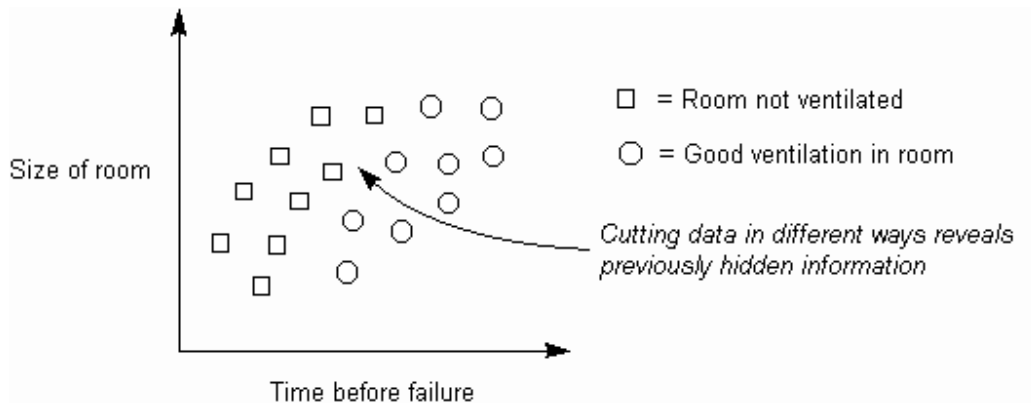


## Stratification

When investigating a problem, a single general measurement is often insufficient and can cloak useful information. By measuring the situation in a number of different ways (*stratifying* or *segmenting* it), one or more 'cuts' may reveal new information that will allow specific corrective action to be identified, as in Fig. 1.

Common measurements used in stratifying data include:

- Raw materials and completed products
- Machines and tools
- People
- Processes and actions within them
- Time
- External factors, such as temperature and season



**Fig. 1. Significant stratification in a Scatter Diagram**

For example, a customer support organization counts the number of calls about each product, and find that a heater product is receiving a very high call rate. They have identified a problem, but cannot find out why without making more measurements. They therefore stratify the calls by taking intrusive measures, asking customers questions about suspected causes, such as the type of problem (failure, cutout, etc.), customer (age, occupation, etc.), how they are using the product (indoors/outdoors, hours of usage per day, etc.) and so on.