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Creating a healthier and safer environment

# Designing & Modelling Control of Natural Ventilation

Nick Hudleston

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## Common Design Process

Client  
Architect  
Consultant  
Builder  
M&E

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## Common Design Process

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## Common Design Process

Temperature (°C)  
Percentage (%)  
CO2 concentration (ppm)

Mon Tue Wed Thu Fri Sat Sun Mon

Date: Mon 08/Aug to Sun 14/Aug

— Air temperature: ROOM (secontrols.apj)  
— Relative humidity: ROOM (secontrols.apj)  
— Room CO2 concentration: ROOM (secontrols.apj)

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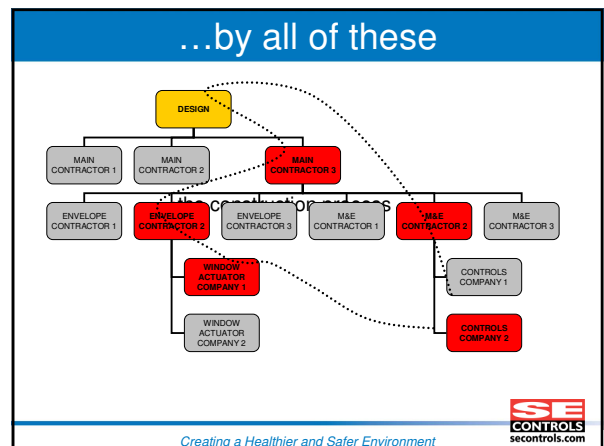
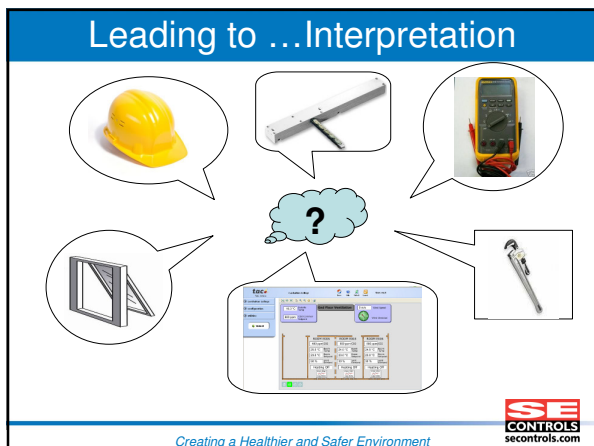
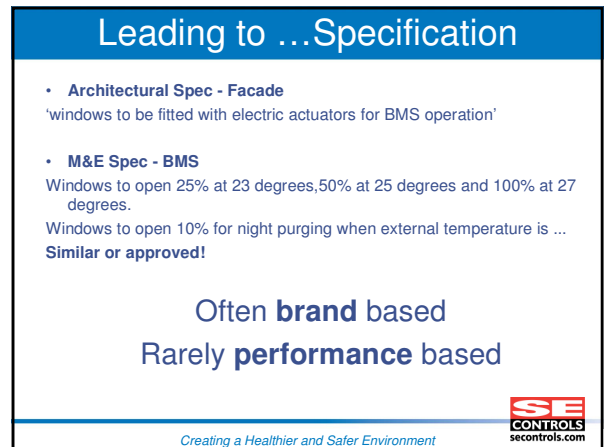
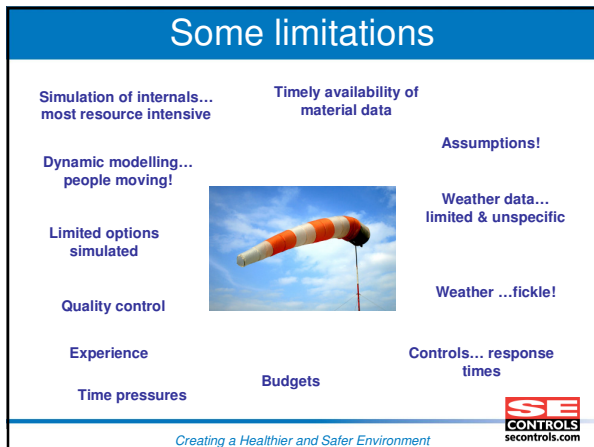
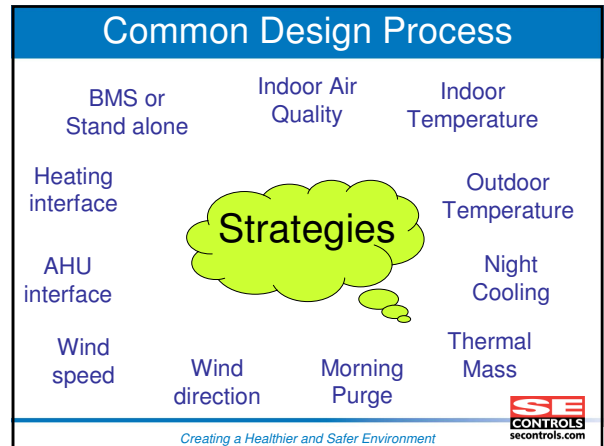
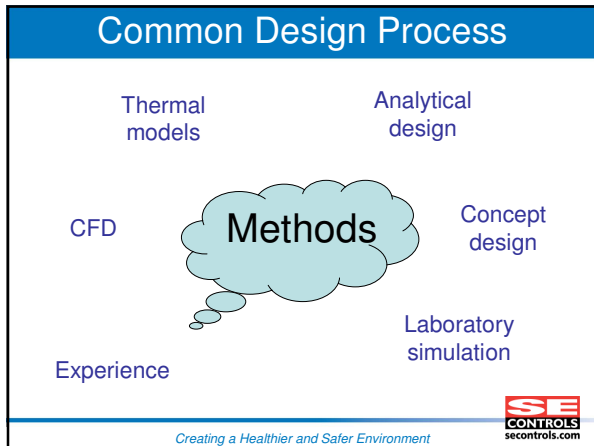
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## Common onsite reality


<p>Specification too loose</p> <p>Specification not understood or misinterpreted</p> <p>Budgets change design intent</p> <p>Everyone else focussed on next contract</p> <p>Fine tuning process omitted or not planned for</p>	<p>NV commissioned last on site</p> <p>Handover often pressured</p> <p>Occupant/Client satisfaction low</p> <p>Occupant/Client understanding often poor</p> <p>Strategy needs 12 month fine tuning but no budget or time allowed for this</p> <p>POS rare</p>
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# Results



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## Common results onsite...examples




Sensor Installation

Strategy too sensitive

Heating interfaces

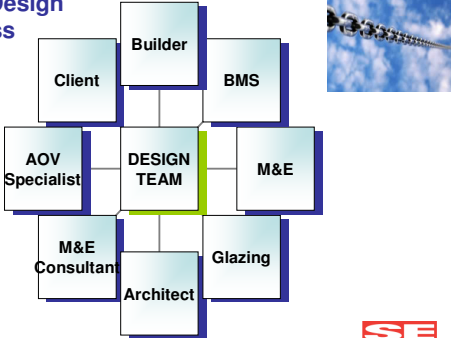
Damper control




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## Room for improvement?

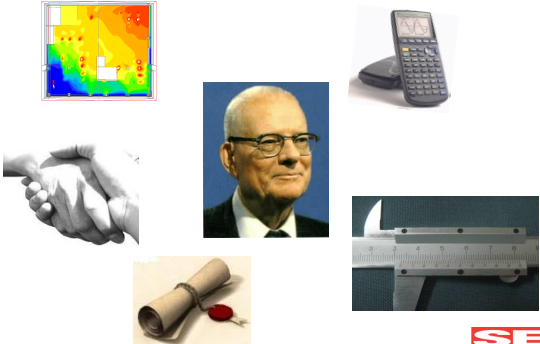
### Improved Design Process






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## Room for improvement?






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## .....any questions??





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## Key points

- Precise performance specification essential
- Whole team involvement & understanding
- All trades available during commissioning
- All trades allow time during D&L period
- GET SPECIALIST INVOLVED VERY EARLY

= Higher Quality result

= SATISFACTION



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