CULTURE AND TRAVEL CENTRE
Cultural and Functional Diversity

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Abstract

Expression of Cultural diversity

The focus of this research is the design of a Culture and Travel Centre in Auckland, in order to explore how architecture can represent cultural diversity. The Centre will provide a permanent venue for various cultural groups in Auckland when they wish to host an event. It is also a platform to bring together travelers and Auckland people through various cultural activities, and attract more visiting travelers to Auckland’s waterfront environment.

This research investigates the precedents of multi-cultural architecture on their spatial and conceptual qualities. The relationships between multi-cultural space and multi-functional space have been explored in order to enable quite different activities to take place in a single building, as well as for different cultural groups to express themselves.

An extensive process of sketching, drawing and digital modeling was used to define, explore and interpret the spatial, functional and structural possibilities. This led to a design outcome which is based on the idea of a single super-block structure which encloses an array of movable, telescopic units which frame a very large central hall. This arrangement enables efficient and safe staging for several different uses – exhibitions, performance and social functions – of any size – small, medium, large – at any time, as well as being an expression of cultural identity by extensive use of media technology.
Table of Contents

Acknowledgements .........................................................1
Abstract ............................................................................1
Table of Contents ..............................................................2

1. Introduction .................................................................3
   1.1 Background Information .........................................3
       Situation of Cultural Events in Auckland
       The People Involved
       The Waterfront Site
   1.2 Research Question ................................................6
   1.3 Aims/Objectives .....................................................6
   1.4 Methodology ........................................................7

2. Defining the Project ....................................................8
   2.1 Cultural Events in Auckland .....................................8
   2.2 Initial Function Brief .............................................9
   2.3 Culture: National Identity or Melting Pot ..................9
   2.4 Tips From International Style .................................11

3. Site ..............................................................................13
   3.1 Wynyard Quarter Waterfronts ................................27
   3.2 The Site ..................................................................29
   3.3 Conditions ..........................................................29

4. Design Process ............................................................33
   4.1 Functional Requirements ....................................33
   4.2 Design Explorations ..............................................40
       A pattern ...............................................................40
       The stage and audience space ............................47
       The circulation .....................................................50
       The massing .........................................................51
       The façade ..........................................................52
       The structure .......................................................53
       The steps .............................................................55
       The waterfront and the water .............................56
       The concrete cylinders .......................................56
       The Matrix ..........................................................56
   4.3 Further Exploration on the motif-the Space Units ....63

5. Design Outcome ..........................................................66
6. Conclusion .....................................................................78
7. Bibliography ..............................................................80
8. Appendix 1 ...............................................................83
9. Appendix 2 ...............................................................88

Introduction

1.1 Background Information ...........................................1
1.11 Situation of Culture Groups in Auckland

   Auckland is an international city with various ethnic cultures. These cultures come from all over the world and are scattered in Auckland. While some of the culture groups have their festivals or cultural events to celebrate, they organize these events in different event centers, convention centers, parks or other public places. They also have different content, forms and time schedule to celebrate. In this situation, culture groups have communication in a very limited condition because of time, location, and advertising scope. A single event has a weak sound to call more people to join in, especially for the minor groups in Auckland. However, if all the cultural activities are well organized in one well-known official place, the sound of every culture groups will be heard by everyone and this sound will not be ignored.

   This project aims to locate these cultural events and culture groups under one common roof and combine these cultural events and communications into a whole city scope or even a
1.12 The People Involved

These cultural events connect different overseas immigrants and local residents. As stated on the website of Ministry of Social Development, “more than a third of Auckland’s population was born overseas and more than 180 different ethnic groups are represented here. This includes the world’s largest Pacific community which, along with a growing Asian population, contributes greatly to Auckland’s cultural make-up.”

The large number of ethnic groups is of huge value to Auckland City. It is important to organize them well to maximize their contribution to Auckland’s cultural diversity. The cultural events also connect the travelers and the people living in Auckland. By the end of June 2012, there were 4.854 million arrivals and 4.889 million departures of international passengers of Auckland in one year. Short-term travelers accounted for 98% of total movements. This huge number of travelers will bring a massive economic income and be a strong influence on Auckland’s reputation. This project is going to make these travelers understand Auckland and they will be a medium to attract their friends, relatives and colleagues to come. The cultural events also include the different cultural forms like art groups, photography groups, fashion groups, music groups, astronomy groups, literature groups, science groups, gastronomy groups. They may be the local groups or a branch of a global organization.

In other word, the cultural events would provide a communication platform among different groups of people living in Auckland and between travelers and Auckland people. This project is going to provide a platform to create an influence on cultures and promote communication.

1.13 The Waterfront and Redevelopment

This project will attract local people and international travelers. It can be located in a local but also international site which has not yet been fully developed, to bring people there to the waterfront. From local authorities’ figures, only 1 in 78 visitors to Auckland visits the waterfront.2 It is a waste of waterfront resource and has a wide gap with some other international city’s waterfront situation. In other words, Auckland’s waterfront has huge potential to offer travel scenery and improve Auckland’s already high ranking on the list of best cities in the world. Auckland City Council has established a long-term redevelopment of a waterfront plan2 aiming to develop the reclaimed land into an invigorated “mixed-use” urban area to improve the livability and the waterfront scenery to attract travelers. The detail of the redevelopment will be discussed in the site section later.

2 http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=10836496

1.14 The Project

According to the information above, I intend to design a Culture and Travel Centre in Wynyard Quarter. The Centre will host various cultural activities that are already celebrated in Auckland (the Lantern Festival, Diwali, Matariki, etc.) but which are currently dispersed throughout the city. This project will give such events a permanent venue on the waterfront, and will provide international travelers with a better understanding of Auckland, a multi-cultural society.
1.2 Research Question:
- What kind of flexible architectural space can effectively suit these different kinds of activities?
- What kind of architectural quality can effectively build a sense of cultural diversity?

The following research is intended to find ways towards architecture which represents cultural diversity and the issues of multi-culture space and multi-functional space.

1.3 Aims/Objectives

To accommodate these events from different cultures, what kind of architecture is required? Under one common roof, which means all these different cultures will be displayed and celebrated within one piece of architecture, requires the flexibility to be able to suit different event forms and different number of people attending. Different cultural events held within one piece of architecture, means the architecture should have the ability to build the sense of cultural diversity.

To summarize, the functional aims are to find the way to make space flexible placing all these events and cultures in one architecture. In further considerations, this research will open the gate to explore the space which can cater for all kinds of activities. The conceptual aim is to explore the expression of cultural diversity in an architectural language.

In the Culture and Travel Centre, the Culture Centre part is going to hold various cultural events. The categories of the events and the possible function rooms will be decided after an analysis of the cultural events happening in Auckland. The Travel Centre part is for travelers to get travel information or travel plans. To put the two parts together in Auckland waterfront, the travelers can join the cultural events conveniently and have communication with the Auckland cultural groups so they can have a comprehensive understanding about the various cultures in Auckland. It could attract more travelers and citizens to Auckland Waterfront to improve the economic development.

1.4 Methodology

This project focuses on the design of a multifunctional large scale building to accommodate various cultural activities. To begin this project, knowledge of the cultural groups in Auckland and their cultural events and festivals is necessary. A specific analysis of the forms of these events and their requirements of space can help to form the function brief and the keynote of this project’s space. In order to explore the way to represent cultural diversity in architectural language, research on the built or un-built architectures and a study of International Style principles has been made. The exploration of multifunctional space is undertaken based on research of the flexibility which is provided by elevators and sliding walls. A concept of the nature of space and a precedent study about the retractable structure system assist to form the motif of this project. With locating the different events into these motifs by drawings or in digital models, the whole matrix can be examined to determine its likelihood of success.
Defining the project

2.1 Cultural events in Auckland

Auckland population is composed of many races which are local and from all over the world. The cultures they bring to Auckland are various and so are the events they celebrate and in which they show their cultures. With a study about the cultural events happening in Auckland, it will be clear about the functions this project should achieve. (See Appendix 1 for the list of Cultural events)

The cultural events can be classified into several forms. Exhibition is a major form that exists in events of many cultural groups such as Auckland Writers and Readers Festival, Auckland Festival of Photography, Matariki Festival, Universal Design Conference, International Culture Festival, South American Fiesta, Pasifika Festival and Food Show. In these events, the volumes of exhibition space they require are various. On-stage performance is also a major form in the cultural events such as NZ International Comedy Festival, Concerts, Drama, Circus Performance, Laneway Festival, The Sound of Indonesia, Fonda Latina and Lantern Festival. The space and the type of the stage are various for each event. Other forms also appear in the cultural events, such as Conference/Symposium, Food & Drinks & Sales. Many events require more than one form, such like Lantern Festival, Night Market, Matariki Festival and Pasifika Festival. Their requirements of space are various. While a simple showground or an outdoor park cannot meet the requirement of one or more events, the significance of flexibility for this project is obvious.

2.2 Initial Function Brief

According to the categories above, the initial function rooms of this project are:

1. Exhibition Space (for displaying art works, history, books, photos, food and drinks, technologies showing in the events)
2. A Celebration/Performance Stage (for Opera, Comedy, Concert, Project Media, Magic show, Circus, music performance, dancing, singing, speech, prize giving, both indoor and outdoor)
3. Meeting Room (for conference and Symposiums)
4. Café (for providing food, beverage and rest)
5. Information Centre (for travelers)
6. Offices (for administration)

For each of the function rooms, there are many cultural groups who will use them. The scales of these groups are various. Some are large groups which can attract tens of thousands of people such as night markets, lantern festivals, while some of them are for special groups of people such as photography festival, International Nurses Day which attract only several hundreds of people or less. Also each year, the numbers of attending people are different. That means the scale of this project’s function rooms should also be able to change.

2.3 Cultural Diversity Expression: Multi-culture, National identity or Melting Pot

With the development of globalization, multi-culture which is composed of different countries’ culture appears in many international cities. The expressions of these cultures are various. So what can architecture do to show the cultural diversity?

To express the sense of cultural diversity, there are several ways that many architects have tried before. For one way, some features can be chosen from each of the cultures which relate to this building and shown on the facades, materials or decorations. This method is viable when it is used to express a single culture or several certain cultures in Auckland.
architecture. For example, the Jean-Marie Tjibaou Cultural Center, Noumea, which was designed by Renzo Piano, is an expression of Kanak Culture in New Caledonia. The shell-shape structure of the centre is a feature of the traditional huts of a Caledonian Village. However, if this method is used to express cultural diversity, this will be a very limited choice with numerous problems. Firstly, the cultural groups in this particular project are not constant. There will be new groups coming to join after the Culture Centre is built. Then their features are hard to add into already-done architecture. Secondly, how to balance the features when we choose from these culture groups to avoid the feeling that some cultures are more important than others? Thirdly, in this project, there are a huge number of cultures, so it is impossible to choose features to express one by one from each of the cultures. So if we can not show all of them, we can not show any of them because it will be unfair to the un-chosen ones. So this is a good way for the certain culture project, but a dead end for the uncertain cultural diversity.

2.4 Tips from International Style

Regarding the cultural aspects, as mentioned before, this project contains different kinds of cultures which are from all over the world. So a single cultural element or some common characteristics of cultures cannot speak for all of them. It is impossible to use any cultural elements to represent all the cultures. But in another way, it is possible to make the cultures show themselves and just provide the platform for all the possibilities. This idea has been practiced by a large amount of architects from 1920s. Le Corbusier, Ludwig Mies van der Rohe and Walter Gropius are the big three representative architects. The type of architecture they formed is named International Style.

The aesthetic principles of International Style are as follows: emphasis upon volume-space enclosed by thin planes or surfaces as opposed to the suggestion of mass and solidity; regularity as opposed to symmetry or other kinds of obvious balance; and, lastly, dependence upon the intrinsic elegance of materials, technical perfection,
and fine proportions, as opposed to applied ornament. The characteristic “a rejection of ornament” of International Style provides architecture the freedom to set any kinds of culture in it. Because no decorations are on the architecture components, the walls, the columns, the beams, the doors or the windows, and also because every component is simplified to only meet its basic functional use, nobody will feel that they are inappropriate to stay in this space. In a simply shaped pure space, any groups can be comfortably settled in. The reason it is called International Style is that it can fit every nation, culture, and people. It is a pure container to contain these different people and let them show their cultures by their cultures themselves. Mies Van der Rohe’s famous words “Less is more” considered the massive possibilities that simplified space and non-ornament can provide. It not only provides the possibilities for the different use of spaces, but also the meaning. It breaks the limitation which comes with the difference of cultures that are reflected in architecture. “A rejection of ornament” suggests a way to remove all the culture representation but leave a clean platform to allow the different cultures to show themselves.

The similarity between International style and this project is that they both require simple architectural language and pure space to contain every culture. Instead of being an International Style business building, this project is more like a mixture of cultural and recreational events. This property of the project decides not only the requirement of flexibility in culture representation but also flexibility in function use.

2.5 Flexibility in Functional Space
Space is an objective existence. It does not disappear because of any changing of external conditions. In the architectural field, the walls, floors and roof are the tools to restrict the space. They do not create space, but design the space into a different volume. When a box is moved away, the space that the box occupied is still there. This property of space provides the chance to make the space multifunctional. The definition of cultural diversity makes it a changing number of cultures and various scales. In architectural language, it could be translated as a space which can contain every cultural activity. A space, which is flexible enough to host every kind of event in it, is a feature of cultural diversity. It is a space. It could be a theatre. It could also be an open-stage. It could also be an exhibition hall. Then it is an office. It is a conference center. It is a market. It could be a classroom. It could be a series of studios. It could even be a shopping mall. The words remind me about Steven Jobs’ introduction for his first iPhone[^6].

[^6]: [http://www.youtube.com/watch?v=hHB9O6ByXTQ](http://www.youtube.com/watch?v=hHB9O6ByXTQ)

It is a revolution of the mobile phone. An iPod, a phone and an internet communicator are combined together to become a smartphone by software technologies. A smartphone has many functions. The functions can be treated as many aspects of software existing in one hardware. It is the same type of thing with what this project needs. The different cultural events are like software and the Culture Centre is the hardware. In this hardware, it can be used as a theatre, an exhibition, an office, a classroom, a concert, a magic show, a shopping mall, even a botanic garden. It could be a new typology of architecture just as iPhone did. What needs to be provided is the flexibility in functional space. In this aspect, the functional diversity can be the way to represent cultural diversity.
In the book *Delirious New York*, Rem Koolhaas described life in a skyscraper. “Each of these artificial levels is treated as a virgin site, as if the others did not exist, to establish a strictly private realm around a single country house and its attendant facilities, stable, servants’ cottage, etc.” This picture he described is similar to what this project wants to achieve, a place where every cultural activity could happen. Rem Koolhaas treated each floor as a platform which can be any space. Different activities happen in different platforms. The whole building is like a society or community with different lives or activities in each floor. He wrote, “1909 theorem: the Skyscraper as utopian device for the production of unlimited numbers of virgin sites on a single metropolitan location.” The Skyscraper is the matrix to allow all these lives to happen in it and what makes the Skyscraper have this ability is its many separated floors and the invention which connect each floor conveniently—the elevators.
“Since the 1870s in Manhattan, the elevator has been the great emancipator of all horizontal surfaces above the ground floor.” It truly frees the horizontal surfaces, but not totally frees them. The elevator is a transportation method to allow the skyscraper to go higher which means containing more activities. Then, if elevators are not treated as transportation but any space which can move vertically, it could be a way to solve the problem which the flexibility of function rooms has on vertical directions.

In the book Koolhaas Houselife, Rem Koolhaas designed an elevator for a house owner. It is a stage that can go up and down. Beside the stage, there is a three level high bookshelf. The house owner can use this device to reach the books in different levels sitting on her chair and also transport heavy furniture by this means. When the elevator reaches different levels, it leaves different space perceptions for the other levels. This precedent is a developed practice of Rem Koolhaas’ theory. He used the elevator as a functional space that can bring communication or activity to activate the relationship among horizontal levels.

Koolhaas Houselife, a film by Ila Beka & Louise Lemoine
http://www.youtube.com/watch?v=7fLVMyGBFSU

Figure 6 and Figure 7: The invention of Elevator frees the activities among the horizontal floors
https://www.twu.edu/rm/ElevatorSafety.asp
Accessed on July, 2013

Figure 8: The elevator in Koolhaas Houselife
Accessed on July, 2013
For the requirement of the flexible scale and the expression of cultural diversity, functional diversity needs to achieve the same space having different functions by different planning, permutation or combination of the spaces. If we treat Koolhaas’ elevator as one of the many units that compose a larger space and treat these “elevators” as a massive system, there will be unlimited possibilities for what this system can do. To achieve a “universal space”, a more powerful space unit is needed which can be moved, transformed or spliced to form various spaces.

In traditional Japanese houses, people are good at dividing space by using the sliding doors or walls. The floor plans are regular squares or rectangles which allows people to get enough space that they want by sliding the walls among their simple and orderly structures. The same idea can also be found in much modern architecture such as Crown Hall by Mies Van Der Rohe. He uses extremely simple structures to support a large free space and uses movable walls separating spaces freely. In this simple way, the flexibility of function rooms on the horizontal is achieved.
In New York City, a new project is proposed by Diller Scofidio + Renfro in collaboration with the Rockwell Group in Feb, 2013. It is an expandable 170,000 square foot multi-use cultural venue which is located at the south of the Hudson Yards. It is called New York Culture Shed\(^\text{12}\).

The concept of the Culture Shed comes from the "understanding that so many of New York’s cultural groups did not have the real estate to house large audiences, nor have the means to expand any exiting venues" - which is a similar situation to this project in Auckland. They think that New York City is prone to missing out on travelling shows due to lack of available exhibition space. To remedy this, "the Culture Shed will be a Kunsthalle, a cultural venue without permanent exhibits. Instead, it will provide a home for temporary shows, fairs and concerts, such as New York’s annual Fashion Week, which currently takes place in pop-up tents" which is the same starting point as this project.

12 Nicky Rackard, "Diller Scofidio + Renfro Designs Telescopic ‘Culture Shed’ for New York”
http://www.archdaily.com/337960/diller-scofidio-renfro-designs-telescopic-culture-shed-for-new-york/
http://ny.curbed.com/archives/2013/02/28/a_look_at_the_hudson_yards_culture_shed_coming_in_2017.php#512fa261f92ea1734b033f36
The Culture Shed will have three flexible galleries. “A lofty 140-foot retractable canopy can trundle out on tracks and enclose a portion of the plaza in front of the building, creating a temporary hall that could play host to food-fairs, concerts and various other public events. When not required, the canopy can tuck itself back over the building and return the plaza to the public.” This is the main feature of this project and also the method to achieve the flexibility on its function use. The huge shed covers an empty space for different events in there. The space it covers can be returned when the events are over.

The External feature of this Culture Shed is a retractable canopy with its steel structure exposed. This project represents the multi-culture by considering the different function requirements of the events.

The square part which the Shed covers is a huge empty space. Events can happen here, such as outdoor concerts, vegetable markets. Regarding the cultural character, this project seems to not represent any characters of the traditional multi-cultures which exist in New York but use modern technology to bring an atmosphere of new age – a melting pot which contains all the cultural activities within this shed.
The Culture Shed’s idea to achieve functional flexibility is to use a retractable canopy to borrow the plaza space when the canopy is stretched out for events and return the space when the events are finished. The theory is similar to some alteration of furniture design. In order to save space or make an efficient use of the space, some architects design multifunctional furniture with foldable, slideable or movable devices. For example, a sofa against a cabinet in a living room can become a bed and the living room is changed into a bedroom. A piece of timber can be pulled out from the floor and become a table or a seat. These retractable, stretchable and foldable methods provide another way to achieve architectural function diversity.

Figure 24: A changeable sofa which can turn a living room into a bedroom

Figure 25: A table and seat hiding in the floor to save balcony space

The Site

3.1 Wynyard Quarter Waterfronts

In history, Wynyard Quarter was occupied by the petro-chemical industry and the fishing industry. Nowadays, this area has become a precinct for new purpose. The Auckland City Council has published the new land use plan aiming to redevelop this area into a mixed-use urban area. The purpose is to improve the livability and develop the waterfront landscape.

The government will develop the Wynyard Quarter Waterfront to attract more travelers and citizens to visit and it will bring 1 billion dollars per year into NZ. The Culture and Travel Centre project is to have various cultural events and bring travelers and citizens together. Locating this project in the Wynyard Quarter Waterfront will contribute to developing this area and attracting more people here. As a cultural and recreational architecture, it is appropriate to be located among the residential and industrial buildings according to the waterfront master plan established by the government.

Figure 26: Wynyard Quarter in history—tank farm

Figure 27: Wynyard Quarter nowadays
3.2 The Site

The site for this project is 120m by 135m area on the corner of Jellicoe Street and Beaumont Street in the Wynyard Quarter. It is on one point of the Waterfront Quay Street Axis.

3.3 Conditions

Transportation

The transportation is convenient. In large scale, there are motorways to connect the Wynyard Quarter with north and south suburbs and there is easy access to connect the Wynyard Quarter and CBD. In the Wynyard Quarter, travelers and citizens come from Beaumont Street and Jellicoe Street. The existing car park building is on the east nearby. An effective light rail will be built to connect the Wynyard Quarter and Britomart. By ferry, people can travel between the Wynyard Quarter and Devonport.
The Views

The site is on one end of the waterfront axis so from here, people can have the opportunity to see the whole streetscape of waterfront. The view to the west is the Harbor Bridge and Westhaven. People can have a view to the iconic bridge and hundreds of sailing boats. At the same time, there will be a large number of passengers through the bridge each day that can see this building. The view to the south is the Auckland CBD. The height of the building and the openings are fully considered to capture the good views.

The neighbors

On the north of the site, there are two concrete cylinders which will remain in the future master plan. A series of newly built facilities are on Jellicoe Street including a water pool, a basketball playground and a steel structure viewing bridge. On the east of the site, multi-story mix used buildings will be built. The lower levels will be commercial retails and the upper levels will be residential space.
Project Development

Design Process

4.1 Functional Requirements

As listed in the second chapter, the functional requirements of these cultural events are exhibition space, enclosed or open space for on-stage performance and audience, administration, offices and meeting rooms. Because the scales of the events are various, it must be ensured that the biggest event can be accommodated.

Among the known cultural events happening in Auckland, the largest events can attract more than 10k to 12k people, such as Laneway Festival, Night Market, International Culture Festival and Lantern Festival. In these large scale events, the main cultural form is live performance and exhibition.

According to the forms of the events, three typical large scale events have been chosen to study the space they need. They attract a large number of people and have multiple event forms.

Laneway Festival is a music festival with live music performance. The performance needs a large well equipped stage and a large seating space for the audience. Large digital screens are required for projection and special effects.
The Night Market is a large fair which offers around 200 stalls with 70 to 80 food stalls cooking up snacks and delicacies from around the world. Arts and crafts, jewelry, clothing, fashion accessories, cultural performance, clowns and live entertainment are on offer. Performance space and mainly stall space are demanded. Circulation space allows visitors to go among the stalls and performance space. In Auckland, there are several night markets on Thursday, Friday, Saturday and Sunday evenings in Dress-Smart in Onehunga, Hunters Plaza in Papatoetoe, Westfield Shopping Centre in Pakuranga, Glenfield Westfield Mall and Silo Park in Wynyard Quarter, both indoor and outdoor.
The stalls are set up in separate tents selling food and goods. The tents are set up in rows in an empty space. People walk on the path between every two rows of tents. There are tables and chairs for people eating and having a rest.
Lantern Festival is a traditional Chinese festival. An exhibition of all kinds of lanterns is made with Chinese cultural performances such as Beijing Opera, gong and drum performance. A series of programs are on offer such as Chinese Chess race, lantern riddles and Chinese food stalls. So a performance space, exhibition space, stall spaces and smaller stages are needed.

According to the three events above, the question now is how to deal with the situation between the exhibition space and performance space, a space in which exhibition and performance co-exist or alternate.
4.2 Design Explorations

A Pattern

To answer the question above, a space in which exhibition and performance co-exist or alternate, or a multi-functional space, is deeply related to the way to treat space. In the past, architects had many ways to deal with space. From "the space which is composed of four walls, a bottom and a top", to free space or flowing space, architects designed their architecture guided by their opinion of the space. So, how to make two or more functions happen in one space? The different number of people requires different amount of space. The space can be treated as composed by many elemental spaces, which are all the same space units. By re-composing these small spaces, the greater space can achieve different kinds of functions. By using different amounts of these elemental spaces, the greater space can suit a different number of people. The contents of the functions depend on the size of the elemental spaces which is predefined by the architect.

Figure 46: A space and A space restricted by walls. When the walls are moved, the space is still there.

Figure 47: A space composed of many small space units.
An exhibition space needs good conditions to place the works and for visitors to appreciate the works. The scale of the exhibition space needs to be loose and comfortable. According to the limitation of the area of the site and the requirement of the event forms, this project cannot be a distributed architecture group, but a single building occupying a large part of the site with several floors. To be a performance space, a good stage and a large place for audience are needed. The height of the space is uncertain because of the scale of the performance.

More acoustic and lighting equipment are required for the stage. With the use of sliding walls or folding walls, the exhibition space can be turned into stage and audience space. Then the exhibition spaces above the audience’s head need to be removed. According to the precedent New York Culture Shed, the expandable structure is a way to solve the problem of the overlapped space. The elemental space can be made expandable. So when a performance space is required, we just need to draw back the elemental exhibition space and use the elevator technology to send them up and make space for the performance. What is more, by choosing different amounts of elemental spaces, it is possible to contain different scales of exhibitions or other functions. By lifting some other elemental spaces onto other floors, it is possible to hold another event even at the same time.

Figure 48: The Expandable space units

To change the levels of exhibition space into a large performance space, the upper levels of exhibition spaces can be split into elemental spaces and retract to the boundaries.

Figure 49: By rearranging the space units, we can put different programs into the space and design new circulation.

Figure 50: Exhibition Space View from section

Figure 51: Exhibition Space broken into space units
The retracted elemental spaces can be sent up to higher levels to leave a larger space for the performance.

Figure 52: The retracted elemental spaces can be sent up to higher levels to leave a larger space for the performance.

Figure 53: A Performance and Audience Space

The Unit

The expandable unit needs to follow some rules to make it work. Firstly, the units need to be in regular shapes such as a cube so that they can be easily combined together to be a larger unit. Secondly, when two or more units come together, there should not be avoidable gaps between two units. Thirdly, the structure of the units must be strong and simple enough to make it easy for people to walk through from one to another, probably just steel skeletons with sliding walls.

Figure 54: Top view of the retractable units which have gaps between each two of them.
The stage and audience space

The stage is set on the ground floor for easy access and exit for thousands of people. The middle part of the ground floor is made a movable floor which is composed of 2.5m x 2.5m floor panels to form the stage and seats in different height. The area of the stage and seats can also be adjusted to contain different performance styles and different size of audience. It can be an exhibition ground when it is flat. It has a common point with the stage of Wyly Theatre in Dallas, America. According to Rex/OMA's design, "the theatre can be transformed into a wide array of configurations - including proscenium, thrust, and flat floor-freeing directors and scenic designers to choose the stage-audience configuration that fulfills their artistic desires."


In the Culture Centre project, the stage is set on the west part of the ground floor so when the elemental spaces above are drawn back, people can see the harbor and bridge through the huge glass curtain wall. Stage lightings are set on the truss. The special lighting can be set with the elemental spaces. When the spaces go up or down, expand or retract, the positions of lightings are also changed. So the lights and acoustic settings can be set up wherever needed theoretically. The tiring rooms, changing rooms, green room are set on the ground floor beside the stage.

Different stage/seat distribution:
Circulation

The main circulation: Most of the visitors enter from the south on Beaumont Street and from the east on Jellicoe Street. So the entrances and receptions are set up both on the south and the north. People come into the ground floor through the entrances and go to other floors by the elevators or staircases on the four corners of the building.

The circulation in cubes: because the cubes have no fixed walls and the requirement of each event is different, the circulations in the cubes are not the same in different events. The planners of the events can arrange the circulation into what they need.

The massing

On the Beaumont Street side, the massing is cantilevered floor-by-floor to form a welcome to attract people to come in. The central box is the main body of the whole building. With the smaller boxes on the north and south of the central box, the whole building becomes a hospitable, iconic, and flexible matrix.
The façade
The building has two layers of facades. The inner façade is a double-glazed curtain wall. The transparency allows people to see through and find out the interesting events happening inside. The outer façade is 2.5m by 2.5m movable panels which are composed of four squares. The style of the panel is from the idea of pixels. They are the smallest units to form a picture. They are the same size and in a regular combination. It is similar to the space units in the building. They both use the same components to compose many different greater items. The style of the panel suggests the form and the flexibility of the inner building. The materials are white concrete and glass in steel frame. The glass part allows sunshine to come into where it is needed and the concrete part has the opposite function. The strategy is to show what needs to be shown and to block what needs to be blocked.

The structure
The main structure of the building is steel frame. The expandable cubes are set on the columns of the frame and suspended on the truss. The distance between each two columns is 5m. The height of each floor is also 5m. The four transportation cores can be treated as four core-tubes to help support the vertical load. The row of columns on the Beaumont street side can help support the cantilevered part of the building. This form is a response to the exposed structure of the viewing bridge on the north of the site. It can create a gray space between the outside and inside of the building.

The steel frame leaves the maximum freedom to the changing of functional spaces. The space units which are contained in their steel skeletons expand or go up and down in their rails. It is a machine to contain everything.
The steps

On the north of the site, is an end point of the waterfront axis. People can have a very good view of the whole waterfront scenery of the Jellicoe Street if they can stand high enough. People can even see through to Quay Street if the weather is good. To maximize this advantage, big steps are set on the end point of the axis so people can sit on the steps and enjoy a good view of the scenery. These steps lead people to the travel center on the second floor. A green roof is on the travel center so people can also stand on the roof to enjoy the view. There is access from the main building to the green roof.
The waterfront and the water

The site is on waterfront so the relationship with water and the activities on water should be considered to enhance the building’s regional features. In history, the Wynyard Quarter was one of the earliest wharves with construction dating back to 1845. In order to build the relationship regarding the history of the Wynyard Quarter, in this project, the sea water is guided into the north and south side of the site to make the water reflect the building and make sure most people can see the reflections. So it looks like the building is floating on the water. A café space is cantilevered over the seawater so that the building can reach the water by treating the café space as a deck of the whole building. Sailing boats and other ships can berth on the south side so people can see the sail in front of their eyes through the windows of the café. On the north, the seawater is shallow so people can start their water sports from here. There are steps which reach into the sea on both sides.

The concrete cylinders

There are two massive concrete cylinders on the north of the site. On Friday evening, there will be a small market and people can project movies onto the cylinder. Considering the strong wind, low temperature and rainfall sometimes, the experience of the out-door movie is often not very comfortable. A viable solution is to put the movie projection and the market into this project and set digital screens and loudspeakers onto the concrete cylinders. So the cylinders can become huge advertisements for the Culture Centre and keep their iconic and historical status at the same time.

The Matrix:

To summarize above, the matrix can be created as below: A fully stretched form of units in exhibition use:

On the ground floor, people come through the receptions from the two entrances into the main exhibition space which is used to display large scale items. On the north side, there is a separated smaller exhibition zone for other exhibitions.

People can go upstairs by the elevators on the four corners of the building. On level 2 and 3, there are fully stretched units for exhibition. On level 4, there are offices, meeting rooms and a restaurant which have the best views towards the CBD, waterfront and Wynyard Quarter.

A part of the main hall floor can be changed into temporary stage for speech or other similar function use. The other part can remain the exhibition or communication use.

Figure 68: Level 1 function distribution and people flow
When people come upstairs from the four corners of the building, they will see the exhibition space which is composed of the space units surrounded by main circulation space. In the exhibition space, the circulation can be various for different kinds of exhibitions. Different amount of space units can combine together to be an exhibition zone for a particular theme. A division plan for Auckland Writers and Readers Festival is shown in the culture context section later.

A large Cafe is set on the south part of the building which has a good view to the harbor on the west. Travel centre is set on the north connected with an exhibition zone. Travelers can be attracted into the Culture Centre and join the events there.

The Level 2.5 and Level 3.5 are the alternate levels. The space units will be lifted up to these levels to stand by or to form other function spaces when there is an event happening on the level 2 and 3 which want to be separated.

There are parts of exhibition spaces on this level and the accesses to the green rooves above the Travel Centre and the cafe.
On the level 3, there are the upper space units which can stretch into four unit-spaces. These units are suspended on the truss by tackle block system and fixed on the rail of the columns.

On the east part of this floor, there are the meeting rooms and offices for the cultural groups to work temporarily.
4.3 Further design exploration on the motif-the Space Units

In the expandable cubes, there will be many things happening. For example, exhibitions of art works, retail space, working studios and offices can be in these cubes. So, the conditions of the cubes must be good.

Lighting:

Lighting facilities are set in the ceilings of each cube. The arrangements of the lighting are different to build atmosphere for different uses. When the cubes retract, the light will be turned off automatically.

Enclosure and Accessibility:

When some cubes are used for a small event, the sliding walls of the boundary cubes will be enclosed to form protection of the event space. When a cube arrives at the floor level, the glass handrail of the floor will open automatically to provide access to the cube. When some cubes or all the cubes are used for an event, certain sliding walls will be retracted to provide access for people walking among the cubes. For the space above the space units on level 2.5 and level 3.5, digital screens on the space units can form a 1.2m high balustrade so that space can be an "outdoor space" inside the big building to locate other activities.

Structure:

There are two levels of cubes in this design. The upper level of cubes can expand into four cubes and is suspended on the truss connected by sets of tackle blocks. The other sides of the cubes are connected on the rail of the steel columns also by tackle blocks. The lower level of cubes can expand into three cubes and is cantilevered. The connection part of each cubes are especially reinforced.
Figure 74: Example of upper level space unit

Figure 75: Retracted upper level space unit

Figure 76: Retracted cubes

Digital Screen

Sliding Walls

Figure 76: Space units on the lower level, sliding walls beside the skeletons, rails hiding in floor slabs, beams dragging the units.
Design Outcome

5.1 Matrix Interior in cultural contexts

- Fully stretched

Auckland Writers and Readers Festival and the same type of events can use the fully stretched form of the building. On the ground floor, exchange meetings can happen on a flat part of the floor while another presentation of new book can happen on the stage. On level 2 and level 3, there are the fully stretched cubes. They are the spaces for the readers to read books or to talk to the writers. Some writers can also have their own cubes to show their works. Digital screens on the cubes can show the themes of their talks or the sponsors of this festival.
On the ground floor, the zones in light yellow color are the exhibition zones of Auckland Writers and Readers Festival. In these zones, the writers can show their books and talk to the readers. Some writers can organize a meeting in one of the large zones. Speech and presentation can happen on the rostrum. Some parts of the floor slabs are moved down to form the seats for the audiences.

The exhibition zone on the north part can be used if the scale of this festival is too large to locate in the main hall. It can also be used separately to hold another event at the same time.

People can go out of the building from the doors besides west corners and reach the water. There are steps stretching into the sea. People can sit there to have a rest and enjoy the view.

On the level 2, the space units are used as reading rooms, talking rooms and bookshops. The whole unit spaces are divided into many enclosed rooms and opened rooms to locate quite function zones and noisy function zones.
On the ground floor, people go through the reception and come into the stall zones. The stalls sell tasty food from all around the world. A stage is surrounded by these stalls and live performance happens here. On the upper levels, there are relatively quieter events. Temporary shops can be settled here to sell handicrafts. Some enclosed spaces can be used to locate massage shops to comfort the tired people. 
Figure 84: Partially stretched form Bird eye view of the main hall in Auckland Night Market context

Figure 85: Partially stretched form Section View in Lantern Festival context
Figure 86: North separated exhibition zone shot in Art exhibition context

Figure 87: Fashion Week in Main Hall Perspective
5.2 Exterior perspectives

Figure 88: North entrance perspective on the end of Jellicoe Street

Figure 89: South entrance perspective on Beaumont Street
Conclusion

The difference between representing culture and cultural diversity in architecture has been stated. The former is relatively straightforward and has had centuries to evolve. The latter is much more complicated. In an ethnically diverse city like Auckland— with the number of ethnicities and the contents of associated expanding— this is the key restrictive condition in this project.

Starting with the principles of International Style and the contribution it has made for containing different cultural groups universally, then taking the position that cultures should represent themselves inside the framework— or the matrix— the building, I have opted for a multifunctional building which makes no cultural references. Inspired by the multifunction of iPhone, the idea is to provide a platform which serves as a matrix that can change into many different roles. The ideas of the elevator and Japanese traditional house partitions offer flexibility in vertical and horizontal directions. In addition, the study of the New York Culture Shed and its idea of a retractable system provided the concept of space subdividing into smaller space units, changing its size, combining together and being moved away.

The design outcome includes the typical layout of the matrix, the changing interior design when some particular cultural event happens inside, implicit façade pattern and massing, and the exterior landscape corresponding to its location. The layout of the matrix is a fully stretched version of the ‘box’ motif— the whole building is one big box, but inside the external envelope there is a frame of stacked boxes which defines the central hall. The boxes themselves expand inwards, telescopically. Both the exterior and the interior of the building— when there are no events— are culturally neutral. However, interior design shows the response of the building to different activities, such as the Writers and Readers Festival, Auckland Fashion Week, Night Market, Lantern Festival, Laneway Festival and art exhibitions.

This project is an attempt to create an extremely functional, adaptable, flexible space to enable maximum expression of the cultural diversity of Auckland. The idea of the unified retractable, movable modules is a strong tool to achieve the multifunctional space which meets the requirement of any cultural groups.

Locating this project in the Wynyard Quarter and setting the Culture Centre with the Travel Centre together mean that there will be more and more visitors and citizens coming to the waterfront. The communication between people and cultures will be significantly improved and multicultural Auckland will be observable in one place for the convenience of both tourists and Aucklanders.

With the future development— full of uncertainty— this building will be perfectly suitable for most of the functions. A studio, an office or a meeting room, an apartment, a garden or a wedding ground, a magic show, a music school or an architectural department can all be set in this space. We have achieved a new, universal typology of architecture, consisting of a multifunctional space that can change use whenever need be among residential, recreational and business spaces.
Bibliography


Steven Jobs, “Production Conference” http://www.youtube.com/watch?v=NM89OEByXTQ


Laneway Festival http://www.eventfinder.co.nz/2013/st-jeromes-laneway-festival/auckland

Appendix 1

Cultural Events

- Auckland Writers and Readers Festival (Celebration and exhibition of writers’ works)
- NZ International Comedy Festival (Comedy shows)
- The 5th Auckland Triennial (Exhibition of Art works)
- Auckland Festival of Photography
- The Illusionists: Witness the Impossible (Magic Show)
- The Original Art Sale Gala Charity Evening (Charity party with art exhibition and sale)
- The Blackbird Ensemble: By the Sea (concert)
- The Glass Menagerie (Drama)
- The 22nd Wallace Art Awards 2013 - Call for Entries (awards giving and exhibition of art)
- Santiago Sierra - Destroyed Word (exhibition)
- Universal Design Conference (Conference and exhibition)
- With a Stranger (Circus performance)
- International Nurses Day Celebration

- Laneway Festival
- The Big day out: Live music event
- South American Fiesta
- Food and Wine Festival
- Waiheke Jazz Festival
- NZ Agricultural Fieldays - Display of Agricultural Technology and productions
- Food Show
- Auckland Home Show - Consumer Products
- Taste of the world (food exhibition)
- The sound of Indonesia (Instrument performance)

Multi-formed Cultural Events

- Matariki Festival (Concert, dancing, exhibition, celebrations)
  This festival will be a month of celebration and entertainment which will bring a modern take to a centuries old Māori tradition. The festival is composed of a series of concerts, family events and traditional celebrations such
as art exhibits, kapa haka, contemporary dance and kite flying.

- "International" Night Market (Sake food, handiworks)
  Auckland Night Market has four markets at four different locations:
  1) Thursday Night Market, starts from 6pm to 10pm at Dress-Smart in Onehunga
  2) Friday Night Market, starts from 6pm to mid night at Hunters Plaza in Papatoetoe.
  3) Saturday Night Market, starts from 6pm to mid night at Westfield Shopping Centre in Pakuranga, which has been running for two and half years and, is hugely popular with anything from 8,000 to 12,000 visitors each night.
  4) Sunday Night Market, starts from 5.30 to 11 pm at Westfield shopping Centre in Glenfield North Shore, hiss and a roar with over 10,000 visitors.

All markets offer around 200 stalls with 70 to 80 food stalls cooking up street snacks and delicacies from around the world. Also on offer are arts and crafts, jewelry, clothing, fashion accessories, mobile phones, fresh produce and more. Free live entertainment, cultural performers, clowns and kids rides, fortune tellers, foot massage and airbrush tattoos make for a truly memorable night out for the whole family.

- International culture festival (Sake food, sales, music & dancing performance, sports)
  This event offers the experience of the world in a day which includes stalls, cultures, entertainments and sports.
  The Stalls include: Hungarian flatbread, Belgian waffles, French crepes, traditional Ethiopian coffee and dipping bread, Greek souvlaki, Oriental dumplings, dim sim, phad Thai, chicken satay, fried rice, pineapple and watermelon ice cream, Spanish paella, Turkish baklava (dessert) andarma (stuffed vine leaves) Indian cuisine, German schnitzels, Italian wood fired pizzas, African hair braiding and craft, Burmese handicrafts, Thai silk, cushions, and handicraft, Indian designed and made clothing.
  Cultural zones include: Indonesian shadow puppetry and gamelan orchestra, Loy Krathong wishing stream, French food, food and dance, Latin American music and dances, including salsa, merengué and cumbia.
  Entertainment includes: Three Houses Down, Hungarian dancers, Tamashi Taiko Drummers Serbian belly dancers, Ethiopian cultural dancers, Rwandan cultural dancers, Pacific dancers, Caribean Southern Stars Steel Band.
  Sports zone includes: Annual Cultural Football Tournament, Eden-Rosall Softball Club, International Taekwon-Do - a mix of demonstrations, and beginners or 'have a go' classes.
  New Zealand Rugby League - have a go at 4v4 Kiwi League Tag or practise your accuracy on the passing targets and SNAG Golf.

- Annual Swiss Market Day
  This event can bring you into the beautiful atmosphere of a "Heidi" village in Switzerland and taste their amazing foods and experience wonderful Swiss traditions and culture.
  There will be everything from Swiss breads and pastries to Bratwurst sausages and holey cheeses, Swiss chocolates to traditional gingerbreads, Victorinox knives to Zyliss kitchen gadgets, sauerkraut to splatzi, rakette to alphorns, wooden toys to unique carvings, wonderful arts and crafts.

- Lantern Festivals
  The Auckland Lantern Festival is celebrated on the first full moon following the Chinese New Year. In 2013, the event was held from 22-24 February at Albert Park. Highlights of this event included: exciting on-stage performances, authentic crafts, delicious food stalls and the gorgeous illumination of Albert Park by hundreds of hand-crafted lanterns.

- Pasifika Festival
  Pasifika Festival is made up of 10 unique villages that showcase the cultures of 10 Pacific Island nations – Cook Islands, Fiji, Kiribati, Nieu, Samoa, Tahiti, Tonga, Tokelau, Tuvalu and Aotearoa – as well as shared Pan-Pacific areas made up of stalls retailing products from a
<table>
<thead>
<tr>
<th>Event Name</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auckland Writers and Readers Festival</td>
<td>Exhibition, Celebration, On-stage music, Food, drinks, sales</td>
</tr>
<tr>
<td>NZ International Comedy Festival</td>
<td>Celebration, On-stage show, music, dancing, Concert, Outdoor</td>
</tr>
<tr>
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</tr>
<tr>
<td>Auckland Triennial</td>
<td>Exhibition</td>
</tr>
<tr>
<td>Auckland Festival of Photography</td>
<td>Exhibition, Fine Arts Commission, Symposium</td>
</tr>
<tr>
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<td>On-stage show</td>
</tr>
<tr>
<td>7. The Original Art Sale Gala Charity</td>
<td>Exhibition, Celebration</td>
</tr>
<tr>
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<td>Concert</td>
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<tr>
<td>9. The Glass Menagerie</td>
<td>On-stage show</td>
</tr>
<tr>
<td>10. Wallace Art Awards</td>
<td>Exhibition, Celebration, On-stage award giving, food &amp; drinks &amp; sales</td>
</tr>
<tr>
<td>11. Santiago Sierra - Destroyed Word</td>
<td>Exhibition</td>
</tr>
<tr>
<td>12. Universal Design Conference: Exhibition</td>
<td>Conference</td>
</tr>
<tr>
<td>13. With a Stranger (Circus performance)</td>
<td>On-stage performance</td>
</tr>
<tr>
<td>14. International Nurses Day Celebration</td>
<td>Celebration</td>
</tr>
<tr>
<td>15. Laneway Festival</td>
<td>On-stage music, Outdoor/Indoor</td>
</tr>
<tr>
<td>17. International culture festival</td>
<td>Exhibition, Celebration, On-stage performance, food &amp; drinks &amp; sales</td>
</tr>
<tr>
<td>18. Annual Swiss Market Day</td>
<td>Exhibition, On-stage music, Food &amp; Drinks &amp; sales</td>
</tr>
<tr>
<td>19. Lantern Festivals</td>
<td>Celebrations, On-stage performance, exhibitions, Food &amp; drinks &amp; sales</td>
</tr>
<tr>
<td>20. The Big Day Out</td>
<td>Concert</td>
</tr>
<tr>
<td>21. South American Fiesta</td>
<td>Exhibition, celebration, On-stage show</td>
</tr>
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<td>22. Food &amp; Wine Festival</td>
<td>Exhibition, Food &amp; Wine &amp; Sales, Celebration</td>
</tr>
<tr>
<td>23. Universal Design Conference: Exhibition</td>
<td>Conference</td>
</tr>
<tr>
<td>24. Pasifika Festival</td>
<td>Exhibition, Celebration, On-stage show</td>
</tr>
<tr>
<td>25. Taste of the world</td>
<td>On-stage show, food &amp; drinks &amp; sales</td>
</tr>
<tr>
<td>26. The sound of Indonesia</td>
<td>On-stage music, concert</td>
</tr>
<tr>
<td>27. Fonda Latina: On-stage music, dance, opera</td>
<td></td>
</tr>
<tr>
<td>28. NZ Agricultural Fieldays: exhibition</td>
<td>Symposium</td>
</tr>
<tr>
<td>29. Food Show: Exhibition</td>
<td>Exhibition, Food &amp; drinks &amp; sales</td>
</tr>
<tr>
<td>30. Auckland Home Show</td>
<td>Exhibitions, Food &amp; drinks &amp; sales</td>
</tr>
<tr>
<td>31. Christmas: Celebration</td>
<td>Exhibition, On-stage performance, concert</td>
</tr>
<tr>
<td>32. Food &amp; Drinks &amp; sales</td>
<td></td>
</tr>
</tbody>
</table>