

# Peri-urban Systems: Challenges of Change for the Surveyor

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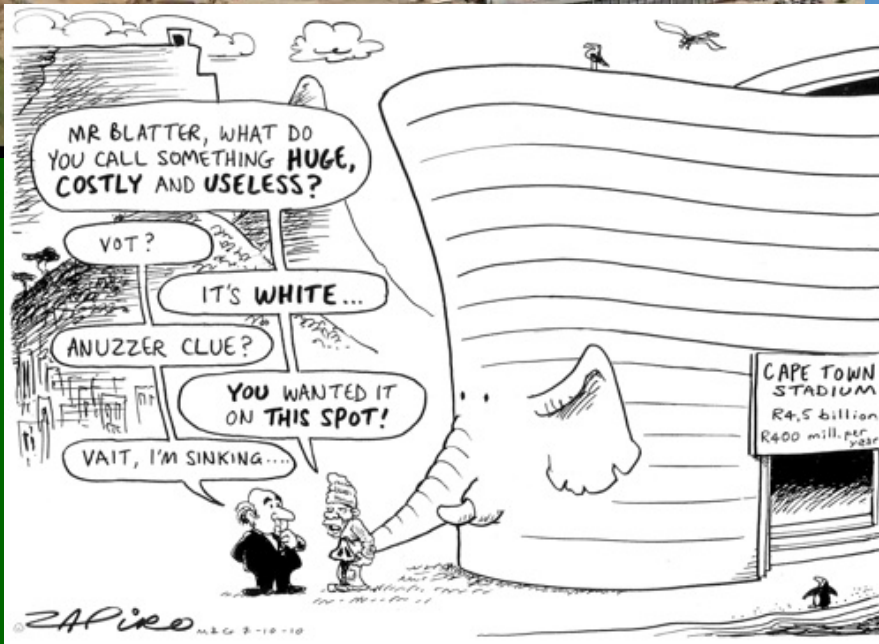
*Peri-Urban Settlements: Tools and Techniques for Surveyors to Ensure Environmental and Social Resilience*

FIG African Task Force WORKSHOP :  
Mombasa Kenya  
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# Structure

- Experiential images...
- An inspirational image
- Land administration and peri-urban systems
- Problem contexts
- Systems approaches to unstructured problems

# Project Oriented Goals: Shifting the Burden?



Millenium Development Goals?

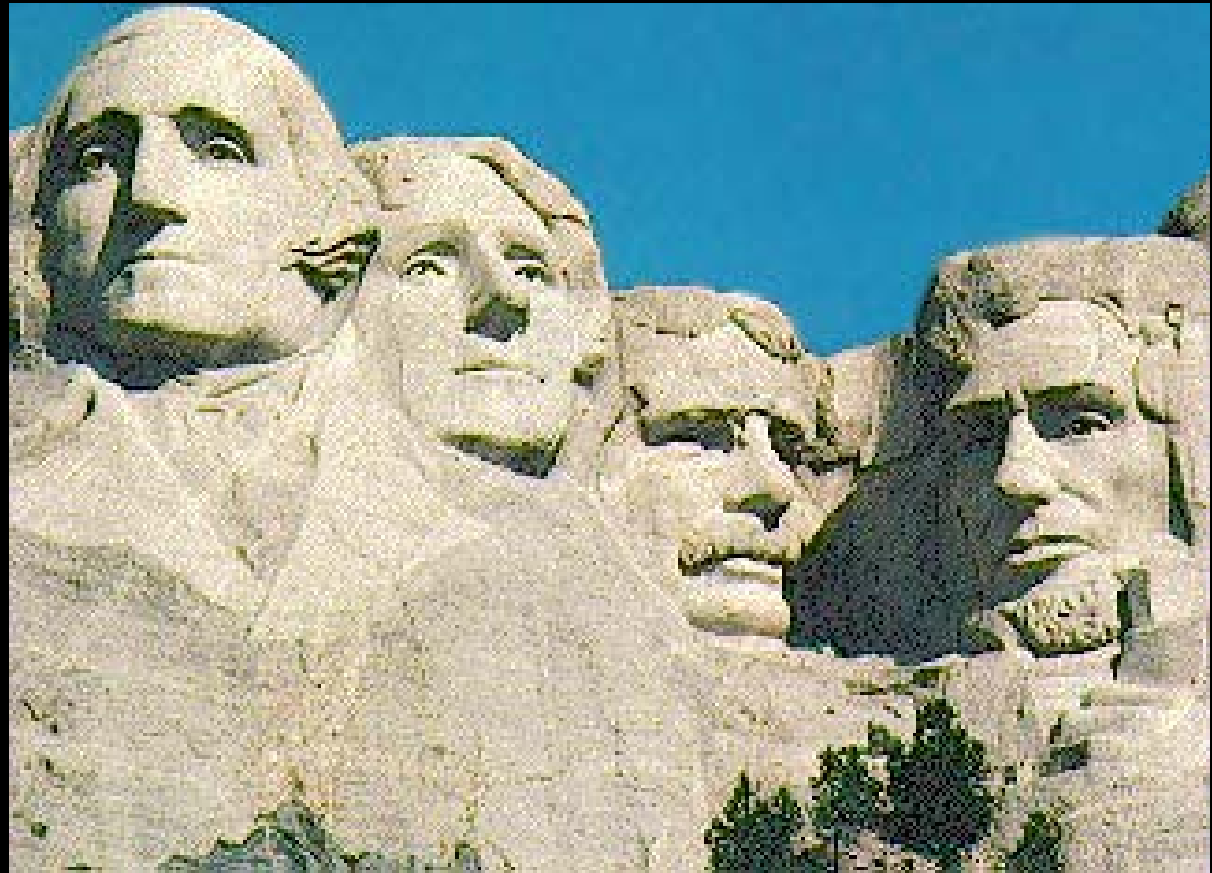




# Mount Rushmore

South Dakota

3 surveyors  
and some  
other guy!



George Washington, Abraham Lincoln and Thomas Jefferson practised as surveyors. They were also interdisciplinary thinkers and practitioners.

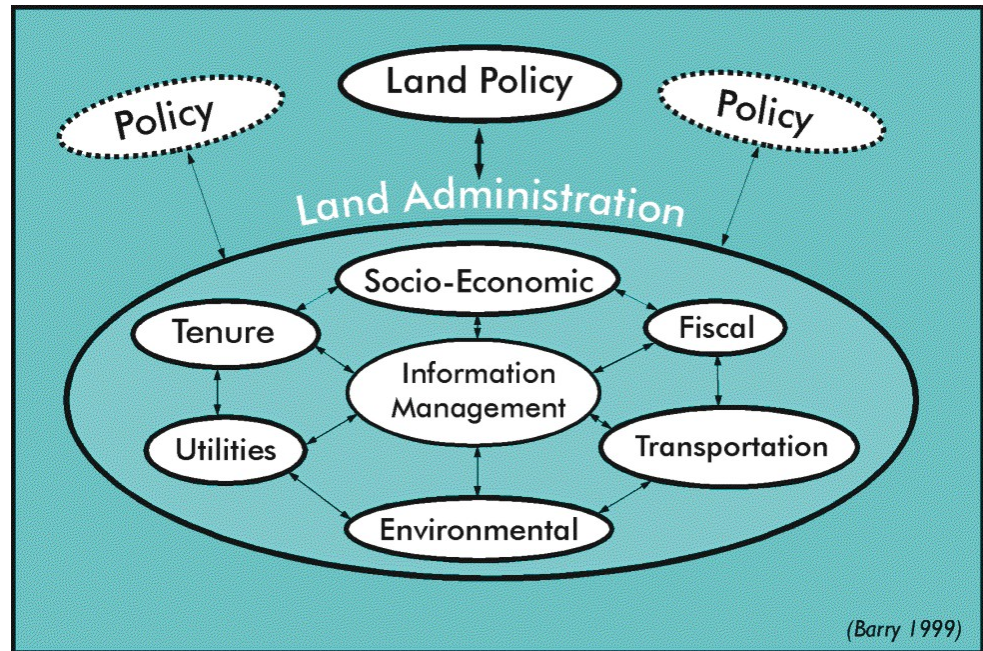
Surveyors have a history of being adventurers, innovators and creative thinkers

Current challenges: boundary expert, measurement, mapping and land tenure information processes and expert advice that serves to improve quality of life.

# Land Administration Systems

## Objectives & Challenges

- Integrated planning & administration
- Sustainable land use and land tenure security
- Fairness & equity - tensions with economic solutions and political agendas
- Agile or flexible system design and implementation – tensions with law and entrenched administrative procedure



Built environment is a physical manifestation of social, political, economic, legal, natural and technical structures and processes.

# Peri-urban Concepts and Systems

- As a location is proximate to city.
- But as a comprehensive system it is dynamic, interactive and transformative (Iaquinta & Drsescher 2000)
  - Demographic components – population change patterns
  - Multifaceted livelihoods – non-agricultural labour force
  - Multiple individual, family, group, local “community”, and rural “community” goals. Long standing v newcomers, surrounding residents.
  - Social-psychological and political facets.
  - Customary and formal tenure “forces”
  - Social Change → competition, entrepreneurial behaviour, coalition formation, power challenges and change
  - Intervention catalyses social change
  - Social change - how do we leverage and manage this this to fashion a workable city
  - Recurring question: who “owns” the problem? Who’s going to own it?
- Scale and nature of observable units for developing policy, law and intervention strategy – location, individual person, family, group, suburb, city, rural –urban linkages



# Grand Theories

- The Titling “Solution”
- Customary / communal land tenure systems

What will work in a continually changing situation?

# Wicked Problems

- Cannot be easily defined so that all stakeholders agree on the problem to solve;
  - Require complex judgements about the level of abstraction at which to define the problem;
  - Have no clear stopping rules;
  - Have better or worse solutions, not right and wrong ones;
  - Have no objective measure of success;
  - Require iteration - every trial counts;
  - Have no given alternative solutions - these must be discovered;
  - Often have strong moral, political or professional dimensions.
- 
- At a particular time, may appear to be intractable

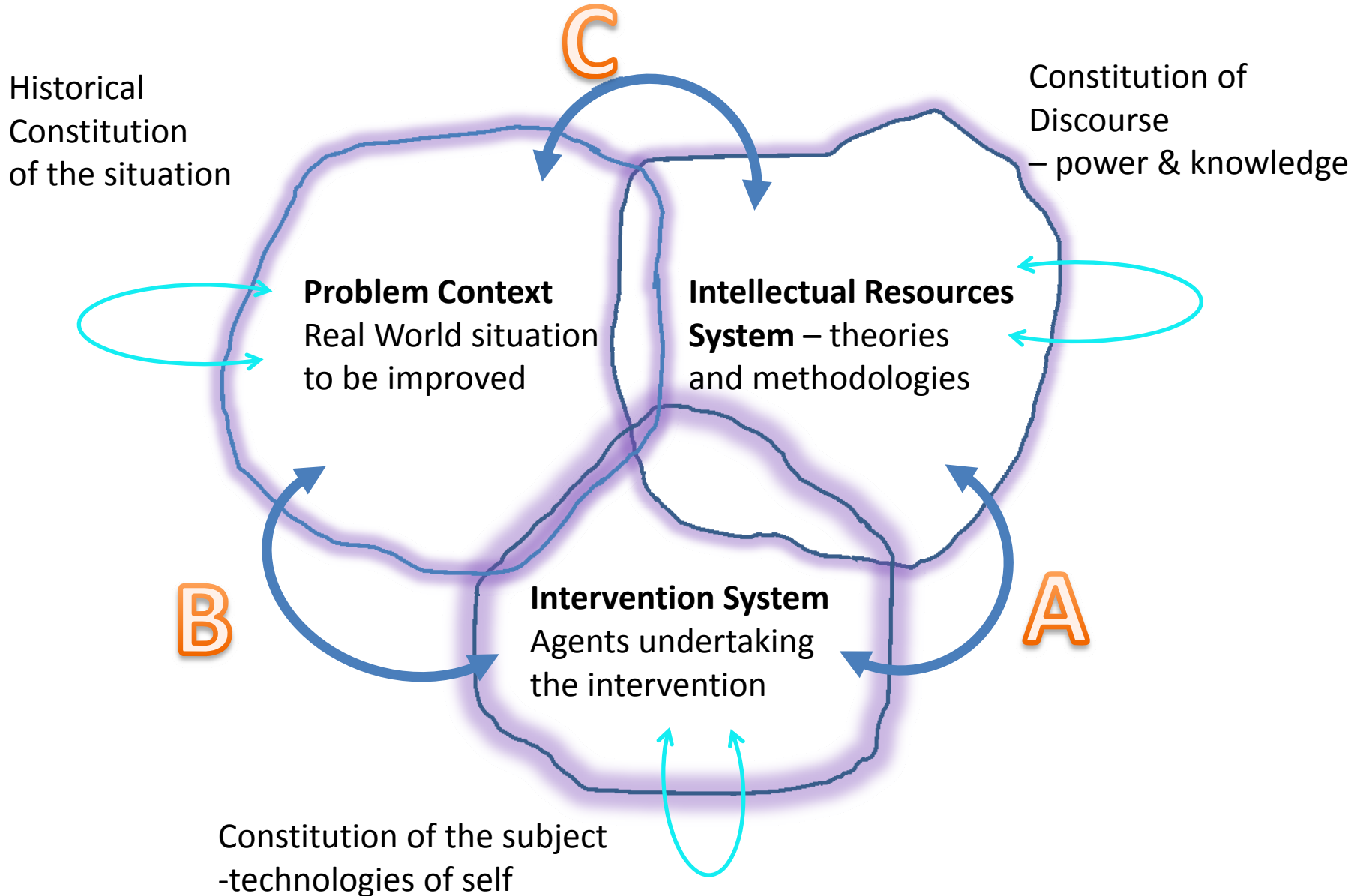
# Jackson's Problem Contexts

	Participants			
System Type		Unitary	Pluralist	Coercive
	Simple	Hard Systems	Soft systems	Emancipatory Systems Thinking
	Complex	Systems dynamics Organisational Cybernetics Complexity theory	Soft systems	Post Modern Systems Approaches

Subjectivity: Ideally we can place our problem contexts in these boxes and we will know when they move from one box to another

# Context of an Intervention

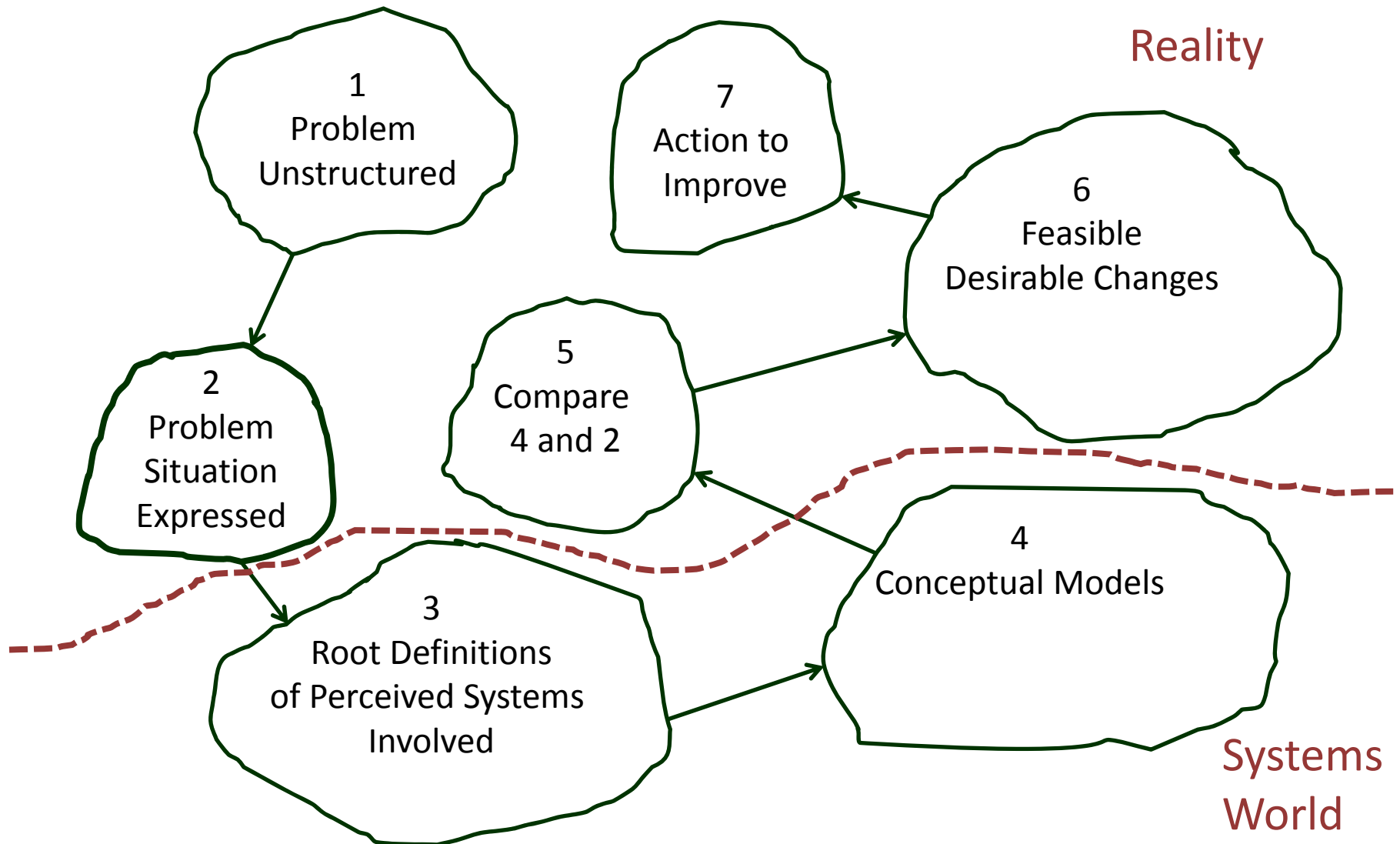
(Mingers 2006)



# Intervention Strategy: Check List or Trade Offs?

- Efficacy –will it work?
- Efficiency – do things right
- Effectiveness – do the right things
- Ethics
- Elegance

# Soft Systems Original 7 Stage Method



# EXPRESSING THE PROBLEM

## Rich Pictures

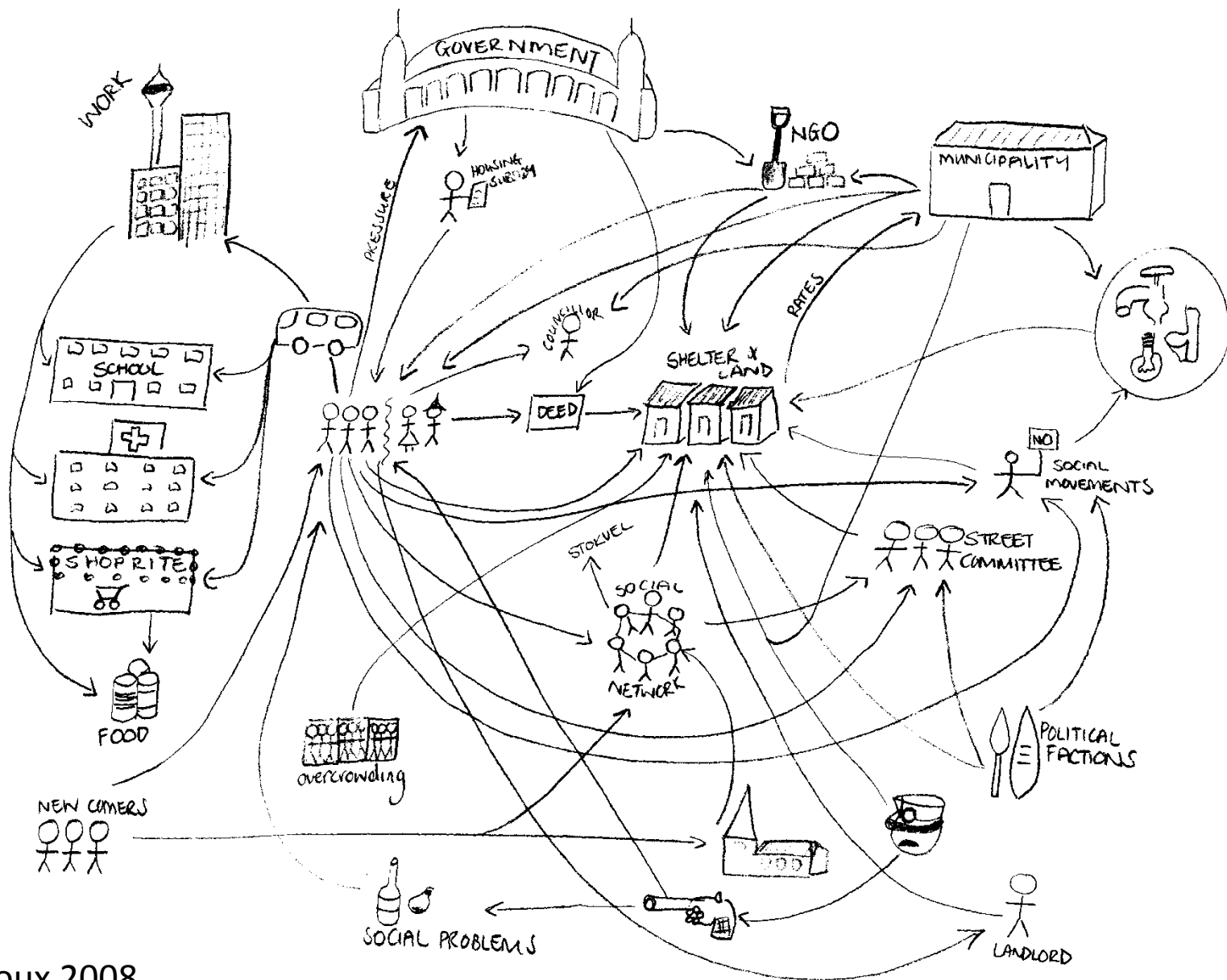
Express a problem situation, compiled by an investigator (s), examine elements of structure, elements of process, and the situation climate

(Checkland 1999)

## Three types of Analysis of the Pictures or Problem

- Analysis 1: intervention, roles of client, problem-solver and problem-owners
- Analysis 2: social systems analysis, roles, norms and values
- Analysis 3: politics, how power obtained and used

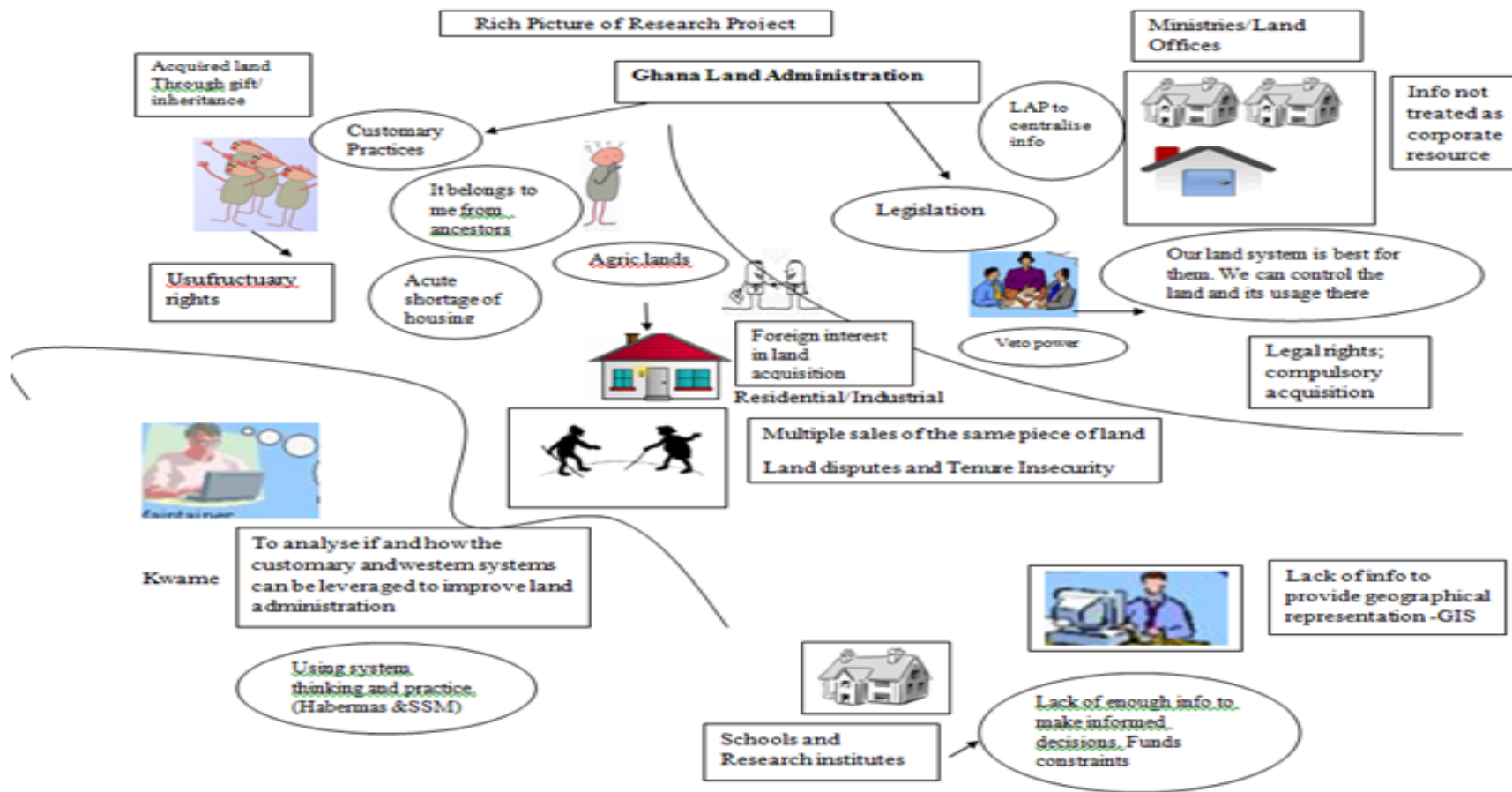
# Informal Settlements: Rich Picture





# Periurban Accra

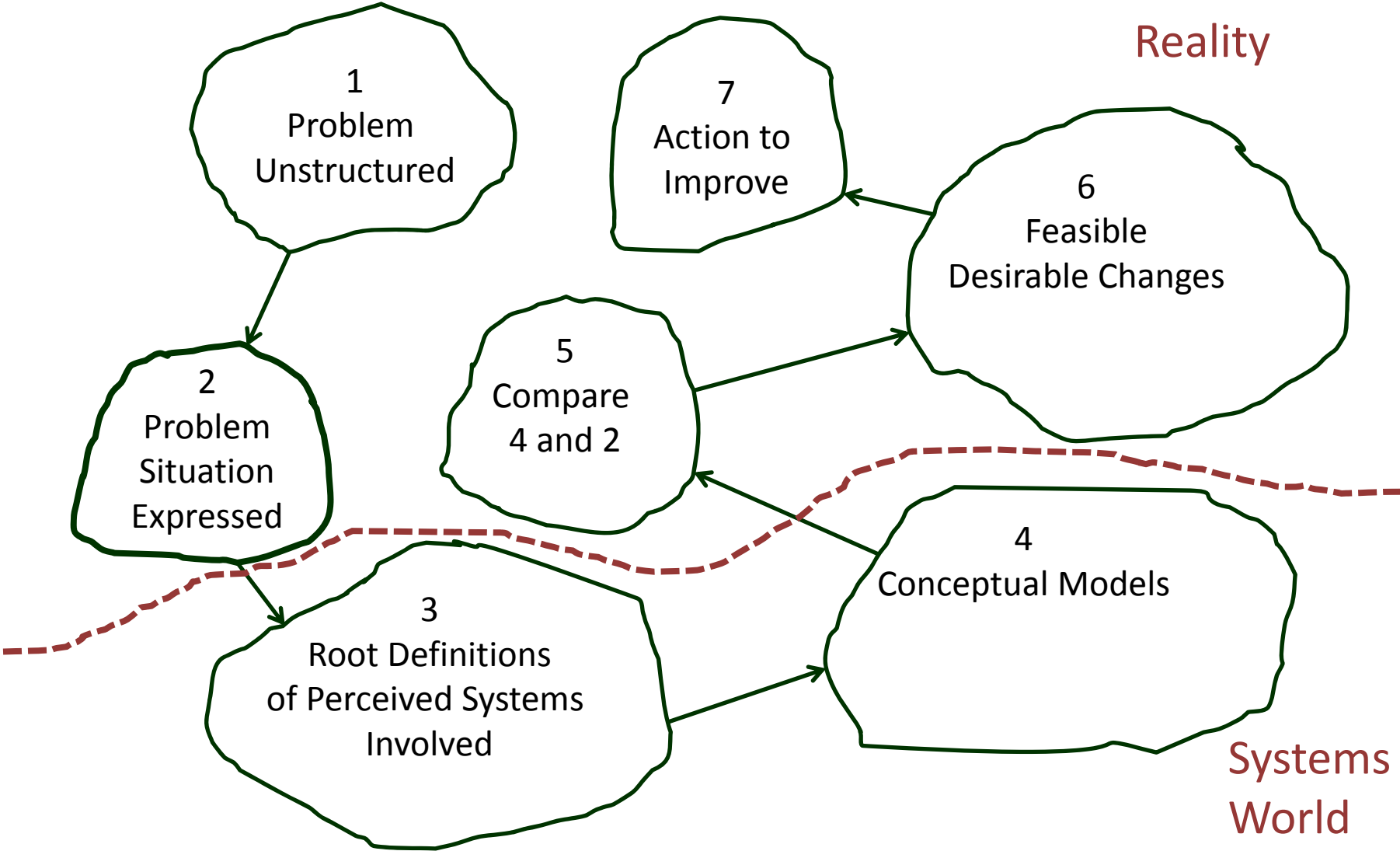
## Rich Picture of the Peri Urban Area



# Definitions CATWOE

- **Clients** –beneficiaries and victims? Who benefits and who suffers or stands to suffer? Who will join the party?
- **Actors** – Who implements the activities to make this work?
- **Transformation** – What transformation does this system bring about? (Inputs, the changes they go through, outputs?)
- **Weltanschauung (Worldview)** – What are the different worldviews? From which view(s) is this system meaningful?
- **Owner** – the power and authority holders to change or even eradicate the system? Power to appropriate or manipulate?
- **Environmental constraints** – what are the givens in the social, political, economic, legal, technical and physical environments? Which external constraints does this system take as a given? How do we set the boundaries? How often should we change the boundaries of the situation we're trying to improve

When you get to the end (and end of each stage); start again as the whole system has changed – do you need to reset the boundaries and CATWOE definitions



# Surveyor's Role

- The product is “peace of mind”
- What technical tools and process oriented tools can we develop?
- Who else should be part of the process?
- What are the critical success factors?
- Risk management
- Change management?

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