Home Together 2030
System Modeling Overview

What is system modeling?

System modeling is a structured, data-driven approach that helps homelessness response system leaders estimate the number of beds, units, and/or subsidies needed across various program types to achieve their community's homelessness reduction goals—including the projected costs. This process enables leaders to compare current resources and usage with what is actually needed to improve system performance and outcomes.

What data Is used to inform the modeling process? And what are key decision points?

System modeling is part art and part science. While it draws on the best available data—including the community's Homeless Management Information System (HMIS), Point-in-Time (PIT) Count, and Coordinated Entry System (CES) data—these sources are inherently imperfect and incomplete. Many aspects of homelessness and system performance are difficult to fully capture through data alone. That's why stakeholder expertise plays a critical role: to fill in gaps, contextualize findings, and apply judgment where the data falls short. It is the combination of quantitative data and the qualitative insight of those closest to the work that allows us to create a strong, though not perfect, model to guide decision-making.

Stakeholders guiding the system modeling are asked to review available data and make assumptions about the following key topics:

1. Annual Demand. How many people experience homelessness in Alameda County each year? And how might this change over the next five years? To answer this question the following must be considered:
    - How many individuals are experiencing long-term homelessness?
    - How many individuals experience first-time homelessness each year?
    - How many individuals return to homelessness after a previously exiting the system?

2. Prevention efficiency. On average, how many households need to be served with prevention assistance to prevent just one household from entering the homeless response system?

3. Program Types/Pathways. What percentage of the population will need each program type (intervention) to end their episode of homelessness? How might different program types be used together to form a pathway from homelessness back to permanent housing? And how many months, on average, will people stay in each program type?

4. System capacity. What is the maximum amount of people that can be served through different program types each year?

5. Unit Turnover. For each different program type in the community's existing inventory, how many units turn over each year?

What is the outcome of the system modeling process?

System modeling provides three important outputs:

1. A set of recommended program models (types) needed within the system, outlining the target population, the type of assistance provided, and other attributes for each program type. During implementation, this information can be incorporated into written standards, Requests for Proposals, and contracts or grant agreements to help clarify roles and responsibilities across program types and standardize services within the system.

2. An estimate of the number of units (or beds, or subsidy slots) of each program type needed, and the associated cost, in order for the community to reach its stated reduction goal. During implementation, this information can be used to guide resource allocation decisions or fund development efforts.

3. System-level performance assumptions on key measures including length of stay, exits to permanent housing, and returns to homelessness. During implementation, the assumptions in the model can be compared to existing performance to help drive system performance improvements.

Who is supporting Alameda County's Home Together 2030 System Modeling Work?

All Home is a Bay Area organization that works to advance regional solutions that disrupt the cycles of poverty and homelessness, redress racial disparities, and create more economic mobility for people with extremely low incomes. Building off previous work to estimate resources needed across the region to end homelessness, All Home agreed to work with our CoC to create a more tailored model for our community.