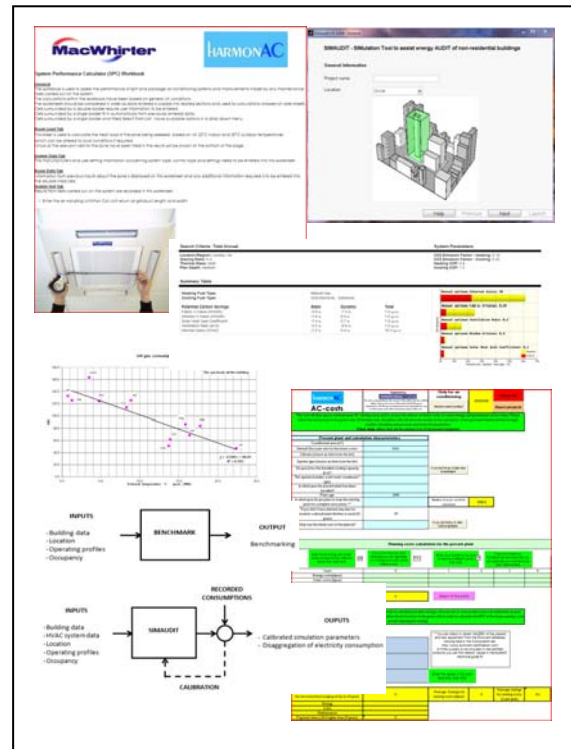




Producing Modelling and other Tools for use in Inspection

The understanding of the energy consumption of Inspected AC systems in practice is generally severely limited by the time available. To ensure this time is used as productively as possible, HARMONAC has developed significant aids for Inspectors to allow rapid modelling and description of a building and specific AC systems. This allows ‘what-if’ scenarios to be quantified with respect to potential energy savings in the inspected AC systems.

In total there are 6 tools produced during the project: the first 3 ‘**BillAnalyzer**’, ‘**SimBench**’ and ‘**SimAudit**’ represent a suite of tools intended to be used together to produce a simple calibrated model of a building and its AC system. The model is able to allow the Inspector to estimate the effect on energy consumption of altering various aspects of the AC system components or their control. This allows the Inspector to provide guidance on whether particular options are likely to be appropriate to the system inspected.



This suite of tools is supported by the ‘**CAT tool version 2**’, which will become available after the project completion. This tool enables a rapid (a few minutes) estimation of the potential for varying aspects of the building fabric or internal gains to reduce the demand on the Cooling AND Heating systems with the aim of providing an overall reduction in Carbon emissions from the building.

The next tool is ‘**AC-Cost**’ – which is an improved version of the tool developed in AUDITAC. The aim of this tool is to provide a simple estimate of the cost-effectiveness of some of the more common ECOs.

The final tool is ‘**System Performance Calculator**’. This spreadsheet based programme allows the Inspector or Maintainer to enter simple measurements from single split AC systems inspected onsite and quickly obtain indications of efficiency and performance of the system that allow insight into whether there are problems that need further investigation.