

# Integrated framework for implementing pathways

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An initiative between the University of Dundee and the Scottish Crop Research Institute





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# Climate change changes everything

**Meeting goal  
of 1.5°C**

**= significant change**

**Not meeting goal  
of 1.5°C**

**= significant change**

# The climate challenge

**Unprecedented  
Urgent, common problem and a symptom  
of current ways society operates**

# Implementing emissions pathways is all about change...

## Three broad focal areas:

**Understanding  
the problem**

**What needs to  
change?**

**Identifying  
solutions**

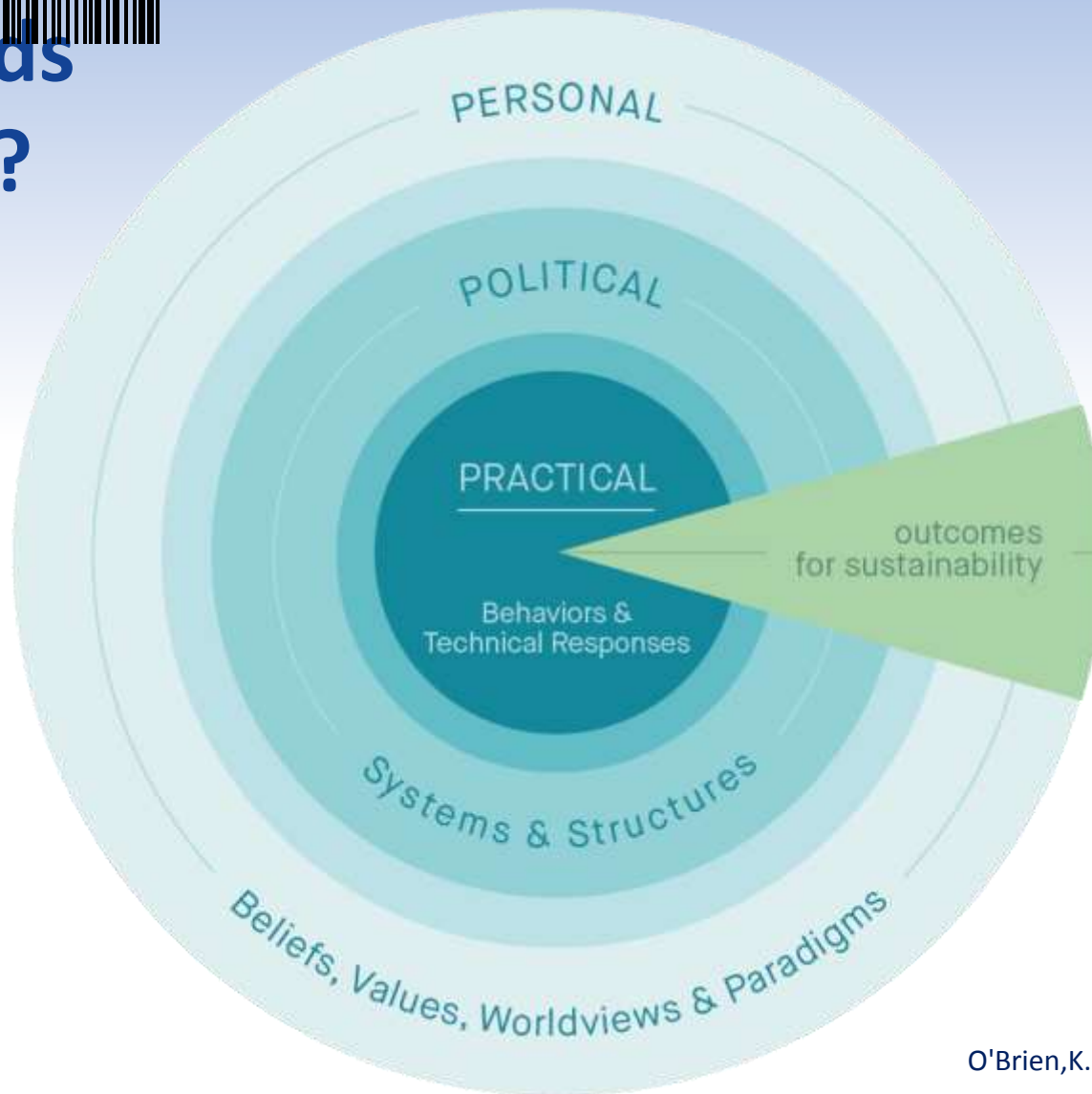
**In what way  
does change  
need to happen?**

**Putting solutions  
into practice**

**How to  
facilitate  
change?**



# What needs to change?

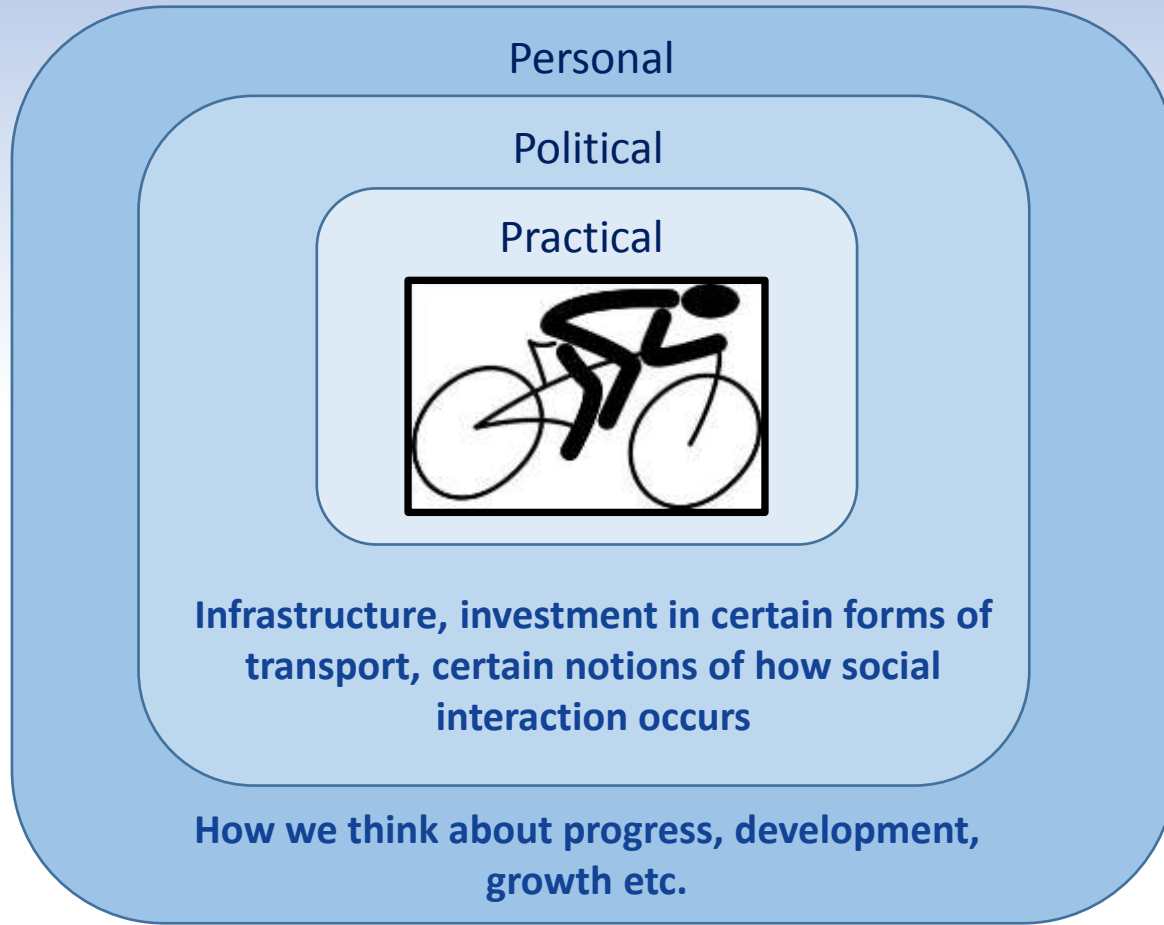


O'Brien, K. and Sygna, L. (2013)



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# Example: changing mobility patterns



Spaargaren, G. (2011) Theories of practices: Agency, technology, and culture. *Global Environmental Change* 21, 813-822.

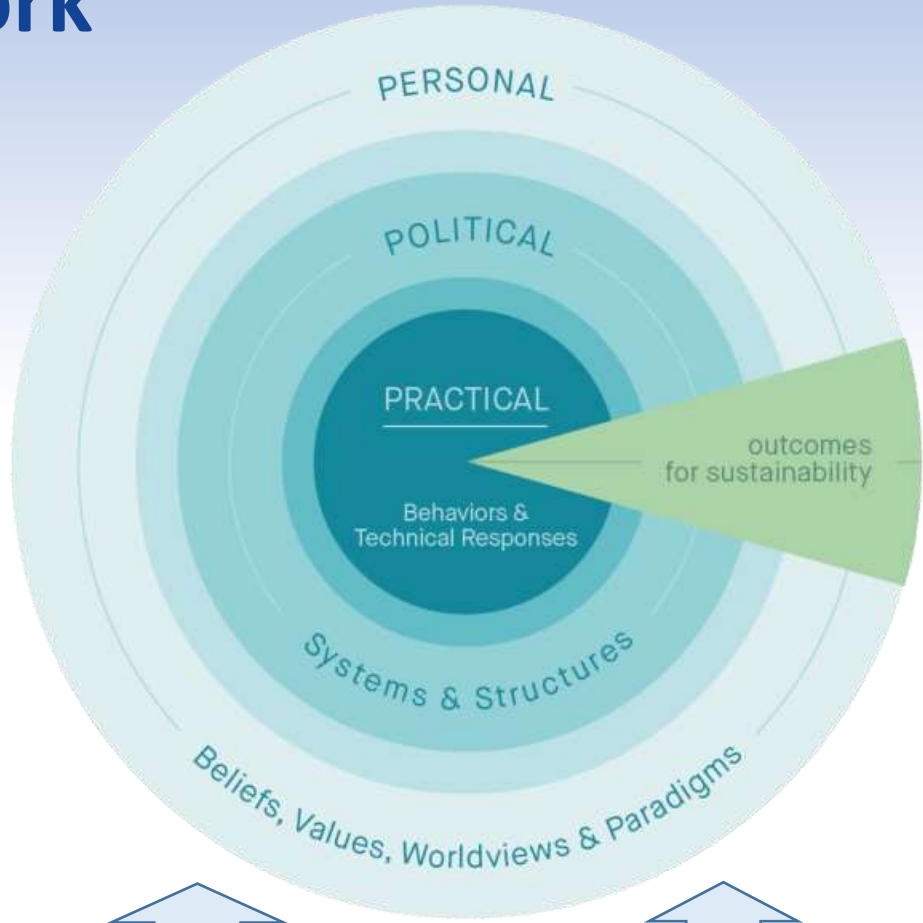
# Simple Framework

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What needs to change?

In what way does change need to happen?

How to facilitate change?



Depth

Breadth

Speed

Direct relation to climate change

Indirect relation to climate change



Transforming lives locally and globally



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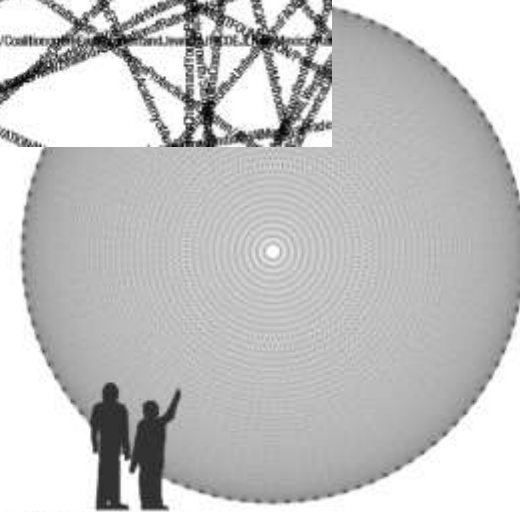
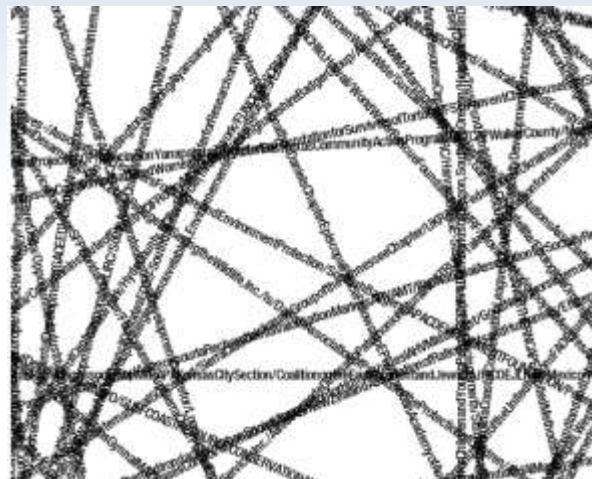


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# Change is already happening...

- Mega trends
- Values, worldviews
- Di-vestments and finance
- Social movements
- New solutions, innovations and ways of doing things

**Much of this is emerging from the multiple actors, often inhibited or reinforced by larger structures, systems and politics**



Chris Jordan 2010





What do we know about:

- Current social/value trends?
- Enabling conditions?
- Policies to practice?
- Opportunities and trends?
- Leverage points for change?
- Collective action?
- Conflict resolution?
- Influence of historical legacies?
- Communications and change?
- How to be creative?
- How to get people talking about CC?
- Large scale system change?

- 
- Business and Management
  - Finance & Economics
  - Futures
  - Political science
  - Human geography
  - Psychology
  - Art
  - Design
  - History
  - Law
  - Sociology
  - Mathematics
  - Education
  - Communication
  - Evaluation



Transforming lives locally and globally

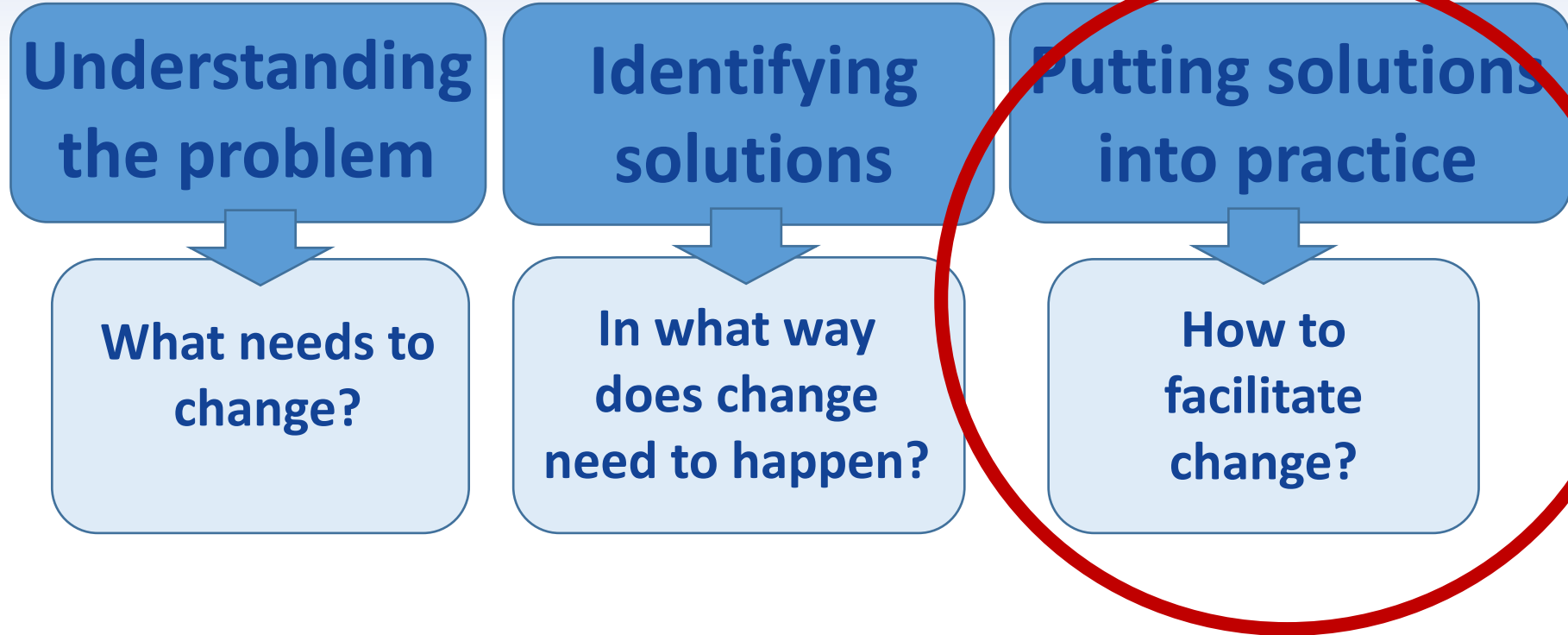


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# Intentional change...



- Tools
  - Practices
  - Processes
- Generic to change
- Specific to climate change

# Theory U

Otto Scharmer

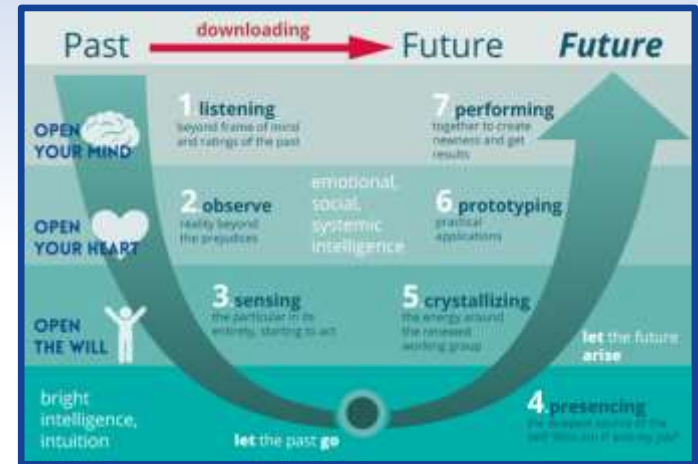


Image by: Umberto Santucci, [www.umbertosantucci.it](http://www.umbertosantucci.it)

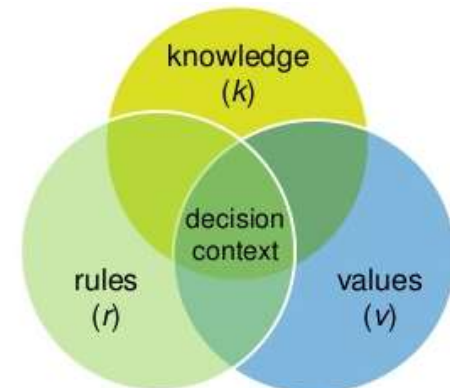


## Multi-Solving

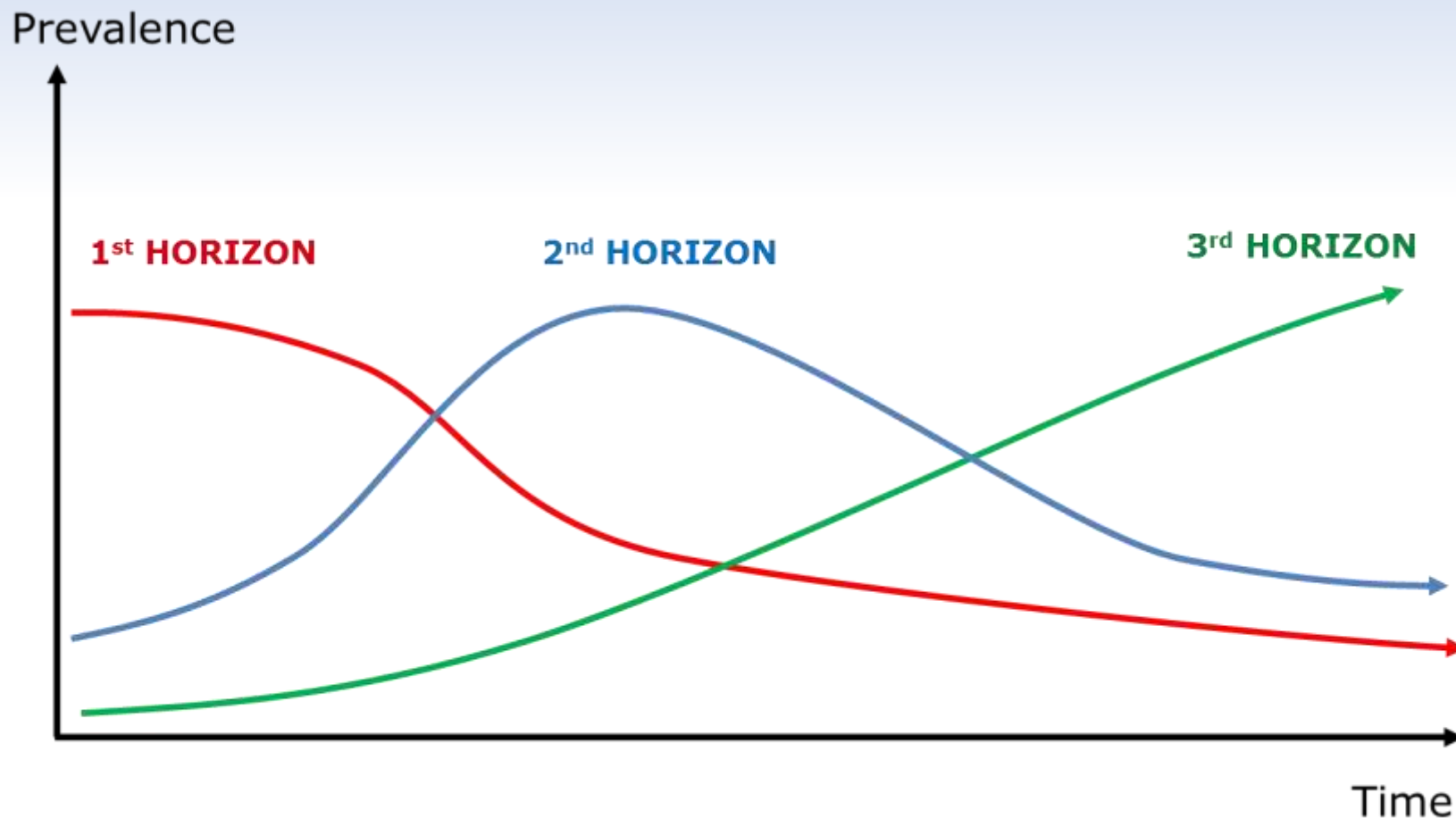
<https://www.climateinteractive.org/>

## Value-Rules-Knowledge

- Do we know the outcome (K)?
- Do we want the outcome (V)?
- Are we allowed the outcome (R)?



# Example – Futures tool/process



Sharpe, B, Fazey, I et al 2016. Three Horizons: A powerful practice for transformation. Ecology and Society. 21, 2: 47



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# Key messages

1. Change needs to occur at multiple levels and in multiple ways
2. Simple framework
3. Needs particular attention to ‘how to facilitate change’.
4. This requires:
  - a) Engaging with diverse social science, arts and humanities disciplines;
  - b) Engaging with knowledge outside of academia;
  - c) Creativity – don’t be constrained by what we think we know from the past.

