The Wasatch 2040 Plan is ambitious in wanting to steer a substantial share of regional growth to transit oriented developments, transit corridors, and transit–served nodes. Implementation of these objectives depends on better understanding of demand and supply conditions, arts and public amenities that influence growth patterns, development of the analytic platform to facilitate community sustainability decision–making from the parcel level up to the region.

The Metropolitan Research Center at the University of Utah and Fregonese Associates are currently collaborating in updating the Envision Tomorrow scenario planning tool by adding numerous analytical models to the current version. Envision Tomorrow Plus (ET+) is in current development and will address strategies and scenarios to carry out the Wasatch 2040 vision as well as provide regions through the nation with the capacity for future community visioning.

**Envision Tomorrow**

Envision Tomorrow puts powerful tools in planners’ hands to design and test land use and transportation decisions. The Envision Tomorrow GIS–based software package can help any city or region examine possibilities at a range of scales. Whether considering how to maximize growth around transit or identify development and redevelopment priorities, Envision Tomorrow provides planners with an easy–to–use, analytical decision making toolbox.

**Current users of Envision Tomorrow**

Cities and regions all over the United States use Envision Tomorrow. Chicago uses the tool to conduct housing studies; Baton Rouge is analyzing future growth scenarios, while the Southern California Association of Governments is examining the potential for emissions reduction through different land use policies. In Portland, the regional government is refining their ability to test land use and transportation policies through scenario planning. Smaller cities like Waco, Texas and Mountlake Terrace, Washington have found Envision Tomorrow to be a valuable addition to their planning toolbox.

**The Plus in ET+**

The Metropolitan Research Center is developing a suite of additional models, called “apps”, which enhance the existing Envision Tomorrow scenarios. The apps are based on the latest research and best practices in the field and cover a range of urban design, socioeconomic and environmental aspects of scenarios.
Predictive Growth Model
Where is growth most likely to occur? Forecast current land use trends into future based on 7D and other LU characteristics

Building and Land Use Types
Menu-based comparison of building/land-use types with predefined characteristics based on FAR, height, density, etc.

Building Energy Consumption
Expand on ET to include LEED or other index, also include intensity, shared walls, FAR, etc.

7-D Transportation Effects
Will calculate interactive coefficients such as internal trip capture, walk, transit, and private vehicle trips for scenario comparison

Return on Investment
Tests physical and financial feasibility of hypothetical development. Will be used to create building prototypes of all types

Housing+Transportation Costs
Will generate H+T costs under current conditions and future scenarios. Draws from 3.3, VMT based consumer data, and reduction from 7-D data such as proximity to transit

Air Quality and Climate Impacts (CO2)
From 7-D data VMT reduction will be converted into emission reduction

Fiscal Impact
Will generate current and future local fiscal revenues (taxes, indirect expenditures) and future fiscal costs (through spatially based capital and operating revenue), cost–benefit will be calculated

Employment Growth
We will extend the analysis further by establishing the relationship between the 7–Ds from the 7–D app and job formation

Employment Resilience
We will compare labor force participation levels of metropolitan areas for which 7–D data were collected, to metropolitan–scale 7–D indices we will calculate, controlling for the usual economic influences
Development Capital
The ROI, building energy, fiscal impact, 7-D (reduction in VMT) all can be capitalized and the sum of savings and monetized

Redevelopment Timing
Will predict, for each parcel and aggregated to any scale, when any given parcel will become “ripe” for redevelopment within a 5-year window.

Water Consumption
Consumption is composed of three principal elements: requirements of the end-user within structures, irrigation or other external uses, and loss. We will apply our 7-D analysis to the EPA’s county-level water use database to establish a relationship between water consumption and urban form

Transportation Safety
Use techniques to assess differences in transportation safety based on mode, urban form, and other factors

Workforce Housing /Jobs Housing Balance
Will estimate the number of jobs by income range and location, and show and calculate the percent of persons in the labor force at comparable income levels living within a 10-minute walk and bicycle distance, and within 10-, 20- and 30-minute transit distance

LEED-ND Application
We will apply design-based apps developed for ET+ to analyze LEED-ND projects

Public Assets (Public Amenities)
Using results from the analysis of amenities and market value, we will construct coefficients indicating the right mix of public assets to maximize value considering the 7-Ds. ET+ can then be able to show the balance of amenities needed to maximize residential and nonresidential value

Street Life
Pedestrian activity related to 7D measures