COMMUNITY PLANNING & DEVELOPMENT

System Modeling 101

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Welcome and Introductions

Who's in the room?

HMIS System Administrator
HMIS Vendor
HMIS User
CoC leadership or member

How familiar are you with System Modeling?

Been there, done that
No idea what it is
Some familiarity, but lots to learn

Learning Objectives

- Understand the concept of system modeling as a framework for driving community-level change
- Identify the stages and key concepts of the system modeling process
- Be prepared to review and use LSA data in the new Stella P (and eventually Stella M)

What is System Modeling?

System Modeling

A process to estimate the optimal system (e.g., the type and amount of assistance) needed to permanently house those seeking assistance in your community

By modeling different sets of assumptions, we can..

- weigh advantages and disadvantages of various options for the optimal system
- better understand your current system and identify gaps and challenges with it

Uses of System Modeling

Once a community has gone through a system modeling process, these insights into their optimal system can be leveraged for:

1. Advocacy to secure funding for the resources needed to develop an optimal system (addition of new program models or further investment in existing resources)
2. Prioritization and resource allocation decisions among existing providers and partners (including addition of or shifts in funding)
3. Performance Improvement Plan development to identify improvements for existing projects, so that the CoC is well positioned to attain the performance modeled for the system
4. Development of or updates to existing CoC Written Standards

Optimal System

- The U.S. Interagency Council on Homelessness (USICH) states that:
  - An end to homelessness **does not mean that no one will ever experience a housing crisis again**
  - An end to homelessness means that every community will have a **systematic response in place** that ensures homelessness is **prevented whenever possible or if it can't be prevented is a rare, brief, and one-time** experience.

Myths About System Modeling

1. There's only one way to do this, one tool that works
2. You need perfect data from your Homeless Management Information System (HMIS) to do modeling
3. It's quick and easy to do
4. The hard part is the data
5. Staff can do this in a silo, without broad participation from all stakeholders

Realities of System Modeling

1. Leverage HDX 2.0 or other available tools for system modeling
2. Focus on ensuring that you have accurate and comprehensive coverage in HMIS
3. Be strategic in your approach; don't rush the process but also work with a purpose and set of goals in mind—why are you doing system modeling?
4. Use the system modeling process to identify areas for practice improvement in your current system
5. Build support for the results of the system modeling process by involving people in the process from the start

Overview of System Modeling Process

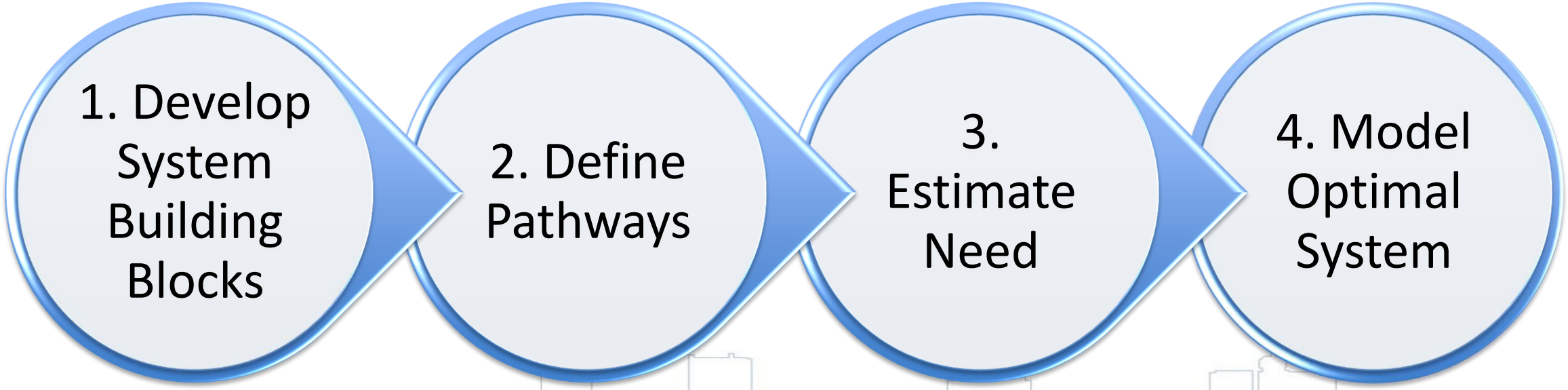
Before you begin…

Ensure that system modeling is something that the CoC is bought into and that they are prepared to actively participate in and strategically use the results

Data is a key ingredient in system modeling, but an inclusive process with a broad array of stakeholders is of equal importance

Consider developing a System Modeling Group that is comprised of: providers, mainstream partners, funders, people with lived experience of homelessness, data team and other community partners

System Modeling Process



- Core Values
- Program Models
- System Map

- % of Populations Served
- Intensity of Assistance

- Current Need
- Annual Inflow

- Estimate units/slots Needed
- Estimate Costs
- **Optimal** System Model

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COMMUNITY PLANNING DEVELOPMENT

1. Develop System Building Blocks: Core Values

What does it mean in your community to end homelessness? What would their optimal system look like?
Are there populations of persons experiencing homelessness that are a priority?

Convene your System Modeling Group for at least one conversation on core values and mission for your community and write them out

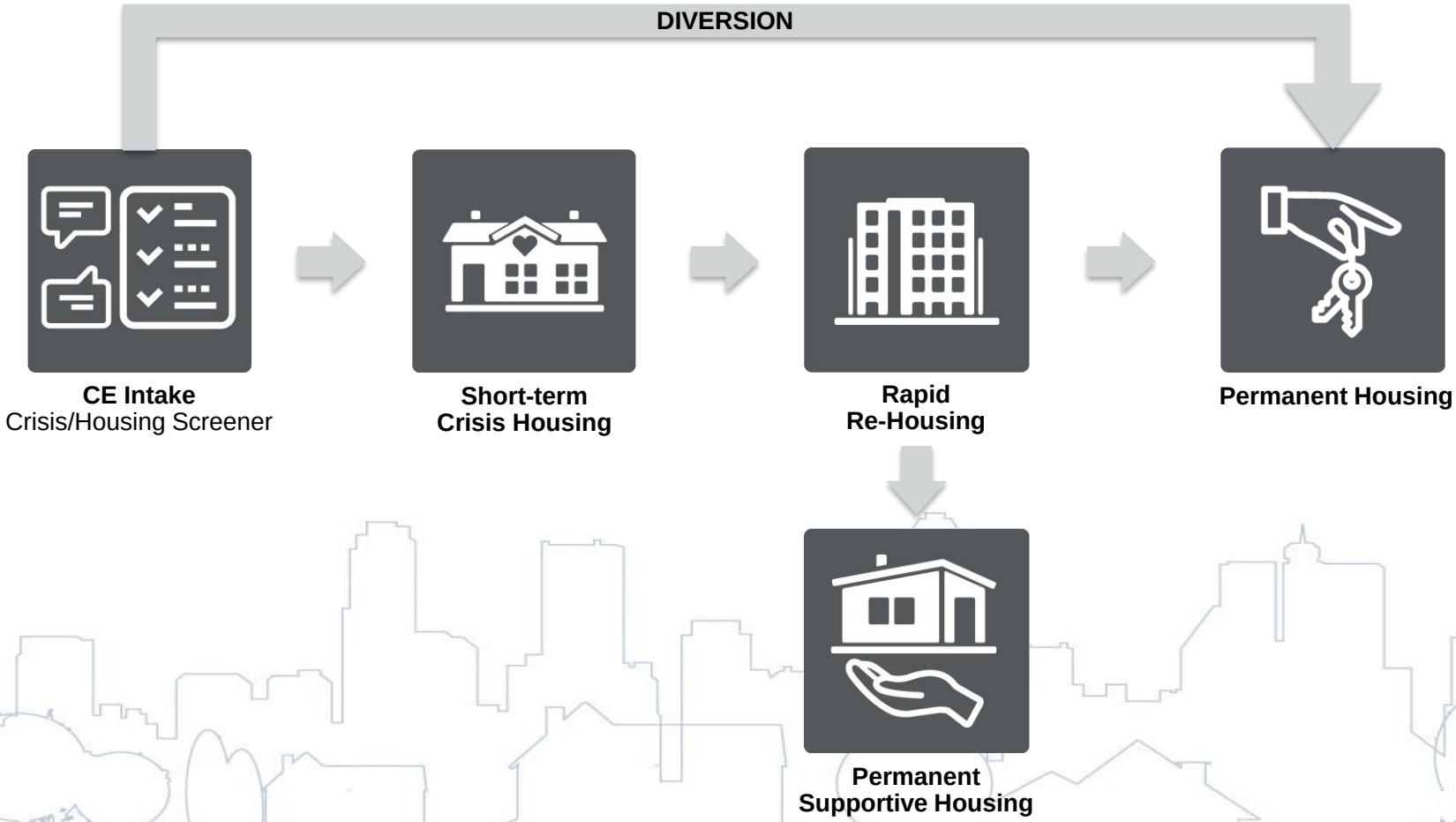
1. Develop System Building Blocks: Program Models

Define models of assistance you want available to end homelessness in your community

For each model, describe:

- Duration of assistance
- Population prioritized for assistance
- Key elements of model (i.e. optional services, required services)
- Eligibility criteria
- Performance measures/evaluation criteria for each model

Sample System Map



In-Session Activity #1: Developing your System Map

Using the worksheet provided, work with at least two of your neighbors to draw out your system. When doing so, keep in mind:

1. How do you believe your system should work to most effectively end homelessness?
2. What types of resources and assistance to do you think your community needs for this work?

Fill out your responses on the sheet
Be prepared to share with the full group and discuss what was hard about this exercise

2. Define Pathways

Pathways, are the ways that people are moving through your homeless response system

You can leverage LSA data and Stella P to identify and understand pathways

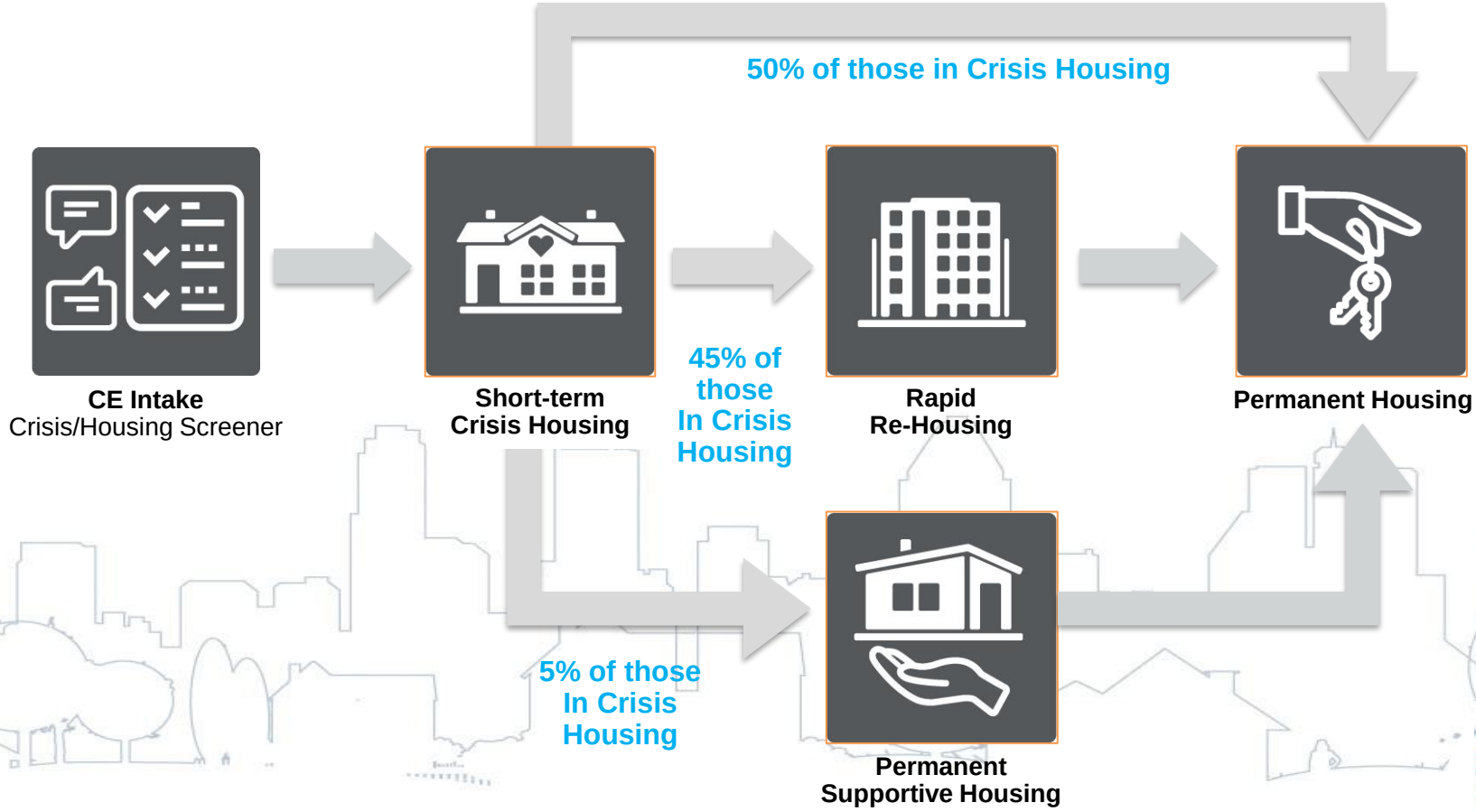
Each homeless system includes many projects and many types of projects, and pathways identify which parts of the system people are using before they become stably housed

Sample pathway: Emergency Shelter (ES) to Rapid Re-housing (RRH) to Permanent Supportive Housing (PSH)

2. Define Pathways

When defining pathways for your optimal system, you are identifying the percentage of people that you think will need a particular combination of project types to end their homelessness (% of populations served) and how long they will need to be served in each project type in the pathway

Sample Pathways



In-Session Activity #2: Cohort Groups and Assistance Needed

Potential cohorts	Potential assistance strategies	%
Immediate housing crisis, limited support network and no income		
Low income and currently employed, homeless, and no history of physical disabilities or mental health challenges		
No/limited income, poor rental history, addiction/mental health and/or disability		

3. Estimate Need

Leverage Longitudinal System Analysis (LSA) data to identify both current utilization of system and to estimate ongoing need of the system

- Annual demand/persons and households served
- Types of households served, including any specific populations identified as focus (e.g. youth, veterans, families, etc.)
- Length of stay in program models

3. Estimate Need

A CoC can adjust data from HMIS with an estimate of additional households expected to present; data from coordinated entry points of access can help with these estimates

A CoC can also model for people who are unsheltered (using the same or different assumptions about how their homelessness should be addresses), and/or assumptions about service strategies can be tailored to different subpopulations

3. Estimating Need- Calculating Inventory

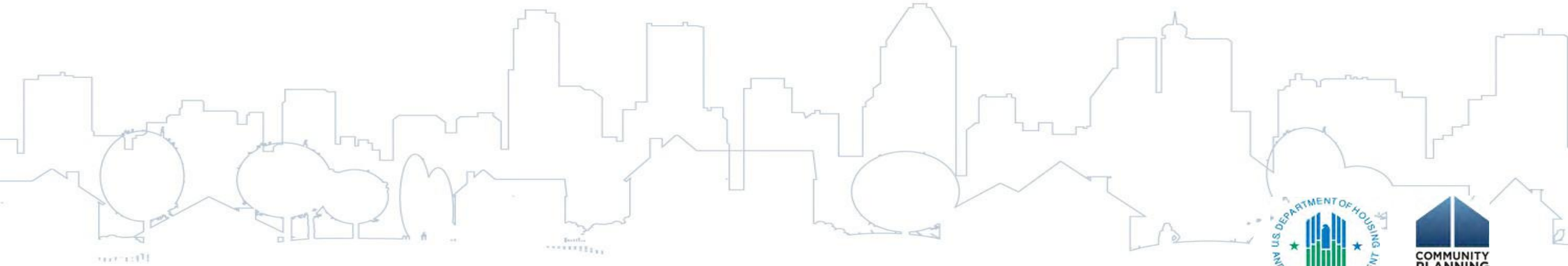
Using annual count and assumptions about pathways and length of stay, can determine the number of units or beds or subsidy slots needed at a point in time.

Example – 10 individuals enter shelter each month

Pathway with % of HHs	LOS in ES	Beds Needed
ES only – 20%	2 weeks	1 bed
ES+TH – 10%	1 month	1 bed
ES+RRH – 50%	1 month	5 beds
ES+PSH – 20%	2 months	4 beds
Total beds		**11 beds**

3. Estimating Need- Demo of Excel Based Tool to Model

- Based on the information gathered during the 2nd exercise, we're going to fill in the projections in an Excel based tool
- Has been used in several communities for system modeling efforts, including Washington, D.C., Indianapolis, and Los Angeles

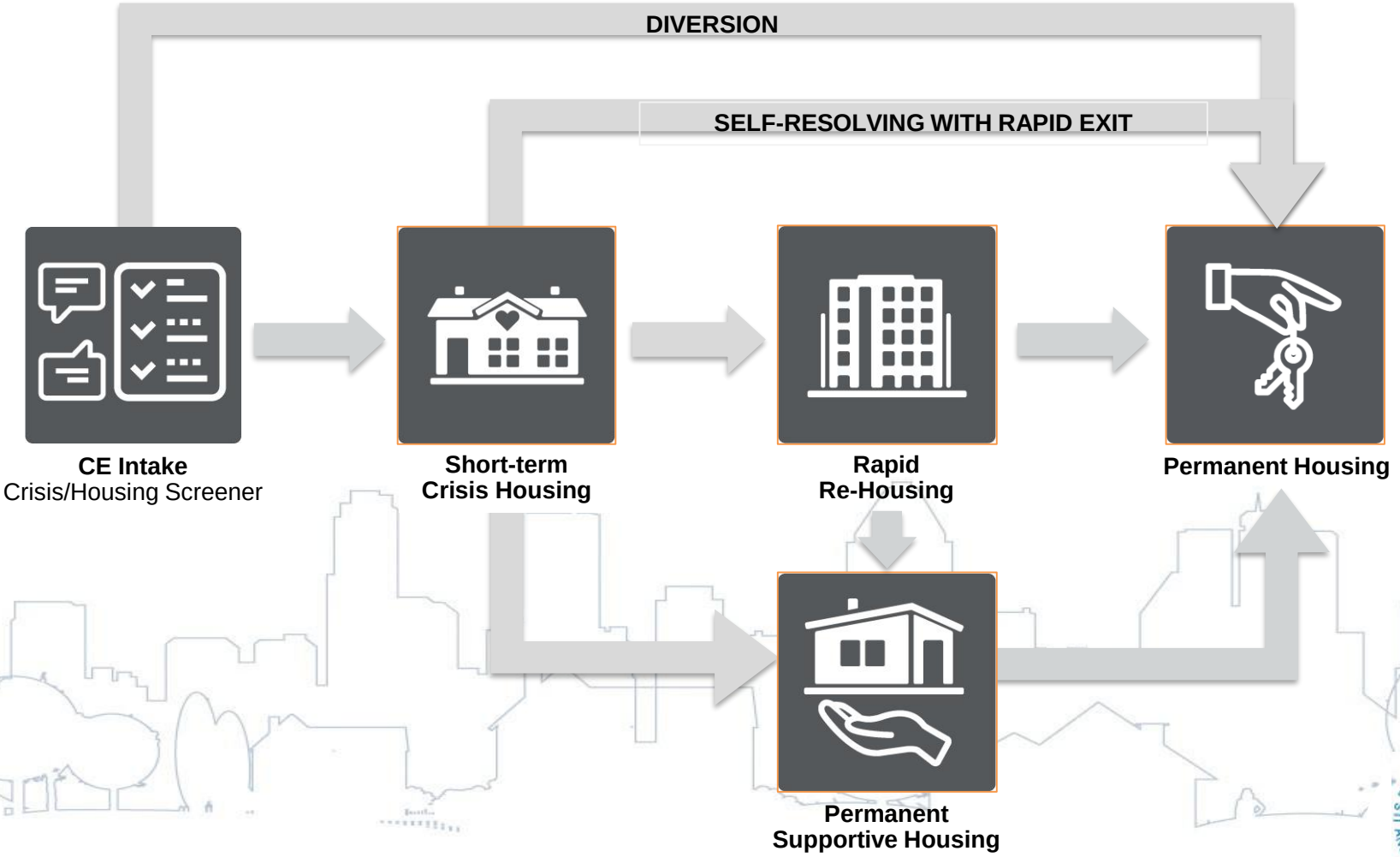


4. Optimal System Model

An optimal system model helps to visualize how the program models work together to serve a particular household type.

Using pathways, or combinations of project types, to develop different service strategies to end homelessness for groups of people with different barriers to housing and needs

Sample **Optimal** System Model



4. Modeling Optimal System- Stella Modeling Module

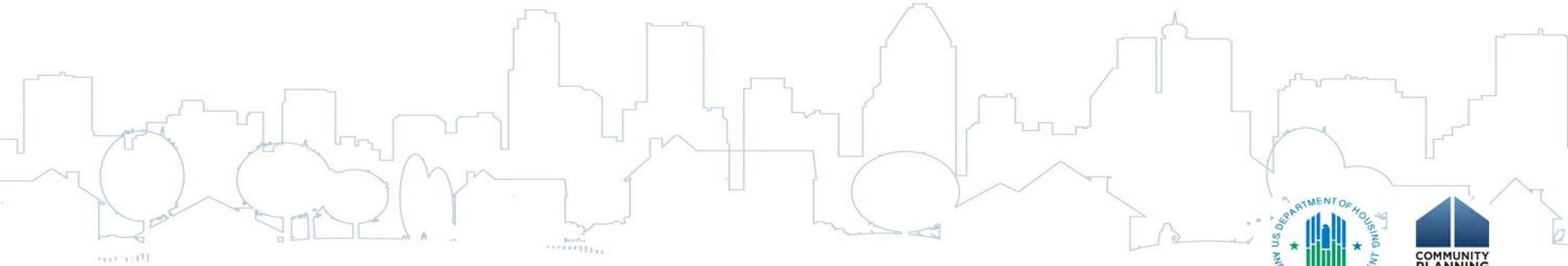
Stella Modeling starts with homeless needs and performance goals, and helps the community transform those needs into a series of resource investment decisions. Modeling allows CoCs to explore the performance impact of investments in different project types and changes to project and system processes.

Stella M will be available in HDX 2.0 for CoCs to explore how to better serve households experiencing homelessness

4. Modeling Optimal System- Estimating Costs

An optional step is to estimate the cost of this optimal system:

1. Can start by surveying your existing projects to understand (across all funding sources) what it takes for them to serve a household
2. Cost data is often very hard to come by and yet can be a very powerful way to advocate for your optimal system



Wrap Up

Additional Resources on System Modeling

Recent brief on system modeling (USICH and Abt Associates)
https://www.usich.gov/news/how-system-modeling-can-help-build-a-stronger-response-to-homelessness/

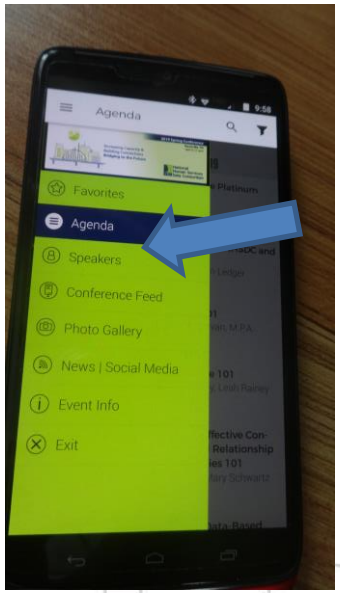
Presentation on system modeling (Focus Strategies)
https://focusstrategies.net/wp-content/uploads/2016/09/Modeling-Workshop-4_03web.pdf

What's Next?

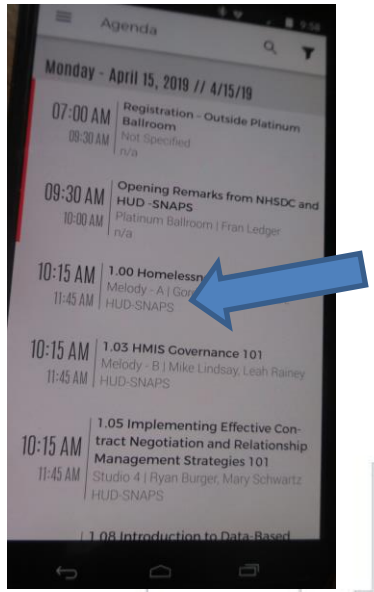
What's one thing that you're willing to do as a next step with this work? What do you feel ready for? What feels like a reach still?

Evaluate This Session on Your Conference App!
(It takes 5 minutes to complete)

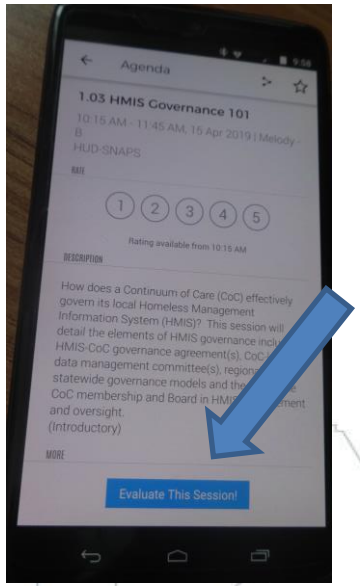
1) Select “Agenda” from the navigation menu.



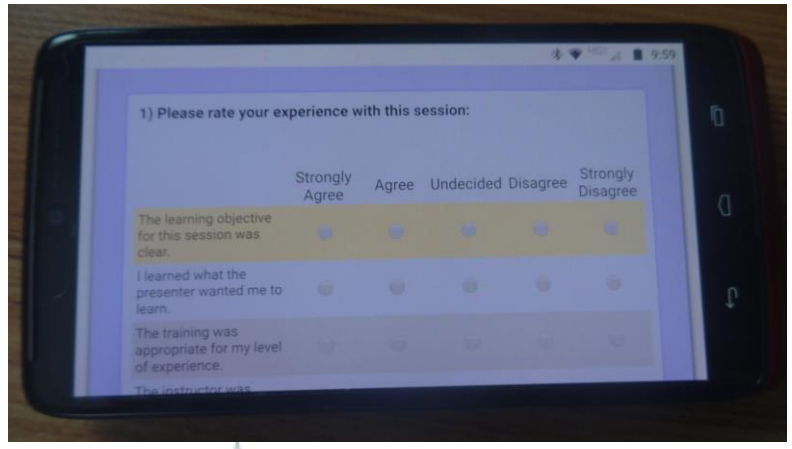
2) Select the name of the session.



3) Select the blue “Evaluate This Session”.



4) Complete the Evaluation and Select “Finish”.



TIP:
Turn your phone horizontally to see rating options.

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HUD Certificate-of-Completion

Reminder: HUD is offering a Certificate-of-Completion for completing at least 4 sessions within either track:

1) HMIS Fundamentals Track
2) System Planning with Data Track

To earn credit for completion of this session, please complete the evaluation on the conference app and include contact details when prompted

HUD Certificate-of-Completion

HMIS Fundamentals Track

- HMIS Governance 101
- HMIS Lead Monitoring
- HMIS Project Monitoring
- Implementing Effective Contract Negotiation and Relationship Management Strategies 101
- HMIS Project Set Up 101
- HMIS Project Set Up 201
- Understanding the Interconnectedness of HMIS Data
- Achieving a Quality and Stable HMIS Staffing Pattern
- HMIS Project Management and Annual Calendar of Expectations

System Planning with Data Track

- Orientation to the Stella Performance Module
- **System Modeling 101**
- System Performance Improvement: Part 1 – Analyzing Performance
- System Performance Improvement: Part 2 – Developing Strategies
- Overview of System Performance Measures and Reports
- Using Data in Funding Decisions
- System Performance by Subpopulation and Geography


THANK
YOU