BUILD TEST SOLUTIONS

Building Heat Loss Measurement for Heat Pump Sizing & Home Assessment

Build Test Solutions

Make Measurement Mainstream

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Applications

- Building QA testing
- Retrofit planning
- Ventilation & mould risk assessment
- Heat pump sizing
  - Mandatory heat loss assessment
  - Inefficient current assessment method

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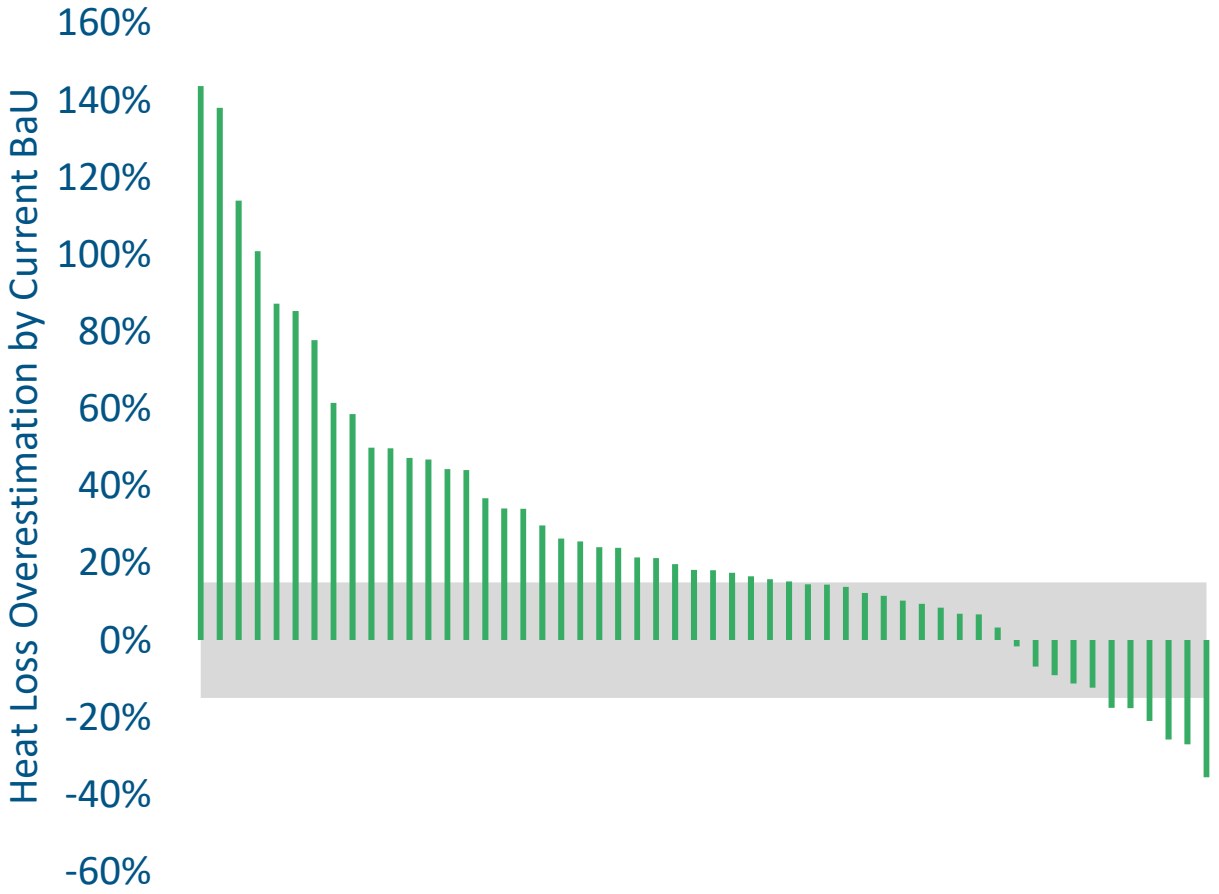
The Problem

- Building performance assessments are carried out by visual surveys… but we know they don't work
- BTS field trial of 56 houses, BaU heat pump sizing calculation wrong for 70%(!) of houses



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The Problem (2)

- Current heat loss calculations difficult & expensive
  - Approx 1 day survey + workings
  - Requires significant training
  - Most installers not currently qualified
- Lots of surveys abortive
- Surveys often carried out for free
- Costs passed on to those with installs

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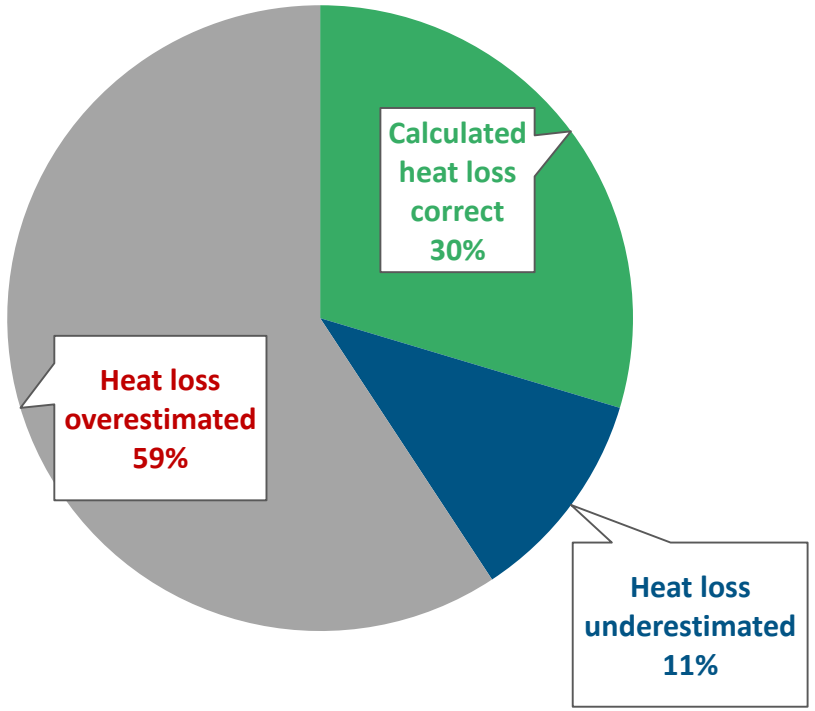
The Problem (3)

- Oversizing is common. Extra capital cost & disruption.
- Undersizing is still a risk. Terrible for heat pump PR
- Surveys are expensive to installers & hard to charge for
- Creates a bottleneck to installs

BS EN12831 Heat Loss Calculations



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Sizing by Heat Loss Measurement

- Measurement by 3 weeks non-invasive monitoring of internal temperature and energy consumption (SmartHTC)
- Accurate heat loss assessment
- 100% field trial residents said they'd recommend measurement to a friend

SMARTHTC

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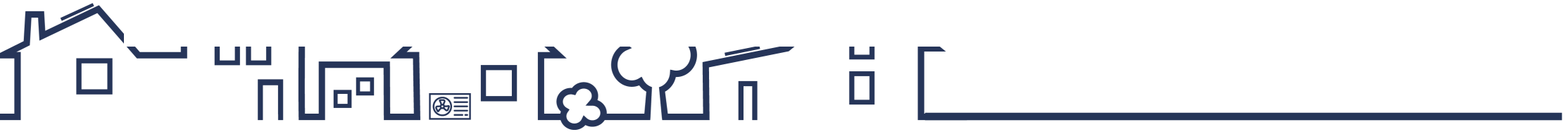
Why use SmartHTC for Heat Pump Sizing?

- Reduce risk of oversizing: cheaper install, better efficiency
- Reduce risk of undersizing: unhappy customers & expensive remediation
- Easier & cheaper than a BS12831 calculation
- >90% of field trial residents would pay £250+ for measurement service



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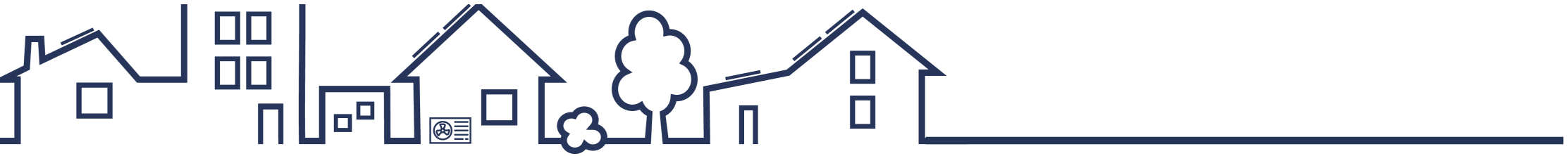
Implementation

- Typical charge for a SmartHTC measurement £200-£300/building
- BTS charge £300 one off sign up fee, plus building credit fee
  - £30/building PAYG
  - £10 or less/building above 100 buildings
  - £150 per reusable hardware kit
- Heating Installer delivery method?
  - Option 1: Facilitate customers to do measurements through proprietary platforms, hardware rental & customer support
  - Option 2: Installer offer and charge for the measurement service directly



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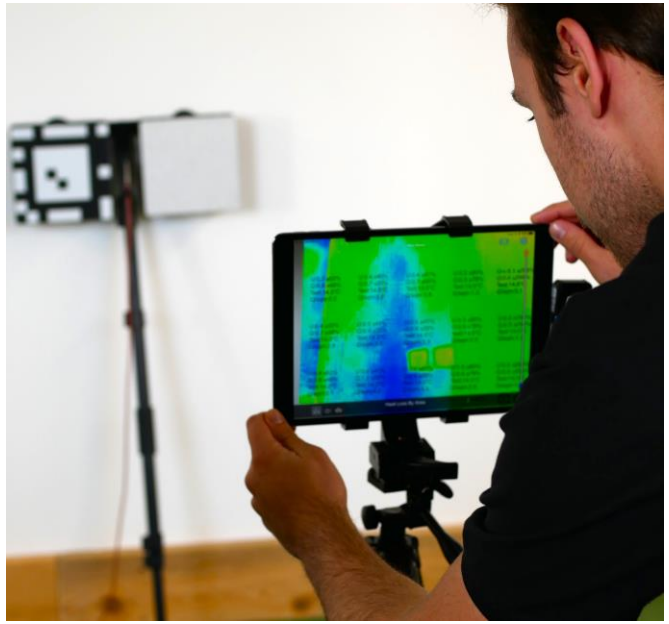
Other BTS Measurement Tools

- Tools to measure air permeability & U-values
- Pulse for air permeability measurement, commonly used by installers
- Heat3D new product to measure U-values



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