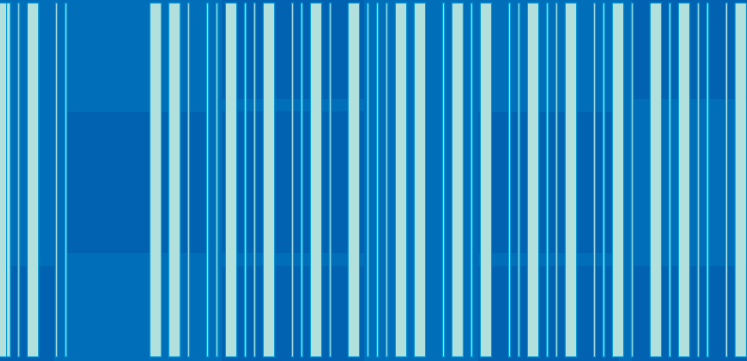


# BASELINE



006

# E CRITERIA

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- > Problem statement\_
- > Baseline criteria\_



"...those interactive environments, where billboards know your name and you can play on those glass screens. They're coming..."

David Rdjaye

## >Problem Statement\_

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To showcase technology in an adaptive environment that can be intelligently manipulated and where users can be educated. To effectively communicate new technologies and media to the average citizen of Pretoria. To provide a platform to showcase these technologies. How will the users identify with this platform? Will the resultant architecture act as a catalyst for the proposed area?



## >Communication with the citizen\_

Communication can take many forms and can range from the written or spoken word to music, art and visual imagery. In the current consumerist society there is an ever growing need to get the message across, quickly and to the largest possible audience. The current trend of bombarding the audience with a myriad of images is a way of delivering this message. The well worn phrase, 'a picture is worth a thousand words', applies.

The consumer has been educated in this method of communication and can relate to it. By using the idea of communicating via the image, the building and its function can be introduced to the passer-by. By accommodating a digital media school in the building the 'image' results from the programme. The intention is to create a building that displays images, whilst itself becoming an image.

## >A catalyst for the area\_

In an urban context there will always be a need for regeneration. As its boundaries extend, parts of the city will inevitably degrade and become neglected. This project is concerned with these parts or voids within the city fabric. The aim of the project is to reconnect the elements of a dislocated city.

The Group Framework has identified various existing and possible future networks within the city. The strength of these networks are of varying degrees and, in some cases, they have become disconnected. The Group Proposal for the site aspires to re-establish these broken links. In addition, any development on the proposed site is seen as one of many initiatives around the city that can act as activators for regeneration.

The Digital Media [Exchange] should consolidate this notion on a smaller scale, by creating new opportunities for the pedestrian and the inhabitants of the site.





## >Baseline Criteria\_

### > Social Issues\_

*{Occupant comfort}*

#### >Ventilation

Use of natural ventilation where possible. Equipment rooms and offices to be mechanically ventilated. (this should be energy efficient equipment and reliable).

#### >Thermal comfort

Human performance is greatly reduced when room temperatures are above 28 degrees Celsius or below 18 degrees Celsius. Occupants must find the temperature, humidity & air movement ideal.

#### >Hygienic comfort

Air quality in a room is rarely a problem in naturally ventilated areas. Natural ventilation must be promoted as stale air causes drowsiness and affects concentration. User interaction must be promoted in private areas, public areas must cater for the general public mechanically.

#### >Acoustic comfort

Can cause discomfort if unwanted noise infiltrates quiet zones. Insulation is to be used in these areas or placement of areas must be carefully considered after analysis of site conditions.

#### >Visual comFort

Views in or out of building to be maximized. Natural light is essential throughout public spaces and controlled where artificial light is desired. Visual link to exterior essential.

*{Inclusive environments}*

#### >Circulation

Building to promote continuous free flowing spaces across the site. Existing movement patterns to be considered as well as 100% paraplegic access to all areas.

#### >Public transport

Provision for taxi pick/up, drop/off zone to be catered for. All vehicular traffic to be kept off site i.e. Subterranean parking encouraged. Project to link easily with existing and proposed public transportation network.

#### >Access to Facilities

Existing facilities on site to be retained where possible or reintroduced within the new proposal. Access to these facilities to be non-discriminatory and available for



### *(Participation and control)*

#### >Environmental control

Users of the building must have reasonable control over the environmental conditions, especially in private spaces.

#### >Social spaces

Users to be offered multiple choices for social interaction. these spaces are to be multi-Functional and program for spaces to be easily changed by the users & public.

#### >Amenities

Easy access to toilets for users inside and public outside.

#### >Local community

Spaces to be available to the public on request if not in use. Majority of spaces to have two or more uses.

#### >Social upliftment

The design process should incorporate purpose designed prefabricated elements to minimize wastage. Detailing and material selection that requires little or unskilled maintenance to be implemented if possible.

#### >Education

The centers vision is to cater for talented

and interested students to interact with one another, teach, view & exhibit digital media. The users will have diverse media forms to select from. Students will also be able to introduce the community to digital media.

#### >Safety

Due to the permeable nature of the proposed site development restricting the access would contradict the public nature of the building. With this aspect firmly established security will become an important aspect within the design. For the building, access control into private spaces will be implemented and public spaces will be closed after hours. For the general external public spaces, the building will have to provide sufficient lighting with no compromising alleys or problem areas.

#### >Heritage

The existing structure is in a state of bad repair and has a high heritage conservation rating. However, it is desirable to maintain existing parts of the structure.

The colonnade is an important characteristic of the existing building and the overall area. The colonnade must be maintained by either keeping the existing or reintroducing a new one to maintain the character of the site.





## >Economic issues\_

### *(Initial costs)*

#### >Localeconomy

Local craftsmen and contractors to be favored for construction. Local trade to be used wherever possible in the construction process to ensure skills transfer and development. Local materials including existing on site material that can be used to decrease costs.

#### >Efficiency of use

In order to achieve a sustainable environment secondary uses for spaces need to be considered. A coordinator will be employed to achieve use around the spaces primary functions.

#### >Adaptability and Flexibility

Open planning should be a priority with moveable screens to be used opposed to permanent walls. 3m head room is favorable which will aid in naturally ventilating the spaces and allows for multiple uses of the space.

#### >Capitol costs

The project will have The TUT Arts Campus as its main lessee. Capital costs to be invested by various private and public corporations such as: The Department of

Art, Science and Culture, The Department of Education, The Department of Public Enterprises, Microsoft Bill Gates Foundation, Fuchs Foundation and Google.

### *(Ongoing costs)*

#### >Maintenance

Materials with low maintenance requirements and high material/component life expectancy to be used to ensure building longevity.

#### >Security

This aspect will be a large contributor to the buildings ongoing cost. As previously discussed the building should provide security for its surrounding spaces i.e. all visual links to the outside spaces must be promoted. Self-surveillance of building and transparency of public areas to ensure visibility and to decrease cost of employing security. Also occupancy to be maximized to ensure that the building is always being used.



## >Environmental issues

### >Water

Storm water runoff to be reduced by the use of pervious or absorbent surfaces to maximize the replenishment of ground water.

### >Rainwater

To be harvested in two ways:

- Storm water

- Rainwater on roof level

Water to be collected and stored for later use as grey water for watering landscape and toilet facilities.

### >Water consumption

Devices that minimize water usage from main water supply to be used.

- Dual flush toilet systems (connected to grey water).

- Auto flow automatic taps in all bathrooms (this water to be reintroduced into grey water collection tank)

### >Energy

As previously addressed, building are responsible for 42% of all energy produced.

"Conventional energy production is responsible for large contributions to environmental damage and nonrenewable resource depletion." (Gibberd, 2006; pg9)

### >Passive environmental control

The design must respond to the micro climate of the site. Appropriate orientation must be prioritized, in the event that orientation cannot be achieved, shading devices should be incorporated. Due to Pretoria's high average temperatures airconditioning may be required. Shading devices not to conflict with views into and out of the building.

### >Renewable energy

South Africa experiences very high levels of incident radiation from the sun. South Africa covers 41% of the land area on the globe where 6kwh of sunlight on a winters day can be harnessed. (Joubert, 2006; pg7)

This renewable resource must be harnessed to heat water or convert solar energy directly into electrical energy with the use of photovoltaic cells if within budget.

### >Waste recycling

A policy must be implemented to sort, store and dispose of any materials to recycling plants within the area if such places exist. Design limits wastage if modular elements are kept to.

