

# Turning Oil Vulnerability and Climate Change into Economic Opportunity

- Report from America

By

Peter Newman

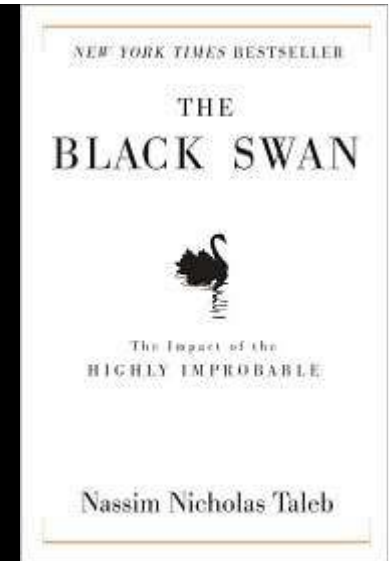
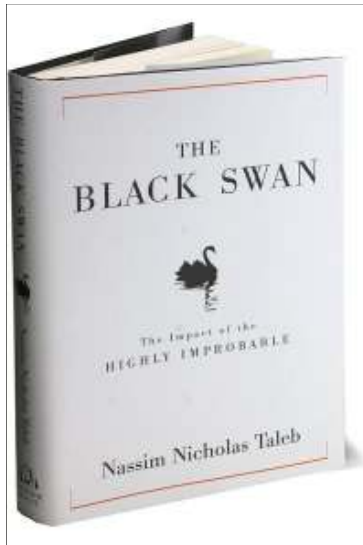
Professor of Sustainability

Curtin University, CUSP

# Greetings from Perth

## - the Swan River Colony, home of the Black Swan

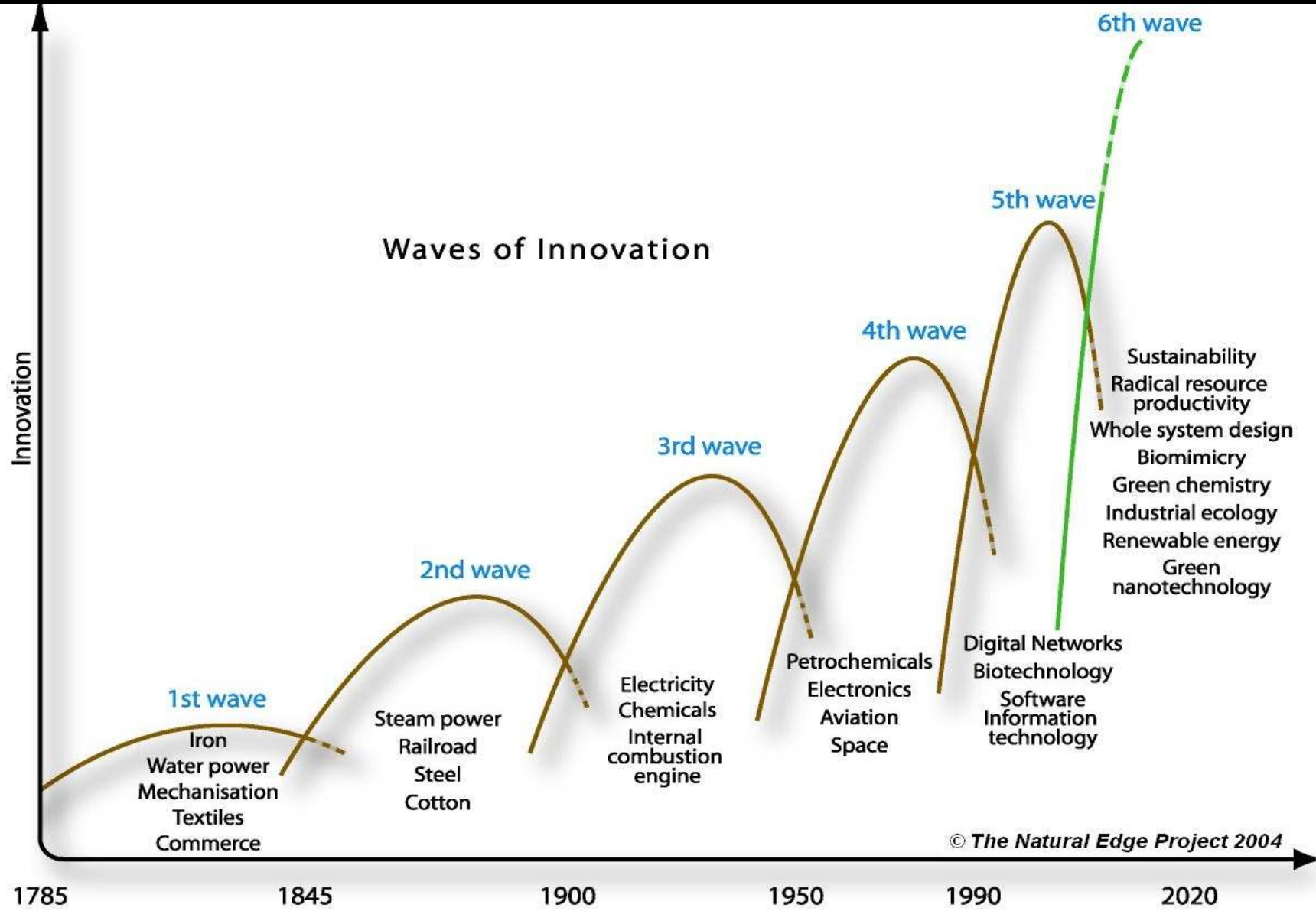




Nassim Nicholas Taleb  
"The Black Swan:  
The Impact of the Highly Improbable."

**UNPREDICTABILITY....**  
**Peak oil, climate change and the crash.**  
**Finding the positive Black Swans.....**

# Waves of Innovation



© The Natural Edge Project 2004



- Global crash caused by **car dependent sub prime mortgages** vulnerable to tripling in fuel price.
- Banks loaned excessively on belief that car-based growth would always happen. Fuel tipped us over...
- CONFIDENCE IN OIL-BASED FUTURE UNDERMINED by sudden *rise*.
- CONFIDENCE IN OIL-BASED ALTERNATIVES UNDERMINED by sudden *fall*.

# Resilient City includes...

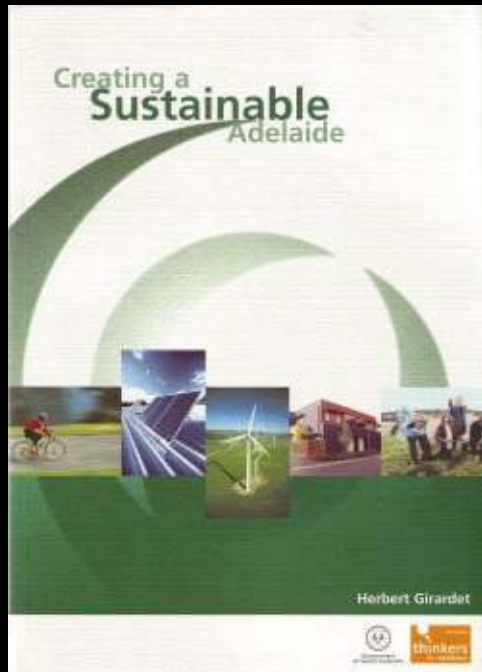
- Renewable Energy City
- Carbon Neutral City
- Distributed City
- Photosynthetic City
- Eco-Efficient City
- Place-Based City
- Sustainable Transport City

*All combine the digital, smart technologies with the new technologies of sustainability.*

# Renewable Energy City



North Terrace Solar Precinct



Adelaide Solar City

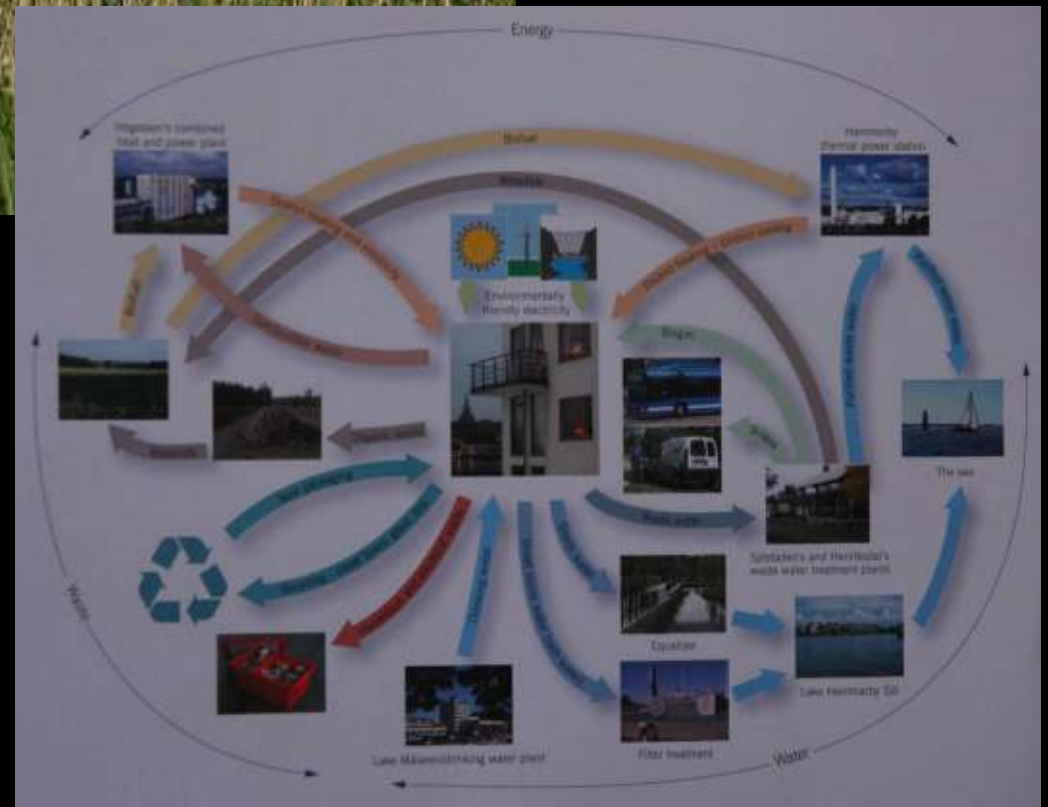
# Photosynthetic City





# Hammarby Sjöstad, Stockholm

# Eco Efficient City



# Distributed City

## Sydney Green Transformers



5  
transformative  
development and  
sustainable renewal

When redevelopment occurs, it provides the opportunity to remake the City in a sustainable way—connecting areas that have been divided by major roads or railways; refining the way energy and water are provided; or creating a fine grain form of streets and lanes.

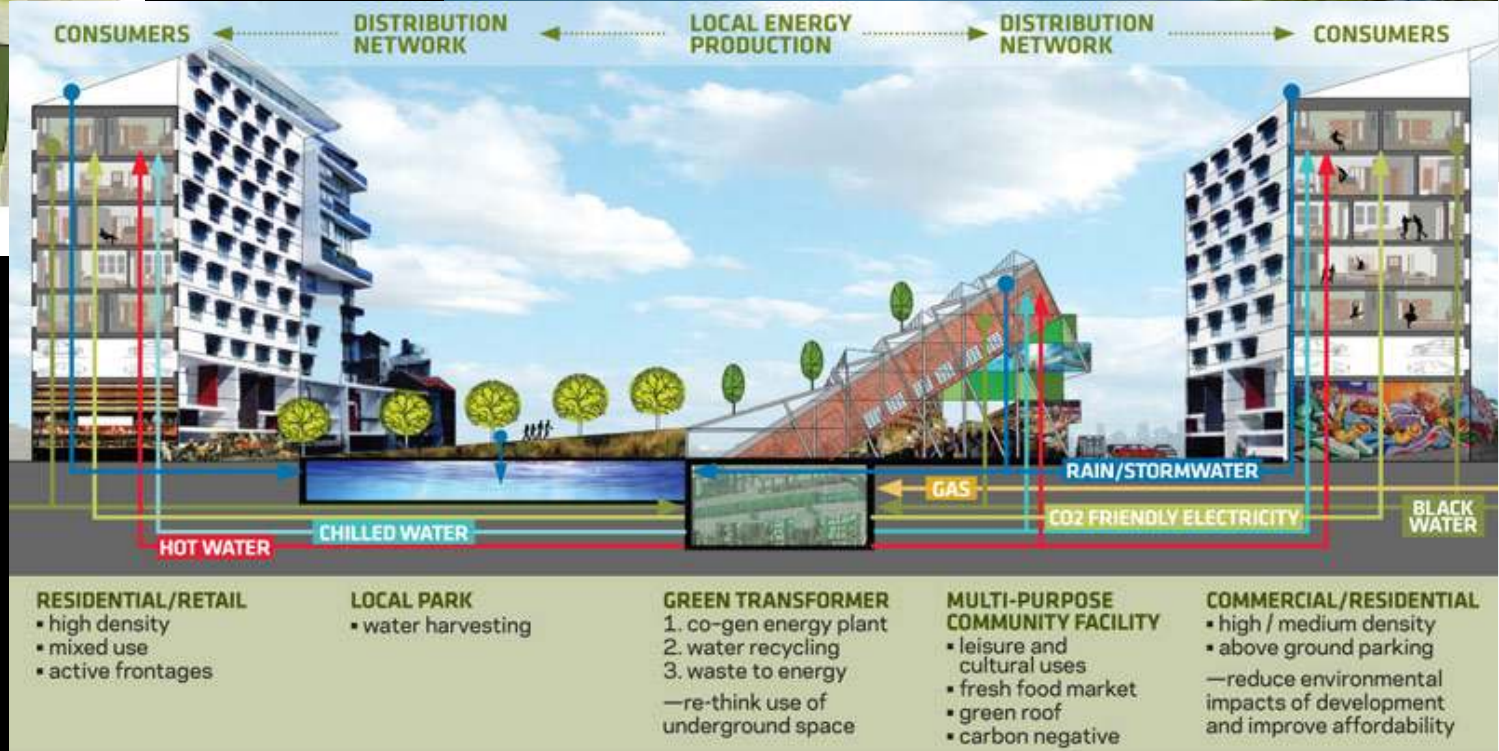
Major development, particularly around areas such as Green Square and Barangaroo, provide opportunity for collective and innovative approaches to energy generation, waste treatment and affordable housing.

Major development, particularly around areas such as Green Square, Barangaroo and Frasers Broadway, provide the opportunity for collective and innovative approaches to energy generation, waste treatment and affordable housing.

INITIATIVES FOR RE-MAKING THE CITY



SUSTAINABLE ENERGY 2030: THE CHALLENGE



# Sustainable Transport City....

- **STOP building extra urban road capacity and urban scatter.** 'The US cannot consume the world's resources without regard to effect' Barrack Obama Inauguration speech. *BLUE economics....save money.*
- **START building electric renewable cities with much greater localism in the economy and infrastructure.** *GREEN economics....spend money.*

# **What do we have to do?**

- 1. Electric transit with TOD, POD, BOD and GOD**
- 2. Electric private transport with PHEV and Smart Grid.**

**1. TRANSIT** eg Opening of new Southern Railway  
90% approval ratings and already paid off.  
Carrying 55,000 per day cf 14,000 on buses.



**2. PHEV - Links renewables into a Smart Grid - can store in electric vehicles via Li-ion batteries...\$30 billion smart green grids in US package.**



**Can now make 100% renewable city...**

**Israel, Denmark and three Australian cities  
starting through Better Place.**

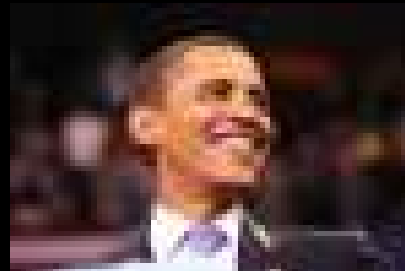
**Boulder demonstration...  
And North Port Quay.**



**'Renewable Transport'**  
[www.sustainability.curtin.edu.au](http://www.sustainability.curtin.edu.au)

# What do we need?

- **Imagination** – Black Swans for sustainability.
- **Post Oil Strategies** for each area and region.
- **Partnerships...and investment in Post Oil demonstrations.**
- **HOPE in our cities**





# Historic Change



# Obama's key messages...

- **Civility** – Oz Guinness *'The Case for Civility: And Why Our Future Depends on It'*.
- **Deliberative processes** – esp through internet
- **Green Economy** – Thomas Friedman *'Hot Flat and Crowded: Why we need a green revolution and how it can renew America'*. Includes energy security....