Regenerative development and its role in transition

Dominique Hes, Director of the Thrive Research Hub, MSD, the University of Melbourne

t: Thrive_Research  f:ThriveResearchHub
TRANSITION WHY DO WE NEED IT
Transition allows us to constructively work with and through change.
REGENERATIVE DEVELOPMENT WHAT IS IT?
Regenerative development is a process through which design for the **health**, **vitality** and **viability** of the **whole system** not just the building.

1. Understand the flows
2. Design for mutually beneficial relationships between flows
3. Embrace uncertainty and change – design
E.G. OF CURRENT TRANSITION - A SHIFT FROM COAL?
Understand the flows that bring a place like Latrobe Valley to life – the people, their skills, the land, the ecosystems, the industries, the history, the way of life, what is great and what is not.

Design systems that allows the good to be strengthened and potential to emerge – from the ground.

Image source: Herald sun, photographer Mark Stewart
WHAT DOES THIS MEAN FOR THE BUILDING INDUSTRY?
Biosciences Precinct Melbourne

Project collaboration between AURECON and the Thrive Research Hub, MSD, the University of Melbourne

Figure source: Aurecon report to the University of Melbourne
<table>
<thead>
<tr>
<th>Flow</th>
<th>Metric</th>
<th>Business as Usual</th>
<th>Best Practice</th>
<th>World Leadership / Regenerative</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Energy</strong></td>
<td>Operational Carbon Emissions</td>
<td>Operational carbon emissions (excluding green power purchased from the grid) less than 230 kgCO₂e/ m²/year.</td>
<td>Operational carbon emissions (excluding green power purchased from the grid) less than 115 kgCO₂e/ m²/year.</td>
<td>More energy is generated on the site than is used in the lifecycle of the zone (operational and embodied energy).</td>
</tr>
<tr>
<td></td>
<td>kgCO₂e/ m²/year</td>
<td>(50% reduction from BAU).</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Embodied Energy</td>
<td>Embodied energy of the building less than 10 GJ/m².</td>
<td>Embodied energy of the building less than 7.5 GJ/m².</td>
<td></td>
</tr>
<tr>
<td><strong>Water</strong></td>
<td>Mains water consumption</td>
<td>Mains water consumption less than 359 L/m²/year.</td>
<td>Mains water consumption less than 179 L/m²/year.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>L / m²/year</td>
<td>(50% reduction from BAU).</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Physical, mental &amp; spiritual balance</strong></td>
<td></td>
<td>Limited options for occupants to maintain physical, mental and spiritual health.</td>
<td>Promotion and celebration of occupant’s health and well-being.</td>
<td>Promotion of sense of community and belonging.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Facilities available and equipped to encourage mental &amp; physical health.</td>
<td>Facilities available and equipped to encourage mental &amp; physical health.</td>
<td>Promoting connectivity with the surrounding environment.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Access to facilities that encourage physical exercise.</td>
<td>Access to facilities that encourage physical exercise.</td>
<td>Programs established that promote healthy lifestyle goals.</td>
</tr>
<tr>
<td><strong>Equity &amp; inclusivity</strong></td>
<td></td>
<td>Limited opportunities for celebrating equality and diversity.</td>
<td>Nurseries a heightened level of equity and diversity.</td>
<td>Provide facilities that give a sense of safety whilst occupants undergo physical exercise.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recognises and praises cultural and intergenerational diversity.</td>
<td>Eradication of negative demographic divisions.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Limit exposure to toxic conditions. Some promotion of fresh air in indoor and outdoor settings.</td>
<td>Access to internal communities that promote health lifestyle choices.</td>
<td>Respect and honour the social, economic and environmental equity and inclusivity.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Access to clean water for all occupants. Some degree of access to natural light for indoor settings.</td>
<td></td>
<td>Ease of access for all demographics, including genders.</td>
</tr>
<tr>
<td><strong>Transport</strong></td>
<td>Zone development plan summary</td>
<td>Promotion of public transport. Greater amount of bike racks and end-of-trip facilities.</td>
<td>Promotion of public transport.</td>
<td>Promotion of public transport.</td>
</tr>
<tr>
<td></td>
<td>Zone wide transportation focus</td>
<td>Mixed transportation use.</td>
<td>Mixed transportation use, larger focus on public transport and cycling.</td>
<td>Cycling dedicated zone.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Infrastructure and policy support for low emission vehicles.</td>
</tr>
</tbody>
</table>

Table source: Aurecon report to the University of Melbourne
Biosciences Precinct Melbourne

Project collaboration between AURECON and the Thrive Research Hub, MSD, the University of Melbourne

Application guide

- 2 hour workshop of regenerative thinking
- Integration process into project design and delivery
- Create potential in the design/construction/etc. team

Table source: Aurecon report to the University of Melbourne
The Paddock, Castlemaine

Increase the ecological capacity.
Higher density to leave room for community space, art, music, gardens and nature.
Living Building Challenge homes – energy/water/waste positive, healthy, beautiful.
Biophilia workshop.
Citizen science and expert ecologist baseline.
Intentional community research.

Give a man a fish
Teach him how to fish
Teach a man to love the ocean

What does this mean for the building and construction industry:
Shifting the story of development and construction from villains to heroes

Source: www.living-future.org
Source: ARUP video Greening Manchester: http://video.arup.com/?v=1_ksglwlr5
EMBRACING CHANGE – HOW CITIES CAN THRIVE INTO THE FUTURE
Cities – greatest focus of HUMAN potential
Design for that potential to emerge
- Learn from the past
- Allow people to contribute
- Niches
- Start small
- Allow local experimentation
- Celebration
- Delight and fun

KEY
- Change is an opportunity to constructively adapt – strengthen the good address the less optimum
- It’s is about facilitating contribution – creating a love for place
- Build develop and design for potential not to solve a problem
- Let go – design things to create their own path
THANK YOU
t: Thrive_Research  f:ThriveResearchHub