



## EXPECTED MAXIMUM IT POWER

One of the main parameters of the RenewIT tool is the expected maximum IT power. This parameter will define the maximum IT power consumption that will be handled by the Data Centre. Over this parameter it is possible to define an oversizing safety margin. As can be seen in Figure 1, the oversizing safety margin defines the ratio between the total installed IT capacity and the maximum IT power consumption. This margin is needed in order to allow the Data Centre to cover either an unexpected addition to the IT load or an unexpected impairment of the component capacity. The parameter that will have a direct influence on the IT power consumption of the infrastructure is the occupancy value, apart from the IT profile selected. As is also shown in Figure 1, the occupancy defines which is nowadays the occupied IT power related to the expected maximum IT power previously defined.

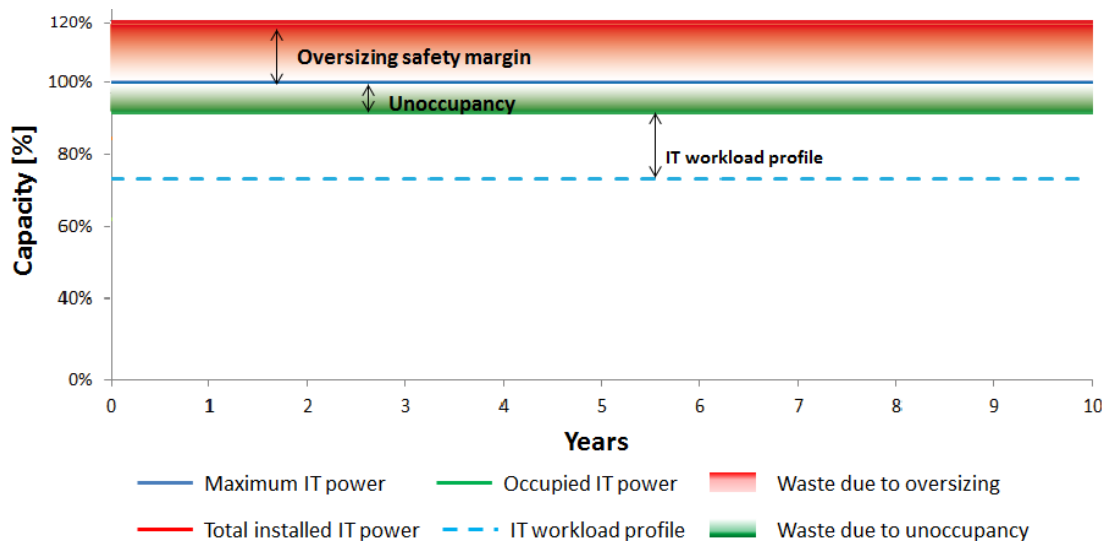


Figure 1 Effect of the oversizing safety margin and occupancy over the IT capacity and load, traditional Data Centre design plan

The installed IT capacity will be used as a reference value to size all the electrical and cooling components. Therefore it is crucial to know the effect of the oversizing safety margin over the Data Centre design in order to minimize the waste of capacity due to oversizing. As a result different designs strategies are emerging in the market in order to avoid have a huge waste of capacity, such as the modular growth plan<sup>1</sup>.

<sup>1</sup> Rasmussen, N., "Avoiding Costs from Oversizing Data Center and Network Room Infrastructure", Schneider, White Paper 37-rev.7, 2012.