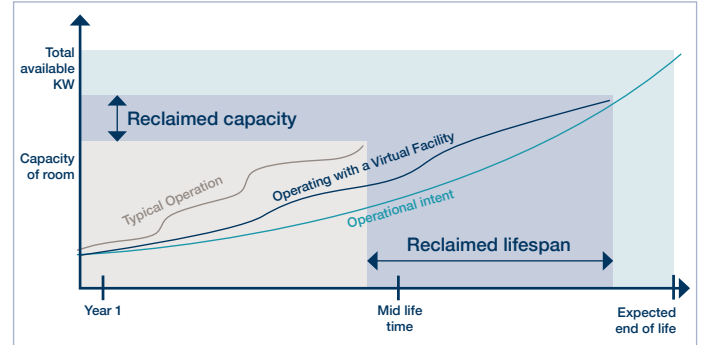


# Predictive CFD Modelling Service

## Avoid stranded capacity in your data centre

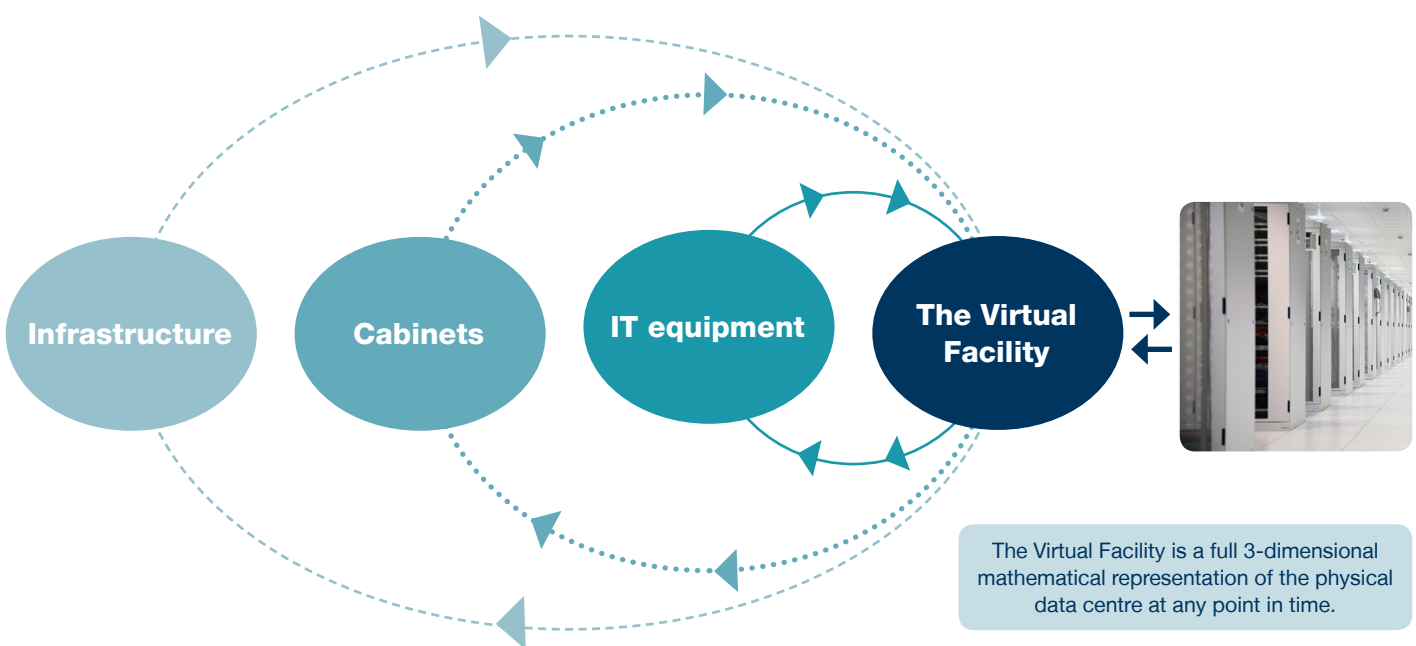
**Most data centres fail to deliver their designed capacity. The reason for this loss of capacity is hot spots that prevent all of the rack spaces being used or all racks being used to capacity.**



We call this loss 'stranded capacity' and in many data centres it can be 30% of the original design capacity.

Cundall's [Predictive CFD modelling service](#) enables you to avoid stranded capacity by developing better IT equipment layout strategies.

[Predictive CFD modelling](#) encourages co-operation between IT and facilities teams enabling them to test alternatives before committing to IT equipment installation. Once IT equipment has been installed and commissioned, it is nearly always impractical to move it. The [Virtual Facility](#) enables you to explore the consequences of equipment installs before they become irreversible.



The Virtual Facility is a full 3-dimensional mathematical representation of the physical data centre at any point in time.

## Predictive CFD modelling service

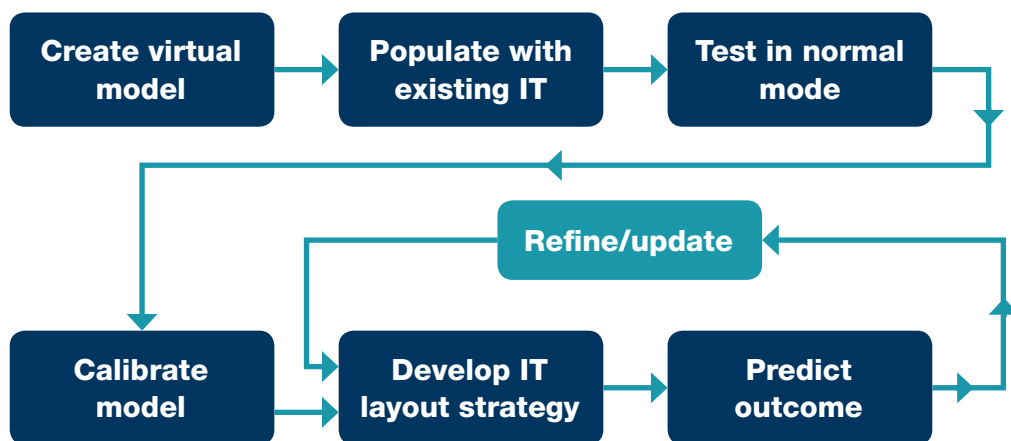
**Cundall uses Future Facilities 6Sigma DC CFD modelling software to model your data centre. 6Sigma DC has the most comprehensive database of IT equipment heat loads and air-flows that enable us to rapidly model all existing IT equipment in the data hall and any new systems that you are planning. Future Facilities works closely with all major IT equipment manufacturers to ensure it has the CFD data for new equipment before it is shipped to customers.**

### Cundall's CFD modelling process

Cundall's CFD modelling process can start at any stage in the lifecycle of your data centre. We start with a model of the data hall and the cooling plant. If the data hall is part populated, we can model the existing installed IT equipment. Once the model is created and populated, we run a series of test cases in normal and partial failure modes to show how the data centre will perform.

Although the 6Sigma DC CFD model and the IT equipment database produces the most accurate results available there may be factors in your data hall such as excessive air leakage or under-floor obstructions that give un-expected results. Our calibration process identifies these anomalies and we refine the model so that the predicted consequence of installing additional IT equipment is as accurate as possible.

We can provide you with data centre management tools that enable your team to plan new IT installations and populate the model with the additions. We can then quickly run the full CFD model on our powerful processors and give you the predicted outcome including an analysis of failure modes.



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