**Asset-Based**

organizations take an asset-based approach to assessing IT risk. Assets are composed of the hardware, software plus the information itself.

An asset-based assessment generally follows a three-step process:

* Inventory of all the assets that the Company use by mentioning the ones that are mentioned in the BIA adding additional ones.
* Identify the threats and the vulnerabilities by creating threat and vulnerability libraries.
* Evaluate the effectiveness of the existing controls and assess the potential impact of the risk on the assets.

# **Asset Inventory.**

it assigns for each asset weight from 1-30 based on the cost of ownership, cost on the

reputation and the impact on the mission:

## Cost of Ownership.

* if the asset cost less than 300$ per month then it is ranked between 1-4
* if the asset cost less more than 1000 and less than 5000 then ranked between 5-7
* otherwise ranked between 8-10.

## Impact on the Reputation.

* If it barely affects the reputation 1-4.
* If it highly affects the reputation 5-7.
* If it severely affects the reputation 8-10.

## Impact on the Mission.

* If the asset affects the mission at a medium level then it will be ranked 1-4.
* If the asset affects the mission at a high level then it will be ranked 5-7.
* If the asset affects the mission at a catastrophic severe level then it will be ranked 8-10.

# **Threat and Vulnerability Identification.**

Create the threat inventory and rank it in scale from 1-5 based on the following metrics:

* 1. 1-Finanial Loss.
  2. 2-Reputational Loss.
  3. 3-Cost to protect.
  4. 4-The loss of the Competitive advantage.
  5. 5-The frequency of occurrence.

The Vulnerability inventory will specify the assets that it affects based on

the threat that the existence of this vulnerability will cause.

for example, HTTP insecure connection protocol might cause unauthorized access.

# **Evaluation.**

The likelihood is measured from 0.1 - 1.0

and the risk is measured quantitatively from ((likelihood\*asset weight)-((likelihood\*asset weight)\*available controls)+((likelihood\*asset weight)\*uncertainty))

Assumed that if there is a control if mitigates 20%

the risk appetite is 15 and less.