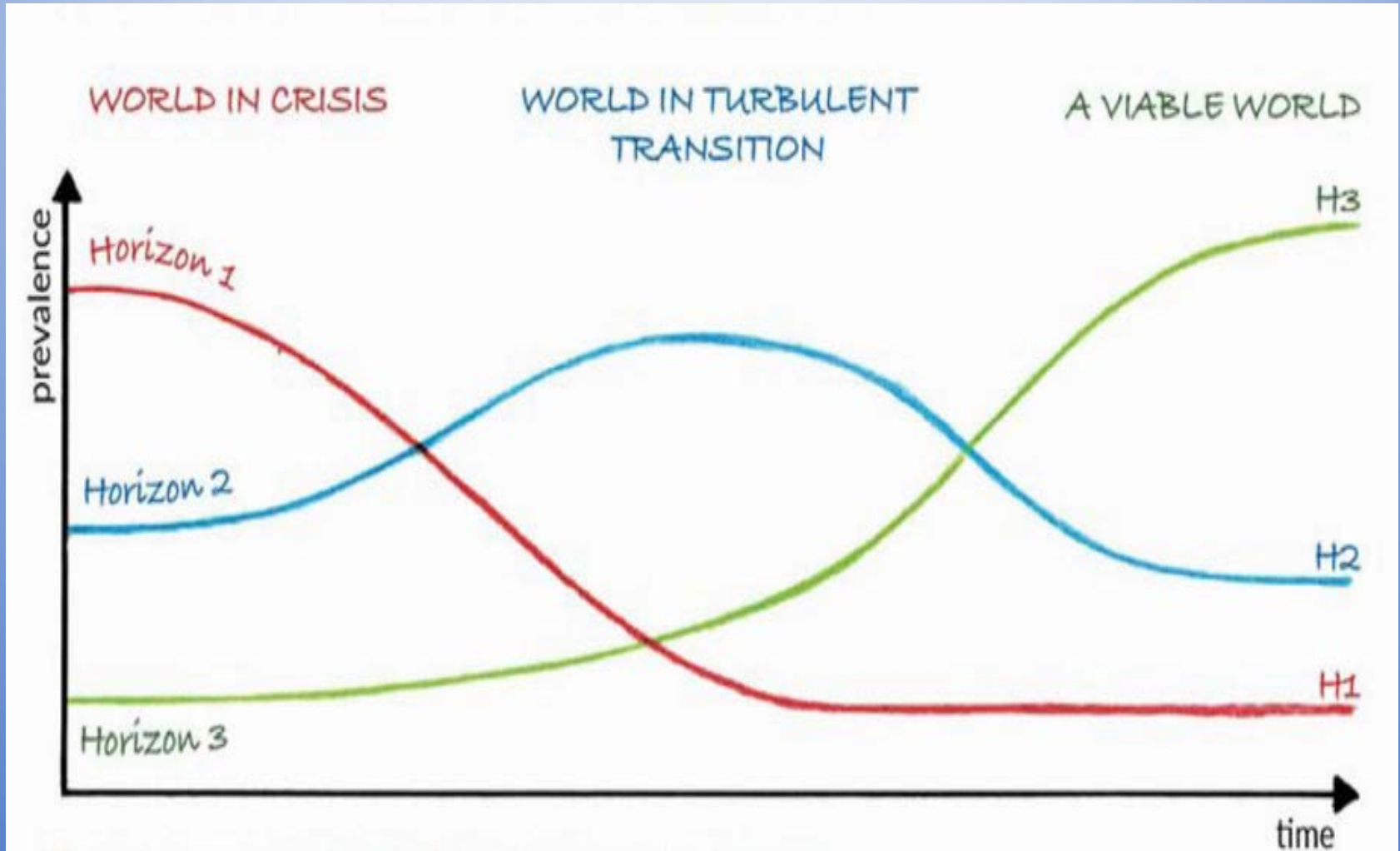


# Making Ecological Civilization Real

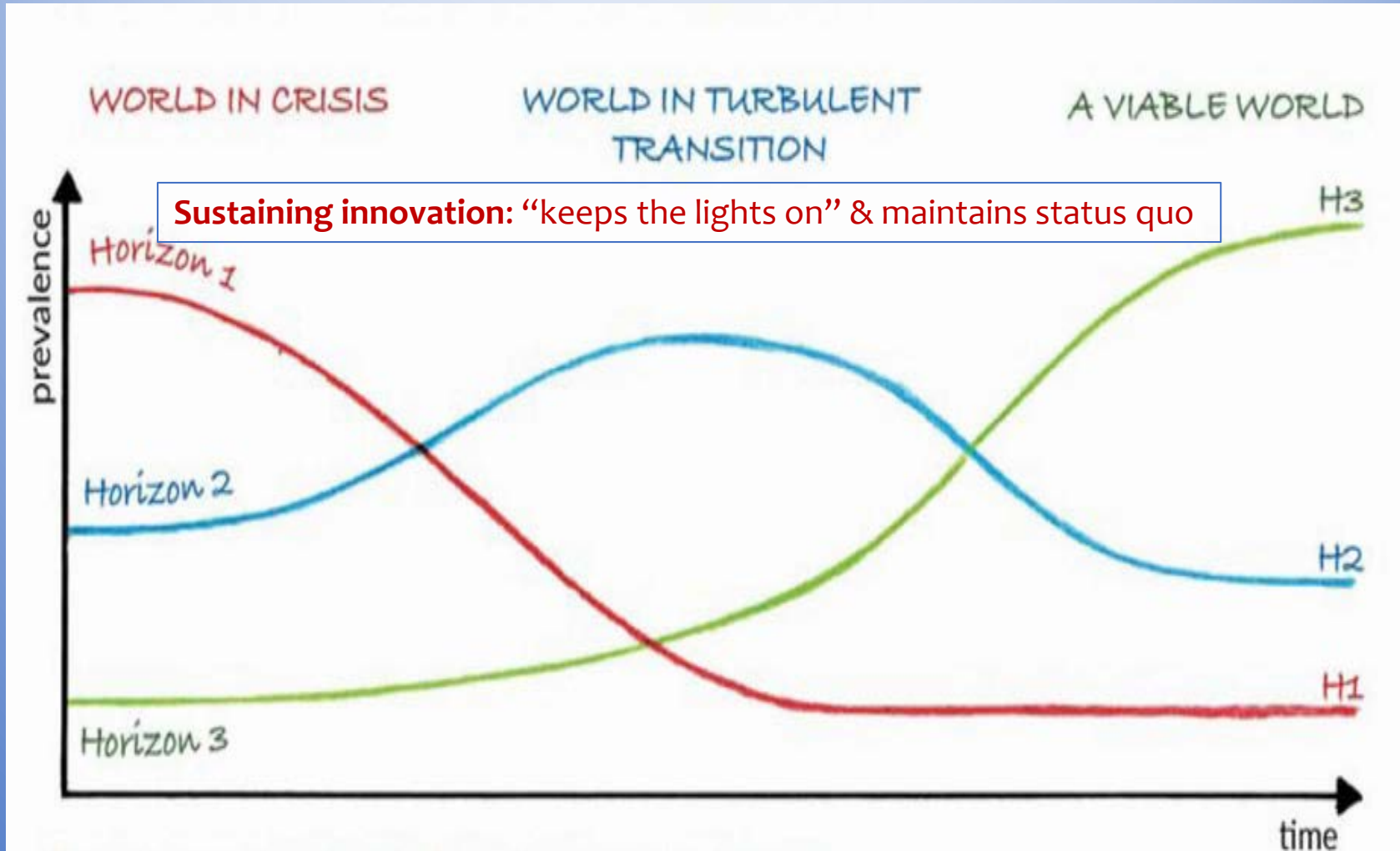
*Practical Steps toward Transformation*

Presented by Lisa Ferguson & Jeremy Lent

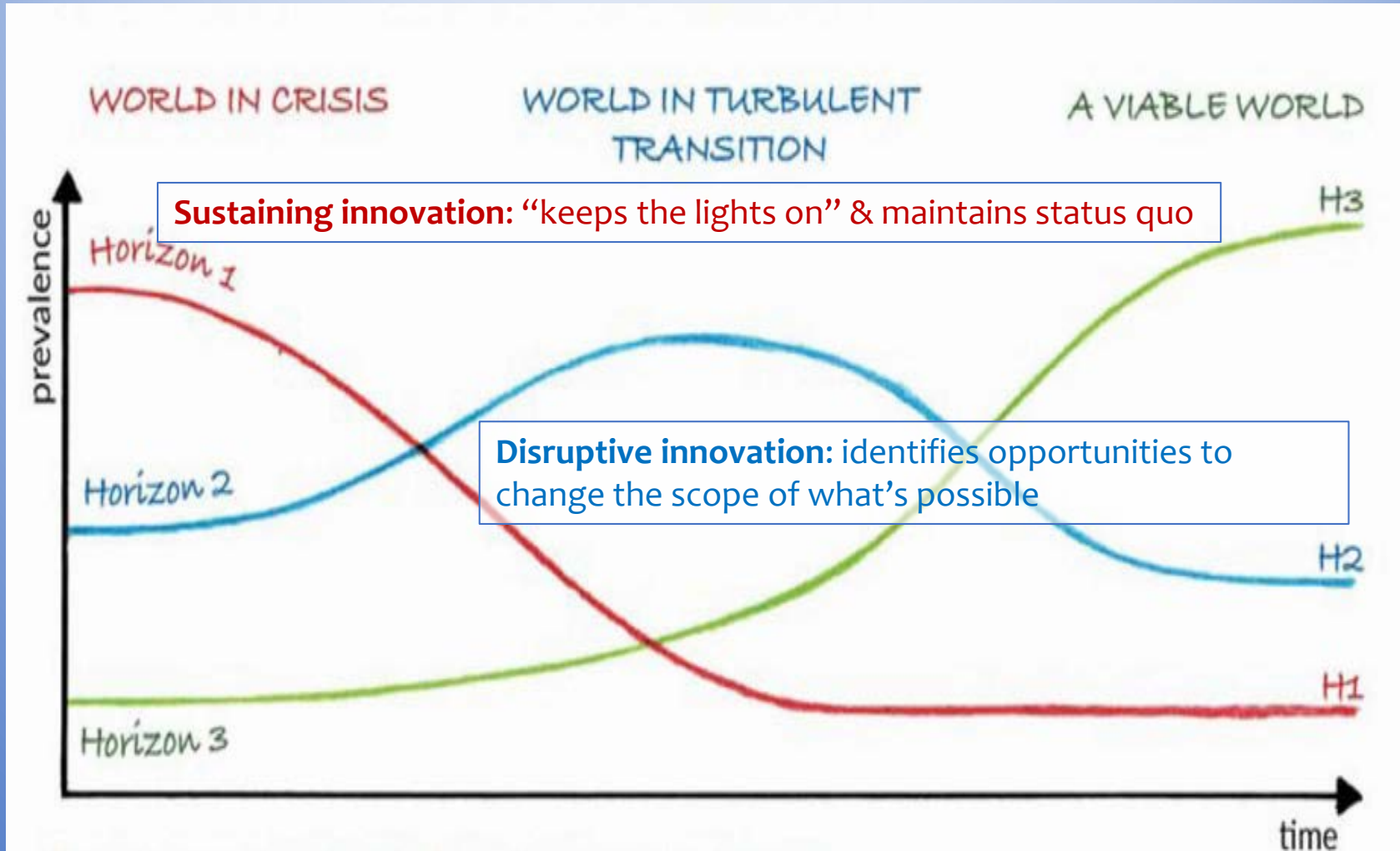
# The Three Horizons Model



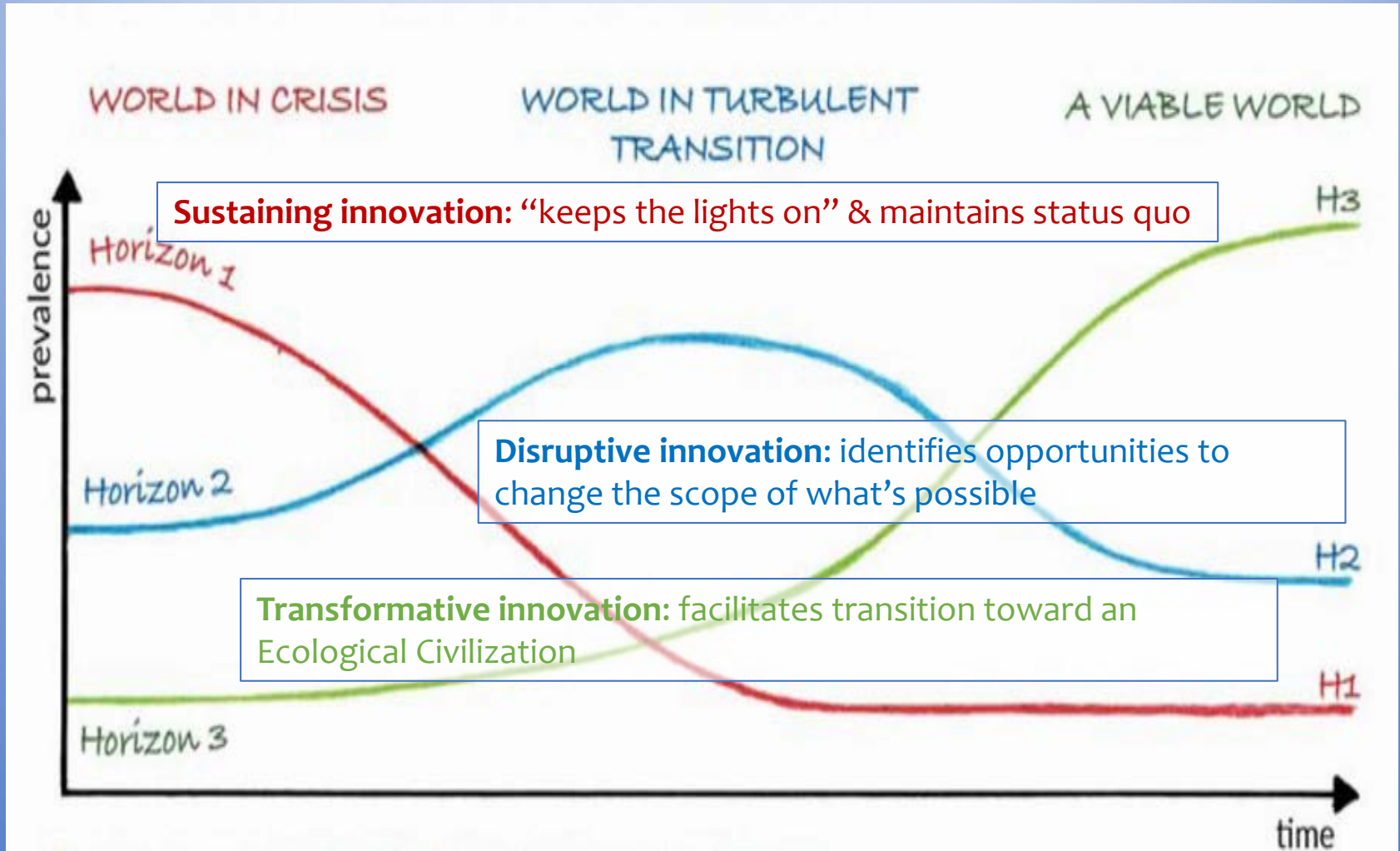
# The Three Horizons Model



# The Three Horizons Model



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# The Three Horizons Model

## NEWARK AIRPORT TERMINAL 4

**T4 IS GREEN**

IN 2017, WE WERE THE FIRST AIRPORT TERMINAL IN THE UNITED STATES TO EARN A LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN (LEED) GOLD CERTIFICATION IN EXISTING BUILDING OPERATIONS AND MAINTENANCE.

**LEED GOLD 2017**

**T4 SUSTAINABILITY FUN FACTS**

- T4 DIVERTED OVER **6 MILLION POUNDS OF RECYCLABLES**. THAT'S 23 TIMES THE WEIGHT OF THE STATUE OF LIBERTY!
- T4 HAS **SAVED MORE THAN 50,000 TREES**.
- EVERY RESTAURANT** IN T4 **COMPOSTS**.
- T4 **SAVES 20 MILLION GALLONS OF WATER PER YEAR**. THAT'S ENOUGH TO FILL OVER 30 OLYMPIC SWIMMING POOLS!

# The Three Horizons Model

## NEWARK AIRPORT TERMINAL 4

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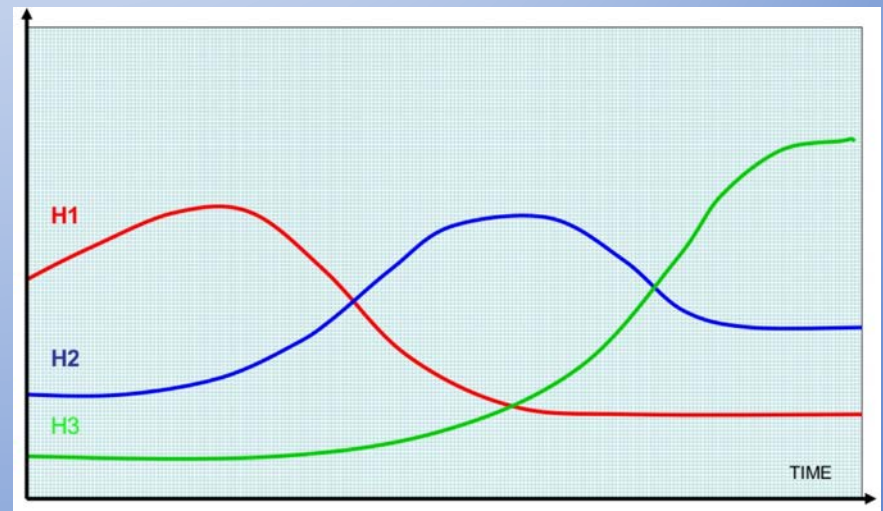
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WHICH HORIZON?



# The Three Horizons Model

TESLA ELECTRIC VEHICLE

RANGE 250+ MILES



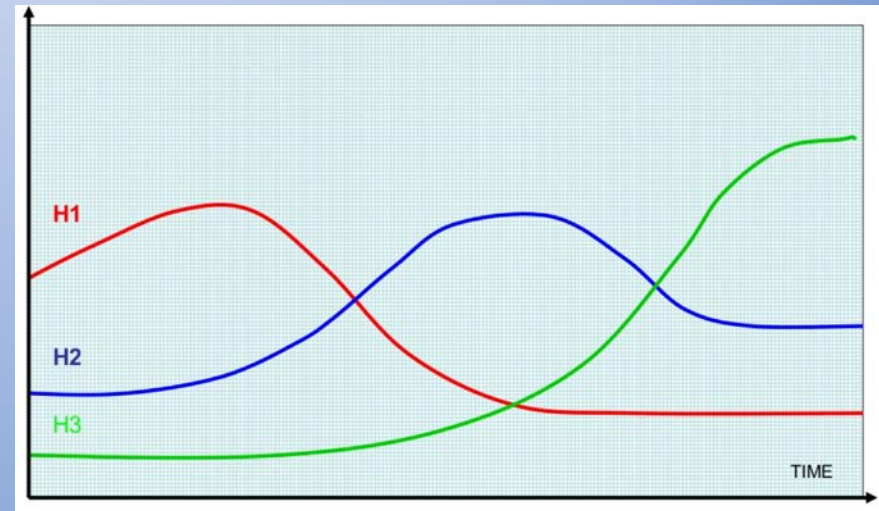


# The Three Horizons Model

TESLA ELECTRIC VEHICLE  
RANGE 250+ MILES



WHICH HORIZON?



# The Three Horizons Model

ECO-SENSE RESIDENCE  
VICTORIA, BC, CANADA



- Net-zero energy basis
- Net-zero water basis
- No “red list” chemicals
- Meets requirements related to:
  - ✓ Place
  - ✓ Health & Happiness
  - ✓ Equity
  - ✓ Beauty

*Jason McLellan: Living Building Challenge, Int’l Living Future Institute*

Source: Green Building Advisor, May 29, 2014

<https://www.greenbuildingadvisor.com/article/yes-the-living-building-challenge-is-overreaching>

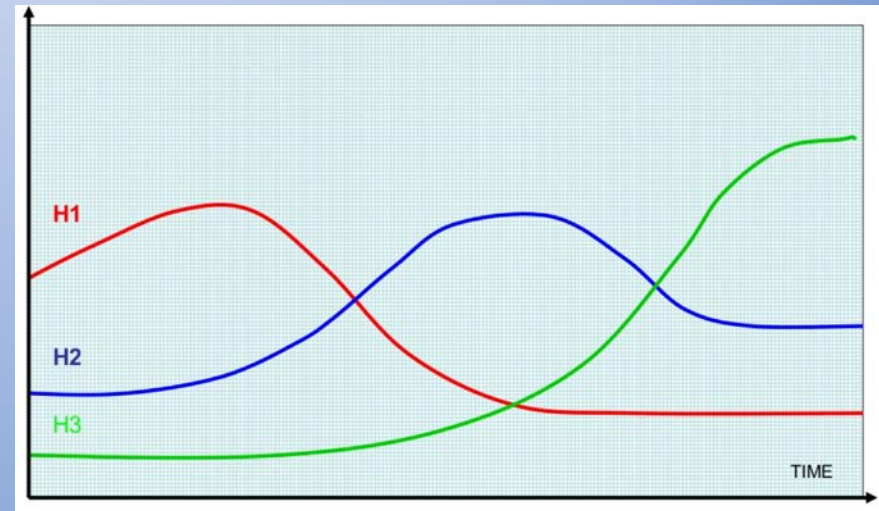


# The Three Horizons Model

ECO-SENSE RESIDENCE  
VICTORIA, BC, CANADA



WHICH HORIZON?



# The Three Horizons Model

ECO-SENSE RESIDENCE  
VICTORIA, BC, CANADA



WHICH HORIZON?

D

David Hicks | May 30, 2014 11:56am | #2

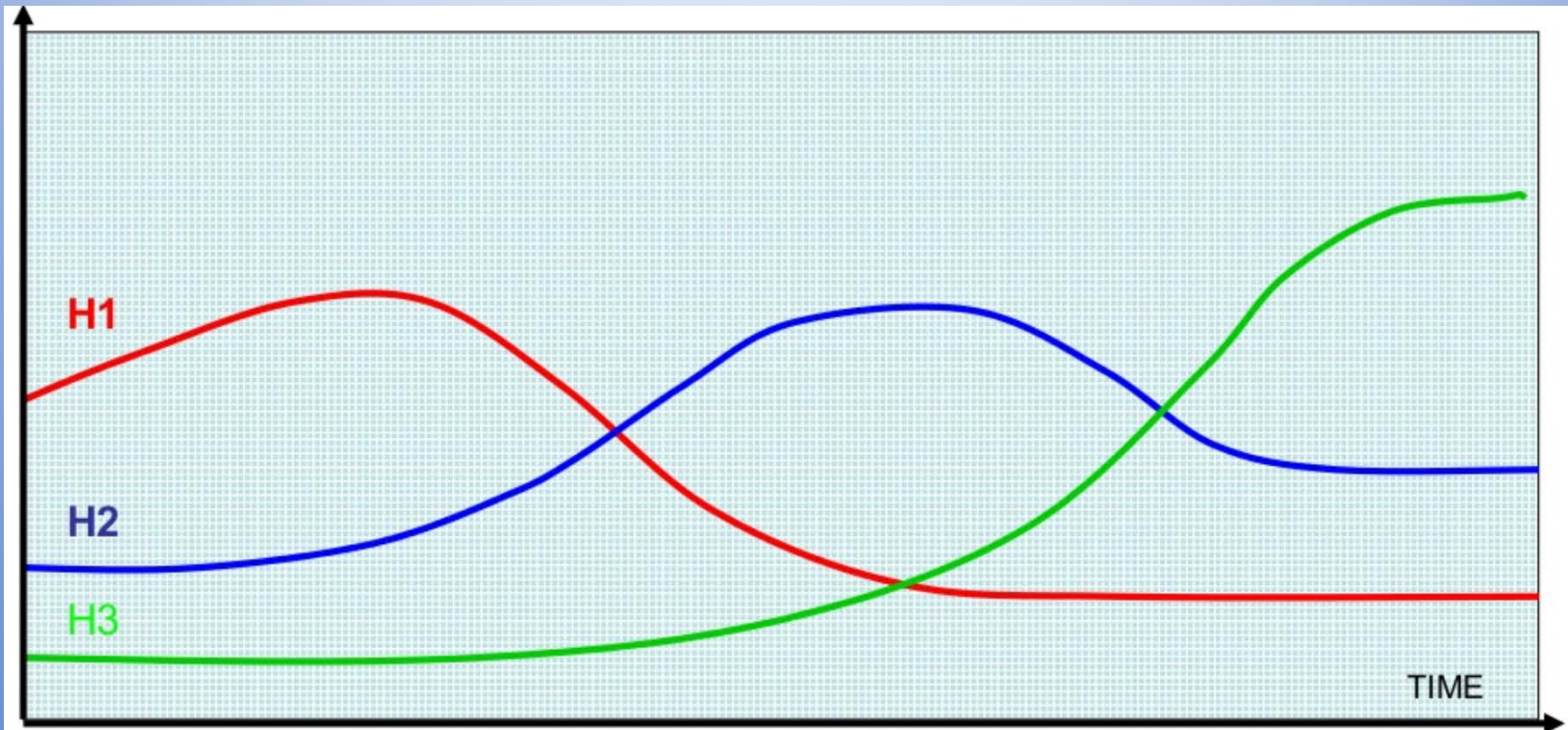
## why should we be overreaching?

I don't think setting near-impossible standards for exceptional buildings is particularly hard or particularly useful. At what point does the standard become good enough? After all, you can always add more insulation and more PV panels (or better wastewater treatment, or whatever). What *is* hard and useful is creating guidelines to help people decide where each marginal dollar is best spent. When you do that, you can make cost an independent variable and you maximize the quality of every house, regardless of the budget.



# The Three Horizons Model

## DIFFERING PERCEPTIONS



**H1** sees  
**H2** as too risky  
**H3** as irrelevant.

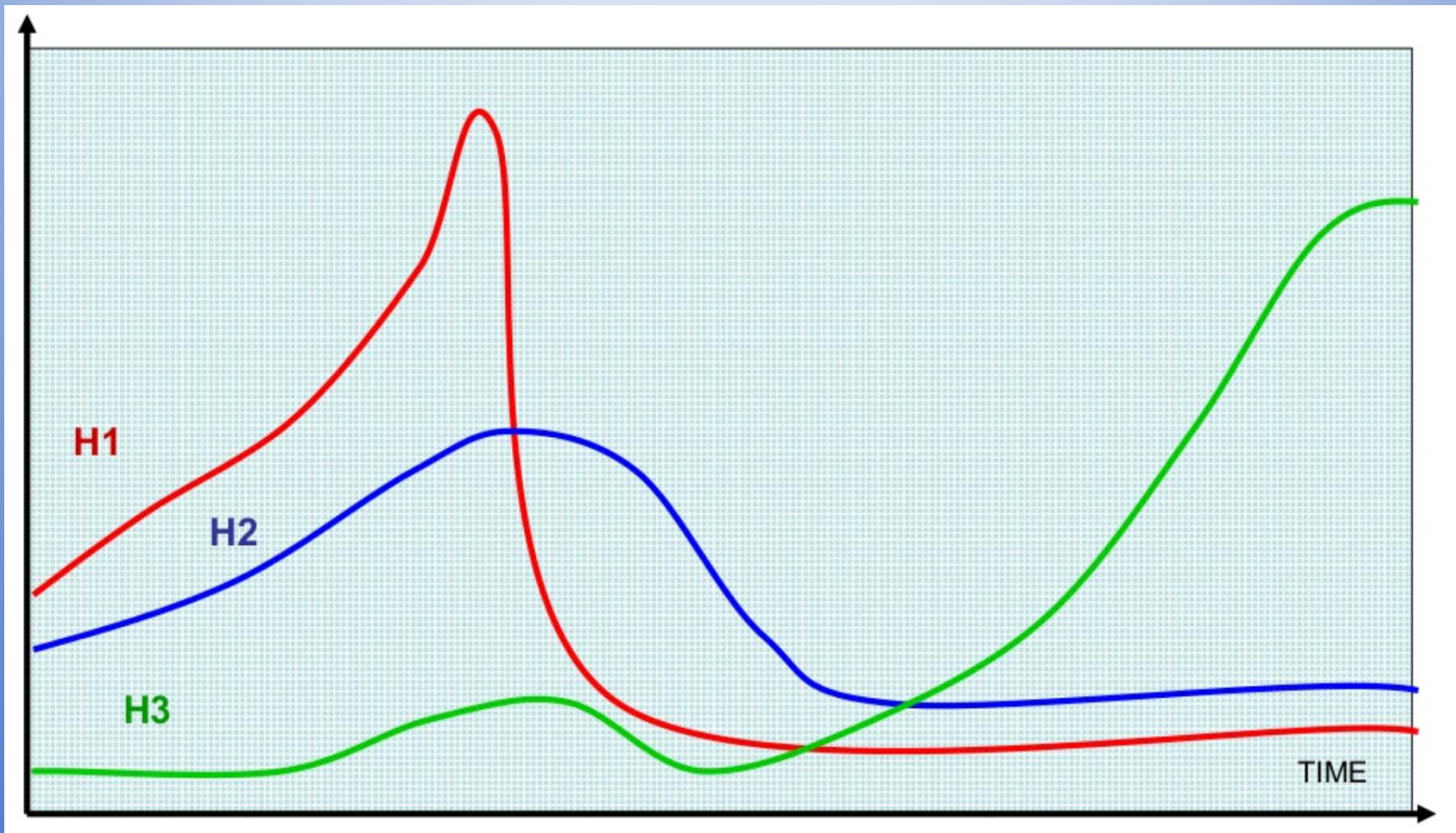
**H2** sees  
**H1** as obstructive  
**H3** as inspiring.

**H3** sees  
**H1** as lunacy  
**H2** as promising.

# The Three Horizons Model

COLLAPSE (AND RECOVERY?)

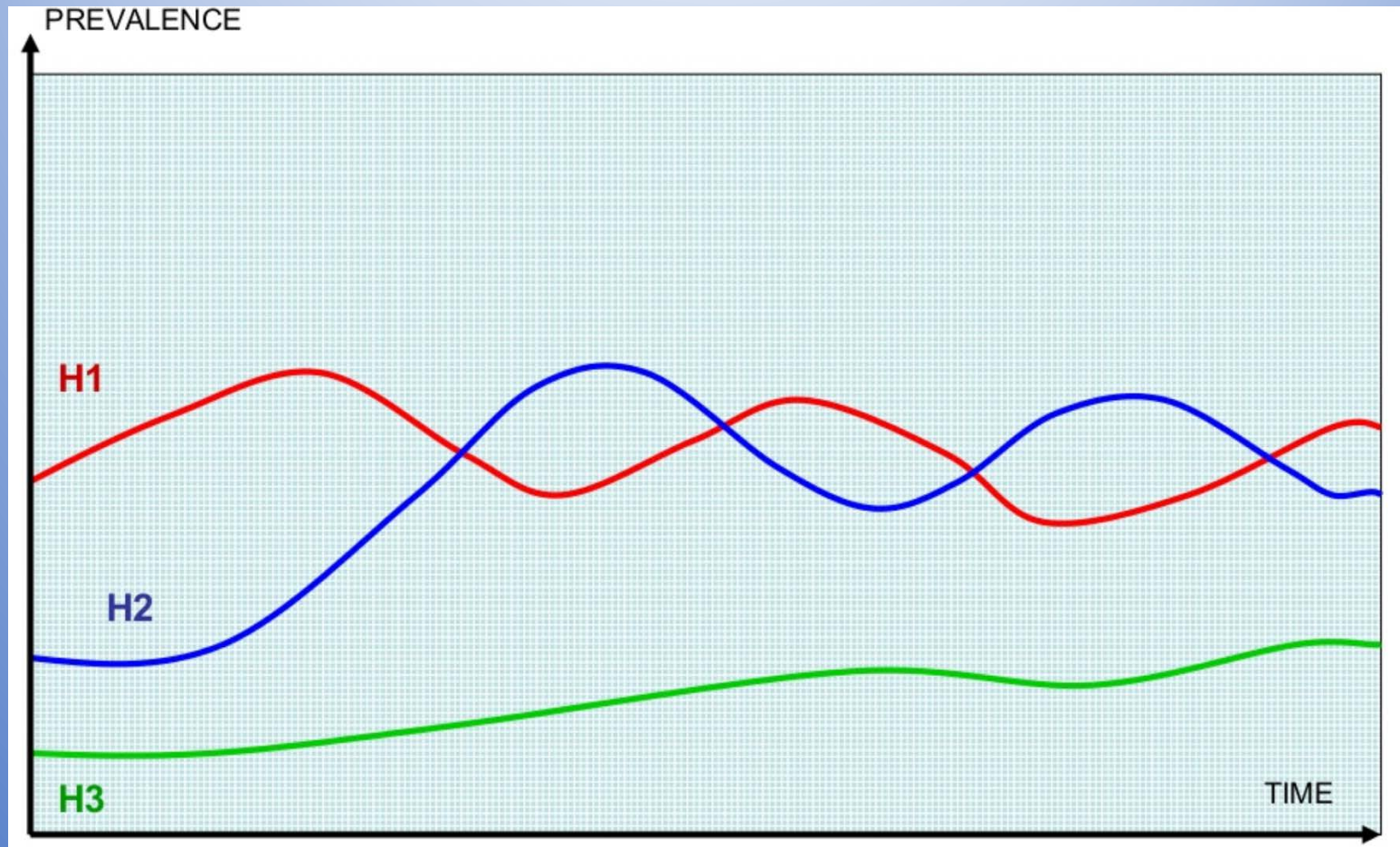
PREVALENCE





# The Three Horizons Model

KICKING THE CAN DOWN THE ROAD

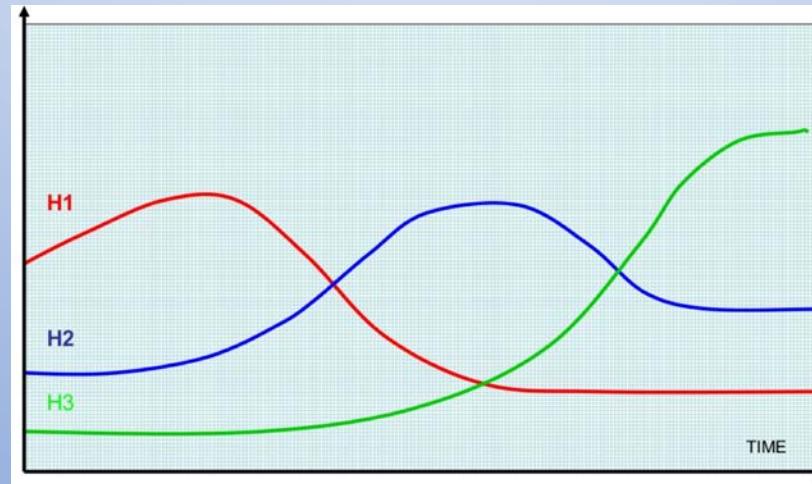


# Construction and the web of life – *building connectedness*

Lenny Antonelli and Andrew Simmonds May 2019



## WHICH HORIZON?



- Building standards/certifications, e.g. Passivhaus, EnerPHit, Irish Green Building
- Putting a monetary value on ecosystem services provided by Nature

- Architects and city planners designing opportunities for engagement with nature

- More responsible materials sourcing
- New models of co-housing & communal living

- Designing a building so:
  - Nature is the musical score
  - Occupants are the audience
  - The building is the instrument



# Principles of an Ecological Civilization

Respecting the inherent right of each person

Each party contributes and receives reciprocally

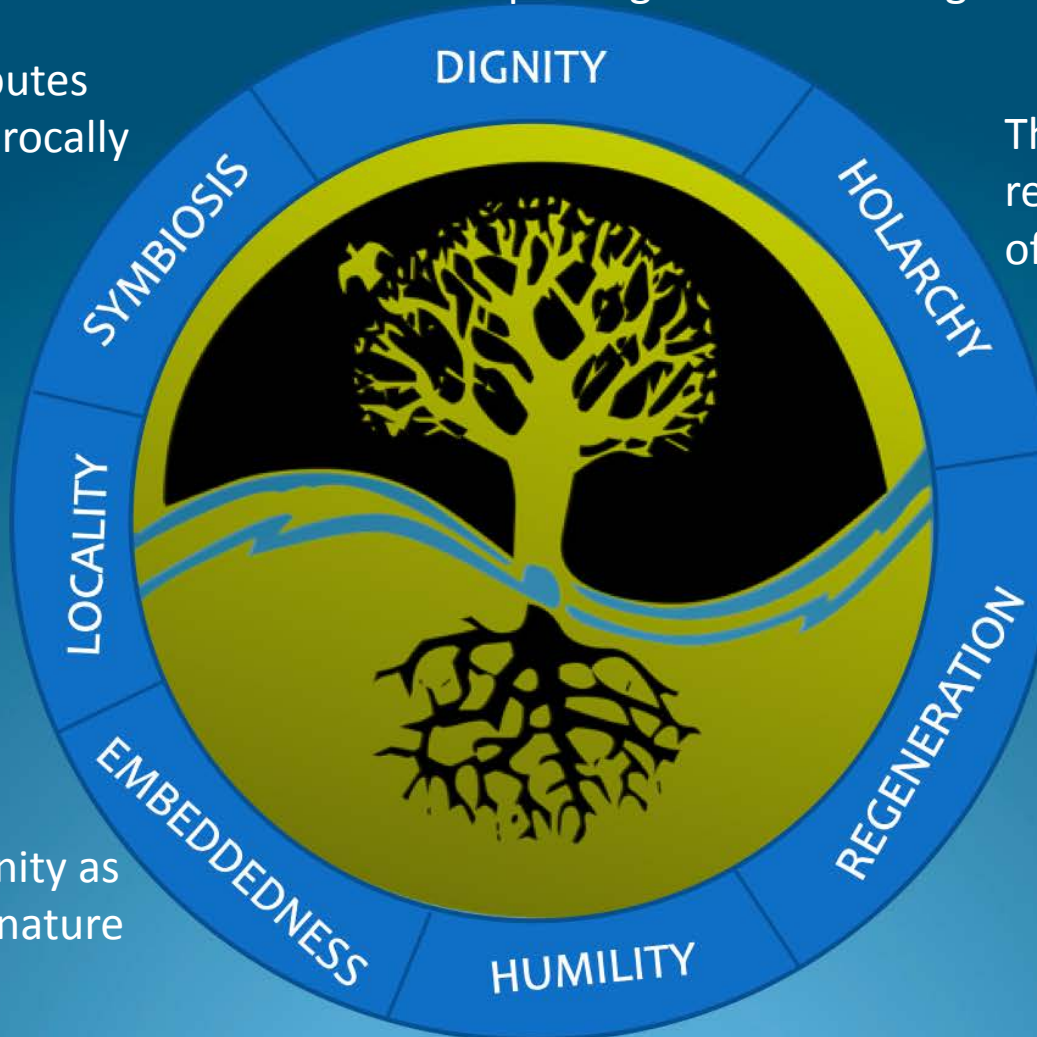
The health of the whole requires the flourishing of each part

Communities connect with the land rather than global flows

Sustainable flourishing into the long-term future  
*(seven generations principle)*

Recognizing humanity as embedded within nature

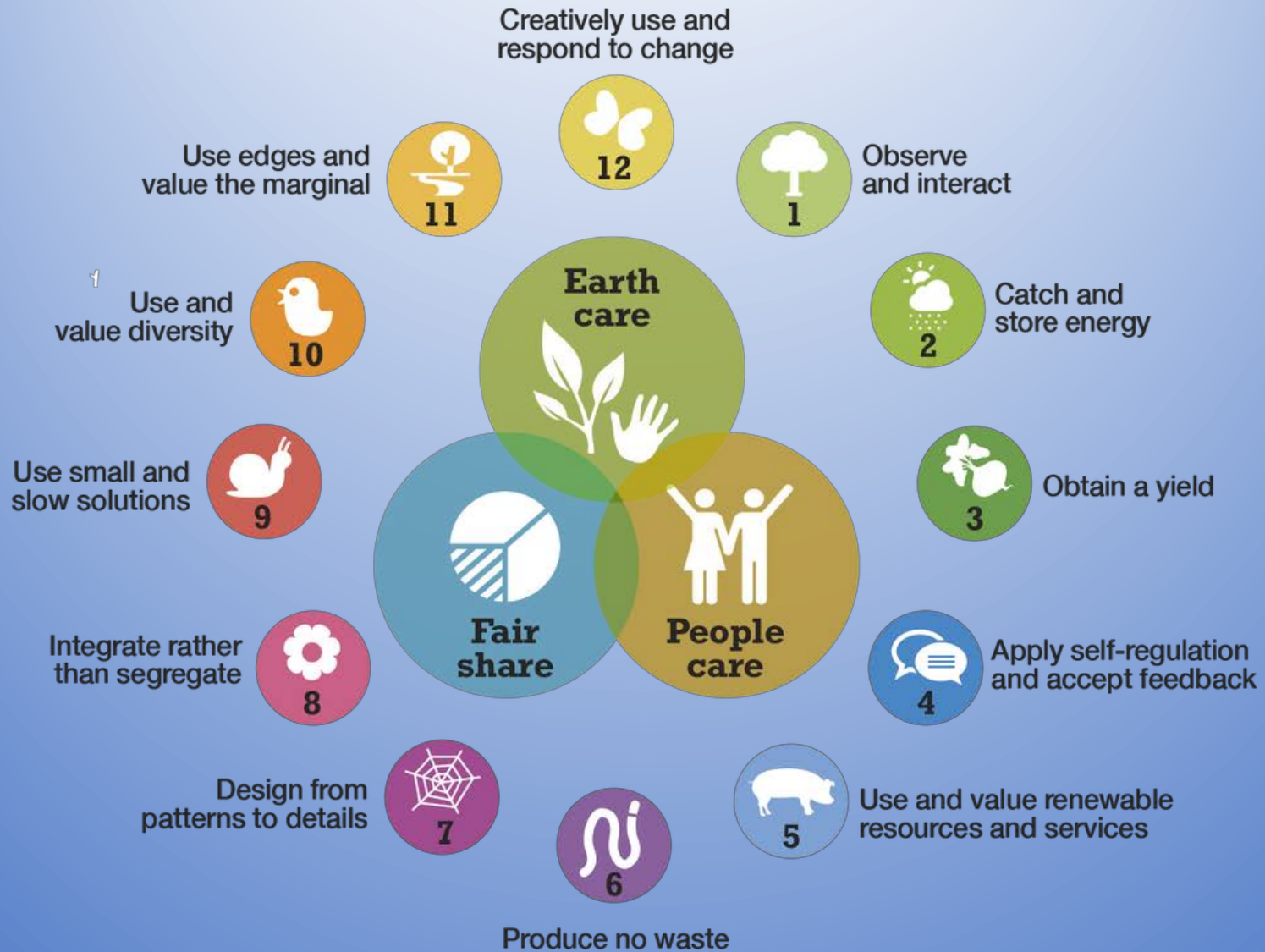
Recognizing the unpredictability of complex systems



# Third Horizon Checklist

- Q Do we really need this new design?
- Q Is it ethical to produce, market and consume the new design in the intended way?
- Q What impact does the design have on the community that produces or employs it?
- Q Is it really safe to make and use the proposed design?
- Q Is it fair? (Does it contribute to greater social, economic and ecological equity without any form of exploitation?)
- Q Is it designed to be repairable and can it be reused over a long period?
- Q What is the full cost over its expected lifetime in terms of social, ecological and economic capital?
- Q Does this new design truly offer a better way to meet certain needs than already existing designs?
- Q How can we ensure that the proposed design does no harm *and* actively helps to restore damage already incurred – regenerating our capacity to meet an unpredictable future with community resilience?
- Q How does the design actively reinforce our lived experience of a regenerative culture and the ‘narrative of interbeing’?

# PERMACULTURE PRINCIPLES



Every Element Supports Many Functions. –

How many functions can we get from every element we include in our plans? Choose each element in a system and place it so that it performs as many functions as possible.

Ex.: A pond provides cooling, supports ducks, fish and aquatic plants, thus creating a richer habitat.

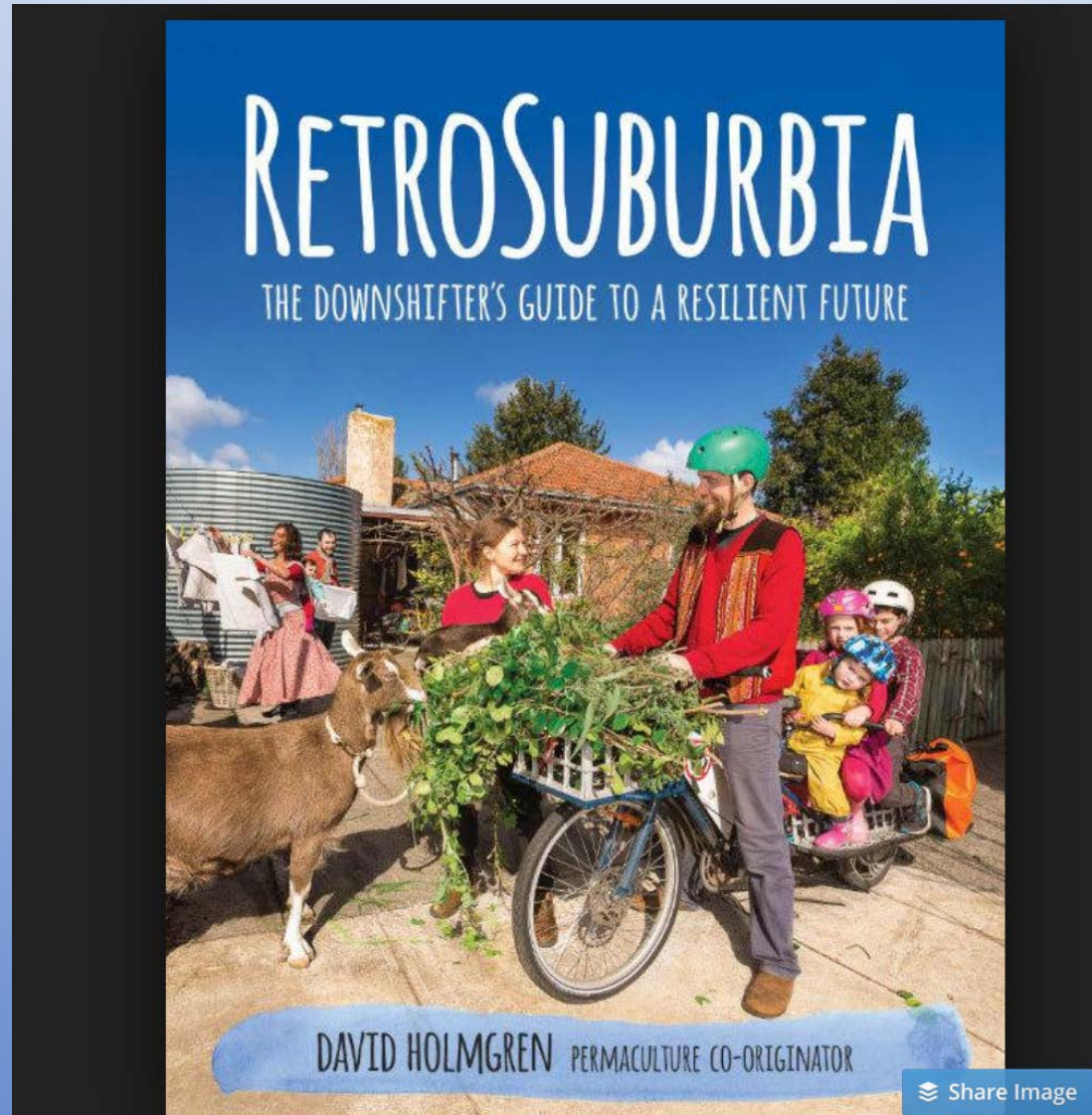
It also catches rainfall, which can be used for irrigation, fire protection or domestic household water.

The clay dug from the pond can be used for building structures such as buildings, walls, benches, ovens and plaster finishes.

A berry hedge serves as food, fence, wildlife and domestic animal forage as well as pollen for bees to make honey.

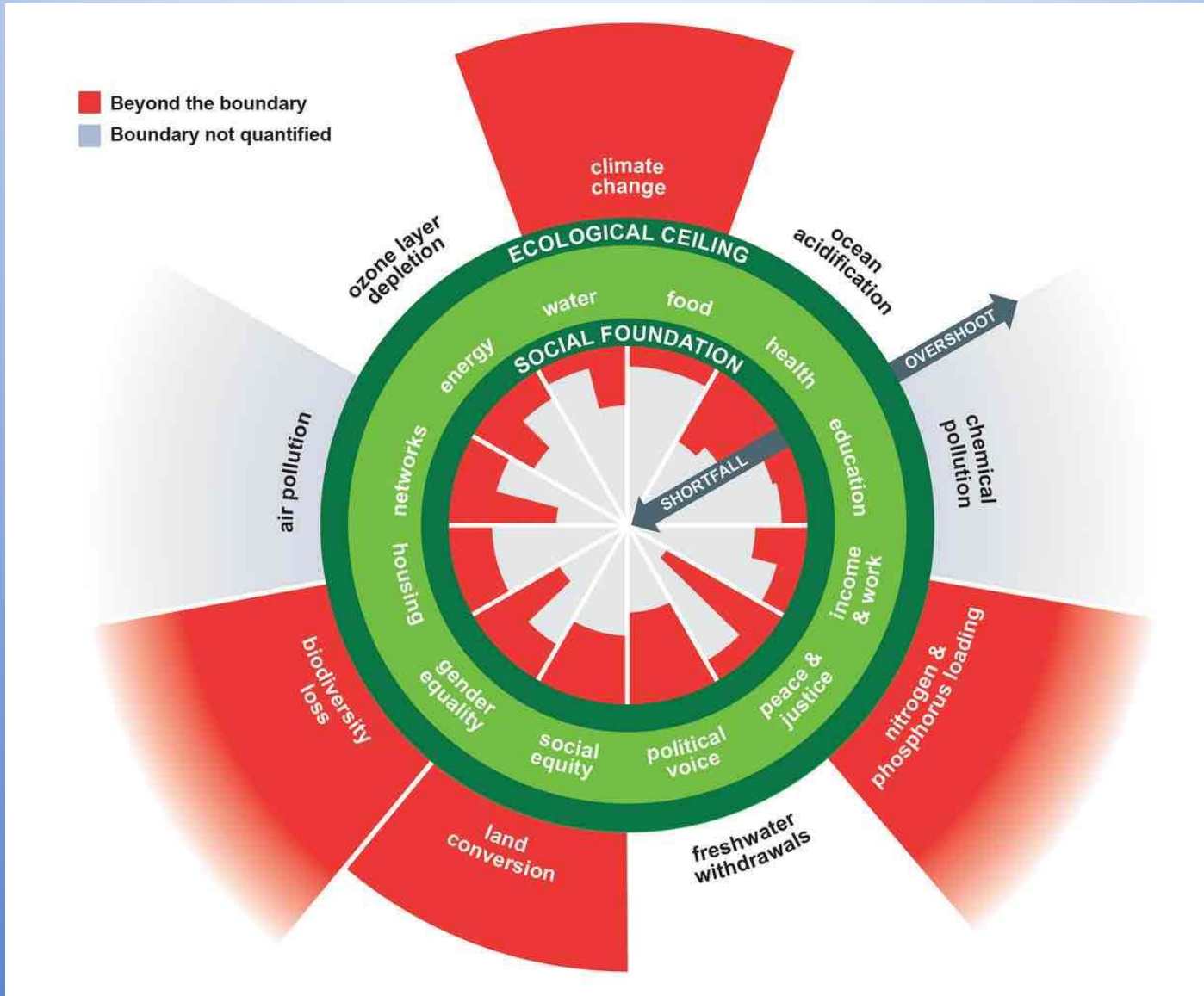


# Retrofitting Suburbia



Source: *RetroSuburbia* by David Holmgren, Permaculture co-ordinator

# Doughnut Economics





# Retrofitting Suburbia

