A Sustainable / Creative Setting

for a

Multi-National Research Institute

1. Introduction

The emergence of globalisation since the Nineteen Eighties has an eminent transformation effect upon all aspects of human life at the individual and institutional levels. These aspects include; ideas, concepts, processes, attitudes to the physical environment as well as the collaboration of local/global communities. Architects, community designers, planners and environmentalists are obliged to face the needs and challenges of globalisation and to address the issues raised by such unprecedented rate of change.

Development of science and scientific research is undoubtly the most important challenge that Egypt has to face in the age of globalisation and local democratic transformation. Although architecture is not usually thought of as a scientific discipline, its role in providing sustainable /creative physical settings for research centres and institutions is highly acknowledged, appreciated and most importantly needed.

The research setting is perhaps a typical example of those accelerant changes in terms of concept, program, configuration, language and expression. **These transformations have been emphasised by two things; the emergence of multi-national research organisations in which the exchange of knowledge and experience is a prime objective. On the other hand by the compelling need for sustainable design approach.**

These new organisations almost work for 24 hours to follow up undergoing research and experiments. This means that the employees spend at least 8-10 hours a day**. A fact that imposes new demands and criteria upon the design of work spaces in terms of program , spatial organisation, environmental conditions, communal facilities and even architectural criteria**. These demands are quite different from those of a standard formal research building to the extent that we may re-conceptualise the new physical setting as bringing urban, communal and even domestic life into a building.

2. Key Themes in Creative Office Design

Till the early Eighties, the majority of research centres adhered to a mechanical-like, hierarchical model of modern office design in which any creative or individual elements were sacrificed to the perceived needs of management efficiency.

Today, growing management interest in new more informal ways of working has been associated with the rapid emergence of new workplace technologies, especially cordless ones, and innovative approaches to space and architecture.

Creative research settings aim at supporting people in thinking more creatively about work – which promote the right-brain skills of intuition, imagination and synthesis, instead of the left-brain focus on rational order, protocol and precedents, which has tended to dictate the shape and style of inflexible scientifically managed offices in the past.

Themes underlying the design of creative research settings come under four main headings, namely teamwork, knowledge exchange, community orientation and mobility.

Teamwork:

Encourage team-building and group work, promote more interaction between people.

Knowledge Exchange:

Facilitate the generation, sharing and presentation of knowledge and experience, especially academic and research organisations.

Community Orientation:

Foster a spirit of community and promote social cohesion. A key focus is on creating images of 'town squares', 'neighbourhoods' and 'city streets' within office interiors.

Mobility:

Provision of non-territorial workplaces, range of work settings – from 'open spaces' to 'private cells' – supported by mobile technologies.

3. New Trends of Planning Sustainable/ Creative Offices

1. Break away from the efficiency of the rectangular grid in favour of more innovative and unusual solutions that create unexpected environments

2. Generous circulation areas, often include spaces for people to meet informally

3. Central focal point(s) or atrium space with public amenities and works of art

4. Planning for random encounters and chance meeting

5. Publicly-owned inside and outside spaces, sometimes given names to reflect their status, the '**The Workshop'** , **'Market Square'**, the **'Piazza'** and the' **Street'** to be supplied by all amenities, services and entertainment of urban life.

6. **Be inspired by the physical ,environmental and socio/ cultural characteristics of the site.**

7. **The combined use of passive and active methods of environmental control to save energy and minimise CO_2 emissions**

8. The use of new technologies that control the building management system [BMS] that will automatically shut all windows and switch on the air conditioning if the outside temperature changes.

4. Challenges and key issues

Although this new work setting is adopted worldwide, it is still lacking in Egypt. Those settings, however, have emerged in contexts that are quite different from the Egyptian one in terms of culture, economy and finance, as well as the physical environment. The challenges that Egyptian architects – and generally speaking, designers – have to face may be viewed in terms of providing an optimal balance between demands of the new creative work settings and those emerging from the local culture and context.

These challenges may be viewed in terms of the following set of polarities (i.e. contradictory issues) as follows;

- Static and formal / Mobile and flexible space
- Private workspace / Public communal place
- Individuality and segregation / Integration and interaction
- Active, static energy control / Passive, sustainable energy control
  [BMS] & intelligent building

- High tech. / Appropriate technology
- Imposing individuality / Contextuality
- Institutional identity / Local identity

5. Aim of the project

The aim of the project is to develop sustainable/ creative and novel solutions for the issues cited above in terms of program , spatial, formal, environmental and structural solutions. Students should take into consideration constraints/potentials of selected site, as well as the nature of the research topic of the institution.

Each student has to choose the research topic, to identify the nature and type of its activities and to develop his/her program according to the proposed components of the project.