Envision Tomorrow Plus (ET+)
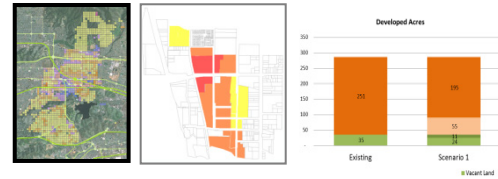**Training Session Outline**
Tuesdays or Thursdays 2:00 – 5:00 PM

Introduction

Although used in business management since the 1960s, scenario planning has been widely disseminated among urban planning practitioners primarily over the last decade. The promise of scenario planning is that it allows people and planners make decisions in a comprehensive way, considering a wide range of possible outcomes of specific actions. Various scenario planning tools in urban planning have been devised by urban professionals to analyze the full impacts of the future changes in the urban environment.

Among these tools, Envision Tomorrow Plus (ET+) is an innovative set of urban and regional planning tools that can be used to model development feasibility on a site-by-site basis as well as create and evaluate multiple land use scenarios, test and refine transportation plans, produce small-area concept plans, and model complex regional issues. The software provides a real-time evaluation of dozens of relevant indicators such as land use, transportation, resource consumption, job and population growth, and fiscal impacts that measure a scenario's performance.

Course Objectives

The Envision Tomorrow Plus course at the University of Utah consists of two three-hour sessions, a beginner level and an advanced level. Those completing the course will understand the overall structure of ET+, be able to create and analyze scenarios at a range of scales, and be familiar with its more advanced functionality.

Beginner Level

The main purpose of this session is to provide prospective users with an overview of the Envision Tomorrow Plus software and guide them through how ET+ is operated and used to produce scenarios. This session consists of three sections. The first section explains general features of ET+ as a leading scenario planning tool and establishes its basic framework such as ET+ file structure and primary components of ET+. In the second section, detailed structure and functions of the Building Prototype Builder (ROI model) – one of the primary components in ET+ - will be explored, and training participants will practice creating a building prototype. The third section will further explore the Scenario Spreadsheet of ET+ (the other primary component) and learn the process of producing scenarios by operating ET+. In particular, participants will practice creating scenarios by painting areas under the ET+ software system and learn how to interpret the outcome of each scenario they produce.

This training session has three main course objectives which are:

- **Understanding** the basic structure of the Envision Tomorrow Plus software as a computer-aided scenario planning tool.
- **Learning** how to build up building prototypes and manage the scenario spreadsheet assuming that all parcel-level data are secured.
- **Practicing** painting multiple scenarios by using ET+ and interpreting the summarized outcomes of each scenario.

Advanced Level

Building on the beginner-level training session, the advanced-level session will explore Envision Tomorrow Plus (ET+) in more detail. Like the beginner-level session, this session also consists of three sections. The first section deals with more detailed data structure of ET+ such as land use categories and important fields for building up data before producing scenarios in ET+. In the second section, participants will learn how to clean raw data from various data sources (ex. Assessor's data) so that they can fit into the data structure of ET+. Also, this section will explore how to use the 'Envision Project Setup' menu so that participants can produce scenarios that fit well into existing conditions or planning goals. As a lab practice section, the third section covers the rest of functions and menus that are not covered in the beginner-level training session. It begins with how to create a GIS file geodatabase in ArcCatalog. Then, it explains how to set up subarea layers in painting scenarios, using ET+ tools (ex. 7Ds apps, buffer summaries etc.), and interpreting 'Apps' tabs in the Scenario Spreadsheet. To illustrate the advanced functions of ET+, this section will also cover larger-scale scenarios.

The advanced-level training session has three main course objectives which are:

- **Understanding** more detailed data structure of ET+ such as fitting existing land use data from various sources into ET+ land use categories, inputting numeric land uses, estimating developed/vacant acres, etc.
- **Learning** detailed preliminary setup functions and cleaning up the existing condition data deriving from various data sources
- **Practicing** how to create a file geodatabase, define subareas, and use various app tools in painting scenarios at various scales

Instructors

This training session will be led by a group of instructors as follows:

Dejan Eskic – Research Analyst, Metropolitan Research Center, University of Utah. dejan.eskic@utah.edu
Keuntae Kim – PhD Student, Department of City and Metropolitan Planning, University of Utah. u0816836@utah.edu

Class/Classrooms

This course will be held at the computer lab in the College of Architecture + Planning, University of Utah (ARCH 125). The address of the building is 375 South 1530 East, Salt Lake City, Utah. The course is offered in two formats – using the lab computers, or on participants' personal laptops. For the laptop option, participants need to bring their own laptops with ArcGIS installed. The ET+ software and all sample files will be provided before the training session via email.

Course Requirements

Although there are no course requirements during the training session, participants should fill out the ET+ survey so that instructors can receive feedbacks and comments after the session. This survey will help instructors figure out how they help participants understand ET+ more easily and what updates or modification the ET+ software will need in the later versions.

Reading Materials

Although instructors cover all materials in the training session, the following reading materials are highly recommended to read before/after the training session:

Envision Tomorrow Plus Manual: Beginner Level.

Arthur C. Nelson et al. (2012), Return on Investment (ROI) Model – Envision Tomorrow Plus (ET+).

Fregonese Associates (2013), Envision Tomorrow Plus: Scenario Indicator + Apps.

Fregonese Associates (2012), Envision Tomorrow Plus: Prototype Builder User guide.

The ET+ user manual will be included in the training session file package and be obtained via email. The other three documents can be downloaded from the ET+ ewiki website http://www.frego.com/etwiki/doku.php?id=support.

Americans with Disabilities Act (ADA) Statement

The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations. All information in this course can be made available in alternative format with prior notification to the Center for Disability Services.

Course Schedule: Beginner-Level

This training session will be a 3-hour class on basic operations of ET+ for scenario planning.

Sections	Contents	Course Materials	Time	Instructor
Section I An Overview of ET+	• What is Envision Tomorrow Plus? • ET+ Basic Framework • When is ET+ used? • Basic Components of ET+ • Brief overview of the Prototype Builder and the Scenario Spreadsheet : Tabs, Work Area, ET+ File Structure • Overview of Apps and Indicators in ET+ • Installing the ET+ software	Presentation Slides ET+ User Manual (p. 1 – 28)	10 – 15 min	Keuntae Kim
Section II Building Prototype Builder	• What is the Prototype Builder in ET+? • The Structure of Tabs in the Prototype Builder • Inputting data in Physical/Basic Financial/Advanced Financial tabs to create a building prototype • Understanding dashboards input/output variables in each tabs • Summary tabs and Calculation Tabs	Building Prototype Builder Sample Files (Excel Files) Prototype Builder Manual	40 – 45 min	Dejan Eskic
Break			10 min	-
Section III Scenario Spreadsheet & Painting Scenarios	• Loading building prototypes into the ET+ Scenario Spreadsheet • The Structure of Tabs in the Scenario Spreadsheet • Inputting data in Input Tabs of the Scenario Spreadsheet • Understanding ET+ menu and functions • Practicing how to paint scenarios : Opening a file geodatabase : Opening a Scenario Spreadsheet : Defining a scenario layer : Start Edit/End-Edit function : Using a paint brush to paint the area : Editing scenarios (Erasing/Sync data) : Using the Attribute Field Manager • Using tools in ET+ : Redevelopment Candidate Apps : Local Jobs-Housing Balance Tool • Interpreting the Scenario Spreadsheet : Indicators in the 'Summary_New' tab : Indicators in the 'Summary_Total' tab	Scenario Spreadsheet Sample file (Excel File) Sample parcel-level GIS file geodatabase (GIS Polygon Layer files and attribute tables) ET+ User Manual (p. 29 – 82)	1 hr 30 min.	Keuntae Kim Dejan Eskic
Q & A Sessions			30 min.	All
Total			**3 hrs**	-

(*) Note: The schedule is subject to change. Additional reading materials or sample files will be provided according to the training session status.

Course Schedule: Advanced-Level

The advanced-level training session will be also a 3-hour class focusing on how to use ET+ in the more detailed and accurate way. Each section will be provided by each instructor shown below, but the other instructor may also assist you in improving your understanding of ET+.

Sections	Contents	Course Materials	Time	Instructor
Section I Overview of ET+ Fields	• Classifying existing land use • Assign numeric land use • Calculate vacant & developed acreages	Presentation Slides	10 min	Keuntae Kim

Section II
Building existing data
	• Inputting existing condition data
	  : Cleaning up Assessor's data based on ET+ land use categories
	  : Estimating/Calculating vacant and developed acres
	  : Setting up existing variables (ex. Sqft, HH, Emp, Pop, J-H Balance, etc.)
	• Using Envision Project Setup
	  : Project Settings
	  : Constraints
	  : Land Use
	  : Field Map
	  : Subareas
	• Creating a file geodatabase by using the Envision Project Setup menu
		Assessor data file	40 min	Dejan Eskic

Break			5 min	-

Section III
Applying the built-up data to scenario planning by using ET+
	• Defining the 'subareas' using the Envision Paint Tools menu
	• Using Tools in ET+
	  : 7Ds Functions (Transportation Location Summary/ Land Use Mix Summary/7D Model Calculator)
	  : Buffer Summaries
	  : Feature Summaries
	  : Create Travel Summary Buffers
	  : Proximity Summary
	  : 1 to many Export
	  : Attribute Aggregation to Neighborhood
	• Interpreting apps in the Scenario Spreadsheet
	  : the 'Spatial Outputs' tab
	  : the ' MXD Travel Summary' tab
	  : the 'Proximity' tab
	• Scenario Planning at the larger geography
	  : City-level scenario planning
		Scenario Spreadsheet Sample file (Excel File)
		
		Sample parcel-level GIS file geodatabase (GIS Polygon Layer files and attribute tables)
			2 hr	Keuntae Kim
				
				Dejan Eskic

Q & A			15 min.	All
Total			**Appx. 3 hrs**	**-**

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