



Healthy Housing
for the Displaced



Prototyping to enhance design manufacturing - Fieldwork Experience

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What is Prototyping ?

Prototyping is the production of design to test performance on buildability, useability and durability.....

..... Information gathered is used to develop iterations to the design performance.



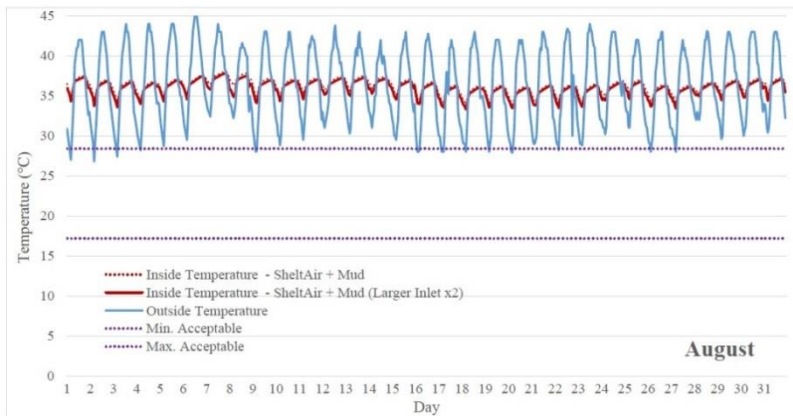
DfMA- How can Prototyping contribute?



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- Evaluate/develop designs with users
- Thermal model predictions worldwide
- Minimize production cost through design and **process improvements**
- Shorten product development cycle time
- Eliminate technical risk
- To promote product/communicate with clients
- Credibility?



Why Full Scale Prototype?



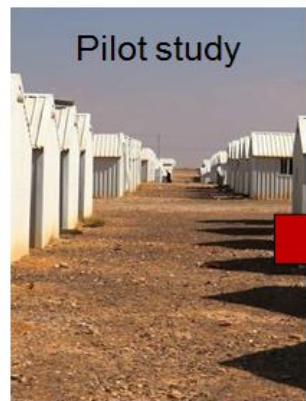
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- Inform decision making
- Confirm performance
- Confirm buildability
- Allows early detection of defects
- Permits feedback to improve design
- Enhanced communication



Pilot study



Initial design

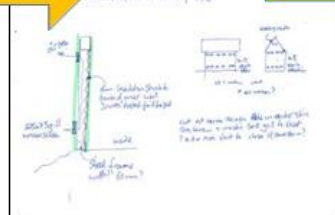
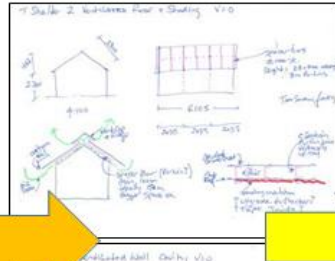


IMPROVING THE THERMAL COMFORT IN NEW SHELTERS

Design recommendations for Azraq refugee camp



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Model

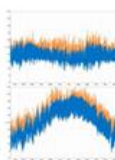
Details

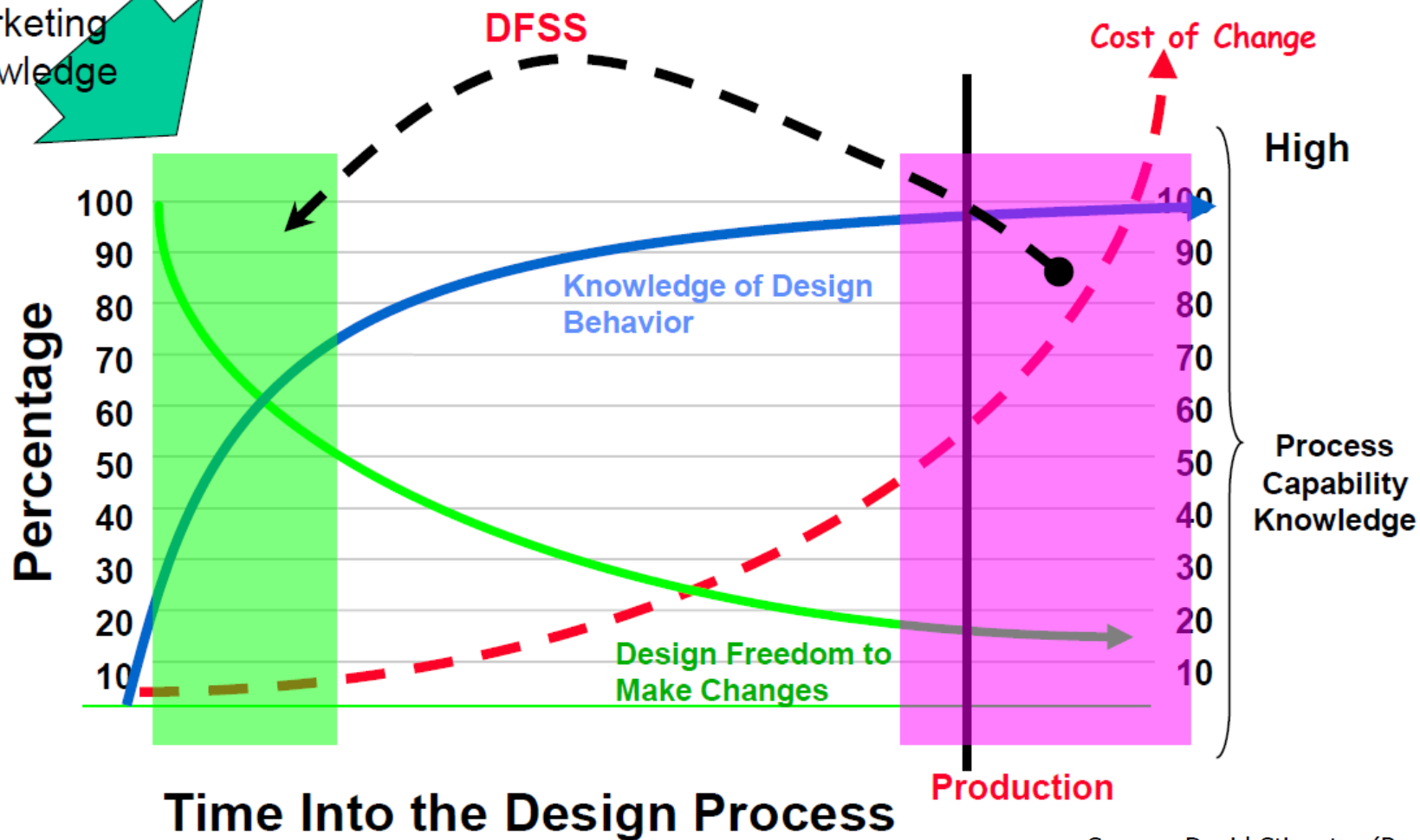
Site

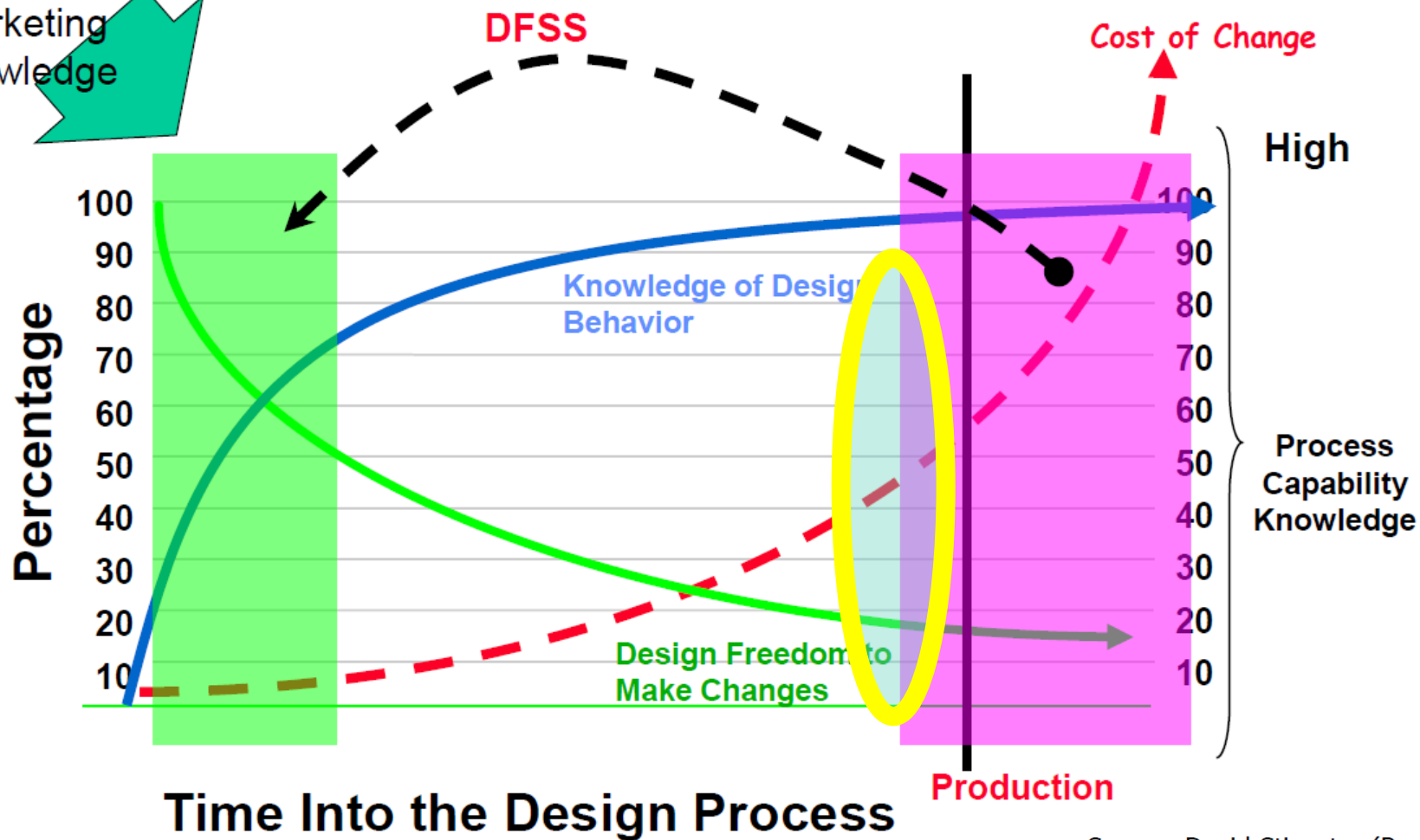
Measure

Analyse

Compare



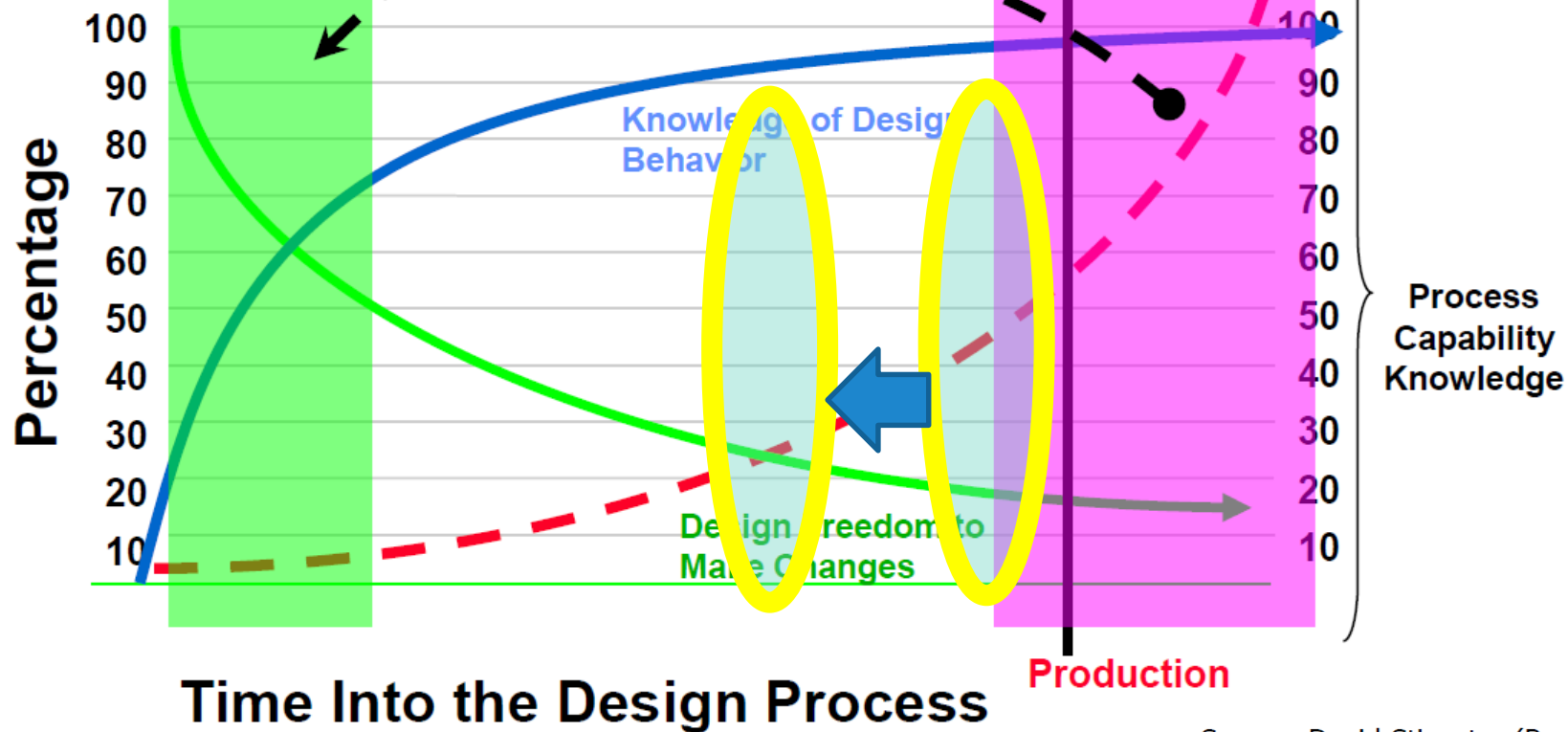
Marketing
Knowledge

Marketing
Knowledge

Marketing
Knowledge

DFSS

Cost of Change



Prototyping Experience



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- Frame
- Minimize Material wastage
- Ventilation



Prototyping Experience



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- Technique
- Product development
- Thermal mass variant



Prototyping Experience



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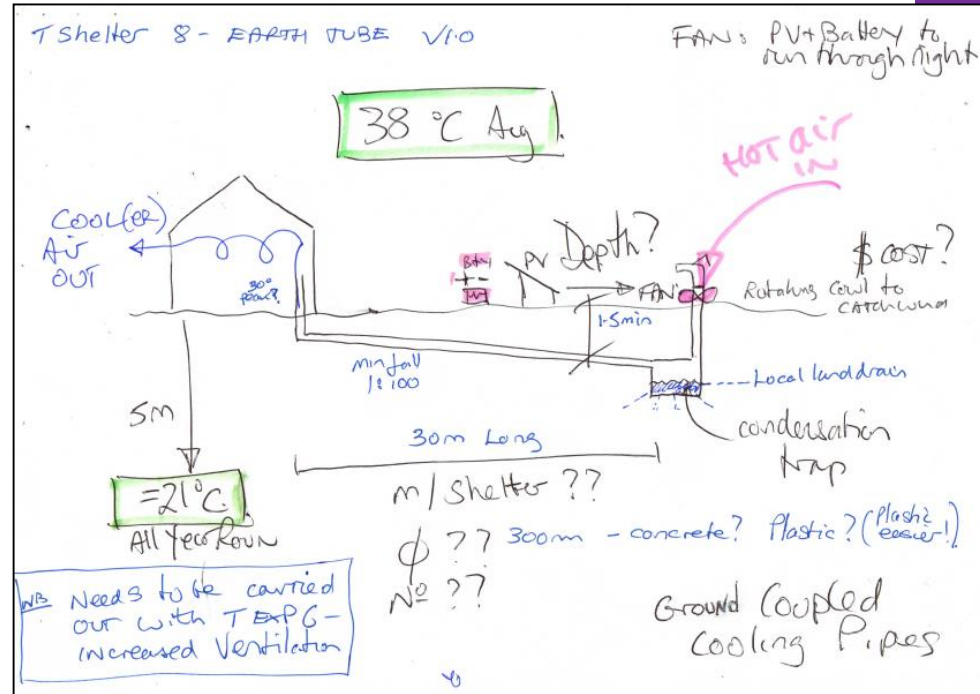
- Buildability
- Thermal breaks
- Insulation





Outcomes

- Embrace failure
- Expect changes
- Evaluate Learning
- Improve build process
- Confirmation of performance



It's about.....People & Teamwork

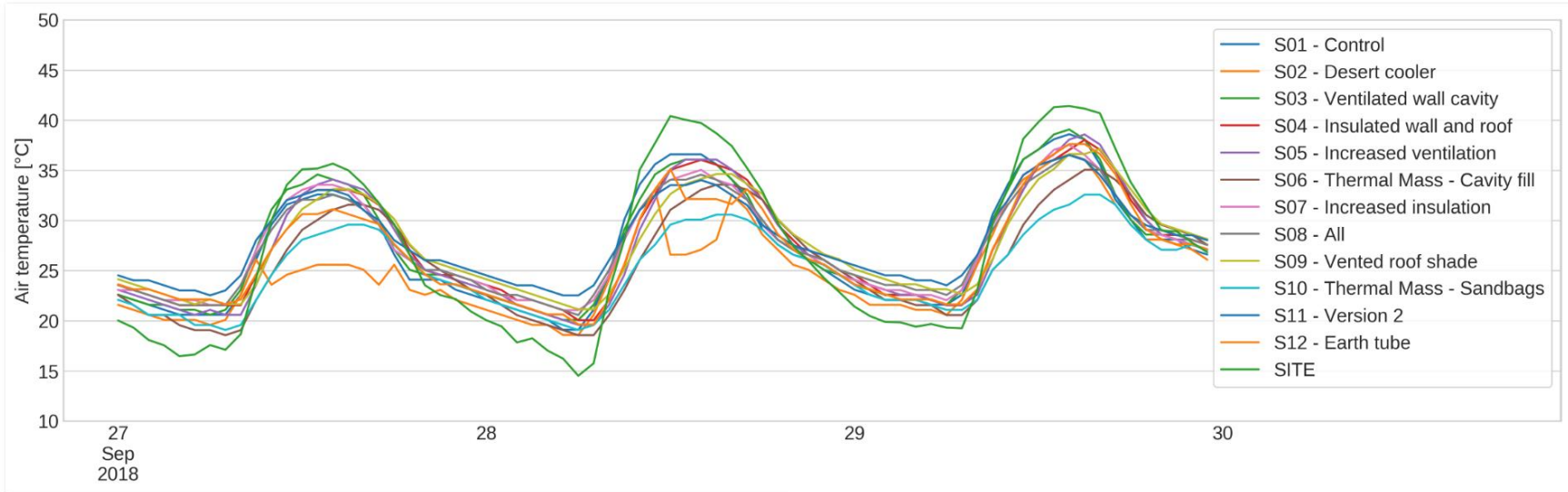


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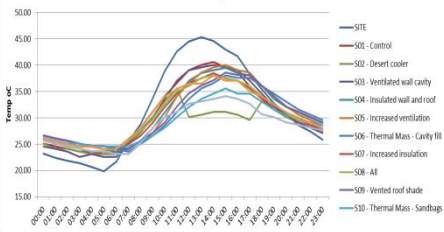


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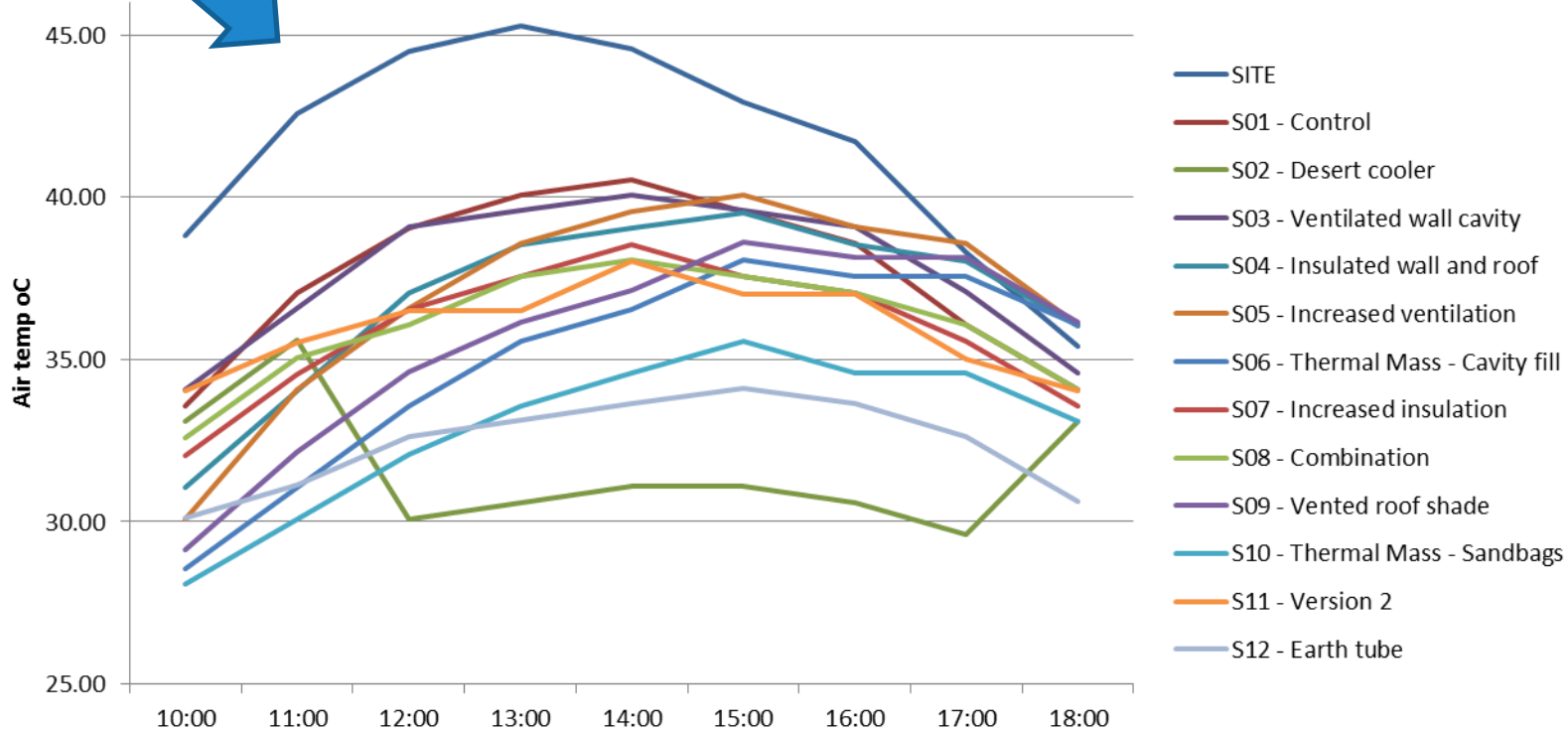
29th August 2018



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It does make a difference- ?'s

