

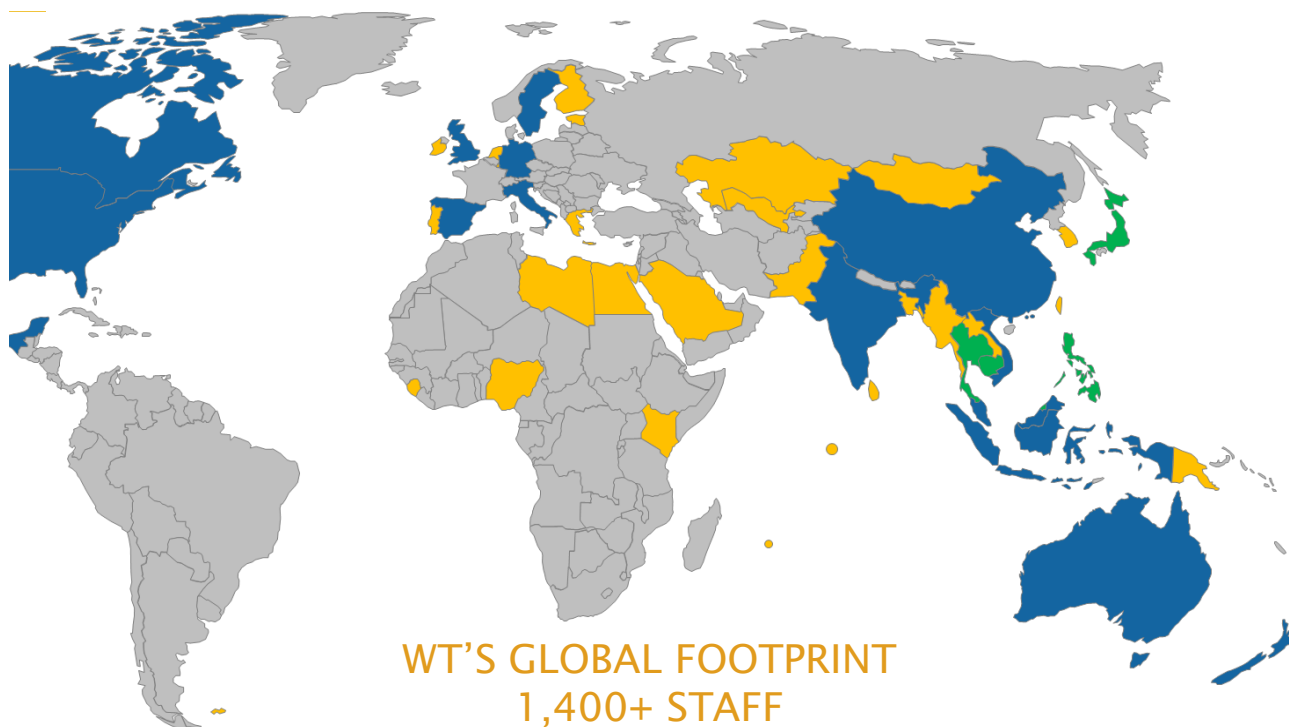
# SUSTAINABILITY IN THE BUILT ENVIRONMENT

## HISTORY OF RATING TOOLS

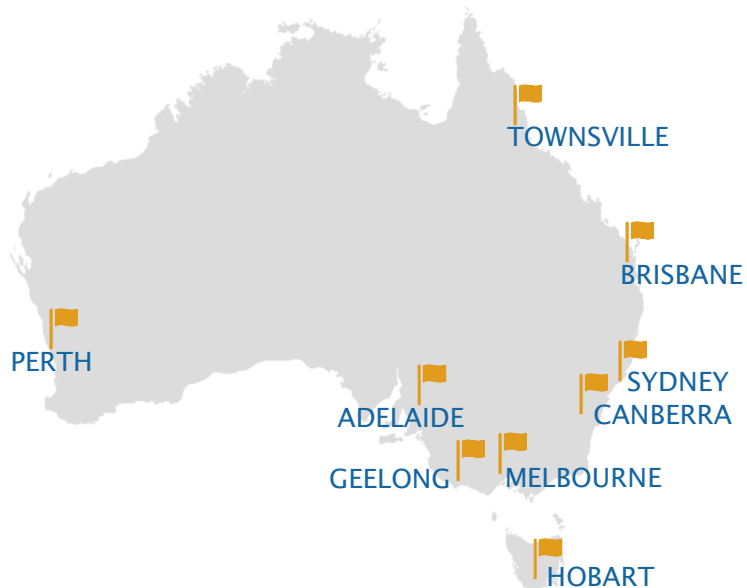
Pratik Shah  
5 December 2017

### CONTENTS

- Setting the scene
  - History of Environmental Sustainability
- Overview of Rating frameworks
  - Green Star
  - WELL Building Standard



## WT'S FOOTPRINT - AUSTRALIA



320+ STAFF NATIONWIDE



# OUR SERVICES



WT CONSULTANCY

# SETTING THE SCENE





## GLOBAL CONTEMPORARIES



Pirelli Tower,  
Gio Ponti & P.L. Nervi, 1960



PanAm Building  
(now MetLife building),  
Walter Gropius, 1963

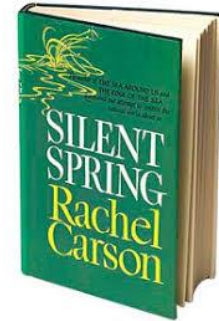


IDS Centre,  
Philip Johnson, 1972

## LATE '50s TO EARLY '70s

### Rachel Carson's **Silent Spring**, 1962

- Focussed on pesticide use and its adverse impact on the environment
- Human activities and its relationship with the environment was examined



- 1963: Designing with Climate (Olgay and Olgay)
- 1967: Sun, Wind, Water (Ralph Knowles)
- 1968: Form and Stability (Ralph Knowles)
- 1970: **First Earth Day**



## ...BACK IN AUSTRALIA

- 1970-74: Green Bans in Australia
  - Kelly's Bush, Hunters Hill
  - The Rocks precinct
  - Royal Botanical Gardens
- 1977: Heritage Act
- 1979: Environmental Planning and Assessment Act (EP&A)


- 1973: OPEC Oil Embargo
  - October '73 to March '74
- 1979: Oil Crisis
  - 12 months





1983-87: World Commission on Environment and Development released 'Our Common Future' (Brundtland Report), which defined **Sustainable Development** as:

- *A development that meets the needs of the present without compromising the ability of future generations to meet their own needs*

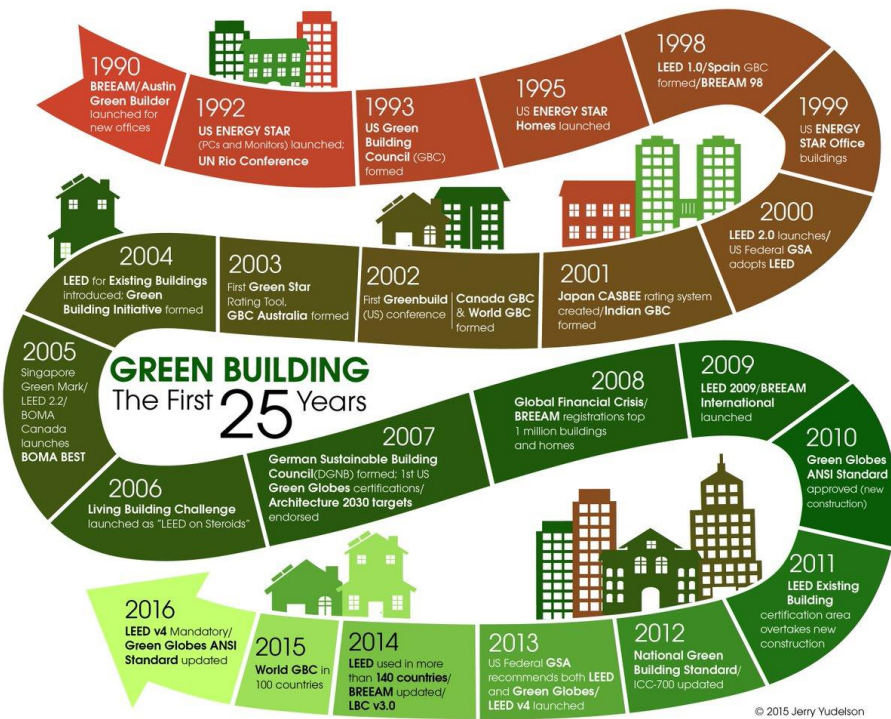
- 
- 1985: Vienna Convention for protection of Ozone Layer
  - 1987: Montreal Protocol for substances that deplete Ozone Layer
  - 1990: Intergovernmental Panel on Climate Change (IPCC) – First Assessment Report



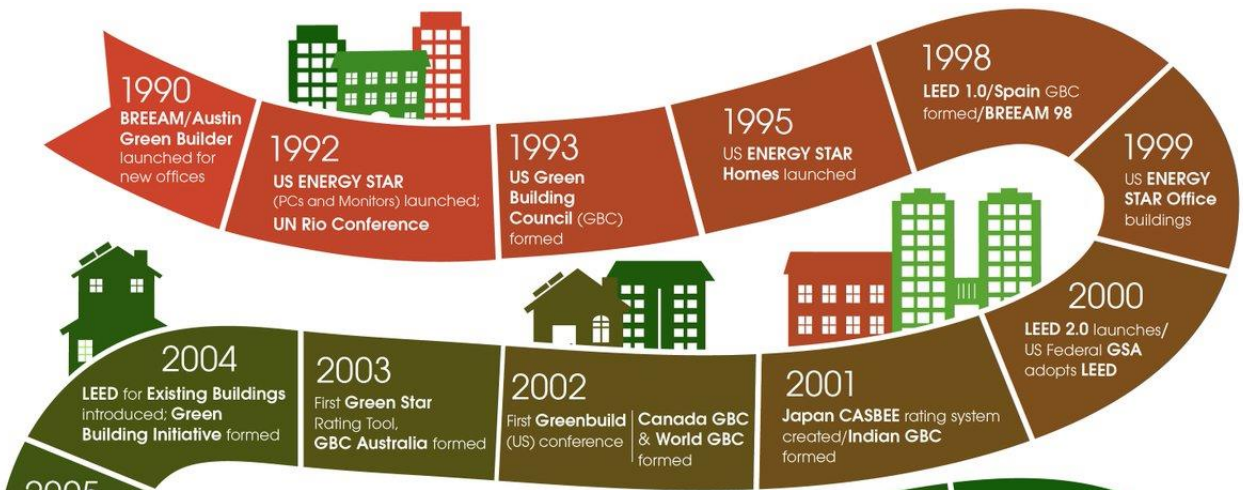
- 1992: UN Earth Summit in Rio
  - Agenda 21 (Sustainable Development)
  - Framework Convention on Climate Change (UNFCCC)
- 1997: UNFCCC Kyoto Protocol







# CHRONOLOGY OF RATING TOOLS



## CHRONOLOGY OF RATING TOOLS CONT...



## RATING FRAMEWORKS

- Green Star (Green Building Council of Australia)
- Infrastructure Sustainability (Infrastructure Sustainability Council of Australia)
- LEED (US Green Building Council)
- BREEAM (UK Building Research Establishment)
- Living Building Challenge
- One Planet Living
- WELL Building Standard

## GREEN BUILDING COUNCIL OF AUSTRALIA

- Established 2002 to develop sustainable property industry in Australia
- Authority on sustainable buildings and communities
- Ratings, advocacy and research
- Not for profit
- Member-based organisation

## GREEN STAR

- Independent third party certification
- Locally and internationally recognised and well-respected
- Increases market value (proven for commercial)
- Provides a marketing edge



## GREEN STAR RATING TOOLS



### Green Star – Communities

Precinct planning and  
development



### Green Star – Design & As Built

Building design and construction



### Green Star – Interiors

Fitout design and construction



### Green Star – Performance

Building operations and  
maintenance

## GREEN STAR CATEGORIES

*DESIGN & AS BUILT*

*INTERIORS*

*PERFORMANCE*



Materials



Energy



Water



Transport



Land Use  
and Ecology



Innovation



Emissions



Indoor  
Environment Quality



Management

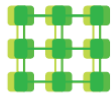


# GREEN STAR CATEGORIES

## COMMUNITIES



Governance



Livability



Economic Prosperity



Environment



Innovation

# RATING SCALE




# WELL BUILDING STANDARD




- Established in 2013
- FIRST human health and wellness building standard
- Over 7 years of evidence-based medical and scientific research



- 
- Developed by DELOS
  - Ex-Wall Street executive (including Goldman Sachs)
  - Interested in Sustainability and altruistic capitalism



- 
- Administered by International WELL Building Institute (IWBI)
  - IWBI is a public benefit corporation (B-Corp)
  - Delos licensed IWBI to administer WELL Building Standard



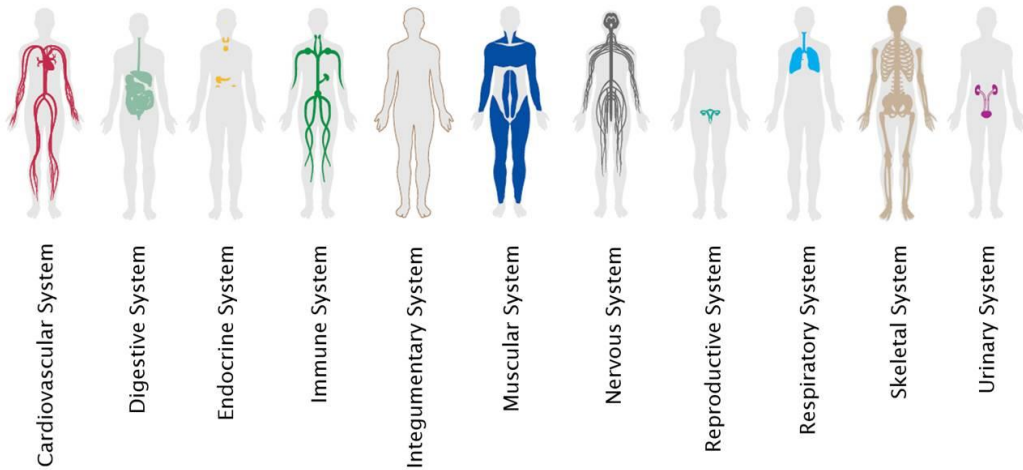
- Not a rating system – but a Nutrition Label for buildings and fitouts
- Ingredients for a healthy building or fitouts



- Over 100 performance metrics, design strategies and policies
- Requirements are embedded in design and then performance-tested on-site by third party







- Complements and works seamlessly with:
  - Green Star
  - LEED
  - Living Building Challenge
- Can also be a standalone system





## RATING SCALE



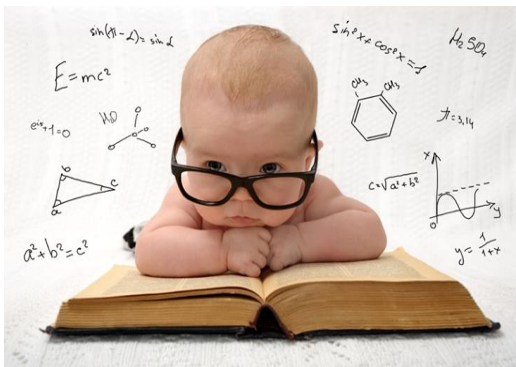
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# QUESTIONS ???



# THANK YOU



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- LEED Accredited Professional
- WELL Accredited Professional
- Infrastructure Sustainability Accredited Professional