



Monitoring and evaluating
complex interventions –
using insights from Systems
Thinking

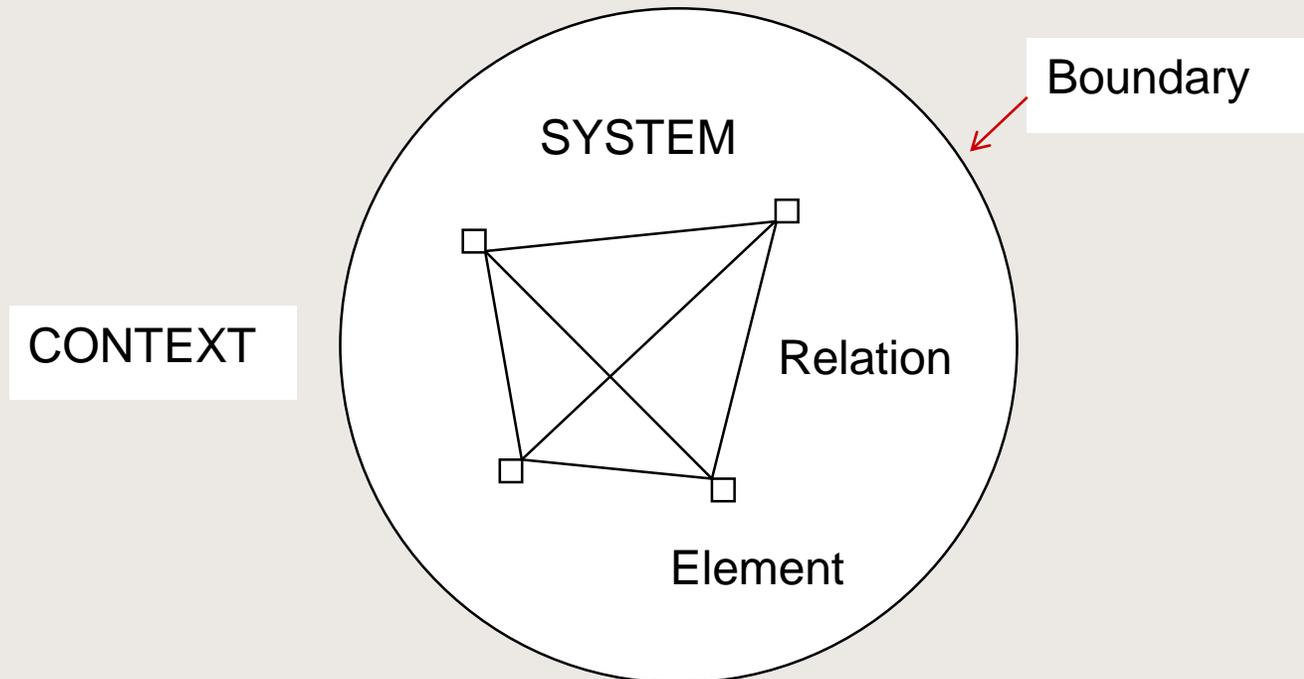
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Challenges of increasing complexity for M&E

- **Interventions become more complex (= multi-layered / -faceted)**
 - > require interaction of various actors (social beings)
 - > influenced by contextual conditions / external factors
 - > need to be shaped / adapted during implementation
 - **Challenges for Monitoring & Evaluation**
 - > cope with shifting / diverse realities, more than one logic
 - > inappropriate dealing with complexity can lead to: questionable findings, harm credibility and relevance, bring forth resistance
- **Replace / complement linear thinking by systems thinking to deal appropriately with complexity, avoid inappropriate simplifications!**

Practical problems in applying Systems Thinking

- **No uniform stock of knowledge, no generally agreed definition(s)**
- **Ways to conceptualize realities as systems**
 - > as physical entities, real world objects
 - > as mental representations ('maps') – not the real world!



...more practical problems – and a way forward

- **Systems and evaluation are methodologically large fields, but**
 - › most are only familiar with parts (approaches / methods)
 - › many approaches / methods are geographically bound
- **Potential risks**
 - › use approaches / methods as starting point, not the situation
 - › 'one-size fits all' attitude, inappropriate applications
- **Three core concepts capture essence of Systems Thinking**
- **Methods / techniques can be aligned with these core concepts**
- **Allow evaluators to integrate Systems Thinking in their practice**

Core Systems Concepts

- **Interrelationships**

- › dynamic, non-linear aspects: models for insight or prediction
- › E.g. *SNA, Causal Loop Diagrams, (Human) Systems Dynamics*

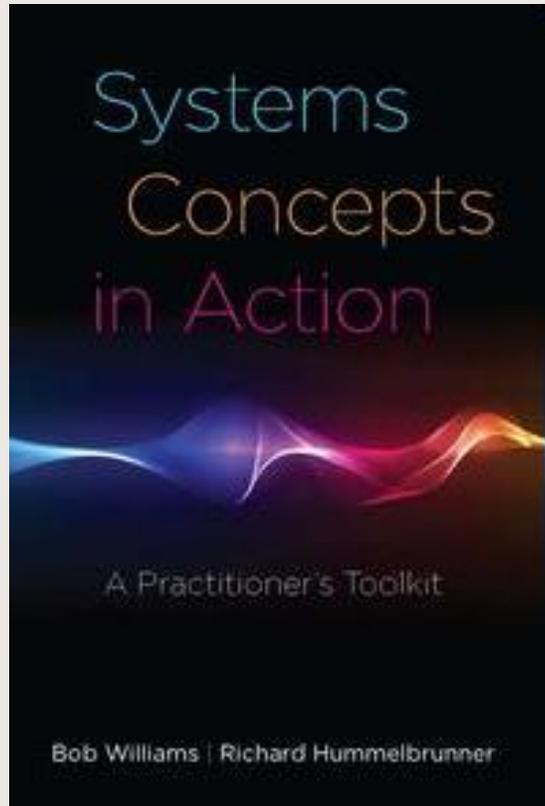
- **Perspectives**

- › (re)framing a situation (stakeholders, stakes), build consensus
- › *E.g. Soft Systems Methodology, Circular Dialogue*

- **Boundaries**

- › reflect the consequences of boundary choices / selections
- › not 'holism', but awareness; reductionist stance
- › *E.g. Critical Systems Heuristics, Dialectic Methods of Inquiry*

... A Resource



Systems Concepts in Action: A Practitioners Toolkit Bob Williams & Richard Hummelbrunner 2011 (Stanford University Press)

Guidance and detailed descriptions / examples

- >For each of the 3 core concepts
- >For 19 selected methods (plus variations)

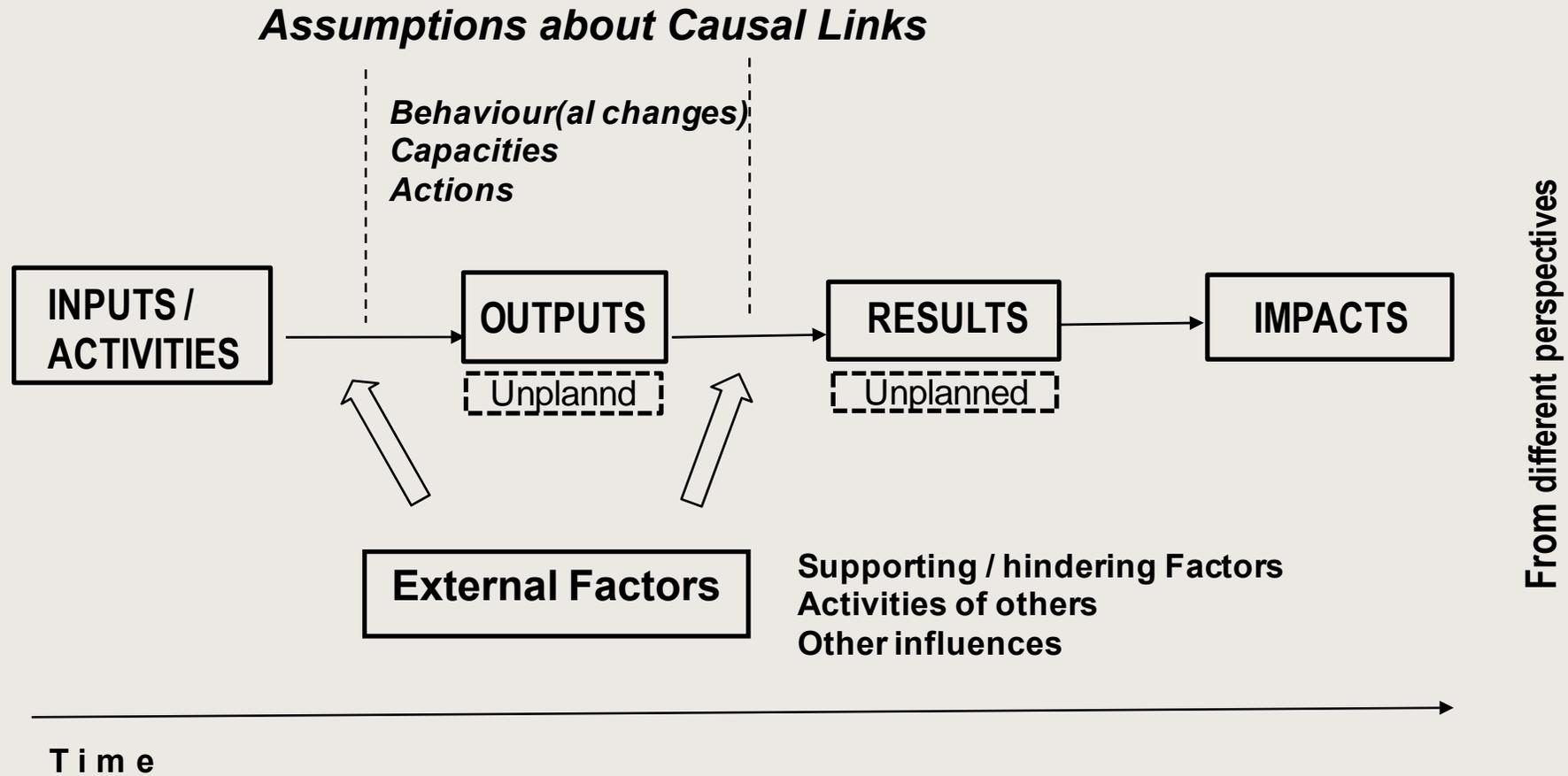
We advocate:

- >using questions for choosing methods
- >multi-methodology, creative combinations
- >use of systems methods alongside other 'traditional' methods

Complexity: Implications for Monitoring

- **Standardized and static approaches based on predefined indicators are often inappropriate or insufficient, provide information (too) late**
 - **Need for more comprehensive, flexible and dynamic approaches**
 - > focus on relations of elements (= actions, behaviour)
 - > inform on context / external factors, unintended effects
 - > capture various perspectives, show relevant differences
 - **Monitoring to inform adaptive management**
 - > serves to initiate corrective action in due time
 - > early information about likely achievement of effects ('on track')
 - > information needs of implementers (= responsible for success)
- **Periodic up-dates of intervention logic and monitoring activities**

Example: Causal Link Monitoring



Systemic Monitoring Approaches: Key Principles

- **Selection and priority setting (e.g. relevance, uncertainty, divergence)**
- **Flexibility: Areas of observation may change over time**
- **Combination of qualitative and quantitative information**
- **Conscious reflection on deviations / differences in data**
 - > do not regard differences a priori as negative!
 - > look for clues (relevant changes, new challenges and patterns)
 - > focus on exceptions, discontinuities, contradictions and puzzles
- **Monitoring as learning loop(s) during implementation**
 - > Up-dated programme theories are more realistic
- **Other monitoring approaches operate without programme theory (e.g. *Most Significant Change Monitoring*)**

Complexity: Implications for (Impact) Evaluation

- **Limited value of rigorous impact evaluations (e.g. RCTs)**
 - › clear, unambiguous causalities are rare, difficult to establish / prove
 - › risk of inappropriately / falsely attributing effects
 - **Select appropriate theory-based approaches, with respect to evaluation questions and programme attributes**
 - **Causal inference depends on how programmes work**
 - › Necessary: only way to achieve effects – or one of several options
 - › Sufficient: works alone and uniform - or only in combination with other interventions, for specific actors and under certain conditions
- **Differentiate according to degree of complexity**

Theory – based impact evaluations: Align approach with nature of situation (domain)

Domain	Characteristics	Causality
Simple 'known'	<ul style="list-style-type: none"> • high certainty and agreement • known right answer • best practice 'recipes' 	<ul style="list-style-type: none"> • clear, predictable and controllable
Complicated 'know-able'	<ul style="list-style-type: none"> • some uncertainty and some disagreement • good practices • requires analysis, coordination and expert knowledge 	<ul style="list-style-type: none"> • neither obvious nor predictable • depends on context • alternative routes
Complex 'unknow-able'	<ul style="list-style-type: none"> • high uncertainty and high disagreement • every situation is unique • requires observing relations and (behaviour) patterns 	<ul style="list-style-type: none"> • only evident in retrospect • depends on initial conditions

Complexity - aware designs for impact evaluations

- **Contribution Analysis**
- **Process Tracing**
- **Realist Impact Evaluation**
- **Qualitative Comparative Analysis**
- **Outcome Harvesting**



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