template	complete
Jackie, Alain	Tracy	CAEH Conference	Prep for Friday review with SLT					complete
Alain	Martina	Fullset generation	Generate fullset for data (October 7, 2023)					Complete
Alain	Martina	Dashboards Updates	Update all dashboards related to BNL and CA	4				Complete
Alain	Martina	Dashboards Updates	Update New Housings					Complete

Evolving Data Approaches

Current State:

- SPSS
- 6,000 lines of code
- Data set limited to30 months only
- Limited reported and analytical capability
- Limited externalization of data

Future State:

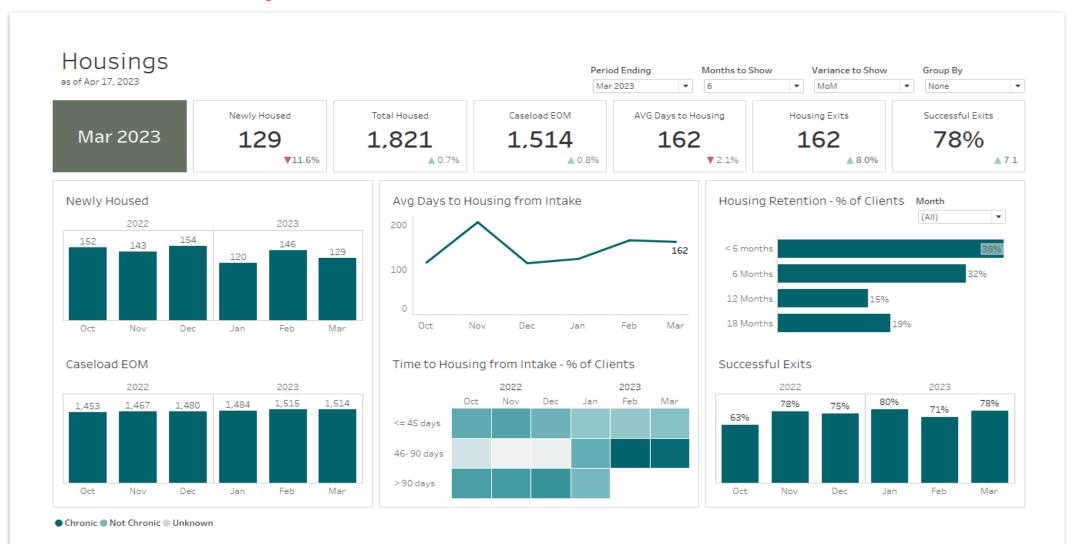
- Python
- 600 lines of code
- Clean, time unlimited data set
- Dynamic system reporting
- Self-serve agency dashboards





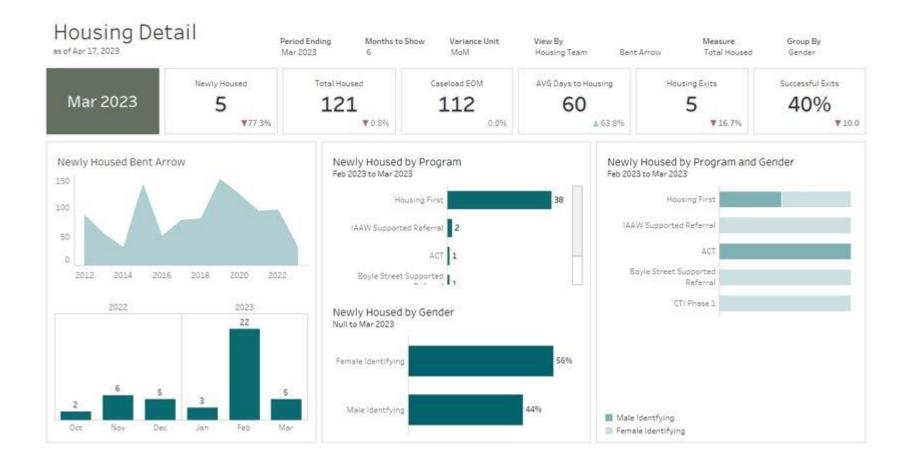


Automated "System" Dashboards





Targeted Team-Based Dashboards





Predictive Models

Linear regression model to represent the relationship between these variables and the need for housing interventions.

Need for Housing Interventions
$$(Y) = \beta_0 + \beta_1(I) + \beta_2(L) + \beta_3(U) + \beta_4(MH) + \beta_5(E) + \beta_6(M) + \beta_7(O) + \epsilon$$

Inflow Rate of Homelessness (I): The number of new entries into homelessness each month.

Average Length of Homelessness (L): The average number of days people remain homeless.

Unemployment Rate (U): A potential economic driver of homelessness.

Mental Health and Addiction Indicators (MH): The number of homeless individuals with self-reported mental health or addiction issues.

Emergency Shelter Occupancy Rate (E): The percentage of emergency shelter beds occupied each month.

Migration Patterns (M): Net migration into the city, which might influence homelessness rates.

Other Factors (O): Other relevant factors such as cost of living, wage growth vs housing price growth, etc.



AI-Enabled Reporting

Encampment Program Interim Evaluation

Dataset

Spanning from January 1, 2017, to April 17, 2023, the plan's implementation period has involved multiple stakeholders working collaboratively to create sustainable solutions.

The data and visualizations in this report reflect the progress and challenges encountered in various programs, specifically focusing on the unsheltered category. By examining these insights, we hope to identify areas of success, and potential improvement and align our future actions with the continuing commitment to reducing homelessness.

Dataset

Key Insights



Encampment Outreach serves clients with high needs - long histories of unsheltered homelessness. This does not seem to align with the Mastersheet's categorization of the program as focused on Moderate needs and being on the lower intensity of ICM (ICM-1).



Outcomes related to housing stability are poorer than rapid re-housing and other Housing First models. This is likely due to the focus on unsheltered populations despite the initial design focused on moderate acuity.



Encampment clients have much lower rates of exit to stable housing and higher rates of return to homelessness than other models. This may be likely due to the program's target population, but also likely due to the lack of proper flow given the focus on connecting clients to other housing/ support services.



Incarceration and deaths are fairly low as exits; the higher rate of exit to shelters suggests some retain the ability/willingness to utilize shelters if needed comparatively to other programs.



The Encampment Outreach population appears to be those with lengthy histories of unsheltered homelessness - despite the fact that their exit to shelter is relatively high compared to other programs. This may be a feature of the program design.



Briefing Note Unsheltered Housing Efforts 2021-2022

April 14, 2023

6th floor, 10242 – 105 Street Territory of Treaty No. 6 Edmonton, Alberta TSJ 3L5

P: 780.496.2630 E: info@homewardtrust.ca W: homewardtrust.ca @HomewardTrust



- → Unsheltered homelessness has a total count of 606 individuals, which is 24% of the total number of people enumerated.
- → There were 275 people enumerated as unsheltered individuals in encampments.

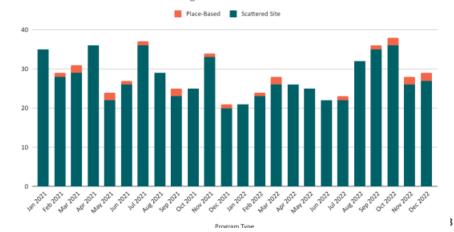
Total Unsheltered	Sub-Category	Total Sub-Category	Sub-Category as Percent of Count Total
	Unsheltered in a Public Space	270	11%
606	Unsure (outdoor location)	61	2%
(24%)	Encampment - Surveyed	198	8%
	Encampment - Observed	77	3%

Responding to Complex Needs in Unsheltered Population

It is important to note that the unsheltered population is not exclusively sleeping in encampments - and the data on program intake does not specifically capture the exact rough sleeping location. Nonetheless, the following trends can be surmised:

- → A total of 685 housings of unsheltered individuals were completed across place-based and scattered site housing options Homeward Trust provides oversight on from Jan. 2021 to Dec. 2022.
- → Of these, 97% were in scattered housing options; only 22 housings (3%) could be made into supportive housing.

Place-Based & Scattered Site Housings of Unsheltered Edmontonians 2021-2022





Peer support: Engaging with peer support groups, such as 12-step programs or other mutual aid groups, can provide valuable emotional support and practical guidance for maintaining sobriety.

Harm reduction services: Programs such as needle exchanges, supervised consumption sites, and overdose prevention education can minimize the risks associated with ongoing substance use.

Life skills training: Assistance with developing life skills, such as budgeting, cooking, and selfcare, can help individuals regain independence and improve their overall functioning.

Job training and employment assistance: Programs that provide job training, education, and employment assistance can help individuals achieve financial stability and reintegrate into society.

Aftercare and relapse prevention: Ongoing support, case management, and relapse prevention planning can help individuals maintain their recovery and avoid returning to substance use.

Here's an overview of how the chronic use of various substances might affect service provision and housing efforts:

Substance	Effects During Use	Detox Process	Long-term Effects of Chronic Use	Often Mixed With
Methamphetamine (Meth)	Increased alertness, euphoria, hyperactivity, decreased appetite	Acute withdrawal may include depression, anxiety, fatigue, cravings	Cognitive impairment, heart disease, psychosis, dental problems	Heroin ("Goofball")
Xylazine	Sedation, hypotension, slowed heart rate	Likely requires medical supervision to manage symptoms Not well-studied but potentially se risks		Heroin, Fentanyl
Benzodiazepines (Benzos)	Sedation, reduced anxiety, muscle relaxation	Withdrawal can be severe and potentially life-threatening, often involves medical supervision and gradual tapering	Cognitive impairment, dependence, potential for overdose if combined with other depressants	Opioids, Alcohol
Fentanyl	Euphoria, pain relief, sedation	Acute withdrawal symptoms similar to other opioids, medical supervision often needed	Dependence, increased risk of overdose, slowed breathing, death	Heroin, Cocaine ("Speedball")
Carfentanil	Extreme euphoria, pain relief, sedation (Note: Carfentani) is extremely potent and often fatal in humans)	Similar to other opioids but potentially more severe due to high potency	Similar to other opioids but with greater risk due to potency	Other opioids (often without the user's knowledge)
Increased alertness, Cocaine euphoria, increased heart rate and blood pressure		Acute withdrawal may include depression, anxiety, fatigue, increased appetite,	Heart disease, stroke, cognitive impairment, dependence	Heroin ("Speedball"), Fentanyl

		unpleasant dreams		
	Increased energy, empathy, euphoria, sensory enhancement	Acute withdrawal may include depression, fatigue, loss of appetite	Possible cognitive impairment, heart disease, dependence	Other stimulants, hallucinogens, ketamine

Methamphetamine (Meth)

- Services: Individuals using meth often need a range of services, including substance use
 treatment, mental health care, medical care (for issues like dental problems and skin sores), and
 assistance with basic needs like food and clothing. Because meth use can lead to aggressive or
 violent behavior, services may need to be delivered in a way that ensures the safety of staff and
 other clients.
- Housing: Housing options that provide a stable, supportive environment are ideal. This could
 include "housing first" approaches, which provide housing without preconditions, as well as
 supportive housing that includes on-site services.

Xylazine

- Services: The sedative effects of xylazine may require services to be delivered at a slower pace, with repeated instructions or reminders. Overdose prevention and response, including access to naloxone, is crucial.
- Housing: Stable housing is important for individuals using xylazine, as the sedative effects of the drug can increase vulnerability to harm or exploitation on the streets.

Benzodiazepines (Benzos)

- Services: Individuals using benzos may require mental health services, substance use treatment, and medical care for issues like falls or other injuries sustained while under the influence.
 Overdose prevention and response are important, as is monitoring for signs of withdrawal.
- Housing: Stable housing with on-site services can provide a safer environment for individuals
 using benzos, reducing the risk of harm and exploitation.

Fentanyl and Carfentanil

 Services: Given the extremely high risk of overdose, services for individuals using fentanyl or carfentanil need to prioritize overdose prevention and response, including access to naloxone.
 Substance use treatment, mental health care, and basic needs services are also important.



Thank You!

Jackie Liu

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