



Results Logic for Complex Systems

Steve Montague

steve.montague@pmn.net

Performance Management Network Inc.

May 13th, 2008

www.pmn.net

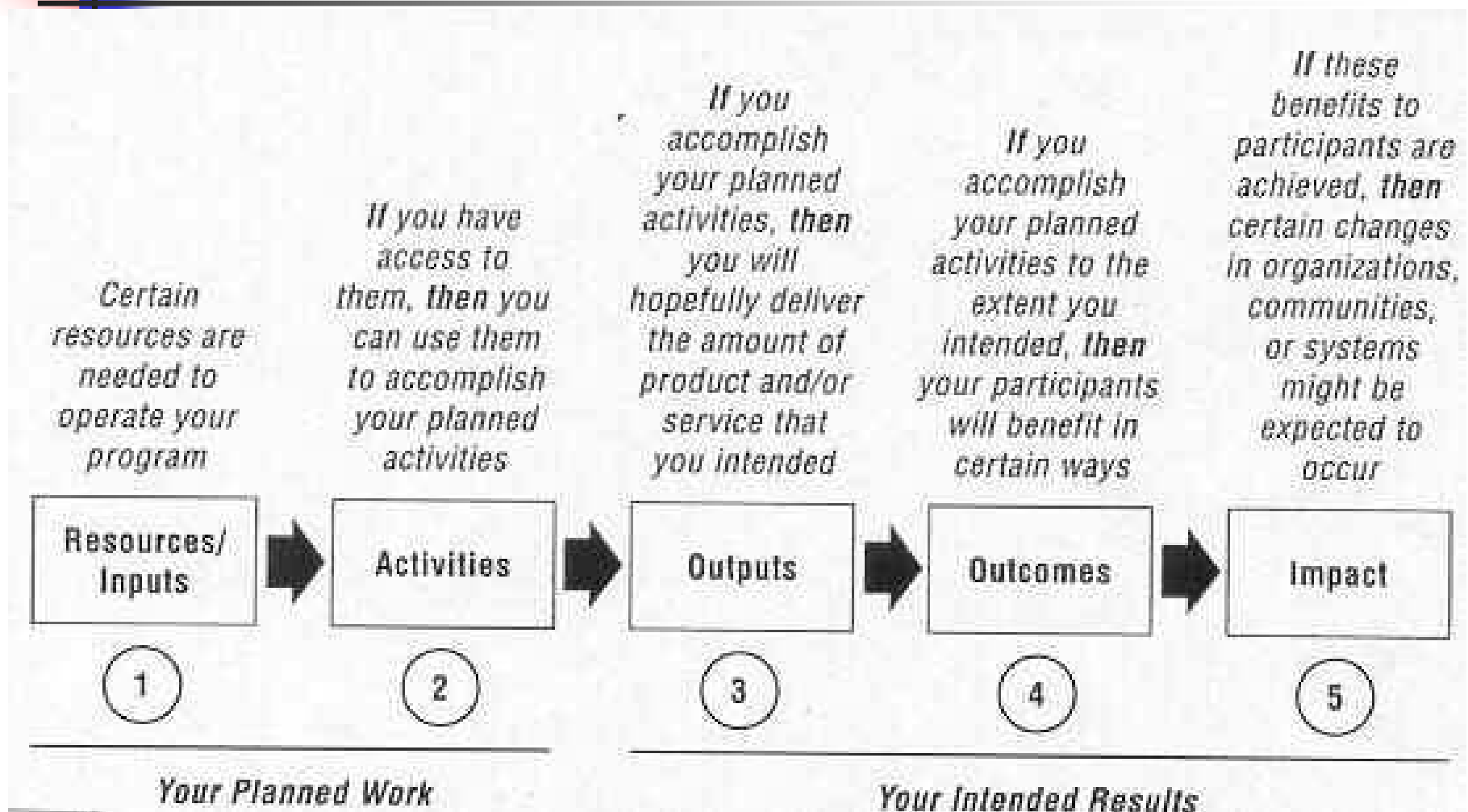


The Question

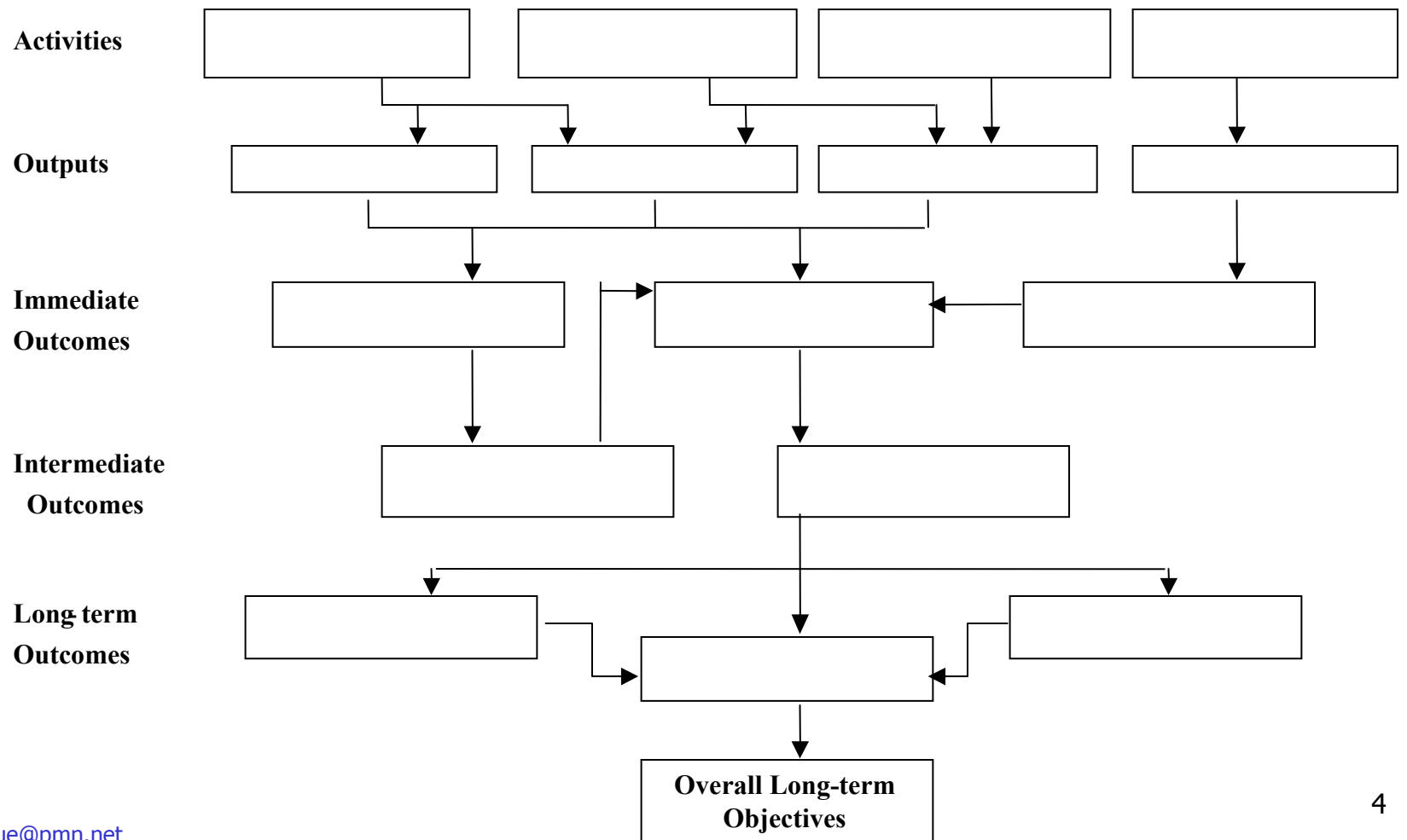
- Is it a problem to represent reality as a simple causal model of boxes and arrows, or should the logic models we use address the complexity of life – and if so how?

P. Rogers *Evaluation* 2006

The [International] 'Classic' Results Logic – Rogers 2006



The [Canadian] 'Classic' Results Logic



Simple-Complicated-Complex

Simple

Following a Recipe

- The recipe is essential
- Recipes are tested to assure replicability of later efforts
- No particular expertise; knowing how to cook increases success
- Recipes produce standard products
- Certainty of same results every time

Complicated

A Rocket to the Moon

- Formulae are critical and necessary
- Sending one rocket increases assurance that next will be ok
- High level of expertise in many specialized fields + coordination
- Rockets similar in critical ways

Complex

Raising a Child

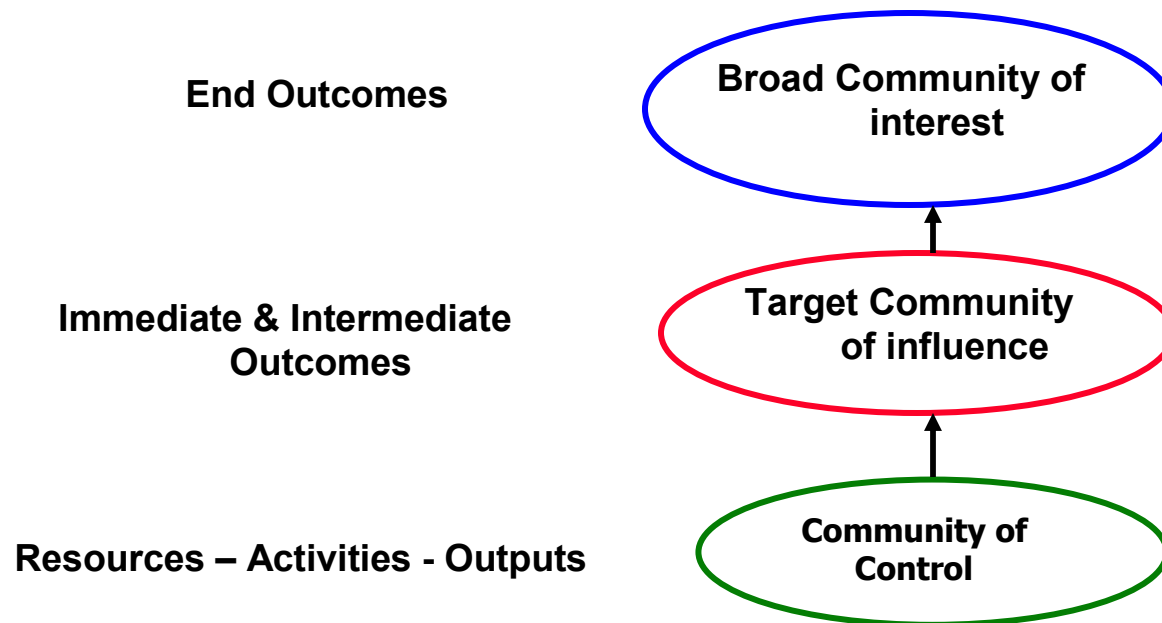
- Formulae have only a limited application
- Raising one child gives no assurance of success with the next
- Expertise can help but is not sufficient; relationships are key
- Every child is unique

(Zimmerman 2003)

Linear Cause-Effect Thinking: Moving to Cause-Effect Within Borders

- Traditional results logic shows a linear depiction of cause-effect results. Most evaluation logic models still work in this mode, often without a strong reference to context, degrees of influence or control. Can we build in
 - Systems thinking?
 - Means to deal with complexity?

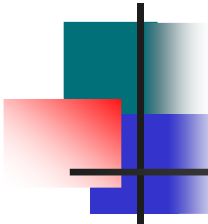
Need to Recognize That Results Occur In Different 'Communities'



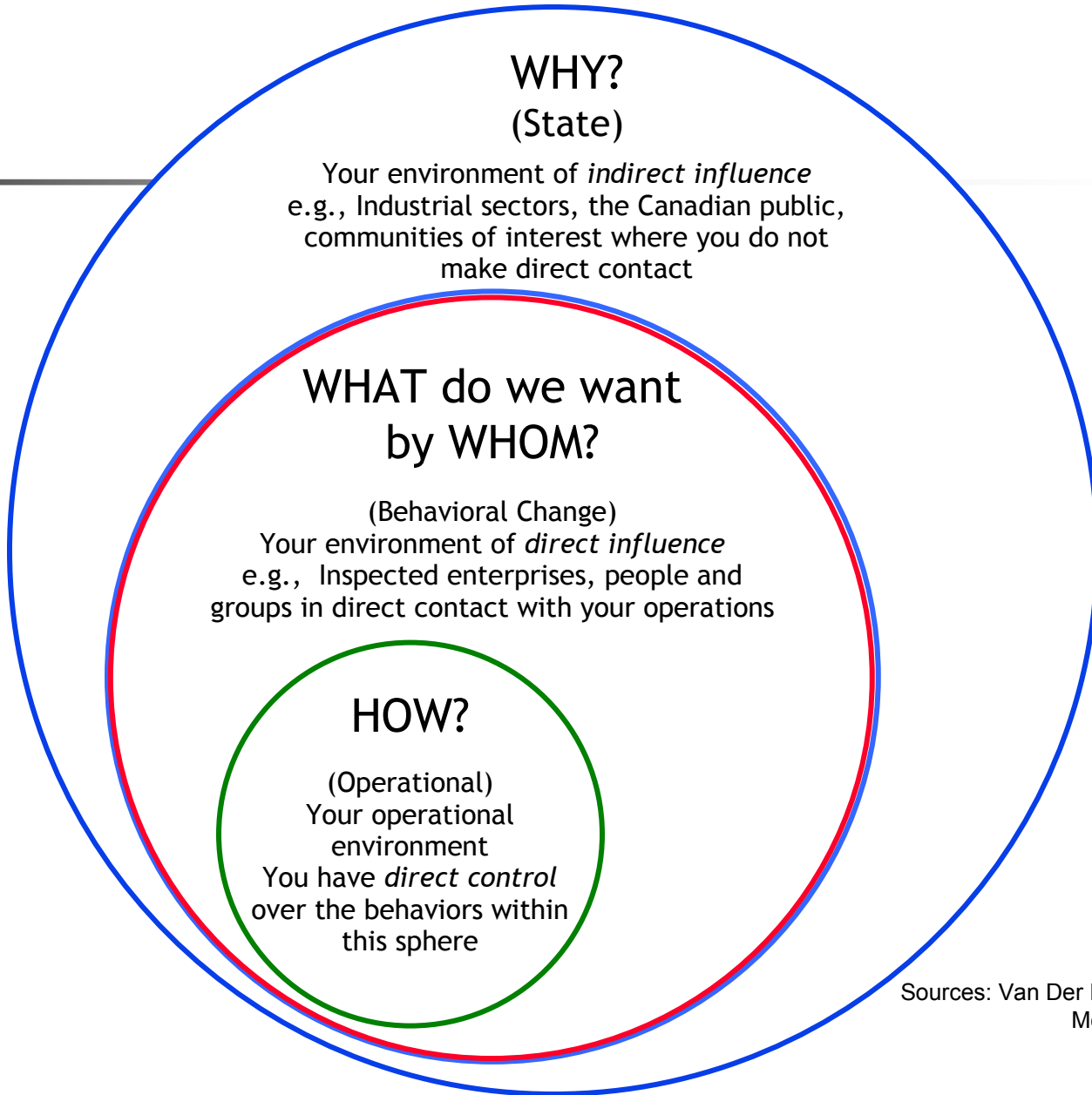
Certain 'Communities' Within Your Reach Can Be Considered 'Standards'

- Guardians vs. Traders – Jane Jacobs
- Partners / Intermediaries vs. Clients
- Support 'Climate' vs. Target Communities
- Users vs. Beneficiaries

Spheres of Influence



Performance needs to be considered in terms of its differing spheres of influence. Actions in the operational sphere should directly lead to changes in targeted groups which should in turn affect the desired 'state'.



Sources: Van Der Heijden (1996),
Montague (2000)

Recognizing the relationship chain (or network) as well as the results chain can help gain perspective on the systems in 'play' for any given program, policy or initiative.

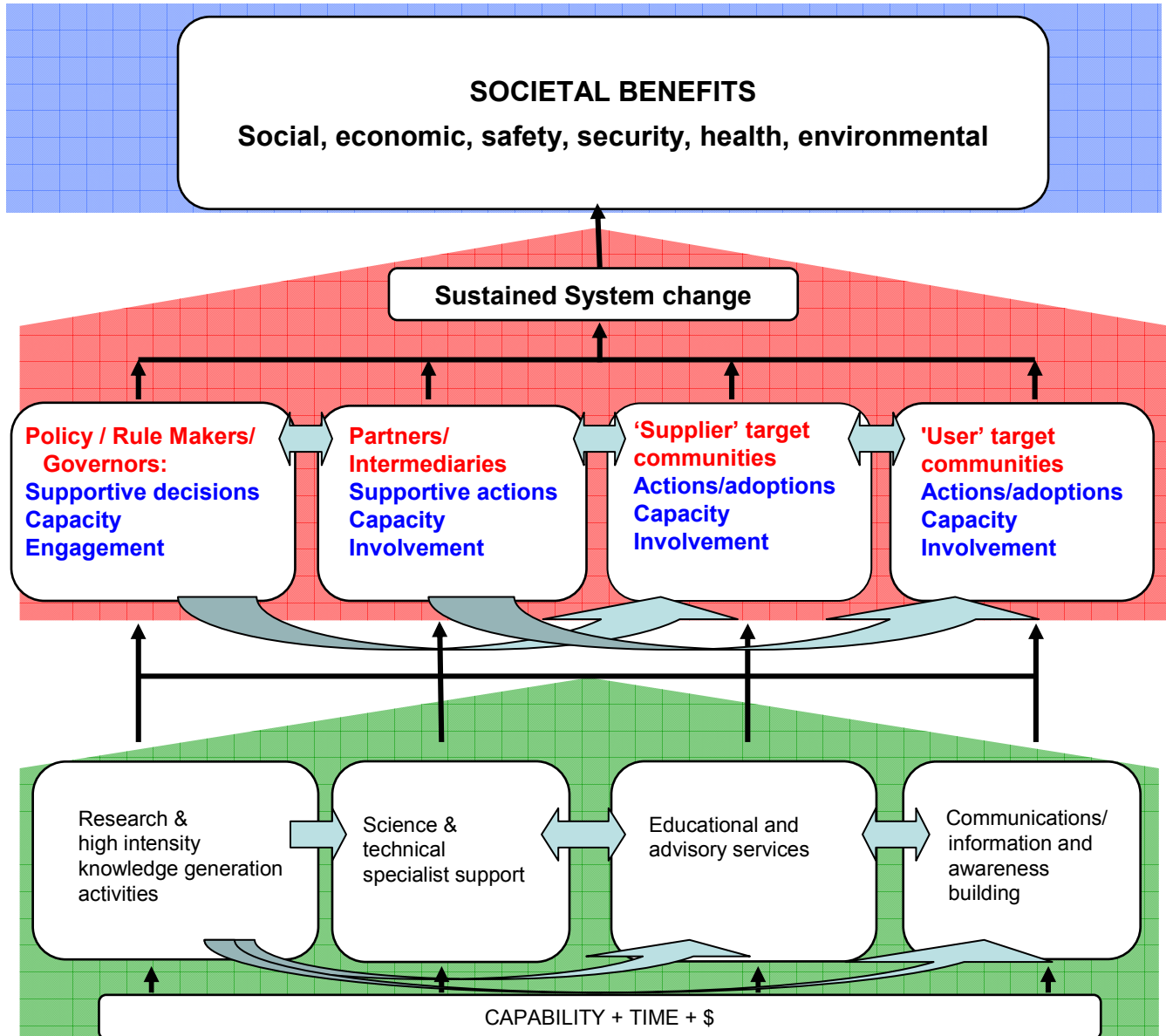
Towards an integration of systems thinking into results logic for complex initiatives

Steve Montague
November 7, 2003

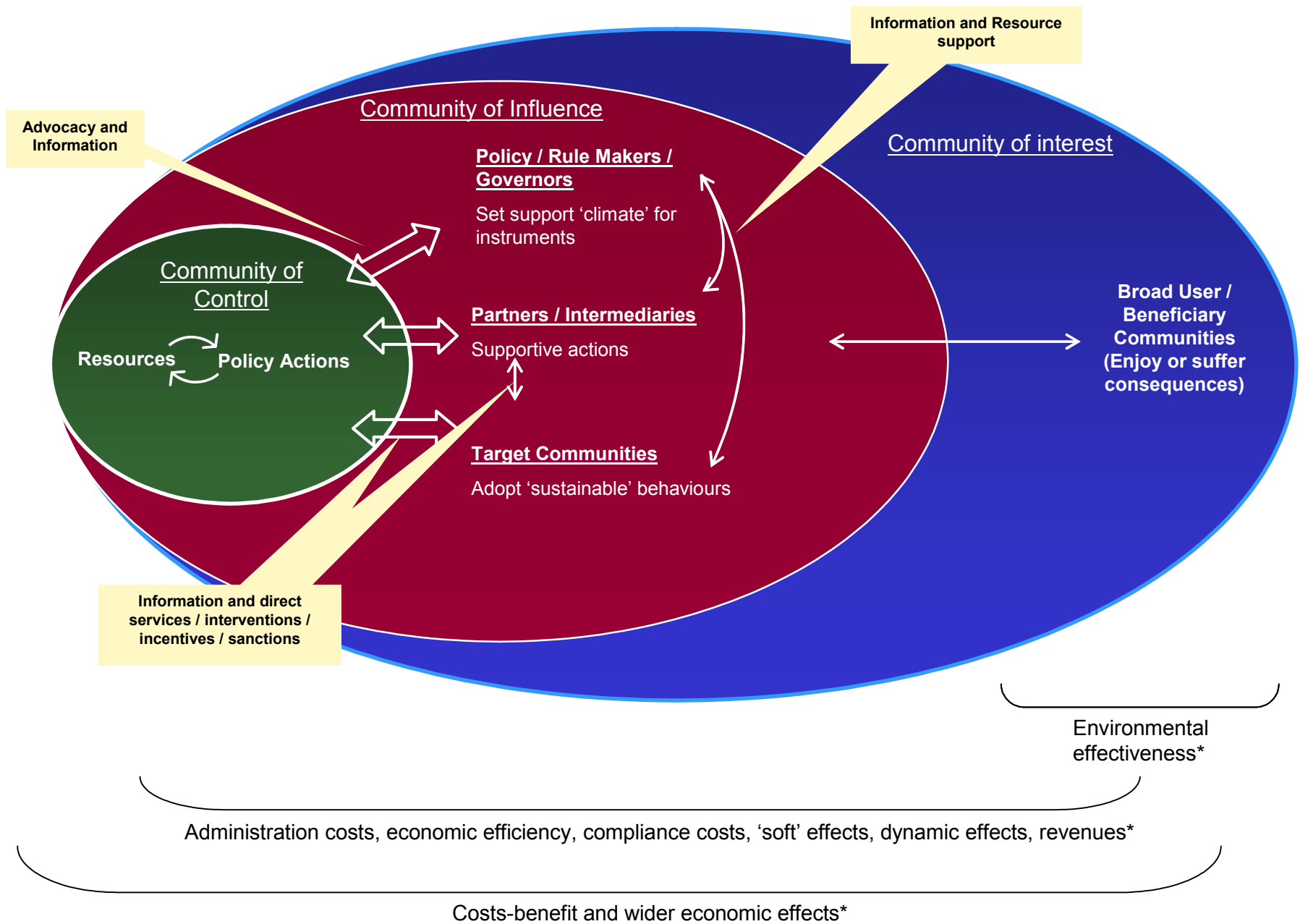
WHY we exist

WHO we reach & WHAT we want

HOW we operate

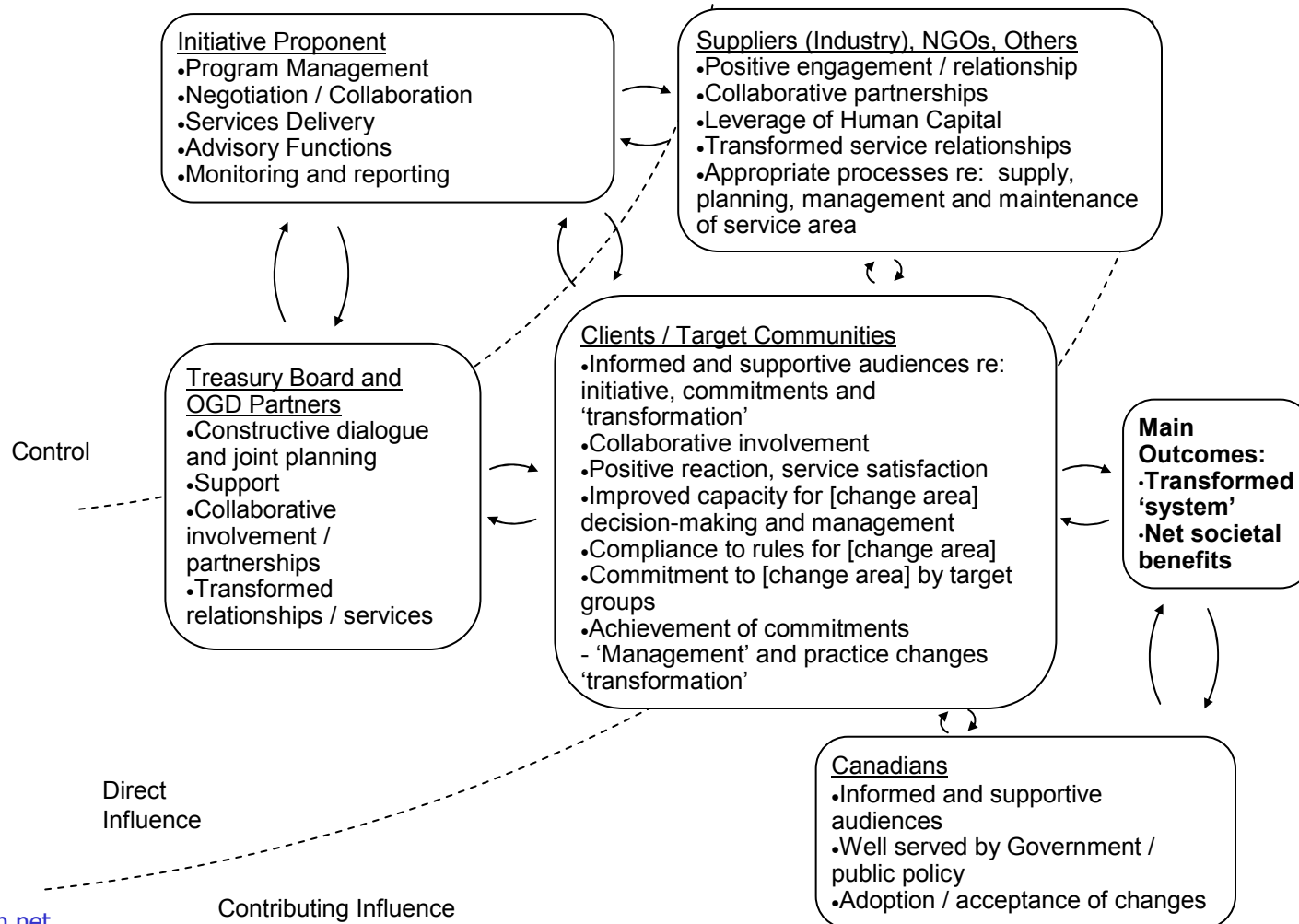
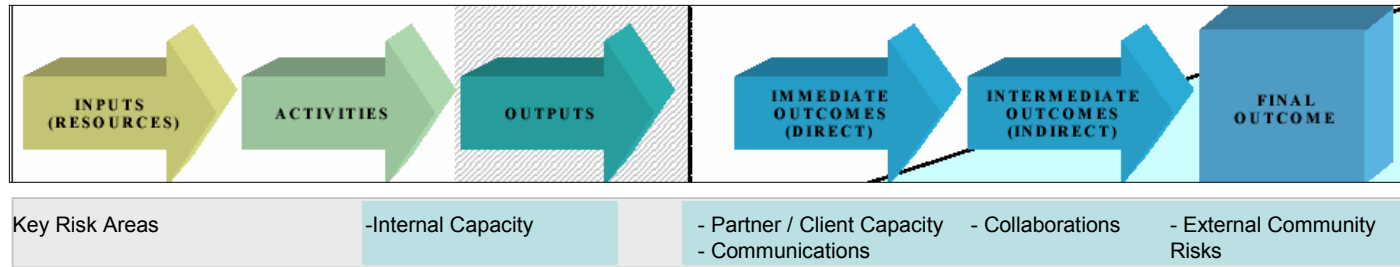


Policy Actions and Cause-Effect in Different “Communities”





A Basic Reach-Results Logic and Risk Map for a Service [or Policy] Change Initiative Involving Multiple Intermediaries



But What About Complex Programs?

Complex programmes	Strategies for developing and using programme theory
a) Recursive causality	Non-linear programme theory showing and documenting iterative development over time
b) Emergent outcomes	Overarching programme theory that can be adapted over time to accommodate specific emergent outcomes

Source: Rogers, 2006



Example of Emergent Outcomes

[Area-Based Initiatives] By opening up processes of decision making to a wider range of people and at the same time seeking to accord equal measure of respect to the contributions this variegated population make, we inevitably move away from the comparatively simple and manageable conceptions of success and failure associated with more closed systems.

Burton, Goodlad and Croft, J. (2004)

Options for Using Logic Models for Complex Programmes and Components Involving Multiple Projects

(or complex aspects of programmes with multiple projects)

1. Wait until the program can be tightly specified before using programme theory (evaluability assessment approach)
2. Work with each project separately to develop programme theory to guide planning and implementation as well as evaluation
3. Develop a broad programme theory that is then developed further and specifically for each project



Examples of Emergent Outcomes

- First Nations
- Public Health
- Community Development
- Science and Innovation

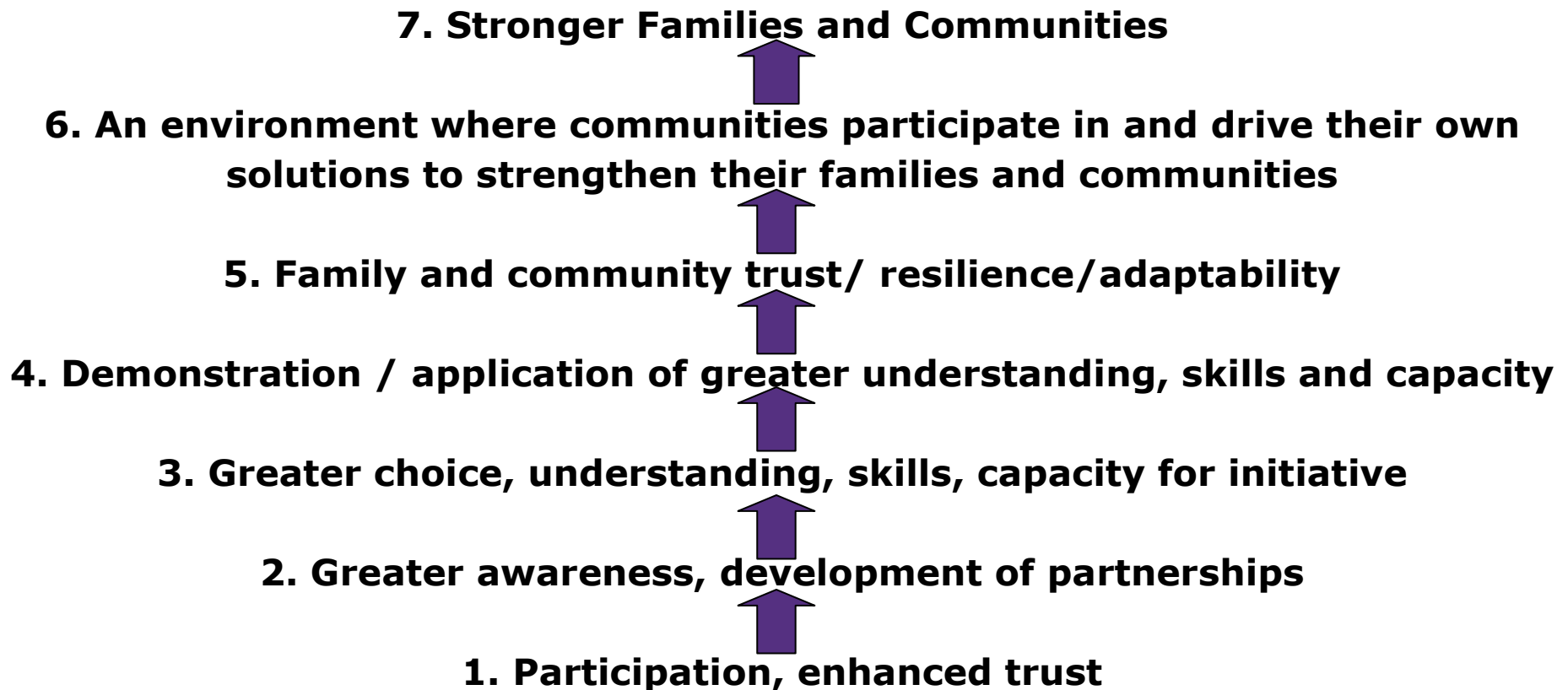
Question: Where are there not emergent outcomes these days?

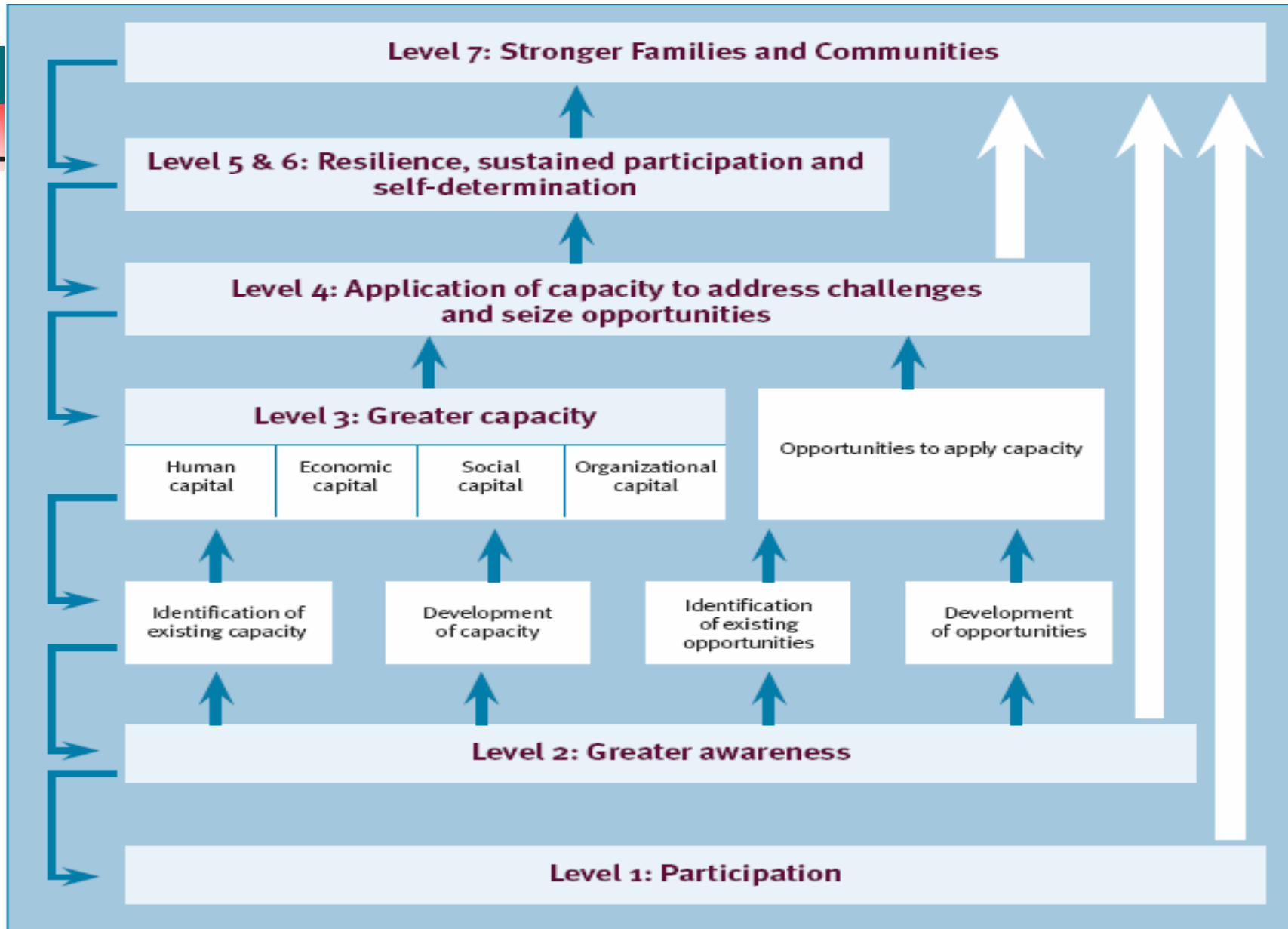


Recursive Causality

- Tipping points
- Virtuous or vicious circles
- Reinforcing loops
- Some classics:
 - Success to the successful
 - Tragedy of the commons
 - Fixes that fail

Example of Common Programme Theory – Rogers 2006







The Dilemma

We need to break out of linear, overly simplified thinking.

BUT...









People like simple, linear charts...

WHAT TO DO?









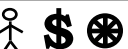


An 'Emerging' Solution?

- Build systems thinking, emergent goals and recursive loops 'into' conventional tools like plans
- Keep language simple, structure consistent and allow for changes over time
- Monitoring and Evaluation built in to management processes

	Results Chain	Time Periods – Usually Fiscal Years			
		T0 [Current Needs]	T1 [Desired]	T2 [Desired]	T3(+) [Desired]
WHY?	'End' Result  <i>Describe the overall trends with regard to the CCS mission and Board Ends.</i>	Recent cancer trends (incidence, mortality, morbidity, Q of L) including S.T.E.E.P. factors			<ul style="list-style-type: none"> Observed health effects and broad system changes (incidence, mortality, morbidity, Q of L)
WHAT	Practice and Behaviour Change  <i>Describe the practices and behaviour of individuals, groups, and partners over time.</i> Knowledge, Ability, Skill and / or Aspiration Changes  <i>Describe the level of knowledge, abilities, skills and aspirations / commitment of individuals, groups, and/or communities.</i>	Current level of practices re: need/problem area Current level of knowledge, ability, skills and/or aspirations re: issue area and services etc		<ul style="list-style-type: none"> Observed behaviour changes, adaptation, action Observed or assessed learning / commitment 	<ul style="list-style-type: none"> Observed behaviour changes, adaptation, action Observed or assessed learning / commitment
BY	Reactions  <i>Describe feedback from individuals, groups, and partners: satisfaction, interest, reported strengths and weaknesses.</i>	Current awareness + satisfaction level with information, services etc.	<ul style="list-style-type: none"> Reactions (satisfaction level) 	<ul style="list-style-type: none"> Reactions (satisfaction level) 	<ul style="list-style-type: none"> Reactions (satisfaction level)
WHOM?	Engagement / Involvement  <i>Describe the characteristics of individuals, groups, and co-deliverers: numbers, nature of involvement</i>	Current level of usage / participation / involvement by key groups (including other deliverers)	<ul style="list-style-type: none"> Level of usage / engagement / participation 	<ul style="list-style-type: none"> Level of usage / engagement / participation 	<ul style="list-style-type: none"> Level of usage / engagement / participation
HOW?	Activities / Outputs  <i>Describe the activity: How will it be implemented? What does it offer?</i>	Current activities + outputs (type and level)	<ul style="list-style-type: none"> # Outputs Milestones Achieved 	<ul style="list-style-type: none"> # Outputs Milestones Achieved 	<ul style="list-style-type: none"> # Outputs Milestones Achieved
	Inputs / Resources  <i>Resources used: dollars spent, number and types of staff involved, dedicated time.</i>	Current and historical \$ and HR spent Needs re: CCS capacity	<ul style="list-style-type: none"> \$ and HR spent Improvements to CCS capacity 	<ul style="list-style-type: none"> \$ and HR spent Improvements to CCS capacity 	<ul style="list-style-type: none"> \$ and HR spent Improvements to CCS capacity

AREA OF CCS MISSION / OBJECTIVES: Reduce incidence and mortality from cancers associated with U.V. exposure

	Results Chain	Needs-Results Plan Worksheet			
		T0 [Current Needs]	T1 [Desired]	T2 [Desired]	T3(+)[Desired]
WHY?	<p>'End' Result </p> <p><i>Describe the overall trends with regard to the CCS mission and Board Ends.</i></p>	<ul style="list-style-type: none"> Increasing incidence of sun related cancer 			<ul style="list-style-type: none"> Reduced rate of sun related cancer
WHAT	<p>Practice and Behaviour Change </p> <p><i>Describe the practices and behaviour of individuals, groups, and partners over time.</i></p> <p>Knowledge, Ability, Skill and / or Aspiration Changes </p> <p><i>Describe the level of knowledge, abilities, skills and aspirations / commitment of individuals, groups, and/or communities.</i></p>	<ul style="list-style-type: none"> Problematic level of unsafe sun and tanning behaviors Key Segments do not know appropriate sunsafe precautions for various UV levels 		<ul style="list-style-type: none"> Improved / increased 'sunsafe' behaviors Reduced risky tanning practices Shade policies implemented for public areas Understanding of what precautions to take at various UV levels 	<ul style="list-style-type: none"> Improved / increased 'sunsafe' behaviors Reduced risky tanning practices Shade policies implemented for public areas Understanding of what precautions to take at various UV levels
BY	<p>Reactions </p> <p><i>Describe feedback from individuals, groups, and partners: satisfaction, interest, reported strengths and weaknesses.</i></p>	<ul style="list-style-type: none"> Lack of awareness / reactions to UV warnings Lack of apparent awareness of need for shade in public spaces 	<ul style="list-style-type: none"> Improved awareness of UV levels and their implications Pick-up of need for shade messaging by media and various public institutions 	<ul style="list-style-type: none"> Improved awareness of UV levels and their implications Pick-up of need for shade messaging by media and various public institutions 	<ul style="list-style-type: none"> Improved awareness of UV levels and their implications Pick-up of need for shade messaging by media and various public institutions
WHOM?	<p>Engagement / Involvement </p> <p><i>Describe the characteristics of individuals, groups, and co-deliverers: numbers, nature of involvement</i></p>	<ul style="list-style-type: none"> Lack of public / institutional / other related agency involvement in sunsafe promotion Lack of opportunity for concerned group involvement 	<ul style="list-style-type: none"> Media pick-up of sunsafe messaging Involvement of physicians groups in sunsafe cause 	<ul style="list-style-type: none"> Media pick-up of sunsafe messaging Involvement of physicians groups in sunsafe cause 	<ul style="list-style-type: none"> Media pick-up of sunsafe messaging Involvement of physicians groups in sunsafe cause
HOW?	<p>Activities / Outputs </p> <p><i>Describe the activity: How will it be implemented? What does it offer?</i></p>	<ul style="list-style-type: none"> Gap in promotional / educational activities 	<ul style="list-style-type: none"> Promotional / educational activities and information / communication to key target groups 	<ul style="list-style-type: none"> Promotional / educational activities and information / communication to key target groups 	<ul style="list-style-type: none"> Promotional / educational activities and information / communication to key target groups
 www.pmn.net	<p>Inputs / Resources </p> <p><i>Resources used: dollars spent, number and types of staff involved, dedicated time.</i></p>	<ul style="list-style-type: none"> Gaps in resources committed to area 	<ul style="list-style-type: none"> Level of people, skills, knowledge, \$ applied to sunsafe area 	<ul style="list-style-type: none"> Level of people, skills, knowledge, \$ applied to sunsafe area 	<ul style="list-style-type: none"> Level of people, skills, knowledge, \$ applied to sunsafe area



Conclusion

- Tell a Performance Story
 - How, Who, What, Why

- Change our mental models and logic models to recognize
 - systems
 - complexity
 - 'communities' (people with some common task, function or identity in the system)
 - program logic as an heuristic – not an implementation blueprint
 - go beyond logic models to build heuristic in to management tools



Select Sources / References

1. Bennett, C. et. al. (2001). *Management and Assessment Indicators for Intergovernmental Programs: Toward A Workable Approach*. January 2001 revision of Paper Presented at the Australasian Evaluation Society Meeting 1999. Perth, Western Australia, Australia.
2. Canadian Cancer Society
3. Environment Australia (2003). *Evaluation of the NAT Phase 1 Facilitator, Coordinator and Community Support Networks*.
4. Gerard and Ellinor, *Flexing a Different Conversational "Muscle": The Practice of Dialogue*, *The Systems Thinker* Vol II No 9.
5. Mayne, J. (2001). *Addressing Attribution through Contribution Analysis: Using Performance Measures Sensibly*, *The Canadian Journal of Program Evaluation* Vol. 16 No. 1.
6. Montague, S. (2006) *Results, Risks and Complex Systems: Adapting Past Evaluation Practice to Meet The Needs of Current Public Management*, Performance Management Network Inc.
7. Montague and Allerdings (2005), *Building Accountability Structures into Agri-Environmental Policy Development* in *Evaluating Agri-Environmental Policies: Design, Practice and Results*, OECD, 2005, pp 55-70
8. Montague, S. (2002). *Circles of Influence: An Approach to Structured, Succinct Strategy*
[http://pmn.net/library/Circles of Influence An Approach.htm](http://pmn.net/library/Circles%20of%20Influence%20An%20Approach.htm)
9. Montague, S., Young, G. and Montague, C. (2003). *Using Circles to Tell the Performance Story*, Canadian Government Executive
<http://pmn.net/library/usingcirclestotelltheperformancestory.htm>.
10. Pahl and Norland, (November 2002). *A Systemic Framework for Designing Utilization-Focused, Evaluation of Federal, Environmental Research, Extending the Focus from Outputs to Outcomes*.
11. Perrin, B. (January 2006) *Moving from Outputs to Outcomes: Practical Advice from Governments Around the World*
<http://www.businessofgovernment.org/pdfs/PerrinReport.pdf>.
12. Rogers, P. (2006) *Using Programme Theory for Complex and Complicated Programmes* Royal Melbourne Institute of Technology, EES-UKES conference London.
13. Sparrow, Malcolm K. (2002) *The Regulatory Craft Controlling Risks, Solving Problems, and Managing Compliance*, The Brookings Institution, Washington.
14. Valovirta and Uusikylä (September 2004) *Three Spheres of Performance Governance Spanning the Boundaries from Single-organisation Focus Towards a Partnership Network* http://soc.kuleuven.be/io/egpa/qual/ljubljana/Valovirta%20Uusikila_paper.pdf.
15. Van Der Heijden, K., (1996) *Scenarios: The Art of Strategic Conversation* Wiley.