

**FASHION TECHNOLOGY PARK
HATIJHEEL,DHAKA**

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Seminar II

Submitted in partial fulfillment of the requirements
for the degree of Bachelor of Architecture
Department of Architecture
BRAC University

Summer 2013

ABSTRACT

Fashion Technology Park which is newly introduced in Bangladesh which is differentiated from the other commercial complex. My research has firmly concluded that in our country the fashion manufacturing industry is a large scale industry, which is hungry of proper services, Designing, Sample-making, Sample testing and workshop. Proposed as an integrated development catering to the fashion industry's requirements of Bangladesh as a **'one-stop-solution'** which also work as a **"HUB"**, the Project would be developed on a commercially self-sustaining format. Based on this, it was felt that both the communities should be able to meet & fulfill their mutual needs at one place. Fashion Technology Park came in to existence as an answer to those needs. In other words, which is very much needed for the development of **Fashion Business** and in **Education** in Bangladesh & particularly in this region. The global scenario of Fashion Business in a liberalized market is another propeller as the competition in quality and pricing is tough to go through. It will help to improvise the fashion as fashion institute and industry globally again of quality design intervention and price because the manufacturers especially the textile manufacturers, will be able to go for mass manufacturing. The Project has been envisaged in view of the current state of fashion and related industries in Bangladesh and the integrated development would provide commercial, industrial and residential spaces. And to integrate and synergies Fashion Business with economic growth of the nation and help it to convert its dream of becoming the largest economic powerhouse of the world in near future, a reality.

ACKNOWLEDGEMENT

This thesis has benefited greatly from the support of many people, some of whom I would sincerely like to thank here.

To begin with, I am deeply grateful to both Abul Fazal Mahmudun Nobi sir and Atiqur Rahman sir for supporting in this interesting topic for investigation and who has been my mentor during my thesis project. Not only they were able to provide useful hints and advices, but they also gave me the chance to develop deeper teaching skills by entrusting me with leading tutor duties. They were also the advisor for all my thesis work throughout my project, deserves special recognition for their always highly competent remarks and suggestions and particular praise for their openness and their calm and friendly manner which allowed me to convey everything most graciously. Thank you very much.

There are two other people who had a positive influence on my project, as well. Thanks for your supporting and encouraging me Raju sir and Nurur Rahman Khan.

Furthermore, I would like to thank my batch mate, Emil, Cyrus, Saiffee , Tahmid , Ifreet , Nazia, Mahmudul, Ali, Reasat and Zahid bhai for supporting me all the time giving me all the strength and motivation throughout my thesis journey. And some people without them my journey would have been incomplete Sayem, Jamie, Hiba, Labonno, Nipa, Zarif, Nagib, Mustafiz, Ayesha, Roma, Mou, Sumaita, Thoiba.

Finally, but first in my heart, my parents and my younger sister are due my deep gratitude for their continued moral and financial support throughout my studies and believing in me , the former being of much greater importance.

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LIST OF FIGURES

CHAPTER 01: INTRODUCTION

Fig 1.1	Fashion cycle Source: Author
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CHAPTER 02: SITE APPRAISAL

Fig 2.1	Site location. Source: Modified by author from Google Earth (June, 2010)
Fig 2.2	Analyzing connectivity and site alternatives. Source: Author
Fig 2.3	Surrounding urban fabric. Source: Author, 2013
Fig 2.4	Hatirjheel master plan Source: Vitti
Fig 2.5	The alter axis. Source Author, 2013
Fig 2.6	Site and surrounding
Fig 2.7	Hatirjheel analysis
Fig 2.8	Site mages
Fig 2.9	Land use pattern of Tejgaon.

CHAPTER 09: DESIGN DEVELOPMENT

Fig 9.1	Initial conceptual drawing 01
Fig 9.2	Initial conceptual drawing 01
Fig 9.3	Conceptual design phase 01
Fig 9.4	Conceptual design phase 02
Fig 9.5	Active nodes
Fig 9.6	Zoning
Fig 9.7	Design phase 01 and 02
Fig 9.8	Landscape phase 01
Fig 9.9	Landscape phase 02
Fig 9.10	Final phase
Fig 9.11	Conceptual section of Exposition centre

Fig 9.3	Conceptual section of Fashion warehouse
Fig 9.4	Ground floor plan
Fig 9.3	Fashion college level 01
Fig 9.3	Fashion college level 02 (+25'-00")
Fig 9.4	Fashion college level 03 (+47'-00")
Fig 9.5	Fashion college level 03 (+54'-00")
Fig 9.5	Fashion college level 04 (+72'-00")
Fig 9.6	Fashion college level 05 (+86'-00")
Fig 9.7	Fashion college level 06(+94'-00")
Fig 9.8	Fashion college level 07 (+106'-00")
Fig 9.9	Exposition centre level 01 (-12'-00")
Fig 9.10	Exposition centre level 01 (-12'-00") Multipurpose different setup
Fig 9.11	Exposition centre level 02 (+12'-00")
Fig 9.12	Exposition centre level 03 (+24'-00")
Fig 9.13	Exposition centre level 04 (+36'-00")
Fig 9.14	Exposition centre level 05 (+48'-00")
Fig 9.15	Exposition centre level 06 (+60'-00")
Fig 9.15	Exposition centre level 07 (+72'-00")
Fig 9.16	Fashion warehouse level 01 (-12'-06")
Fig 9.17	Fashion warehouse level 02 (+12'-00")
Fig 9.18	Fashion warehouse level 03 (+24'-00")
Fig 9.19	Fashion warehouse level 04 (+36'-00")
Fig 9.20	Section AA' and BB'
Fig 9.21	Structure

Fig 9.22	Bird's eye view
Fig 9.23	Night render
Fig 9.24	Studio corridor
Fig 9.25	View from fashion college
Fig 9.26	Traditional workshop
Fig 9.27	Studios
Fig 9.28	Multipurpose hall(fashion show)
Fig 9.29	Pop-up market
Fig 9.30	Museum
Fig 9.31	View from the road
Fig 9.32	Plaza level View (night render)
Fig 9.33	Night render view

LIST OF TABLES

CHAPTER 02: SITE APPRAISAL

Table 2.1	Temperature data of Tejgaon. Source: http://www.travel-climate.com/bangladesh
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CHAPTER 06: FASHION INDUSTRIES IN BANGLADESH

Table 6.1	<i>Diagram of Garment Export from Bangladesh</i>
Table 6.2	<i>The Textile and Clothing Sector at a Glance</i>

CONTENTS

ABSTRACT
ACKNOWLEDGEMENT
CONTENTS
LIST OF FIGURES
LIST OF MAPS AND TABLES
LIST OF ABBREVIATIONS

CHAPTER 01: INTRODUCTION

1.1 PROJECT BRIEF
1.2 BACKGROUND OF THE PROJECT
1.3 AIM OF THE PROJECT
1.4 GIVEN PROGRAM
1.5 PROJECT RATIONALE

CHAPTER 02: SITE APPRAISAL

2.1 SITE LOCATION
2.2 ANALYZING THE URBAN FABRIC
 2.2.1 THE HEART OF THE CITY (THE CENTRAL BUSINESS DISTRICT)
 2.2.2 THE LUNDS OF THE CITY (HATIRJHEEL URBAN DISTRICT)
 2.2.3 THE ALTER AXIS
2.3 SITE AND SURROUNDING
2.4 ENVIRONMENTAL CONSIDERATION
2.5 DETAIL AREA PLAN AND LAND USE PATTERN
2.6 SWOT ANALYSIS
2.7 CONCLUSION

CHAPTER 03: LITERATURE REVIEW

3.1 WHAT EXACTLY IS A FASHION TECHNOLOGY PARK?
3.2 THE STRUCTURE OF THE THESIS

CHAPTER 04: FASHION IN BANGLADESH

4.1 THE FASHION OF BANGLADESH
4.2 BANGLADESHI'S FASHION DESIGN IN INTERNATIONAL MARKET
4.3 IMPACT OF FASHION TECHNOLOGY TO OUR COUNTRY

CHAPTER 05: EVOLUTION

- 5.1 EVOLUTION OF FASHION IN BANGLADESH
- 5.2 IMPACT OF BIBI RUSSEL IN FASHION INDUSTRY
- 5.3 TRADITIONAL FIBRE IN BANGLADESH

CHAPTER 06: FASHION INDUSTRIES IN BANGLADESH

- 6.1 PRESENT SITUATION OF FASHION INDUSTRIES
- 6.2 WORKING CAPABILITY AND WORKING ENVIRONMENT
- 6.3 PROBLEM IN PROSPECTS OF GARMENT INDUSTRIES
- 6.4 PRESENT SITUATION OF FASHION HOUSES

CHAPTER 07: CASE STUDIES

- 7.1 INTERNATIONAL CASE STUDIES
- 7.2 NATIONAL CASE STUDIES
- 7.3 CURRENT SITUATION/SCENARIO OF FASHION IN BANGLADESH

CHAPTER 08: PROGRAM DEVELOPMENT

- 8.1 PROGRAM RATIONALE
- 8.2 PROGRAMMATIC LAYOUT AND SPACE PROVIDED FOR EACH FUNCTION

CHAPTER 09: DESIGN DEVELOPMENT

- 9.1 CONCEPTUAL DESIGN PHASE
- 9.2 ZONING
- 9.3 DESIGN STRATEGIES
- 9.4 DESIGN PROPOSAL
- 9.5 FINAL DESIGN DRAWINGS AND VIEWS

CONCLUSION

BIBOGRAPHY

CHAPTER 01: INTRODUCTION

1.1 Project brief

‘Everyone thinks Bangladesh is a poor country. For me - it's rich in culture, fashion and everything. It gives me a lot of energy’.....BIBI RUSSEL

Fashion is the need of the society; fashion is the mode of action, method of conduct, manner, custom, sort and way. Fashion is not only the method or the way how one is dressed up but it is also the style, what makes difference is the type of fabric, usage of threads, the combination of colors. It is important to prepare dresses as per the celebrations, customs - traditions; prevailing weather and the atmosphere. Today we need creativity; art and fashion. Fashion is a way of expressing oneself through carefully selected threads that cover our skin projecting out our inner thoughts and expressing our feelings. Cloths are the art and the way one is dressed up - is the style. Actually people love art, it is the need of today's global era hence establishment of Fashion Technology Park which is newly introduced in Bangladesh which is differentiated from the other commercial complex. My research has firmly concluded that in our country the fashion manufacturing industry is a large scale industry, which is hungry of proper services, Designing, Sample-making, Sample testing and workshop. Proposed as an integrated development catering to the fashion industry's requirements of Bangladesh as a 'one-stop-solution', the Project would be developed on a commercially self-sustaining format. The Project has been envisaged in view of the current state of fashion and related industries in Bangladesh and the integrated development would provide commercial, industrial and residential spaces. And to integrate and synergies Fashion Business with economic growth of the nation and help it to convert its dream of becoming the largest economic powerhouse of the world in near future, a reality.

1.2 Background of the project

Fashion is the art of the application of design and aesthetics or natural beauty to clothing and accessories. Fashion is influenced by cultural and social latitudes, and has varied over time and place..Fashion technology attempt to design clothes which are functional as well as aesthetically pleasing. They must consider who is likely to wear a garment and the situations in which it will be worn. They have a wide range and combinations of materials to work with and a wide range of colors, patterns and styles to choose from. Some clothes are made specifically for an individual, as in the case of haute couture or bespoke tailoring. Today, most clothing is designed for the mass market, especially casual and every-day wear.

In Bengal, fashion evolved with a direction kindled by Western influence with the making of tailored sari blouses about a hundred and forty years ago. It can easily be stated that the ladies

of the Tagore family played a very important role in creating and developing a strong fashion statement. Kolkata was then the fashion capital of India and the society ladies experimented with their sari drapes. Long or short end pieces, hobble petticoats and peplum blouses almost imitating the dresses of the Victorian era. Although I must add that the story of our fashion did not originate here. In fact it can be traced back over three thousand years earlier to the relics of Paharpur, Chandraketugarh and Tamluk in Bengal. The stone carving clearly depicts the maturity of our ornamentation and rich textile heritage. The aesthetics are very well-defined and do not fail to mirror the discerning culture and customs of the times.

Bangladesh is the epicenter of textiles and handicrafts industries; there are many handicrafts industries in the cities and small towns of Bangladesh. The country is one of the largest exporter of textile garments and fabrics and second largest producer of knit product. Bangladeshi fashion designers are mainly inspired by the simple yet elegant apparel designs. They use silk and cotton in their apparels time to time. These designs are also appreciated internationally for their uniqueness and elegance. Today, Fashion industry not just caters with the demand of younger generations but it covers almost people of all ages. Fashion designers focusing on every occasion from wedding to parties, conferences and even funerals.

Bangladesh has emerged as a key player in RMG (Ready Made Garment) sector since 1978. Textiles and clothing account for about 85% of total export earnings of Bangladesh. Out of which, 76% comes from the apparel sector which covers the major products of knit and woven many more casual and fashion items. The sector currently employs approximately 1.5 million workers, mostly females from underprivileged social classes.

Quality of goods exported from Bangladesh has always been questioned by the foreign buyers due to lack of experience and awareness of Garment manufacturers associated in the trade. In order to export readymade garments, it is not only the quality parameters which are important towards acceptance of the product as per the intended end use, but also the working environment in which the garments are to be produced, is equally important so that sweatshop concept is totally taken care of and the code of conduct must be stretched towards achieving the objectives of social compliance issues. The core areas of social accountability are, basically, based on the principles of international human rights, local culture and tradition. The prime objective of the system is to protect the human rights in readymade garment industries. Thus, Bangladesh has a stiff challenge ahead to meet the demand of world market.

Based on this , it was felt that both the communities should be able to meet & fulfill their mutual needs at one place. Fashion Technology Park came in to existence as an answer to those needs in our country. In other words, Fashion Technology Park is very much needed for the development of Fashion Business in Bangladesh.

1.3 Aim of the project

- The aim is to make fashion a global experience where traditional forms can be enriched with technology. This project has firmly concluded that the fashion manufacturing industry, especially the large scale industry, is hungry of services of Designing, Sample-making Sample testing and proper services. Presently, there is no place for manufacturers to go and get such services. They need a place where choice of design services of designers can be availed of that out of hundreds of fashion and culture of Bangladesh at one place.
- Another sector which needs to be catered and can prove to be a big market is "Traditional fiber of Bangladesh". The Fashion Technology Park would be developed as one of its kind, 'state of the art' facility that would have as its hub, a Knowledge Centre, via the 'Global Fashion Business Tower', that would not only provide the FTP its fashion centric character, but would also undertake various, training & development programs and would develop linkages that would benefit units and designers.
- Based on this, it was felt that both the communities should be able to meet & fulfill their mutual needs at one place. Fashion Technology Park came in to existence as an answer to those needs. In other words, Fashion Technology Park is very much needed for the development of Fashion Business in Bangladesh & particularly in this region. The global scenario of Fashion Business in a liberalized market is another propeller as the competition in quality and pricing is tough to go through. In Bangladesh Fashion Technology Park fits because its new in Bangladesh, it will help to improvise the fashion an fashion industry globally again of quality design intervention and price because the manufacturers especially the textile manufacturers, will be able to go for mass manufacturing.

1.4 Given program

The fashion design infrastructure will consolidate the Fashion Design Industry with intellectual inputs, human resources, market information, trends and forecasting etc. all of which are coming together in the Fashion Technology Park.

The intelligent building concepts are integral to every component of the Park. This will enable dynamic networking of every dimension within the Park, internally as well as globally through the dedicated Information Technology Infrastructure. We divided Fashion Technology Park into three zones

- Knowledge zone
- Exposition Centre and
- Fashion Warehouse

- KNOWLEDGE ZONE

Fashion College :Colleges sharing the Various Colleges facilities of art building. based on Design studio.

Temporary Exhibition space
Design Studios
Classes
Labs
It zone
Photography zone
Library

- EXPOSTION CENTRE

Event Centre :multipurpose hall
Event management
Magazine corner
Media press and conference
Pop up market
Grooming centre/ rehearsal space
Photography centre
Banded outlet shops: present garments collection
Museum: permanent garments collection

- FASHION WAREHOUSE

Industrial lab
Traditional workshop/live workshop
Branded outlet workshop
Fashion centre; The premier destination in Bangladesh
for buyers and sellers and a space to sell

- RESTURANT: Supporting the local community and for students

1.5 Project rationale

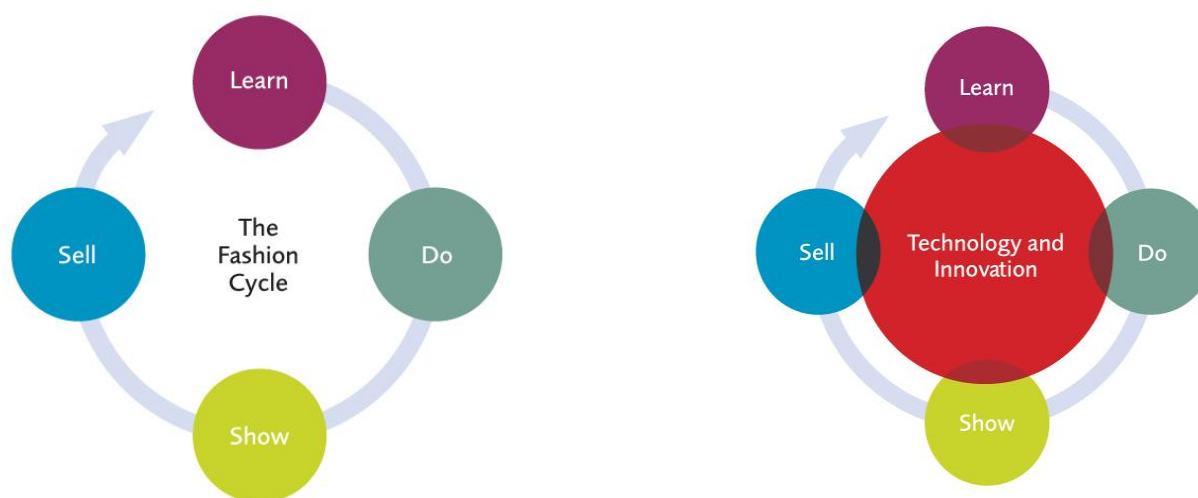


Fig 1.1.: Fashion cycle Source: Author

Fashion Technology Park will become a Focal Point to an economic revolution in our county by fulfilling the primary needs of Fashion Business and services. It is a well-recognized fact that glamour of fashion is the prime mover in promoting the Fashion Business. Since the manufacturing community needs designs, sample- services and most of all innovative Designs. Fashion Technology Park which will provide a set-up of facilities to support creative and innovative designer and worker, will help to brighten up the marketing value of their manufactured goods. To develop their creativity in an ambience in which they can utilize their time for creative designing to the extent of 95 %, the Designers should be totally hassle- free. This will require a complete set of services to support the designers. A viable and throbbing physical infrastructure is also a must required.

Today there is no such center where a manufacturer, a trader or an exporter can have the services of designing and planning at one place. Some large manufacturers may hardly have few designers on their rolls but small manufacturer cannot dream of having design team at all and some don't have proper working environment. But definitely he needs to design to work to promote his design . In the absence of any design centre presently the total manufacturing activities of fashion related items are being done in a haphazard manner and such centre is needed badly for all who are evolved in fashion.

We did not have such centre because we did not take the importance of textile of Bangladesh or its impact on Fashion Business very seriously. So based on this it is felt that both the we should be able to meet & fulfill their mutual needs at one place is Fashion Technology Park which came in to existence as an answer to those needs in our country nationally and internationally.

CHAPTER 02: SITE APPRAISAL

Site appraisal

As there is no allocated site for the project, a number of potential sites were initially chosen that complies with the conditions required for such project.

2.1 Site location

Initial consideration for the site was a very well connected area in the city, so as to attract as much people as possible. Also another consideration was to locate the project adjacent to a zone that experiences thoroughfare of local, foreign and foreign visiting traffic for various reasons throughout the year. The site required a location that does not belong to any specific residential neighborhood, surrounded by mixed use development and public spaces of different scales.



Fig 2.1.: Site location. Source: Modified by author from Google Earth (June, 2010)

Considering all these, the Karwan Bazar, Farmgate, Tejgaon zone was selected as the focus zone for potential sites.

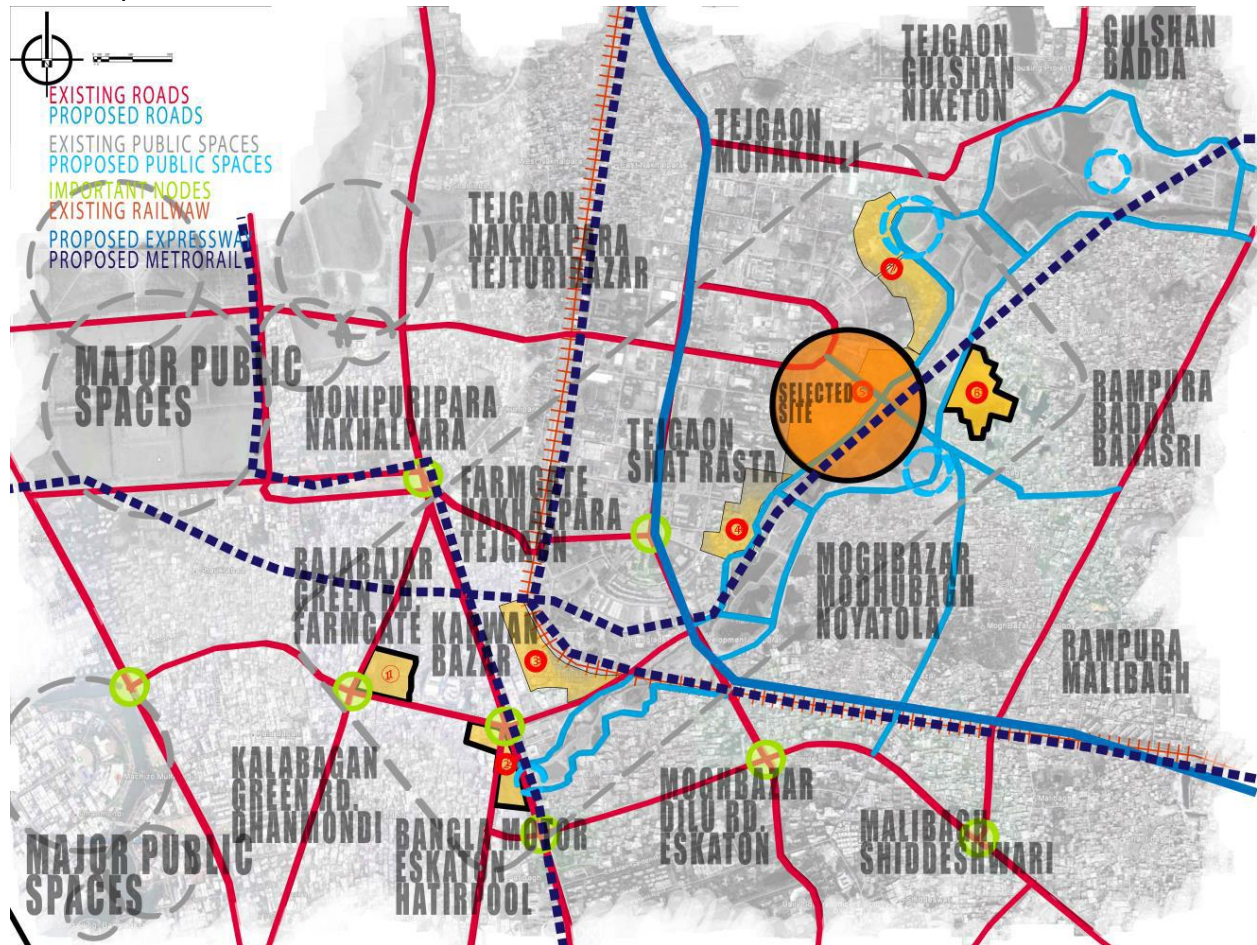


Fig 2.2. Analyzing connectivity and site alternatives. Source: Author

The issues that influenced the selection of the site are; connectivity, access, functional zoning, surrounding development category, vista and relation with other public spaces, spatial hierarchy of surrounding structures, existing proposals, etc.

Taking the under construction infrastructure and waterfront redevelopment project of 'Hatirjheel' into consideration and predicting the major future public space of the city, the site was chosen on the Northern bank of the lake, in Kunipara, Tejgaon.

2.2 Analyzing the urban fabric:

The surrounding urban fabric shows variety and, interrelated and integrated development. The different zones have very distinct flavor of built environment, locality and community. The site also creates very interesting relationships with other public and urban spaces.

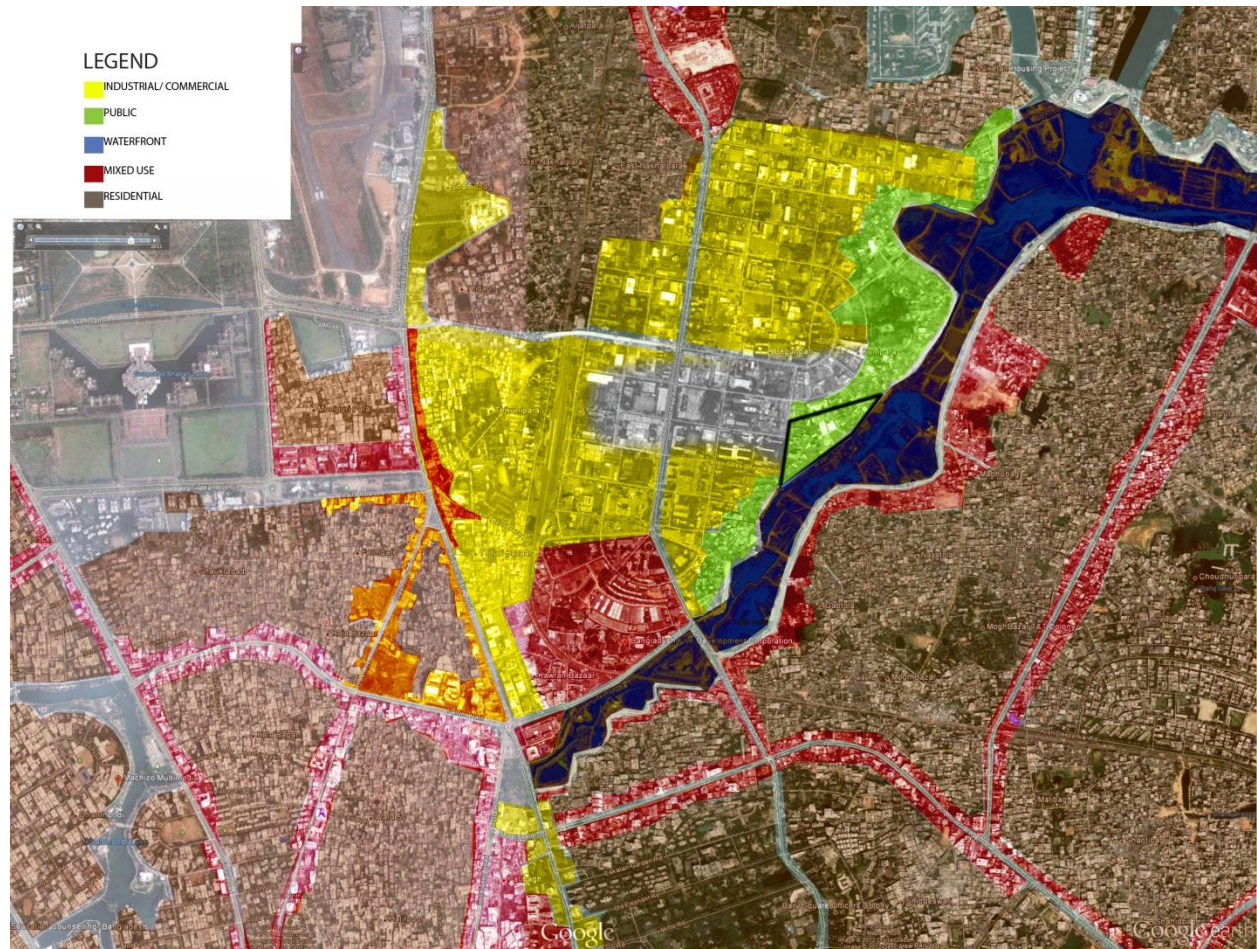


Fig 2.3.: Surrounding urban fabric. Source: Author, 2013

2.2.1 The heart of the city (the central business district)

Predominantly industrial, the entire Tejgaon region is now growing into the extended Central Business District, initiated from the Karwan Bazar-Farmgate area. Most major arteries of the city connect or pass through this region. The upcoming infrastructure projects of the city also integrate with the region. This area brings in a lot of people from different socio-economic brackets from all over the city every day for various reasons. In terms of community and locality, the region belongs to the whole city rather than to any particular neighborhood; but simultaneously houses a distinct flavor of its own.

2.2.2 The lungs of the city (Hatirjheel urban district)

The Hatirjheel infrastructure and waterfront project can be predicted to become the largest public retreat and waterfront recreational space. The project comprises of different sort of public spaces, smaller and larger scale gathering spaces, parks, event spaces, etc. But most importantly the project creates opportunities for a rapid mixed development catering the visitor public. It also bridges the long gap in the thoroughfares of the city.

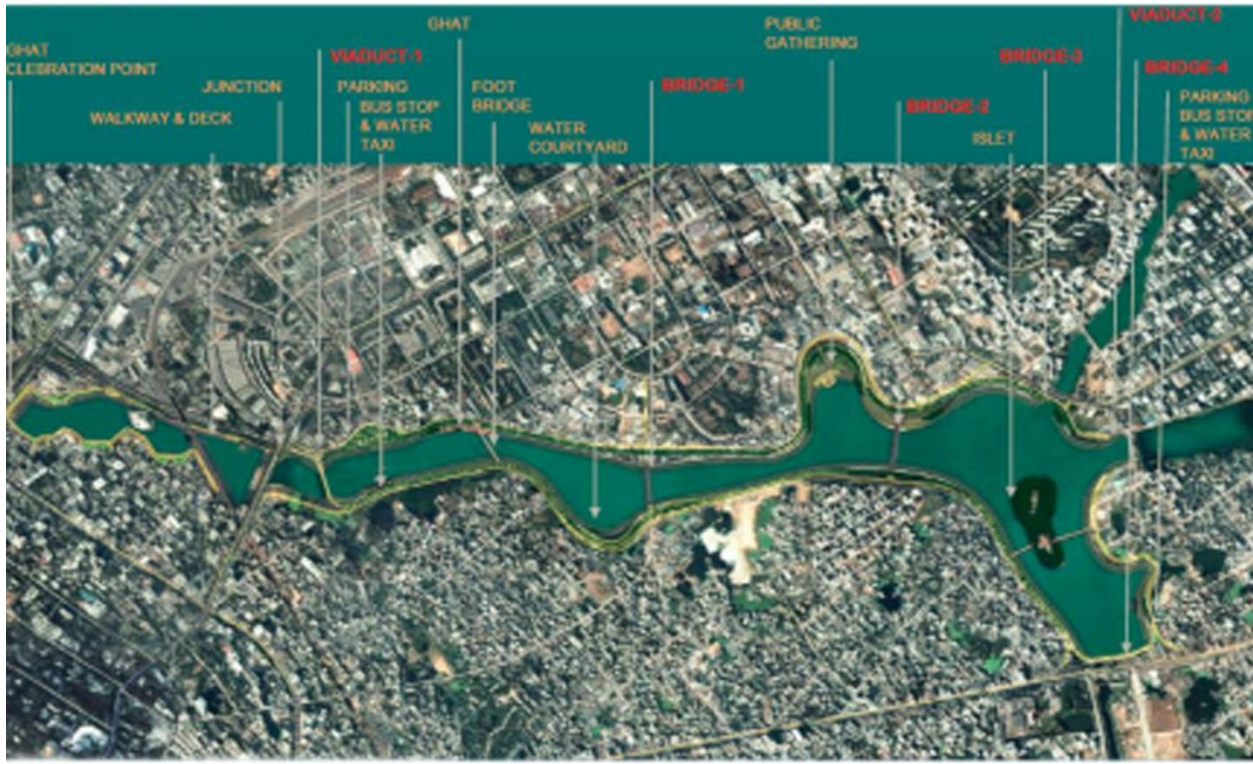


Fig 2.4 : Hatirjheel master plan Source: Vitti

2.2.3 The alter axis

As most of the major arteries of the city runs on the North-South direction, the Hatirjheel project incorporates connections that would create a new axis cutting the others on the East- West direction. This axis incorporates some very important structures like the parliament complex, Army Museum, Novo Theater and also large open spaces, the old airport, etc.



Fig 2.5 : The alter axis. Source Author, 2013

2.3 Site & Surroundings

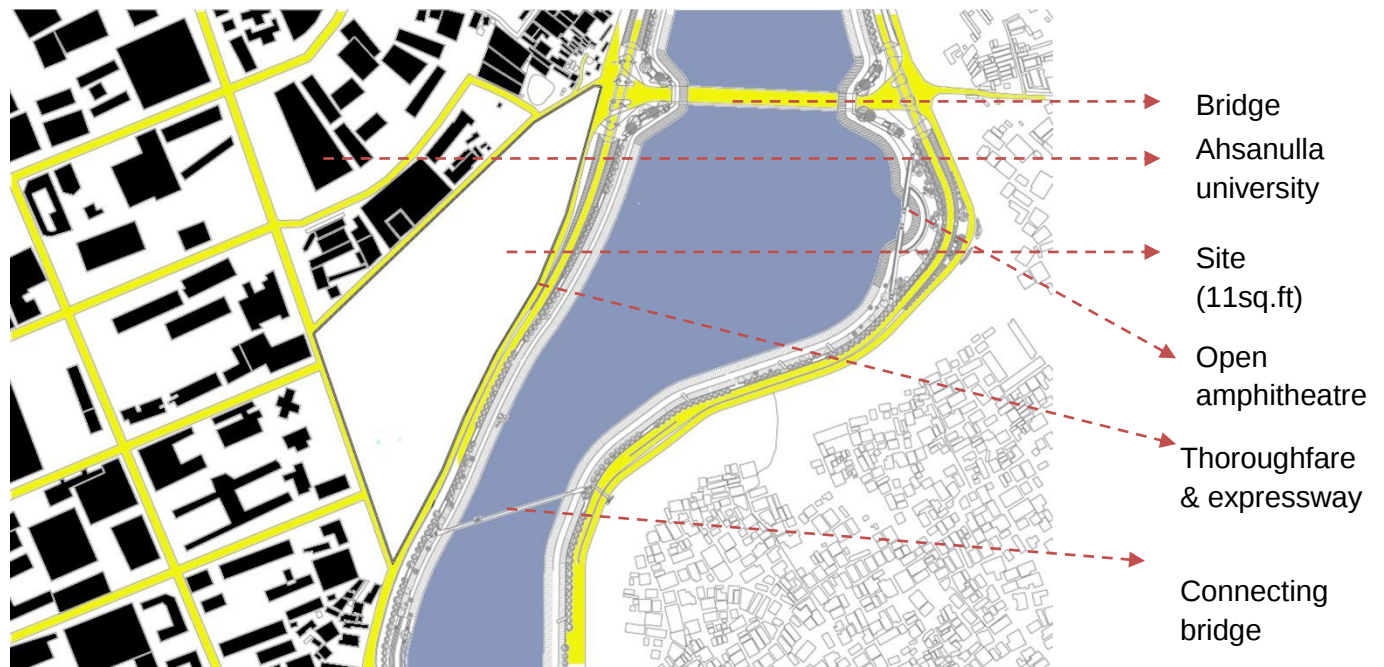


Fig 2.6: Site and surrounding

The surrounding developments are mostly industrial factory and tin-shades of companies like Kohinoor, Nabisco, Igloo Ice-cream and so on. Among the commercial uses, the commercial banks are mention worthy. Significant banks like Pubali bank Ltd, Shonali Banks Ltd have their age-old brunches in this area for quite a long time. Also there are some institutions like - Bangladesh Textile Engineering College, Ceramics institute, Polytechnic institute, etc. in the area around. Along the main road (Shahid Tajuddin Ahmed Shoroni), there are two fuel pumps and one at the Shat Rasta node. Basic utilities like gas, water & electricity are available. The existing condition will be better understood by the following photographs of the site and its surroundings.



Fig 2.7 : Hatirjheel analysis

The most important aspect of the site is its direct relation with the Hatirjheel waterfront, water courtyard, accommodating an East-west thoroughfare, etc. The site is located at a very strategic location of the waterfront as well as the city. One other important factor is the Hatirjheel Lake is surrounded by various sorts of locality and the site is located in an area that belongs to all such areas and connects them as well



Fig 2.8: Site images

2.4 Environmental considerations

In many research studies the Tejgaon area is significantly mentioned as the most polluted area of Dhaka city in terms of sound, air and soil pollution; as it is a dense industrial zone. But the gradual development of the city is making this area a mix of commercial and industrial use. Many industries are being moved from this area to the out skirts of Dhaka city for reducing the environmental damage caused by them.

As a fabric of mixed use contents, the temperature of Tejgaon is slightly different from the rest of the Dhaka. The air is more carbonated and hotter. But due to the waterfront location of the site, and being surrounded by dormitory areas, there are large open and green spaces around the site. The average temperature of the entire area is given below

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average High Temperature (°C)	26	29	33	34	33	32	31	31	32	31	29	27
Average Low Temperature (°C)	12	15	20	23	25	26	26	26	26	24	18	14
Mean Temperature (°C)	19	22	26	28	29	28	28	29	29	28	24	20

Table 2.1: Temperature data of Tejgaon. Source: <http://www.travel-climate.com/bangladesh>

2.5 Detail area plan and land use pattern

The land use pattern and the detail area plan show the type of development in the surrounding area; which is predominantly industrial. But the new rules and policies regulated new industries to be built, and shifting of the existing ones to a different zone outside Dhaka, which made way for the CBD to extend in this zone. The area also consists of several institutes and academic infrastructure. Another important development of the area is the media centers and offices. The site of the project is currently encroached, which would in near future be allocated for institutional or mixed use.

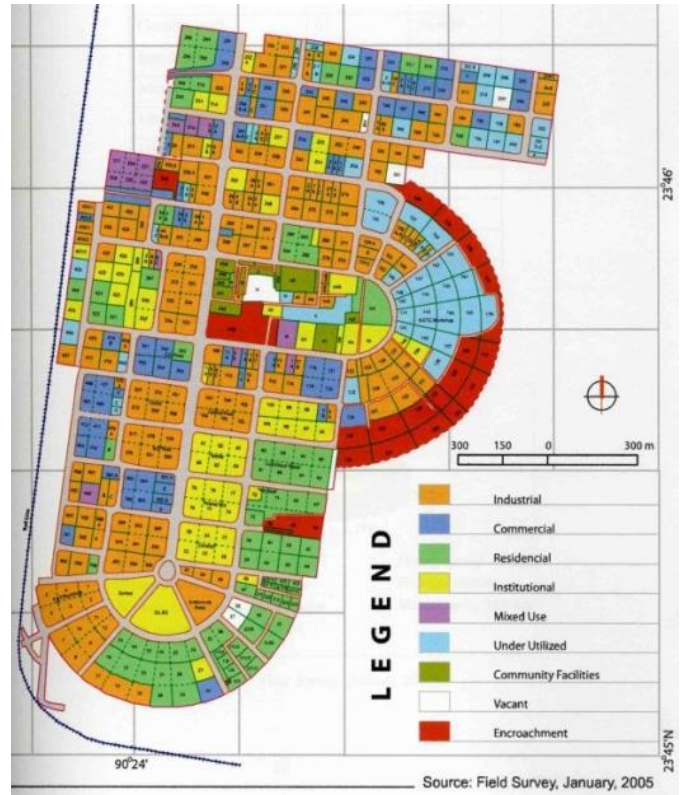


Fig 2.9. Land use pattern of Tejgaon.

2.6 SWOT Analysis

Strength

- Mobility

Roads & circulation:

- 30' wide roads almost on all sides of the site, 50' wide road along the waterfront.
- Connecting bridge from Madhubagh to Kunipara.
- Site incorporates a major East-West artery, possibly to become a major thoroughfare.
- Landscaping along the roads.

- Parking

- Defined and sufficient parking areas for the industries.

Pedestrian conditions

- Large pedestrian and a lot of pedestrian activities all around the zone.
- Pedestrian on both sides of the road running along the waterfront.

- Land use

- Number of universities and institutes.
- Number of newspaper and media offices.
- A mix of industrial, commercial and institutional development.

- Environmental

- Waterfront has the possibilities to become the breathing space of the city. This is to influence the environmental impacts of the surrounding neighborhood

Weakness

- Mobility

Roads & circulation:

- Illegal parking and illegal rickshaw garages.
- Road encroached by vendors and temporary shops.
- Possibilities of crime.

- Pedestrian conditions

- Pedestrians blocked and encroached by vendors and shops
- Lack of maintenance.

- Land use

- Unplanned settlement, underutilized spaces, encroachments.
- Distinct distinction between industrial and institutional zones.
- Improper use of public and private land.

- Environmental

- Due to prevailing industrial development, the area is exposed to industrial exhausts, resulting in slightly hotter average temperature and polluted air.

Opportunities

- Mobility

Roads & circulation:

- Incorporate one of the first East-West arteries of the city.
- Connecting the two shores of the lake and, localities
- Reduce surrounding traffic congestion.
- Become very popular and vibrant street.

- Pedestrian conditions

- Landscaped and ample pedestrians connecting to the waterfront, bringing localities closer to the lake.
- Proper maintenance and create scopes for vibrant pedestrians and public spaces.

- Land use

- Maximize the utilization of the area by proper planning and creating public spaces.
- Incorporate the green spaces and create large open spaces, parks, gardens, landscaped plaza, etc.
- Create recreational spaces, eventful waterfront.

- Environmental

- The development of the lake will help to create a balance of open spaces, breathing spaces, water bodies in the city.

- Preserve eco system, home of other animals, birds.
- Plantation can help to make the area fresh, cooler, etc.

Weakness

- Mobility

Roads & circulation:

- Rapid development of infrastructure may lead to unplanned growth.
- Increase in land value.

Pedestrian conditions

- Unplanned commercial establishment and encroachment on the pedestrians.
- Poor maintenance can lead to public suffering.

- Land use

- Unplanned settlement, unfavorable growth, encroachments.

- Environmental

- Unplanned development can create adverse environmental impacts hamper the waterfront public experience.

2.7 Conclusion

The chapter well establishes the potentials of the chosen site and its analysis in context of the idea in question. As the site and the surrounding are now under rapid development it will become a prime spot for such a project in future. The site already exhibits a huge number of people gathered for recreation and relief; so with infrastructure and other surrounding development the project can create a huge impact on the city, considering this as its site. The following chapters would elaborate how the site is addressed in the design consideration.

CHAPTER 03: LITERATURE REVIEW

3.1 What exactly is a FASHION TECHNOLOGY PARK ?

In a study of fashion technology parks, it seems appropriate to establish what exactly is meant by the term, or at least try to clarify how the term is understood. However, deciding on a theoretical definition of fashion technology parks is not easy. Firstly Textile and apparel industry products can be divided into two general categories: basic and fashion (Kunz & Garner, 2007). Basic products do not change radically from one season to the next, while the driving force behind fashion products is change. Fashion is defined as ----

- 1) the prevailing or accepted style or group of styles in dress or personal decoration established or adopted during a particular time or season.
- 2) [When capitalized] such prevailing customs or styles considered as an abstract force" (Webster's Third New International Dictionary, 1986).

Kawamura (2005) builds on the second definition above and refers to fashion as such prevailing customs or styles considered as an abstract force whose integral components are novelty and change. McCracken (1986) describes fashion as a system that "serves as a means by which goods are systematically invested and divested of meaningful properties" (McCracken, 1986, p. 76). Hamilton describes "the fashion system , which, as a function of any complex, industrial nation-state, has the responsibility for the production, marketing, and merchandising (Kean, 1997) of products associated with the construction of individual appearance" (Hamilton, 1997).

Dickerson (2003) describes The Fashion Business as all companies and individuals concerned with the design, production, and distribution of textile and apparel goods. Frequently included under the discussion of the fashion business are components of the industry such as accessories, jewelry, and perfume (Dickerson, 2003). The production of basic apparel items does not depend on the same abstract driving force based on novelty and change, and therefore basics were not a part of this analysis.

So Fashion Technology Park is a place for fashion professionals, where they can execute their product , display in a showroom, shopping, sale, housing etc. Its infrastructure consists of warehouse for working, shopping malls for display, lecture theaters, theaters, residential buildings all in one campus. Public can access and purchase its more suitable for the fashion professionals cause everything is under one roof. The Fashion Technology Park is, for the purpose of this study, all textile industries or individuals involved in the creation, production, promotion, and sale of items that

- (a) have specific aesthetic and functional properties,
- (b) trigger psychological reactions related to desire and need and

(c) are adopted by a group of people for a limited amount of time.

The Fashion Technology Park operates within the context of industrial societies that “willingly accept, indeed encourage, the radical changes that result from deliberate human effort and the effect of anonymous social forces” (McCracken, 1986, p. 76). In order to remain successful, companies must change the aesthetic properties of a product on a regular, usually seasonal, basis, carefully cultivating the desire for and need of the new product by transferring to the new item an abstract force similar to the one that created the meaning which initially pushed the outgoing product into popularity.

The study of the Fashion Technology Park is complex and encompasses a wide variety of disciplines including aesthetics, design, product development, economics, global business, marketing, consumer behavior, operations, and management as well as anthropology, psychology, and sociology. A common theme that joins all of the areas, however, is attention to the concept of change. Today's Fashion Industry endures because of change as it simultaneously reflects and affects the culture in which it exists.

3.2 The structure of the thesis:

The Fashion Technology Park in BANGLADESH will act as HUB will become a point of contact for manufacturers, retailers, designers and students

In order find out how fashion technology parks may function as innovation policy, I have chosen to use four different approaches to innovation as a framework. However, as these approaches are not really comprehensive theories, I first discuss the rationale for innovation policy and how technology parks may be viewed in two influential theoretical traditions, respectively the neoclassical and the so called evolutionary in chapter four. In order to further specify the role of technology parks as innovation policy, I relate the technology parks to the following approaches in innovation studies; Entrepreneurial studies, sector approaches, national and regional innovation systems and managerial approaches. Hence, in chapter five I discuss the present situation of fashion industries and fashion houses in Bangladesh, their theoretical foundation and lastly how the technology parks may be viewed as innovation policy within the respective approaches. At the end I compare the approaches. Because I conclude that they to a large degree overlap, I suggest five propositions on how technology parks may function as innovation policy within these respective perspectives.

In chapter six I will discuss about the case study regarding fashion technology international and national and the present scenery of fashion technology.

Chapter seven is a discussion of the program development, how I will develop the programs and how I will implement to it . In the final chapter, I will propose my design and strategies briefly.

CHAPTER 04: FASHION IN BANGLADESH

4.1 The fashion of Bangladeshi:

Fashion in Bangladesh is much like the streets of Dhaka. They reflect changing patterns, unexpected color mix, and is the meeting point of sudden chaos and quiet. It's moody, it's traditional, and it is also in a transition between the old and new. Fashion in Bangladesh doesn't want you to forget its history.

As more styles and materials enter the market from the outside however, it can sometimes be difficult to hold onto this Bangladeshi fashion that we speak of.

With the demand to look unique, an abundance of new boutiques with distinctive names have started to crowd Dhaka. Designers and fashion houses have begun to fuse influences from abroad and within, creating new lines of work that are meant to be contemporary. Additionally, more from the outside is coming in- Indian katan, Pakistani cottons, Jaipuri colors, South Indian embroidery, etc. The hustle to look exclusive has led to an increase in this demand for foreign clothing and often, foreign styles. Namely, Indian fashion has flourished, not only with its import but also with the rapid copying of designer's items from Mumbai and Delhi. Many boutiques will proudly boast that they only sell imported and thus "exclusive" pieces. While this takes place, we must ask, what then, is the Bangladeshi style? What makes Bangladeshi fashion, Bangladeshi?

While clothing from the "outside" is heavily popular, a number of boutique houses have also started to claim clothes and accessories only bearing roots to the homeland, whether that's reflected in the jamdanis, the muslin, cloths bearing prints from local artists, or bringing in tribal motifs from far edges of the country.

The uniqueness of Bangladeshi fashion is made through those who decide to deal with Bangladeshi material for designs. And in order to discuss what makes Bangladeshi fashion unique, we must talk about the weavers and their handlooms in the country. The blend of traditional weavers and today's designers' inputs has brought together distinctive deshi materials, allowing for more experimentation with hand weaving.

Bangladesh is also famous for its khadi, dating back to the 1930s when Mahatma Gandhi excited the regional people, advocating wearing clothes from the homeland to express nationalism and an appreciation for tradition. Hand spun cotton thus became popular in Bengal, continuing its wear beyond independence. "Although it has been thought that only the intellectuals wore khadi it has that ethnic feeling about your own homeland which has been inspired by it and uses it along with tribal motifs to contrast Bangladeshi fashion in her line.

The way that the clothes are worn, and the way they are cut and composed is equally important in defining and motivating Bangladeshi fashion. The traditional sari is very symbolic which encourages not only the creation of quality saris bearing our roots but wearing them appropriately. Further, while many cuts exist for the shalwar kameez, the Bengal region used to be known more for the long, lean, floating kameez combined with fitted churidar styles, layered heavily at the bottom. While this style has been the rave in Pakistan for some time already, it actually originates from Bengal and has just started to appear this season in Bangladesh. Attempts to introduce the long, flowing kameezes both in simple cotton and heavier material with ornamentation, combined with wider ornas has been observed recently.

In the city, we will be struck by vibrant colors and contrasts, along with the more subdued and tame, working together to create the feelings that have defined the urban culture. AnDes for example use very vibrant and solid colors that signify the low paddy fields, the changing blue skies and green fields that plaster the subcontinent. Beads and shells are used in the saris to incorporate the flat lands and the hill side of Chittagong and the seas, and calligraphy from our famed poets who spent time travelling around the country. Designers in Bangladesh have also tried to fit their latest clothing to the current seasonal changes in their color palettes. Since Eid will fall near the end of the summer this year, fashion houses consider this fact by paying attention to the color schemes that represent the summer and its rain by incorporating a palette of blue hues and whites to vibrant oranges in their salwar kameezes and cotton saris.

Block prints, hand woven materials and dyes made of ingredients that pay homage to Bangladesh have been gaining prominence among many designers, finding its place on the shelves of many leading boutiques. Aranya's locally produced silk saris in purely natural dyes has continued to attract attention, and it has expanded its collection this season by including more endi cottons and block prints that capture the traditional Bangladesh, especially in their saris. These native elements as integrated by designers work to define the Bangladesh in fashion, among shelves of other South Asian work.

Even then, with all the movement for bolstering domestic goods, there is still a strong preference for the outside, such as those from India. Many designers for example will bring in cloth and materials from India and patch them together in Bangladesh, confusing its association- is this Bangladesh that I am wearing, or India? Further, the line between carefully crafted designer fashion and designs that are simply copied in bulk claiming to be boutique also makes it difficult to look for authentic styles. With a partiality for India ever present, the Bangladeshi market in turn is being interrelated and even changed. Thus, sometimes identifying what is the Bangladeshi trend becomes complicated.

As fashion moves forward, this question will have to be asked, and it will inevitably be on the minds of designers and buyers. The return of the jamdani saris for example is deeply attached to the tradition of weavers in Bangladesh, albeit the cutting and infusing it with other materials that has appeared recently. It took a long time to achieve a standard for the jamdani, adding chiffon and embroidery to it and calling it a trend is mutilating the tradition. We should encourage weavers to produce better weaves instead of making a big mess of the jamdani. The

weave itself says a thousand words. Browsing through the many new boutiques, more and more people are purchasing jamdanis, block prints, Banarasi silks, etc. that have been mixed, cut, and contrasted with different materials and styles in an attempt to make it look contemporary and individualized. With this trend, it can be observed that fashion in Bangladesh is not only trying to hold onto its own creative roots, but also finding a way to change it so that they will be worn by those who also want exclusivity.

As Bangladesh itself is being increasingly exposed to the outside, it is inevitable that this will come with outside influences, especially with fashion. And fashion is very much alive in Bangladesh, just like the world; it is estimated that people spend over USD\$1 trillion per year on fashion worldwide, after all. Fashion extends to everyone, to all generations and economies. As we have to use all the techniques of ornamentation available in our country and strategically so that people from a wide range of backgrounds can enjoy our Bangladesh's fashion. As for today, keeping up with the transitions and an increased focus on just looking good and different does not mean that the modern individual should forgo their own country's fashion, even if mixed and matched, but most importantly, represented. Every culture has its own heart and for us, if we lose our culture we don't have much left.

4.2 Bangladeshi's fashion design in International market:

Since the ancient age, there has been an intimate relationship between clothes and humans. Clothing reflects the culture and progress of a society and the personality of individuals. That is why we see diversity in the design of clothing among different cultures and among individuals. But fashion or design is shaped by dominant cultures as well as economic, environmental, religious and political forces of the time.

Fashion has also been a global phenomenon long before the term 'globalization' came into being. What happens in the west trickles into the east and meshes with local flavor and determines the fashion trend. Only clothes and accessories of garment and textile manufacturing do not represent the fashion scenario.

Fashion design is the applied art dedicated to the design of clothing and lifestyle accessories created within the cultural and social fabrics in a given time.

Bangladesh is proud to have a variety of handmade crafts like Jamdani, Rajshahi silk, Reshmi silk. Perhaps, the most famous yarn from this part of the subcontinent is Dhaka Muslin, a superfine silk yarn embellished with intricate hand embroidery. But it is a big question now whether the brand exists in the market. While talking to the Cotton Bangladesh designers, garments exporters of Bangladesh say, **"We do have Brand Bangladesh, but the specialty of Brand Bangladesh for the most part, truly our own. We weren't able to put up that sort of exposure for international market."** Most of the designers of Bangladesh runs their own

boutiques and produces not only for a local clientele but have participated in various international fashion events. But the fashion design of Bangladesh is struggling to strengthen its position in the international market.

The general problem in Bangladeshi textile production is the small number of available fashion designers. It is difficult to know how many there are, as there is no organization for fashion designers. The lack of fashion designers also means that whenever a designer, trained in-house, moves to new place leaving the former with no expert hand. In “The buyer model,” the buyer brings materials and designs, often the patterns, to the producer. The producers learn how to make one particular design; but they neither learn anything about the market research and trend analysis underlie the design nor the actual act of designing and the design management process.

The international trade of textiles is highly competitive. Skill, design and quality are essential. But, equally important is the need to assess national and international demands and integrate them into the production process. There is no doubt that very few of the Bangladeshi designers know the international markets. There is a unison cry in Bangladesh saying that they need help from foreign designers to make their products marketable internationally. This is even more the case if the products are going to be developed into high-value niche products.

There are very few designers in the garment industry or in crafts with a degree in design. The ones that do have a design education are educated abroad - many in India and some in the West. Some of the designers working in the craft businesses have an education from Institute of Fine Arts, University of Dhaka. Although this educational background in combination with experience from the craft businesses, in many cases seem to work well, some say that a lot of people in the trade do not understand the difference between an artist and a designer, “**Design is planning step by step and the artists do not know how to do that.**” Others say that the creativity exists, but the understanding of the market is lacking.

Designers, of whatever level of training, who can work for a domestic market, are undoubtedly in advantageous position. If a designer is required to design for a foreign rather than local market, then certain skills are not able to develop in a full and relevant way. The problem is the same for designers either in industry or crafts. In many respects, they are being asked to design for 'virtual' situations only. After all, very few of the designers in these businesses will ever get the chance to visit the markets they design for, let alone be able to spend time enough in them to really develop an understanding of the nuances of a situation. Accordingly, western designers can best help with the designs for the export markets of Bangladesh. However, as the local market is changing rapidly due to increased buying power of internationally-oriented middle class, the products designed for the export market may very well have a future in the local market.

It is a good sign for Bangladesh that The Fashion Designing profession has recently emerged as one of the most demandable careers among the youth. These young folks have their own creative style of dressing and belief in setting a trend rather than following a trend set by others.

A career in fashion design not only involves meeting glamorous people and interacting with rich and famous but also gives an impetus to the creative flair of the people who possess a sense of style. But still Bangladesh is struggling to establish a standard in fashion design for international market.

There are several findings, which will explain the reasons why Bangladesh is struggling in international market with their fashion design.

- There is small number of qualified product designers available in RMG sector.
- “Non-qualified” designers having experience with product design learn through trial and error and provide the design services.
- The concept of purchasing designs for manufacture has not developed in Bangladesh.
- The service providers have, in general, designers who do not have any relevant training and education.

They are generally with 10-12 years of general education and learn designing while in job. Designers with art college background join the designing firms but leave after few years. After then, they normally set up their own businesses or work individually as freelance designers.

- There is little creativity as the customer normally comes with his/her own idea about the design.
- The designers are usually low-paid, as there is more competition and cost-cutting. Many service providers have closed down their ventures in the last few years.
- The clients bring their own design concepts but are not much concerned about the quality of design. There is, therefore, no demand of quality design work. The demand is mainly for cheaper work. This is the reason why designers with fine arts background do not stay in the same designing house. They receive salaries lower than their expectations.
- The export market is buyer/buying house dependent. They bring in their own designs for the production in Bangladesh.

To overcome this situation several tasks should be undertaken by companies using design effectively. The tasks include responsibilities such as:

- Submitting proposals based on market research at a management level on how design can be integrated into the company's aims and objectives,
- Thinking and planning strategically how design can be placed within the company's structure to ensure optimum interaction,
- Recommending the use of design as business resource to generate revenue and encourage cost reductions to benefit the company,
- Assessing the risk factors in new design ventures and managing innovation,
- Actively seeking appropriate opportunities to use designers' skills within the company,

- Giving guidance to designers and others when necessary on design practice in relation to the overall design strategy.

The list mentioned is not exhaustive but does show some of the crucial points, which can be put to good effect in the context of businesses in countries like Bangladesh.

Several institutes like BIFT, Shanto-Mariam University of Creative technology, National Institute of Fashion Design, Pearl Fashion Institute, Design and Technology Center, Lankan institute of fashion & technology have started giving training of several kinds, like merchandising, knitwear Design & Technology, apparel manufacturing, marketing and merchandizing. Exporters say that these institutions are not only very young but also very weak. There are many warning voices being heard in Bangladesh as far as cooperating with “non-established” institutions that may be too weak to survive. On the other hand, the weaknesses also make a need for support very obvious. But the academics are claiming that the exporters are not cooperating with the institutions by providing internship options for the upcoming designers from the institutes. The students from these institutes are blaming the exporters for not providing sufficient job opportunities for them. The upcoming designers think that media can play an active role in this sector. There is a large gap between the needs of the textile and clothing industry and the supply of graduates, be it in textile technology and/or in design. It should also be mentioned that no institution in Bangladesh offers master's level education or the opportunity of MPhil or PhD research works in the field. Experts think that the teachers from these institutes need further education, either through higher education abroad or entering internships in (fashion) companies. As far as student exchange programs can be developed, this would most probably have positive effects both in industry and in the partner design institutions.

The future of the Bangladeshi textile production lies in the development of high-value-added products, suitable for long-term export markets and for the local market in short-term. In order to develop such products, Bangladesh needs strengthening of its design potential. This should mainly be done through training Bangladeshi designers with the help of the foreign designers. This way, product development and training in the workplace will be combined, giving both short term and longer-term effects. This is a large sector; supporting the newly established schools through training the designers for this industry should be considered as important investment for market sustainability.

4.3 Impact fashion technology to our country:

Fashion and technology have a fast-paced and continually evolving relationship. Today, the term “techno-fashion” is used to refer to a predominantly 21st-century phenomenon, but technological advancements were shaping fashion design and fabrication as early as the mid-eighteenth century. Technology has always been the essence of fashion. The fast-paced progress of technology complements fashion’s ever-evolving aesthetic, and each gives the other a wider frame of reference and more scope to explore new horizons.

Fashion and Technology explored the impact of emerging technologies on the nature of fashion design and production over the past 250 years. The exhibition focused on innovations that have influenced the production, materials, aesthetic, and function of fashion. It began with objects created during the Industrial Revolution of the 18th and 19th centuries, when innovations in textile manufacturing revolutionized the fashion industry. These innovations included the introduction of the Spinning Jenny, the Jacquard loom, and the sewing machine. The exhibition then continued chronologically to the present day.

With the first men orbiting the earth in 1981, it seemed apparent to these 1980s designers that an era of recreational space travel was just around the corner. Therefore, they created looks that the fashionable woman could wear on a jaunt to outer-space. In the late 20th century, the rapid spread of personal computers and the introduction of the internet transformed culture. The impact of this transformation on fashion was felt when designers turned to “cyber space” for aesthetic inspiration, and software programs like Computer Aided Design (CAD) and computer-operated Jacquard looms began to alter the ways garments were produced.

Digital technology continues to transform the promotion, fabrication, and basic design of fashion. From 3-D printing to advancements in sew able electronics, designers are creating garments that can play music, answer telephone calls, and even monitor the wearer’s heartbeat. thus students will explore how technology has affected the Fashion Industry by researching, using the Internet, writing a short essay that reflects their conclusions and designing a garment that uses the technology they researched. And to integrate and synergies Fashion Business with economic growth of the nation and help it to convert its dream of becoming the largest economic powerhouse of the world in near future, a reality.

The interplay of digital technology and fashion has only just begun. As fashion designer Hussein Chalayan has said ,***“fashion will renew itself through technology, new fibers, new ways of making clothes. Without risk, nothing changes the world.”***

CHAPTER 05: EVOLUTION

5.1 Evolution of fashion in Bangladesh:



Early 1990

In Bengal, fashion evolved with a direction kindled by Western influence with the making of **tailored sari blouses** about a hundred and forty years ago. It can easily be stated that the ladies of the **Tagore family** played a very important role in creating and developing a strong fashion statement.

Kolkata was then the fashion capital of India and the society ladies experimented with their sari drapes.

Long or short end pieces, hobble petticoats and peplum blouson blouses almost imitating the dresses of the Victorian era. Although I must add that the story of our fashion did not originate here.



TIMELINE OF FASHION IN BANLAGESH

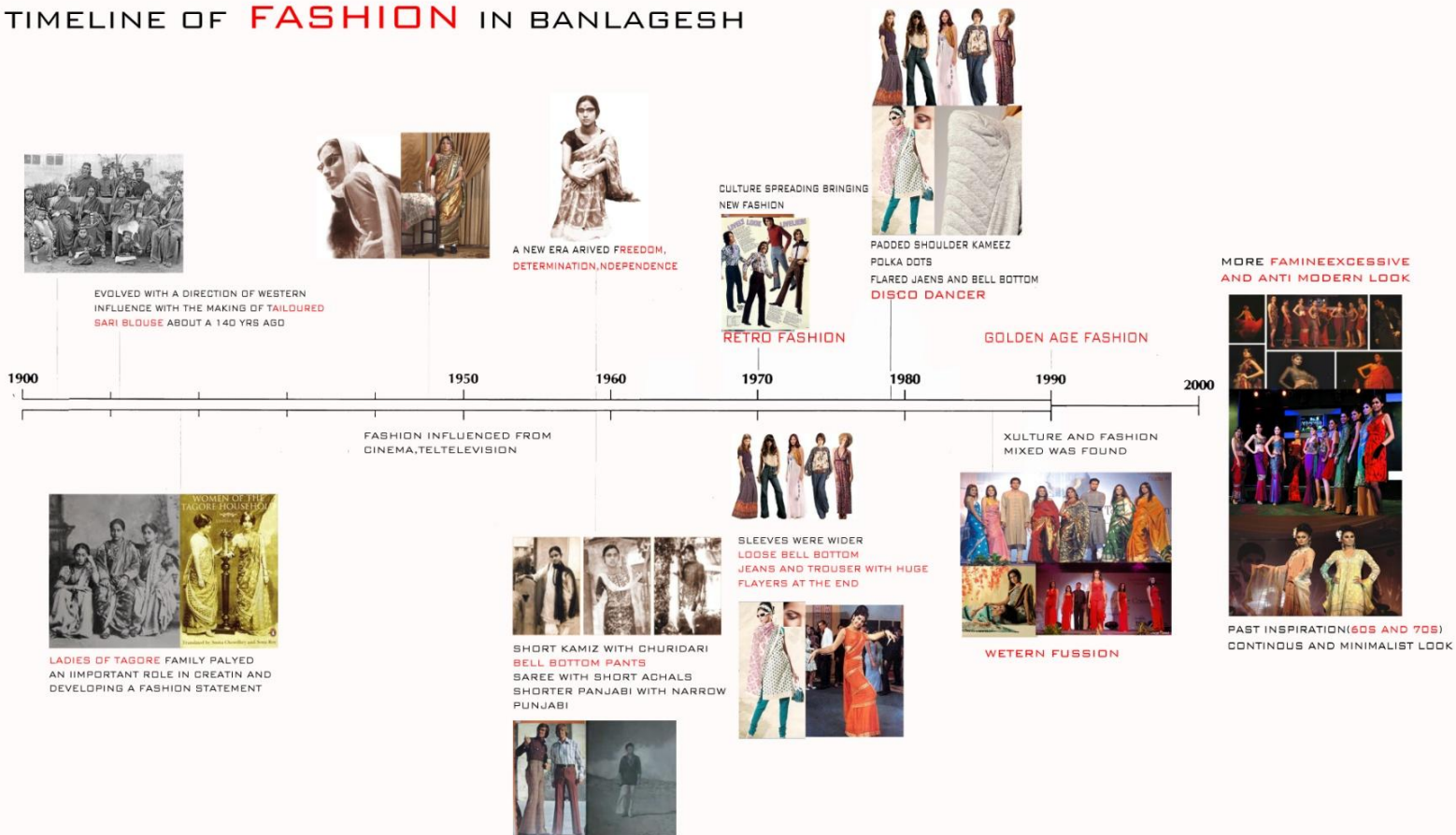


Fig 5.1: Evolution of fashion in Bangladesh Source: Author

In fact it can be traced back over three thousand years earlier to the relics of Paharpur, Chandraketugarh and Tamluk in Bengal. The stone carving clearly depicts the maturity of our ornamentation and rich textile heritage. The aesthetics are very well-defined and do not fail to mirror the discerning culture and customs of the times

50s and 60s Dacca



I shall be discussing this decade and the length of time as a fabulous inspiration that revolutionized our sense of fashion in Bangladesh. Our modern fashion industry definitely reflects upon and is clearly rooted in this era. Local trends are changing and moving forward with fashion demands, but in no other time in history did we make such a great leap of design consciousness as we did in the 1960s. It defines and marks the beginning of our distinctive demand for an individual look.

The majority of women continued to wear saris but for the first time the urban middle class was experimenting with tailored finished garments in both ethnic and western wear. A new era had arrived with independence, self-determination and freedom.

Georgettes and other synthetic materials were worn widely. Psychedelic, busy, large bold prints and paisleys were big as fashion statements. **Brocade and Benarasi** borders were applied to these saris. Mirror work on borders in Sindhi style and other fancy embroidery with metal threads and **zari** work were fashionable. Lace and crochet as borders were also used as embellishments. The transparency and fluidity of the materials were very liberating.

Light, figure-hugging materials were preferred. Women were breaking out of their social conventions and were challenging the limits of freedom. Worn tightly and pinned in place with draped pleats and sculpted to fit women's figures; the **aachals were very short and only hung like scarves.**



Tanchoi benarasi and **tissue benarasi** were all the rage. Gold and silver embellishments as well as fine floral motifs were used widely. Bold woven checks with slightly wider borders and shorter end designs with classic corner motifs were also commonly in use. The colors got brighter, and bolder in courageous combinations and subtlety was a thing of the past. Sequence beads and lacing were generously used to create patterns of interest. Embroidery was used on nets, muslins, georgettes and chiffons.

60's fashion reflected the spirit of revolution in the air. Kameezes grew short while hair grew long. Patterns were bright and busy. A-line mini-kameezes and tight tailored **churidars or fitted shalwars** were very attracting in the early 1960's, especially when paired with a turtleneck sweater in winter. **Chundris** (a kind of pleated twisted scarf) were short and would hang over the neckline. Interesting hand- knitted sweaters and thick yarns were very popular, as were tweed and other thick materials. Sometimes knee-length, particularly popular in thicker materials.



Men's clothes became much more casual. Slightly **flared bell-bottom pants** became the norm, as did brightly colored shirts. Turtlenecks and interesting knits also started to show up. Ethnic influences could be seen in casual clothing, for both men and women. The fitted tailored look for women was considered trendy as kameezes were darted and buttoned to fit perfectly on the contour. I believe the styles of the era were a great way to add class and sensuality and continue to succeed and work even today in any modern wardrobe.

Beads epitomized the 60s look here and elsewhere. Beaded neckpieces and bracelets, glass bangles and the idea of costume jewellery took off as a major accessory. **Bright acid colors and contrast mix and match** compositions were very popular.

70s Dacca "RETRO FASHION"

The 70's fashion has been repeating itself on the fashion cycle. It is not surprising because **the 70's fashion was versatile**. Some of the other trends seen in the 1970s are high-wasted, flared satin trousers or denims decorated with rhinestones, tight lure halter tops, metallic-colored lame and antique velvet dresses, satin hot pants, and occasionally ostrich- feather boas draped over shoulders, and turbans for headwear. Thrift shopping became popular, with the reemergence of the 1930s and 1940s look.

Clothes such as **Kaftans, Maxi and bell bottoms, flared trousers, platform heeled footwear, tank tops, knit wears, flashy colors and hip hop and disco** clothing is back. Today's fashionable colors are hot pinks, electric blues, fresh greens, bright yellows and rich reds.

Women are seen wearing glamorous full length maxi dresses and halter neck This is what was most famous in those times for women.

Sequined fabrics with elegant sleeves in tops also give 1970s feel in a big way. The coats men wore in those times were embroidered. Kaftans gave a twist to the garments



80s Dhaka "DISCO DANCER FASHION"

The 80's fashion was all about bright **colors, polka dots, contrasting stripes, neon leggings and pointed boots**. The leather jacket was introduced with straight side cuts and jodhpurs became popular among the masses. Men, women, teens, children and the old, everyone embraced this sudden birth of self-expression and extravagant.

Many styles from the late 1970s remain fashionable in the early 1980s. In the 1970s, the silhouette of fashion tended to be characterized by close **fitting clothes on top with wider, looser clothes on the bottom**. This trend completely reversed itself in the early 1980s as both **men and women began to wear looser shirts and tight, close-fitting trousers**.



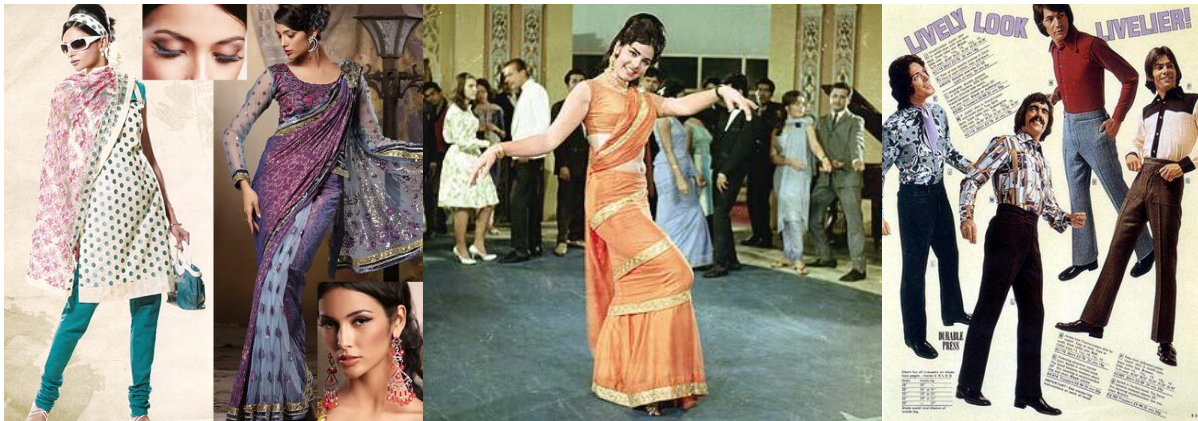
The popular fashion of 80's was all about signature style statements. These are the styles we still follow. **Puffed sleeves, geometric prints, cardigans, ponchos, pointed boots and stilettos** are loved by one and all.

Earrings became a mainstream fashion for male teenagers. Jelly or thin metal bracelets (also known as bangles) were very popular in the 1980s, and would be worn in mass quantities on one's wrist. Designer jewelry, such as diamonds and pearls were popular among many women, not only for beauty, but as symbols of wealth and power

90s Dhaka" GOLDEN AGE FASHION"

The '90s the last decade of the millennium, was one of the extremes. The excess of the early decade gave way to the drastic pairing down. Perhaps the biggest fashion news of the '90s has been the ascendancy of the **younger generation of designers** into the mainstream. The decade also looked for **independent women with comforts, poise and confidence** as key features. 90s style and fashion was heavily influenced by TV, Hollywood and the music industry.

But the decade also saw the revival of ethnicity with films too becoming more discreet and launching a **"back to ethnic"** look. While on the one hand the new drive for information



technology popularized the corporate look, an ethno-cultural revival made people again go back to the traditional forms of art and crafts. As it is fashion is extremely alive and whatever the decade or the century, it is here to stay. For not only it is comfortable, practical and aesthetically beautiful but has changed with time with the result that it has, in the past century, and will in the coming one, remain contemporary.

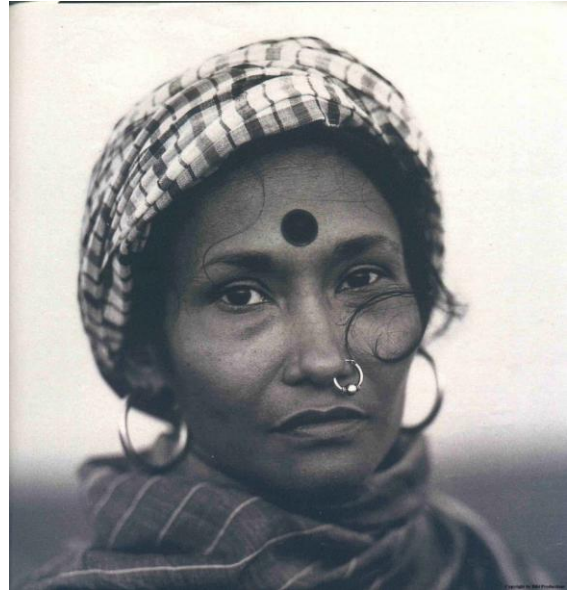
2000 Dhaka

Some key elements of 2000 fashion are loose and flowing garments with a **mix of colors and prints, often with layers**. Fabrics used are natural, and at times, organic cotton, silk, and linen, while the colors are muted and earthy.



5.2 Impact of BIBI RUSSEL in fashion industry:

Weaving is an old-age heritage of Bengal. The fine and varied handmade fabrics; the weaving skills of the craftspeople of Bengal have marveled and drawn the attention of people around the world for centuries. Exquisite hand-woven Muslin, Jamdani, raw silk as well as refined silks, a wide range of Khadi and extremely fine cotton have earned a place of honor for the artisans of Bengal in the world as well as in culture.



Bibi Russell set up Bibi Productions in Bangladesh on the 13th July 1995, the purpose of which is to generated a movement towards weaving a glorious future for the weavers of Bangladesh.

Bibi Russell- the astounding model who rose to stardom in the late 70s and early 80s- now works to establish a cause that's much closer to her heart; the plight of the hand-woven textile industries and their workers in her native Bangladesh. She has given the Bangladeshi weavers and artisans the golden opportunity to utilize their considerable skills and talents to achieve economic survival- and to build towards a prosperous future. **"It's about using culture and creativity to eradicate poverty"**, says Bibi. **"I want to present the beauty of poverty that is oblivious to the global community. It's not charity-that's demeaning. The people I work with can show their skills to the world with pride"**.

Born into a prominent Bangladeshi family, she spent time in outlying villages in the rural areas of her country, soaking up the strong colors and distinctive patterns that marked out the fabrics made by local crafts people. It sparked off an interest in hand-woven textiles that led her to Britain – and to become the first woman from her country to study at the London College of Fashion in 1972. In 1975, she modeled her own collection at the graduation show and was immediately offered modeling assignments with most of the prolific designers and renowned magazines. Thus was her career in fashion launched. For nearly 20 years, her beauty and grace populated the world's Fashion Magazines and catwalks.

By the early 90s Bibi decided that it was time to return home, relocating to the city of Dhaka and to establish what she calls her dream - to build a world-wide reputation for the hand-woven textiles she remembered from her childhood. A true humanitarian by heart, Bibi Russell also strives in her diligent pursuit of easing the burden of street children. **"Our world, our future lies in the hands of the next generation,"** says the strong confident designer, **"Be it poor or well fed, they are tomorrow's leaders. I have taken it on myself to teach them to be self-sufficient young people and to encourage self-employment. It is my dream to watch these children blossom in to strong confident young individuals the world can lean on"**.

Her project has enabled 56 out of 60 of her street urchins to be regular going school children to realize their goals.

Bibi is currently working in Bangladesh promoting Bangladesh fabrics and handicrafts for domestic and international markets. She works with projects and organizations related to her slogans “Fashion for Development” and “Positive Bangladesh. To date, she has provided work for over thousands of weavers and artisans and has presented several shows in Europe, most of which were supported by UNESCO. In 1996 Bibi presented her first ready to wear collection, a fashion show “Weavers of Bangladesh” at UNESCO Headquarters in Paris. It showcased her designs in various handloom fabrics and promoted the weavers who made them.

UNESCO supported all the three major shows of Bibi Russell in Europe. The second show in August 1997, “Colors of Bangladesh” at the Castell de Believer in Palma de Mallorca was launched and supported by the Queen of Spain, who was the special guest at the event. This show promoted the use of khadi and jute fabrics in an effort to save the homespun earners and jute farmers from losing their livelihoods. The accessories were made from natural resources, coconut shells, wood, jute, terracotta, water hyacinth and palm leaf. Due to her growing popularity, she was made a guest at the cultural event, “Knitting Together Nations-Fashion and crafts from Women of Bosnia and Herzegovina”, jointly sponsored by UNESCO, UNHCR and World Bank held in December 1997. She was also voted the “woman of the year” by Elle in the year 1997.

In September 1998, with the support of UNESCO and the British Fashion Council, Bibi brought her third show to London, “Stars of Bangladesh” where Her Royal Highness Grand Duchess Maria Teresa of Luxembourg and Ms. Clare Short, member of the British Parliament were guests of honor. The rich fabrics included fabrics made from a mixture of cotton, jute and also recycled fabrics of wool and silk. She intended to bring out the stars of Bangladesh in the European fashion world. The same year had also brought her fame and glory at the Spanish Designs collection in Madrid, where she exhibited her collection made of hand woven textiles.

The following year, the Fashion Space Gallery in London displayed an exhibition on Bibi Russell’s work on 13th May 1999. The exhibition was held on the occasion of her receiving the “Honorary Fellowship” of the London Institute as recognition for her outstanding contribution to the field of fabric and design. Her unfailing attempt to human dignity, development and eradication of poverty did not go unrecognized. UNESCO conferred upon her the title Designer for Development, “UNESCO Special Envoy” on October 4, 1999. A special collection for world fashion in Spain was presented in Barcelona in February 1999. This exhibition has been touring the world with the slogan “Fashion for Development”. The international foundation of Entrepreneur Woman awarded her work and keen sense of ethics in the year 1999 in Barcelona, Spain. Asia week Magazine highlighted Bibi Russell as one of the 20 people to watch in the millennium.

Her work also did not go unrecognized in her native Bangladesh thus achieving several awards. On the 28th January 2000, the local television Channel -I had promoted her 12 part epic mini

series titled “Bibir Swapna” [Bibi’s Dream] which was aired in 12 different parts of Bangladesh that was renowned for their craftsmanship. Also, in the year 21st July 2000, Bibi had held an exhibition of Satranji (handmade rugs) hosted by Alliance Française with an opening of the multi-purpose additional hall “La Galerie”. Satranji is one of the long forgotten traditional crafts of Bangladesh. The North of Bangladesh [Rangpur] was once famous for the hand woven Satranji, which have been around since the 13th century. Now a dying craft, she strives to revive the craftspeople which was a part of the cultural heritage that was once lost, now found.

For her efforts in promoting not only the weavers of Bangladesh but also weavers all over the world the special envoy title was replaced with the title “Artist for Peace” by UNESCO in 27th November, 2001 focusing more on the special mission fulfilled.

The year 2003 had also brought her a dynamic medium of hope and success. This was the first time when Bibi had created her first ever costume designs that were to be attired in the film “Dwitiya Paksha” [The Second Innings] produced by the Film Divisions of the government of India. The exceptional designer was also awarded with the prestigious “you can change the world” award by the club of Budapest. She also played an eminent role in presenting the “images of Asia” which was held in Denmark. The Fashion Show exhibited in the National Museum in Copenhagen [Denmark] was dedicated to the weavers.

To this end, Bibi Productions launched the Fashion for Development initiative that seeks to blend the creativity of the local artisans with that of Bibi’s professional design and fashion background to secure market outlets for the artisans and thereby preserve and revive the weaving heritage of Bangladesh.

It’s difficult not to be touched by the passion of this extraordinary woman who believes fashion can be used for social good and for a positive movement.

“When people see my collections,” she says, “I want them to understand and appreciate all the work and effort that has gone into them. I want to preserve the heritage of my country, foster creativity, provide employment, empower women and contribute towards the eradication of poverty. That’s what I’m committed to do.”

5.3 Tradition fiber in Bangladesh

Jamdani::Mughal period(1565-1606) or Emperor Jahnagir(1605-1627)_The word jamdani is Persian, where “*jam*” means cup and “*dani*” means flower vase. Thus *jamdani* designs depict arrangement of flowers sewn with fine threads. The earliest mention of the origin of jamdani and its development as an industry was found in Kautilya’s book of economics (about 300 AD) where it is stated that this fine cloth used to be made in Bengal and Pundra. Jamdani is also mentioned in the book of Periplus of the Eritrean Sea and in the accounts of Arab, Chinese and

italian travelers. Alexander the Great in 327 B.C mentioned "beautiful printed cottons". In the 14th century, Ibn Batuta profusely praised the quality of cotton textiles of Sonargaon. Towards the end of the 16th century the English traveler Ralph Fitch and historian Abul Fazal also praised the muslin made at Sonargaon.

Jamdani Poli is the oldest cottage industry in Bangladesh which is situated at village of Narayanganj district.

Manufacturing technique The fineness of muslin cloth used to depend usually on the art of making yarns. The most appropriate time for making yarns was early morning as the air then carried the highest moisture. For making yarns weavers needed *taku*, a bamboo basket, a shell and a stone cup. They used popcorn, rice or barley for starch. Before making jamdani designs they used to dye their yarn and starch it. For dye they used flowers and leaves of creepers. For quality jamdani they used yarn of 200 to 250



counts. These days weavers buy fine yarn from the market and use chemical dyes instead of herbal dyes. For making jamdani two weavers sit side by side at a loom to work on the delicate designs. Jamdani designs are made while the fabric is still on the loom. Coarse yarns are used for designs to make the motifs rise above the fabric. Originally, the motifs used to be made on gray fabric. Later on fabrics of other colors were also used. In the 1960s, jamdani work on red fabric became very popular. The Victoria and Albert Museum of

London has a fine collection of jamdani with work in white on white fabric.

Nokshi kantha (From centuries of Rural bengal): *nakshi kantha*, another exclusive Bangladeshi product. Poet Jasimuddin wrote his famous "*Nakshi Kanthar Math*" in 1929. Through this poem, the art form that had originated in the villages of Bangladesh became known to the world for the first time.



Manufacturing technique The *kantha* is made out of old saris, *lungis* and dhotis. At least 5-7 saris usually make a standard size *kantha* or quilt. They are sewn together to attain the size and the layers required. The needle and thread is used to outline a design followed by focal points. The filling motif is then worked on. The designs are usually flowers, undulating vines, images of birds and fish, animals, etc. No two are the same. Each *nakshi kantha* is unique and often tells a tale. Nakshi kantha is quintessentially Bangladeshi.

Mymensingh, Faridpur, Rajshahi and Jessore where nokshi kantha were manufactured.



Benerasi: Banarasi saris are saris made in Varanasi, a city which is also called "Benares." These saris are historically considered to be among the finest saris in India and are known for their gold and silver brocade or zari, fine silk and opulent embroidery, and being highly sought after. These saris are made of finely woven silk and are decorated with intricate design, and because of these engravings, these saris are relatively heavy. Their special characteristics are Mughal inspired designs such as intricate intertwining floral and foliate motifs, *kalga* and *bel*, a string of upright leaves called *jhallar* at the outer, edge of border is a characteristic of these sarees. Other distinctive features are Heavy gold work, Compact weaving, figures with small details, metallic visual effects, pallus, jal (a net like pattern), and mina work. These saris are an inevitable part of any Indian bride's trousseau.

Depending upon the intricacy of designs and patterns, a sari can take anywhere from 15 days to a one month and sometimes up to six months to complete. Banarasi saris are mostly worn by Indian women on important occasions such as when attending a wedding and are expected to be complemented by the woman's best jewelry. Mughal period (1600) BENERASI are made in Varanasi, a city which is also called "Benares."

The Benarasi Polli in Mirpur is the country's largest emporium for banarasi shares.

Manufacturing technique: It almost takes 15 days or a month to make banerasi saree. Mostly 3 labor are needed one is artesian weave, one is engages the power ring creation bundles of silk and one for dye.

Tangail Fabric: (4th century AD): It was originated from Tangail, a district of present Bangladesh. Previously it was named as "Begum Bahar" where



silk warp and cotton weft were used. Later on, both cotton warp and weft were in vogue. The weaver mainly of 'BASAK' community who migrated from Tangail district before partition of our country & settled in 'Katwa' Dhatrigram, Tamaghata, Samudragarh, area in Burdwan district.



Moslin :Mughal era(1851): Muslin was a brand name of pre-colonial Bengal textile, especially of Dhaka origins. Muslin was manufactured in the city of Dhaka and in some surrounding stations, by local skill with locally produced cotton and attained world-wide fame as the Dhaka Muslin.

Different types of Muslin:

1. **Malmal** It was used by emperors, nawabs etc.
2. **Jhuna'** was used by native dancers.
3. **Rang'** was very transparent and net-like texture.
4. **Abirawan'** was fancifully compared with running water.
5. **Khasa'** was special quality, fine or elegant.
6. **Shabnam'** was as morning dew.
7. **Alaballee'** was very fine.
8. **Tanzib'** was as the adorning the body.
9. **Nayansukh'** was as pleasing to the eye.
10. **Buddankhas'** was a special sort of cloth.
11. **Seerbund'** used for turbans.
12. **Kumees'** used for making shirts.
13. **Doorea'** was striped.
14. **Charkona'** was chequered cloth.
15. **Jamdanee'** was figured cloth.



CHAPTER O6: FASHION INDUSTIES IN BANGLADESH

6.1 Present situation of fashion industries:

The **garment industry** has played a pioneering role in the development of industrial sector of Bangladesh. Though it took a rather late start i.e., in 1976 but it soon established its reputation in the world market within a short span of time. Resultantly garment is now one of the main export items of the country. Besides, enriching the country's economy it has played a very important role in alleviating unemployment. At present there are more than two thousand one hundred garment factories in the country employing more than 12 lack labors. 85 percent of the labor force is women.

With 5,000 factories employing about 3.6 million workers (of a total workforce of 74 million), Bangladesh is clearly ahead of other Southeast Asian suppliers in terms of capacity of the ready-made-garment industry. It also offers satisfactory levels of quality, especially in value and entry-level midmarket products.

Ready-made garments manufactured in Bangladesh are divided mainly into two broad categories: woven and knit products. Shirts, T-shirts and trousers are the main woven products and undergarments, socks, stockings, T-shirts, sweaters and other casual and soft garments are the main knit products. Woven garment products still dominate the garment export earnings of the country. The share of knit garment products has been increasing since the early 1990s; such products currently account for more than 40 per cent of the country's total RMG export earnings (BGMEA website). Although various types of garments are manufactured in the country, only a few categories, such as shirts, T-shirts, trousers, jackets and sweaters, constitute the major production-share (BGMEA website; and Nath, 2001). Economies of scale for large-scale production and export-quota holdings in the corresponding categories are the principal reasons for such a narrow product concentration.

With about \$15 billion in exports in 2010, ready-made garments are the country's most important industrial sector; they represent 13% of GDP and more than 75% of total exports. Recent surveys carried out by the consulting firm McKinsey and the accounting firm KPMG identified attractive prices as the most important reason for purchasing in Bangladesh. Price levels will remain highly competitive in the future, since significant efficiency increases will offset rising wage costs.

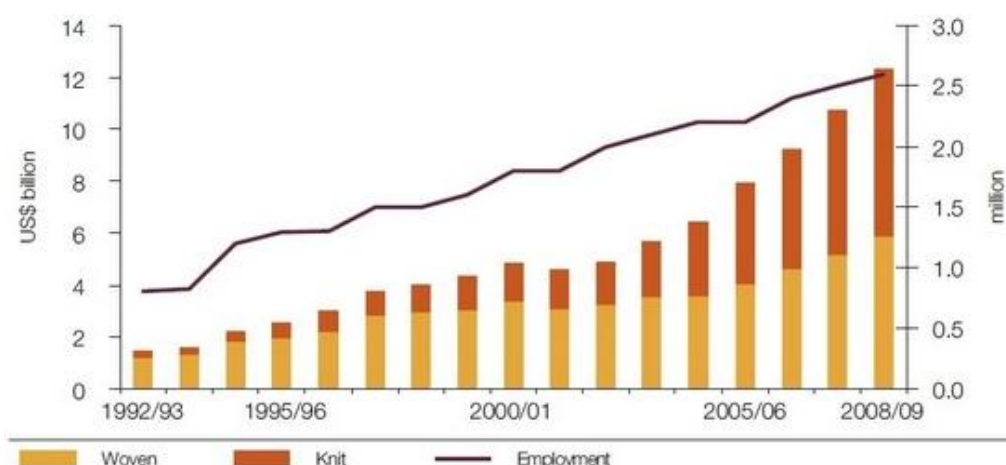


Table 6.1: Diagram of Garment Export from Bangladesh

Besides labor cost and duty advantage, raw materials and real estate costs are also cheaper in Bangladesh. There is also no doubt that Bangladesh is benefitting from various preferential trade agreements providing tax free entry into several dozen countries.

But Bangladesh has its own challenges to overcome. Impediments to investment include unreliable power supply, high real interest rates, corruption, and weaknesses in law and order. So what can Bangladesh do to overcome these challenges and utilize its huge potential?

First, inefficient infrastructure, including transportation and energy supply, is the single largest bottleneck hampering our garments industry. This issue will become even more important in the future, since buyers want to source more fashionable products with shorter lead times. The

government needs to prioritize the improvement in this area and start to upgrade power systems. Fortunately, a number of steps have been taken in this regard.

Second, although labor and social-compliance standards have improved over the past few years, suppliers vary greatly in their degree of compliance. Environmental compliance is just beginning to get attention.

Third, the suppliers' productivity must improve not only to mitigate the impact of rising wages but also to close gaps with other sourcing countries, such as India and Cambodia, by satisfying new customer needs for more sophisticated products. Lack of investment in new machinery and technologies and the insufficient size of the skilled workforce, particularly in middle management, is also hampering growth in this industry.

Fourth, access to raw material is crucial for clothing exporters. Lack of backward linkages and Bangladesh's dependence on imports create sourcing risks and lengthen lead times. Compounding the problem is the volatility of raw-material prices in recent years. The development of a local sector could improve lead times.

Fifth, political stability is a prerequisite for attracting foreign investors. Political unrest, strikes, and the absence of ease of doing business are major concerns of foreign investors.

Table 6.2: The Textile and Clothing Sector at a Glance

Sub-sector	Number of units	Installed machine capacity	Production capacity	Employment
Textile spinning	350 7.5 million	spindles (0.2 million rotors)	1,800 million kg	400,000
Textile weaving	400	25,000 shuttle less/shuttle loom	1,600 million meter	80,000
Specialized textile and power loom	1,065	23,000 shuttle less/shuttle loom	400 million meter	43,000
Handloom	148,342	498,000 looms	837 million meter	1,020,000
Knitting, knit dyeing	2,800	17,000 knit/Dy/M	4,100 million meter	324,000
Dyeing and finishing	310	--	1,720 million meter	33,000
Export oriented readymade garment (clothing)	4,500	---	475 million dozen	2,000,000
Other related sectors	---	----	----	600,000

The three main stakeholders the government, suppliers and buyers must work together to realize the potential of Bangladesh's ready-made-garment market. The government's top priorities for investment should be developing infrastructure, maintaining political stability, reducing corruption, and providing education and trade support.

Buyers should help to increase the supply chain's efficiency and transparency and increase their support for lean operations and electronic data exchange. They should also build closer relationships with suppliers and improve their own operational execution. Their long response times, the complexity of internal procedures involving the merchandising and sourcing functions, and a large number of last-minute changes slow down the overall process.

While Bangladesh has some very promising advantages in certain dimensions in the garments industry, a number of challenges remain. Only if these challenges can be overcome will Bangladesh's garments industry continue to prosper.

6.2 Working capability and working environment:

At first, issues such as safety, workers' rights, environmental pollution and productivity were neglected. More recently, however, as the RMG industry has grown, so too has the need for producers and buyers to comply with international standards in order to maintain their position in the market. The German and Bangladesh governments began working together in 2005, to encourage compliance. The most recent phase of this cooperation began in 2009 with the start of the programmed 'Promotion of social and environmental standards in industry'. It now also receives support from the European Union (EU)

The program provides capacity building measures and encourages innovation. It runs training courses for compliance inspectors with the Ministry of Labor and Employment, the Bangladesh Knitwear Manufacturers & Exporters Association (BKMEA), and the Bangladesh Garment Manufacturers & Exporters Association (BGMEA). The professional associations and the state inspectors are also addressing occupational health and safety issues, for instance through the assessment of noise levels and air pollution in factories. Other courses have been held for master trainers of social compliance, who now work as consultants with various stakeholders in the industry.

GIZ is also supporting NGOs active in the field of workers' rights, such as the Awaj Foundation and Karmajibi Nari in Dhaka, and OWDEB and Agrajatra in Chittagong. These NGOs have set up women's cafés where the textile workers can drink tea and get legal advice, for instance about labor disputes and workers' rights (the duration of maternity leave etc.), or about domestic violence.

The program trains environmental auditors, qualifying them to issue ISO 14001 certification to firms that meet environmental standards. It is working directly with dyeing and washing plants in Bangladesh to help them improve their chemical management processes to fulfill international requirements, and introduce environmental management systems. It also trains energy auditors, and provides advice to factories on energy efficiency.

The project is working with the Department of Environment at the Ministry of Environment and Forests (MoEF) to draft guidelines and standards on the disposal of textile sludge – the residues from treated wastewater after the washing and dyeing processes, which can contain hazardous substances. The guidelines and standards will be incorporated into the environmental legislation of Bangladesh.

Through development partnerships with the private sector, the program is cooperating locally with a number of major retailers, in order to improve the working conditions within their supplier firms. In another joint project with the private sector, it is also assisting BKMEA and BGMEA to open up new and emerging export markets.

1. Social compliance

- The social compliance status has improved in around 2,000 factories employing 1.5 million workers.
- Some 35,000 workers have benefited from legal empowerment measures, enabling them to claim their rights through peaceful means.
- Relations between workers and management have improved in nearly 70 factories, and 5,000 labor disputes have been peacefully and fairly resolved.

2. Promotion of environmental standards and ecological efficiency

- Chemical and environmental management systems have significantly reduced environmental pollution. The better management has also improved conditions in the workplace.
- More local consultants are now qualified, and are employed to promote cleaner, greener production
- In a number of factories, teams have been established for chemical management (14 factories), energy saving (34), and environment management (9).
- Five key energy saving measures have been introduced, bringing energy savings of up to 40% in the factories.
- Some 33 auditors and 178 energy managers have completed training and are now supplying auditing and energy efficiency services in the market.

3. Skills development for higher productivity and quality

- Ten training institutes are now able to provide market-oriented training.

- After completing training, around 660 formerly unskilled workers now have better prospects of employment and higher incomes.
- The number of managers who have learned to apply lean management techniques has risen from 100 to around 270, while the number of factories practicing such techniques has increased from 10 to 40. In these factories, the lean management methods have increased labor productivity by 80% and lowered production costs by 40%.

4. New and emerging markets for garment exports

- The rate of growth in exports to non-traditional markets more than doubled between 2005 and 2011, to 15.5%. Important new markets included Brazil, Mexico, Chile, Japan, Hong Kong and South Africa.
- In three separate missions between 2009 and 2010, BKMEA attracted almost 90 buyers and exporters from Hong Kong to explore new opportunities.
- As of April 2011, the Government of Japan simplified and relaxed its rules of origin for imported Bangladeshi knitwear.
- In 2010, two representatives of BGMEA and BKMEA attended a course in Cambodia entitled 'Working with Stakeholder Dialogues', thereby improving their services.

6.3 Problem in prospectus of garments industry

Bangladesh economy at present is more globally integrated than at any time in the past. The MFA phase-out will lead to more efficient global realignments of the Garments and Clothing industry. The phase out was expected to have negative impact on the economy of Bangladesh. Recent data reveals that Bangladesh absorbed the shock successfully and indeed RMG exports grew significantly both in FY06 and (especially) in FY07. Due to a number of steps taken by the industry, Bangladesh still remains competitive in RMG exports even in this post phase-out period.

Our Garments Industries can improve their position in the world map by reducing the overall problems. Such as management labor conflict, proper management policy, efficiency of the manager, maintainable time schedule for the product, proper strategic plan etc.

Government also have some responsibility to improve the situation by providing- proper policy to protect the garments industries, solve the license problem, quickly loading facility in the port, providing proper environment for the work, keep the industry free from all kind of political problem and the biasness. Credit must be provided when the industry fall in need.

To be an upper position holder in the world Garments Sector there is no way except follow the above recommendations. We hope by maintaining proper management and policy strategies

our country will take the apex position in future.

We need to remember that when there is a fire, the first thing one should do is to run away from it. And this is what everyone does in such a situation. But the situation become dangerous and tragic when the escape doorways and gates are found locked. **Precautionary should need to be adopted are given below:**

1. Building should be constructed with fire resisting materials
2. Adequate exits and proper escape routes should be designed
3. Protection against fire and smoke should be ensured
4. Electrical wiring must be properly designed, installed and maintained
5. Escape routes should be lighted at all times, kept clear, be indicated by signs
6. Regular fire drills should be held
7. Doors should be protected and should open along the direction of escape
8. Doors should not open on the steps and sufficient space should be provided.
9. Smoke/Fire alarm systems must be installed
10. adequate number of extinguishers should be provided
11. Prior relationship with local Fire services should be established

The Ready-Made Garments (RMG) industry occupies a unique position in the Bangladesh economy. It is the largest exporting industry in Bangladesh, which experienced phenomenal growth during the last 25 years. By taking advantage of an insulated market under the provision of Multi Fiber Agreement (MFA) of GATT, it attained a high profile in terms of foreign exchange earnings, exports, industrialization and contribution to GDP within a short span of time. The industry plays a key role in employment generation and in the provision of income to the poor. To remain competitive in the post-MFA phase, Bangladesh needs to remove all the structural impediments in the transportation facilities, telecommunication network, and power supply, management of seaport, utility services and in the law and order situation. The government and the RMG sector would have to jointly work together to maintain competitiveness in the global RMG market. Given the remarkable entrepreneurial initiatives and the dedication of its workforce, Bangladesh can look forward to advancing its share of the global RMG market.

6.4 Present situation of fashion houses

Bangladesh is proud to have a variety of handmade crafts like Jamdani, Rajshahi silk, Reshmi silk. Perhaps, the most famous yarn from this part of the subcontinent is Dhaka Muslin, a superfine silk yarn embellished with intricate hand embroidery. But it is a big question now whether the brand exists in the market. While talking to the Cotton Bangladesh designers, garments exporters of Bangladesh say, **“We do have Brand Bangladesh, but the specialty of Brand Bangladesh for the most part, truly our own. We weren't able to put up that sort of exposure for international market.”** Most of the designers of Bangladesh runs their own

boutiques and produces not only for a local clientele but have participated in various international fashion events.

With the demand to look unique, an abundance of new boutiques with distinctive names have started to crowd Dhaka. Designers and fashion houses have begun to fuse influences from abroad and within, creating new lines of work that are meant to be contemporary. Additionally, more from the outside is coming in- Indian katan, Pakistani cottons, Jaipuri colors, South Indian embroidery, etc. The hustle to look exclusive has led to an increase in this demand for foreign clothing and often, foreign styles. Namely, Indian fashion has flourished, not only with its import but also with the rapid copying of designer's items from Mumbai and Delhi. Many boutiques will proudly boast that they only sell imported and thus "exclusive" pieces.

The general problem in Bangladeshi textile production is the small number of available fashion designers. It is difficult to know how many there are, as there is no organization for fashion designers. The lack of fashion designers also means that whenever a designer, trained in-house, moves to new place leaving the former with no expert hand. In "The buyer model," the buyer brings materials and designs, often the patterns, to the producer. The producers learn how to make one particular design; but they neither learn anything about the market research and trend analysis underlie the design nor the actual act of designing and the design management process.

CHAPTER 07: CASE STUDIES

7.1 International case studies

The Fashion Technology Park is India's Strategic response to the rapidly expanding global fashion market. The Project site is located on the Sohana Landran Road and is well connected to various key locations in the city. Recognized as the key growth factor for Chandigarh, Mohali is apt for a development catering to the knowledge-based industries as it has, in recent times witnessed a lot of high quality development activity.



The Vision

To deliver excellence in the fashion world through a state of the art infrastructure and facilities.

The Mission

To achieve global recognition as a socially responsible corporate entity.

Behind the Concept

The visionaries behind the project are blessed with unique blend of education, expertise in different fields and rare attributes of personality. Their expertise, compassion, values, beliefs and missionary zeal to make things happen that never were, is well known in the region. Their outstanding record of project planning, management and successful implementation speaks volumes about their passion and emotional involvement in anything they take under. They have effectively used rare people skill, supported by leadership of the human spirit to complete all the projects undertaken efficiently.

While aspiring to achieve success, FTP ensures progress of all stake holders, organizations and nodes partaking in the venture. Until now, FTP has linked up with village artisans to contribute towards women empowerment, generation of employment avenues for the local population, rural development and preservation of traditional crafts. FTP is highly motivated to develop an eco-friendly infrastructure.



Industrial Zone



Knowledge Zone



Commercial Zone



Residential Zone

Location and Infrastructure Highlights

Fashion Technology Park, located at Mohali and spread over in an enviable 13.76 Acres has a unique strategic location advantage. Chandigarh, the city Beautiful, an architectural wonder and a dream project of Pt. Nehru, is known the world over as a well planned and modern city which boasts of many tourists attractions. Mohali, the satellite city of Chandigarh, is coming up as the new architecturally planned and modern green city of India. Chandigarh and Mohali, the twin cities are linked through more than seven, 100 feet wide roads. Land for development of 27 new city Sectors of Mohali has been acquired by well known real estate developers like Ansals, Parsavnaths, Emmar MGF, TDI and others in Private sector.. NRIs and many other global players are investing heavily in the real estate projects. Greater Mohali Area Development Authority (GMADA) has taken up the task of providing excellent facilities and services like well planned roads and modern communication network, sewage plants, uninterrupted water supply and electricity in order to maintain the sanctity of planned Sectoral Grid. This has made Mohali the dream destination of any business entity. FTP at Mohali has in close proximity many booming industrial centers having large number of textile and garment manufacturing units like Ludhiana (known as the Manchester of India because of its hosiery and woolen manufacturing units) Amritsar, Baddi (H.P) and national capital, Delhi,

- FTP is located in the vicinity of villages which are rich in handicrafts and traditional designs which can prove to be great asset for users of design studios and the support services providers.
- FTP provides dedicated Design Process Outsourcing (DPO) business model for Domestic and International designers
- FTP has association with Apparel Export Promotion Council of India, Fashion Design Council, Fashion Technology Institutes and Industry Associations like Federation of Indian Chamber of Commerce and Industries (FICCI) and Confederation of Indian Industries (CII)
- Global Fashion Business Centre housing DPO will act as one stop shop for all fashion solutions.
- It will have an integrated mix of design studios, research and testing labs, amphitheater, convention centre and residential complex.
- Business School of Fashion (BSF) will meet the needs of skilled human resources of high standards, anywhere in the world. Our association with Royal Melbourne Institute of Technology (RMIT), Australia, founded in 1900 and ESMOD, France, the first Fashion University founded in 1840, will give a definite advantage to the designers and the support community.

Services

Sample Testing & Photography labs, with latest equipment and professionals to meet the ever-changing design requirements

Exhibition Centre with exhibition halls of various sizes equipped with multimedia facility to launch and provide latest fashion. creations. Also, provides opportunities to participate in group exhibitions in fashion capitals of world in the most cost-effective manner.

Material Sourcing Centre to provide all materials for samples.

Planning, detailing of designs, pattern making and prototyping of samples and logistic support to enable designers to focus on their creative work.



Modern Well Planned Quality Control Centre.

Fashion Trend Forecasting from around the globe.

Amphitheatre with 1100 seating capacity to provide excellent opportunities / facilities for showcasing fashion creations on ramp.

Consultancy Services to set up new manufacturing units, Export Houses and total management thereafter.

Conference Halls state of the art face to face / video conferencing facility with large seating capacity.

Fashion Library Easy access to all relevant literature & fashion knowledge portals.

Women Empowerment Cell to fulfill the needs of designers, especially Western Designers for getting art and craft work done through upgraded skillful village artisans.

Global Marketing Network to provide comprehensive reach and access to the latest world market.

Academic +Training for training in higher studies in Fashion Designing, Business Management & Quality Control etc.

Tie-Up & Collaboration Centre to provide professional platform for tie ups between Indian or global fashion designers, exporters / traders and manufacturers.

Sample machines to convert fiber to fabric concept into reality by creating fabric and for printing and dyeing.

02.Pearl Academy of Fashion

Creating a sustainable building was a fusion of old-school building techniques and modern technology in the design for the Pearl Academy of Fashion. Designed by Morphogenesis, an architecture firm based in New Delhi and Pune, the academy is extremely energy efficient thanks to its use of cooling methods traditionally found in buildings in the hot-dry desert climate of Rajasthan. Situated in Jaipur, India, the finished structure is a sight to behold and looks like an incredible place to go to school.





Morphogenesis was able to develop two passive-cooling control methods to keep the work spaces and courtyards cool at 27 degrees Celsius even when it is 47 degrees Celsius outside. First, the entire building is elevated off the ground, sucking air in around the edges of the building which is eventually released up through the open-air courtyards. A large stepped well in the center of the building also plays a role in lowering the temperature of the air as it enters under the belly of the building. Fed by recycled water from the on-site sewage treatment plant, the well creates a cooler microclimate through evaporation.

The second control method is the use of a traditional Rajasthani architectural motif called the 'jaali' (or jali), which is a stone screen. In this particular building, the screen is used as a thermal skin between the building and the surroundings. A 4-foot gap between the screen and outdoor wall of the classrooms reduces direct heat gain. Drip channels on the inside of the screen also provide more evaporative cooling. The traditional building technique was modernized as computer models were used to determine the optimum density of screen pattern to provide the most cooling.

The Pearl Academy of Fashion also incorporates local stone and mosaic tiles in the construction of the building. The inner, amorphous-shaped courtyards provide ample daylight to classrooms and studio space, reducing the need for artificial light. And all rainwater and wastewater is recycled for on-site use in the building's very own waste water treatment plant.

The building uses traditional Rajasthani motifs including a "jaali" pierced stone screen an open courtyard..It features passive cooling techniques to combat the desert climate. Given the nature of an institution, budgetary constraints on the project necessitated the use of cost effective design solutions to keep within the price points set by the client and yet be able to achieve the desired functionality and effect.

The adverse climate makes it a challenge to control the micro climate within the project thus

incorporating various passive climate control methods becomes a necessity and also reduces the dependence on mechanical environmental control measures which are resource hungry.

The architecture of the academy needed to be a confluence of modern adaptations of traditional Indo-Islamic architectural elements and passive cooling strategies prevalent in the hot-dry desert climate of Rajasthan such as open courtyards, water body, a step-well or baoli and jaalis (perforated stone screen). All these elements have been derived from their historic usages, but will manifest themselves through the built form and become an intrinsic part of the daily life of the design student.

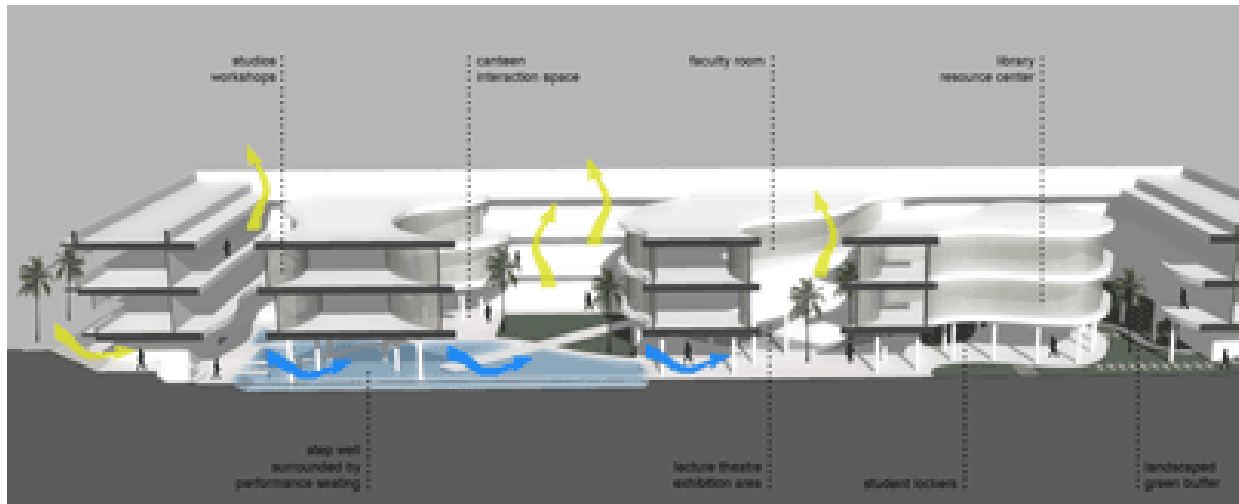
The building is protected from the environment by a double skin which is derived from a traditional building element called the 'Jaali' which is prevalent in Rajasthani architecture. The double skin acts as a thermal buffer between the building and the surroundings. The density of the perforated outer skin has been derived using computational shadow analysis based on orientation of the façades

The scheme relies on self shading sliver courts to control the temperatures of internal spaces and open stepped wells while allowing for sufficient day lighting inside studios and class rooms. The entire building is raised above the ground and a scooped out under belly forms a natural thermal sink which is cooled by water bodies through evaporative cooling.



This under belly which is thermally banked on all sides serves as a large student recreation and exhibition zone and forms the anchor for the entire project. During the night when the desert temperature drops this floor slowly dissipates the heat to the surroundings keeping the area thermally comfortable. This time lag suits the staggered





functioning of the institute.

Besides having become a very successful model for cost effective passive architecture in desert regions the design and facilities of the campus complement the ideology of the Pearl Academy of Fashion – a cutting edge design institute with a sustainable approach. The Pearl Academy of Fashion is an exemplar of an inclusive architecture which intends to accommodate all the heritage values while positioning it within the contemporary cultural and architectural paradigm.

7.2 National case studies:

01.BGMEA University of Fashion & Technology (BUFT)

BGMEA University of Fashion and Technology (BUFT) is a prime University of Bangladesh aimed to produce technically competent human resources for the RMG sector of the country. It was established in **1999** as BGMEA Institute of Fashion & Technology (BIFT) by BGMEA. It started functioning in 2000 and was affiliated to the National University, Bangladesh in 2001. BUFT, in collaboration with international organizations such as United Nations Industrial Development Organization (UNIDO), European Union (EU), German Technical Co-operation (GTZ), and the South Asia Enterprise Development fund (SEDF), is working for further growth and development. It started functioning with the affiliation of National University. BUFT is offering **2 years MBA degree course in Apparel Merchandising** and **4 years B.Sc (Hons)** course in Apparel Manufacture & Technology, Knitwear Manufacture & Technology and Fashion Design & Technology along with **1 year Diploma courses** in Apparel Merchandising, Apparel Manufacture Technology and Apparel Engineering & Production Planning. Besides, it is also conducting 6 months certificate courses in Woven Garment Merchandising, knitwear Merchandising, Sweater Merchandising, Fashion Design Technology, Quality Control & Compliance in Apparel Industry, Production Management, Enterprise & Resources planning and 3 months short courses in Sewing Machinery Maintenance, Computer Aided Design,

Modern Dying-Printing & Finishing Technology, Pattern Cutting, Production Management. The MBA and B.Sc. Honors Courses are governed by the rules and regulations of BUFT approved by UGC.

BUFT is situated in a prime location of Uttara Model Town of Dhaka Metropolitan City, having a good communication network with all areas of Bangladesh. It occupies about **75,000 sft of floor space of classrooms, laboratory, library, faculty rooms, auditorium, students' common room, and office rooms**. The laboratories include computer lab, CAD lab, sewing lab, knit lab, textile testing lab, pattern lab, product development lab, etc. All labs are equipped with state of the art equipments. There is rich collection of books and journals in our library, There are **4000 books and journals in BUFT library**. Students have the broadband internet facilities free of cost. All classroom, library, laboratory, faculty rooms, office, auditorium are air conditioned. Classrooms are fitted with overhead projectors, multimedia and other teaching aids. BUFT has rented another building for **campus 2 in Azampur where classes are being taken. It occupies 8000 square feet**. Students have the Broadband Internet facilities free of cost. All classroom, library, laboratory, faculty rooms, office, auditorium are fully air conditioned and classrooms are fitted with overhead projectors, multimedia and other teaching aids. BUFT has a 2nd campus in Azampur where regular classes are being taken because of the huge demand of the students.

Beside formal academic activities BUFT students regularly participate in different extra-curricular activities; such as sports, cultural program and co-curricular activities. BUFT students organize regular fashion shows with their created dresses and act as model in the fashion shows, actively participates in the BATEXPO and contributes BATEXPO fashion shows by providing self-designed dress for the models. BUFT faculties and students are also contributing BATEXPO fashion show management in every year.

Considering the future demand, BUFT is planning for academic and infrastructural expansion. As part of the academic expansion we are also planning to organize 4 years B.Sc. Honors course the Textile Technology. Diploma in Leather Design, Certificate in Fashion Photography and Fashion Modeling Course in near future. BUFT has collaboration with many international organizations, such as, United Nations Industrial Development Organization (UNIDO), European Union (EU), German Technical Co-operation (giz).

02.BANGLADESH INSTITUTE OF FASHION & DESIGN TECHNOLOGY (BIFDT)

BANGLADESH INSTITUTE OF FASHION & DESIGN TECHNOLOGY (BIFDT) has been formed to excel the career path of those individuals who want to explore their career in RMG (Ready Made Garments) & IT (Information Technology) sector in both home and international markets in the post MFA (Multi Fiber Agreement) era. We are firmly determined to explore potentials of the students in the area of creativity and imagination with the help of proper care, effective teaching and modern technology. We ensure smooth and secure professional job

prospect to overcome the challenge of the 21st century.

The company has an in-house team for designing, manufacturing, quality assuring, marketing, well erection & commissioning services with excellent management.

Counseling section is always ready to keep contacts with the students and ready to counsel them at any matter. Students get an effective assistance for their career as we keep close contacts with the perspective employers of the relevant fields.

Faculties

All of our teachers have been carefully selected among the top professionals in their own fields of expertise. Keeping the latest trends and techniques in mind, they provide innovative teaching methods that will help the students to understand the true requirements of a job within the Merchandising and fashion world . They are very much dedicated & uncompromising to deliver the best service to their students, which will help to be a successful professionals in respective fields.

- All courses are professional courses.
- Highly Qualified experienced teachers.
- Day & Evening shift program.
- Theoretical & Practical classes.
- Special English language & Computer classes are provided as intrinsic part of course.
- BIFDT is a well equipped with multi class rooms, Computer Lab, 24 hours internet facilities, Pattern Lab, Sewing Lab, Computer Aided Design (C.A.D) Lab.
- Guest teachers From Textile College, Private Bank , B.C.S Cadre Service and R.M.G related practical oriented renowned persons.
- Lowest tuition fee & friendly payment system.
- There are about **5000 Garments & 1700 Buying houses in Bangladesh**. Every year large number of Technically competent experts are needed in human resources like Fashion Designer, Merchandiser/Asst.Merchandiser, Commercial Manager/Officer, AGM, PM , Production Manager/Officer, Quality Controller.
- BIFDT is the most renowned institute to provide High qualified technical persons in R.M.G sector of Bangladesh. Each year near about 500 experts are produced from BIFDT to overcome the challenges of R.M.G sector .
- BIFDT is always Committed to Create Excellence.

03.Shanto-Mariam University of Creative Technology

Shanto-Mariam University of Creative Technology (SMUCT) is a private university established in 2003 under the 1992 Private University Act. The university is located at Dhaka, Bangladesh. It was named after Md. Imamul Kabir Shanto (founder and Chairman) and his wife Tahmina Chowdhury Kabir (Mariam) (founder and Vice Chairman).

The University has three Faculties:

- Faculty of Design and Technology;
- Faculty of Fine and Performing Arts;
- Faculty of Management and General Studies.

These faculties are divided into specific subject areas by Departments, each Faculty being headed by a Dean of Faculty and each Department headed by a Head of Department.

The following two institutions also run alongside the University and other professional and vocational Diploma and Certificate Courses are awarded through these institutions :

- Shanto-Mariam Institute of Creative Technology;
- Shanto-Mariam Academy of Creative Technology.

Objectives

- To develop an internationally recognized University providing courses of study and awards tailored to meet the need of all design related activities in Bangladesh.
- To encourage fine and performing arts like dance, music, painting and such other qualities as considered the backbone of the culture and heritage. The University actively associates itself to promote and enhance the inner qualities of the young generation.
- To maintain corporate membership of recognized International professional bodies e.g. the textile Institute, The Royal Society of Arts, and to ensure that courses are designed to qualify students upon graduation for individual membership.
- To share the knowledge and information with International community since with the advancement of the communication technology the world has been converted virtually into a GLOBAL VILLAGE. The University is fully equipped to render facilities for such purpose of sharing knowledge, expertise and educational techniques with any reputed university located at any part of the globe.
- To upgrade the image of commercial industry and the creative sector from that being a secondary player to one of being a world leader.
- To substantially increase the productivity, efficiency with due appreciation of the product value of the young generation through appropriate use of digitally equipped library having substantial collection of books, journals and periodicals in various subjects duly supported by the "resources of the Creative Destination" specially in the Fields of design, quality and marketing.
- To develop a technically competent and socially efficient work force through the provision of public lecture, research and consultancy linked to national and international issues.
- To provide all types of technical assistance in any sector to the extent the same is required.
- To forge links with other institution, local and abroad, to encourage exchange of staff

and students to increase awareness of good practice and to promote the reputation of Bangladesh.

- To provide a very productive and efficient linkage between students and ex-students on a continuous basis with special reference to Design, Quality and Marketing of products to enable both the groups to share experience and enhance their potential for further advancement of their creativity. The University, thus, will provide bridging facility in this regard.
- To extend cooperation with most Bangladeshi entrepreneurs who aspire to find a University where Arts, Business and Technology are effectively covered in their curricula. This will enhance their business potential to compete with the International arena through a pool of trained human resources matching their required level of qualities and expertise. The Shanto-Mariam University could serve as a "Centre of Excellence" actively endeavoring to meet the expectation of our business community and entrepreneurs

7.3 Current scenery/situation of fashion in Bangladesh:

The textile and clothing sector is the largest manufacturing activity in Bangladesh. It provides direct employment to about 5 million people, which accounts for 45 per cent of all industrial employment in the country. The sector contributes 10 per cent of the country's GDP, 40 per cent of industrial value addition, and 78 per cent of export earnings. Major readymade garments exported by Bangladesh are knitted and woven shirts and blouses, trousers, skirts, shorts, jackets, sweaters and sportswear, and other fashion apparel.

The Current Position of the Textile Industry in Bangladesh

Today, the textile industry of Bangladesh can be divided into the three main categories: the public sector, handloom sector, and the organized private sector.

Public Sector

The factories in the public sector enjoy certain privileges such as government funding. In addition, the equipment in this sector is not well maintained, as much of the money allocated for this purpose is not spent as planned, but is wasted through corruption and poor accounting.

Handloom Sector

However, the inferiority of their machinery, mostly due to their narrow width, means that the fabric production is slow, and usually falls short of the quality needed for export.

Private Sector

The most productive of the three categories is the private sector.

Since the owners of such factories are directly affected by their performance, they take an active part in planning, decision making, and management. Most of these factories also have machinery that is superior to those in the two other sectors because the owners are well aware of the connection between their equipment and their profits.

The Future of the Textile Industry in Bangladesh

As the population is growing and the standard of living is increasing in Bangladesh, the demand for textiles is increasing rapidly. The weaving and knitting sub-sectors will also need to expand at a rapid rate, as there is a large demand-supply gap in the country. With increased investment in the sub-sectors and modernized machinery, Bangladesh could profit greatly from larger and more competitive weaving and knitting sectors. As the current dyeing facilities are mostly dependent on imported fabrics, they are expanding at a rate which is not dependent on any of the other sectors. However, as local grey becomes more competitive, and its production is increased, the dyeing, printing, and finishing sub-sector will also need to expand to accommodate for the increased supply. The reduction of such problems will automatically improve the market position resulting in improved opportunities for the expansion of the Bangladeshi textile industry.

The importance of the textile industry in the economy of Bangladesh is very high. Furthermore, the industry is expected to be the catalyst in the industrialization of Bangladesh, and has been declared as a thrust sector by the government. However, over the course of my Senior Project investigations, I have realized that Bangladesh's low labor cost, skill development potential, a presently expanding market, and favorable conversion cost can be used to turn the challenges of the quota-free market into a window of opportunity. In addition, most developed countries are turning away from industries like the textile industry and investing in other sectors, thus creating a vacuum in the market.

CHAPTER 08: PROGRAM DEVELOPMENT

8.1 Program rationale:

The fashion design infrastructure will consolidate the Fashion Design Industry with intellectual inputs, human resources, market information, trends and forecasting etc. all of which are coming together in the Fashion Technology Park.

The intelligent building concepts are integral to every component of the Park. This will enable dynamic networking of every dimension within the Park, internally as well as globally through

the dedicated Information Technology Infrastructure. We divided Fashion Technology Park into four zones

- Knowledge zone
- Exposition centre and
- Fashion warehouse

The Knowledge Zone comprises of design studios, labs, library and temporary exhibition space for students. The Exposition Centre will house nationally and internationally recognized fashion design houses. The facilities offered in the Exposition Centre of the Park will suit companies of every magnitude domestic, international, global and multi nationals.

The Exposition Centre will be the main function of the park. These face a beautifully landscaped central plaza containing an open amphitheater. The amphitheater along with open plaza would provide a platform for cross cultural exchanges. These exchanges will create the flavor and ambience of a global village. The Retail Infrastructure, Exhibition Hall, Conference facilities and the Bonded Warehouse around the Plaza will position the park as a destination for International Trade

8.2 Programmatic layout and space provided for each function

KNOWLEDGE ZONE

Space	No. of user	Quantity	Space required(sft)	Total Area(sft)	Height (sft)
FASHION COLLEGE	1200-1500	1	39700	39700	112
Temporary Exhibition space		1	10725	10725	24
Design Studio	50	12	(45x45) =2025	(2025x12) =24300	18
Classes	40	4	28x35 =980	(980x4) =3920	12
Lab	40	2	(50x40) =2000		12
It zone	100	1		3400	12
Photography		1	1870	1870	12

zone				
Library	1	23800	23800	12

DEPARTMENT OF FASHION DESIGN

Space	No. of user	Quantity	Space required(sft)	Total Area(sft)	Height (sft)
Pattern and cutting studio	50	8	(45x45) =2025	(2025x8) =16200	18
Sewing lab(Domestic)	40	1	(50x40) =2000	2000	12
Material store		1	(30x30) =900	900	12
D.C.O	1	1			12
Dept head room	1	1	250	250	12
Asst professor room	4	1	(17x13) =221	221	12
Professor room	2	1	(16x20) =320	320	12
Teacher's room	8		(52x31) =1612		12
Tea room		1	(10x10) =100	100	12
Staff room	4	1	(20x10) =200	200	12
Teacher's lobby		1	1848	1848	12
Teacher's toilet (male and female)		4	(17x10) =170	170	12

DEPARTMENT OF FASHION MERCHANDISING TECHNOLOGY

Space	No. of user	Quantity	Space required(sft)	Total Area(sft)	Height (sft)
Studio	50	8	(45x45) =2025	(2025x8) =16200	18
Material store		1	(30x30) =900	900	12
D.C.O	1	1			12
Dept head room	1	1	250	250	12
Asst professor room	4	1	(17x13) =221	221	12
Professor room	2	1	(16x20) =320	320	12
Teacher's room	10		(36x56) =2016	2016	12
Tea room		1	(10x10) =100	100	12
Staff room	4	1	(20x10) =200	200	12
Teacher's lobby		1	1848	1848	12
Teacher's toilet (male and female)		4	(17x10) =170	170	12

DEPARTMENT OF LIFESTYLE ACCESSORY

Space	No. of user	Quantity	Space required(sft)	Total Area(sft)	Height (sft)
Classroom/workshop	40	4	28x35 =980	(980X4) =3920	12
Accessory design workshop(lab)	40	1	(50x40) =2000	2000	12
Dept head room	1	1	250	250	12

Asst professor room	4	1	(17x13) =221	221	12
Professor room	2	1	(16x20) =320	320	12
Teacher's room	4				12
Tea room		1	(10x10) =100	100	12
Staff room	4	1	(20x10) =200	200	12
Teacher's lobby		1	1848	1848	12
Teacher's toilet (male and female)		4	(17x10) =170	170	12

OTHER SERVICE

Space	No. of user	Quantity	Space required(sft)	Total Area(sft)	Height (sft)
Vice chancellor		1	250	250	
Pro-vice chancellor		1	250	250	12
Student affair		1	(25x40) =1000	1000	12
Admin office room	2	1	(13x16) =208	208	24
Register office	1	1	150	150	24
Account	5	1	(20x15) =300	300	24
Lobby\Reception			(71x45) =3195	3195	24

EXPOSITION CENTRE

Space	No. of user	Quantity	Space required(sft)	Total Area(sft)	Height (sft)
Pop-up market	50 stalls	1	(245x55) =20825	20825	12

Photography centre	3(studio)	1	2500	2500	12
Rehearsal space	100	1	14400	14400	12
Powder room (male and female)	15	2	(125x70) =8750	8750	
Banded outlet shops (traditional and western)		2	1750	(1750x2) =3500	12
Museum: permanent garments collection		3	22000	(22000x3) =66000	12

OTHER SERVIC

Space	No. of user	Quantity	Space required(sft)	Total Area(sft)	Height (sft)
Multipurpose hall(indoor)	500	1	16000	16000	24
Event management	2	1	(28x17) =476	475	24
Magazine corner	2	1	(35x28) =980	980	24
Broadcast centre	10	1	(45x25) =1260	1260	24
Press and conference	50	1	1500	1500	24
Admin	30	1	(157		12
Archive		1	(45x45) =2025	2025	12
Material storage		1	(100x60) =6000	6000	12

FASHION WAREHOUSE

Space	No. of user	Quantity	Space required(sft)	Total Area(sft)	Height (sft)
Industrial lab(for students)	15	1	3000	3000	24
Traditional workshop	7	1	3000	3000	12
Branded outlet workshop	20	1	(25x40) =1000	1000	12
Fashion centre		1	(235x100) =23500	23500	24

RESTURANT

Space	No. of user	Quantity	Space required(sft)	Total Area(sft)	Height (sft)
Cafeteria space	250	1	(20x10) =2500	2500	24
Service counter			400	400	24
Hand wash	4	4	200	200	24
Employee check-in and changing room			400	400	24
Food storage			500	500	24
Food preparation			200	200	24
Cooking area			250	250	24
Washing area			150	150	24
Material storage			50	50	24

CHAPTER 09: DESIGN DEVELOPMENT

9.1 Conceptual design phase

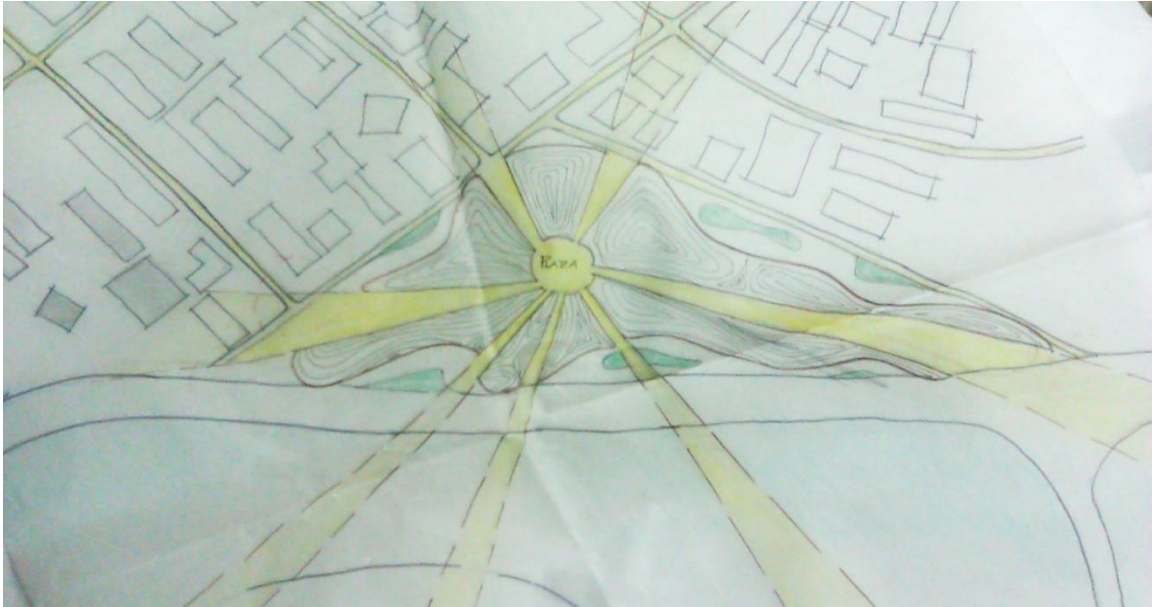


Fig 9.1: Initial conceptual drawing 01



Fig 9.2: Initial conceptual drawing 02

As Hatirjheel is the heart of the city I wanted to connect the people from different zone of the city of different economical status to experiencing the fashion cycle and experiencing the fashion of Bangladesh

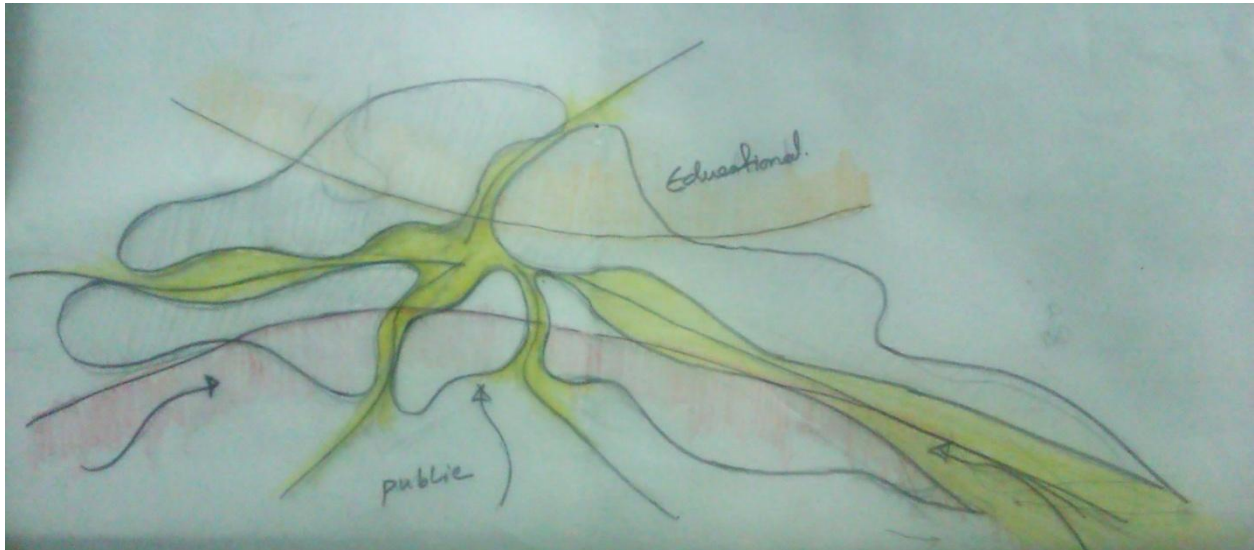


Fig 9.3: Conceptual design phase 01

So I wanted to connect the urban at the centre of the Fashion Technology Park to experience the surrounding and provide the shortcuts for the visitors. And also connecting the neighborhood to this fashion park

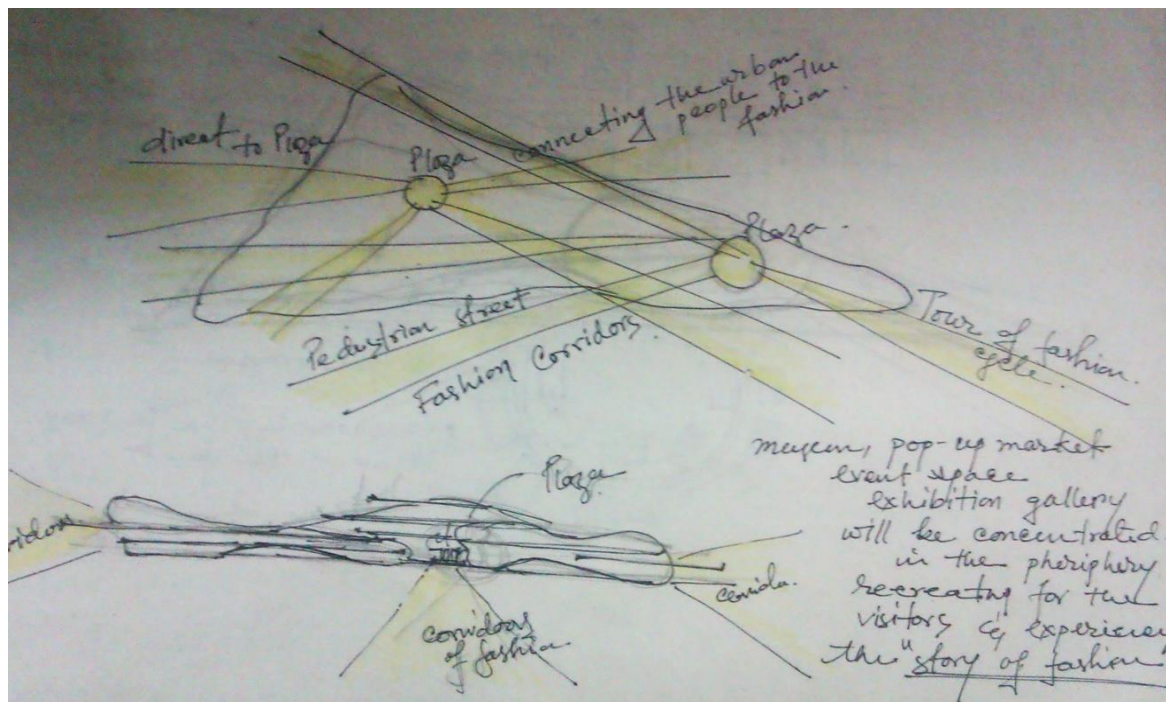


Fig 9.4: Conceptual design phase 02

My first concept was plaza will be the centre of attraction for the visitors and surrounding the site from anywhere the visitor or neighborhood can experience the direct view of the plaza which is directly connecting towards the street.

9.1 Zoning:



Fig 9.5: Active nodes

So this are the active nodes surrounding my site , basically most active zone is over the bridge many people gather there to see the surroundings of the Hatirjheel.

The surrounding urban fabric shows variety and, interrelated and integrated development. The different zones have very distinct flavor of built environment, locality and community. The site also creates very interesting relationships with other public and urban spaces.

But most importantly the project creates opportunities for a rapid mixed development catering the visitor public. It also bridges the long gap in the thoroughfares of the city.



Fig 9.6: Zoning

I located the Knowledge zone much in the bound of the site facing the huge water body and the road. So the students get the direct view of the surrounding and also within the site. I also located it nearest to other knowledge zone so that they can interact and exchange their knowledge to the others. And also I placed it nearest to the active nodes so that students can learn each and everything by networking to the different urban people

Then I located the Exposition centre next to the main road and the active node. Exposition centre will work as a centre of attraction of Fashion Technology Park. A strong visual prominence, wide frontages and strategically placed entry points ensure an even flow of urban people to the fashion park.

And lastly Fashion warehouse which I placed between the two Knowledge zone and exposition centre. So that will be the connection between two and it will act as one stop shop for the fashion solution.

It caters to all the requirements of an international design house to function perfectly. Not only international but it caters to every company of all scales whether, local, national or multinational.

9.1 Design proposal:

I choose the organic form in my design which goes with the fashion. Architecture is making its presence felt in fashion as the pliable metals, membrane structure light weight glasses and flexible plastics used in building construction are creeping on to the catwalks. At the same time, architects are borrowing the techniques of pleating and draping form traditional tailoring to design buildings that are interactive, inflatable and even portable. In architecture, designing monumental buildings are meant for a long visual life, whereas fashion in clothes changes every season. However both forms are three dimensional and contain space.

And my idea was introducing the mechanism of layering of cloths into a event spaces which holds the essence of fashion and serve as an urban public realm and constant inspiration of fashion industry of Bangladesh.

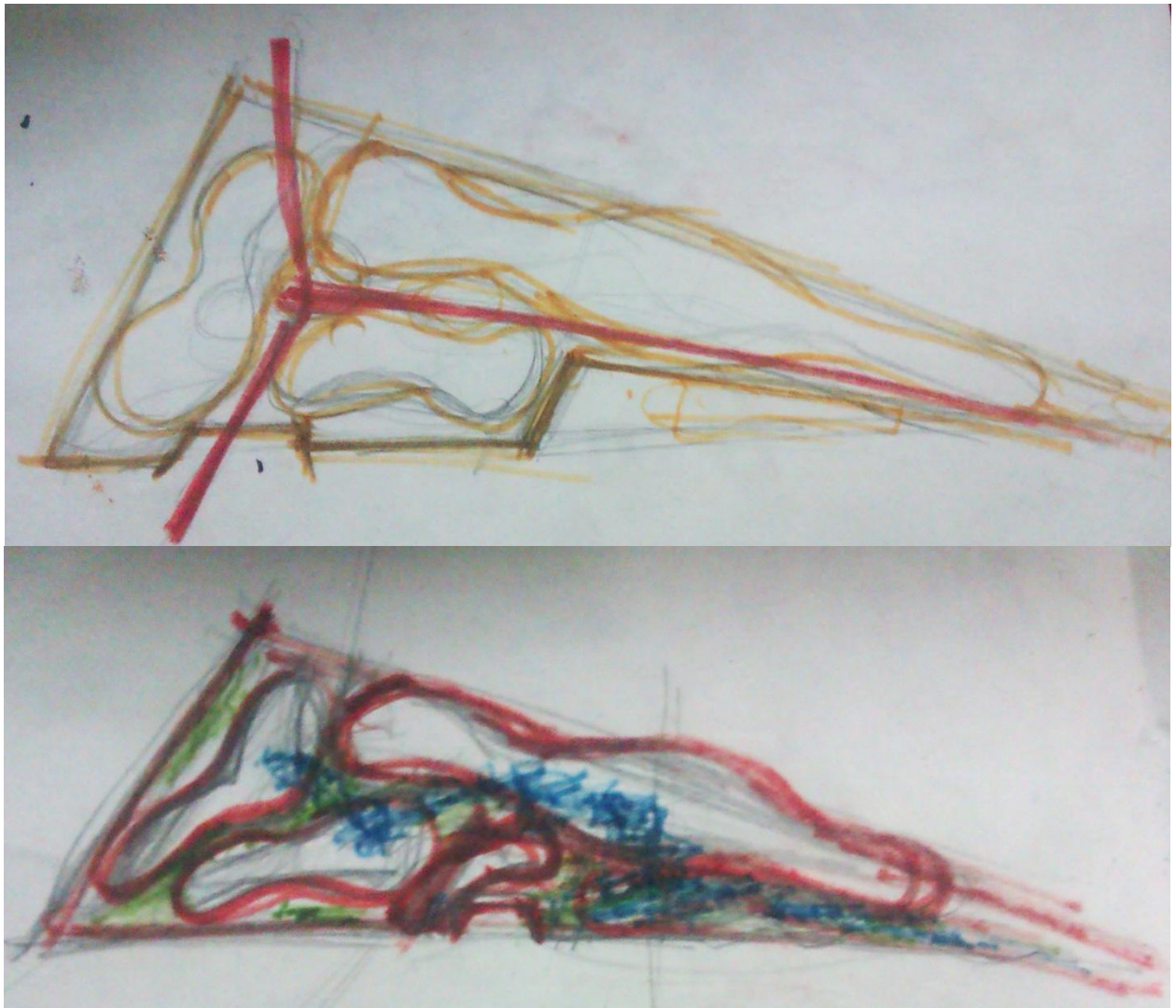


Fig 9.7: Design phase 01 and 02



Fig 9.8: Landscape phase 01

I connected the plaza with ramps and also through the street so the people can direct to the fashion park from the street, bridge etc. Even I tried to connect the ramp from the neighbor to the center of the plaza.

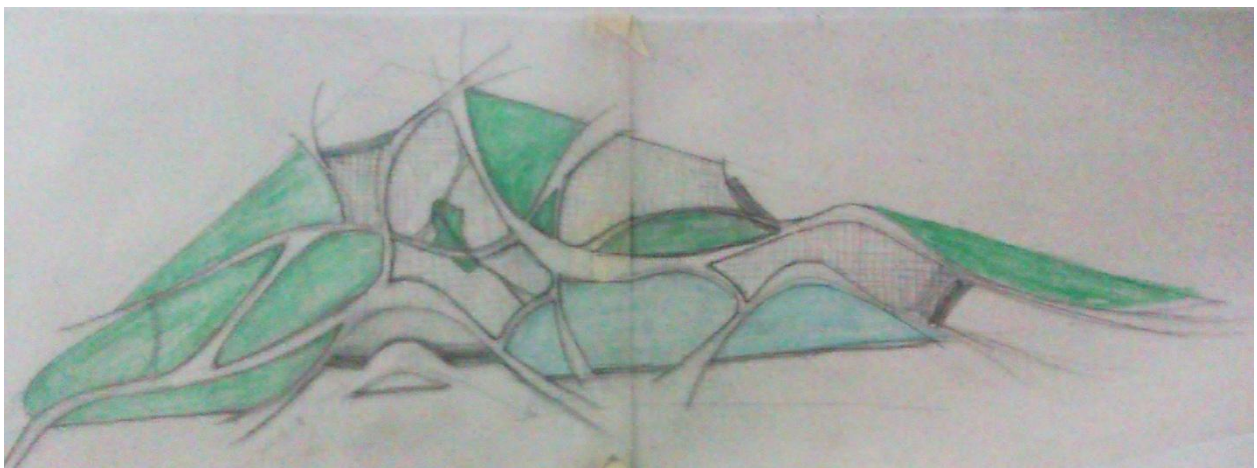


Fig 9.9: Landscape phase 02

Then I offered green to the plaza which is small green mound through the ramps which reveals the fashion park and experiencing the site as a urban park. And again to the periphery I proposed water body to connect the site as a surrounding.

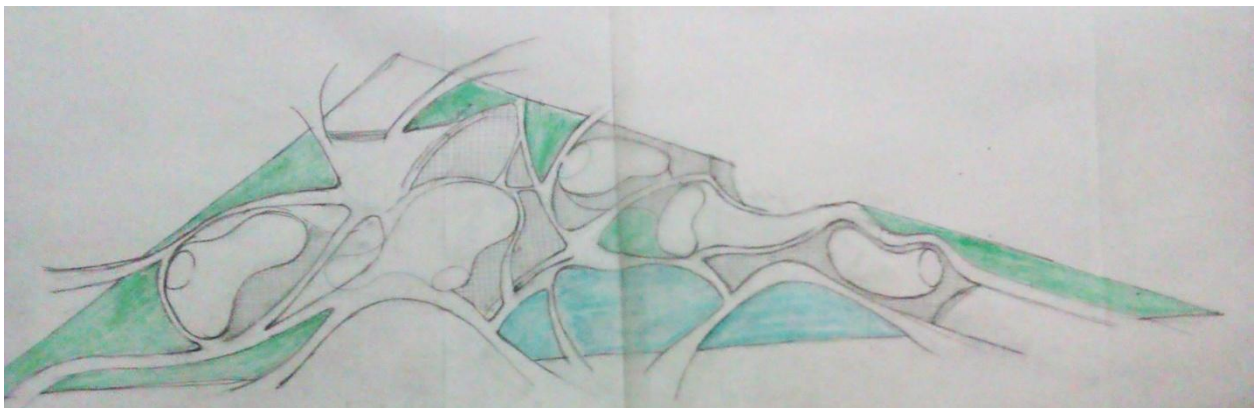


Fig 9.10: Final phase

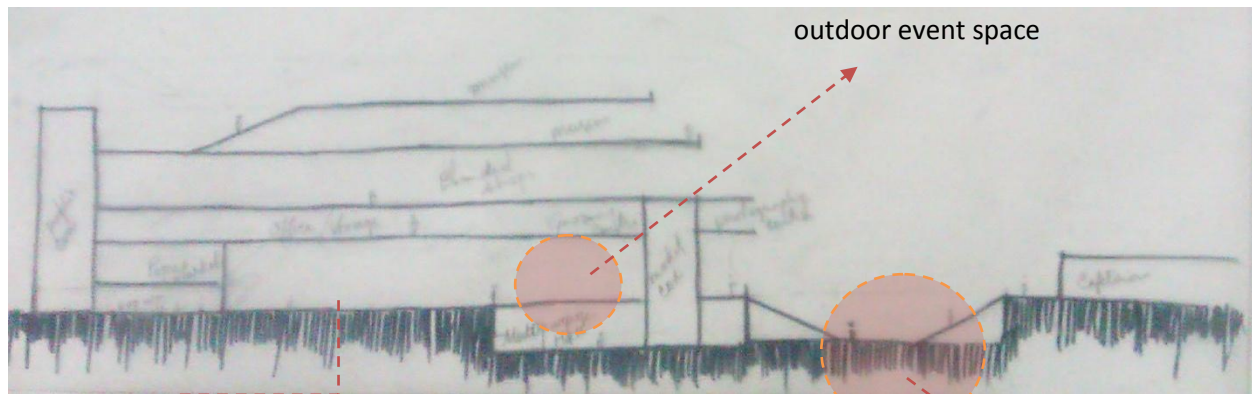


Fig 9.11: Conceptual section of Exposition centre

Plaza activity

- Live fashion show
- Live program/ performances
- Live concert
- Launching any fashion product of the designers or any brand

Trade fair or traditional trade fair

Festivals

- Pohela Baishakh
- Pohela Falgun
- Robindro Joyonti

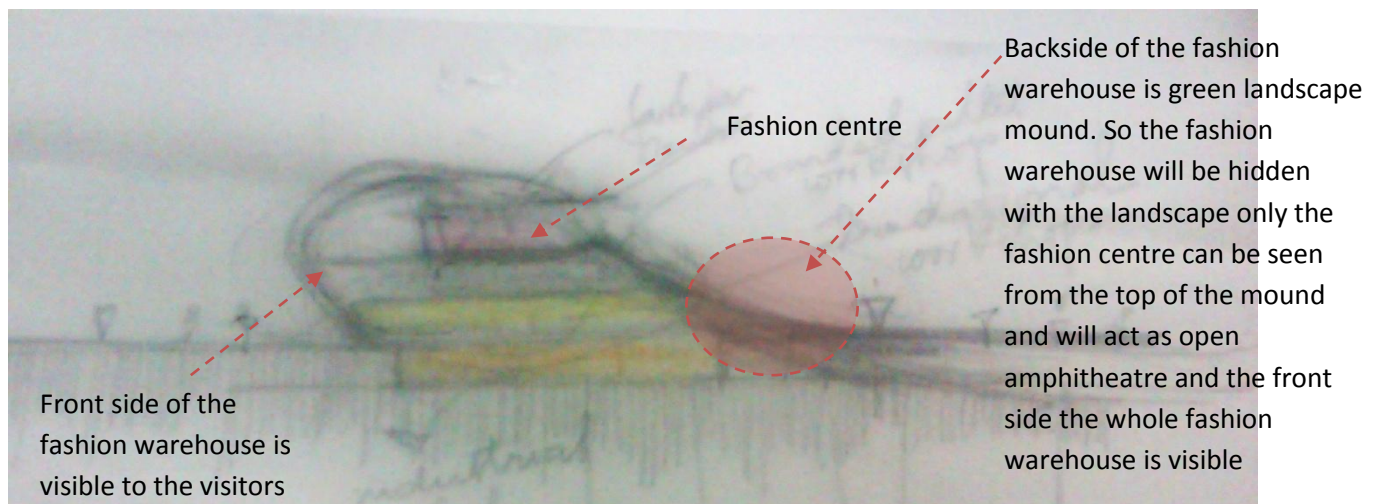
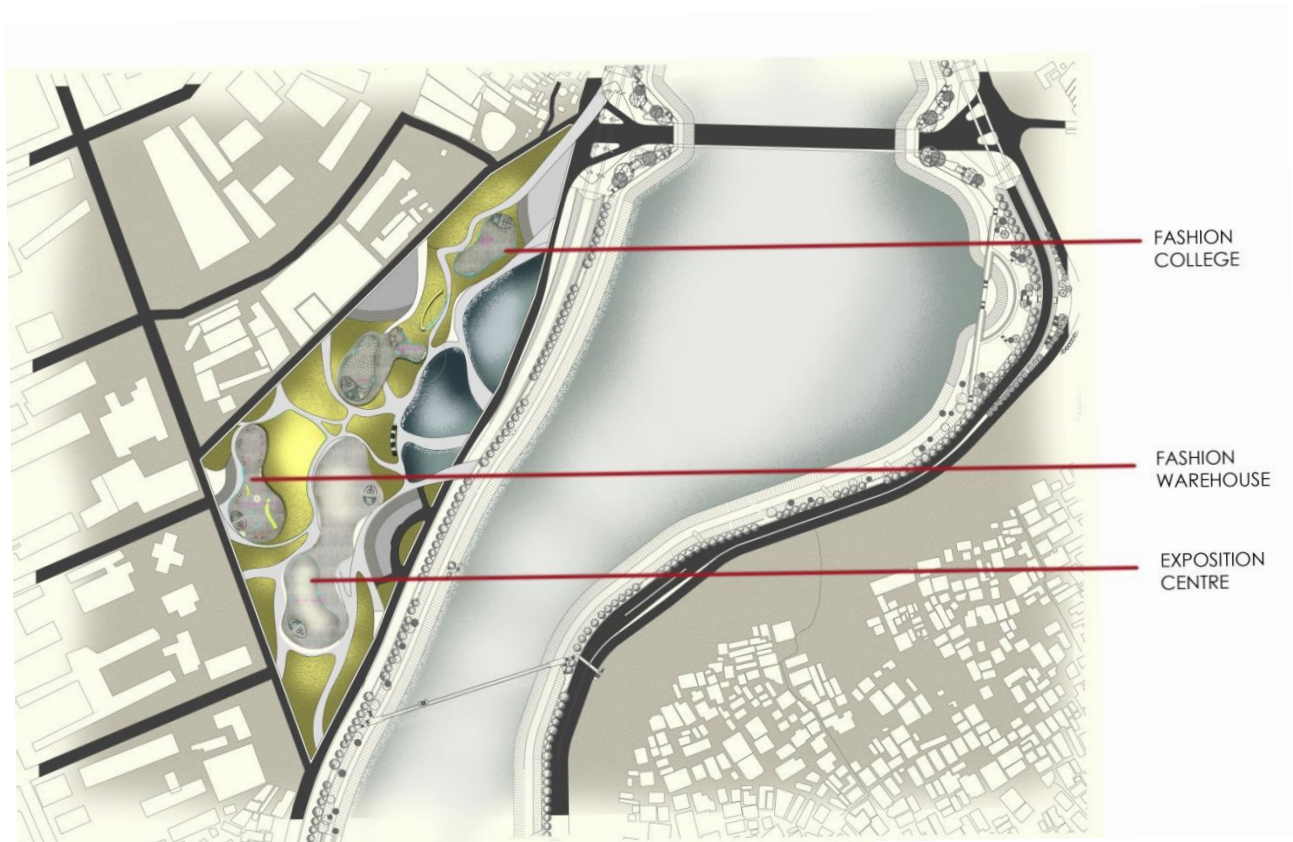


Fig 9.12: Conceptual section of Fashion warehouse



9.1 Final design drawings and views:

Fig 9.4: Ground floor plan

FASHION COLLEGE



LEVEL 01

FASHION COLLEGE



LEVEL 02 [+25'-00"]

FASHION COLLEGE



LEVEL 03 [+47'-00"]

FASHION COLLEGE



LEVEL 03 [+54'-00"]

FASHION COLLEGE



LEVEL 04 [+72'-00"]

FASHION COLLEGE



LEVEL 05 (+86'-00'')

FASHION COLLEGE



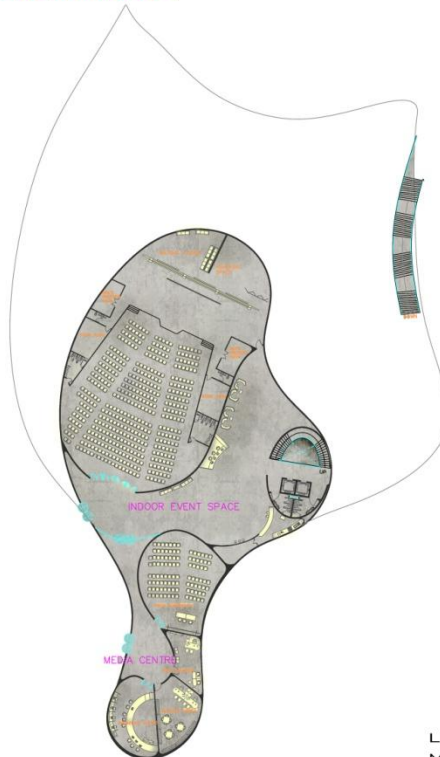
LEVEL 06 (+94'-00'')

FASHION COLLEGE



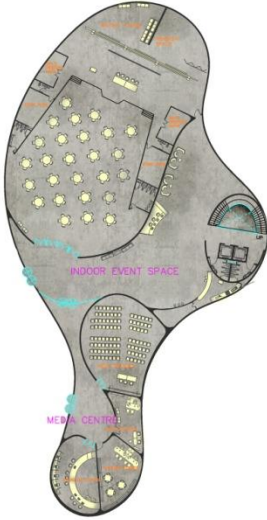
LEVEL 07 [+106'-00"]

EXPOSITION CENTRE

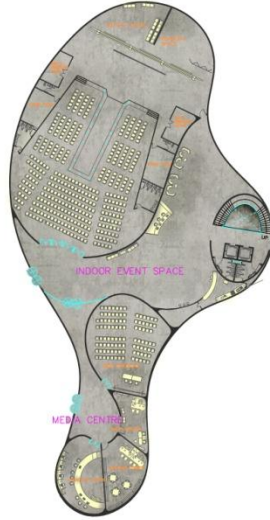


LEVEL 01 [-12'-00"]
MULTIPURPOSE HALL

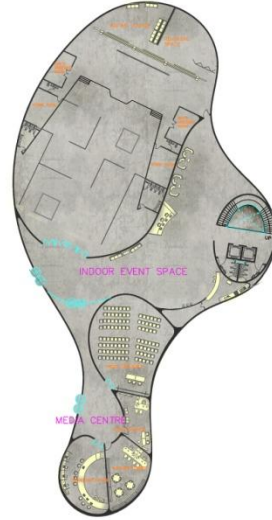
EXPOSITION CENTRE



LEVEL 01 [-12'-00"]
AUCTION SETUP

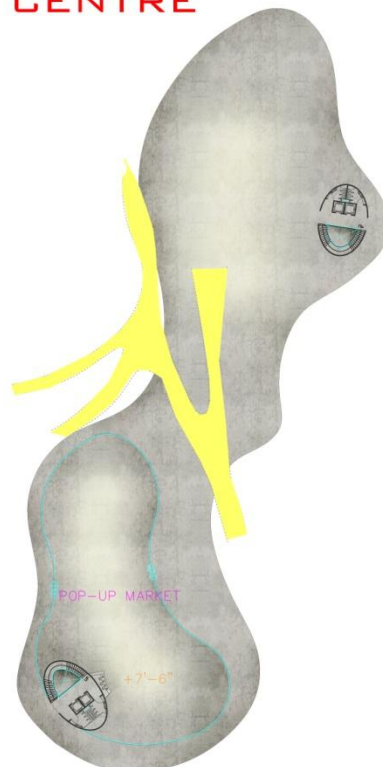


LEVEL 01 [-12'-00"]
RAMP SHOW SETUP



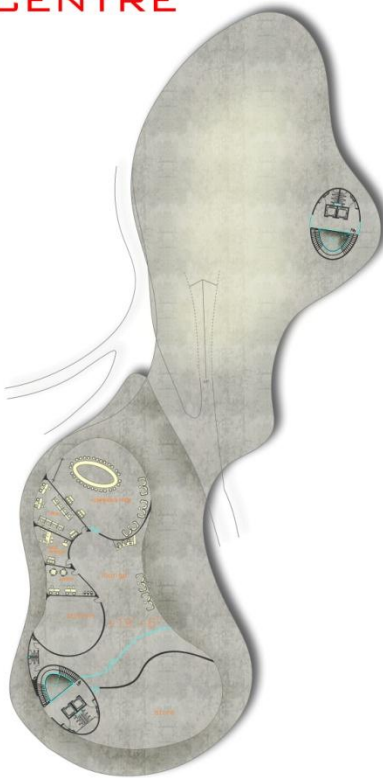
LEVEL 01 [-12'-00"]
EXHIBITION SETUP

EXPOSITION CENTRE



LEVEL 02 [+12'-00"]

EXPOSITION CENTRE



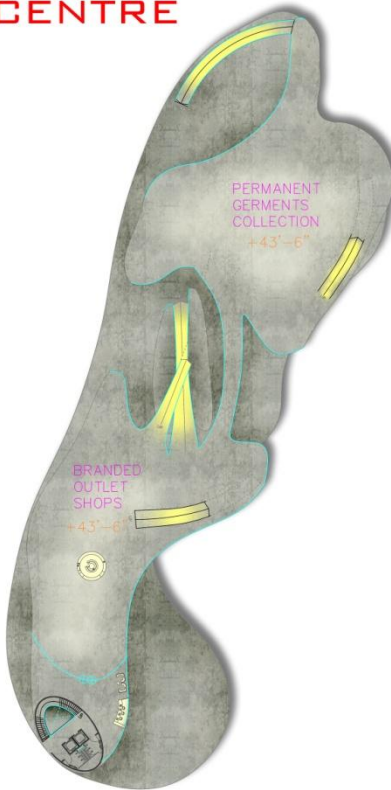
LEVEL 03(+24'-00")

EXPOSITION CENTRE



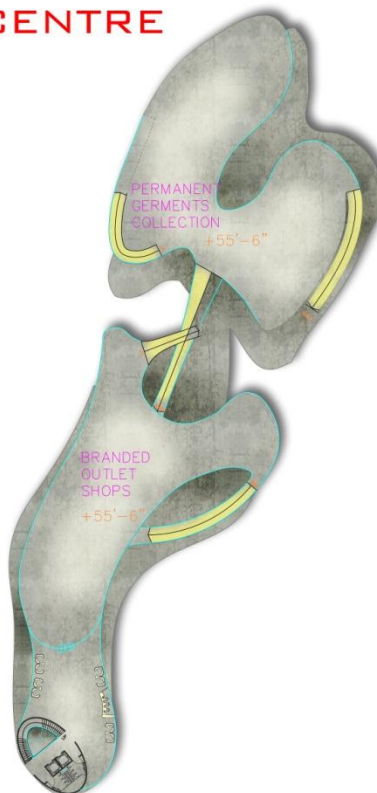
LEVEL 04(+36'-00")

EXPOSITION CENTRE



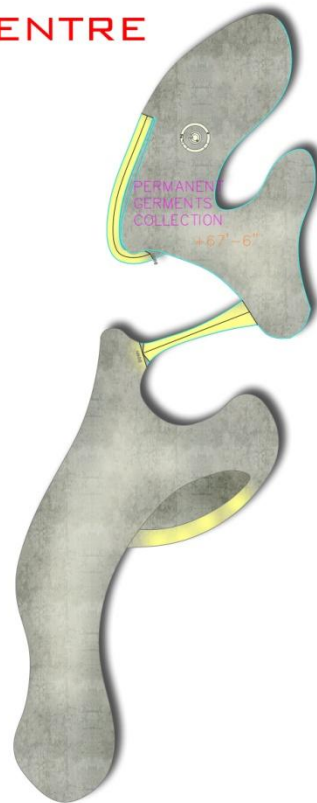
LEVEL 05 (+48'-00")

EXPOSITION CENTRE



LEVEL 06 (+60'-00")

EXPOSITION CENTRE



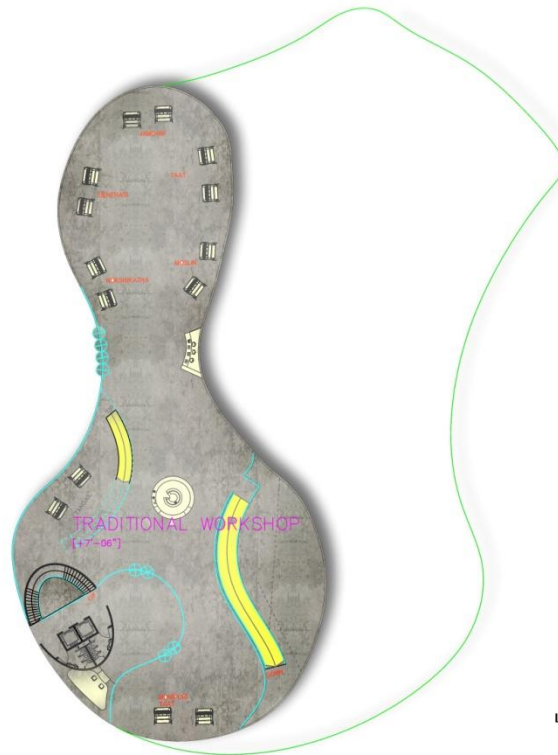
LEVEL 07 (+72'-00")

FASHION WAREHOUSE



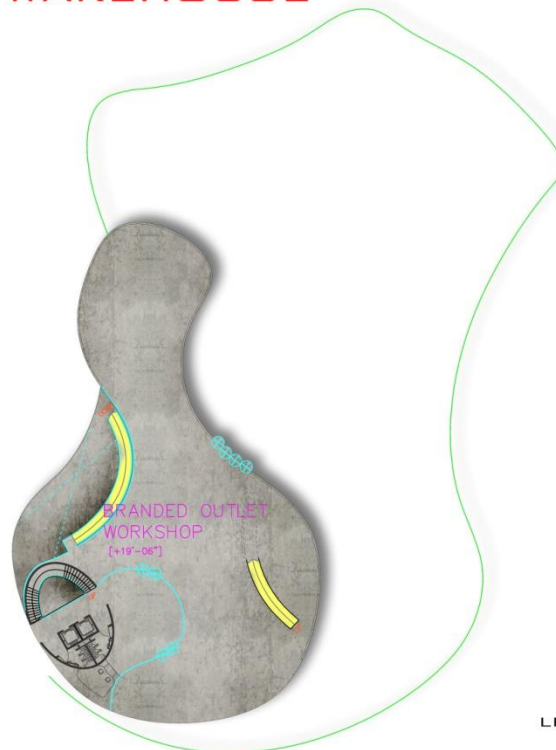
LEVEL 01 (-12'-06")

FASHION WAREHOUSE



LEVEL 02 [+12'-00"]

FASHION WAREHOUSE



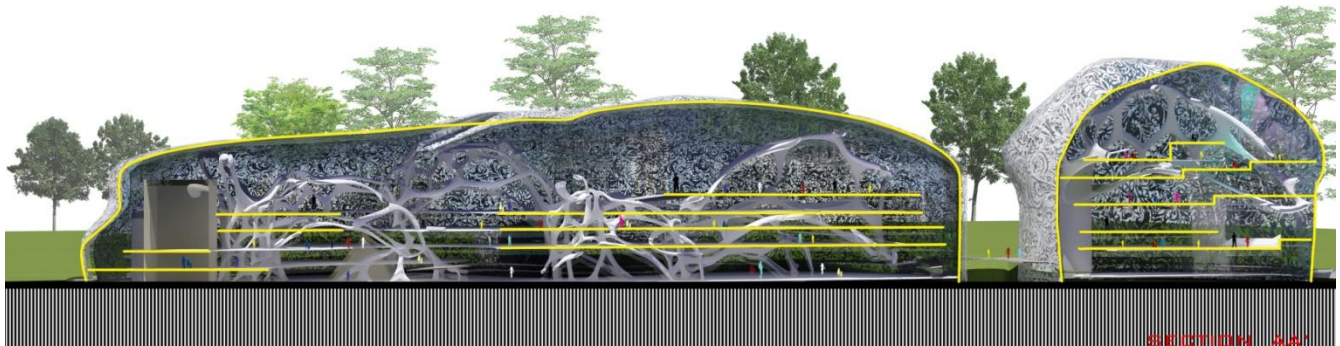
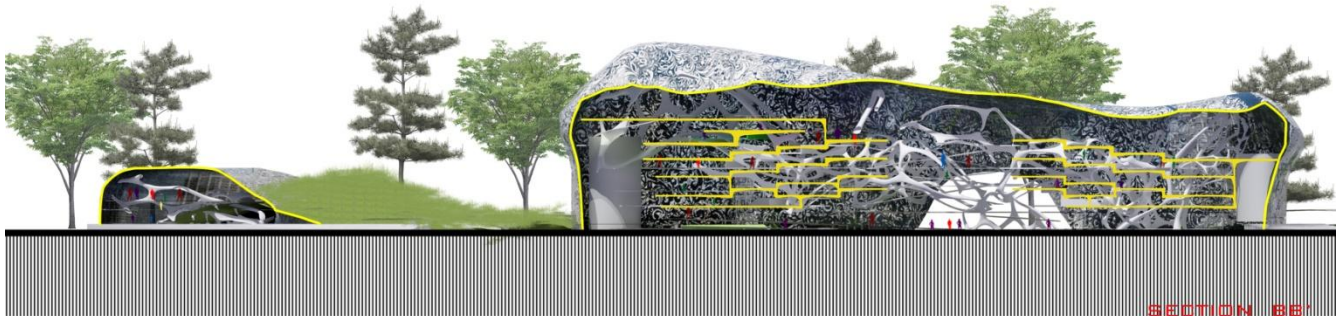
LEVEL 03 [+24'-06"]

FASHION WAREHOUSE

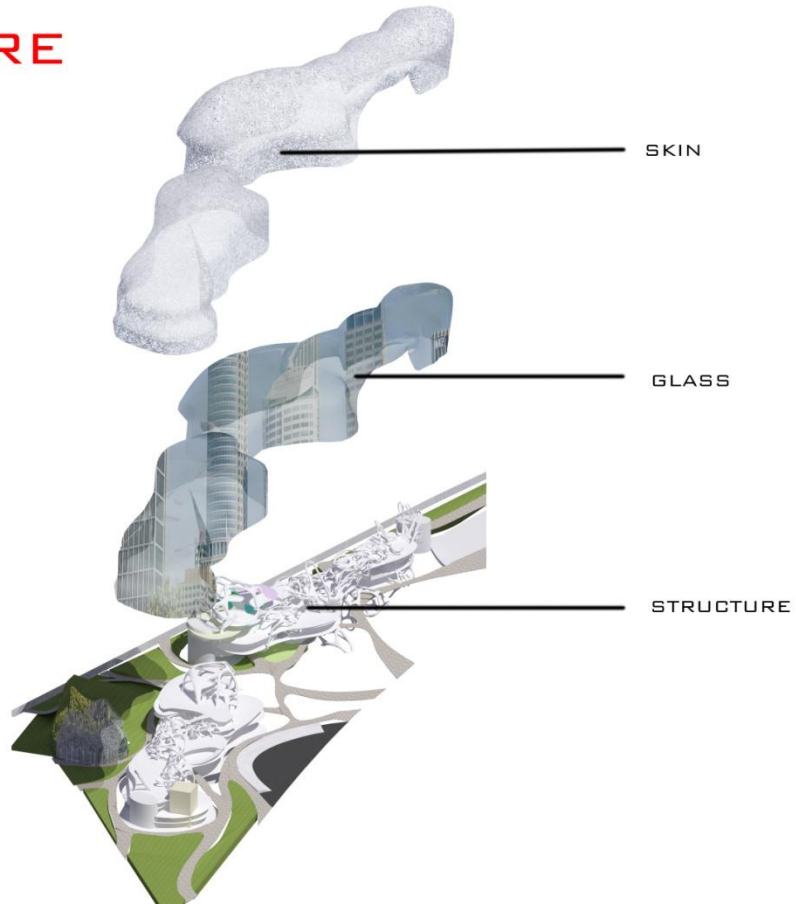


LEVEL 04 [+24'-06"]

SECTION



STRUCTURE



BEAR HIGH WIND AND **SEISMIC LOADS** WITHOUT RELYING ON INTERIOR SUPPORT COLUMNS

A SPACE FRAME AS ITS MAIN STRUCTURAL ELEMENT; THE CLADDING IS A **CURTAIN WALL** SYSTEM COMPRISED OF VARIOUS SPECIALLY FABRICATED PANELS

IS A MIX OF REINFORCED CONCRETE, STEEL FRAME STRUCTURES, AND COMPOSITE BEAMS AND DECKS. THE SPACE FRAME IS COMPOSED OF A **SPECIAL STEEL TUBE-AND-NODES SYSTEM** (A PRODUCT OF MERO-TSK INTERNATIONAL).

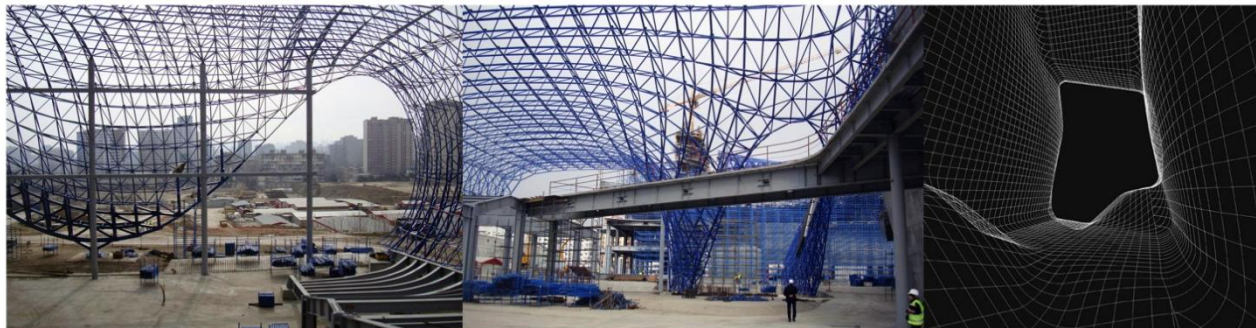




Fig 9.22: Bird's eye view

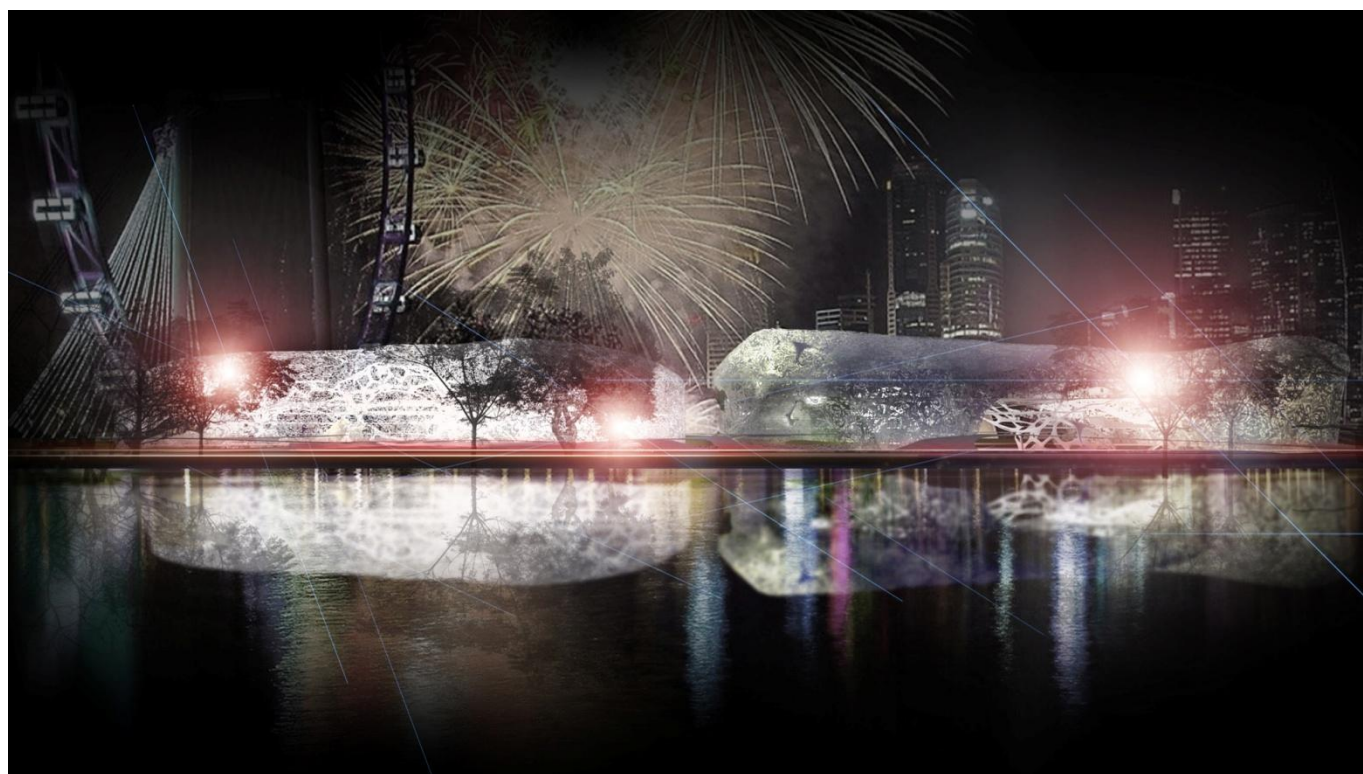


Fig 9.23: Night render

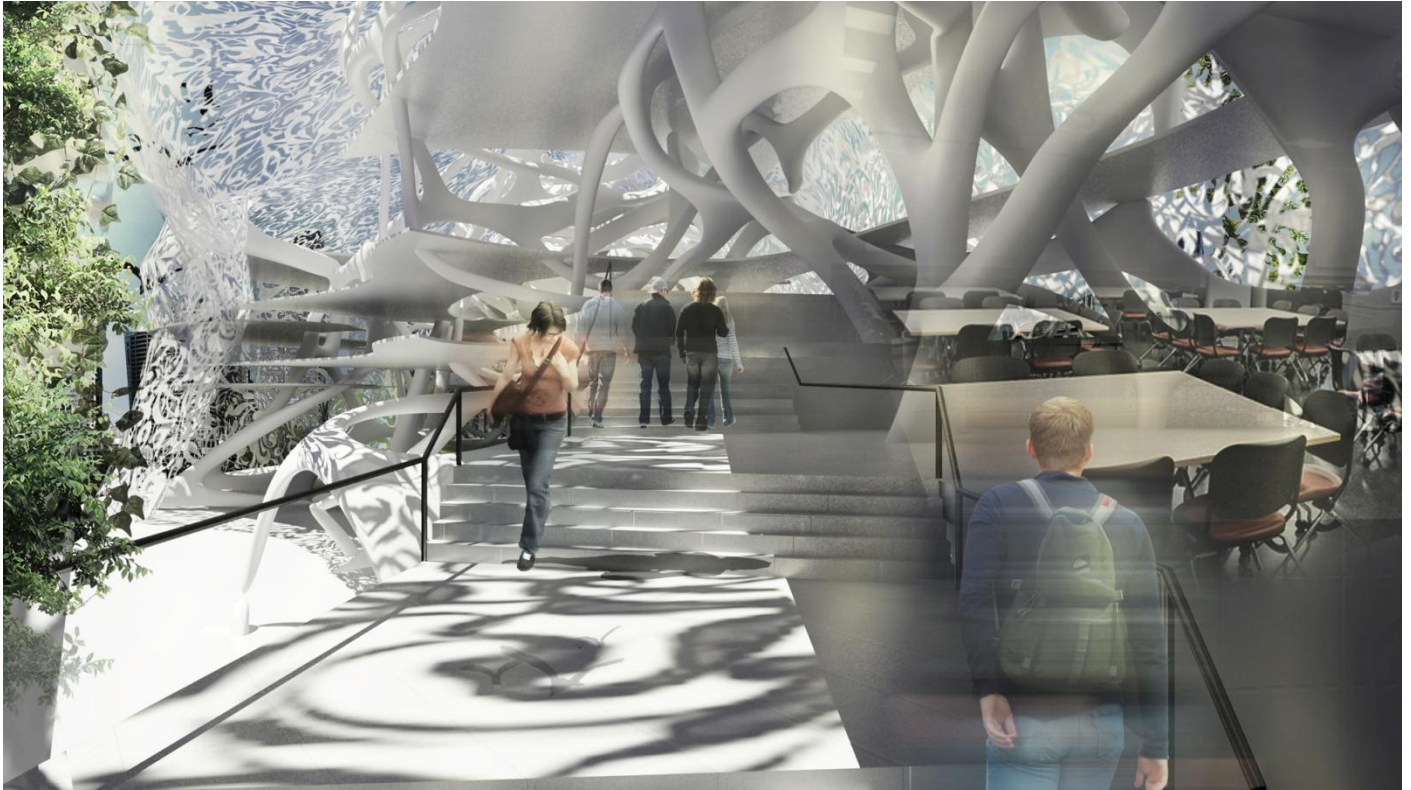


Fig 9.24: Studio corridor

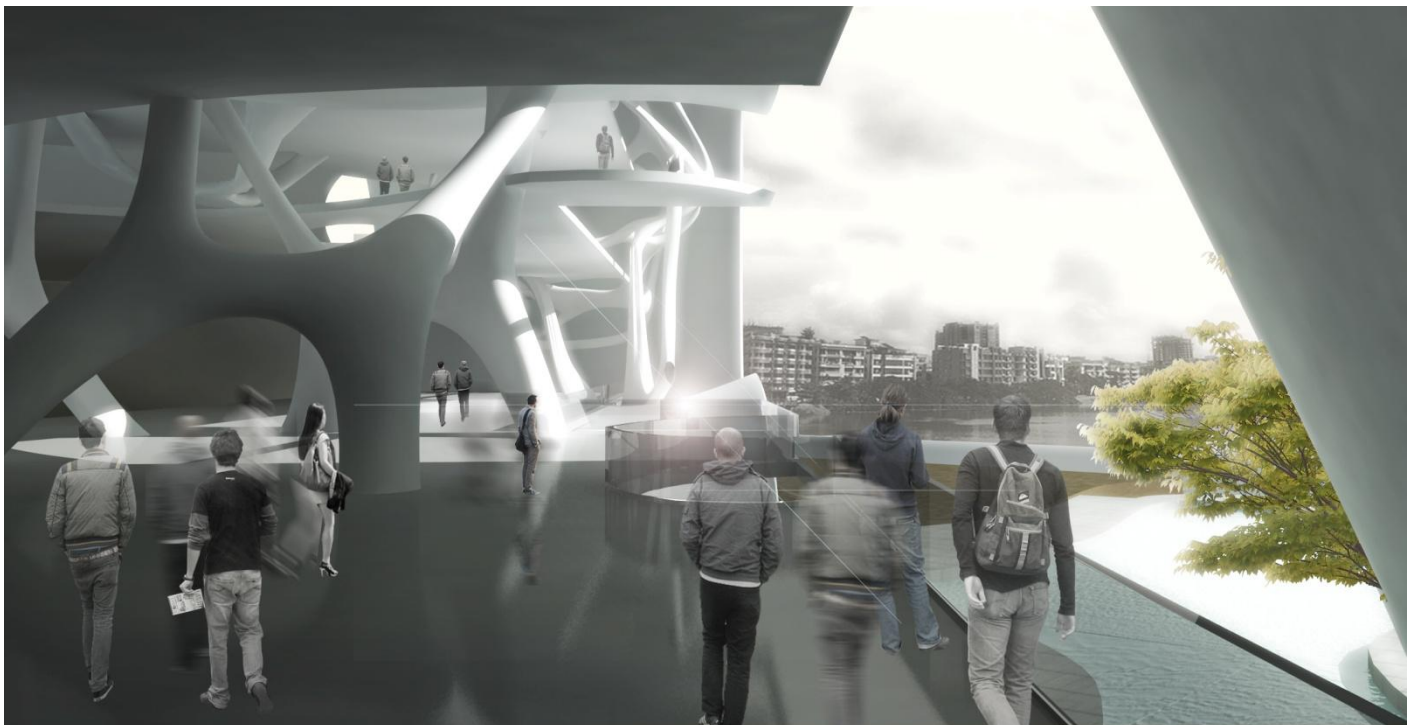


Fig 9.25: View from fashion college

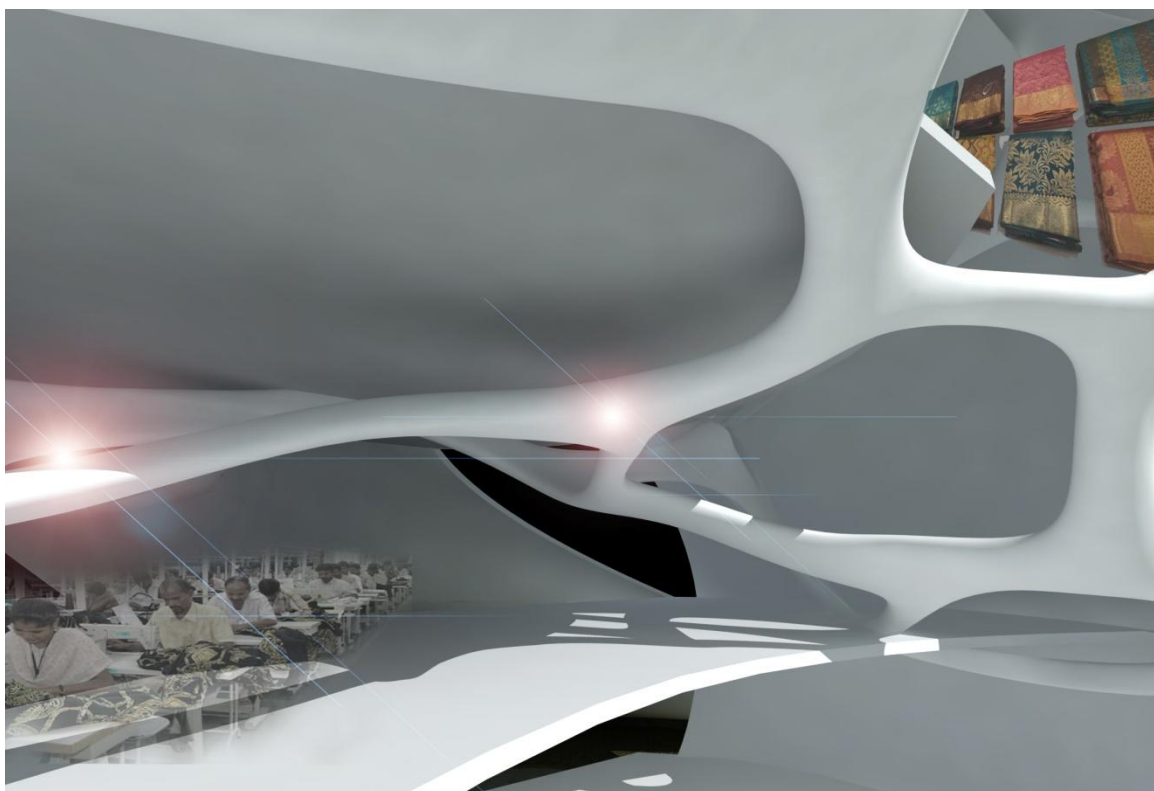


Fig 9.26: Traditional workshop

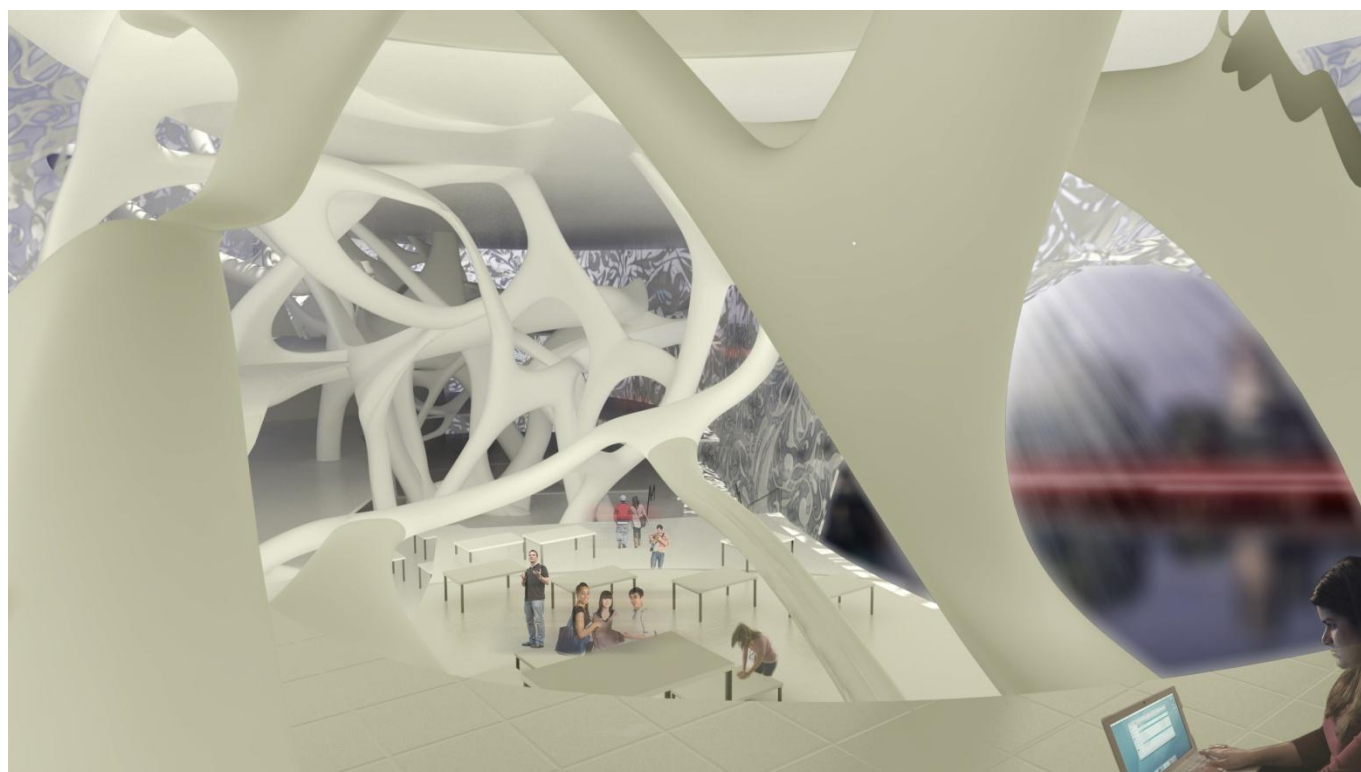


Fig 9.27: Studios

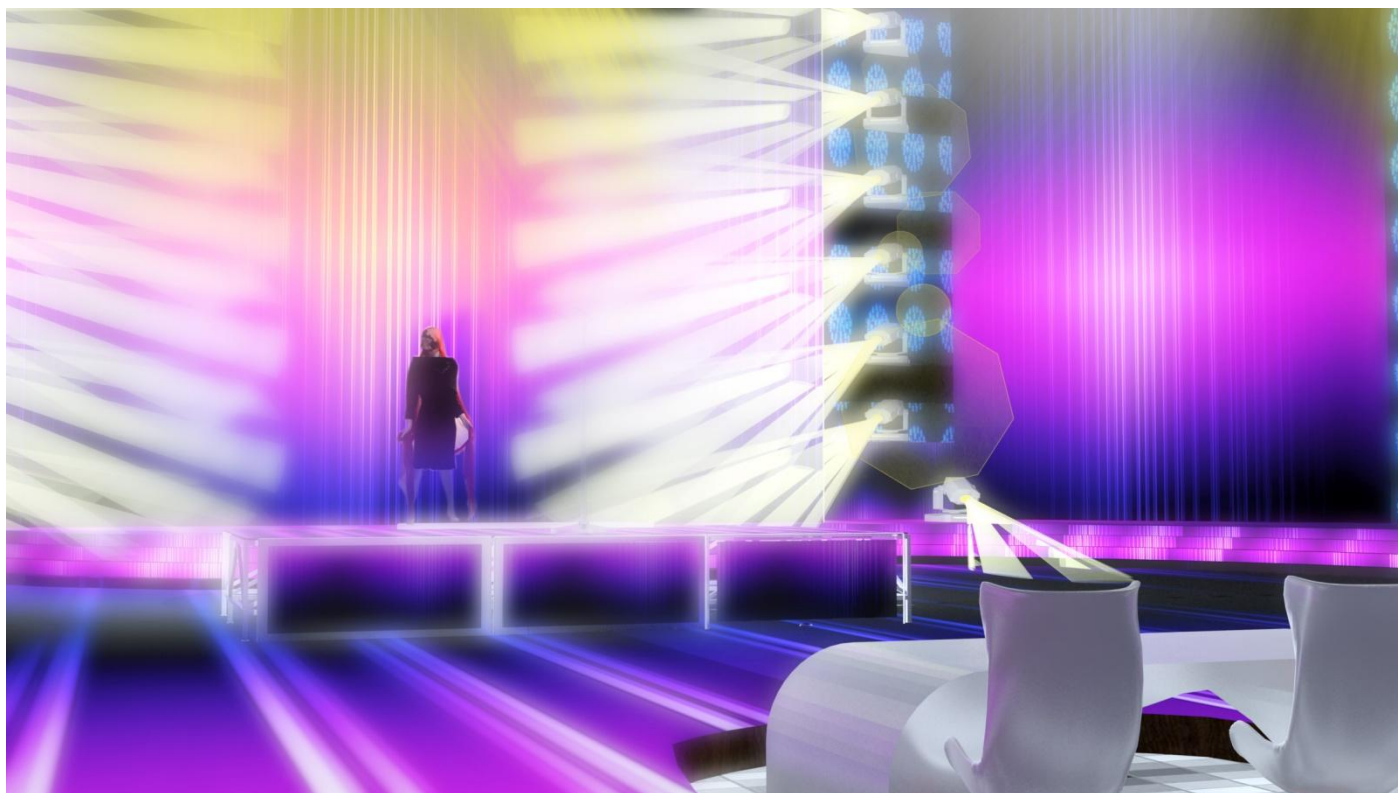


Fig 9.28: Multipurpose hall(fashion show)



Fig 9.29: Pop-up market



Fig 9.30 : Museum

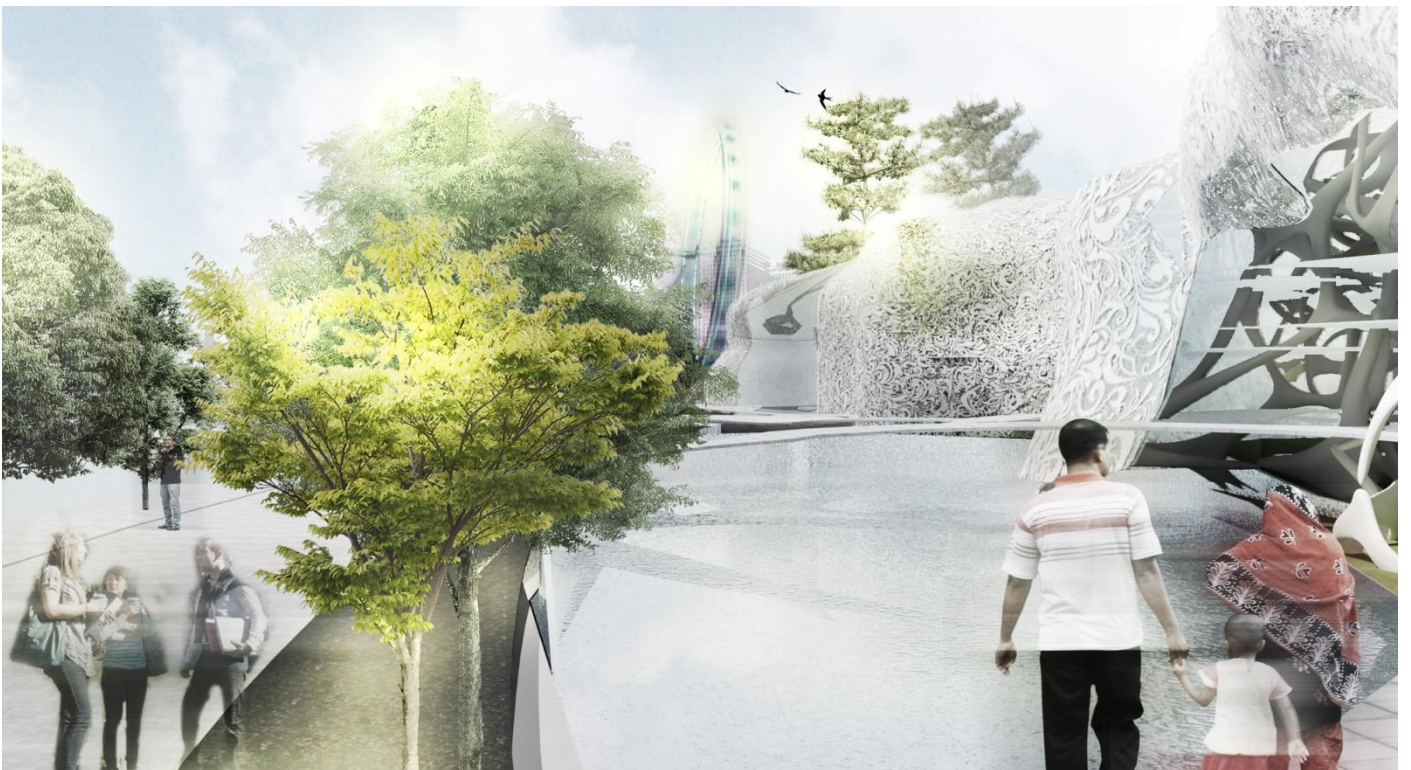


Fig 9.31: View from the road



Fig 9.32: Plaza level View (night render)



Fig 9.33: Night render view

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