Creation and Comparison of Sustainable Neighbourhood Patterns

CPSC 533C
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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”

The Problem – The Goal

**Inputs:**

- 3p, 0j
- 3p, 0j
- 0p, 10j
- 0p, 10j
- 0p, 10j
- 0p, 10j
- 919p, 32j
The Problem – The Goal

Inputs:

```
<table>
<thead>
<tr>
<th>Inputs</th>
<th>Pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>3p, 0j</td>
<td>0p, 10j</td>
</tr>
<tr>
<td>3p, 0j</td>
<td>0p, 10j</td>
</tr>
</tbody>
</table>
```

Pattern:

```
919p, 32j
```
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
My Solution
Progress Thus Far

- **Done:**
  - Carry out user observation ✓
  - Get OK on mock-up ✓
  - Become familiar with SMART Table SDK ✓
Progress Thus Far

Done:
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- Get OK on mock-up ✓
- Become familiar with SMART Table SDK ✓

ToDo:
- Integrate C# libraries for menus, charts
- Implement everything!
Questions?