



# Why and how building infrastructure is going green.

Sarah Rushmere, Green Building Council of SA - 21 June 2012



# We only have ONE Earth

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We will need equivalent of TWO by 2035

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# Globally, the built environment is responsible for:



**40%**  
solid waste  
generation



**12%**  
fresh water  
consumption



**40%**  
end-use energy  
consumption



**Buildings =**  
1 in every 3 tons

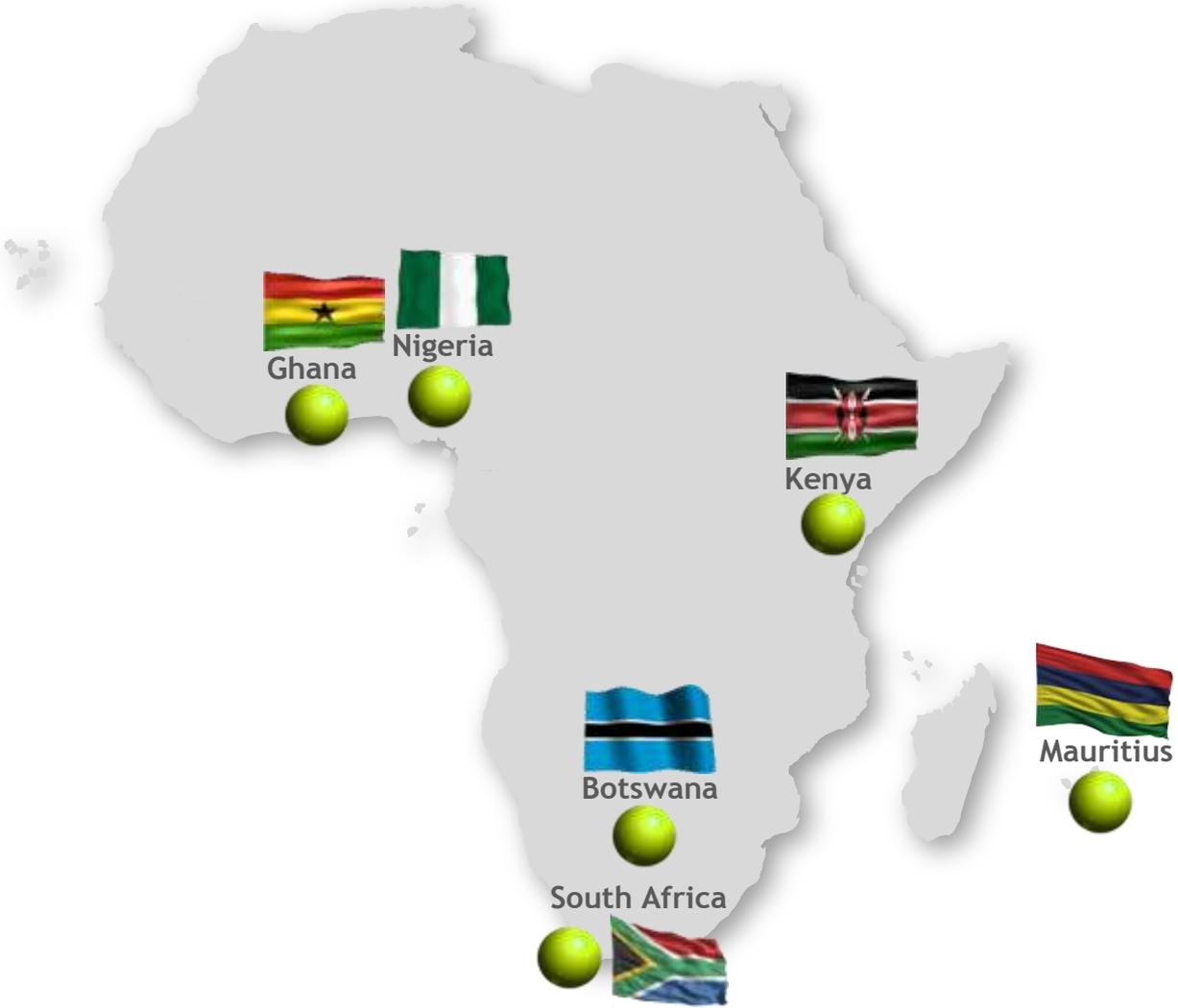
# GBCSA credentials

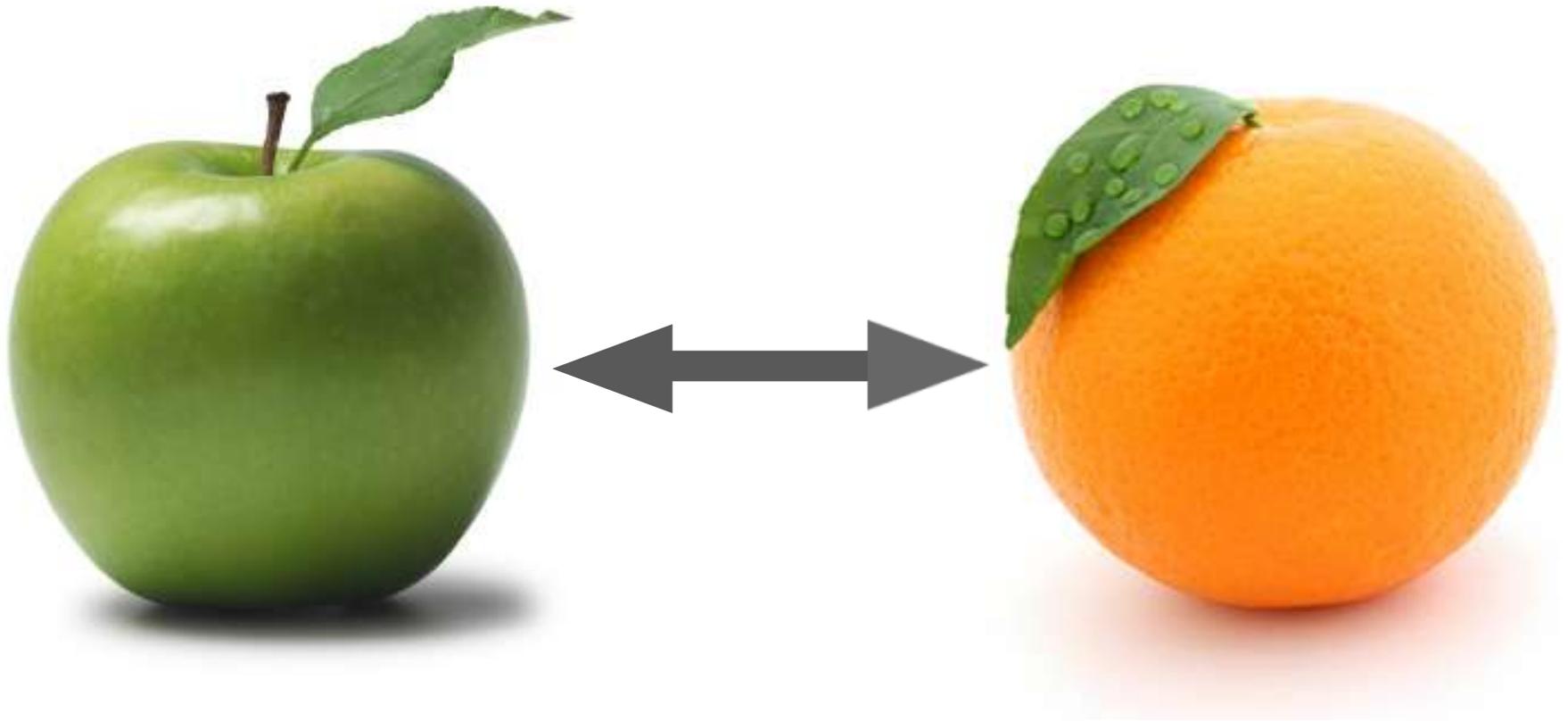


- Formed in 2007 to lead transformation of property industry towards environmental sustainability.
- Independent, 'Not-for-Profit' company
- Only officially recognised green building authority in SA
- Full member of the World Green Building Council, and currently holding Vice Chair position.
- Broad membership

**Awareness · Education · Recognition · Advocacy**

# Special relationship with Africa Green Building Councils





**How green is green?  
How to compare buildings?**



Vodafone Innovation Centre, Gauteng



24 Richefond Circle, Durban

**Now we can compare**

# Green Star SA rating tools available



OFFICE v1 (2008)



RETAIL v1 (2010)

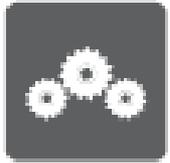


MULTI-UNIT RESIDENTIAL v1 (2011)



PUBLIC & EDUCATION PILOT (2011)

# Green Star SA - 9 environmental categories



Management



Indoor Enviro Quality



Energy



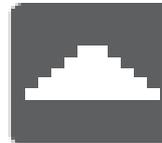
Transport



Innovation



Water



Materials



Land use and ecology



Emissions

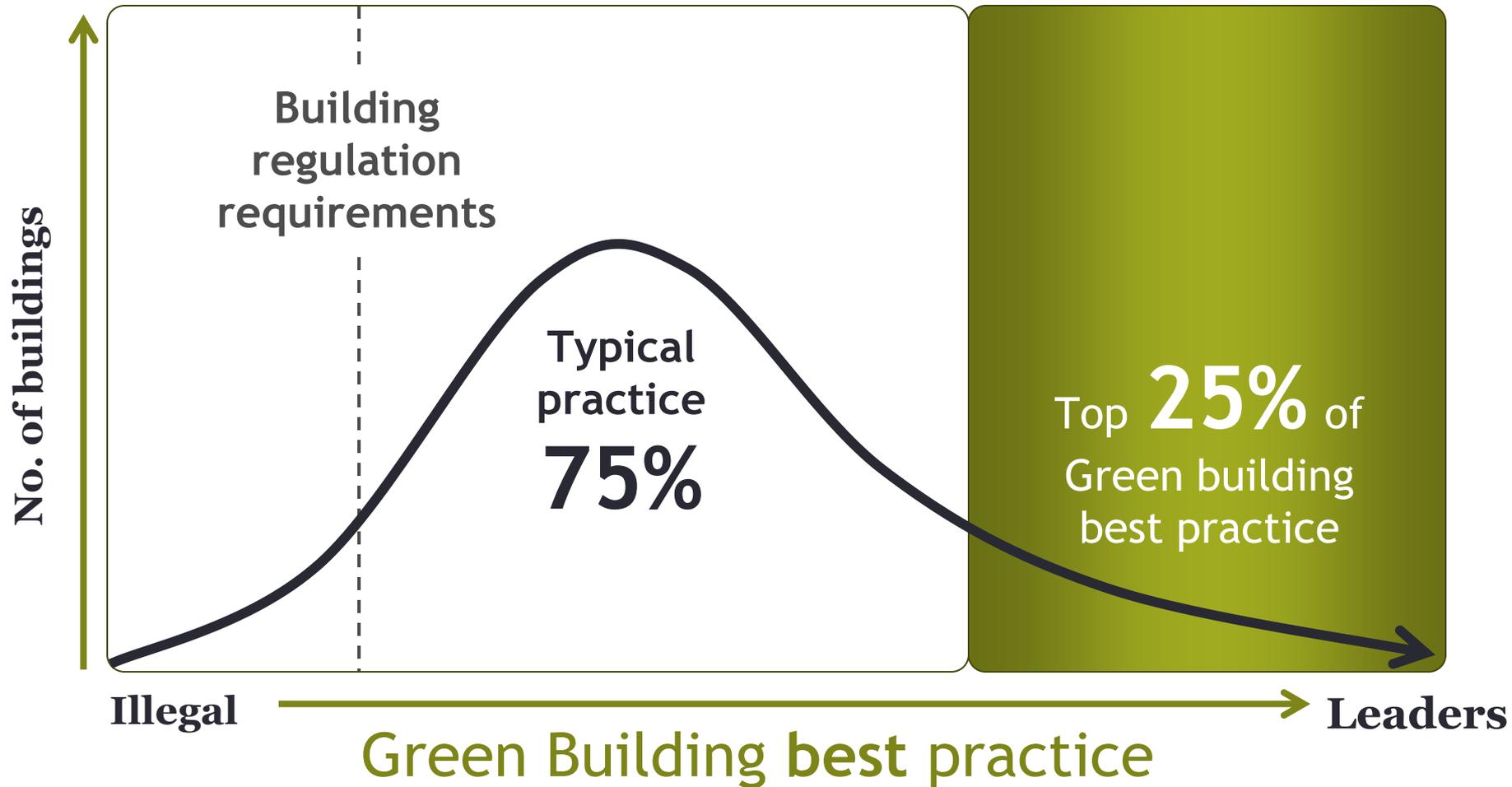
## New & forthcoming tools:

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- Green Lease Toolkit just launched at SAPOA convention
- Water & Energy Benchmarking Tool
- Socio-economic category - Pilot by end 2012
- Interiors Tool
- Existing Buildings Tool
- Communities/ Precinct Pilot

Publications: Rands & Sense; Cost of Green and the Cato Manor Case Study

# GBCSA's approach is to pull the market forward



# Who is pioneering:

## PLATINUM



## GOLD



## SILVER



## MEMBERS





## Benefits & 'Future-proofing'

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- Lower operating & life-cycle costs
- Increased productivity + reduced absenteeism
- Higher returns on asset investments
- Increased property values & rentals
- Attract tenants faster & for longer
- Demonstration of environmental leadership
- A more sustainable South Africa

# Global 'dollars and sense'

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- Rental premiums of 5-6%
- Valuation premiums of 5-11%
- Operational expenditure savings of 20+%
  - 35-30% more energy efficient
  - 39% more water efficient
- Productivity increases for people in green buildings
- Savings also on public infrastructure provision (from power stations to water pipelines) & health costs

# Green buildings DO NOT have to cost more

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- Perceptions of high cost premiums have been debunked.
- Typical perception is that it costs are about 17% (avg)
- In fact additional capital cost of building green is on average only = 1.5%

*\*Finding from Greg Kats book 'Greening our Built World: Costs, Benefits & Strategies' which surveyed green premiums of 180 buildings, mostly in USA. The range was 0-4%.*

# Recent research from Australia

- BCI Green Building Market Survey (2010)- perception is 12.5% premium, but empirical data shows green buildings are even cheaper to build.
- Davis Langdon study (2011) found costs:

Level of Certification	Capital cost differential
4 Star Green Star- Best Practice	-5% to -2%
5 Star Green Star- Australian Excellence	0%
6 Star Green Star - World Leadership	6% and more

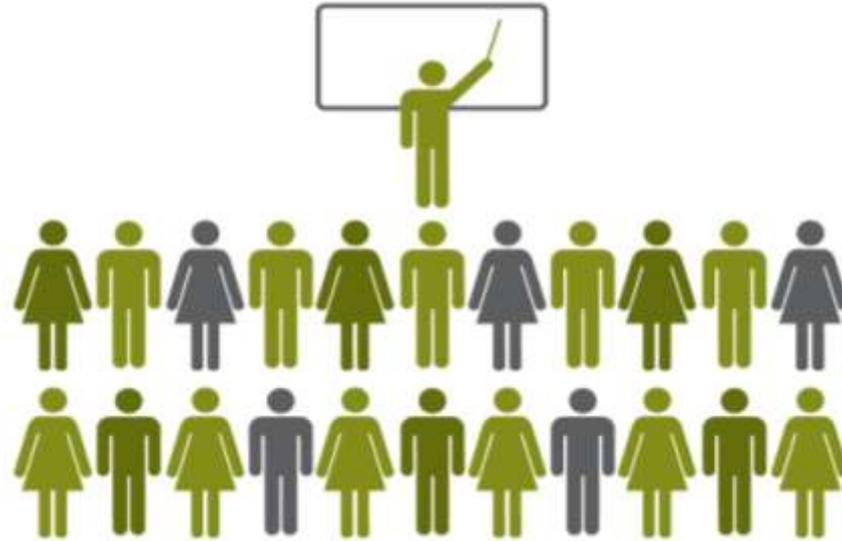
# Membership



**1000** member companies

# Education

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**3000** professionals on AP course since 2008

**427** Green Star SA Accredited Professionals



# Certifications



**17** buildings certified to date

**30** more buildings registered in 2012 alone

# Nedbank Phase II, Sandton - 4 Star, Design & As Built



# Aurecon Century City, CT - 5 Star, Design Rating



# Vodacom Innovation Centre. Jhb - 6 Star, Design Rating



# SANRAL Corporate Head office - 4 Star Design Rating



# Sisoke Public Works Office, KZN, 5 -Star Design Rating



# Menlyn Maine pilot precinct scale in Tshwane



# Cato Manor: SAs FIRST “GREEN STREET” RETROFIT

Green upgrade of 30 low-income houses in Durban, ahead of COP17.

Solar water heaters • Insulated ceilings • Efficient house & street lighting

Heat insulation cookers • Rainwater harvesting • Waste reuse & recycling

Food gardens • Trees & plants • Stream upgrade • Training & work opportunities.



What government can do:

Lead by example

Legislate

Facilitate

We are **changing**  
the way the **W****orld** is built

# Join us & leave a positive legacy:

- Subscribe to the GBCSA newsletter
- Become a member of GBCSA
- Sign up for a training course
- Attend or exhibit at GBCSA Convention 2012
- Support a networking / member event
- Sponsor development of a rating tool
- Become a sustainability champion

[www.gbcsa.org.za](http://www.gbcsa.org.za)



A close-up photograph of a green t-shirt. On the left side, there is a red graphic consisting of several thick, slightly curved lines radiating from a central point, resembling a starburst or a stylized flower. To the right of this graphic, the text "Don't blow it good planets are hard to find." is printed in a white, sans-serif font. The text is arranged in four lines, with the first line being the longest and the last line being the shortest. The t-shirt fabric has a visible ribbed texture.

Don't blow it  
good planets are  
hard to find.

# QUESTIONS?

