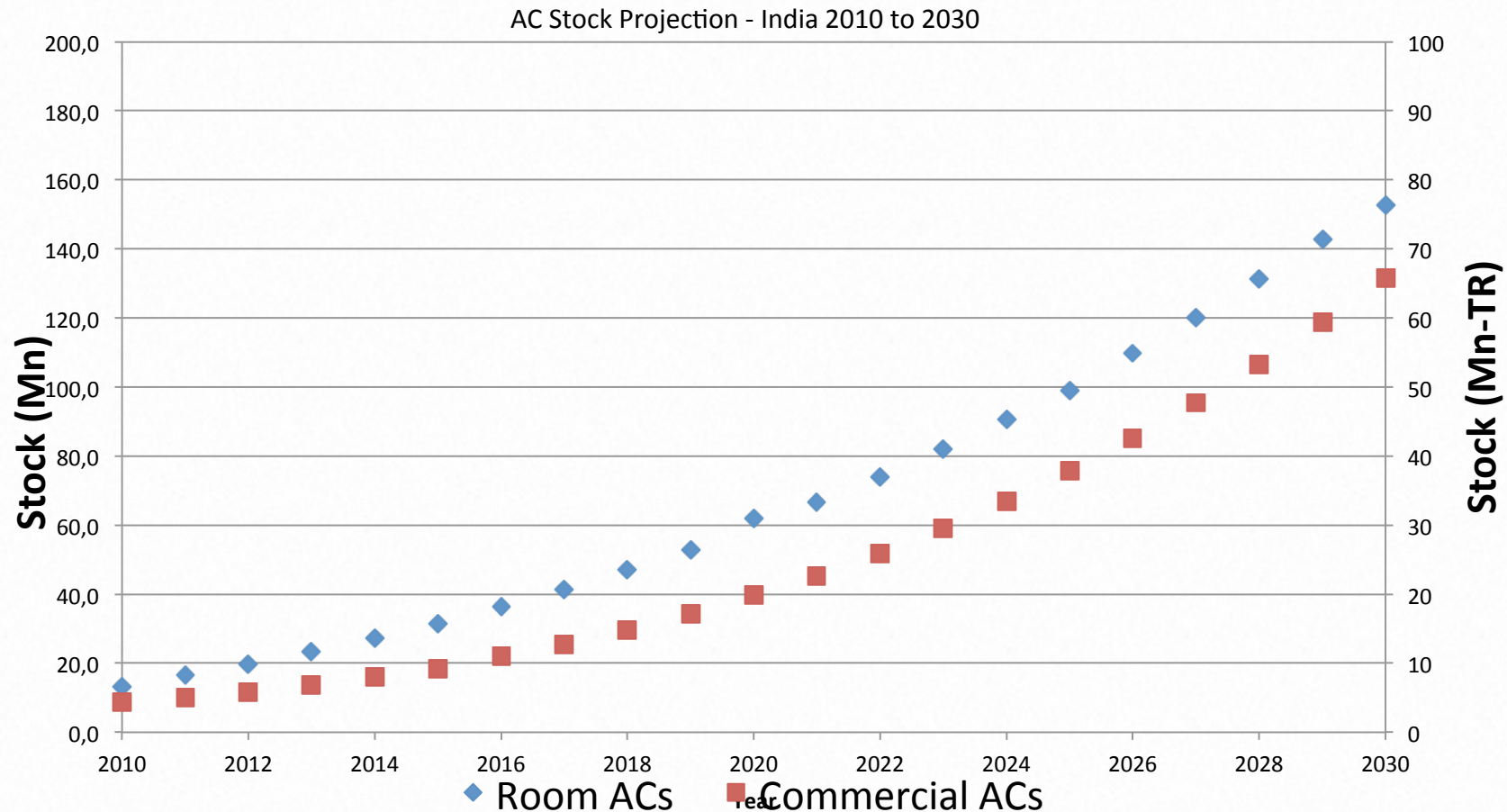


'F'airconditioning India

Why Air Conditioning India is not enough,
Why we must 'Fair' Condition it

Reasons for Fairconditioning

- India can leapfrog (refrigerants & technology) – we're just starting our Air Conditioning party, we can change the music right now!

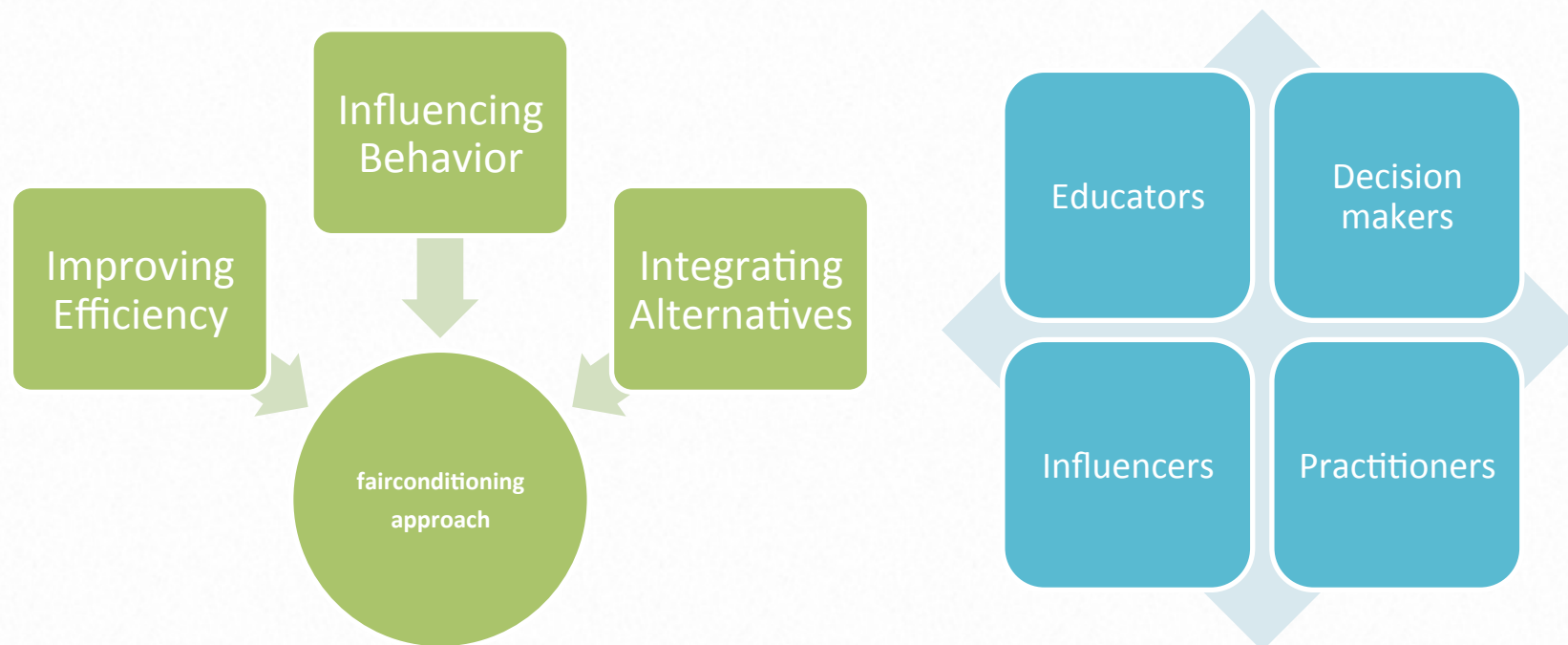


Reasons for Fairconditioning

- India in 2010 vs. 2030: **10 fold** increase in Built Space
- Natural Refrigerant / Water-based cooling technologies commercially proven, available, viable, feasible (all other good adjectives)
- We can focus thermal comfort and not air conditioning
- Sophisticated softwares available to simulate and design passive cooling strategies
- EPI of conventional buildings = **50%** > than EPI of energy efficient buildings

fAIR CONDITIONING

In 5 cities across India: Mumbai, Pune, Delhi, Chennai, and Bangalore



Academic Curricula Integration Program

- Lack of knowledge among Engineers and Architects about energy efficiency in their field
- Curricula in Architecture and Engineering courses devoid of stimulating and actionable content related to:
 - Green Building design principles, ECBC
 - Sustainable Cooling Technologies (classical, New-age derivatives, State-of-the-art)
- End goals is :
 - intellectual enhancement
 - skill development

Methods

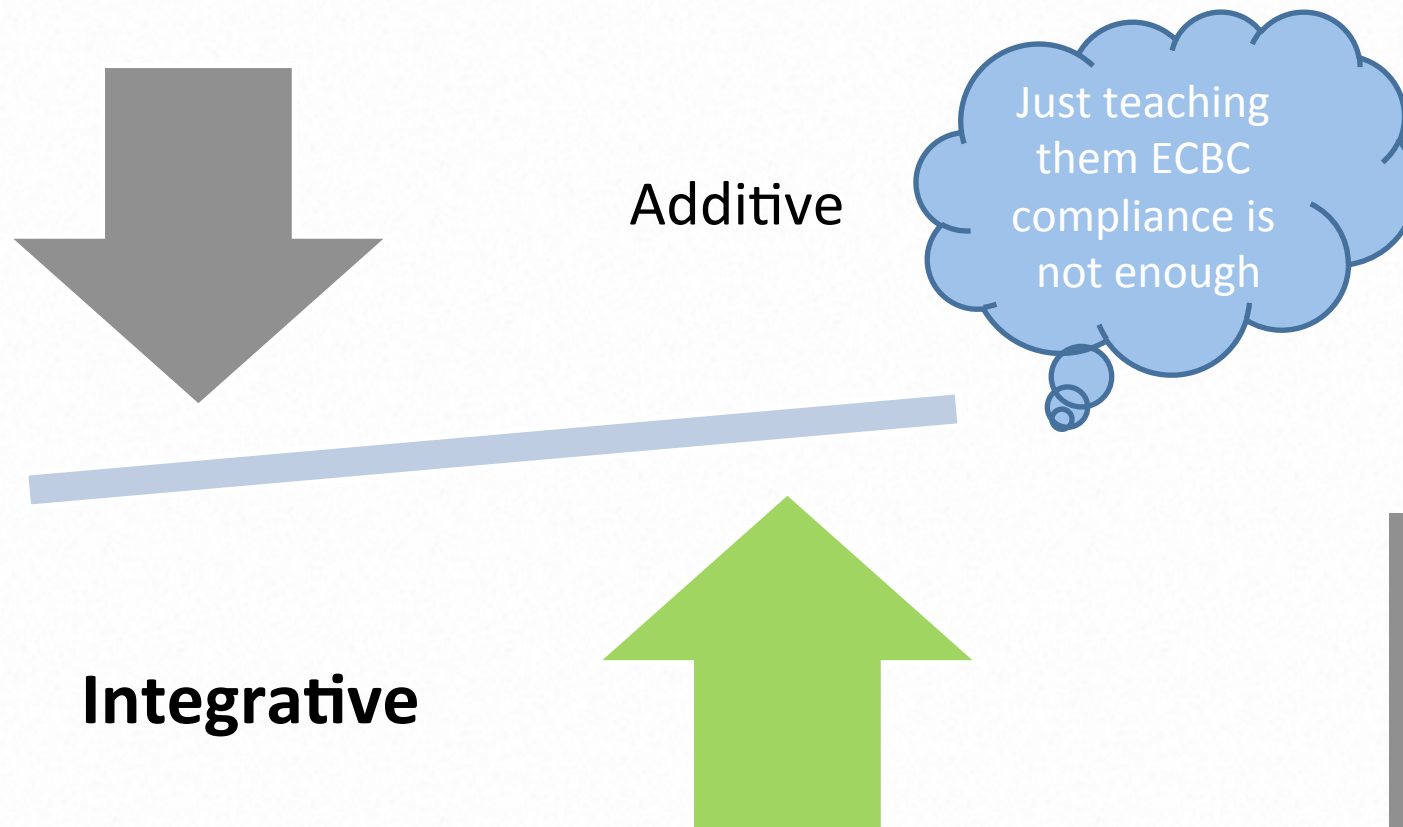
Train the Trainer

Certificate Programs

Curriculum Integration

Academic Curricula Integration Program

Guiding Principle 1



Academic Curricula Integration Program

Guiding Principle 1

Building Materials

Climatology

Building Technologies

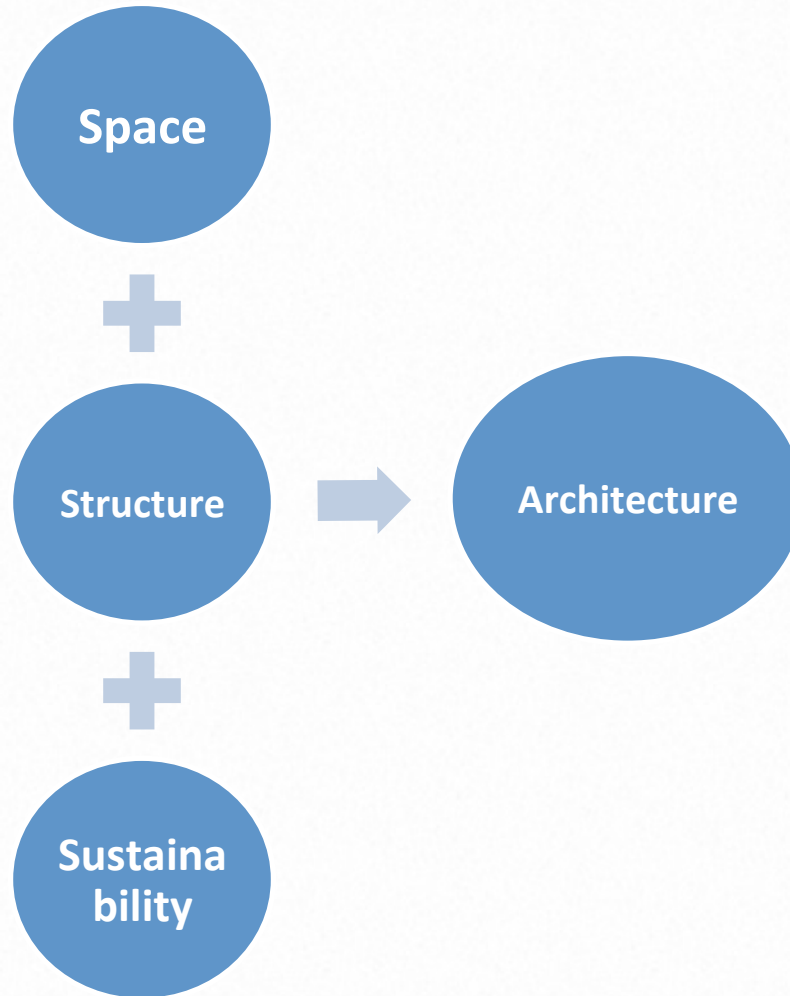
Architectural Design

Building Services

History & Theory of Design

Academic Curricula Integration Program

Guiding Principle 2



Make it a default.
Don't let it hinge on
student interest. You
don't ask students if
they are interested in
building 'safe'
building right?

Academic Curricula Integration Program

Guiding Principle 3

Architects in India today prefer building from scratch.

Unlike engineers, they rarely build upon the body of knowledge of previous generations of architects who have solved basic issues of energy efficiency , local building material use etc.

Academic Curricula Integration Program

Guiding Principle 4

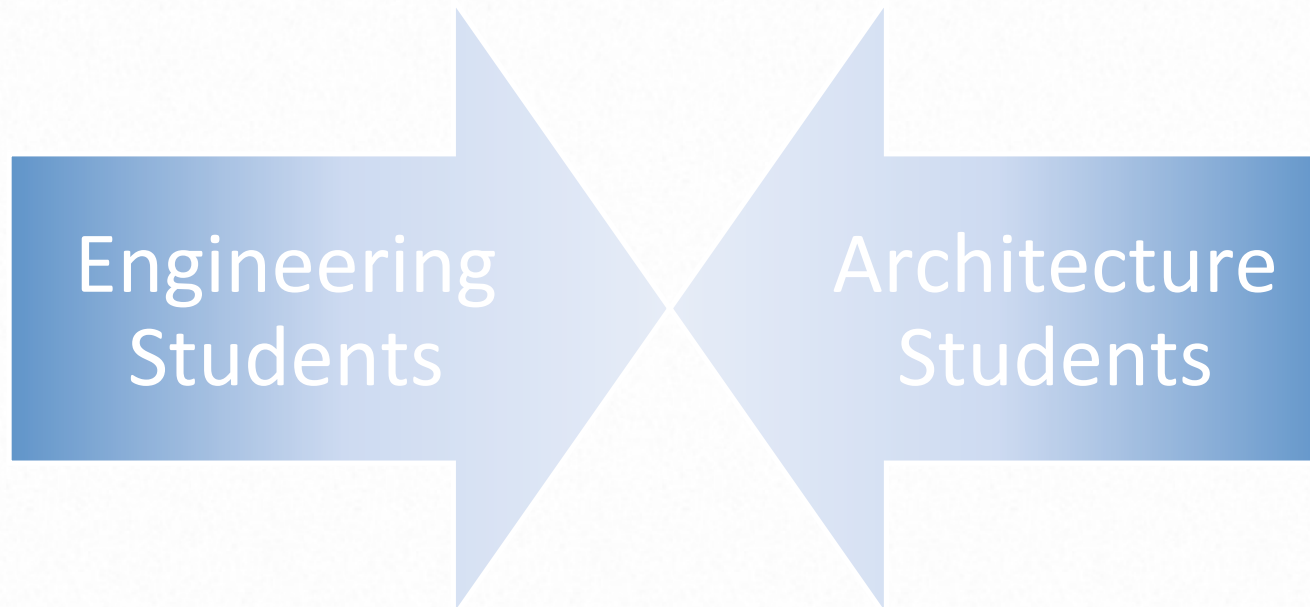
“Hot air rises”...its only a abstract concept for architecture students.

They need to ‘feel’ it.

Avoid software use too early in a curricula.

Academic Curricula Integration Program

Guiding Principle 5



Academic Curricula Integration Program

Guiding Principle 6

Curricula in a college – as determined by the University is only a ‘minimum’ criteria.

Great liberties can be taken..and are

Academic Curricula Integration Program

Method



Microsoft Office
Excel Worksheet

Academic Curricula Integration Program

Our Questions for you

- do you know universities in colleges across cities in India?
- any specific subject-matter or pedagogy experts we should engage with?
- do you know foundations that can fund us to expand the program?
- aware of programs that have tried this and failed and why they failed?
- would you do this differently?

fAIR CONDITIONING



REPUBLIC
AND STATE
OF GENEVA

POST TENEBRAS LUX

- In operation since October 2012 with a successful 1.5 year long pilot for Natural Refrigerant Split AC's
- A 3 year program to bridge the gap between knowledge and action in the cooling sector to 'Cool India Efficiently and Sustainably'
- In partnership between NOE21, a Geneva based Non-profit Organization and cBalance Solutions Hub, India
- Funded by the State of Geneva

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