

Creating Futures

Develop and apply planning and communication tools to make informed choices for the future



Objectives

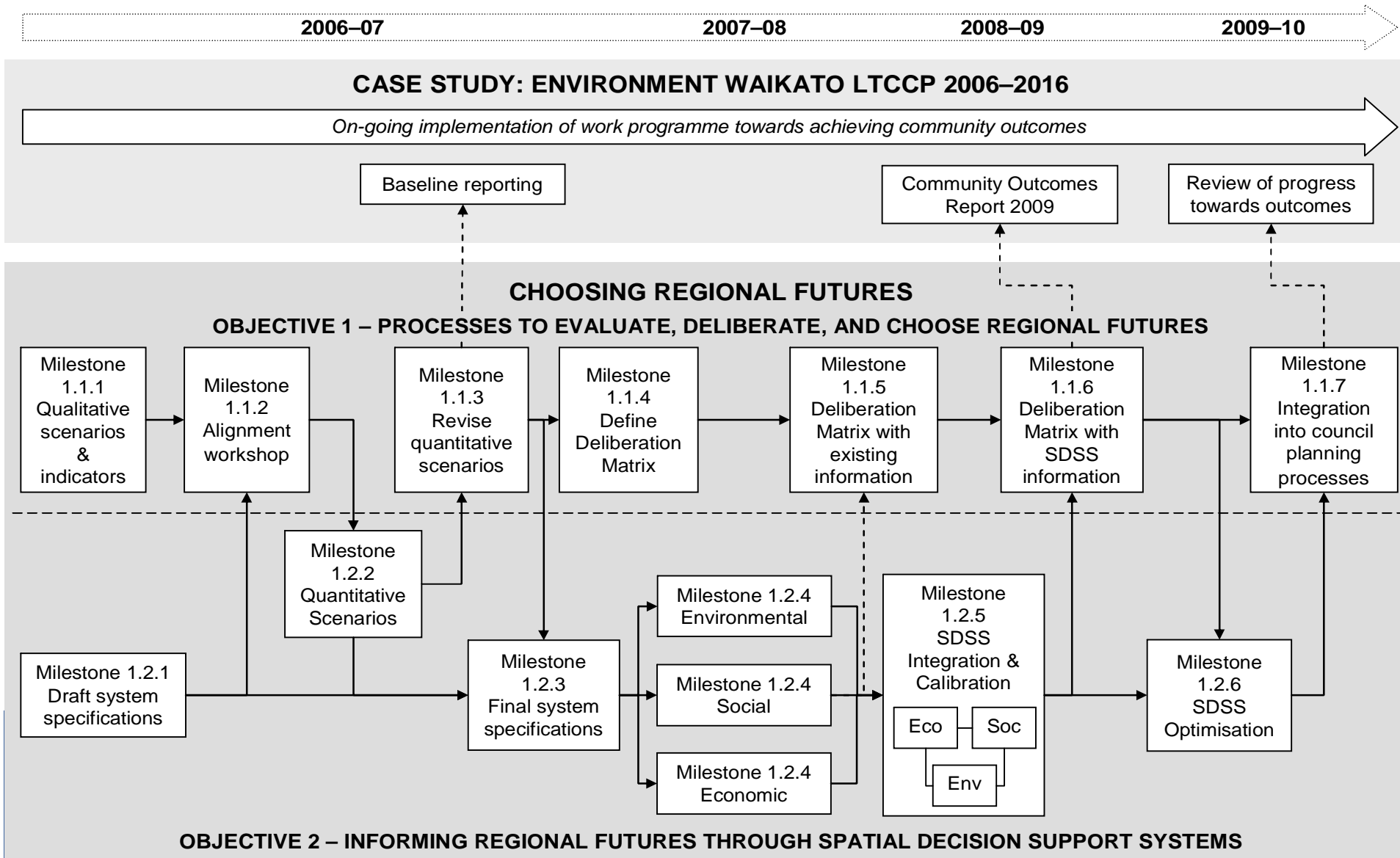
- 1) Process and communication focus
 - ⇒ linked to Community Outcomes/LTCCP
 - ⇒ explore plausible futures (scenarios)
 - ⇒ develop deliberation processes

- 2) Building spatial decision support system
 - ⇒ dynamic, spatially-explicit systems models
 - ⇒ links economy, environment, society
 - ⇒ track indicators across space and/or time



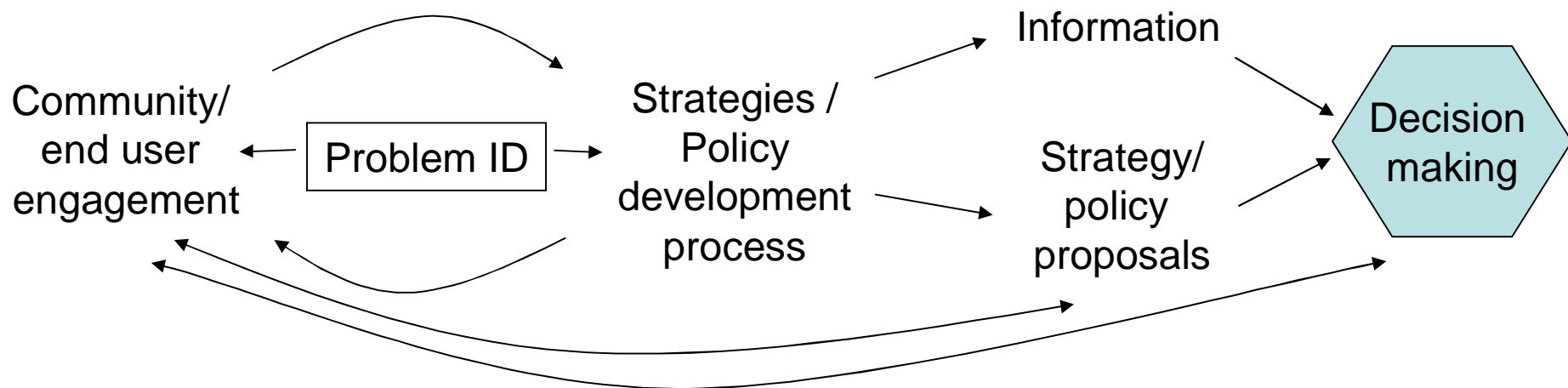
Research Process

LONG-TERM COUNCIL COMMUNITY PLANNING PROCESSES



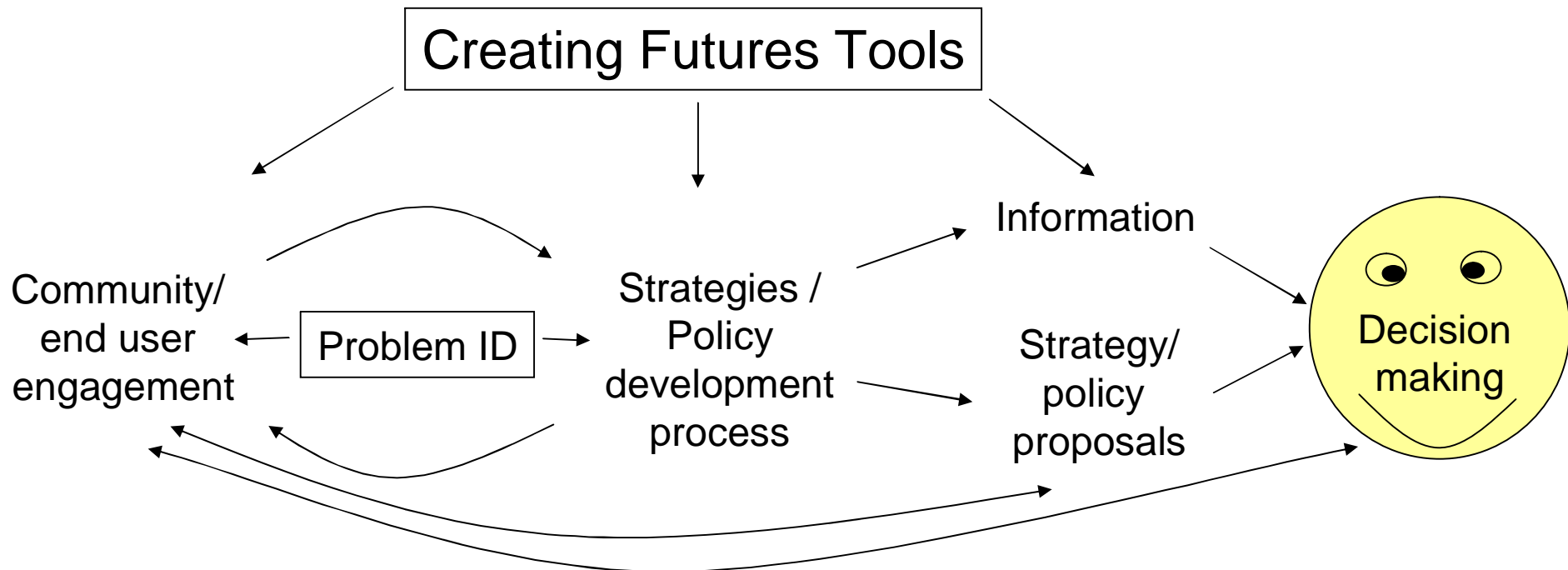
Creating Futures 101

Policy development process



Creating Futures 101

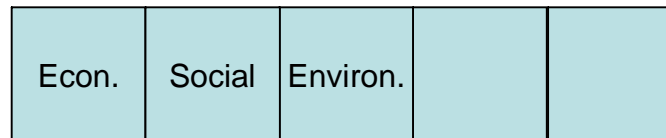
Potential use of outputs in policy development process



CFR101: Deliberation - Informed Conversations

Strategy / Policy proposal

Likely Consequences
(Based on existing
indicators, information)



Evaluation categories
(distinct quality / performance concern)



CF-101: Deliberation

- Informed Conversations

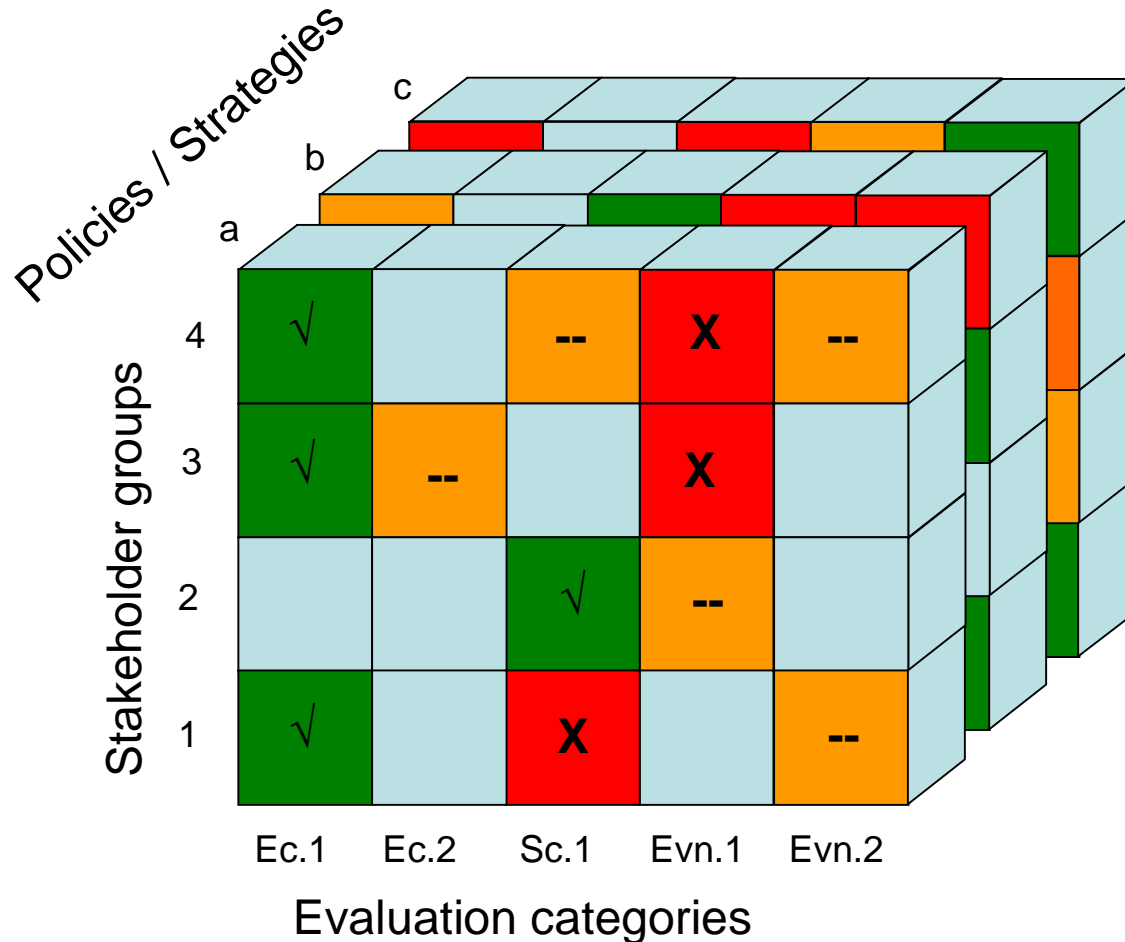
Stakeholder groups	Ec.1	Ec.2	Sc.1	Evn.1	Evn.2
4	✓		--	X	--
3	✓	--		X	
2			✓	--	
1	✓		X		--

Evaluation categories

(distinct quality / performance concern)



CF-101 Deliberation Matrix – options/consequences



CF-101: Deliberation ‘challenges’

- Populating consequences with meaningful information on ‘evaluation categories’
- Making the process understandable and efficient
- How to incorporate the process and outcomes into existing decision making processes



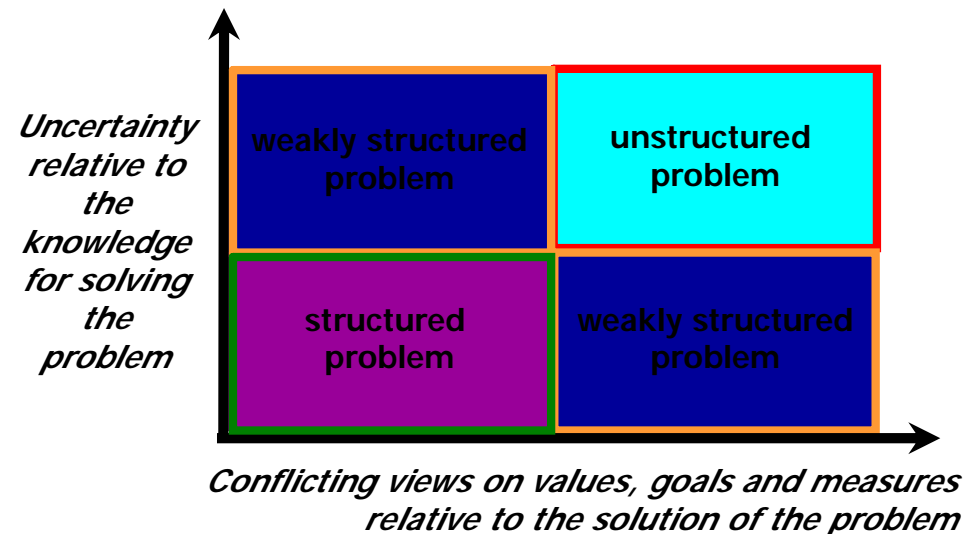
Objective 2

Development of Spatial “Waikato Model”

(Spatial Decision Support Systems - SDSS) to support long-term, integrated planning

Why an SDSS?

- Long-term integrated planning and resource management are examples of “wicked” or unstructured problems
- Characterised by
 - Multiple actors
 - Multiple values & views
 - Multiple outcomes possible
 - High uncertainty

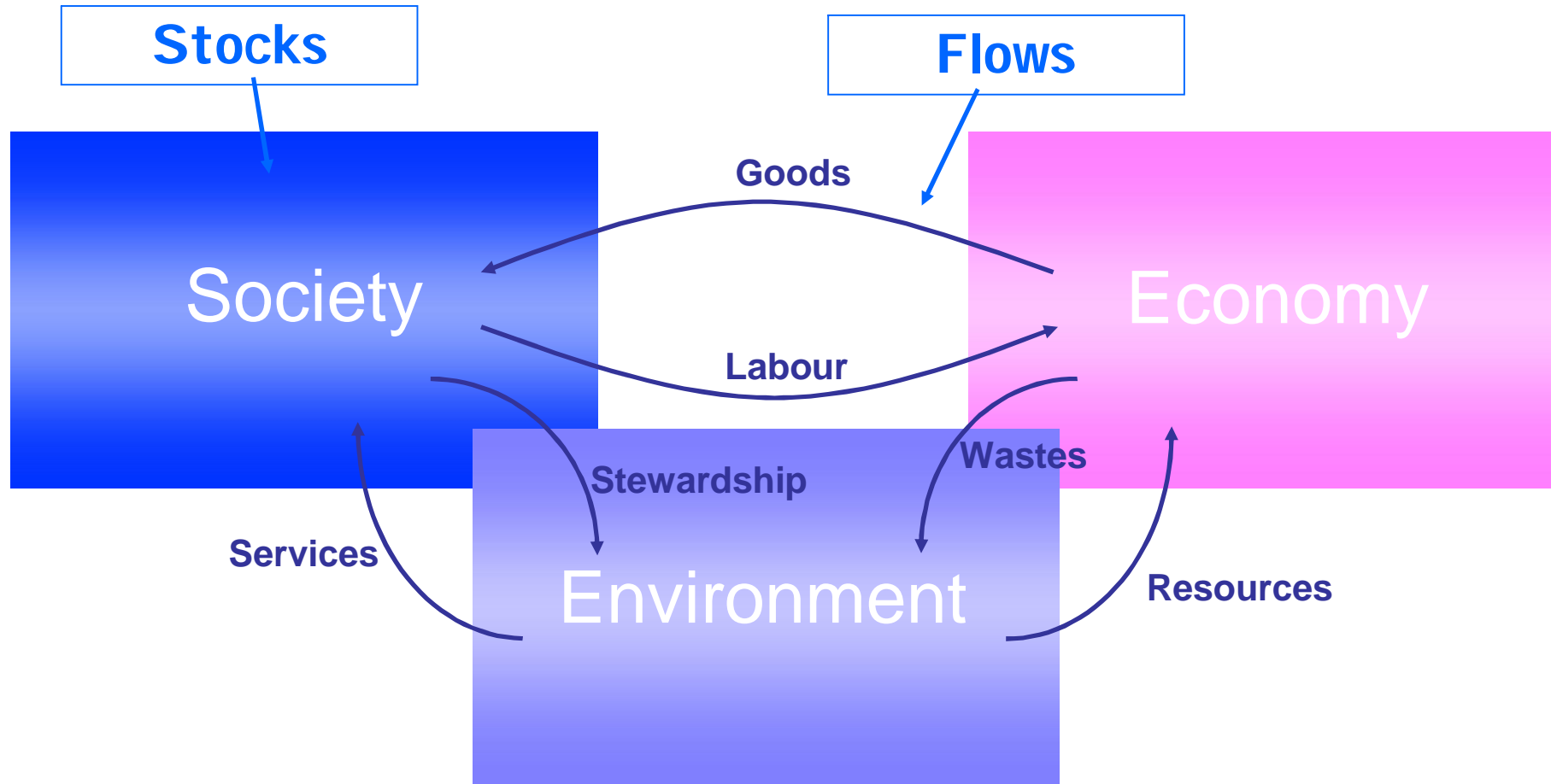


An SDSS helps address unstructured problems

- Integrates society, economy, and environment (systems approach)
- Identifies links & feedbacks
- Sets limits explicitly (e.g., only so much land, water, soil)
- Demonstrate importance of “where” in addition to “what” and “how much”
- Potential for aggregation/disaggregation

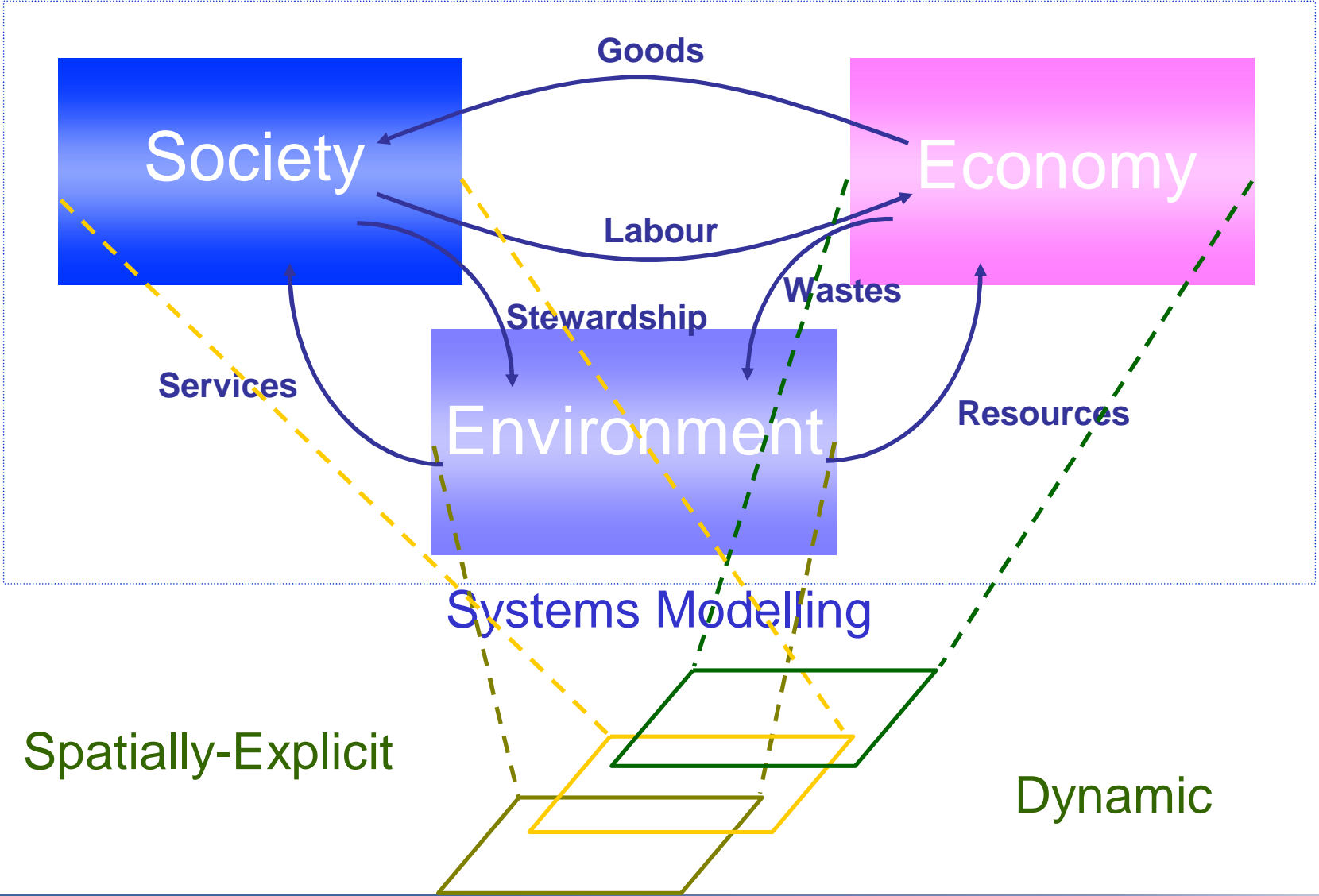


Spatial Modelling: Systems Approach



Systems models track **stocks & flows** over time





Decision Support System Attributes

- Helps solve ill- or semi-structured problems
- Powerful and easy-to-use interface
- Enable user to combine models & data in a flexible manner
- Helps user explore options available by generating feasible alternatives
- Supports different decision making styles and adapts to provide new capabilities as user needs evolve
- Interactive & iterative process

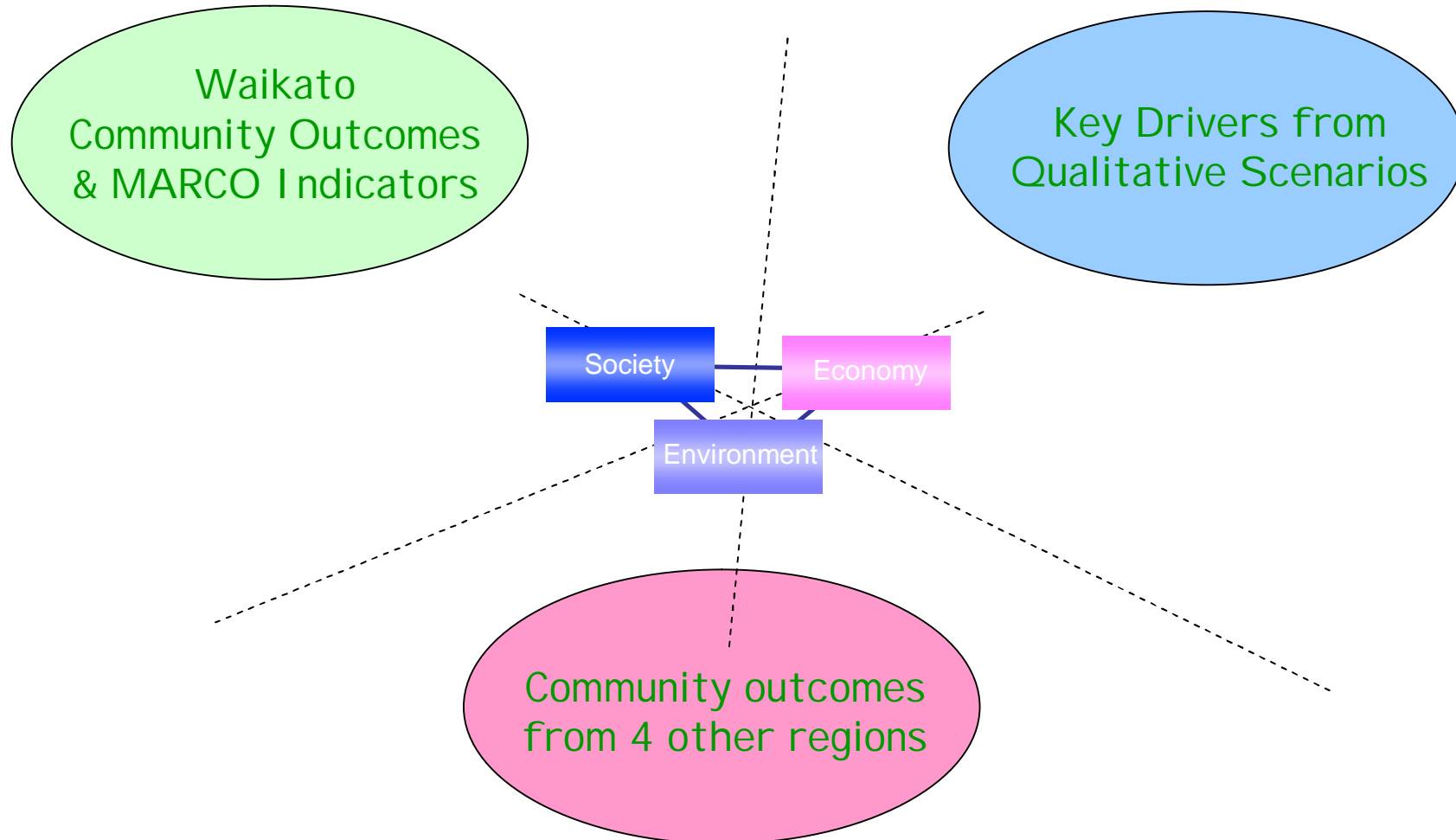


Spatial Decision Support System Characteristics

- All of the above +
- Spatial data included
- Storage of complex data structures
- Include techniques unique to spatial analysis
- Spatial outputs (i.e. maps)

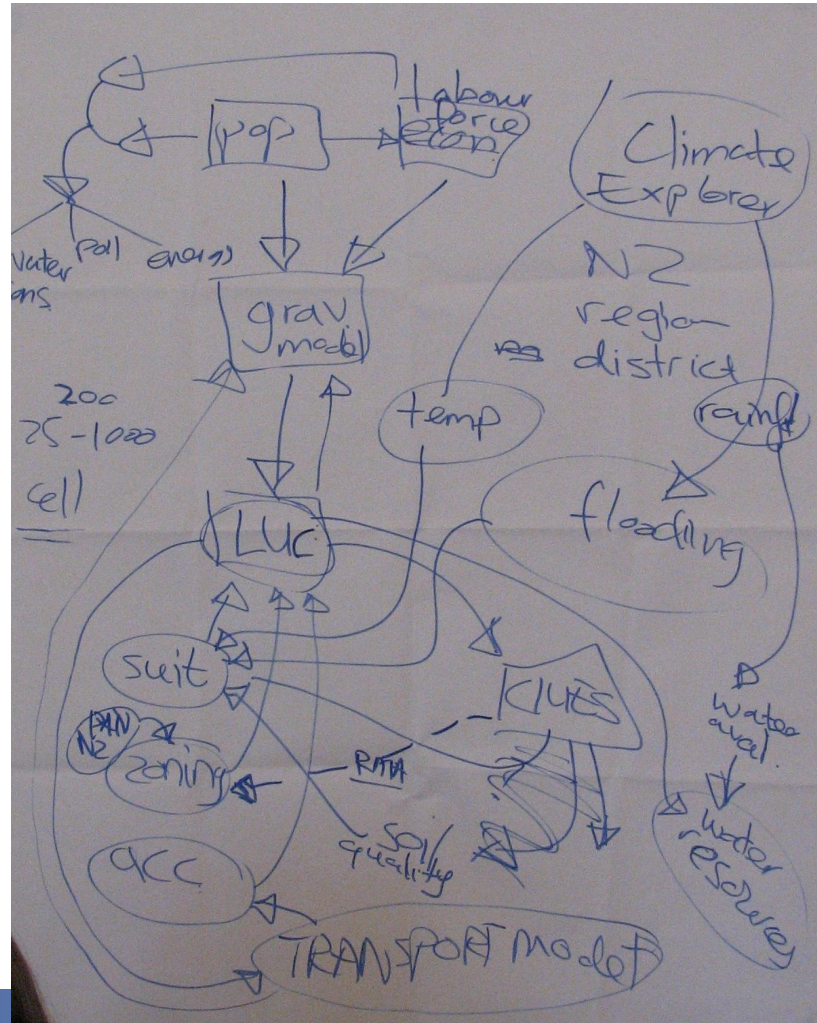


Design by “Triangulation”

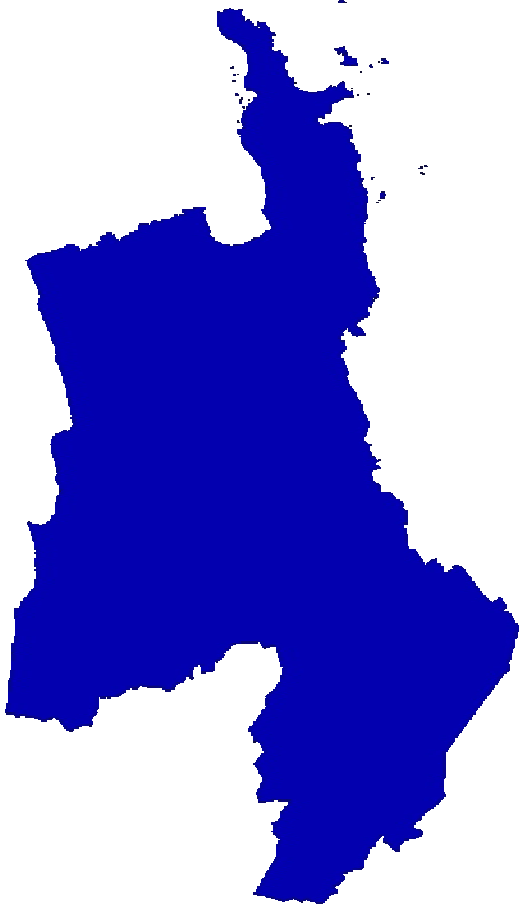


SDSS Specifications: First Attempt

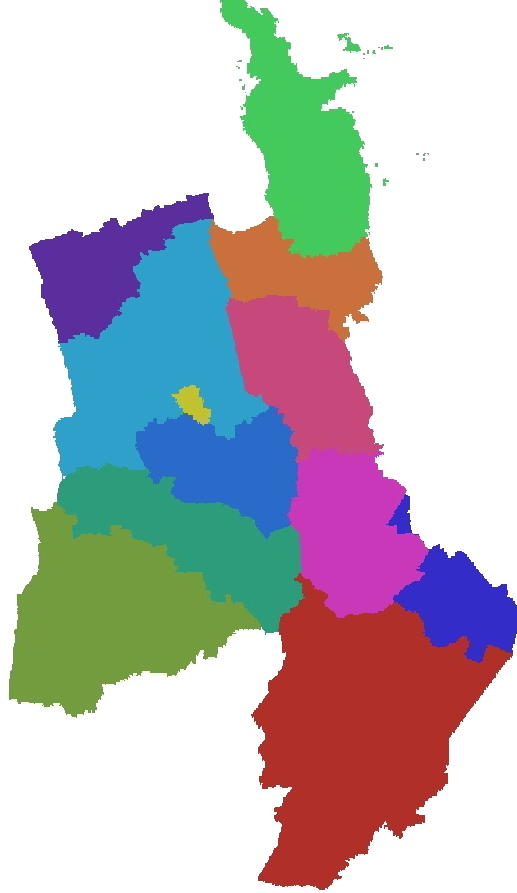
- SDSS Scoping Workshop – January 2007
- Included researchers & end-users
- First attempt at draft SDSS specifications



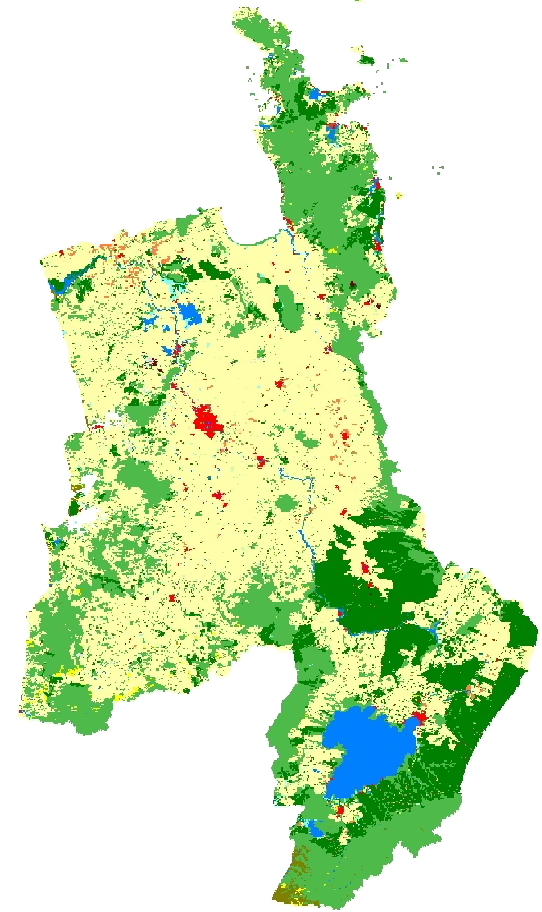
SDSS Operates at 3 Scales



Region

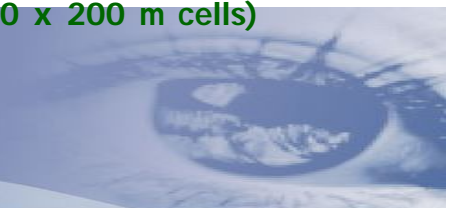


District

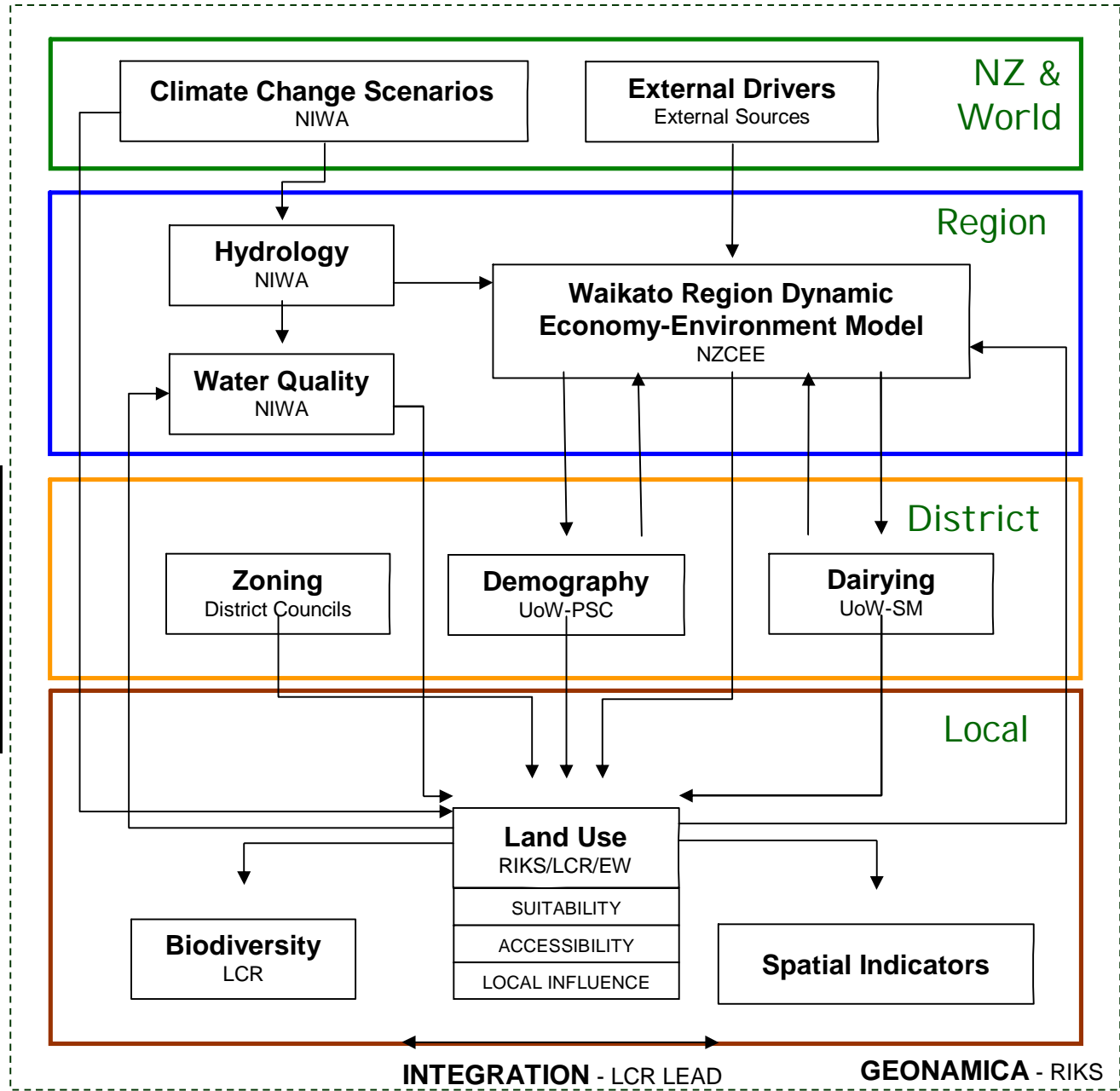
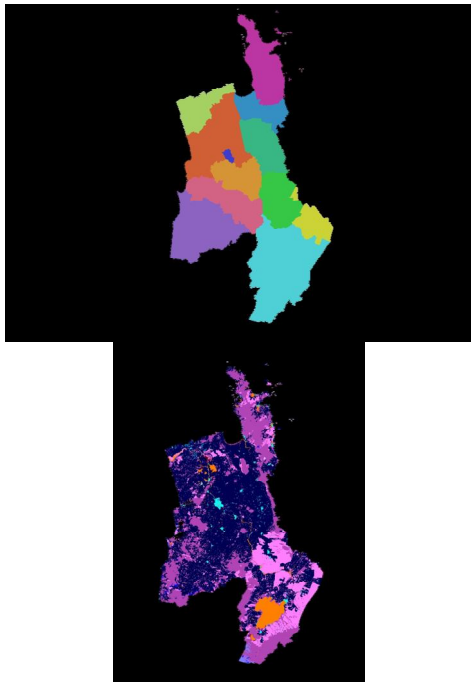


Local

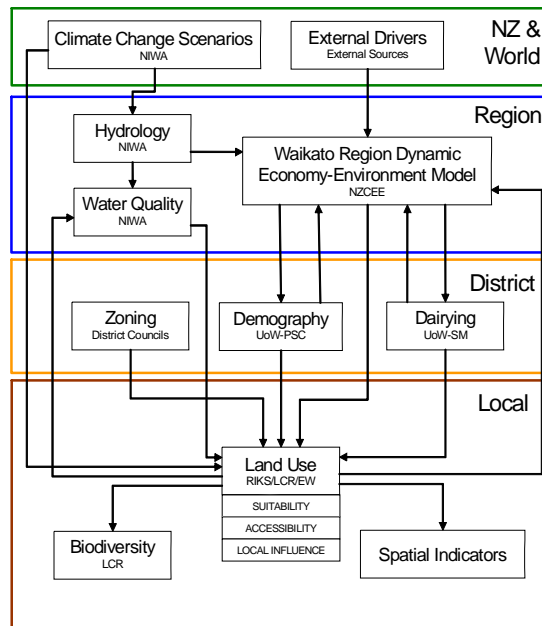
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Draft SDSS System Design



CRF101: SDSS



- Improved exploration of consequences
- Spatial and temporal effects
- Links and feedback
- Allows for 'what if' testing in strategy development
- Sensitivity analysis
- Unintended consequences



CF101: The power of 2

