

## Bizagi model simulation

Read through Bizagi Simulation help:

[http://help.bizagi.com/processmodeler/en/simulation\\_in\\_bizagi.htm](http://help.bizagi.com/processmodeler/en/simulation_in_bizagi.htm)

Some additional notes:

At the Start Event, the 'maximum arrival count' sets the number of process instances (each of which is represented as a token) to be started.

A token is like a baton – you can run (or perform a task) only if you have a token. If you are done, then you give token over to the next task (or event or gateway).

## Resource costs

You can define the *fixed* and *per hour* costs for each Resource.

•**Fixed cost (of a resource at a task):** This cost is generated each time a resource processes a token (at a task). So each time a task requires the resource that has a defined fixed cost, that fixed cost is added to the total resource cost of the process instance. Like switching a lamp on, a lamp can sustain only so many switch-ons in a lifetime, thus every single switch-on has a fixed cost.

•**Per hour cost:** This cost is generated for each hour a resource employs processing a token. Each lamp also has an estimated lifetime in hours (and consumes a certain level of electricity), thus each hour of a burning lamp costs something.

So both fixed and per hour costs are accounted at the individual task level.

You can also define the Fixed cost of performing an individual Task once. That cost becomes real once the task is performed, regardless of any resources.

- One should also think about waiting for another role to complete its task.

If a waitress at a desk waits for the customer to pay for the service and that payment task is modeled at the lane of the customer, then to model the waiting cost of the waitress one would have to assign both the client and the waitress as the required resources for the payment task.

Similarly, if the customer waits at the desk for the waitress task to complete and if it is desired to take customer costs into account, then one would have to assign the customer as the resource for the waitress task as well.

Both cases assume that the waitress has to wait for the customer (ie. can't do any other task in the meantime).

- But how to take into account the fixed costs that are independent of tasks?

If an waitress is at work, but there are not enough clients for that extra waitress and if the waitress is paid by day, not based on the number of customers, then by default Bizagi (ver 2.9) does not account for such costs. Those costs have to be manually added to the Bizagi results (exported to Excel).

Total costs = Bizagi total resource costs + Bizagi total main process costs + Bizagi total subprocess costs + manually added fixed resource costs that are not tied to performing any individual task.