

# SAFMA 2018

## Controlling the building to reduce cost and complaints *(improve comfort levels)*

August 2018

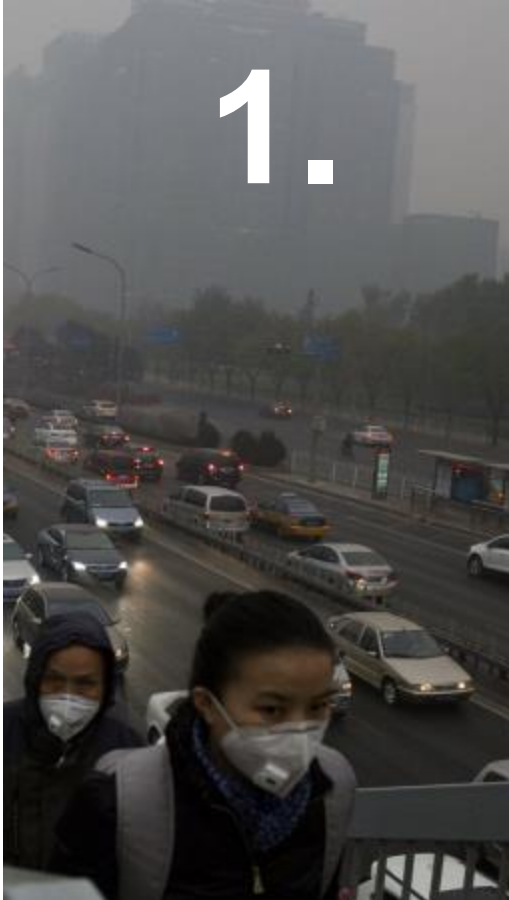
If the right investment choices are made today we can build low-energy, resilient urban environments.

Greening construction offers a chance to reduce CO<sub>2</sub> emissions at a low cost.

**Healthy, comfortable indoor environments bring about better wellness and productivity for people**



1.



**AIR QUALITY**

2.



**FOOD SECURITY**

3.



**ECOSYSTEM  
SURVIVAL**



# SOCIO-ECONOMIC



**CLEAN WATER**

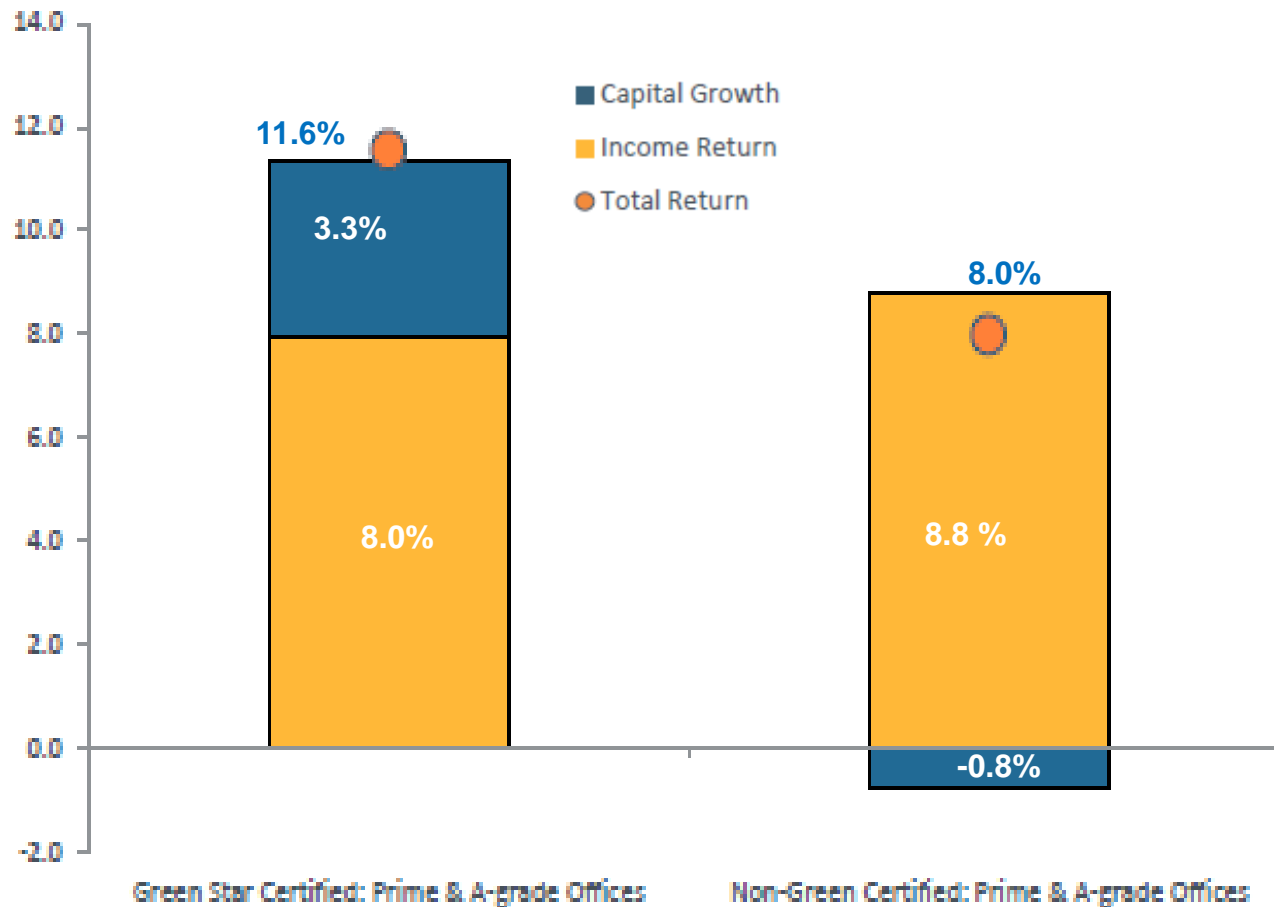


**HEALTHY LIVING**



**POVERTY**

# FINANCIAL



An MSCI Brand



# IMPACT OF 300 GREEN BUILDINGS




**300** green  
certifications  
since 2007

**R85 billion**  
worth of  
property  
greened



**430** million  
kilowatt hours  
of electricity saved every year



Equivalent to  
**130 000**  
cars off the road every year  
in terms of CO<sub>2</sub> emissions



**500** million  
kilograms  
of CO<sub>2</sub> will  
be saved  
every year



Equivalent to powering up  
**30 000**  
homes annually



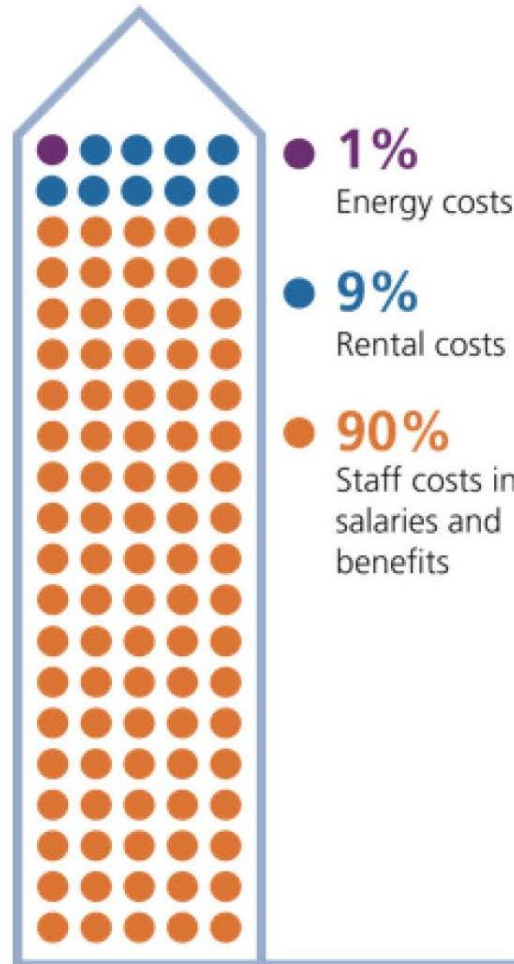
 **400** million litres of water  
will be saved every year

Equal to the daily  
water needs of **550 000**  
people





# PEOPLE



## 10% Variation

A 10% variation applied equally to each cost has a far from equal impact

**+/- 0.1%**

Energy costs

**+/- 0.9%**

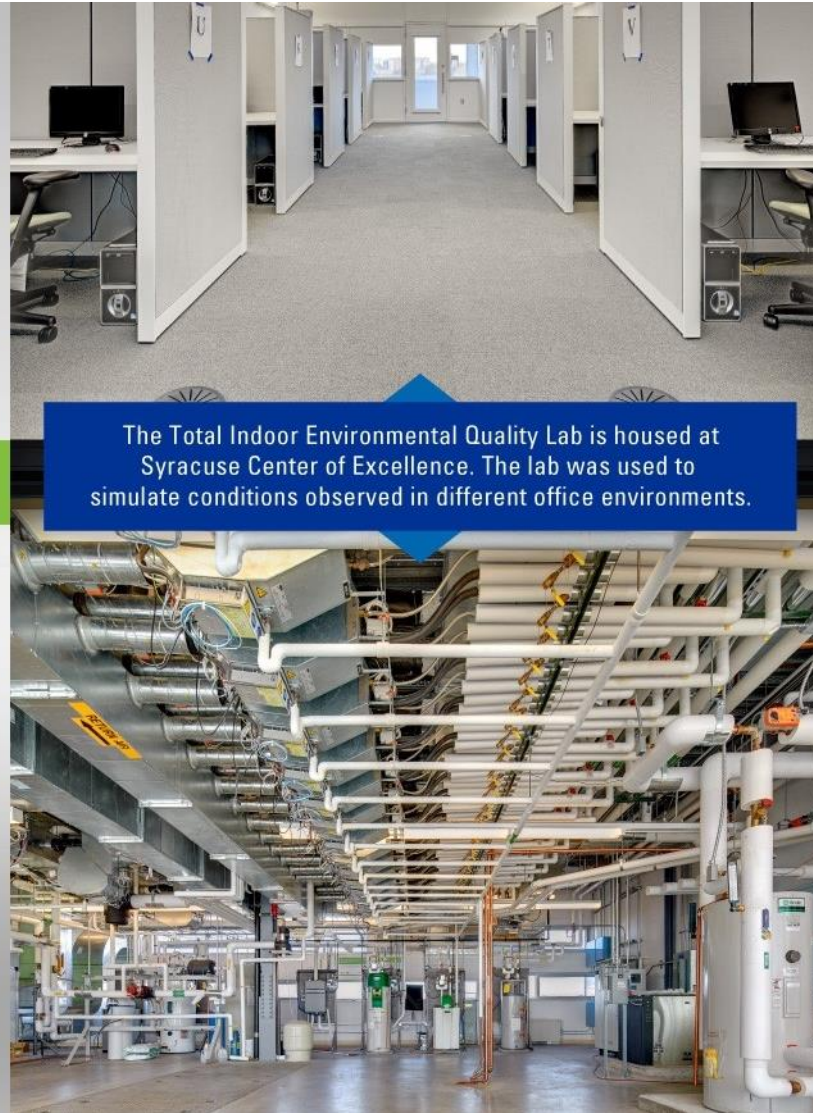
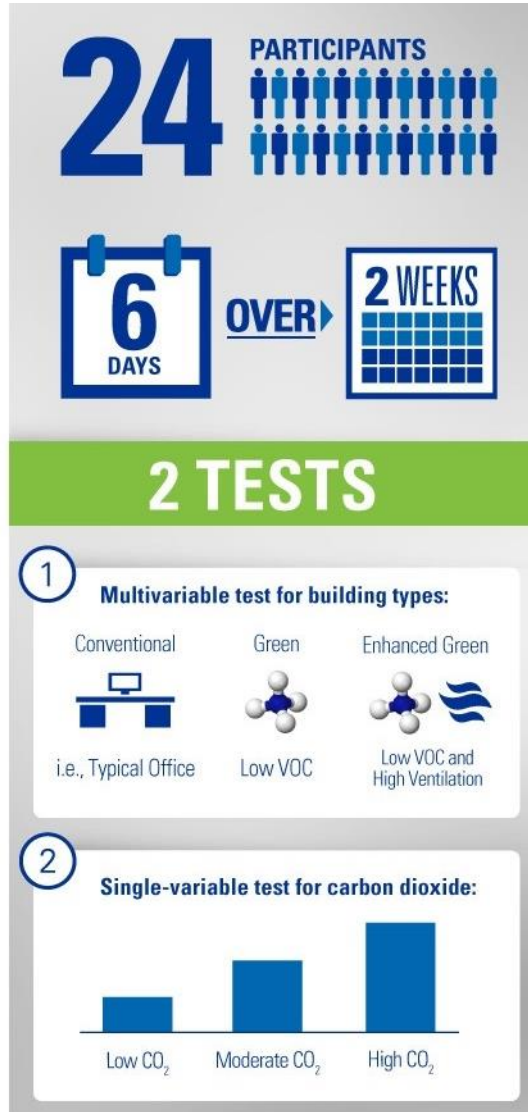
Rental costs

**+/- 9.0%**

Staff costs

# GREEN IS ESSENTIAL FOR PEOPLE

## Harvard Study in an office space where fresh air conditions were changed





# GREEN IS ESSENTIAL FOR PEOPLE

## BEST OBSERVED PERFORMANCE



Harvard Study in an office space where fresh air conditions were changed

## No. 1 Silo Allan Gray Green Star Rating: New Build Office 6 Star June 2014






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Energy: ?? points (Max ?)

- ?
- ?
- ?

HEAT  
EXCHANGER





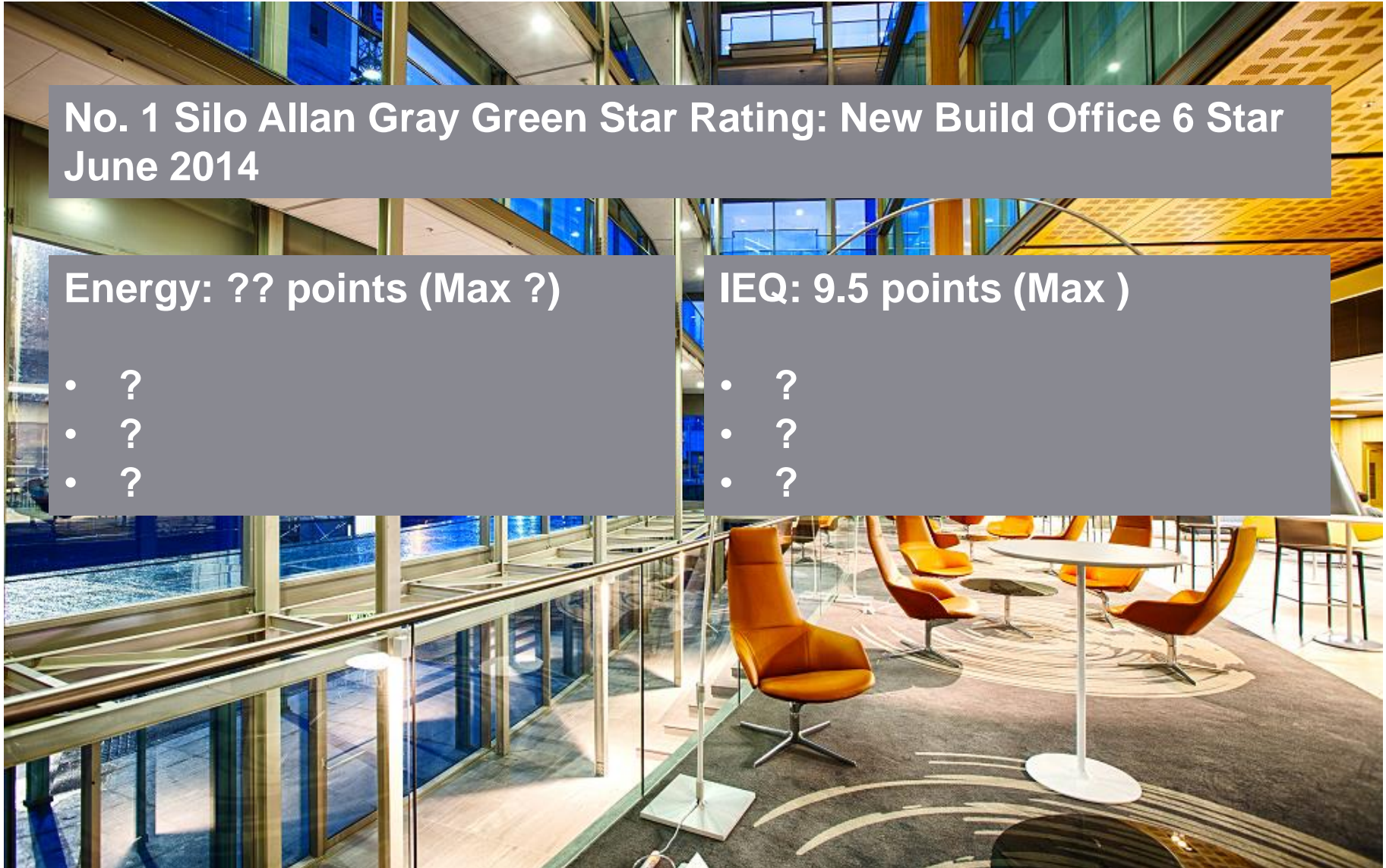
## No. 1 Silo Allan Gray Green Star Rating: New Build Office 6 Star June 2014

Energy: ?? points (Max ?)

- ?
- ?
- ?

IEQ: 9.5 points (Max )

- ?
- ?
- ?



## Convention Tower CTICC April 2016

Green Star Rating: EBP 4 Star

Energy: ?? points (Max 27)

- ?
- ?
- ?

IEQ: 9.5 points (Max 16)

- Indoor air quality testing
- Carbon Dioxide
- Carbon Monoxide
- Thermal Comfort
- Acoustics

Corrective action plan

