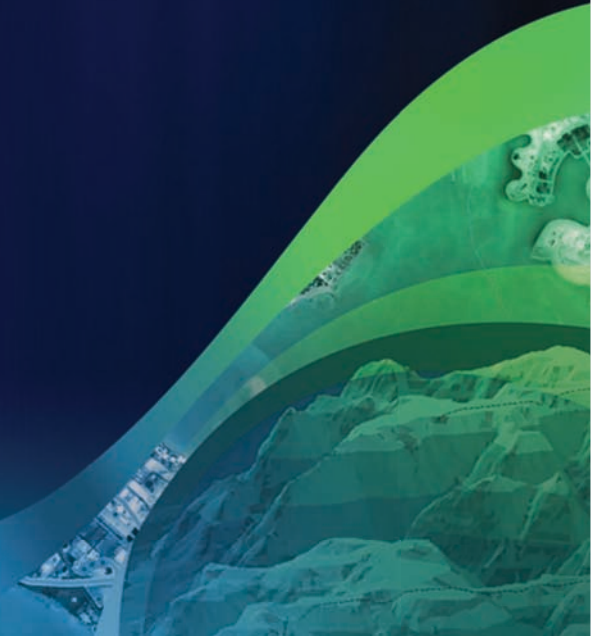


Enabling Technology

Matthew Baker



A Model for GeoDesign



The geodesign framework – by Carl Steinitz

1 How should the landscape be described?

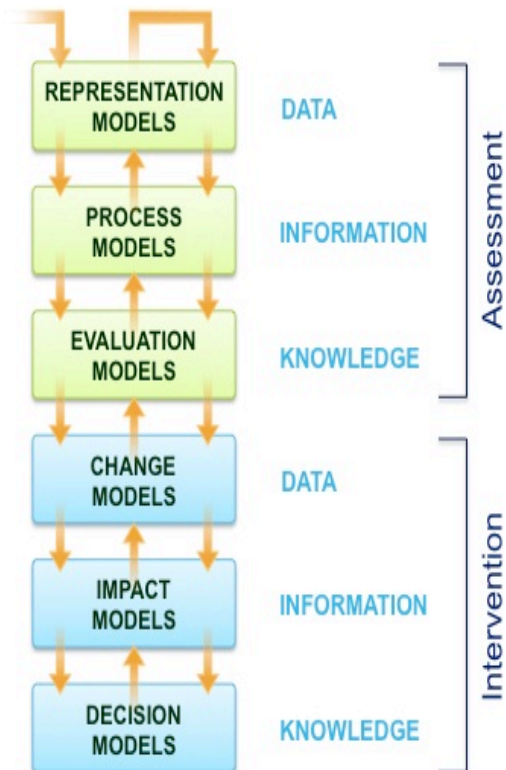
2 How does the landscape operate?

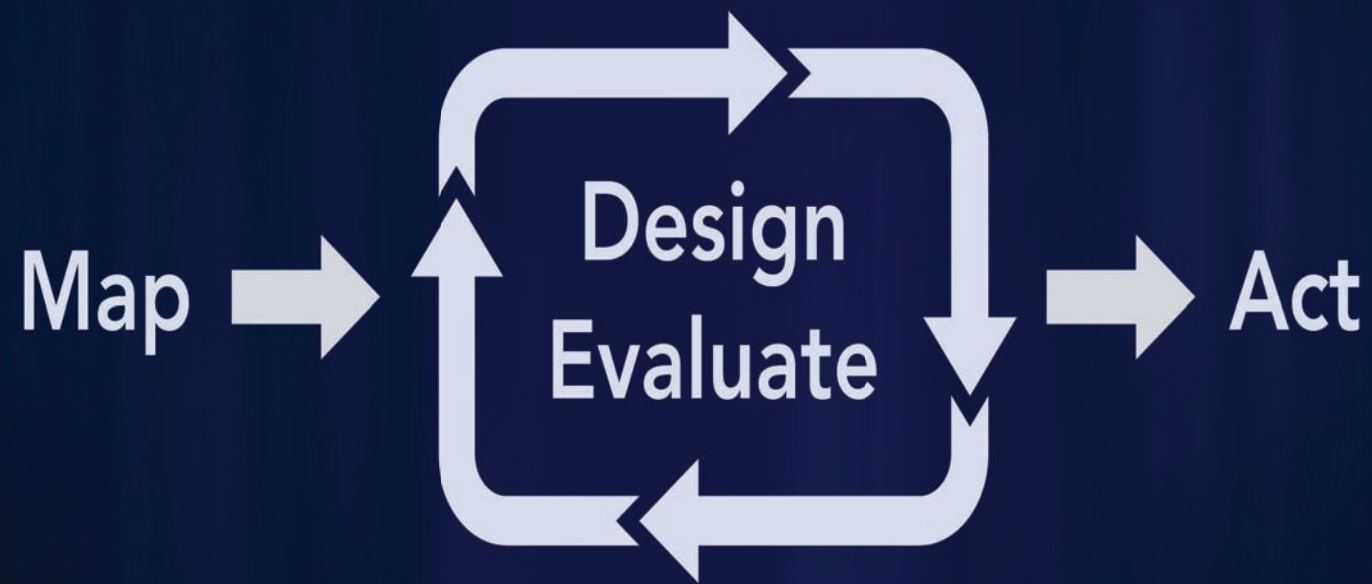
3 Is the landscape working well?

4 How might the landscape be altered?

5 What differences might the changes cause?

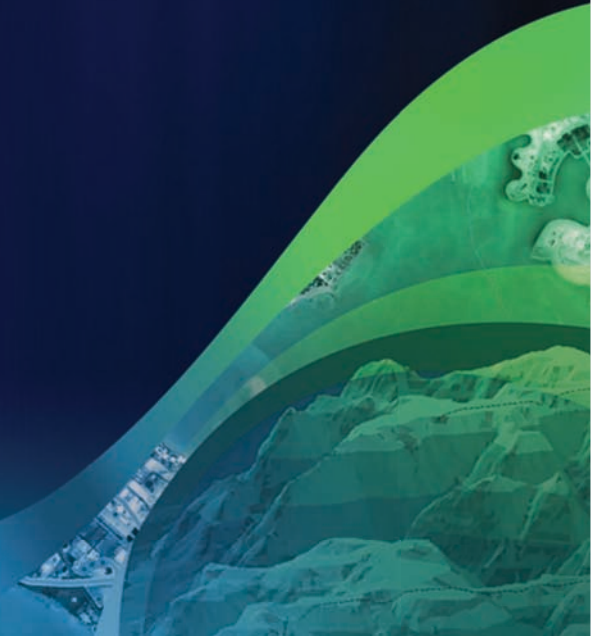
6 Should the landscape be changed?





By Matt Artz, Esri

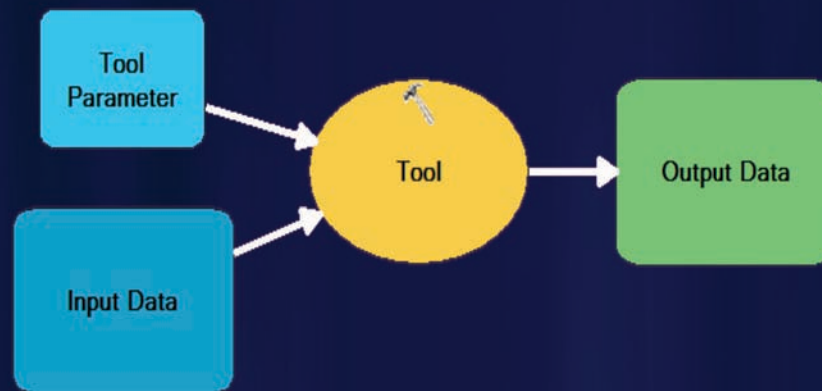
GeoDesign Workflows



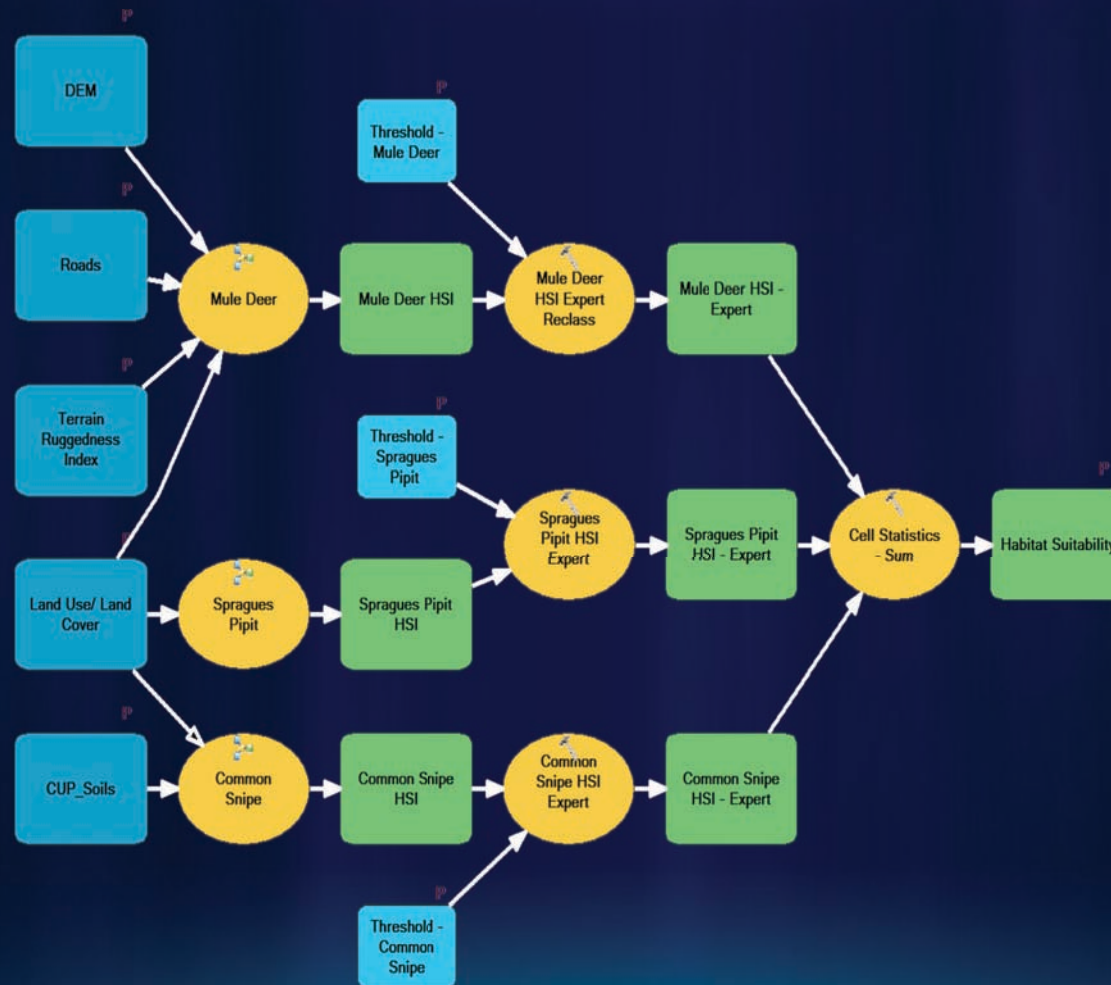
02 Planning and Design



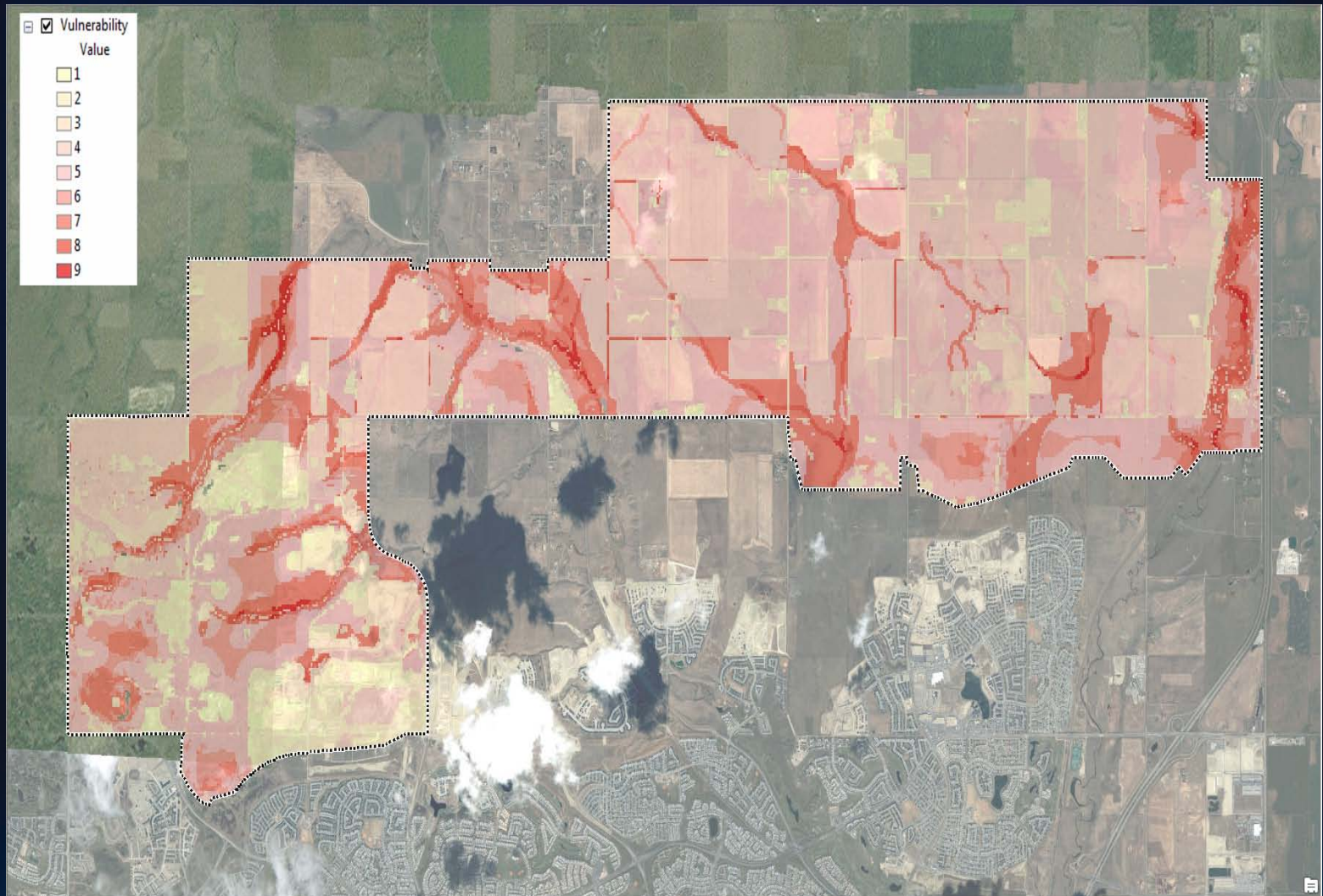
Model Builder



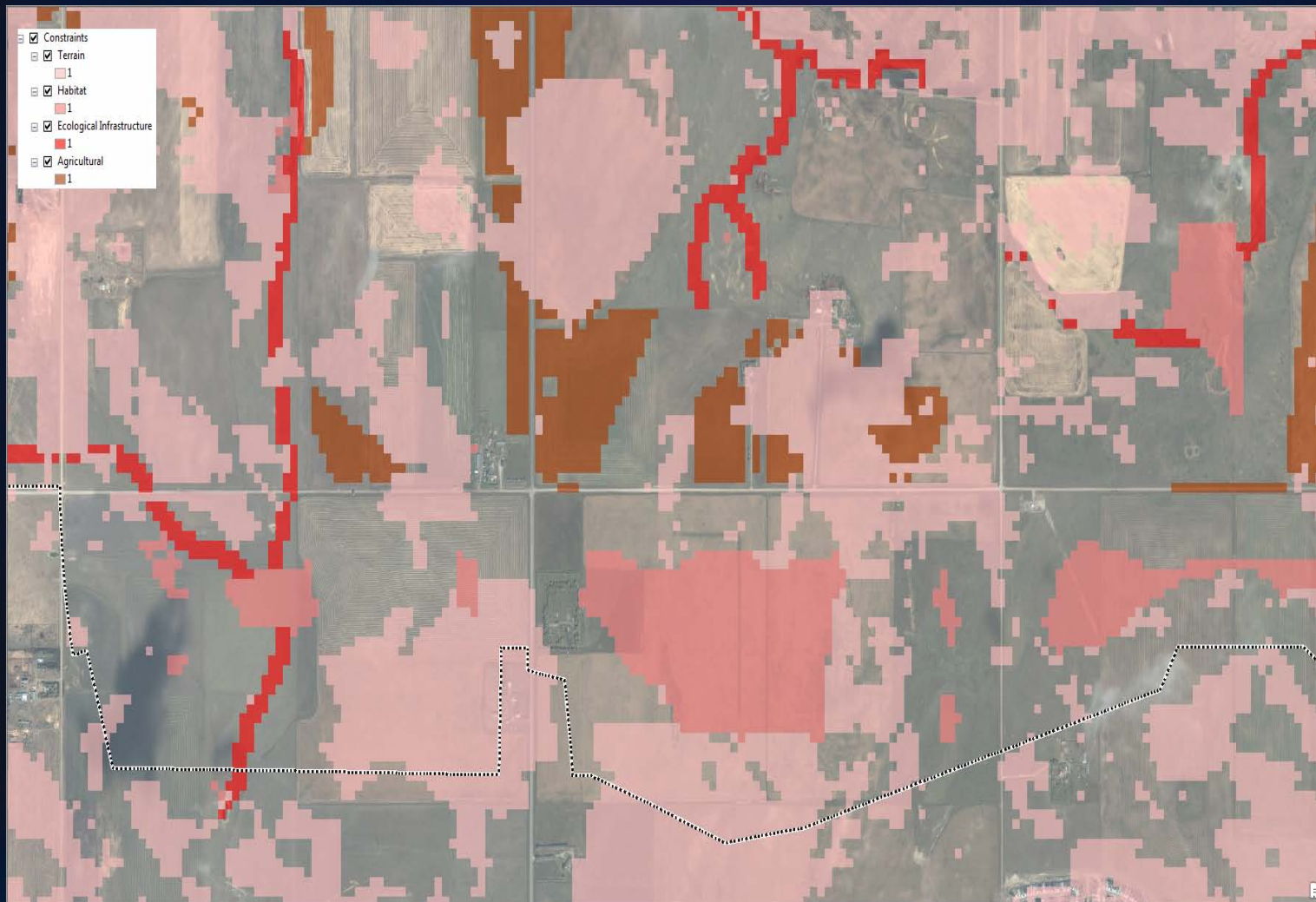
Model Builder and Suitability Analysis



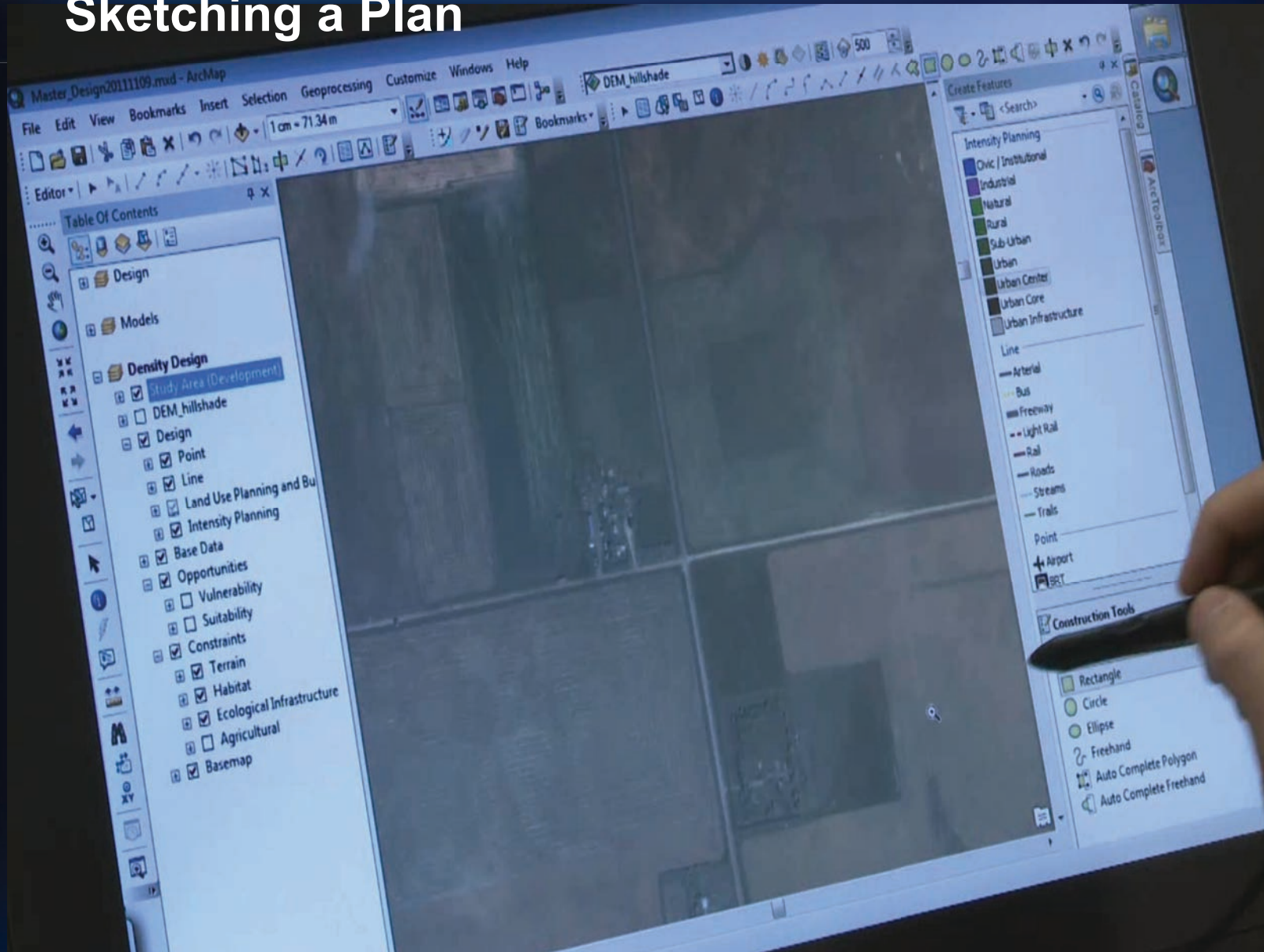
Opportunity and Vulnerability Analysis



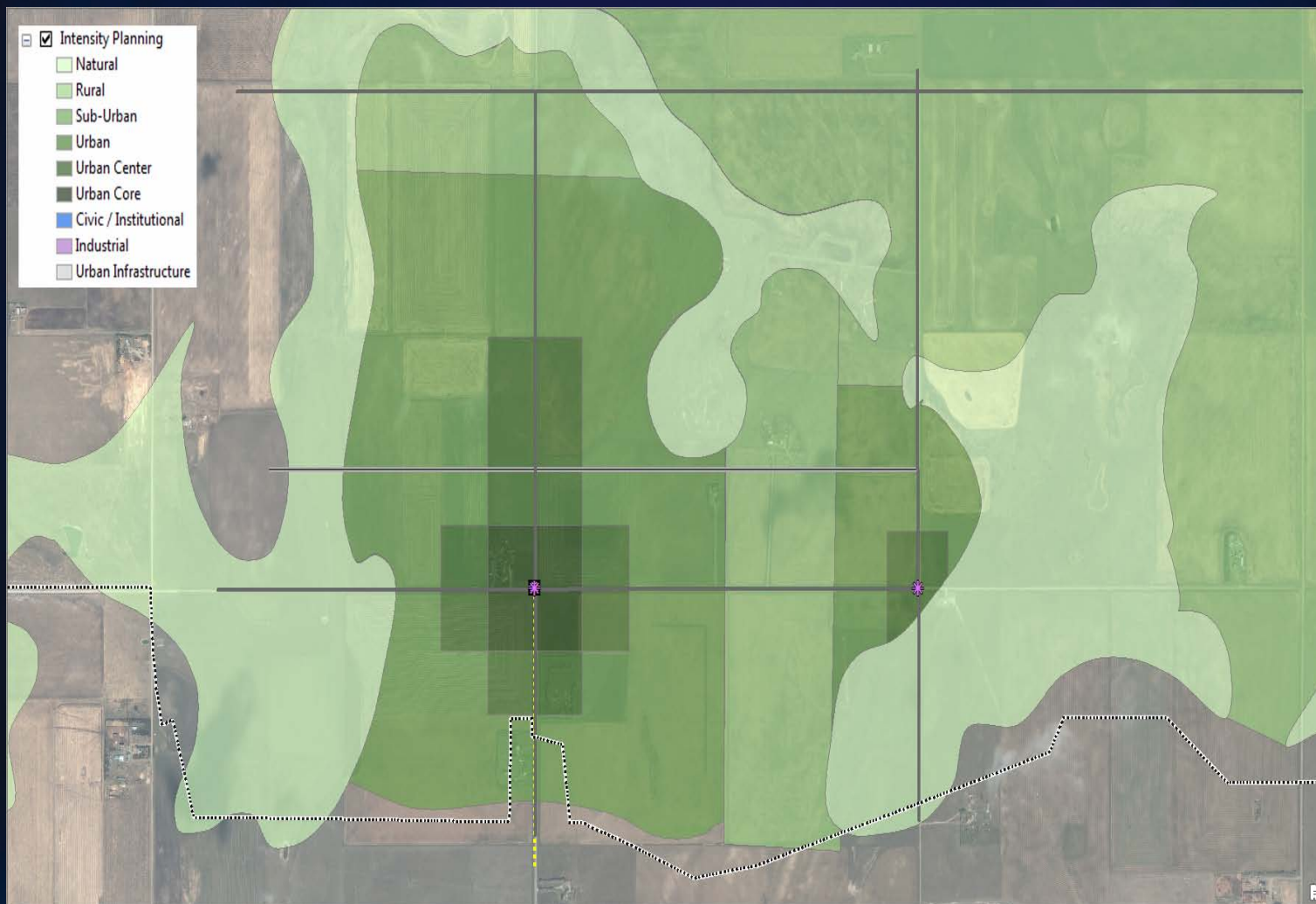
Development Constraints



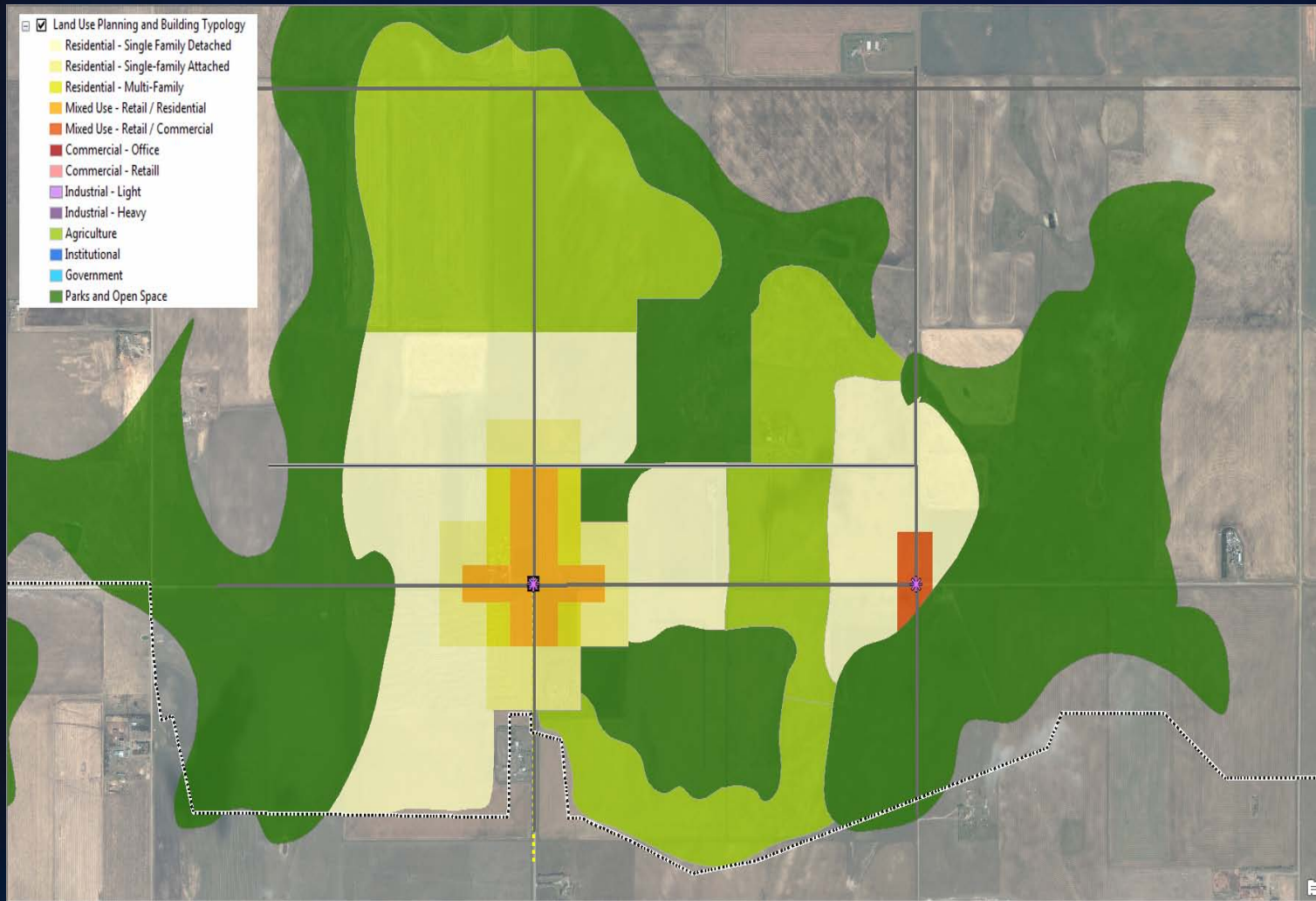
Sketching a Plan



Intensity Plan



Land Use Plan

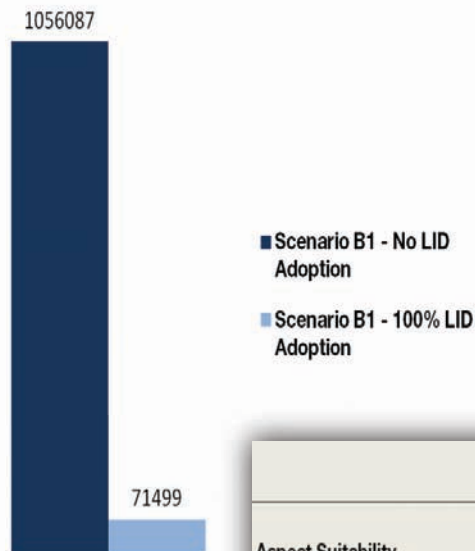


Evaluating Your Design

Scenario B1 - No LID Adoption			
Scenario LID Adoption	0 %		
Scenario Hydrologic Outputs			
Impervious Area	318 ha	786 acres	
Impervious Percentage	53 %		
Runoff Volume	1056087 m ³	856 acre foot	
Runoff Volume	175 mm/ha	17 in/acre	

Low Impact Development Adoption			
Scenario B1 - 100% LID Adoption			
Scenario LID Adoption	100 %		
Scenario Hydrologic Outputs			
Impervious Area	202 ha	498 acres	
Impervious Percentage	33 %		
Runoff Volume	71499 m ³	58 acre foot	
Runoff Volume	12 mm/ha	1 in/acre	

Annual Runoff Volume in Cubic Metres



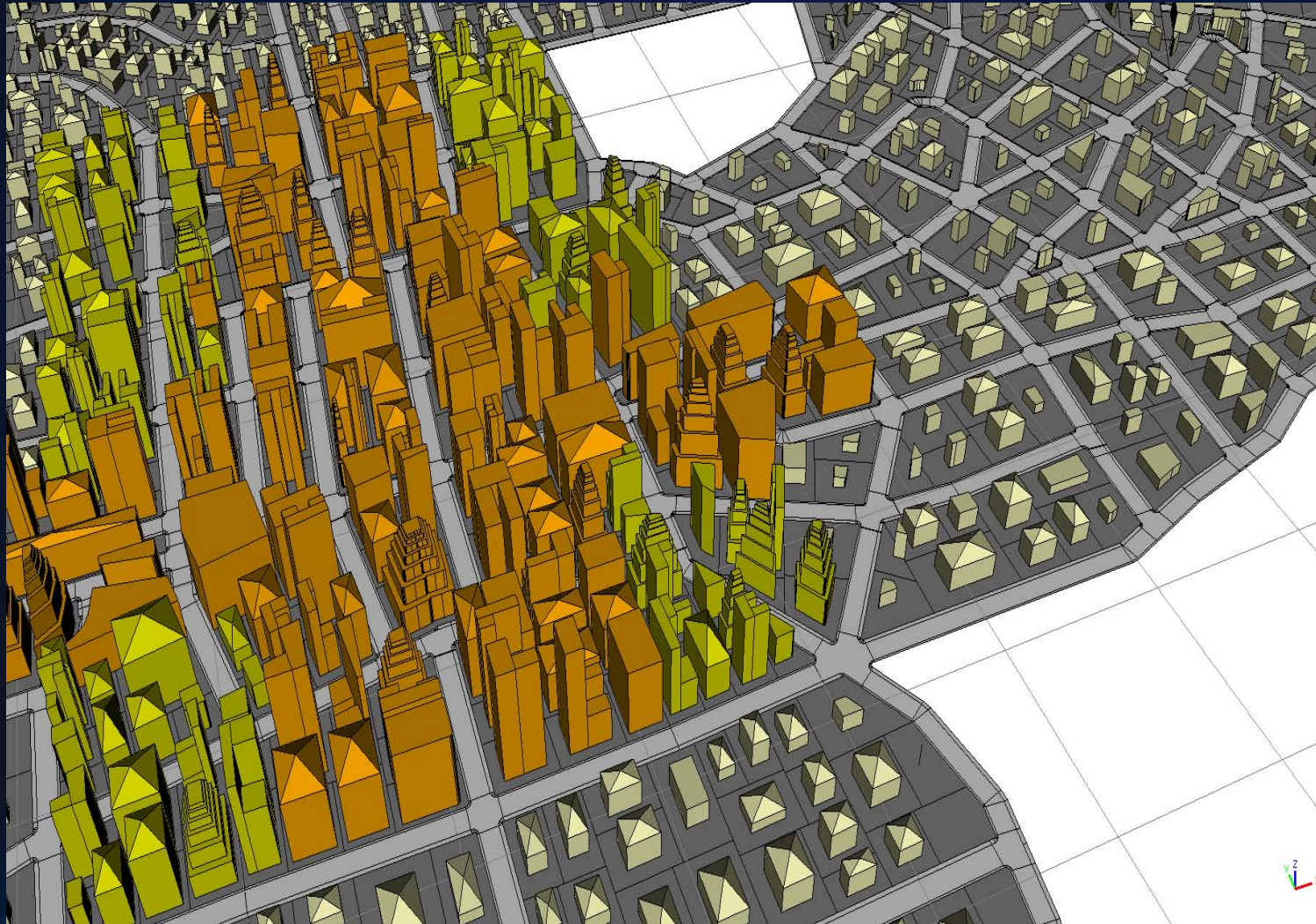
Suitability Weights	
Aspect Suitability	5 %
Transportation Suitability	95 %
View Suitability	0 %

Excel-based Dashboard Manager

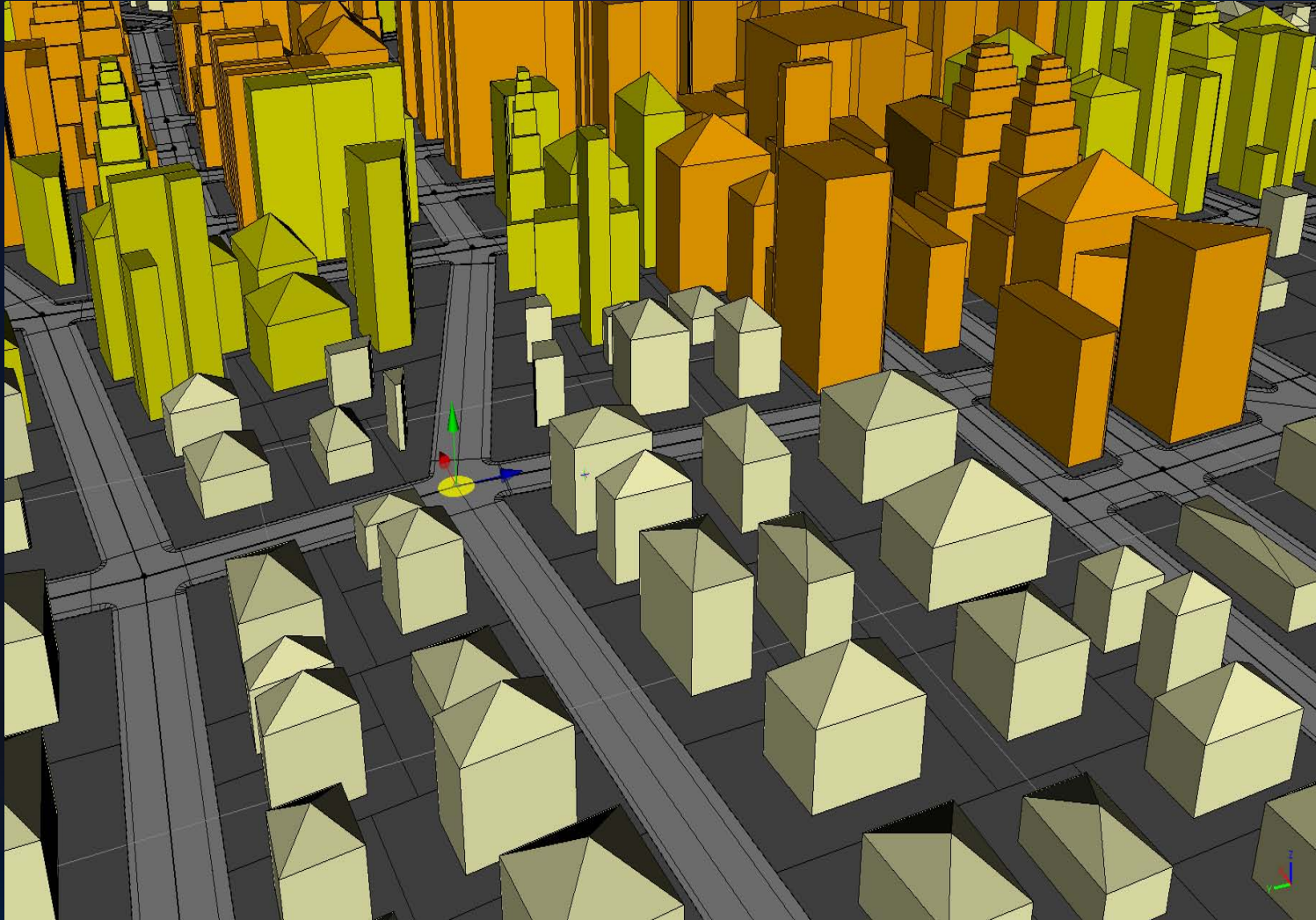
City Engine Integration



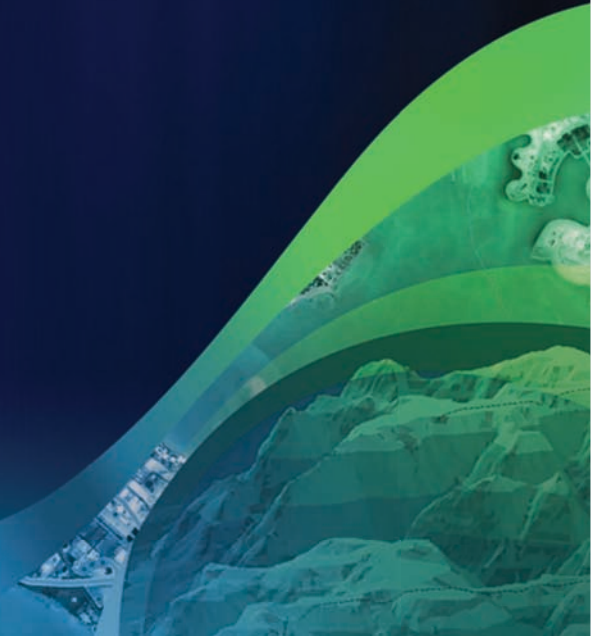
Generating Buildings and Parcels



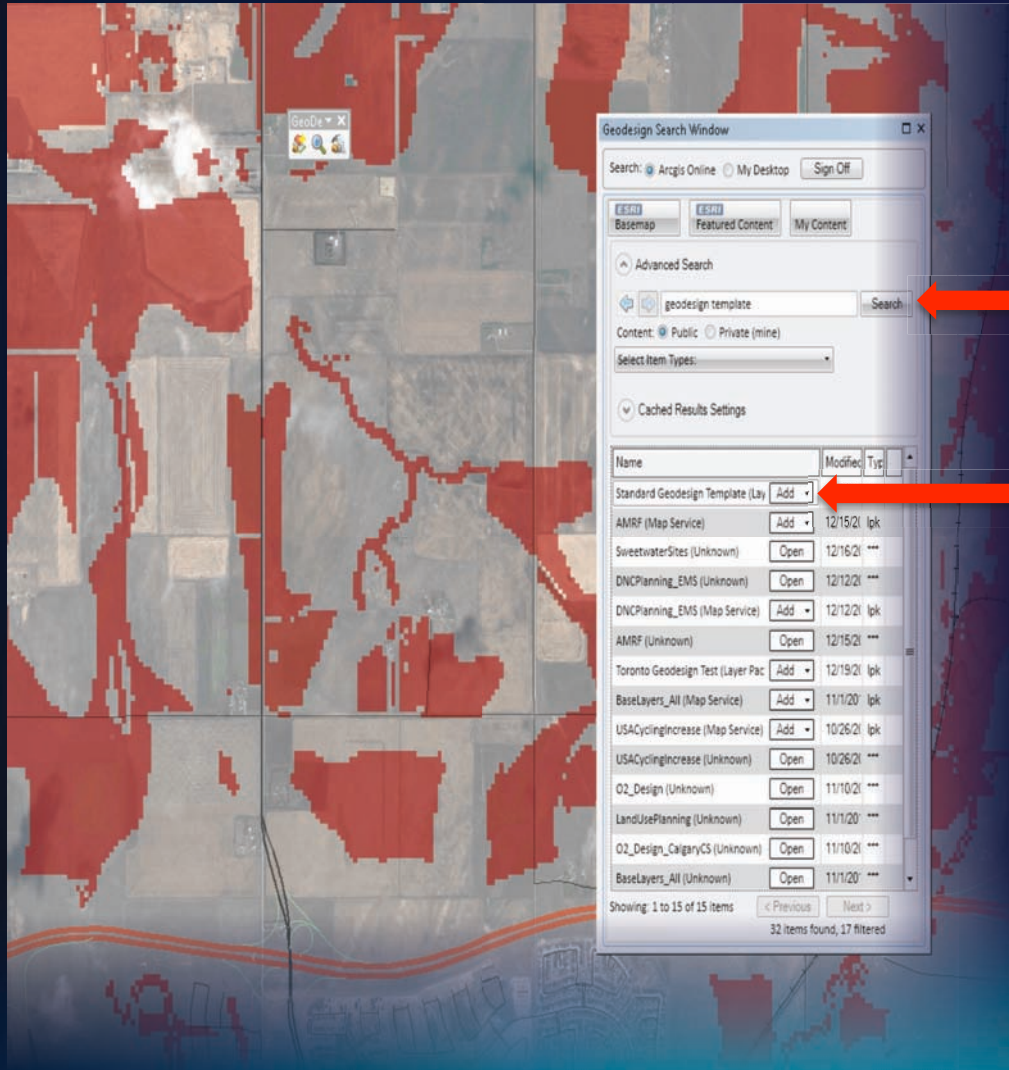
Land Use and Intensity drives Color and Height



GeoDesign Tool Development



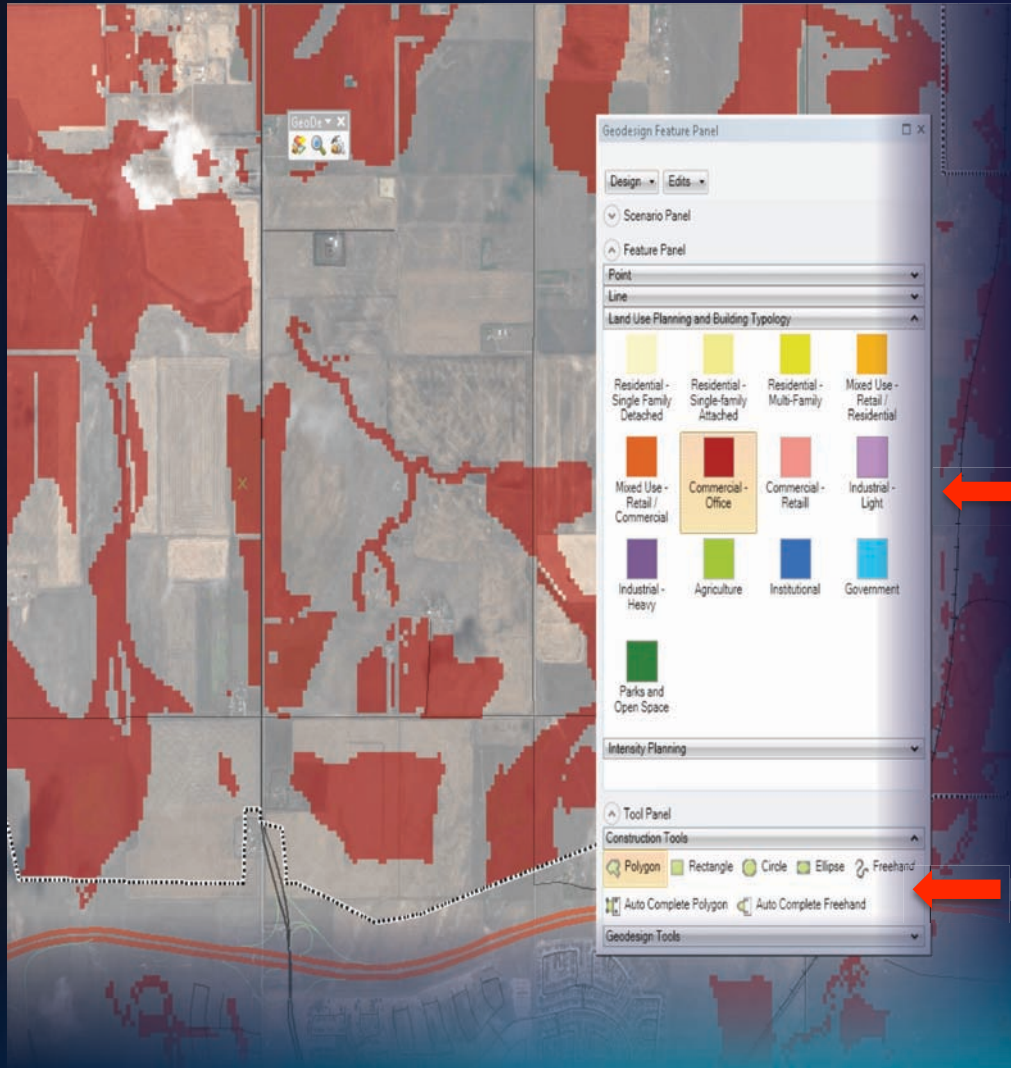
GeoDesign Window for ArcMap



Find Content / Templates

Add to Design Project

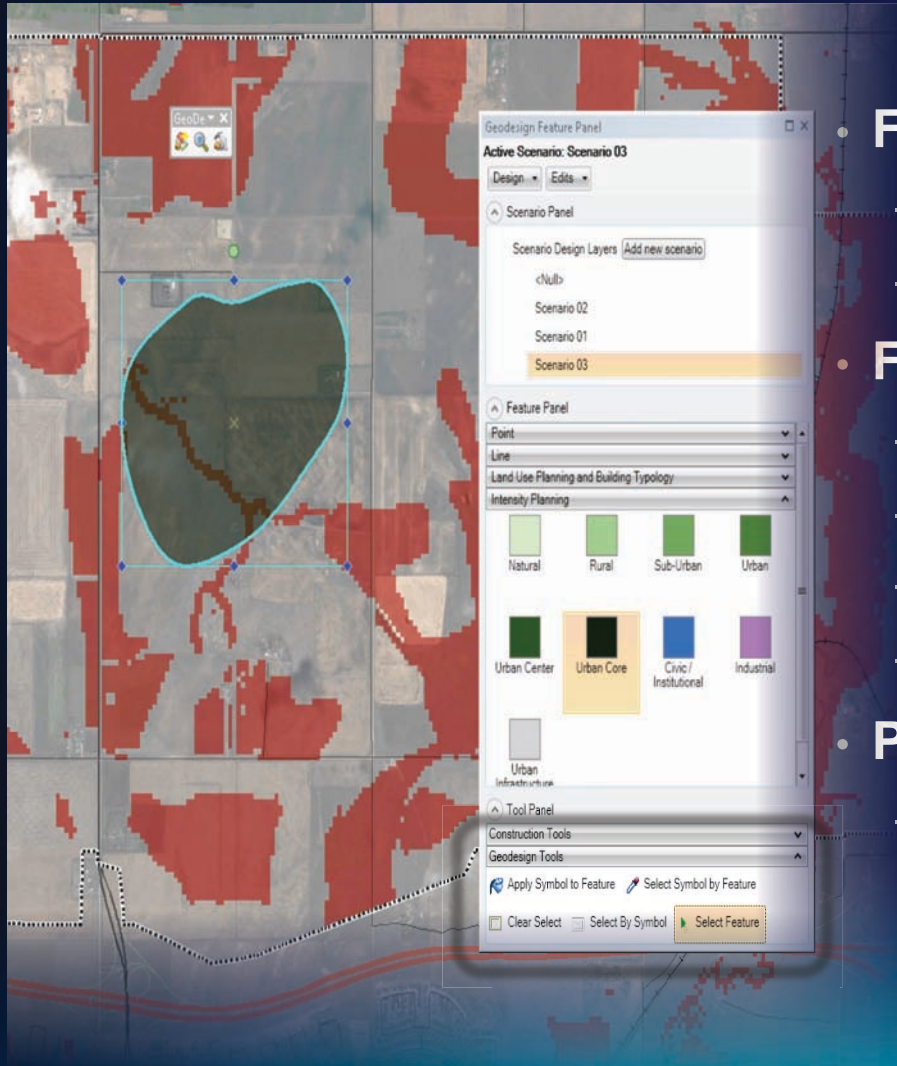
Sketching Features



Feature Templates

Feature Construction Tools

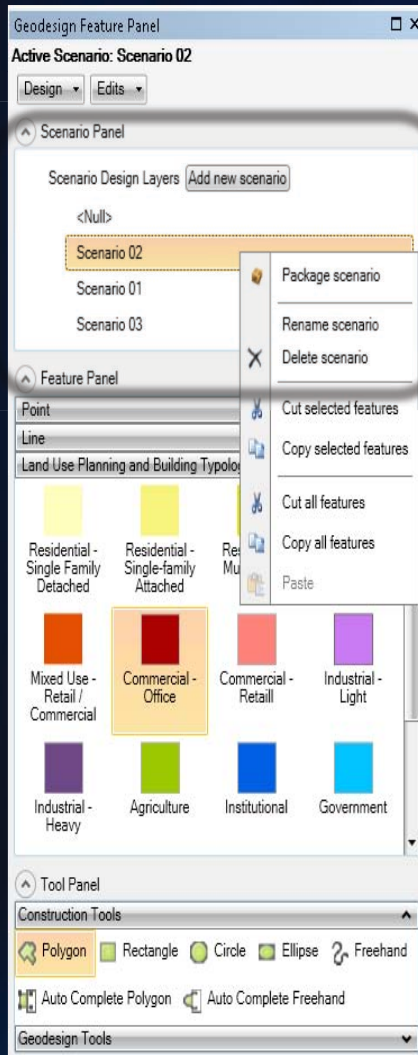
GeoDesign Sketching Tools



- **Feature Selection**
 - By type / symbol
 - By feature template
- **Feature Interaction**
 - Rotate
 - Scale
 - Resize
 - Move
- **Paint Bucket**
 - Apply style

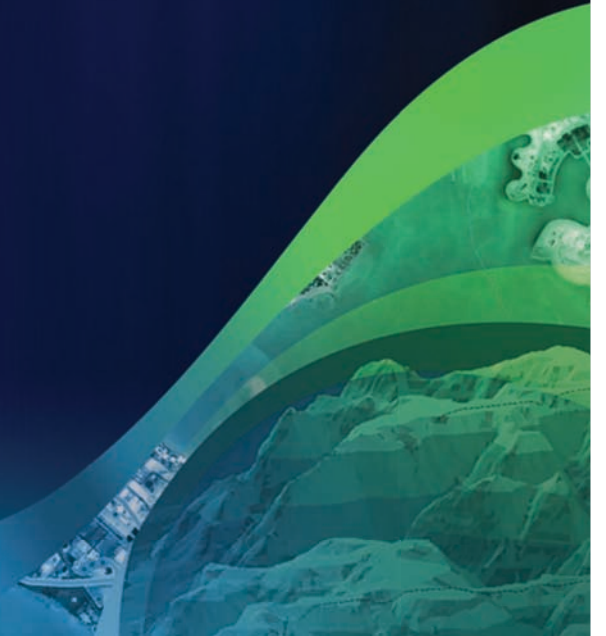


Scenario Management

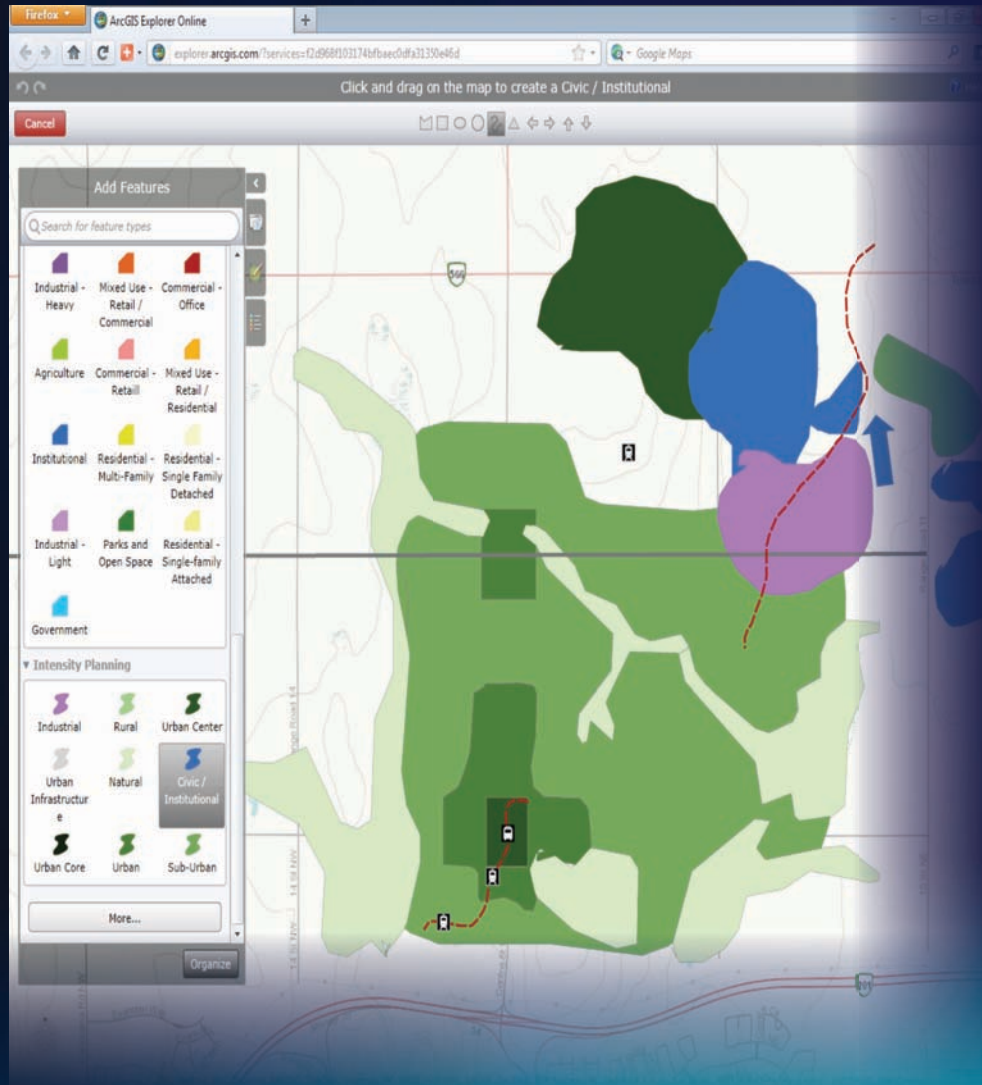


- **What is a Scenario?**
 - Text: “**Scenario A**”
- **Scenario Manager**
 - Create / delete / rename scenario
 - Manage features between scenarios
 - Toggle between scenarios
- **Stored in single feature class**
 - Ease of storage
 - Sharing

GeoDesign and the Web



Collaborative Design with ArcGIS Server



- Centralized data
- Multi-User Design
- Real-Time Updates
- ArcGIS Hosted Services
- Simple Interface

What's Next?

- **Feedback!**
 - Users drive software development
- **Sketching Ideas Lab**
 - Friday 1:30 Room D
- **ArcGIS.com Group**
 - GeoDesign with ArcGIS

Thank you!

Matthew Baker

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