

## Solution Brief

# Intelligent Buildings

Modern buildings are being equipped with very large number of sensors that can monitor every single aspect of building and its environmental operations. These devices offer real-time data gathering that can be used to optimise the comfort and cost aspects of their usage. Big Data technologies allow unprecedented monitoring, analysis and fine-tuning of all relevant operating parameters through data aggregation from many locations. When combined with external data such as demographics and meteorological data it will give you insights and control ability that simply were not there before. enVdata will enable you to gain these key insights in real-time.

Big data is changing how organisations are structured and managed. It is affecting all sections of the business, from those that deal with the core activities of an organisation, such as operations or manufacturing of products, to supporting ones, such as human resources. The term Big Data refers to data sets the size of which is beyond the capabilities of current database and computing technology to process in timely and efficient manner. The challenge organisations will face is how to become information-centric, with decisions based on massive amounts of data that are collected in real time.

enVdata is committed to enabling all businesses and organisations to take advantage of new computing and data models that Big Data technologies and information design offers such as Hadoop and NoSQL. Big Data is fast becoming a primary competitive edge and a means of delivering products, and services with efficiency, accuracy and cost effectiveness. This is a completely new way of looking at significant value that can now be extracted from not only the private data but from public data sets as well. enVdata as your Big Data partner will help you get some amazing results.

**enVdata will provide you with the means of establishing and integrating these new innovative technologies into your organisation and we will show you how to extract unprecedented value from your data.**

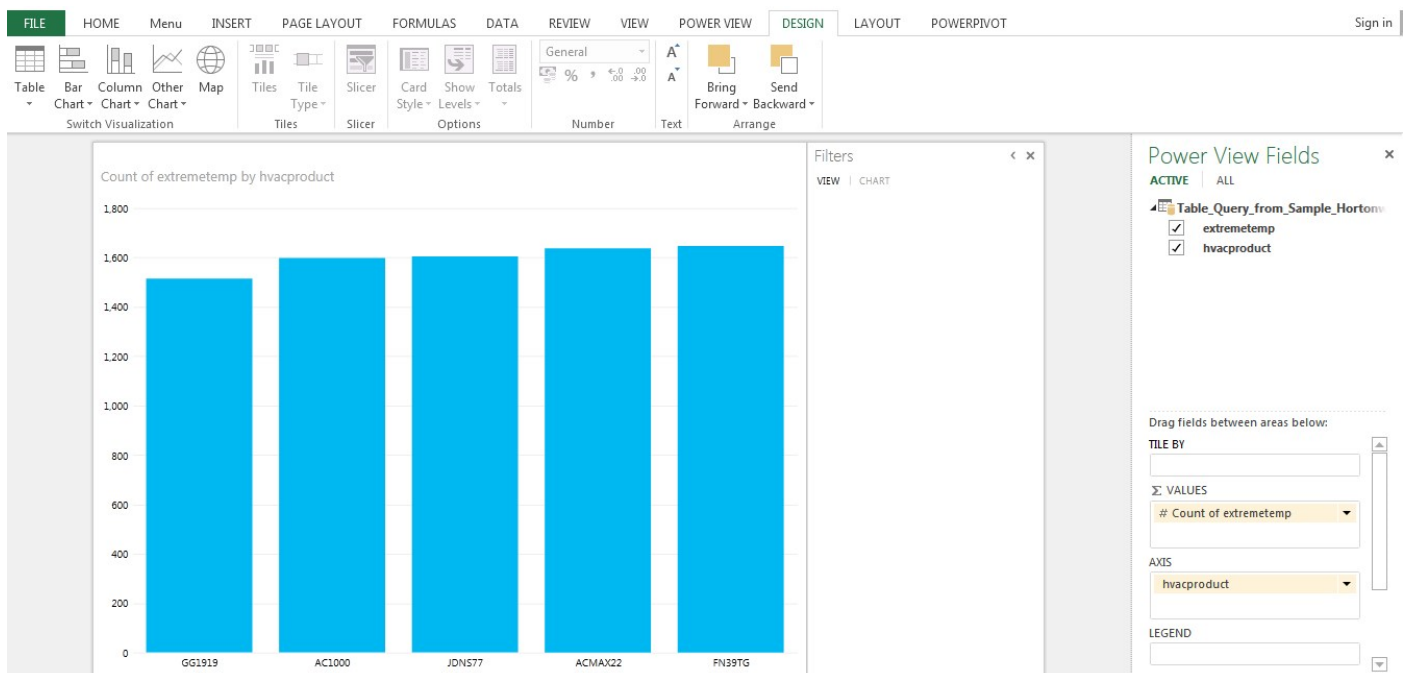
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This solution describes how to refine data from heating, ventilation, and air conditioning (HVAC) systems using the, and how to analyze the refined sensor data to maintain optimal building temperatures. In this example we show sensor data from building operations. This would be a scenario where we can refine and analyze the data from Heating, Ventilation, Air Conditioning (HVAC) systems in any number of large buildings in disparate locations.

A sensor is a device that measures a physical quantity and transforms it into a digital signal. Sensors are always on, capturing data at a low cost, and powering the “Internet of Things.” Sensors can be used to collect data from many sources, such as monitoring machines or infrastructure like ventilation equipment, bridges, energy meters, or airplane engines. This data can be used for predictive analytics, to repair or replace these items before they break.

The information about the performance of various brands of HVAC equipment, deployed across many types of buildings in a wide variety of climates can be used to assess the relative reliability of the different HVAC models.



Example of temperature control unit effectiveness rating

**enVdata is a unique provider of integration services for Open Source Big Data, NoSQL, visualisation, analytics and Microsoft technologies. We will preserve and enhance your environment with solutions that build on your current staff skillsets and knowledge. We also partner with all major Big Data platform providers such as Hortonworks, Cloudera and MapR.**

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ITS ABOUT BIG DATA