How we are...

creating places where people want to live and work

ASHRAE Qatar Oryx Chapter
Presented by: Lakshmi Suryan
“HEALTH IS A STATE OF COMPLETE PHYSICAL, MENTAL, AND SOCIAL WELL-BEING, AND NOT MERELY THE ABSENCE OF DISEASE OR INFIRMITY.

THE WORLD HEALTH ORGANIZATION
Genetics are responsible for 10% of our state of health. The vast majority is based on our physical & social environment…

…Where we live and work

World Health Organization
and the Centre for Disease Control
WHAT DETERMINES THE STATE OF HEALTH?

Aim of today’s presentation

The start of our journey – Google’s healthy materials programme

Our involvement - The impact of buildings on our cognitive functions

What we can do – WELL to the future
The start of our journey
Google & Healthy Materials Programme
Google
Healthy Materials Program

Locations
UK, Ireland

Involvement since
2012-present

Developing & implementing the industry leading healthy material program

Aim
Elimination of potentially harmful chemicals substances
<table>
<thead>
<tr>
<th><strong>Client</strong></th>
<th>Google</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location</strong></td>
<td>San Francisco Bay Area, USE</td>
</tr>
<tr>
<td><strong>Involvement since</strong></td>
<td>2015-present</td>
</tr>
<tr>
<td><strong>Living Building Challenge – Materials Petal, Google Healthy Materials Programme</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Aim</strong></td>
<td>Construct a flagship exhibition of sustainability</td>
</tr>
</tbody>
</table>
The impact of green buildings on cognitive function study
Scientific studies on healthy buildings
Studies around science
Universities interested in healthy living
Published an interesting study on the subject of cognitive functions
THE IMPACT OF GREEN BUILDINGS ON COGNITIVE FUNCTION

STUDY 1: INDOOR ENVIRONMENTAL QUALITY

STUDY 2: BUILDINGOMICS

STUDY 3: GLOBAL BUILDINGS

MOTT MACDONALD & HARVARD T.H. CHAN SCHOOL OF PUBLIC HEALTH
The benefits of green certification standards proved to go beyond measurable IEQ factors.
• Synergies between Building Performance for People and the CogFX study – cross-referencing our own software and developing technical capability

• Five Mott MacDonald offices are participating

• Study launched in July 2018
WELL to the future?
THE BUILDINGS WHERE WE LIVE, WORK, LEARN AND RELAX PROFOUNDLY IMPACT OUR HEALTH, WELL-BEING AND PRODUCTIVITY.
90% of our life is spent in buildings¹

86% Vitamin D deficiency

5.6 Average sick days per year²


Buildings
Interiors
Shell and Core
Communities

Work environment
Living environment
Social environment
WELL around the globe
Certified Projects
WELL Rating System

Concepts

1. Air
2. Water
3. Nourishment
4. Light
5. Movement
6. Thermal Comfort
7. Sound
8. Materials
9. Mind
10. Community
WELL Rating System
Concepts

1. Air
2. Water
3. Nourishment
4. Light
5. Movement
6. Thermal Comfort
7. Sound
8. Materials
9. Mind
10. Community
Disruption to the body’s circadian rhythm are associated with chronic diseases including obesity, diabetes, and depression.¹

70% of population are either obese or overweight in the Qatar

83% of population does little or no physical exercise in Qatar

45% of the participants of the study consume fast food more than three times a week

Movement

- Features company provided fitness activities / access to exercise
- Building design to promote walking and use of stairs
- Active furnishings
Workers in offices with natural elements such as greenery and sunlight are 6% more productive, 15% more creative, and report 15% higher level of well-being.

¹ https://blog.interface.com/category/topic/biophilic-design/
Mind

- Completely new category compared to LEED or BREEAM
- Biophilia, business travel policy, sleep policy, family support, stress treatment, altruism
- Material transparency

<table>
<thead>
<tr>
<th>Topic</th>
<th>Feature</th>
<th>Precondition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mind</td>
<td>89</td>
<td>Adaptable spaces</td>
</tr>
<tr>
<td></td>
<td>90</td>
<td>Healthy sleep policy</td>
</tr>
<tr>
<td></td>
<td>93</td>
<td>Workplace family support</td>
</tr>
<tr>
<td></td>
<td>95</td>
<td>Stress and addiction treatment</td>
</tr>
<tr>
<td></td>
<td>96</td>
<td>Altruism</td>
</tr>
<tr>
<td></td>
<td>97</td>
<td>Material transparency</td>
</tr>
<tr>
<td></td>
<td>98</td>
<td>Organizational transparency</td>
</tr>
</tbody>
</table>
Mind
WELL to the future?