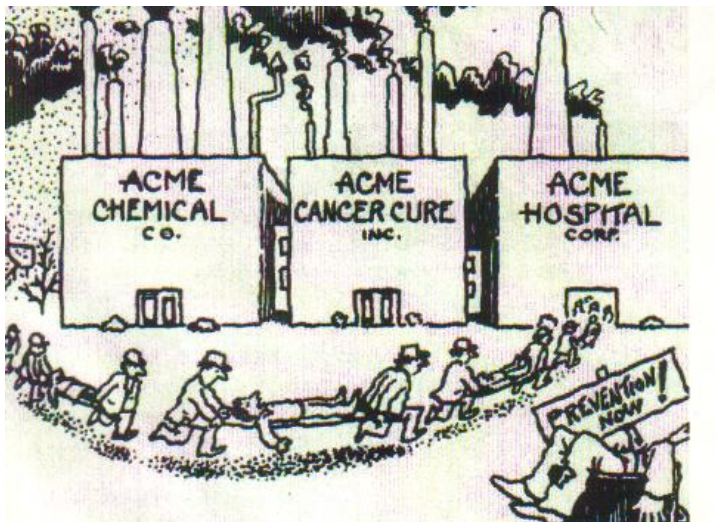


**Climate Change, Healthcare and Carbon Footprints**  
**Sydney, August 2010**

**Waste Management and  
Sustainability**

**Dr Trevor Thornton**  
**Deakin University**

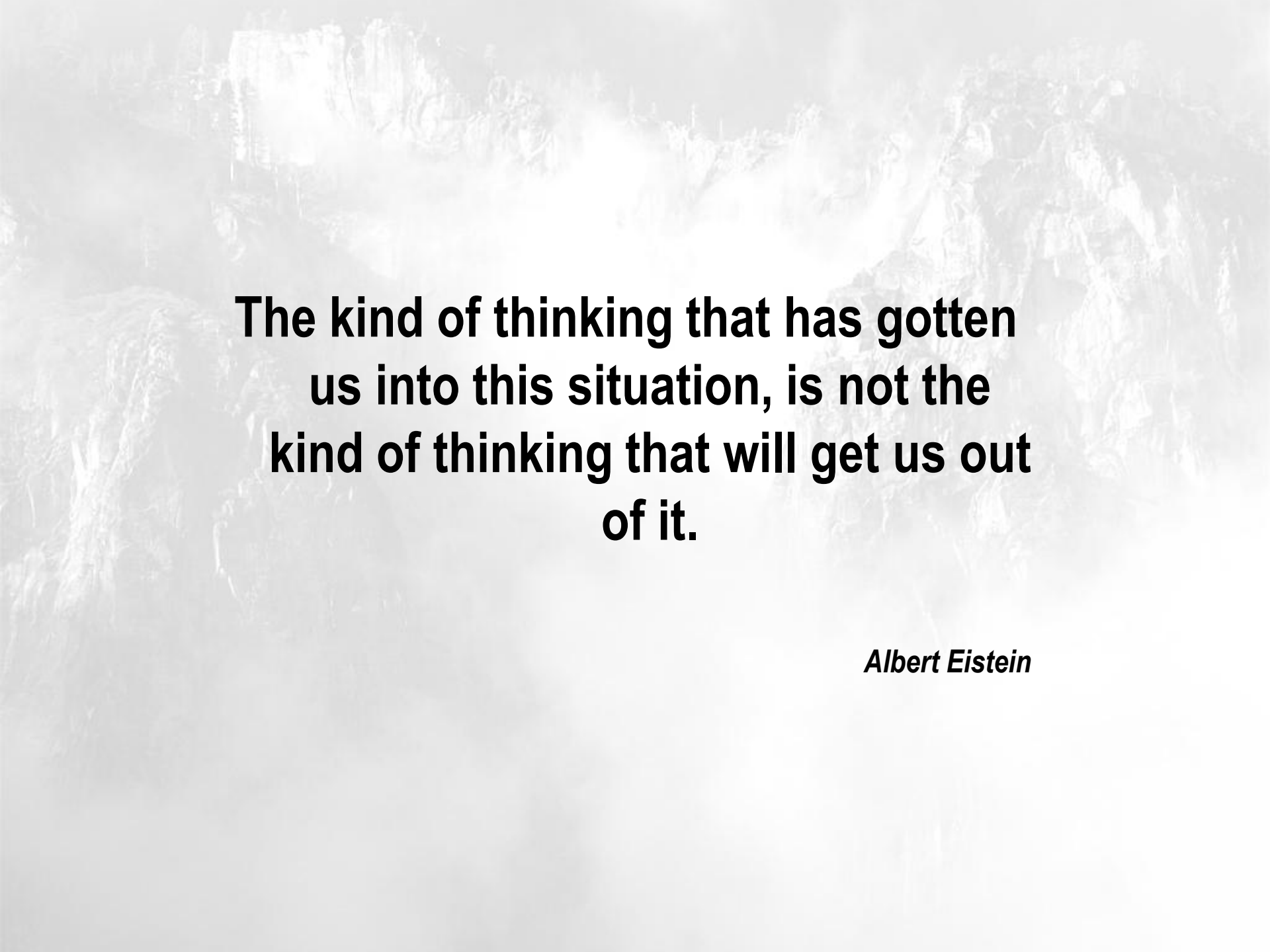
**The bottom line is, the more healthcare impacts environmentally, the more resources that will be needed to treat illnesses as a result of declining environmental quality**



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# Features of Sustainability

- The need to consider, in an integrated way, the wider economic, social and environmental implications of our decisions and actions for Australia, the international community and the biosphere
- The need to take a long-term rather than short-term view when taking those decisions and actions



**The kind of thinking that has gotten  
us into this situation, is not the  
kind of thinking that will get us out  
of it.**

*Albert Einstein*



# How Sustainable

**\$142,206.92 per annum**





The management of health care waste is an issue that is looked upon from both a public health and an environmental point of view

Such different perspectives may lead to gaps in visions and understanding, and even definitions

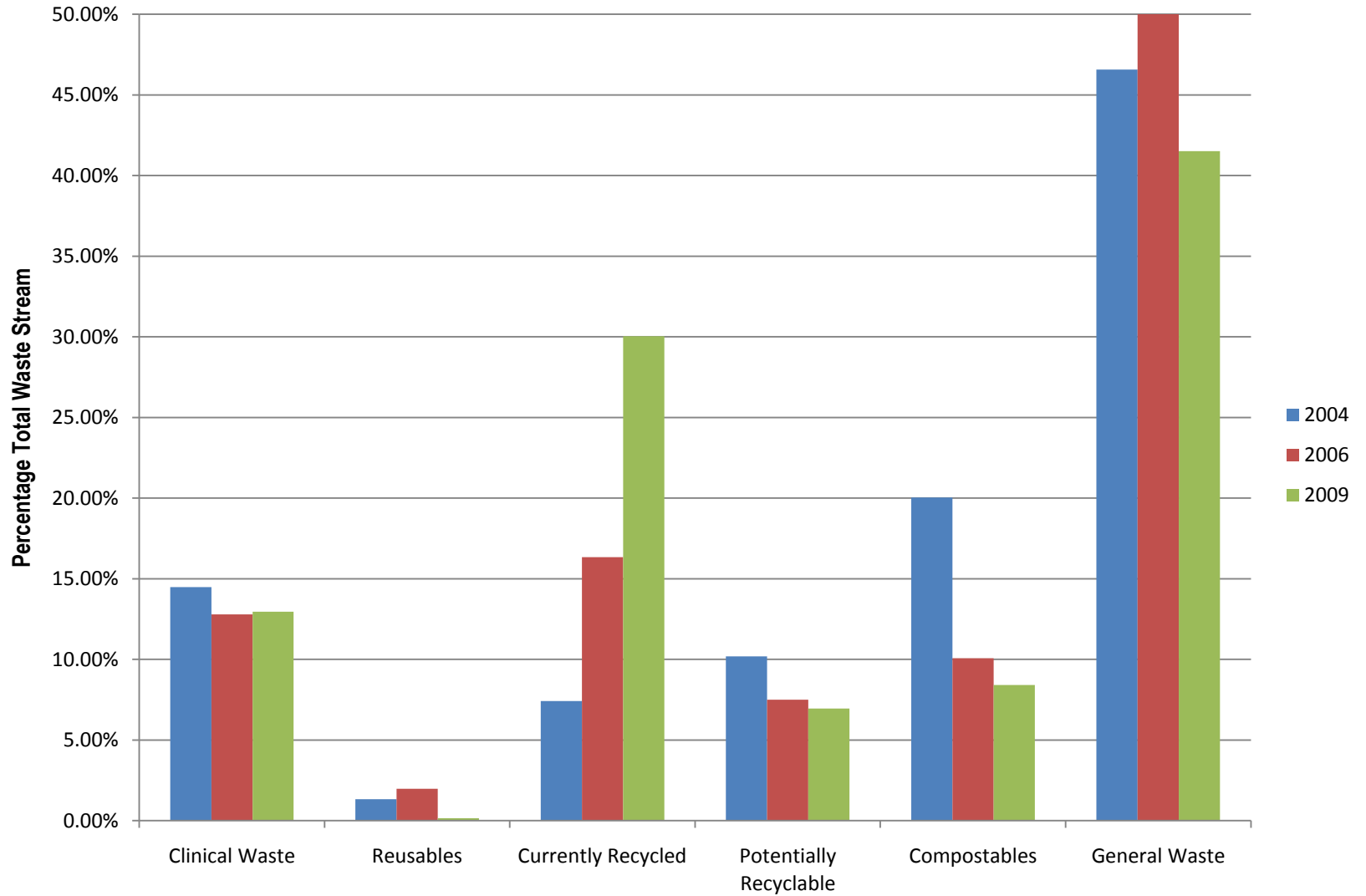
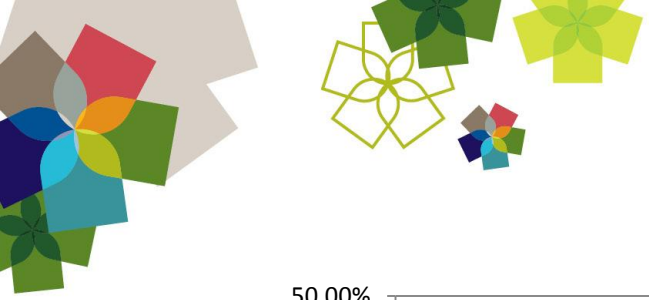


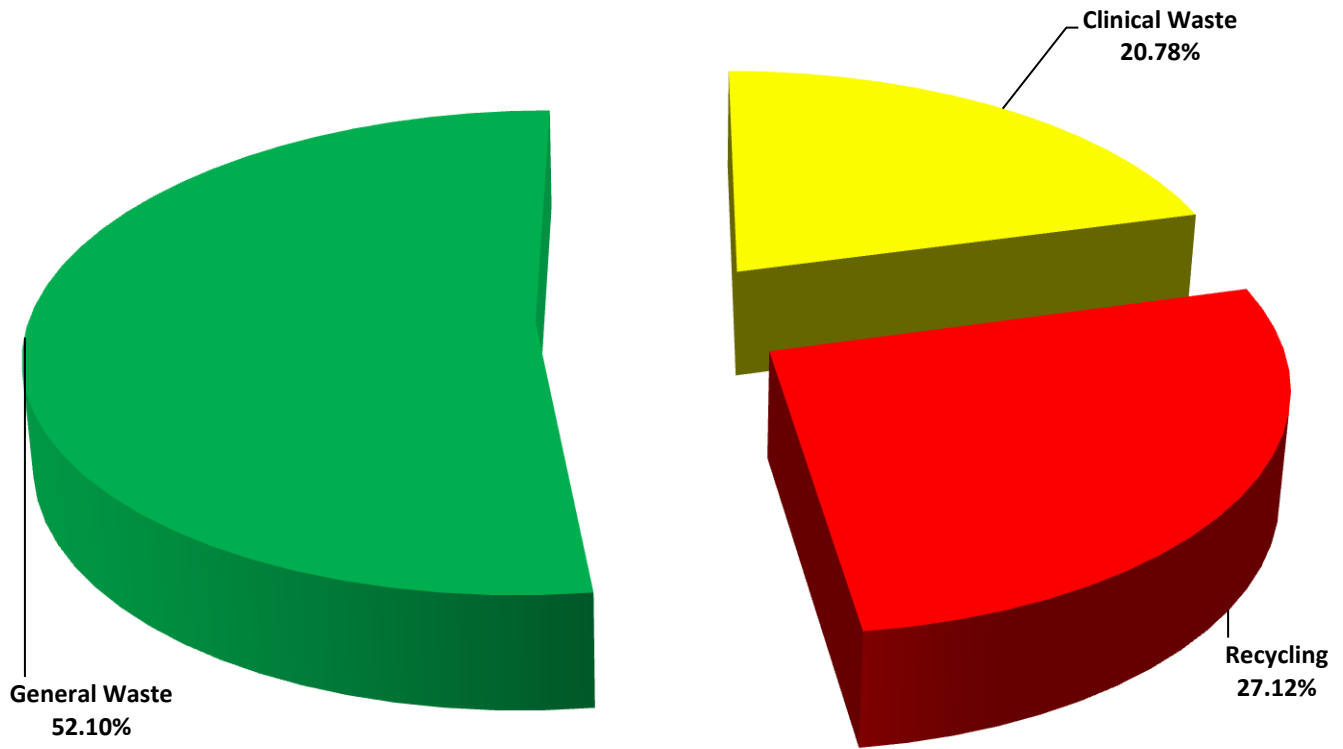
**Improved waste management is linked in with  
the drive for greater sustainable use of all  
resources including energy, water, transport  
and waste reduction**

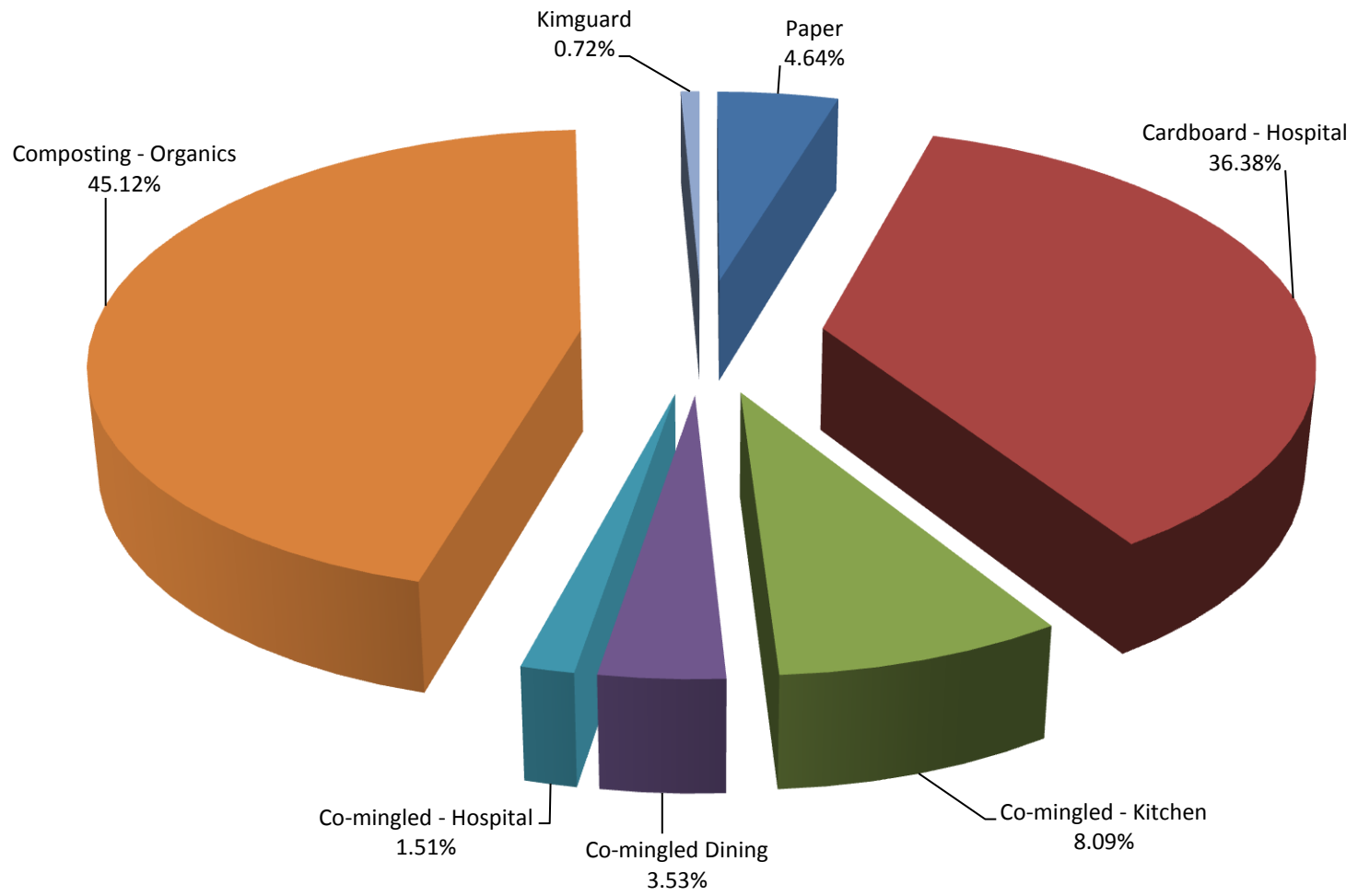
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# Waste Generation

- Waste generation is a measure of inefficiency
- If a hospital was to improve efficiency, it would be important to actually understand what these inefficiencies are
- Need comprehensive data and tools to use the data
- How much should an orthopaedic bed generate as opposed to a medical bed







# Toast

- A lot wasted
- Should be warm and not dried out
- Often isn't
- Patients not happy
- Staff not happy
- Cost of buying the bread, energy, labour and waste
- Can be fixed and has been



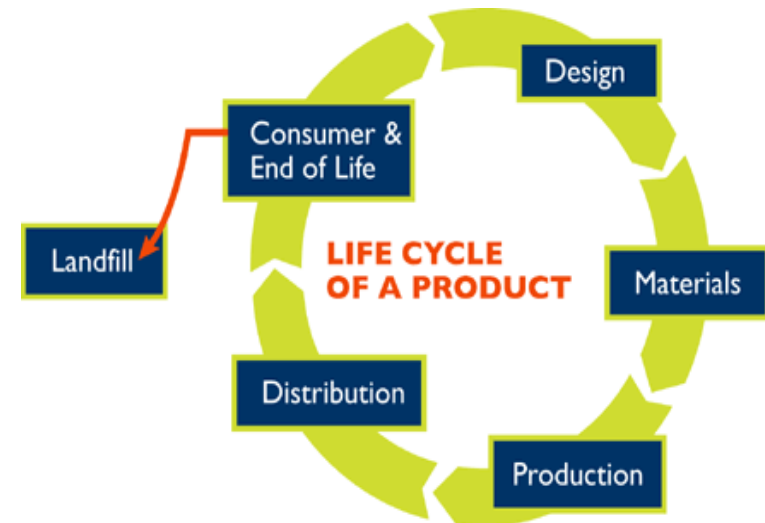
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# Traditional Waste Management

- At source segregation of all wastes
- Appropriate storage and handling
- No manual handling
- Appropriate transport
- Appropriate treatment and disposal
- Generally compliance centred
  
- If these are being achieved, there is a belief that waste management is “sustainable”

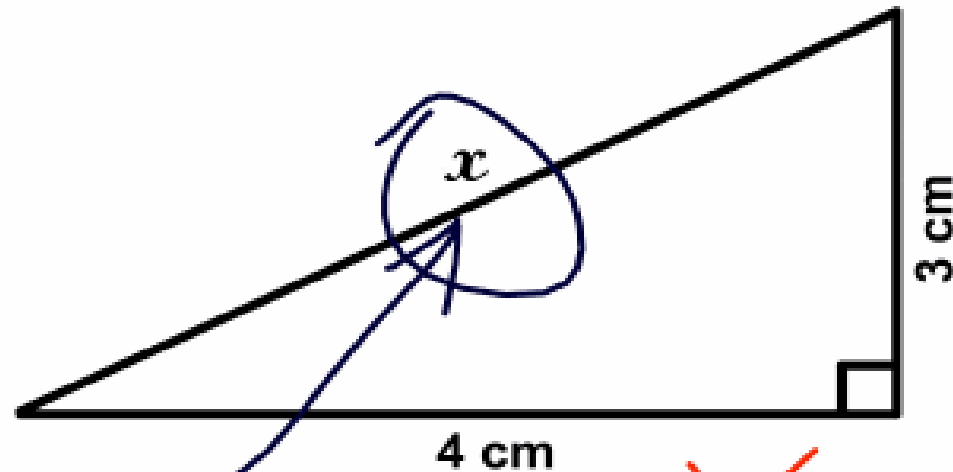
# Approaches

- Waste audits/assessments
- Life cycle analysis
- Eco-footprint
- Supplier commitment



# Sometimes it is the Obvious

3. Find  $x$ .



Here it is



# Life Cycle Analysis

Used to evaluate the total environmental impacts associated with a product, process or activity

identifies:

- types, stages and quantities of discharges, energy & raw materials

therefore:

- improving information base for decision making by assessing the impact of these energy/material uses and waste discharges

enabling:

- methods to reduce these impacts to be developed

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# Innovation

- Innovation has many meanings.
- An innovation may be a new way of thinking or an invention that is the product of this way of thinking.
- ***“The prize goes to the exploiter of the invention - not necessarily the invention”.***



# The Future

- Bring waste to front of the process not hidden away behind the process
- Need to act much more widely in procurement – not in waste management options
- But also to reduce the impact of waste – where does it go and how does it get there
- Ignore waste – focus on resource efficiency
  - Measure efficiency of input resources – measuring inputs rather than waste

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## Practically Though ....

- Greater emphasis on diverting materials from landfill
  - Organic materials and recyclables
- Extended producer responsibility
- Corporate accountability
- Channels of influence / Supply chains
- Benchmarking
- Consolidate experience and influence

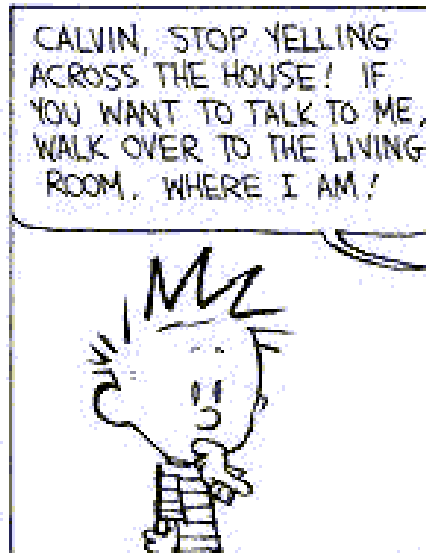
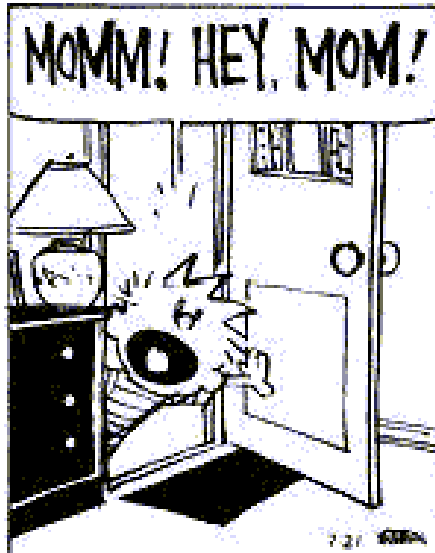


## Extension activities

- Collect pharmaceuticals from the community
- Promote waste management (and particularly avoidance) as a health related issues



# Important to Listen & Respond





**Thankyou & Questions**