

# IT 600 Final Project Milestone One Template: Analytical Organizational Profile

**Directions:** Insert your answers directly in the *Student Analysis* column below by doing the following:

* In each of the “Tech Description” fields, describe the GPOS feature using relevant technical terms and topic-related details.
* In each of the “Business Requirement” fields, describe (in business terms) how the absence of this GPOS feature impacts a business such as TSI.

**Note:** Consider the work you did for Milestone One as you populate the table.

| **GPOS Feature** | **Profile Criteria** | **Student Analysis** |
| --- | --- | --- |
| **Multiprogramming** | Tech Description | Multiprogramming is when several applications are ran in different stages of execution but are still on a single I-steam engine. This allows multiple applications to use the CPU not at the same time but in schedule with each other whereas without it CPU utilization would go up and down tremendously. |
| Business Requirement | From a business perspective without having multiprogramming computers CPU’s would be tasked with one job at a time and couldn’t multitask. In highlight speed would be slowed down and thus productivity slowed. It used to talk people days to program simple systems and now it can be done in minutes because of this. |
| **Multiprocessing** | Tech Description | Multiprocessing is the running of multiple programs on a computer running at a single time from a CPU. For example, a web browser and email application running at the same time. |
| Business Requirement | In the absence of multiprocessing a company from a business perspective would end up losing productivity due to having to wait and work with one program at a time. |
| **Multithreading** | Tech Description | Threads can execute different parts of a program side by side with other threads to help processes run quicker. Although they cannot run at the exact same time if using the same CPU, splitting threads up on different CPU’s can make a process run much quicker. |
| Business Requirement | Without multithreading we would be limited to the old way of computing where we have to wait for each command to be finished after the other. Threads are inside processes and therefore without them process/applications would take longer and again decrease productivity and ultimately money. |
| **Virtual Memory** | Tech Description | Virtual memory allows for applications to run without having to worry about conflicting memory in other applications. The virtual memory is passed on to the OS and then the OS will schedule the memory with physical hard drives or RAM. |
| Business Requirement | Losing virtual memory would mean that in certain circumstances that applications should use duplicate memory the effect of this could be anything from crashing to completely wiping all your memory and losing everything. Ultimately if you lost of all your things you would be losing money as well especially if it’s a banking system. |
| **System Call Interface** | Tech Description | System calls provide an interface to the services from the operating system. In other words if an application needs access to resources that it doesn’t have permission to have it can make a call to go into kernel mode this call is the system call interface. |
| Business Requirement | Without having this functionality applications would have to run in a certain mode that if it crashes the whole system would crash. Having these calls allows for more stability in user workflow. More stability in workflow means more productivity and more money. |
| **Security** | Tech Description | Security is the state of being free from a danger or threat. This is an important feature when it comes to technology since someone can impersonate another person and take what they do not own. |
| Business Requirement | Security needs to be a priority, since without it there is a possibly that an organization can be hacked and ransomed for money. |
| **Device Drivers** | Tech Description | A device driver is a group of files that controls some sort of hardware for the computer. These files communicate with the OS to be able to use the physical device. |
| Business Requirement | Device drivers enable organizations to be able to use modern hardware. Without device drivers computers would not be able to connect to the internet. In case not able to be productive and therefore not make any money. |
| **Fault Tolerance** | Tech Description | Fault tolerance is somewhat of a safety net in case applications or hardware break the entire system doesn’t crash. Similar to a ground line in electricity many times it can stop a major issue. |
| Business Requirement | In an example if you’re working on a school project and your computer dies you don’t want to lose all of your information so as a fault tolerance the computer in some OS’s will save your work as a final process. |