 Other Elements of a in-house Implementation

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Along with acquiring the adequate hardware to suffice the current requirements there are other components which should be mentioned and in many case these are considered the drawbacks of purchasing your own hardware.

**Failure management - Disaster management**

It is important to plan ahead for unpredictable events that may occur and affect the system performance. These events include hardware faults, power outage, system overheating and any other natural disaster. Therefore, a disaster or recovery management plan would be necessary. However, such plans are responsibility of the client to develop because it will depend on client's necessity or willingness to ensure system is always working and determining if the information is vital, also of the venue to comply with their health and safety policies.

Some usual solutions are to have the servers in a temperature monitored room, which also has an inergen gas system for event of fire; generators that kicks in automatically to supply power to the servers only when power goes down; back-ups servers to take place when one stops working; daily back-ups of data and etc.

In the case of MATHEX competition the current paper-pen system will not be discarded as last resort back-up plan.

**Maintenance**

It includes hardware and software checks, ensure system is up to date and working to specifications. Also, implementation and alterations of features and testing.

Maintenance may also be extended to other parts of the system such as the options mentioned in the failure management section above.

Further information can be found at: <http://sebokwiki.org/wiki/System_Maintenance>.

**Cost to run the equipment’s.**

The system will require resources since energy power to labour. We assume that the servers and its peripherical devices will not be located at the venue and will need to be moved from place to place, which will also infer set-up costs and tests.

Maintenance of the system will also generate costs as well as possible hardware faults.

**Durability**

A computer also have a lifespan which is usually estimated between 3 to 5 years, but it is subjective. It will depend on how it is used, how often it is used an how it is maintained.

There are many system out there that have been running for several years and may be still live for many to come with the appropriate maintenance.

That been said it is important to know that further costs are expected.