

# Units

A unit has 3 levels of information:

- the unit,
- its components and
- their downtime modes

A unit can have several components, a component can have several downtime modes. For high level and design studies, and when there is only limited data, the components and downtime modes can be lumped together.

<p><b>Unit</b></p> <p>name: <input type="text" value="well"/></p> <p>description: <input type="text"/></p> <p>start date: <input type="text" value="01 Jan 2014"/></p> <p>icon: <input type="text" value="well"/> ▼</p>	<p><b>lifetime distribution</b></p> <p>scale: <input type="text" value="1"/> (year)</p> <p>shape: <input type="text" value="1"/></p> <p>mean: <input type="text" value="1.00"/> (year)</p>
<p><b>Component</b></p> <p>name: <input type="text" value="reservoir"/></p> <p>description: <input type="text"/></p>	<p><b>Unplanned downtime</b></p> <p>mean: <input type="text" value="10 * 24"/> (hour)</p> <p>distribution: <input type="text" value="exponential"/> ▼</p>
<p><b>Downtime mode</b></p> <p>name: <input type="text" value="testing"/></p> <p>description: <input type="text"/></p> <p>bypass capacity: <input type="text" value="0"/> (%)</p>	<p><b>Preventive downtime</b></p> <p>strategy: <input type="text" value="periodic"/> ▼</p> <p>mean: <input type="text" value="240"/> (hour)</p> <p>distribution: <input type="text" value="exponential"/> ▼</p> <p>interval: <input type="text" value="6"/> <input type="text" value="month"/> ▼</p>

For a given unit, all its items start at the same unit start time. Before then, they have zero capacity. The unit start date determines the progress of the items' ageing (if any) and the start of the capacity profiles.

The component and downtime mode names can be chosen as per the result of Reliability Centered Maintenance (RCM) or Failure Mode and Effects Analysis (FMEA) studies or any other relevant classification.

At any time, the capacity of each item equals the minimum of the bypass capacities of its unit's modes that are down.

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