**Our research is about finding alternatives for traditional block partitions and external facade cladding to reduce construction cost and for achieve high quality. There are too much cost and expensive for the owner which is important for internal and external works (wall) like hollow block and cladding works include the additional requirements for this work. We are looking forward to replace the above mention to minimize the cost and to redesign for less expensive and achieve high quality.**

**We will study the alternatives for block traditional cladding by bring building completely design and calculated the cost for construction this building especially for internal works, then we have to do for redesigning the building by using the new material which we choose it. The aim of this research is to find alternatives it has the same function with less cost, and the owners have a chance to use it.**

**Walls cost estimation is one of the important parts in the cost of the project, and after a fair study for the common materials that used in external and partition walls construction, we found a new material can be used in Palestine, which is not popular in construction projects; this material is XPS sandwich panel. This material can be used in internal and external cladding for its high efficiency, high quality and low cost; these three components are very essential and must be provided in the engineering projects.**

**If this material is manufactured locally, this will minimize the cost of the projects. It is possible to use an alternative material to be used in internal partition walls, with a relative high efficiency, good quality and does not need professionalism while installation like gypsum board. For external walls, clay brick is chose to be used externally, clay brick provides a good quality and low cost in projects. And it has many good insulation properties. The result of our search, we combined the common materials with the alternative, to get a high quality and low cost combination of materials, and also to provide a strong building material, that is compatible with the Palestinian specifications.**

**Definitions:**

**Circulation Space - Spaces, such as corridors and aisles, provided within an office to Allow for access to various work areas.  Enclosed Workstation - A workstation with four-sided, floor-to-ceiling**

**Enclosures using drywall, demountable or removable partitions. Full-Time Equivalent (FTE) - A measure of labor utilization which approximates the Number of persons employed by a department and requiring office space. Office space planning is based on the anticipated number of (FTEs) at the mid-point of occupancy or a five year period, whichever is less.**

**Functional Program – A detailed statement describing what is needed by a department to perform its activities efficiently, safely and comfortably. It includes a description about the occupant group’s requirements for each workstation, support, circulation and special purpose spaces, based upon the approved space standards and guidelines. It also describes how the areas relate to each other etc. Special purpose space is not included in the space envelope allocation determined under these standards.**

**Standards - A set of prescribed maximum space allocations which must be followed when planning office space. Standards do not establish or imply minimum space entitlement and consideration should be given by departments to meet their requirements using less space. Support Space - Shared space containing furniture, equipment or materials used by a department. For example, photocopier rooms, file cabinets, meeting rooms, coffee counters, etc. These shared spaces are located near the people that use them on a regular basis and may be enclosed or open depending on the type of equipment and the work.**

**General Guide lines:**

**The following space planning and design guidelines are recommended:**

1. **In order to create flexibility, promote air quality, increase natural light penetration and reduce costs, attempt to limit the number of enclosed workstations to 45% of the total workstations on a floor.**
2. **Enclosed workstations may be provided to senior managers (e.g., director level and above) and positions which conduct continuous (e.g., on a daily basis for at least 3 to 4 hours during the day) confidential meetings. The supervision of staff and/or occasional confidential meetings is not usually considered sufficient cause for an enclosed workstation. The provision of meeting rooms and shared Quiet Rooms In a more efficient and functional solution.**
3. **Enclosed offices should be positioned on the building core and provided with glazing to receive natural light. Screens should be 1.65m (65") or lower in height.**
4. **Allocate approximately 25% of the space as circulation space.**
5. **For periodic large group (12 or more people) meetings, conference rooms should be rented from the private sector rather than accommodated in general office space. However, if private conference facilities are not available locally, departments can provide for conference-size rooms by connecting adjoining meeting rooms with ceiling height, soundproof, moveable partitions.**
6. **Departments should consider collocating in order to share support spaces and equipment and reduce costs.**
7. **Plan space so that short term space requirements are isolated from longer term requirements to enable future space reductions.**
8. **To promote open workstation planning, Quiet Rooms can be provided for small group meetings and work requiring privacy. To provide maximum functionality as shared workstations, Quiet Rooms should be equipped with furniture, computer equipment and communications connections.**
9. **To create flexibility, apply a modular approach to planning; i.e., plan spaces which are compatible with building grids. Most existing facilities are built on a 5' x 5' grid. Plan the size of smaller support spaces so that they can be interchangeable with workstations for people.**
10. **Attempt to standardize workstation furniture so that, when moves occur, only people need to move.**