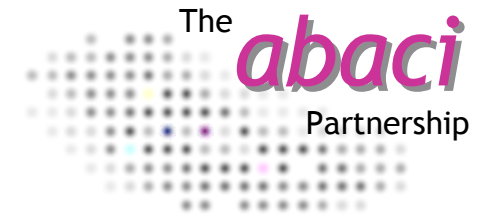


# *Exploiting Complexity*



## Insights for Oxfam from Complexity and ACCRA's Adaptation and Resilience Safari

Patrick Beautement, Christine Broenner  
A presentation to: Oxfam Complexity Group

Date: 08 Jul 2013

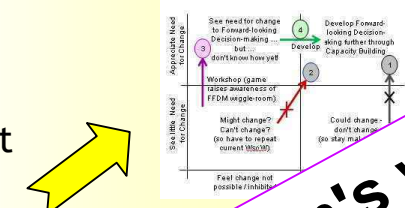
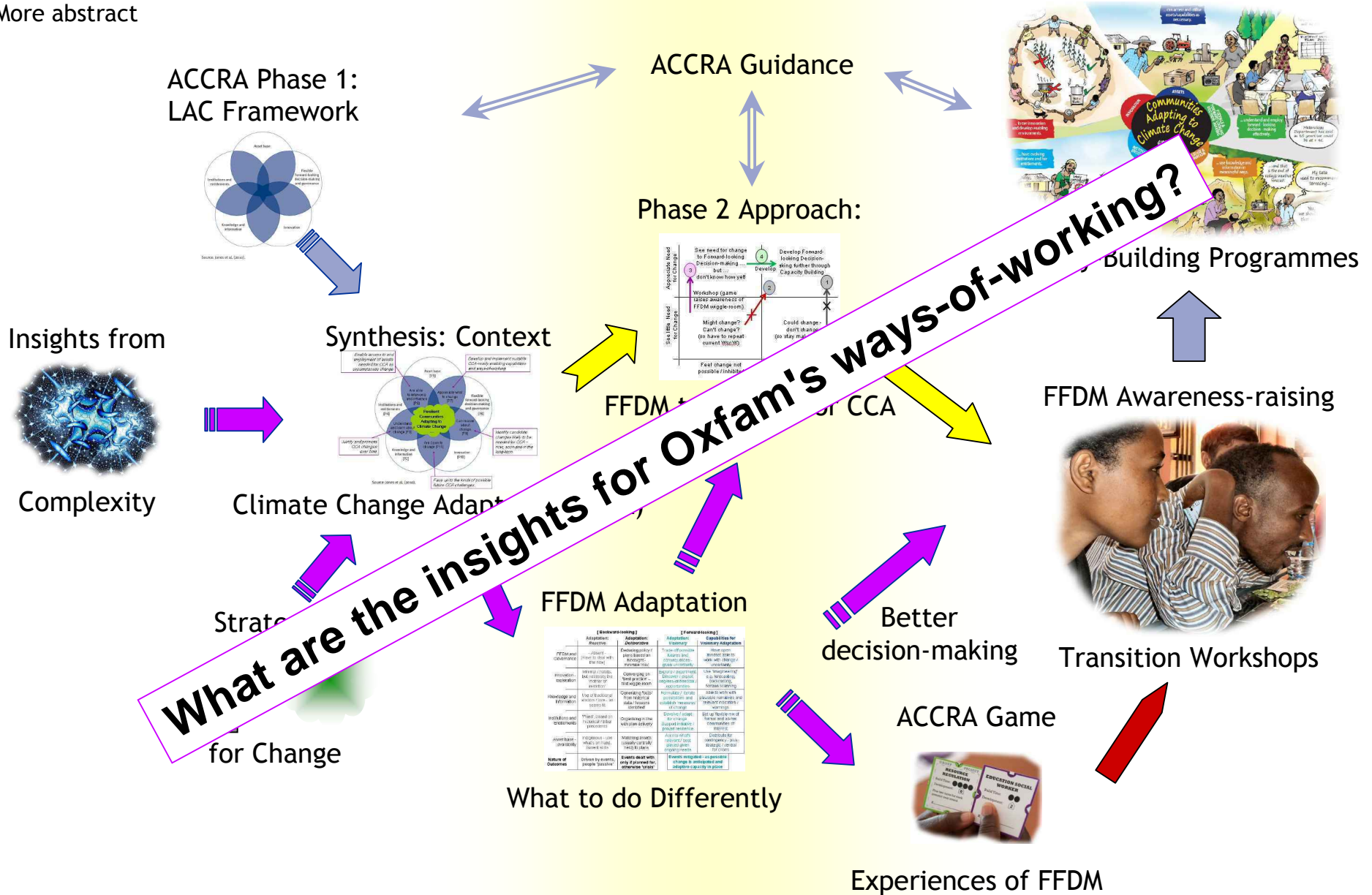
<http://complexitydemystified.wordpress.com/>

<http://www.abaci.net/library/lib-index.htm>

# ACCRA's Complexity Safari: Landmarks

More practical

More abstract



	Adaptation	Adaptation	Adaptation	Adaptation
FFDM and Governance	Adaptation: Focus on... (text partially obscured)	Adaptation: Focus on... (text partially obscured)	Adaptation: Focus on... (text partially obscured)	Adaptation: Focus on... (text partially obscured)
Institutional and Governance	Adaptation: Focus on... (text partially obscured)	Adaptation: Focus on... (text partially obscured)	Adaptation: Focus on... (text partially obscured)	Adaptation: Focus on... (text partially obscured)
Knowledge and Information	Adaptation: Focus on... (text partially obscured)	Adaptation: Focus on... (text partially obscured)	Adaptation: Focus on... (text partially obscured)	Adaptation: Focus on... (text partially obscured)
Innovation and Entrepreneurship	Adaptation: Focus on... (text partially obscured)	Adaptation: Focus on... (text partially obscured)	Adaptation: Focus on... (text partially obscured)	Adaptation: Focus on... (text partially obscured)
Accountability	Adaptation: Focus on... (text partially obscured)	Adaptation: Focus on... (text partially obscured)	Adaptation: Focus on... (text partially obscured)	Adaptation: Focus on... (text partially obscured)
Nature of Outcomes	Adaptation: Focus on... (text partially obscured)	Adaptation: Focus on... (text partially obscured)	Adaptation: Focus on... (text partially obscured)	Adaptation: Focus on... (text partially obscured)

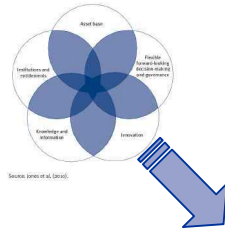
ACCRA = Africa Climate Change Resilience Alliance. FFDM = Flexible and Forward-looking Decision-Making. LAC = Local Adaptive Capacity.

# ACCRA's Complexity Safari: Landmarks

More practical

More abstract

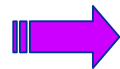
## ACCRA Phase 1: LAC Framework



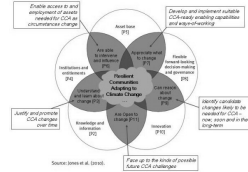
### 1. Insights from



Complexity



### Synthesis: Context



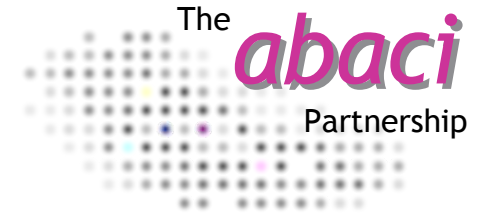
Climate Change Adaptation (CCA)

### 2. Strategies



for Change

# 01 Insights: Ten principles of Complexity



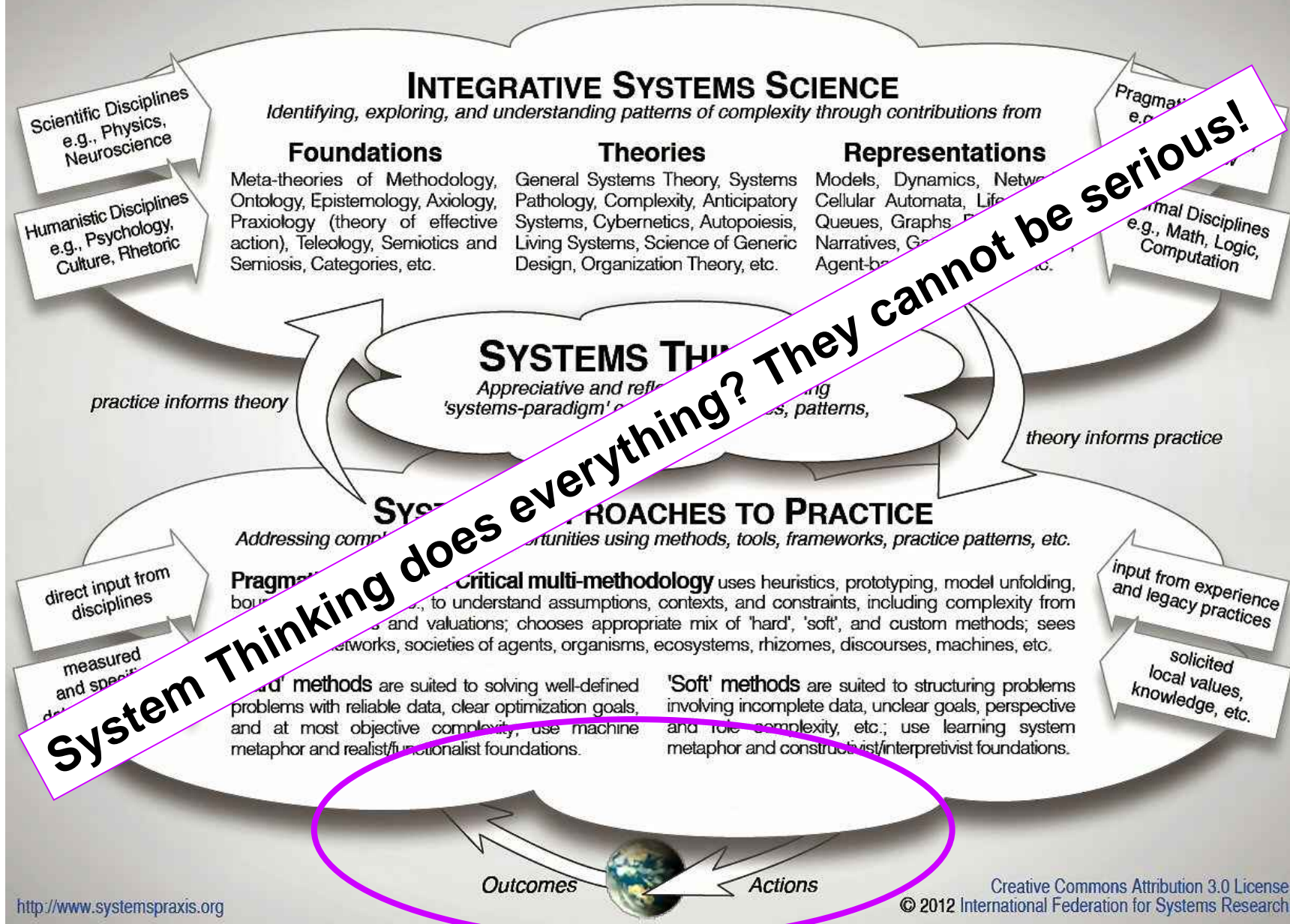
- self-organisation
- emergence
- connectivity
- interdependence
- feedback
- far from equilibrium
- space of possibilities
- co-evolution
- historicity & path dependence
- path dependence

**Is this language and are these abstractions 'real-world-ready'?**

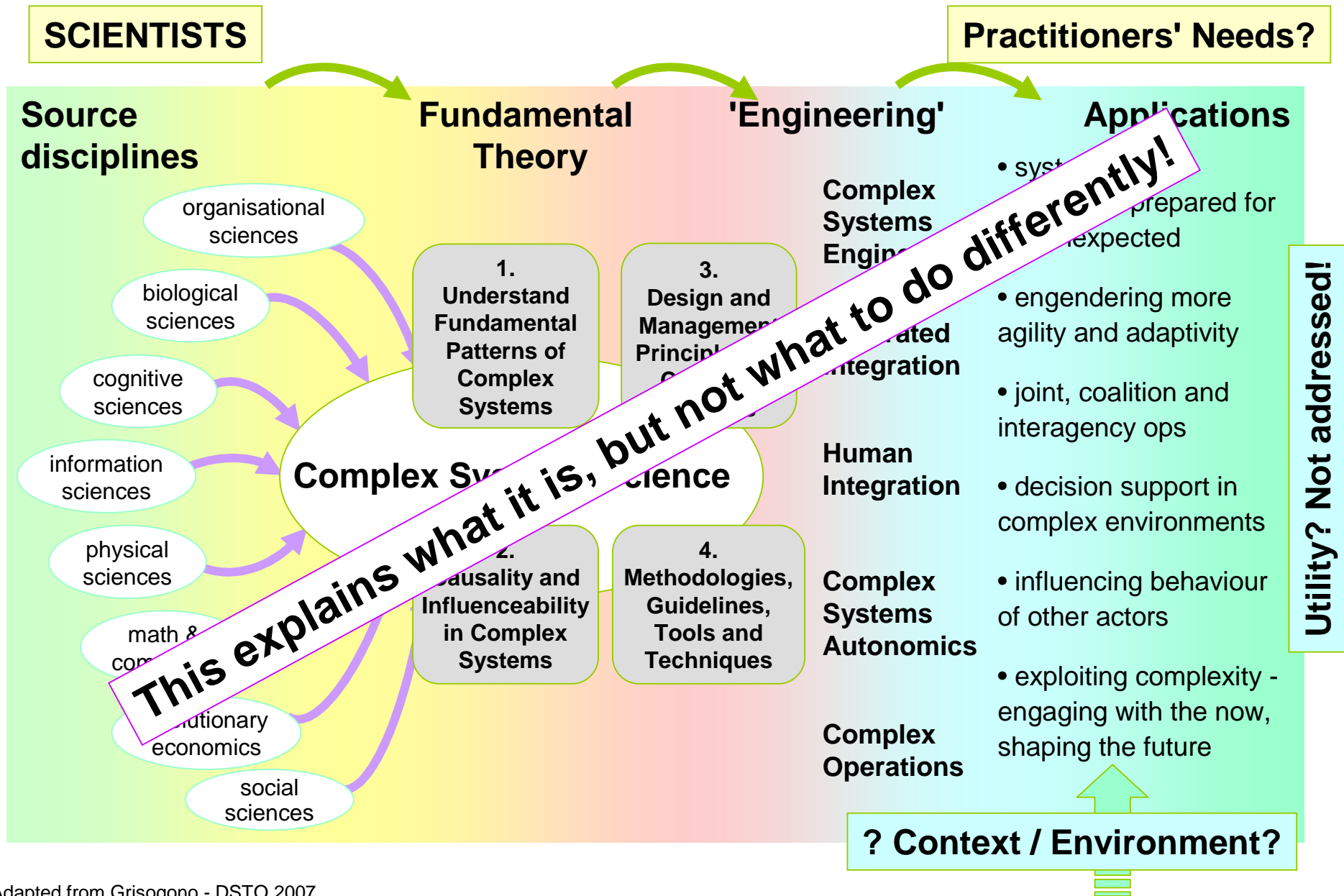
Mittleton-Kelly (2004).

# 01 Insights: From Complexity to ???

The Systems Praxis Framework, a joint project of the International Council on Systems Engineering and the International Society for the Systems Sciences



# 01 Insights: From Complexity to Practice?

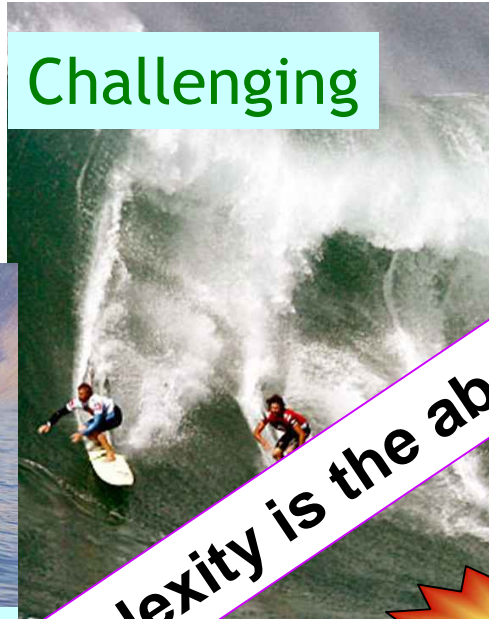


# 01 Insights: Importance of 'Contextual Complexity'

Practitioners' types of 'Experienced Complexity'



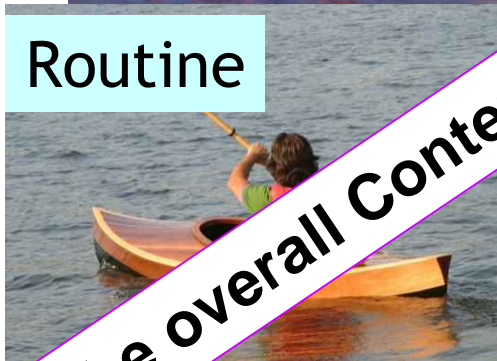
Predictable



Challenging

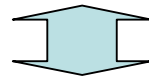


Analysis

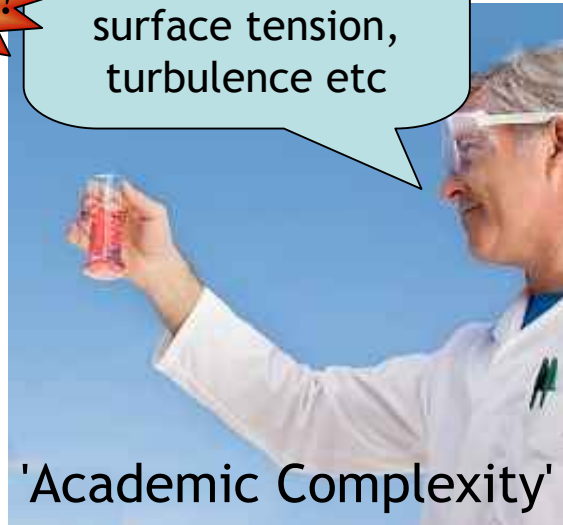


Routine

Phenomena  
Dynamic interactions in underlying 'Natural Complexity' (eg: sea-bed shape, solar radiation, water density, salinity, temperature, organic chemicals, wing-form-profiles, human physique, thrill-seeking drives, sex-appeal)



Wave propagation, hydrology, dipoles, surface tension, turbulence etc



'Academic Complexity'

The overall Contextual Complexity is the abstraction we struggle with

# 01 Insights: Complexity to Simplicity = Context is Everything

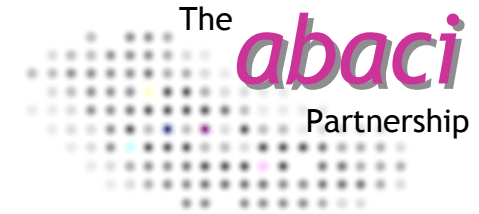
- The *features* that the child and the cat experience *in the context* are '*simplicity* itself' - underlying 'complexity' is 'hidden'.



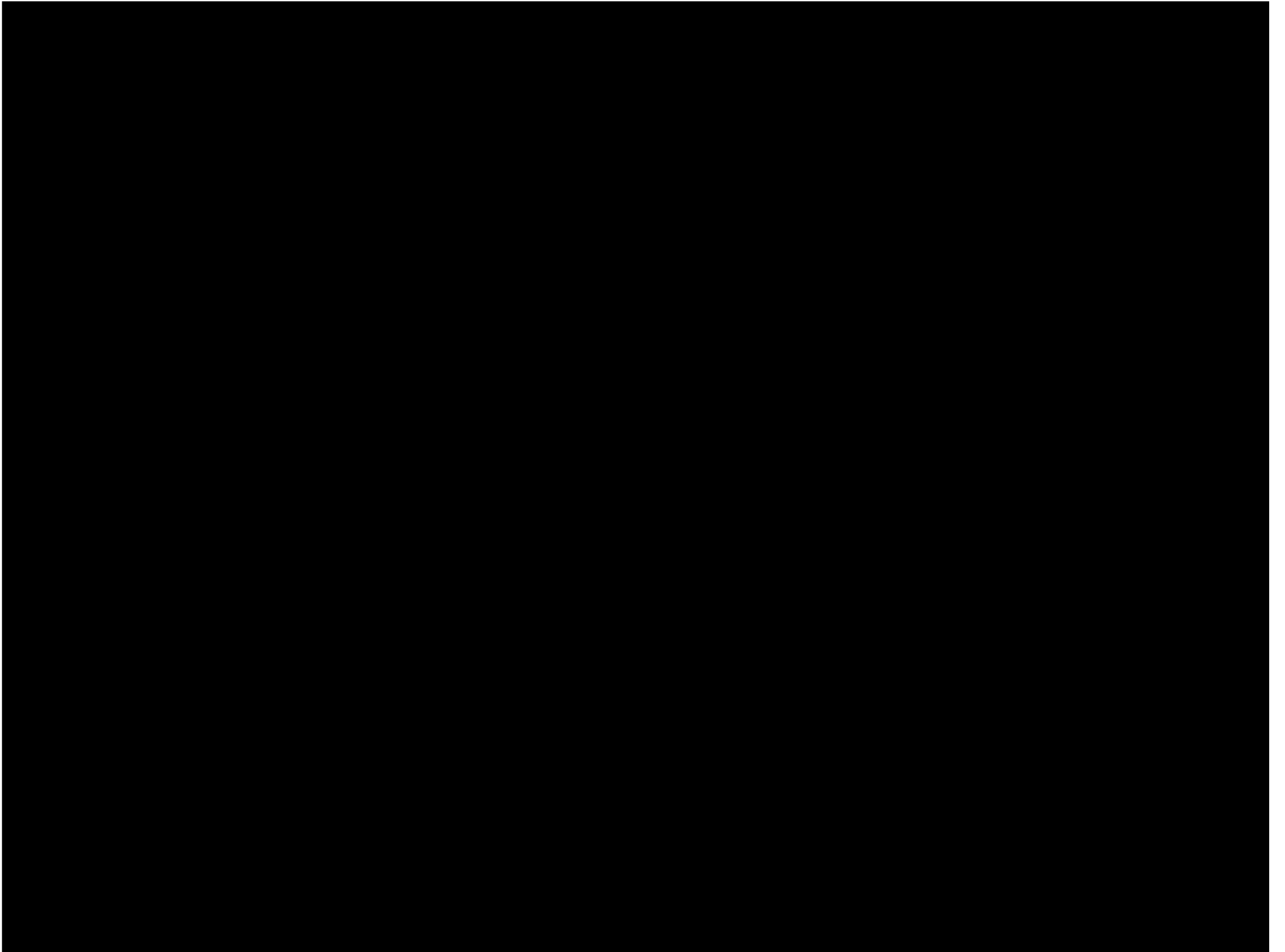
- For practice, changes in Contextual Complexity are the drivers ...



# 01 Insights: Summary



- So, insights for practitioners:
  - academic ***complexity terms can be wrongly used*** in a reductionist manner in practitioners papers
  - ***insights from complexity need to be 'translated'*** - both into language and into forms that are relevant to contexts
  - context understanding is diverse - ***there is no 'single view of the truth'*** nor single perspective that is 'right'
  - people in the context already have many pragmatic ways of working with the 'features' of interest - ***augment them*** as they are more likely to have the 'requisite variety'
- ***At the end of the day, practice has to be focussed on bringing about the desired / expected change ...***



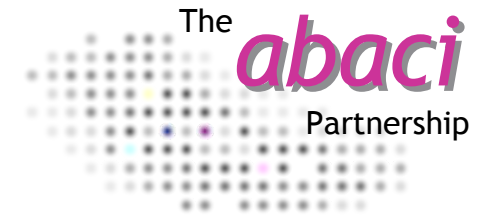
## 02 Strategies for Change

### Aspects of 'Change-worthiness'

		Open to change - appreciates what to sense	Can reason about change - has will to intervene	Can engage, influence - and learn by doing	Ability to Change
Example Caricatures	Effective practice	Yes	Yes	Yes	Well-placed
	Inhibited practice	Yes	Yes, but not how	No, so powerless	Aware, well meaning, but inhibited
	'Elephant in a porcelain shop'	Yes, but misinterprets	No, 'empty-headed'	Yes, but inappropriate	Aware, intent missing, 'dysfunctional'
	Watcher / 'lurker'	Yes, 'voyeur'	No	No	Aware, not interested in opportunity
	Ill-informed intervention	No, so 'blind'	Yes, based on own doing	Yes, but ill-informed	Could do it, can't detect what or when
	'Arm-chair' intervention	No	Yes, hypothetically	No	Has visions, dreams about change
	Interfering intervention	No	No	Yes, impulsively	'Loose-cannon' capability - miss-aligned
	Entrenched institution	No	No, in 'world of their own'	No	Detached, indifferent

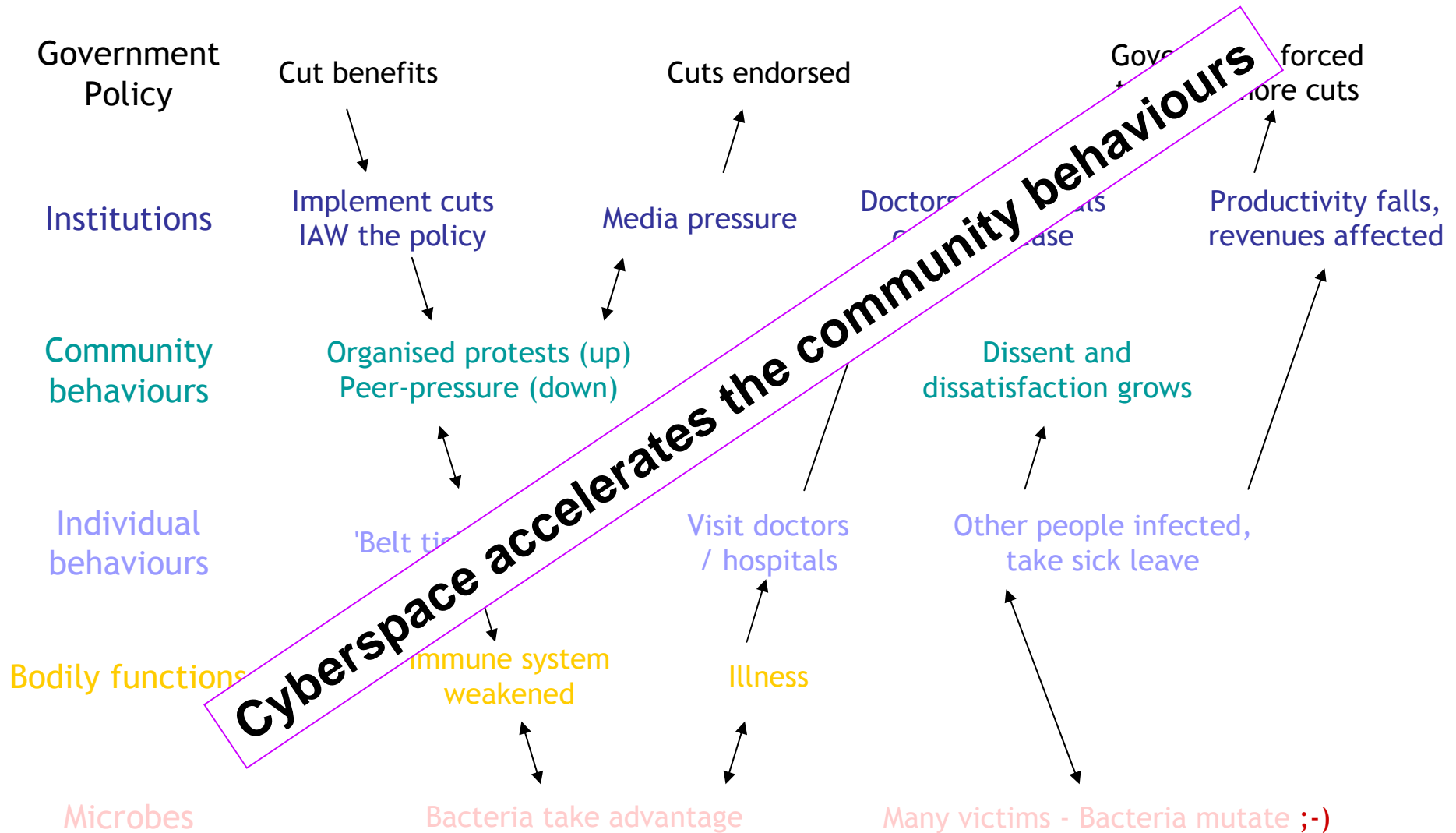
Consequences in Real-World Terms

## 02 Strategies for Change: Transition and Transformation

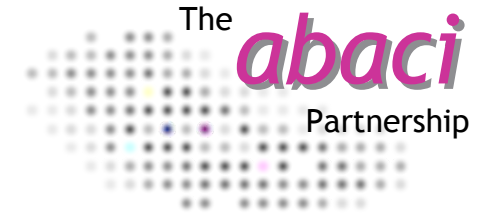


- Transition:
  - evolutionary: going from here to there 'rationally' whilst essentially retaining the previous behaviours
    - *largely backward-looking*, then extrapolating forward
- Transformation:
  - metamorphosis / disruptive: the post change form and function may be entirely novel
    - no 'rational' route between here and there, *no certainty*
    - uses 'imagineering' to *conceive of possible futures and then, for example, backcast* to see what to change
  - For a steam engineer, you can't get to iPod devices and Facebook software using the techniques you used before ...
    - indeed you *wouldn't even be able to comprehend* them using steam-engine thinking

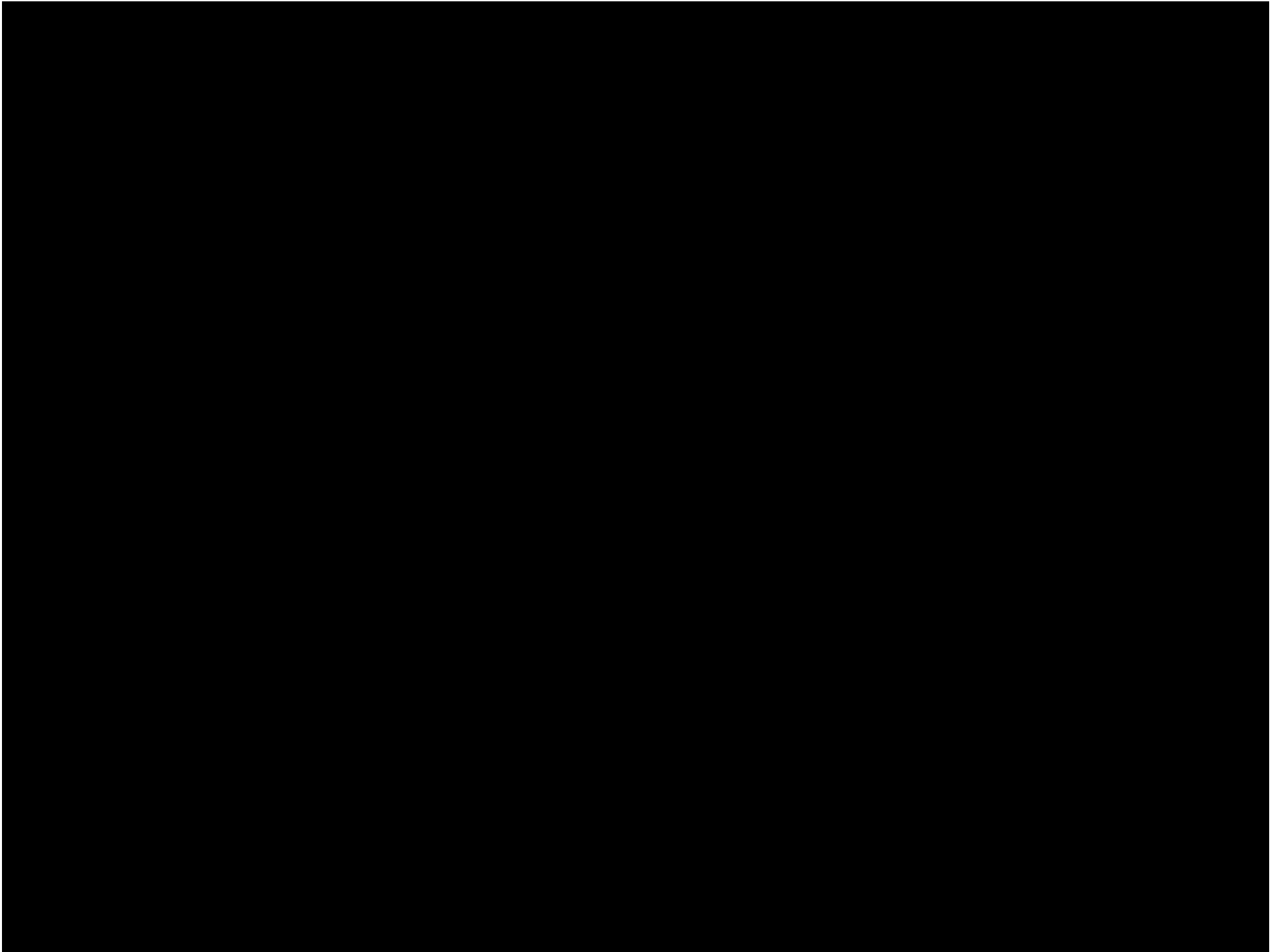
# 02 Strategies for Change: Appreciate the Levels, Scales and Domains - example



## 02 Strategies for Change: Summary



- So, for effective change:
  - there must be the mindsets, abilities, capabilities and relationships ***appropriate to the context***
  - the ***different natures*** of the transition / transformations to be made ***need to be appreciated***
  - ***lack of certainty and predictability*** has to be embraced
  - the engagement, shaping and influences will need to ***work across many levels and scales***

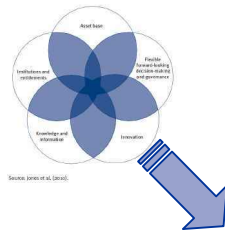


# ACCRA's Complexity Safari: Landmarks

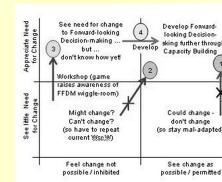
More practical

More abstract

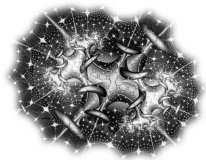
## ACCRA Phase 1: LAC Framework



## Phase 2 Approach:

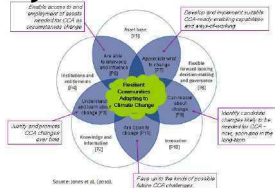


### 1. Insights from



Complexity

### 3. Synthesis: Context



Climate Change Adaptation (CCA)

FFDM transition for CCA

### 2. Strategies



for Change

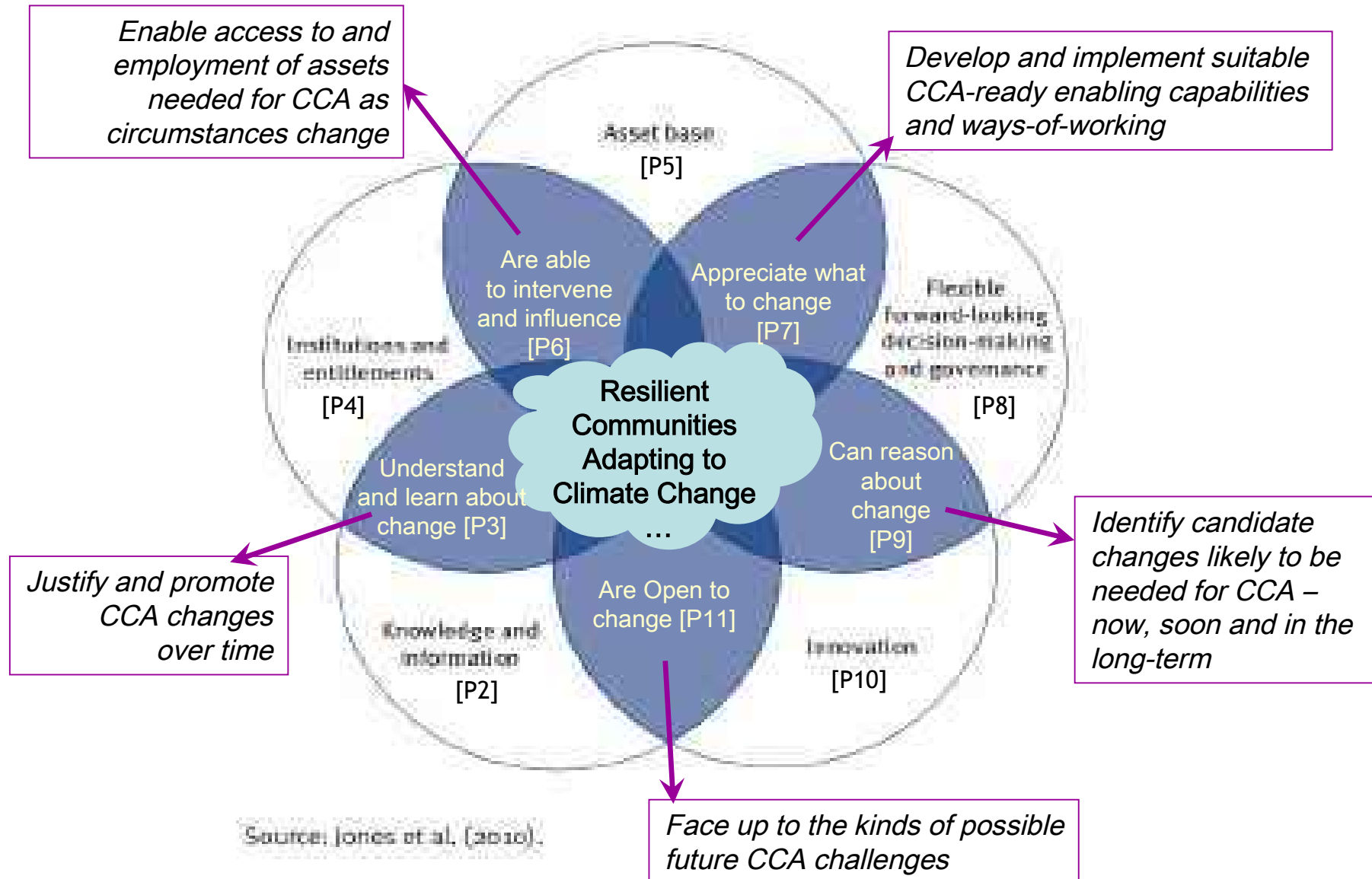
### FFDM Adaptation

	[Backlooking]	[Forwardlooking]
	Adaptation: Reactive	Adaptation: Deliberative
FFDM and Governance	Account: Focus on what we have done	Deliberating policy: Focus on what we need to do
Inclusion and representation	Minimal: Inclusion, but not necessarily of all stakeholders	Coveraging on: Inclusion of all stakeholders
Knowledge and information	Use of historical data: What has worked in the past	Coveraging: Focus on what is needed to respond to change
Institutions and Enablers	Formal: Focus on formal structures and processes	Organizing in the future: Focus on what is needed to respond to change
Asset base-availability	Individual: Use what is available	Mixing assets: Focus on what is needed to respond to change
Nature of Outcomes	Driven by events: People react	Events that with people plan: People plan

What to do Differently

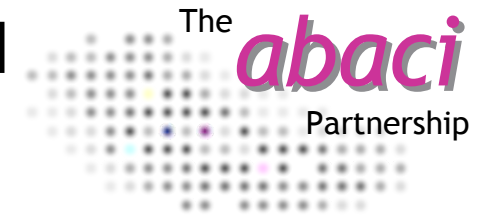


# 03 Synthesis: Complexity Insights, Change Strategies and the LAC



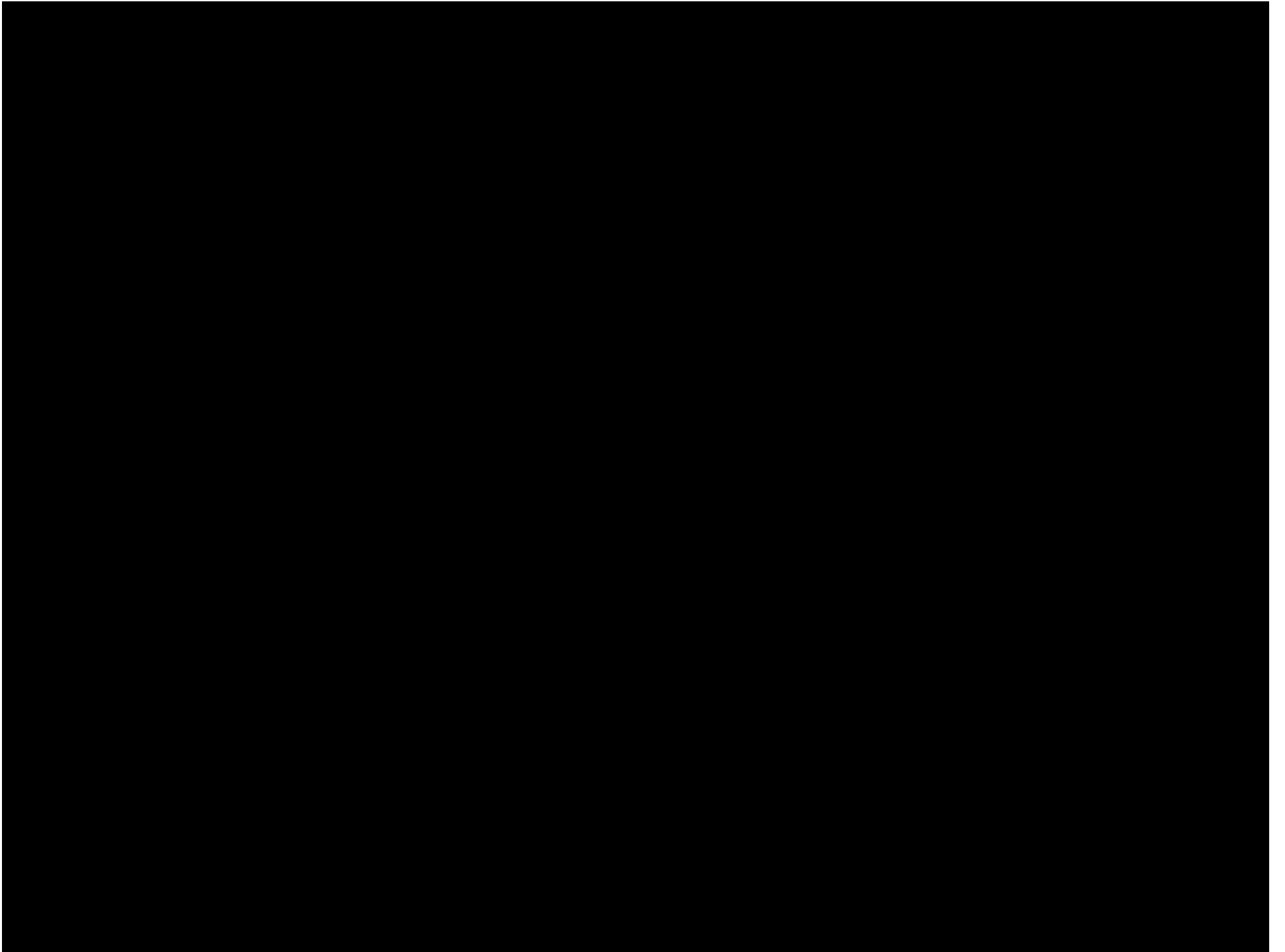
[P-numbers correspond to the Principles in the ODI 2013 paper - see notes pages below]

## 03 Synthesis Summary: What would Good CCA Decision-making look like?



The ACCRA Phase 2 team took the CCA principles from their 2013 paper, plotted them onto the LAC and then developed the following 'Good Decision-Making' criteria ...

- So, Resilient communities adapting to climate change will have good decision-making when they:
  - accept that they *need to be ready for future events* brought about by climate change;
  - *can think about the consequences of possible change* in a determined way;
  - *can appreciate what they need to change practically* to be resilient and adaptive;
  - *can intervene and influence* to implement the decisions in collaboration with the appropriate people;
  - can understand the nature of CCA and *learn from 'doing things differently' over time ...*

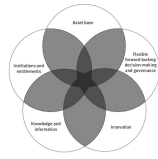


# ACCRA's Complexity Safari: Landmarks

More practical

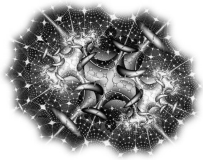
More abstract

## ACCRA Phase 1: LAC Framework



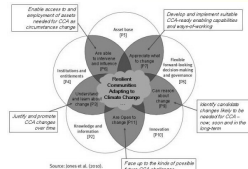
Source: Jones et al. (2016)

### 1. Insights from



Complexity

### 3. Synthesis: Context



Source: Jones et al. (2016)

Climate Change Adaptation (CCA)

### 2. Strategies



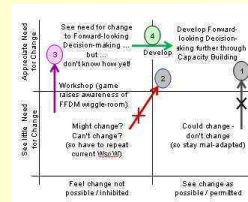
for Change

### 4. FFDM Adaptation

	[Business-as-usual]	[Adaptation]	[Transformation]	[Capabilities for Transformation]
FFDM and Governance	Adaptation: Focus on short-term, incremental changes.	Adaptation: Focus on short-term, incremental changes.	Transformation: Focus on long-term, systemic changes.	Capabilities for Transformation: Focus on long-term, systemic changes.
Institution	Adaptation: Focus on short-term, incremental changes.	Adaptation: Focus on short-term, incremental changes.	Transformation: Focus on long-term, systemic changes.	Capabilities for Transformation: Focus on long-term, systemic changes.
Knowledge and Information	Adaptation: Focus on short-term, incremental changes.	Adaptation: Focus on short-term, incremental changes.	Transformation: Focus on long-term, systemic changes.	Capabilities for Transformation: Focus on long-term, systemic changes.
Resilience and Adaptability	Adaptation: Focus on short-term, incremental changes.	Adaptation: Focus on short-term, incremental changes.	Transformation: Focus on long-term, systemic changes.	Capabilities for Transformation: Focus on long-term, systemic changes.
Accountability	Adaptation: Focus on short-term, incremental changes.	Adaptation: Focus on short-term, incremental changes.	Transformation: Focus on long-term, systemic changes.	Capabilities for Transformation: Focus on long-term, systemic changes.
Nature of Outcomes	Adaptation: Focus on short-term, incremental changes.	Adaptation: Focus on short-term, incremental changes.	Transformation: Focus on long-term, systemic changes.	Capabilities for Transformation: Focus on long-term, systemic changes.

What to do Differently

### 5. Phase 2 Approach:



FFDM transition for CCA

FFDM Awareness-raising



Transition Workshops

Better decision-making

ACCRA Game



Experiences of FFDM

# 04 FFDM Adaptation: Some narratives

*"I'm Mr Reactive, I just sit under the tree - bad things always just happen to me!"*



*"I'm Mrs Visionary, I know that we must anticipate change!"*



*"I'm Mr Deliberative, I say we should study the past to learn what to do!"*



*Eh... These rains! They are lost!*



Narratives on the Notes Page below

# 04 FFDM Adaptation: What to do differently

		[ Backward-looking ]		[ Forward-looking ]	
		Adaptation: <i>Reactive</i>	Adaptation: <i>Deliberative</i>	Adaptation: <i>Visionary</i>	Capabilities for <i>Visionary Adaptation</i>
<b>ACCRA LAC Characteristics</b>	FFDM and Governance	<b>- Absent - [Have to deal with the now]</b>	Deducing policy / plans based on hindsight - minimise 'risk'	Trade-off possible futures and consequences - given uncertainty	Have open mindset able to work with change / uncertainty
	Innovation - exploration	<b>Minimal / habits, but necessity the 'mother of invention'</b>	Converging on 'best practice' – test wiggle-room	Explore / experiment. Discover / exploit degrees-of-freedom / opportunities	Use 'Imagineering' e.g. forecasting, backcasting, horizon scanning
	Knowledge / Information	<b>Use of traditional wisdom / lore - as seems fit</b>	Generating 'facts' from historical data / 'lessons identified'	Formulate / iterate possibilities and establish 'measures' of change	Able to work with plausible narratives and relevant indicators / warnings
	Institutions / Entitlements	<b>'Fixed', based on historical / tribal precedents</b>	Organising in line with plan delivery	Devolve / adapt for change. Support initiative / proven resilience	Set up flexible mix of formal and ad-hoc communities of interest
	Asset base / Availability	<b>Indigenous - use what's on hand, current skills</b>	Matching assets (usually centrally held) to plans	Access what's relevant / best placed given ongoing needs	Distribute for contingency - plus strategic / central for crises
	Nature of Outcomes	<b>Driven by events, people 'passive'</b>	Events dealt with only if planned for, otherwise 'crisis'	Events mitigated - as possible change is anticipated and adaptive capacity in place	

## 04 FFDM Adaptation: What to do differently in practice means, for example ...

### *[1.1] - Recognising and prioritising short- and long-term benefits, by ...*

- planning beyond 5 years, considering possible futures as well as projections of current situations
- having and using flexible national priorities and resource allocation

### *[1.2] - Looking for possibilities and opportunities (finding space to act), by ...*

- being guided by risk, capacity and vulnerability analysis
- accepting future uncertainties at local level
- looking for opportunities in national priorities
- being skilled at judging what is now appropriate
- requiring appropriate changes in the donor policies

### *[1.5] - Working in collaborative ways, and integrating cross-sector by ...*

- sharing risk and vulnerability analyses from national to local levels as needed
- using integrated analysis, planning and implementation beyond single sectors
- promoting holistic approaches to activities, interactions and relationships
- integrating flexible local, regional and district planning

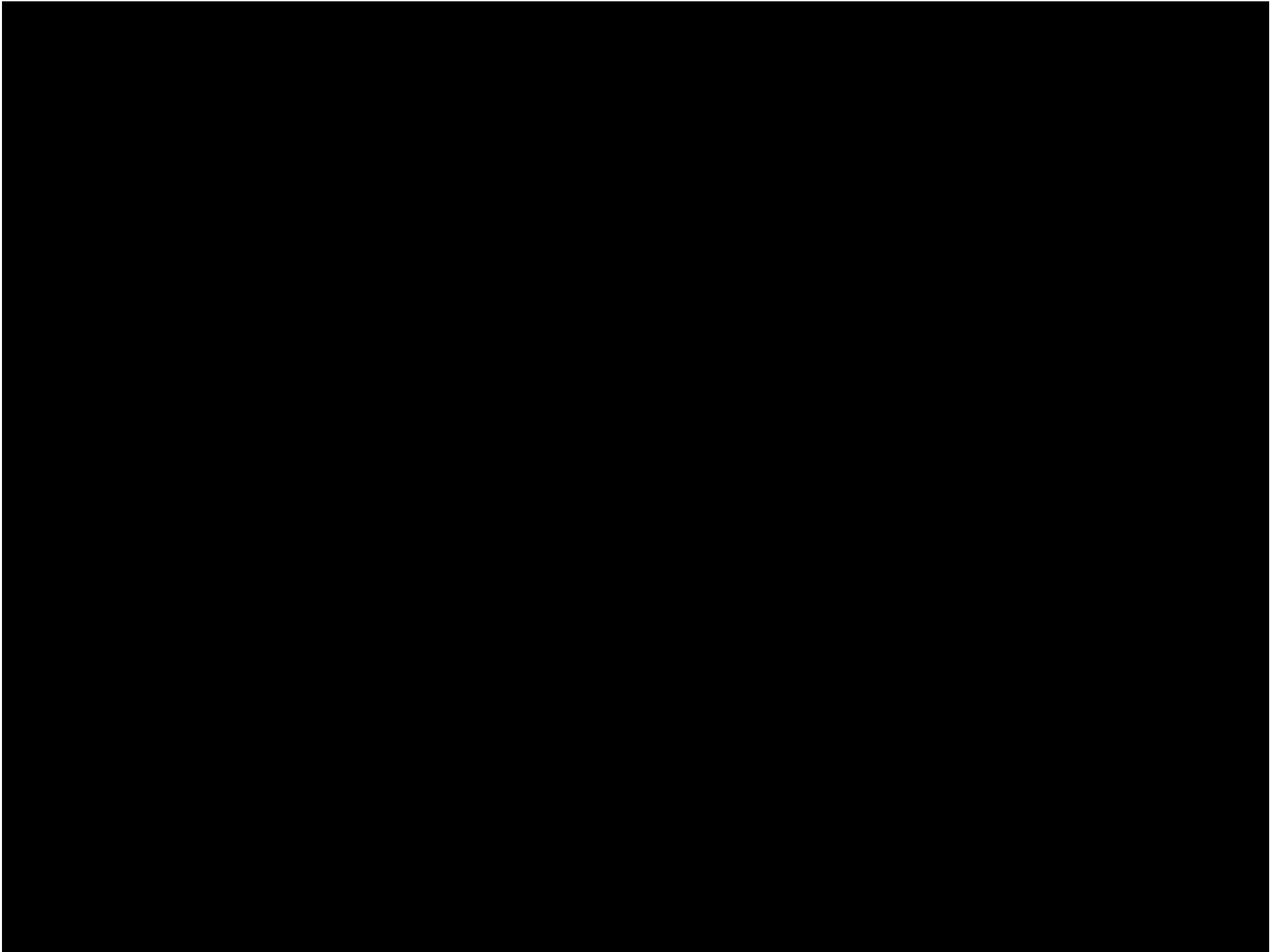
**Planning is flexible and incorporates adaptive long-term climate, social and economic issues across sectors and levels including stakeholders**

### *[1.4] - Planning by reflecting and adapting continuously over time, by*

- incorporating broader factors than at present which challenge assumptions and 'received wisdom'
- being prepared to / actually adapting plans as circumstances change

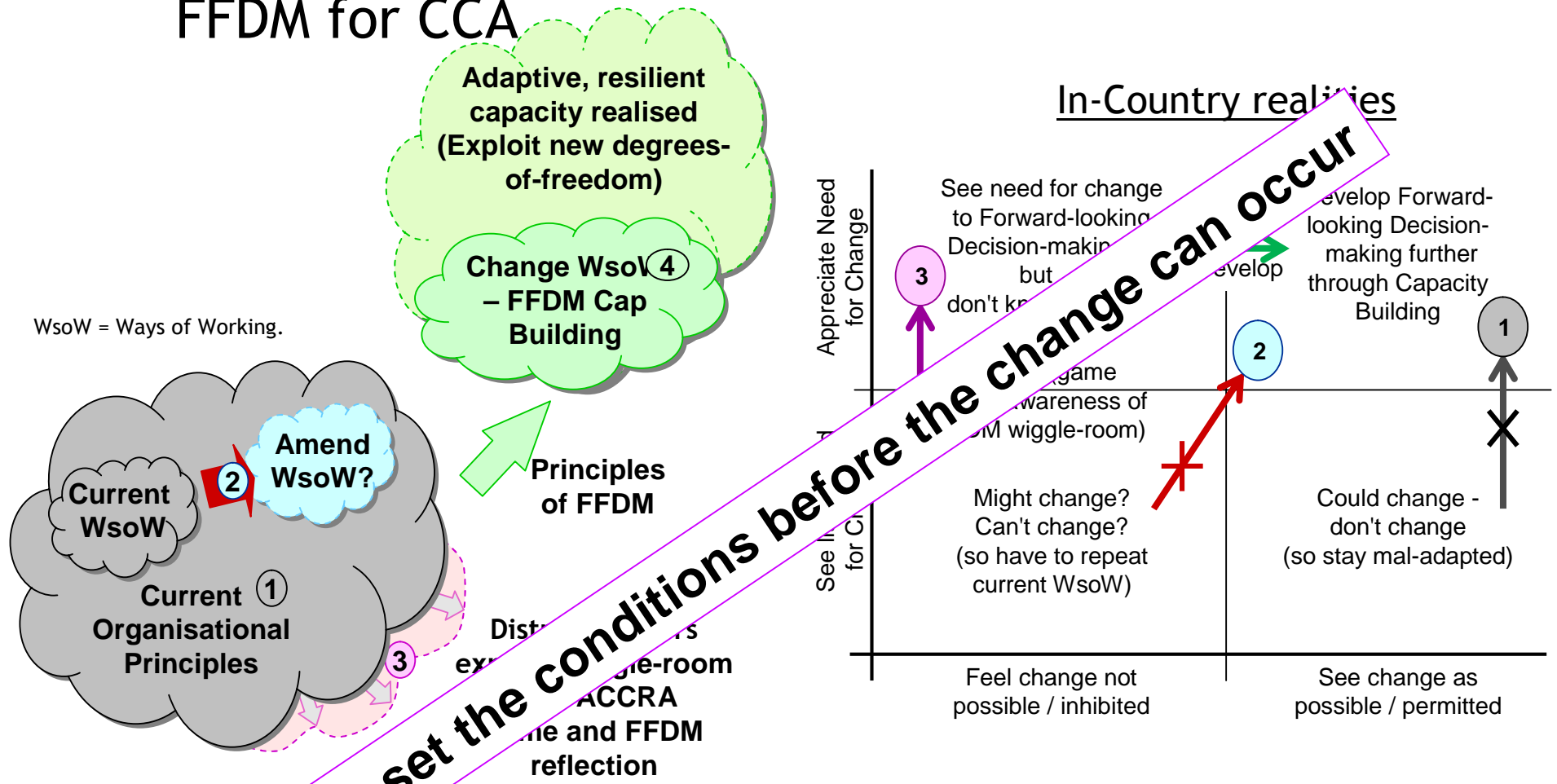
### *[1.3] - Appreciating informal interactions (social), maximising intangible (community) benefits, such as ...*

- identifying those which should be included in national development plan priorities
- ensuring participation of women and other special groups



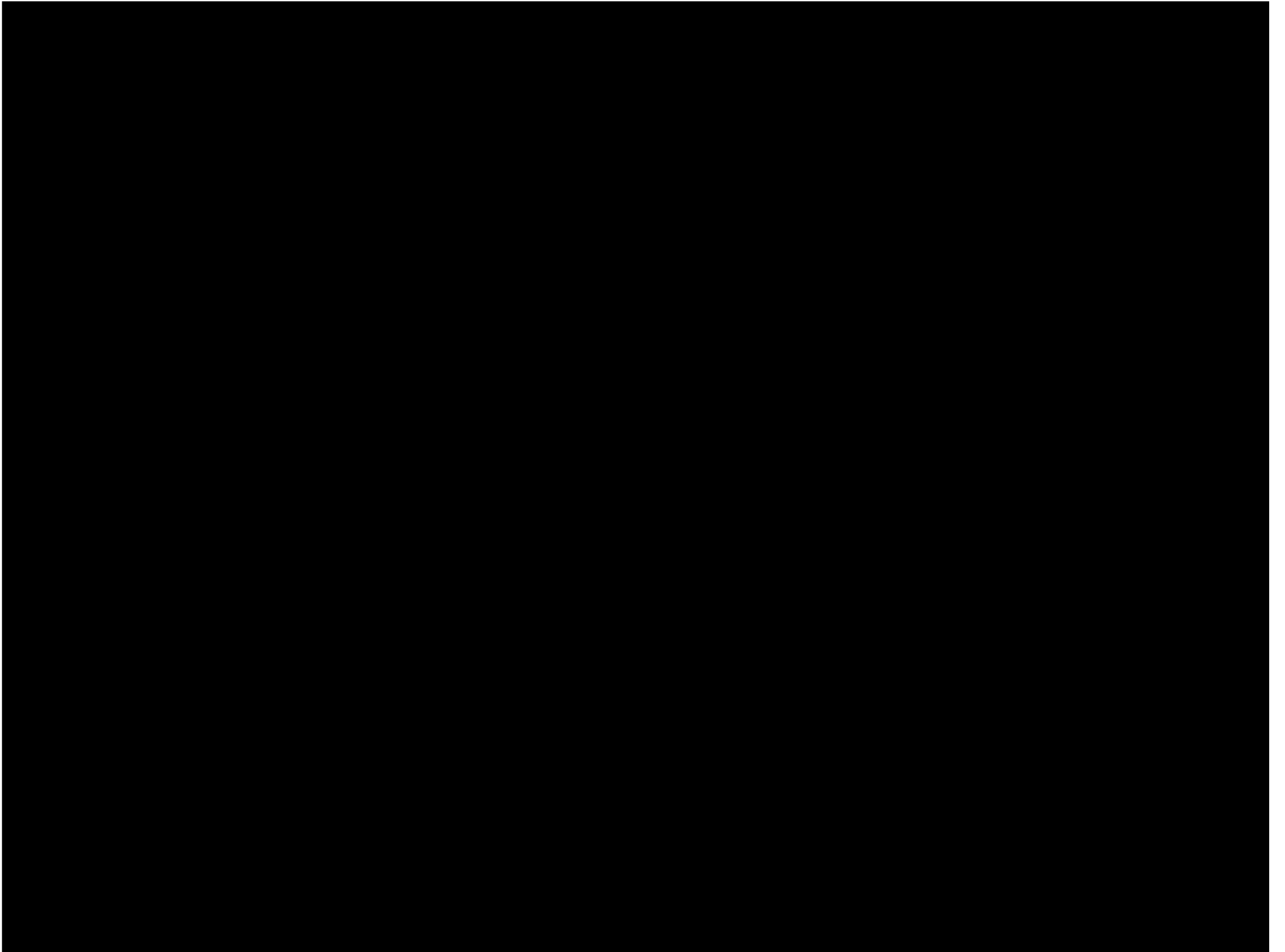


# 05 ACCRA Phase 2 Approach: Transitioning to FFDM for CCA



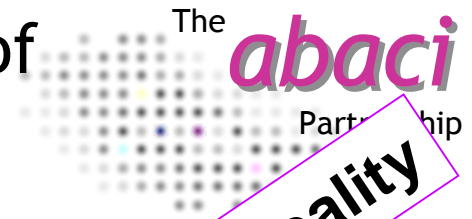
Have to set the conditions before the change can occur

- 1 **No action:** Do not attempt to change current capacity and organisational principles (stick to linear planning).
- 2 **CCA blocked:** Changes **not** made to WsoW within the current organisational principles (thought too difficult).
- 3 **FFDM awareness-raising:** Game explores wiggle room - see benefits of making changes towards FFDM WsoW.
- 4 **Transition to FFDM WsoW:** Adopt and employ set of FFDM organisational principles through Capacity Building.





# 06 ACCRA Game: Experiences of FFDM - of the Need to Work Differently for CCA



## How to Win the Game in an FFDM Way

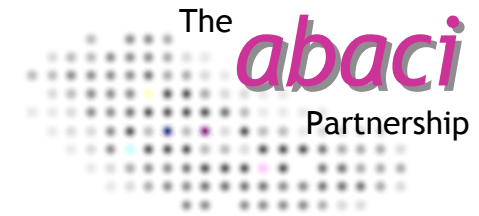
- Win the *SECTOR DEVELOPER* prize: invest over time in the sector where your district needs development.
- Win the *REGIONAL DEVELOPER* prize: plan and complete Group Projects - collaborate with other districts.
- Win the *DIVERSITY DEVELOPER* prize: diversify your developments across a range of sectors over time.
- Win the *FLEXIBLE DEVELOPER* prize: maximise open connection points and be ready for opportunities to change.

**Basic scenario - within the wider context of FFDM for CCA in reality**

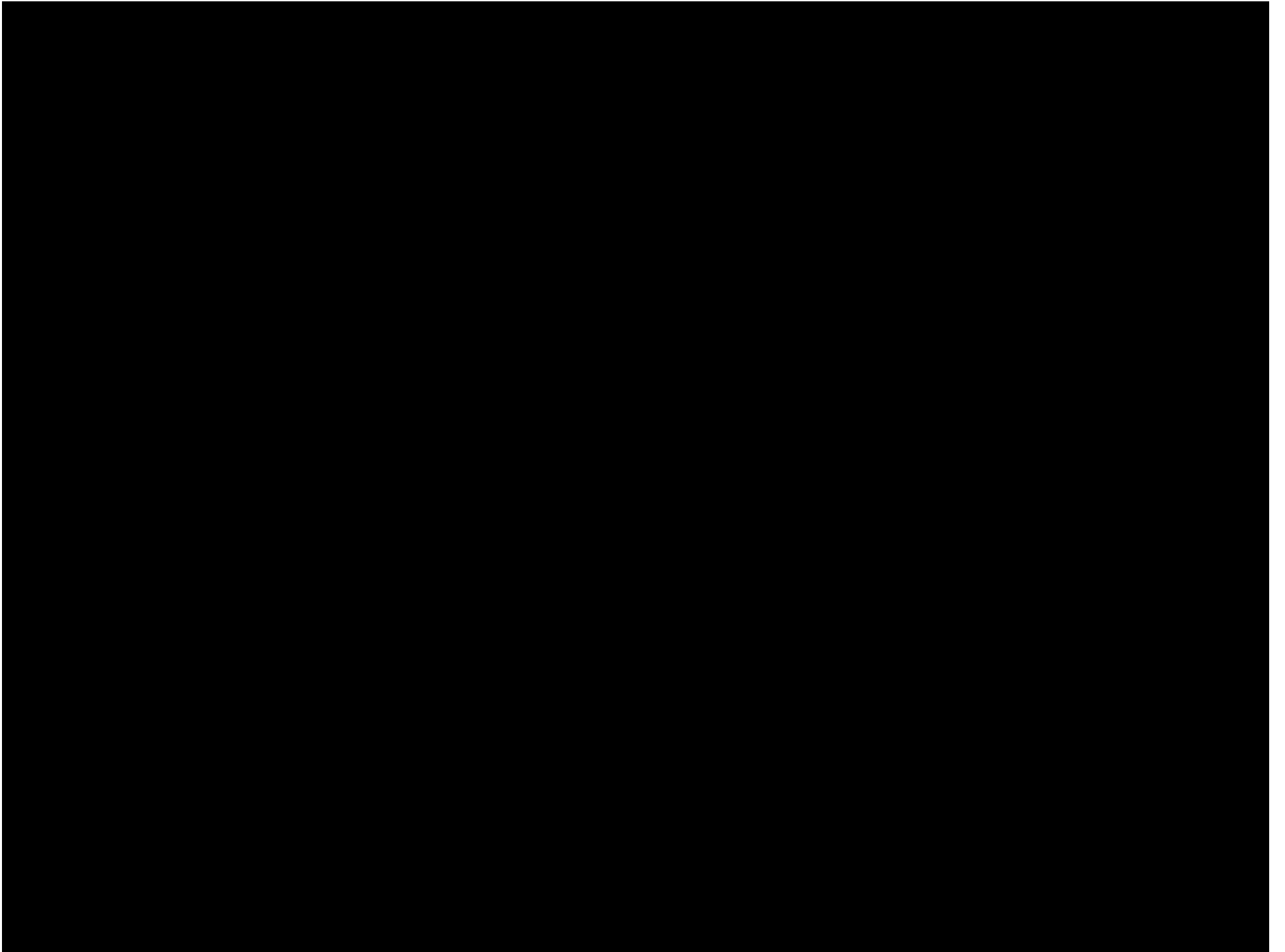


... of these things and maybe win the top prize: **BEST CLIMATE CHANGE ADAPTATION DEVELOPER**

## 07 FFDM Awareness Raising: ACCRA In-country Workshops



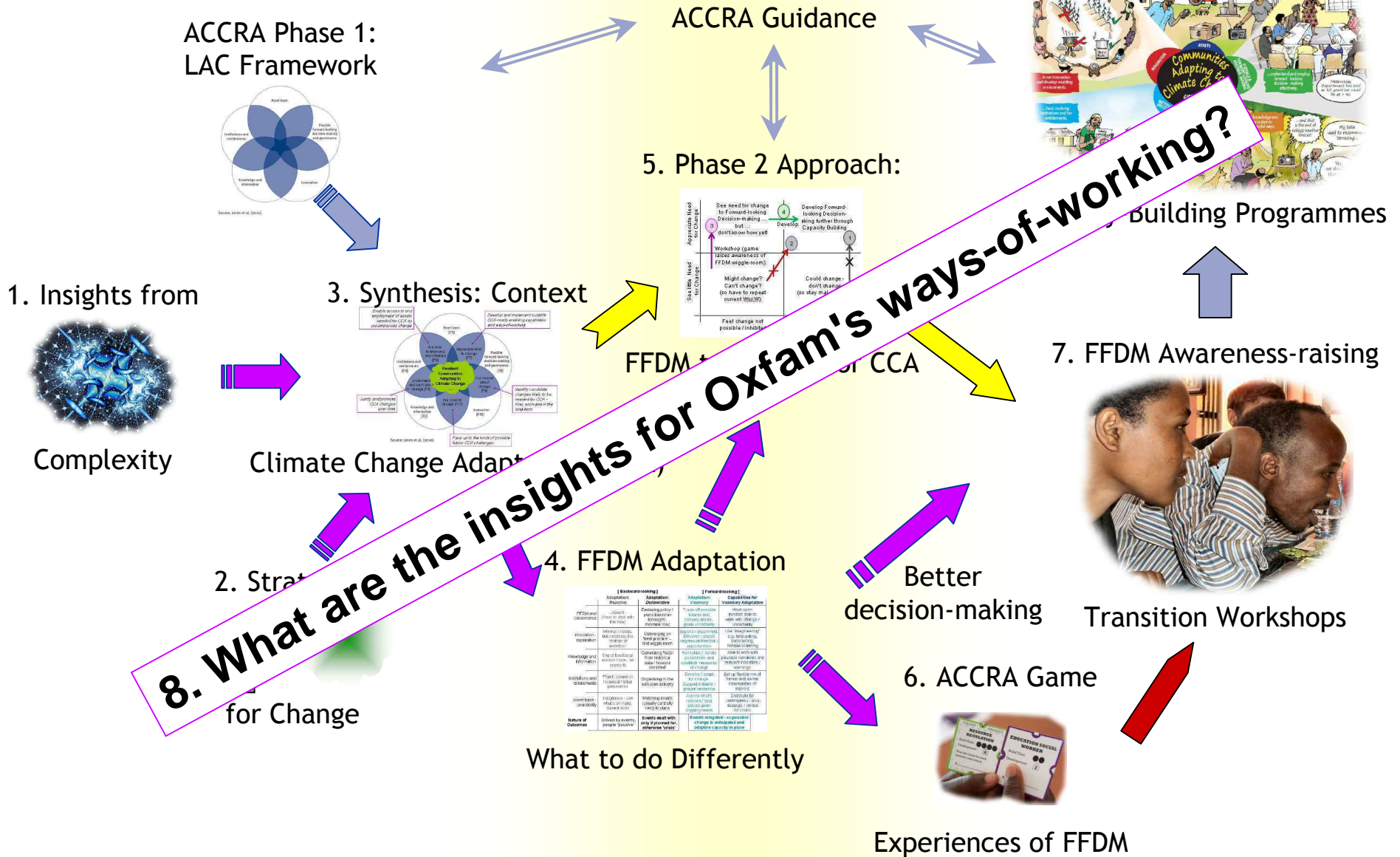
- Held in Uganda (2012), and Ethiopia and Mozambique.
- Programme:
  - Pre-survey about CCA and FFDM
  - Background to CCA and the need for FFDM
  - Introduction to the ACCRA Game - play two rounds
  - Reflect on FFDM and different ways-of working
  - ACCRA Game - play two rounds and identify 'winners'
  - Reflect on what to do differently in practice - planning exercise using FFDM techniques
  - Capacity-building questionnaire - intentions for the future
  - Post survey about CCA and FFDM ways-of-working
- Follow-on capacity-building activity will be followed by impact assessments - report to be published 2014.



# ACCRA's Complexity Safari: Landmarks

More practical

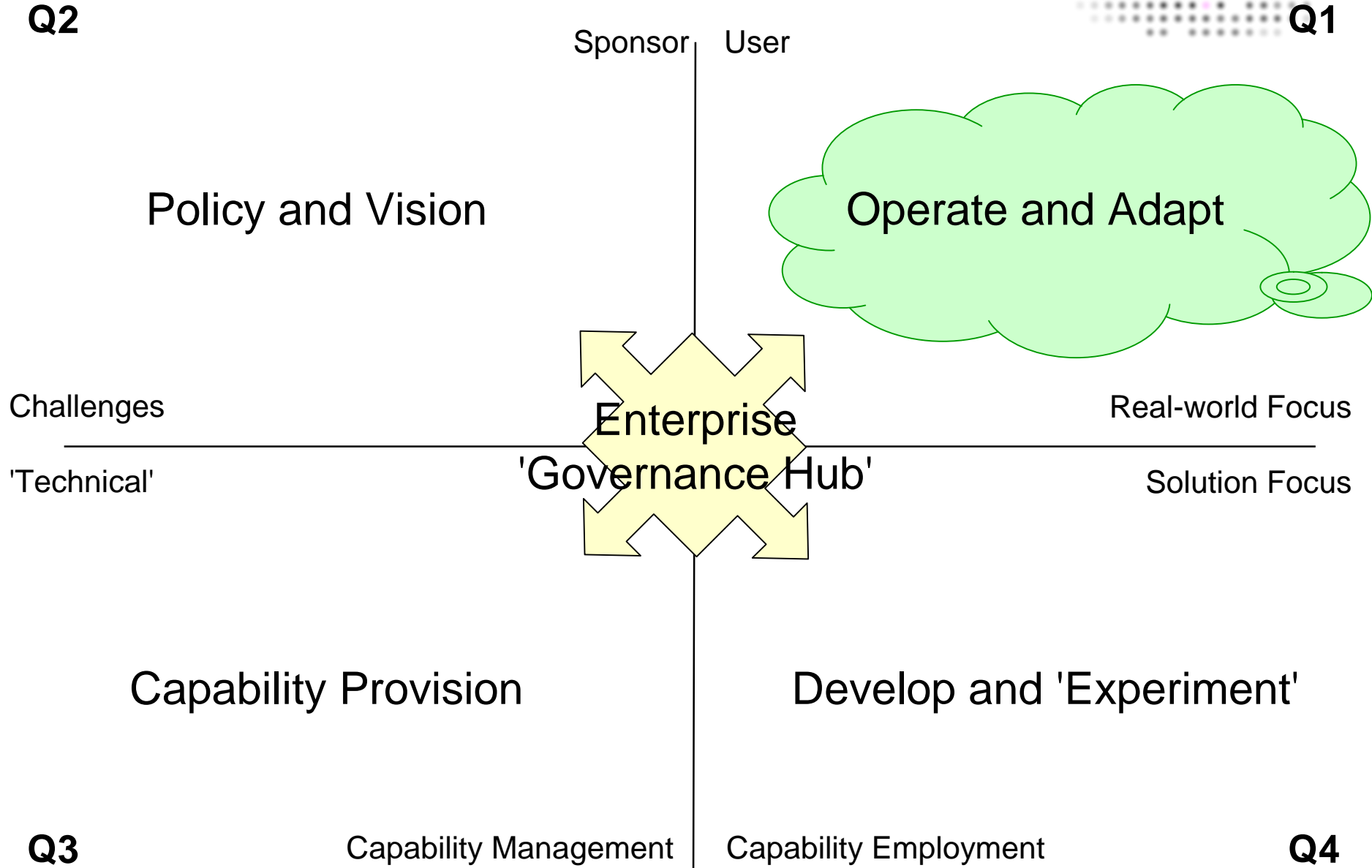
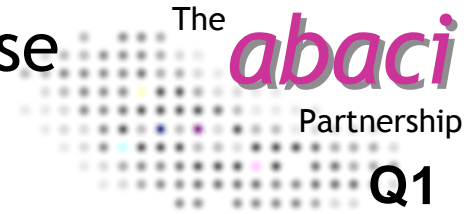
More abstract



	Adaptation	Adaptation	Adaptation	Adaptation
FFDM and Governance	Adaptation: Focus on the need to adapt to the changing climate.	Adaptation: Focus on the need to adapt to the changing climate.	Adaptation: Focus on the need to adapt to the changing climate.	Adaptation: Focus on the need to adapt to the changing climate.
Resilience and Resilience	Adaptation: Focus on the need to adapt to the changing climate.	Adaptation: Focus on the need to adapt to the changing climate.	Adaptation: Focus on the need to adapt to the changing climate.	Adaptation: Focus on the need to adapt to the changing climate.
Adaptation and Resilience	Adaptation: Focus on the need to adapt to the changing climate.	Adaptation: Focus on the need to adapt to the changing climate.	Adaptation: Focus on the need to adapt to the changing climate.	Adaptation: Focus on the need to adapt to the changing climate.
Adaptation and Resilience	Adaptation: Focus on the need to adapt to the changing climate.	Adaptation: Focus on the need to adapt to the changing climate.	Adaptation: Focus on the need to adapt to the changing climate.	Adaptation: Focus on the need to adapt to the changing climate.
Adaptation and Resilience	Adaptation: Focus on the need to adapt to the changing climate.	Adaptation: Focus on the need to adapt to the changing climate.	Adaptation: Focus on the need to adapt to the changing climate.	Adaptation: Focus on the need to adapt to the changing climate.

ACCRA = Africa Climate Change Resilience Alliance. FFDM = Flexible and Forward-looking Decision-Making. LAC = Local Adaptive Capacity.

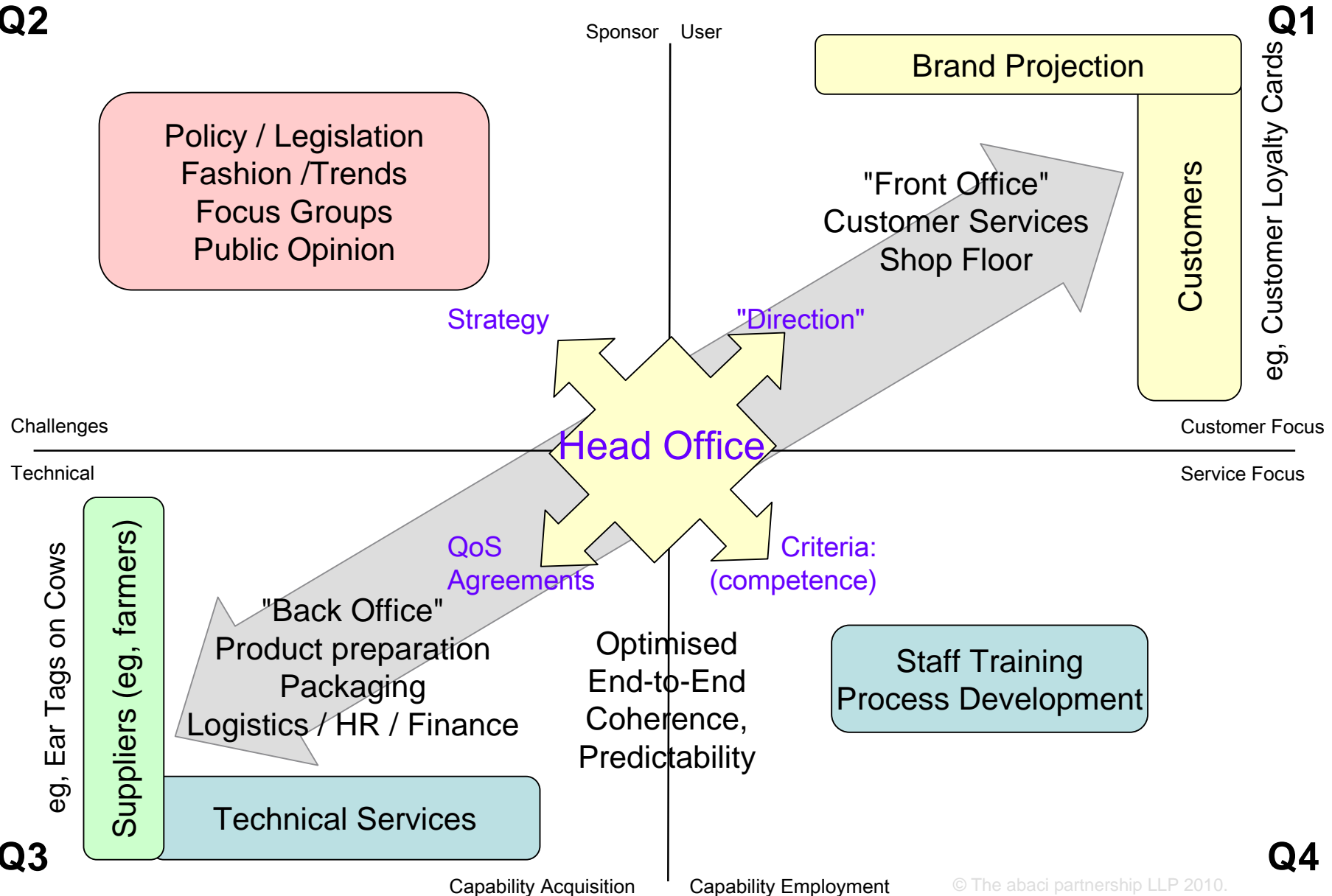
# 08 Insights for Oxfam: A generic Enterprise Framework



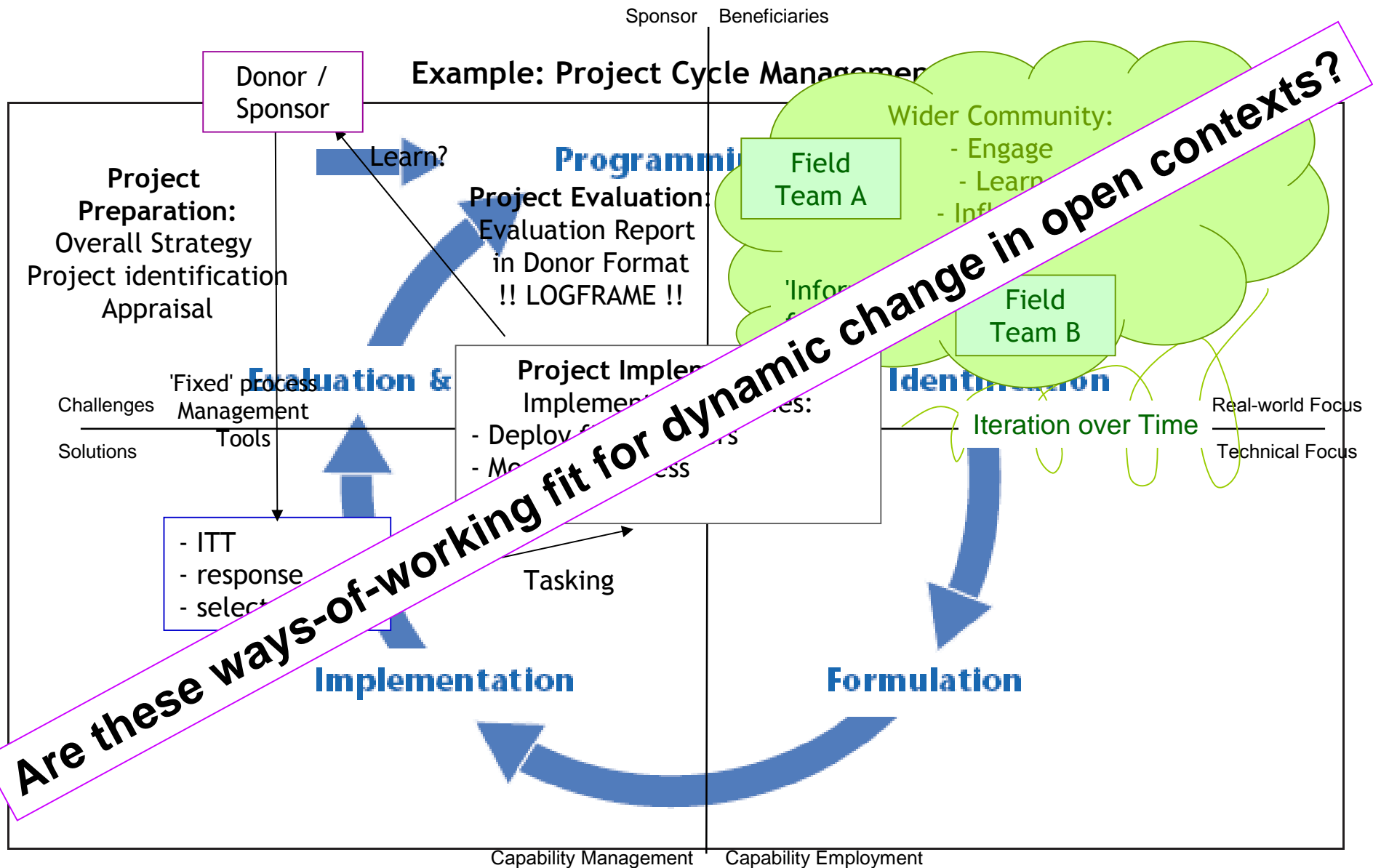


# 08 Insights for Oxfam: Model of a Supermarket Chain

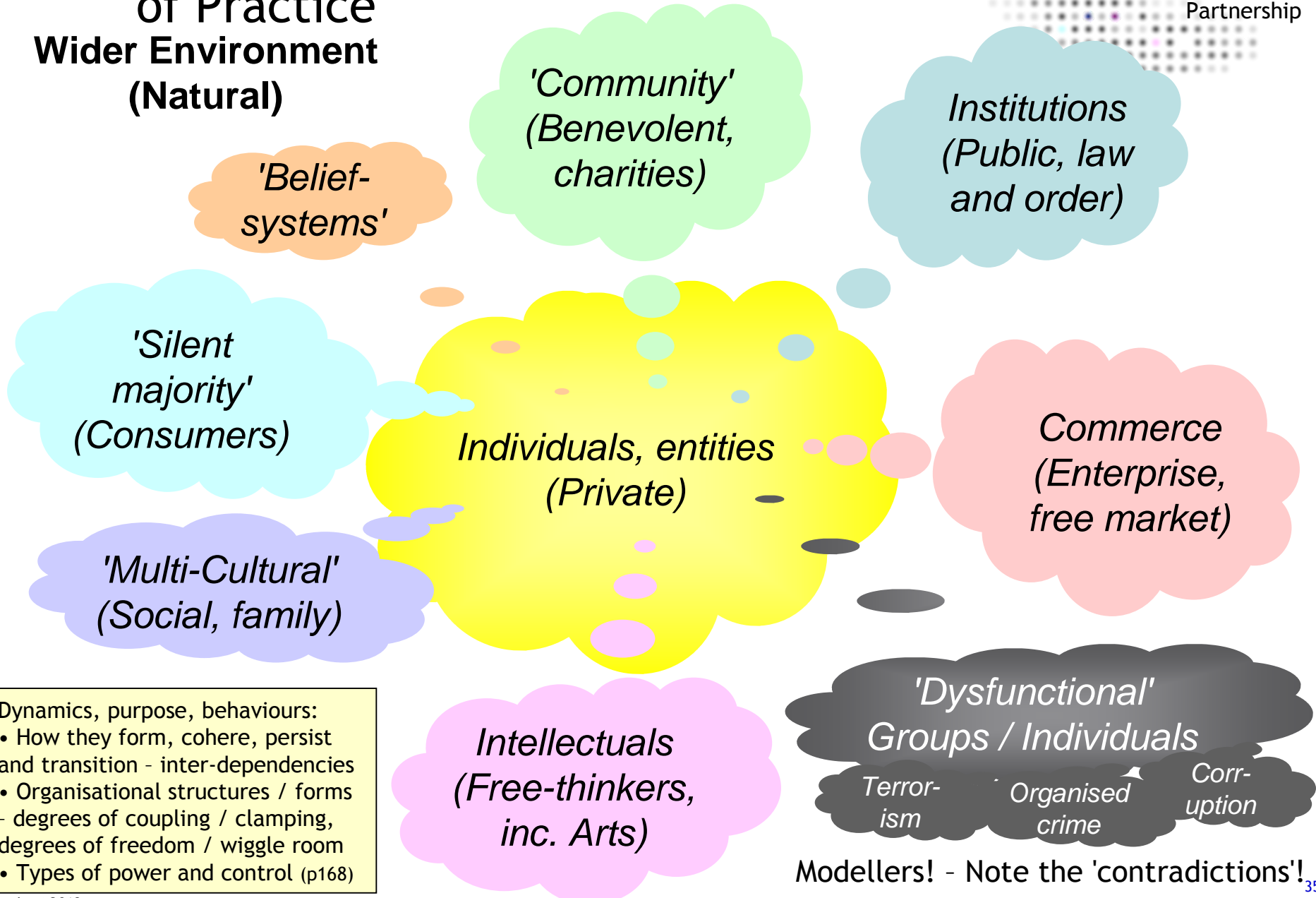
Q2



# 08 Development Aid example



# 08 Development Aid Contexts - Communities of Practice Wider Environment (Natural)

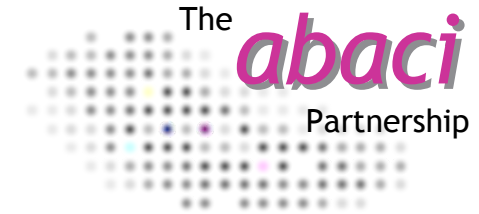


Dynamics, purpose, behaviours:

- How they form, cohere, persist and transition - inter-dependencies
- Organisational structures / forms - degrees of coupling / clamping, degrees of freedom / wiggle room
- Types of power and control (p168)

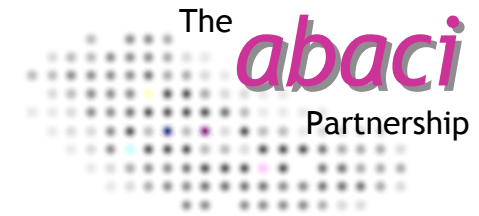
Modellers! - Note the 'contradictions'!

# 08 Complexity: Insights for Oxfam



- The language and perspectives of academic complexity are poorly matched to that of practice and should not be imposed arbitrarily.
- Context is the driver of practice and every context is always complex, different and always dynamically changing.
- Practice already has a pragmatic language for describing and working with contextual complexity.
- Key to the synthesis of complexity and practice is developing competencies / context-relevant tools for:
  - appreciating the drivers of change in the context
  - engaging appropriately with those drivers to set the conditions for transition or transformation
  - judging what, given the change, to do differently in practice
  - applying the insights effectively with the changing context by working with the realities.
- The consequences at the policy level must be addressed if change is to be nurtured ... discuss ...

## 08 Complexity: Eleven principles that underpin CCA and resilience issues

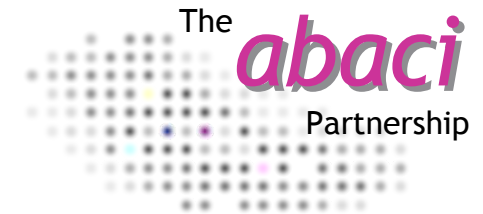


The following principles, as they are derived from complexity science insights, reflect the integrative and iterative manner in which ongoing effective CCA can be maximised:

- Principle 1: Dynamic, ongoing 'complex' CCA can be influenced purposefully.
- Principle 2: Context understanding is diverse - there is no 'single view of the truth'.
- Principle 3: Change is ongoing, dynamic and multi-level - there is no 'end-state'.
- Principle 4: There are many qualities of power and influence to accommodate.
- Principle 5: It is necessary to appreciate who is/what are best placed to bring about change.
- Principle 6: CCA requires that 'interventions' have the necessary Requisite Variety, i.e. have appropriate 'Complexity-Worthiness' given the desired changes.
- Principle 7: CCA is not just about adapting, but is also about being able to adapt the adapting and learn.
- Principle 8: Different decision-making and problem-solving styles are required for different situations.
- Principle 9: When reasoning about change, past evidence does not guarantee future prediction.
- Principle 10: When innovating, transformation may be the only valid option.
- Principle 11: Change will be impeded unless appropriate degrees of freedom and 'wobble room' are available..



# References:

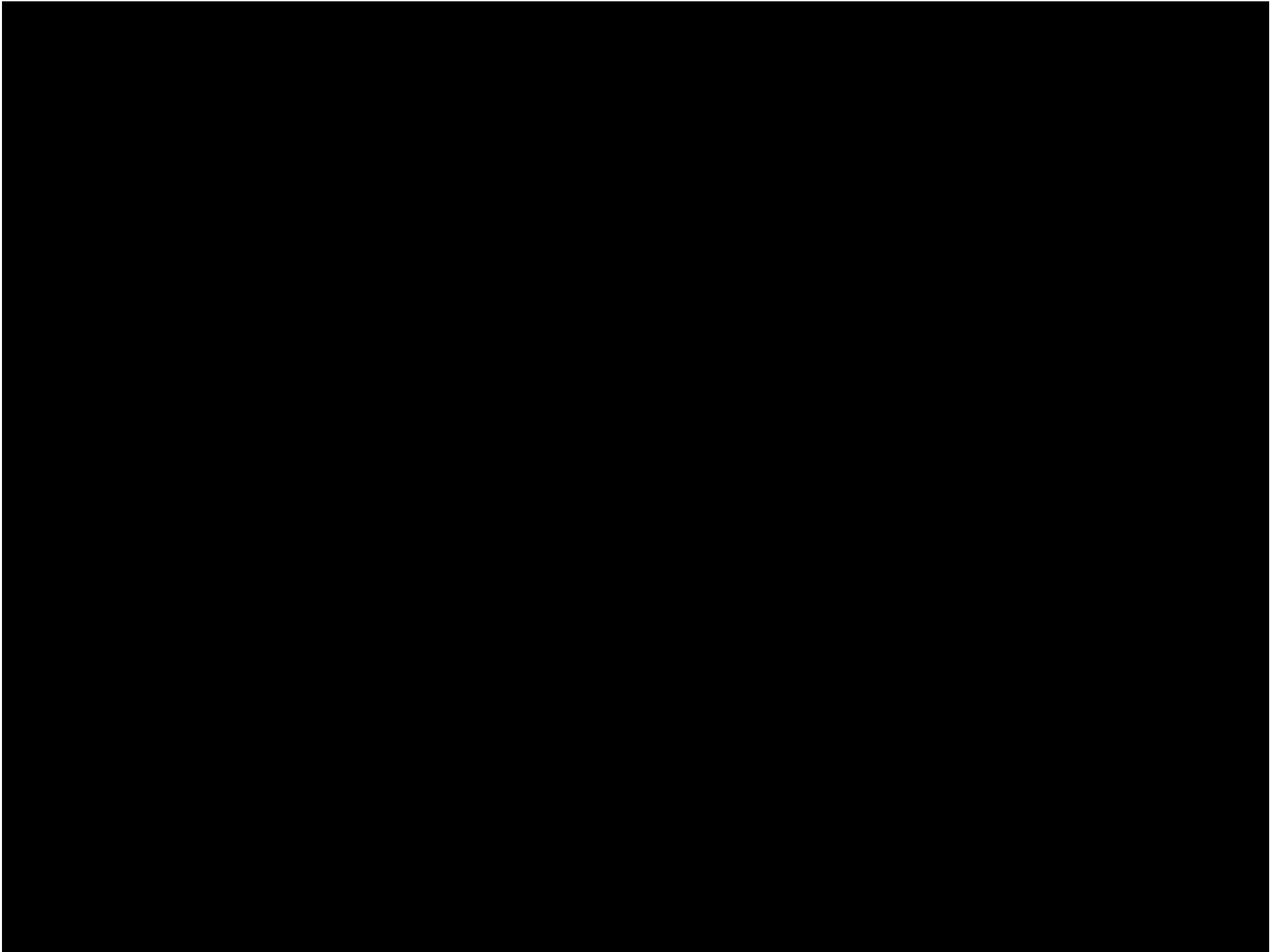


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*Thank you!*



Photo: Children at Kotido Airport, Uganda. © Tom White 2012







# [1] Understanding and employing forward-looking decision-making means ...

## *[1.1] - Recognising and prioritising short- and long-term benefits, by ...*

- planning beyond 5 years, considering possible futures as well as projections of current situations
- having and using flexible national priorities and resource allocation

## *[1.2] - Looking for possibilities and opportunities (finding space to act), by ...*

- being guided by risk, capacity and vulnerability analysis
- accepting future uncertainties at local level
- looking for opportunities in national priorities
- being skilled at judging what is now appropriate
- requiring appropriate changes in the donor policies

## *[1.5] - Working in collaborative ways, and integrating cross-sector by ...*

- sharing risk and vulnerability analyses from national to local levels as needed
- using integrated analysis, planning and implementation beyond single sectors
- promoting holistic approaches to activities, interactions and relationships
- integrating flexible local, regional and district planning

**Planning is flexible and incorporates adaptive long-term climate, social and economic issues across sectors and levels including stakeholders**

## *[1.4] - Planning by reflecting and adapting continuously over time, by*

- incorporating broader factors than at present which challenge assumptions and 'received wisdom'
- being prepared to / actually adapting plans as circumstances change

## *[1.3] - Appreciating informal interactions (social), maximising intangible (community) benefits, such as ...*

- identifying those which should be included in national development plan priorities
- ensuring participation of women and other special groups

## [2] Using knowledge and information in a meaningful way means ...

### *[2.1] - Recognising appreciating and incorporating the value of local knowledge, by ...*

- exploring indigenous knowledge and insights to identify those that still work
- emphasising the importance of timely information provision

### *[2.5] – Expressing, visualising and communicating information in an accessible manner, by ...*

- ensuring that usable and accessible media are used
- simplifying the information provided to users
- acting on the need to provide different types of information to different users: youth, women, PLWD (People Living with Disabilities)
- better academic expertise at working with local communities
- using local examples

**People get timely information in useable formats to support forward-looking decision-making via established communication and feedback channels**

### *[2.4] - Teaching children and adults the utility of information, and how to interpret it by ...*

- building community capacity to interpret and translate information
- giving women's views a voice
- building ability to use technology effectively

### *[2.2] - Integrating cross-sector information, by ...*

- collaborating actively across the communications and feedback channels
- willingly sharing lessons and experiences across sectors
- creating 'platforms' for sharing lessons and experiences (forums)
- networking openly
- sharing responsibility and accountability through planning
- monitoring and evaluating in adaptive ways (different indicators)

### *[2.3] - Appreciating what is available and where it is – and trusting it, by ...*

- highlighting key resources that provide timely information
- establishing channels for communication and feedback by using suitable shared platforms
- exploiting technology appropriately

# [3] Having evolving institutions and fair entitlements means ...

## *[3.1] - Collaborating across agencies and communities, by ...*

- involving stakeholders in decision-making processes at all levels (regardless of tribe, age, race or gender)
- improving coordination, integration and sharing of information across disciplines (scientific and indigenous)
- providing working facilities

## *[3.5] - Recognising rights and responsibilities, by ...*

- involving all stakeholders including beneficiaries and duty-bearers, (including women and children) - sense of ownership
- providing (self) enforcement of policies, laws and responsibilities
- respecting rights to information, land titles etc
- sensitizing rights holders / duty bearers to their responsibilities

**An enabling environment exists in which equitable access, control and decision-making (involving vulnerable groups) occur**

## *[3.4] - Providing advice, protection and support, such as ...*

- providing protection and support to those carrying out enforcement
- provide assets and resources needed (eg, transport)

## *[3.2] - Being trustworthy and respecting contracts / agreements, by ...*

- sharing relevant information and adhering to terms and conditions in agreements openly
- formulating relevant policies about to unsure enforcement
- acknowledging and acting on the need for trust and showing respect in practice
- setting binding timeframes for agreements
- ratifying agreements

## *[3.3] - Promoting equitable access to and control of resources at all levels by ...*

- engaging in fair negotiation and arbitration (by neutral arbitrators accepted by both parties)
- empowering vulnerable groups such as women and children
- exposing those who act in selfish interests
- encouraging community participation

# [4] Fostering innovation and developing enabling environments means ...

*[4.1] - Supporting new ideas with incentives, such as ...*

- encouraging planners and implementers to gain insights from continuous monitoring and adapting
- those which encourage community-level contributions
- providing benefits to those addressing trans-boundary concerns
- rewarding leaders who have courage for the greater good
- opening resource centres

*[4.5] - Nurturing a participatory, trans-boundary environment, by*

- introducing new organisations and (regional) institutions which facilitate dialogue
- supporting and promoting existing institutions that aid communication and feedback
- respecting community-level contributions
- involving duty-bearers and practitioners
- recognising migration of animals across borders

**Innovations are adaptive and anticipatory and enable people to have ownership, grasp opportunities and deal with climate change sustainably**

*[4.4] - Learning from experimenting, from successes and from failures, by ...*

- exploring innovations, guided by risk and vulnerability assessments based on possible futures not just current concerns
- allocating resources which allow experiential learning and feedback (eg, copying and developing, expose visits)

*[4.2] - Being prepared to try new things, do existing things differently, such as ...*

- actively looking to improve ongoing activities and actually doing them differently
- looking for and exploiting opportunities across all sectors / activities – networking in new ways
- planning from the bottom-up
- exploring indigenous innovations
- incorporate spirit of volunteerism

*[4.3] - Promoting self-generated initiatives, such as ...*

- diversifying livelihoods
- suggesting new ways-of-working for ongoing activities
- supporting community-driven processes and traditional methods (where appropriate)
- planning initiated from the bottom-up

# [5] Accessing and utilising assets / capabilities as necessary means ...

*[5.1] - Knowing what / who / when is available, where they are and their status (abilities, willing-ness, able to work / function etc), by ...*

- focussing on community sustainable diversification skills and experiments
- utilising private-sector / NGO involvement
- doing adaptive resource management
- understanding needs, costs / overheads of working differently

*[5.5] - Having the means to 'pay' for assets / capabilities, such as, by ...*

- utilising the opportunities available via new markets and sectors
- sharing skills and capabilities
- being able to ensure the sustainability / availability of assets and capabilities
- cooperating on shared provision

*[5.4] - Being prepared to share and re-allocate assets / capabilities, by ...*

- building on information and experience-sharing
- being open about the actual availability and utility of assets
- promotion of regional cooperation

*[5.2] - Involving other sectors (in decisions about competing priorities etc), by ...*

- incorporating community-based skills and insights
- working up from community-level crop / livestock value addition to the national
- including private-sector contributions
- encouraging cross-planning sector coordination meetings

*[5.3] - Being trained and competent in their use / deployment, by ...*

- focussing on development of community-based business skills
- employing capabilities available at any level, including via market linkages
- training of decision-makers
- putting in place capacity-building to enable change

**Processes, people's abilities and skills development, social networks, information sharing etc comes first over physical (money-based) assets**

