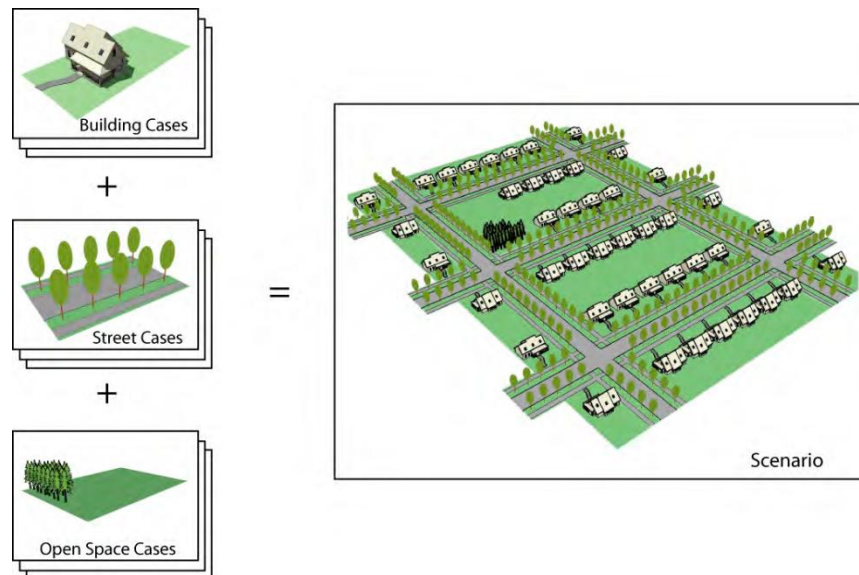# Creation and Comparison of Sustainable Neighbourhood Patterns

CPSC 533C

Jen Fernquist
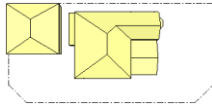
The Problem – Overview

▸ Landscape Architecture group aims to create sustainable neighbourhoods

▸ Collaboration with city planners

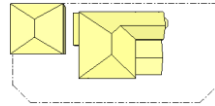▸ Each have their goals, try to meet in the middle

▸ End result: a "pattern"

▸ Img from "Decision Support Tools for Energy and Sustainability in Charrette-based Urban Design", R. Kellett et al. Third International Council for European Urbanism Congress, Oslo, Norway, 2008.

The Problem – The Goal

Inputs:

3p, 0j

3p, 0j

0p, 10j   0p, 10j   0p, 10j   0p, 10j

919p, 32j

The Problem – The Goal

Inputs:
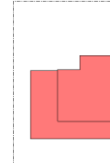
3p, 0j   3p, 0j   0p, 10j   0p, 10j   0p, 10j   0p, 10j   919p, 32j
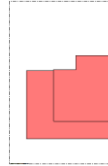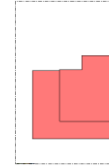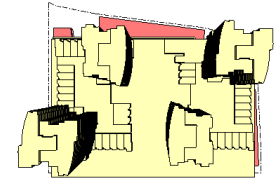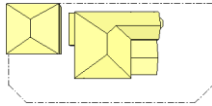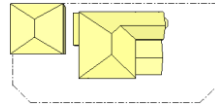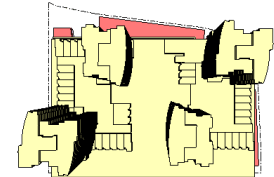
Pattern:

The Problem – The Goal
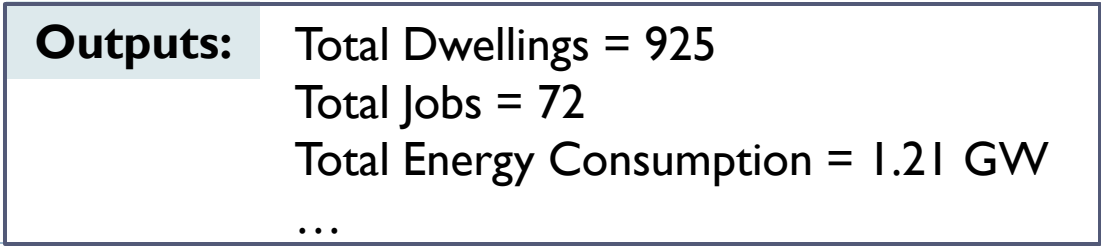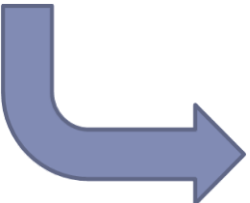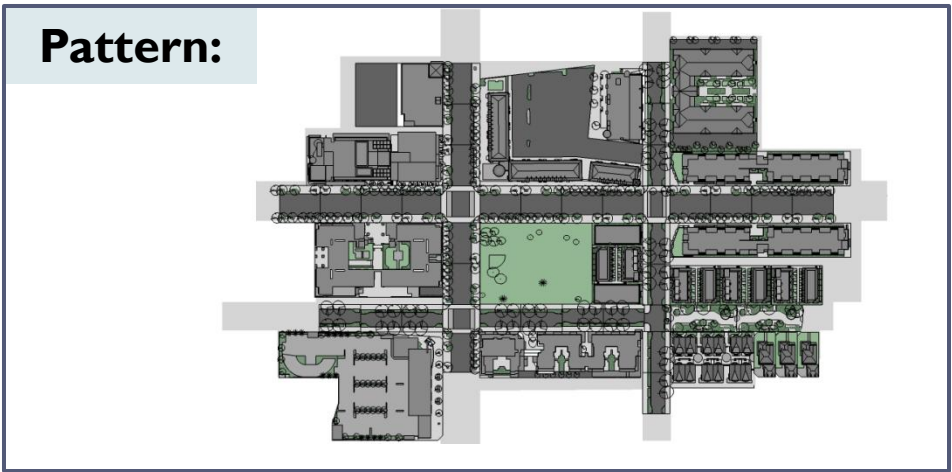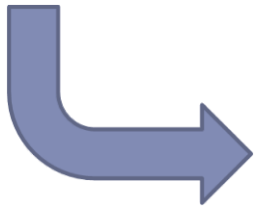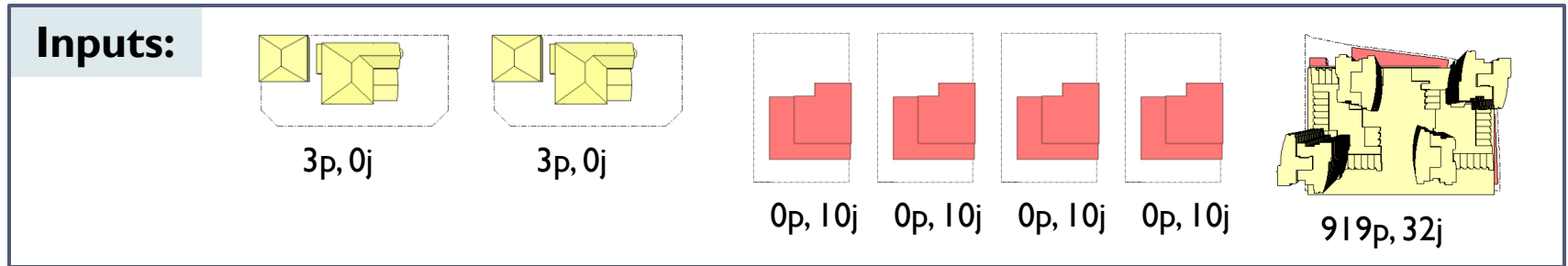
Inputs:

3p, 0j   3p, 0j   0p, 10j   0p, 10j   0p, 10j   0p, 10j   919p, 32j

Pattern:

Outputs: Total Dwellings = 925
Total Jobs = 72
Total Energy Consumption = 1.21 GW
…

The Problem – Current Method

- Collaboration around table:
    - Paper maps
    - Paper cutouts of elements
    - Masking tape to place elements in map
    - Manually compute outputs in spreadsheet

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- Issues:
  - No way to "save" at any point
  - Hard to compare different solutions
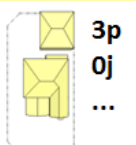 - Labour intensive calculation; prone to user error

The Dataset

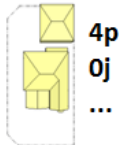- Pictures of elements

- Numerical input data
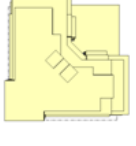
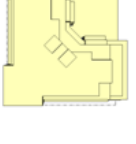- Map of desired area

My Solution – Multi-touch Table!
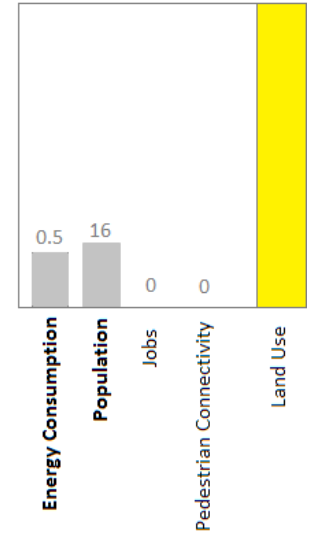
My Solution

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Progress Thus Far

‣ Done:

  ‣ Carry out user observation ✓

  ‣ Get OK on mock-up ✓

  ‣ Become familiar with SMART Table SDK ✓

Progress Thus Far

▶ Done:

   ▶ Carry out user observation ✓

   ▶ Get OK on mock-up ✓

   ▶ Become familiar with SMART Table SDK ✓

▶ ToDo:

   ▶ Integrate C# libraries for menus, charts

   ▶ Implement everything!

▶

Questions?