

Future Drivers of Urban Form



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Mimicking Ecosystems
The Eco-Rainforest – Grimshaw Architects

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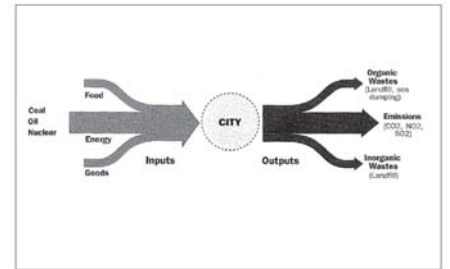


Diagram 2a: Linear metabolism
Cities consume and pollute at a high rate

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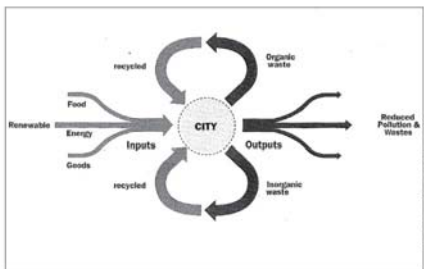
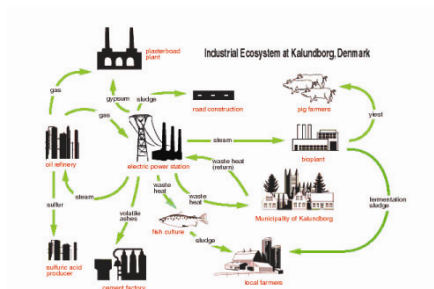
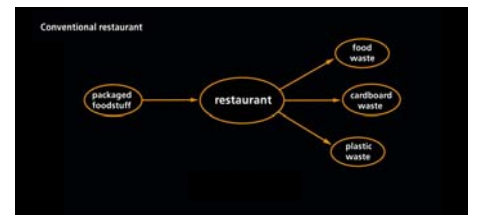


Diagram 2b: Circular metabolism
Cities minimise new inputs and maximise recycling

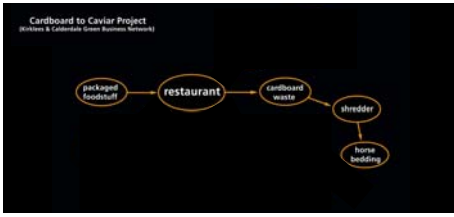
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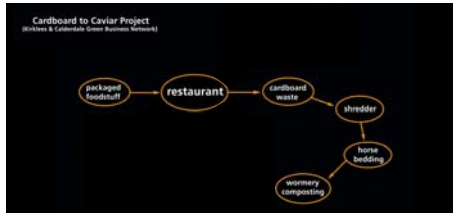
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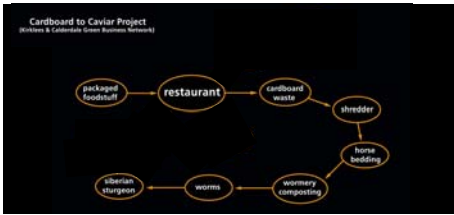
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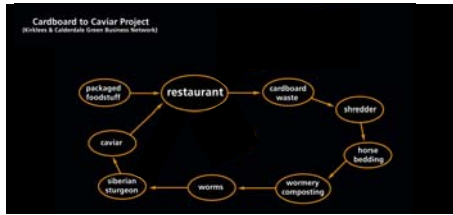
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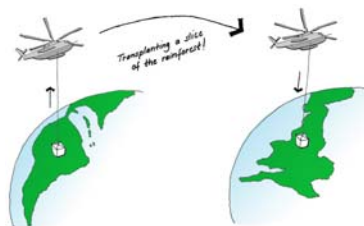
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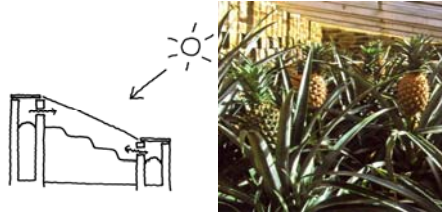
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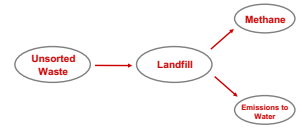
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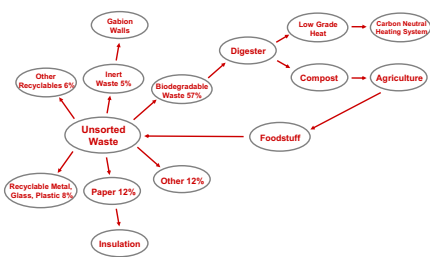
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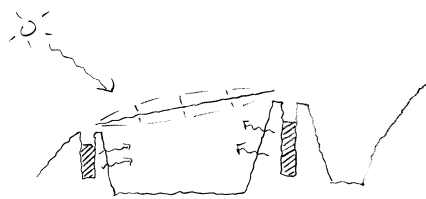
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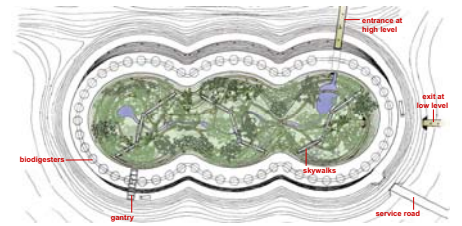
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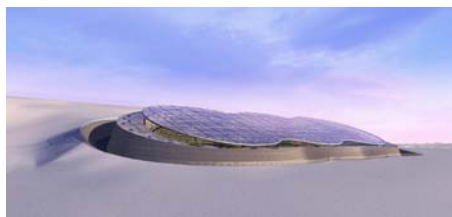
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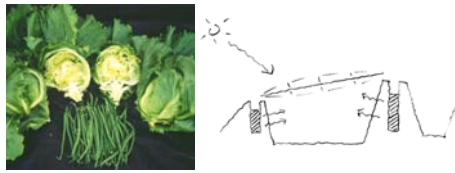
Eco-rainforest revenue streams:

- Electrical value (4.5p/kWh) £1.2 million
- Heat value (2p/kWh) £0.7 million
- Landfill tax (£20/t) £7.1 million
- Compost value (£20/t) £0.5 million

Total £9.5 million / year

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The Community Ecology Centre



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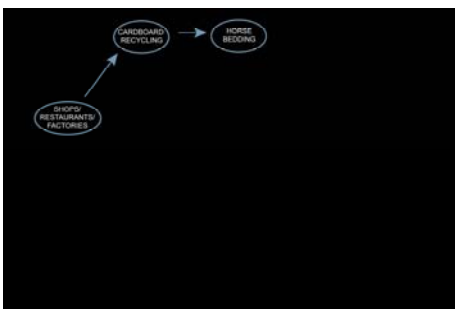
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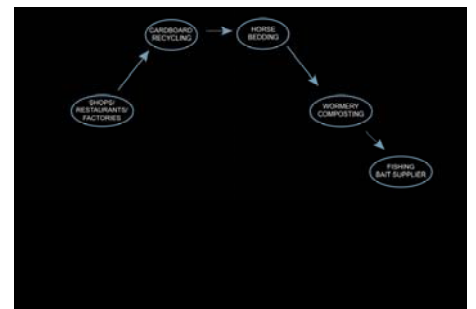
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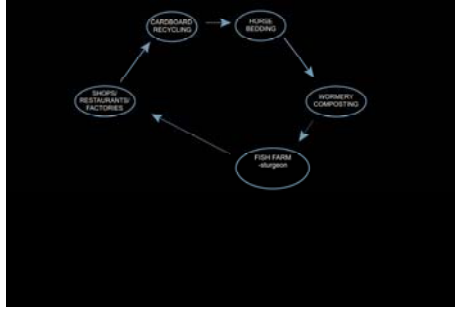
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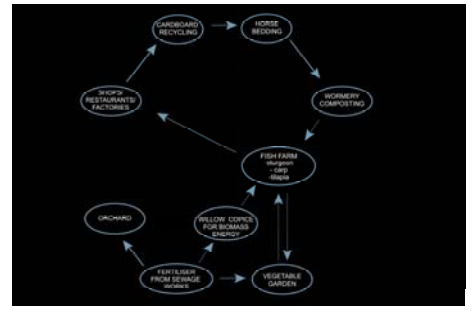
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Conclusions

Man-made systems

- Simple / Linear
- Disconnected
- Wasteful
- Fossil fuel dependent

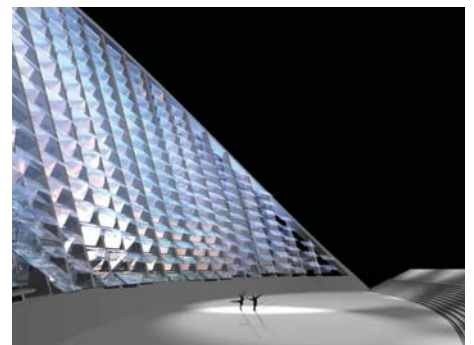
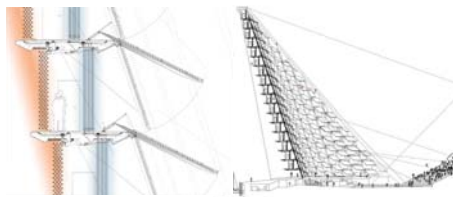
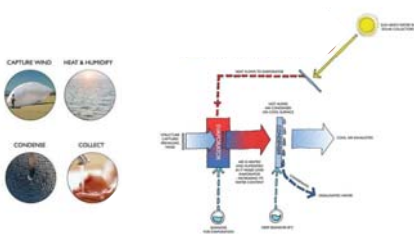
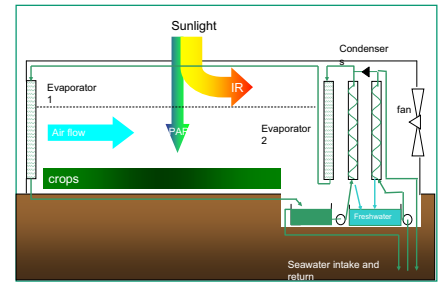
Natural systems

- Closed loop
- Densely interconnected
- Zero waste
- Current solar income



Mimicking Natural Processes

The Las Palmas Water Theatre
Grimshaw Architects & Charlie Paton

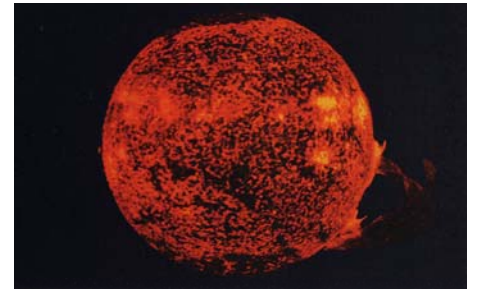




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Mimicking Systems & Processes

The Sahara Forest project



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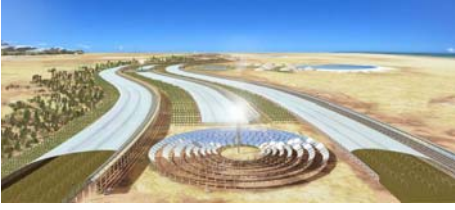
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