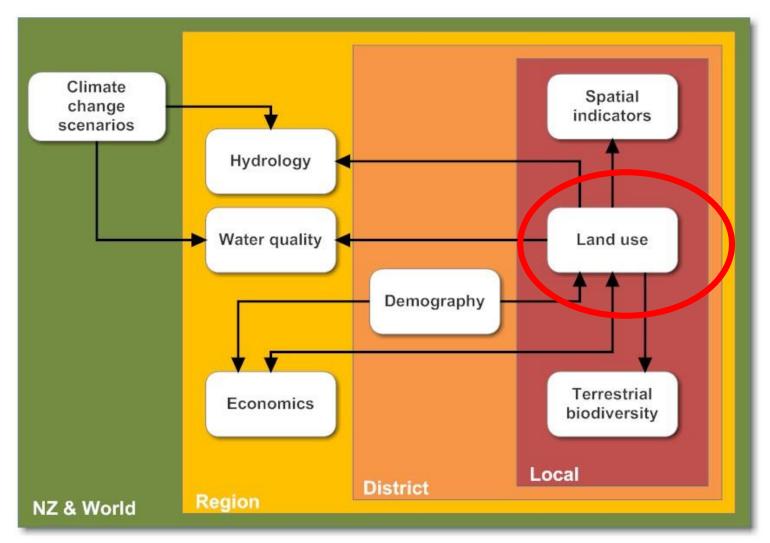
Land Use Change Model





Healthy environment

Strong economy

Vibrant communities

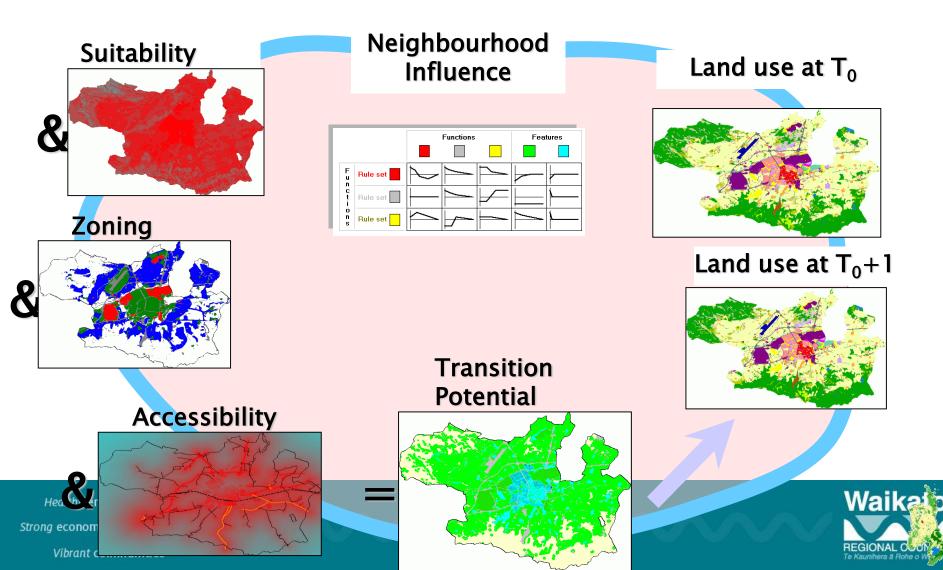
WISE Land Use – 2013 Update

- No case to change classification of 24 land uses already defined
- Data sets used LCDB4, Valuation Database, Agribase.
- Rules based approach seen as best method to update land use layer (similar to 2006 layer)
- Others Roads/rail, marine farms, airports
- 100 x 100m grid for increased resolution

Bare Surfaces Indigenous Vegetation Other Exotic Vegetation Wetland Residential - Lifestyle Blocks Residential - Low Density Residential - Medium to High Den Commercial **Community Services** Horticulture **Biofuel Cropping** Vegetable Cropping Other Cropping Dairy Farming Sheep, Beef or Deer Farming Other Agriculture Forestry Manufacturing Marine Aquaculture Utilities Mines and Quarries Urban Parks and Recreation Fresh Water Airports Land Outside Study Area Marine Outside Study Area

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How does WISE work – Land Use Change Model

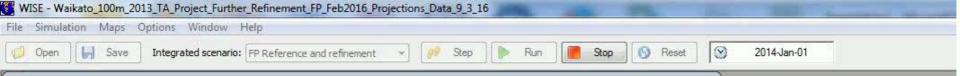


Land use change model - interface

WISE - Waikato_100m_2013_TA_Project_Further_Refinement_FP_Feb2016_Projections_Data_9_3_16	
ile Simulation Maps Options Window Help	
💋 Open 📙 Save Integrated scenario: FP Reference and refinement 🔻 🤌 Step 🕨 Run 🔳 Stop 🕥 Reset 😒	20
🖌 🕰 Land use change model	
Land use: Residential - Low Density Land use type: Function	
Land use Neighbourhood Accessibility Suitability Zoning	
Input Initial land use map: ps\Land use\and_use_Fin100_13.tif	
Land use changes	
Time Map Add time	
2013-Jan-01 - Remove time	
Show current land use map and selected changes	
Parameters	
Random coefficient: 0.3	
Random seed: O Variable O Fixed to: 5489	
Total potential formula Vacants: TP = I * S	
Functions: TP = (1 + (-log(1 - random))^alpha) * N * if(N >= 0; A * S * Z; 2 - A * S * Z)	
Output	
Show total potential map	
Show current land use map	

Strong

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Bare Surfaces		Potential figures (1652, 905)					X
Indigenous Vegetation Other Exotic Vegetation		Land use	Total potential	Neighbourhood potential	Suitability	Numerical zoning	Accessibility
land =		Residential - Lifestyle Blocks	0	137.768	0.945742	0	0.46539
Lifestyle Blocks		Residential - Low Density	83.09	157.028	0.945742	0.9	0.339532
Low Density		Residential - Medium to High Density	61.5859	207.015	0.945742	0.4	0.331378
I - Medium to High I		Commercial	32.4465	95.5196	0.945742	0.4	0.467204
		Community Services	105.432	184.063	0.945742	0.6	0.47955
rvices		Horticulture	-3.56694	-1	0.447214	0.2	0.599105
		Biofuel Cropping	0.677326	2	0.738677	0.2	1
		Vegetable Cropping	-31.7976	-9.00153	0.391487	0.2	0.826403
a -		Other Cropping	0.512032	2	0.537075	0.2	1
		Dairy Farming	2.33846	13.042	0.580838	0.2	0.85902
		Sheep, Beef or Deer Farming	33.7654	30.6343	0.669433	1	0.788736
Chart L		Other Agriculture	1.02719	9.42721	0.716235	0.2	0.4 <mark>141</mark> 79
	1997 - N. 1998 - Maria	Forestry	0.296456	1.81716	0.553918	0.2	0.765923
		Manufacturing	0	166.437	0.945742	0	0.479293

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Value of Scenario Planning

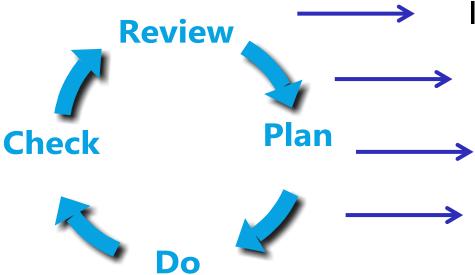
- Better understand the range of plausible futures
 - To have more informed decision making
 - Create more robust enduring policy
- Framing policy questions to direct Scenario development
- Process is often more important than the products
- Select 'Decision Support' tools to suit questions



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Policy Cycle - How can WISE help you?



Issue Identification

Identifying Policy Options

Analysing Options

Consulting on Methods

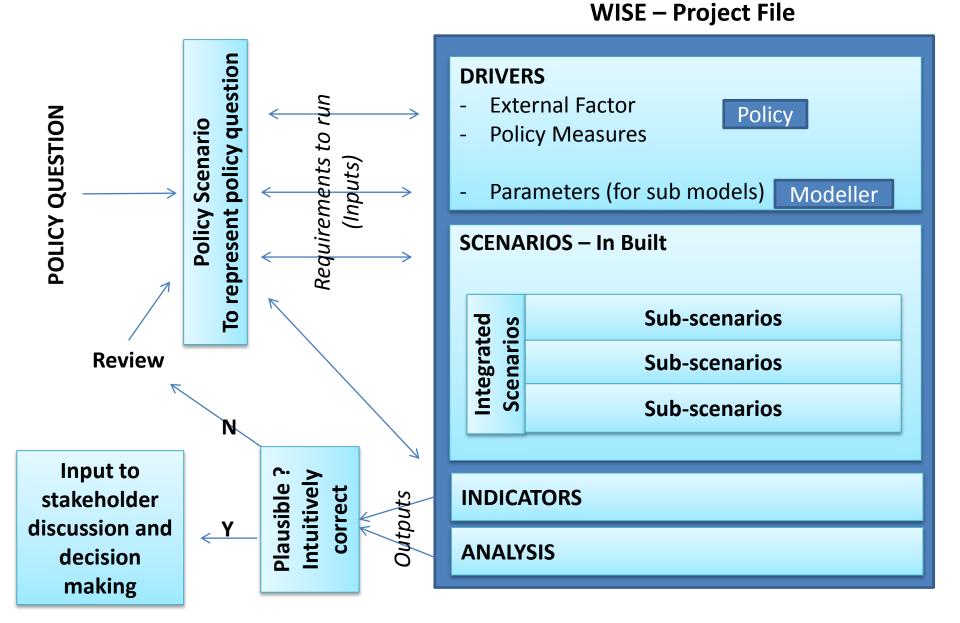


Healthy environment

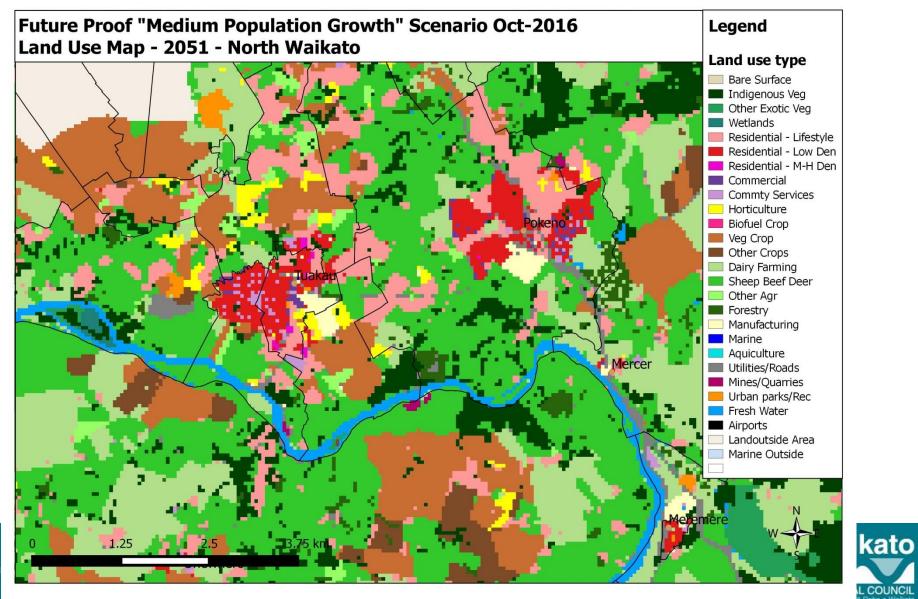
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WISE – Implementation Process



WISE Land use outputs – used to drive population allocation by CAU



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