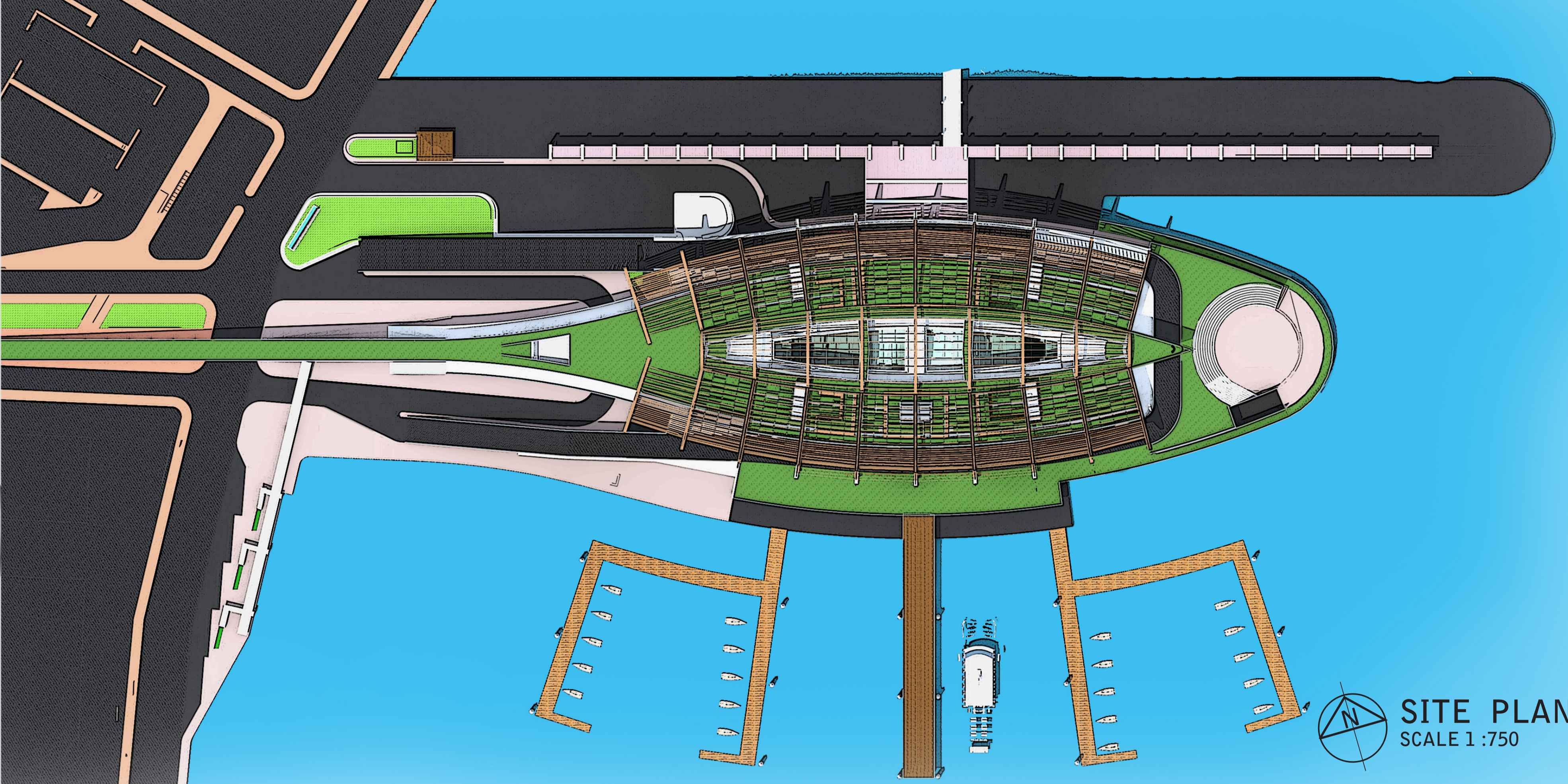


PROPOSED TERENGGANU CRUISE AND COMMERCIAL HUB

FOR GLENN MARINE GROUP AND TERENGGANU STATE GOVERNMENT AT MUARA NORTH, SEBERANG TAKIR, KUALA TERENGGANU, TERENGGANU

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ABSTRACT
Long-term economic transformation plan implemented under the economic program of The east coast region (ECER) has opened the space of high quality and profitable investments. The dynamism of ECER reflects the potential for the Region to grow and develop at a faster pace through innovation and a shift in economic orientation, structure, technology and mindset. One of the development plan was carried out under the ECER program is Kuala Terengganu City center (KTCC). KTCC is envisioned to become a city centre that will excite the senses, energising and connecting the broader city to the waterfront. One of the KTCC objectives is to boost the tourism sector, which can directly increase the level of local socio-economic as well as adding a lot of job opportunities in the future. Therefore, the idea of creating a cruise, ferry and commercial hub at KTCC as systematic water transportation center of east coast region is very promising as it can be a new landmark of Terengganu as the heritage waterfront city and can even be an alternative detour or gateway for tourists to come for a holiday in Terengganu.

THESIS STATEMENT ISSUES POTENTIALS CLIENTS

A proposal of Terengganu cruise and commercial hub (TCC) in Kuala Terengganu brings some challenges to sustain it in long term of period due to several reasons.

1. Cruise industries is a high risk industries in Kuala Terengganu because it still new which need a detailed feasibility studies to identify the proposal is viable/feasible or not.
2. The proposed project is located at coastal area which need detailed technical studies including site constraints, cruise vessel design characteristics, operational/ logistical flows and government requirements.

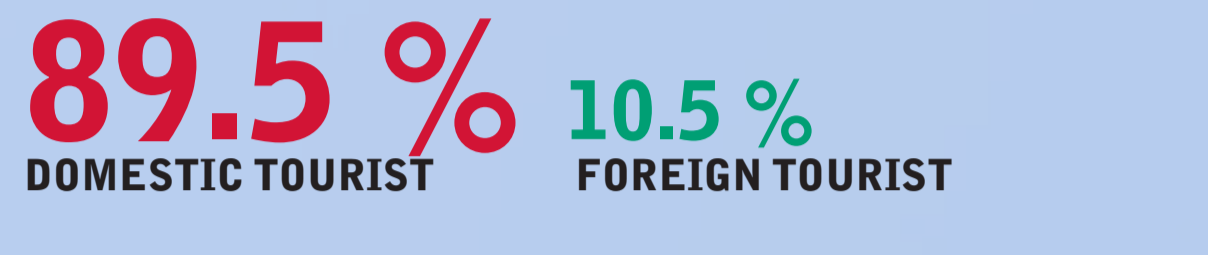
AIM & OBJECTIVES

Aims to develop Terengganu into a leading regional water transportation hub at east coast of peninsular Malaysia through the development of a world-class international cruise, ferry and river cruise terminal. The expectation of the Terengganu Cruise and commercial hub are:

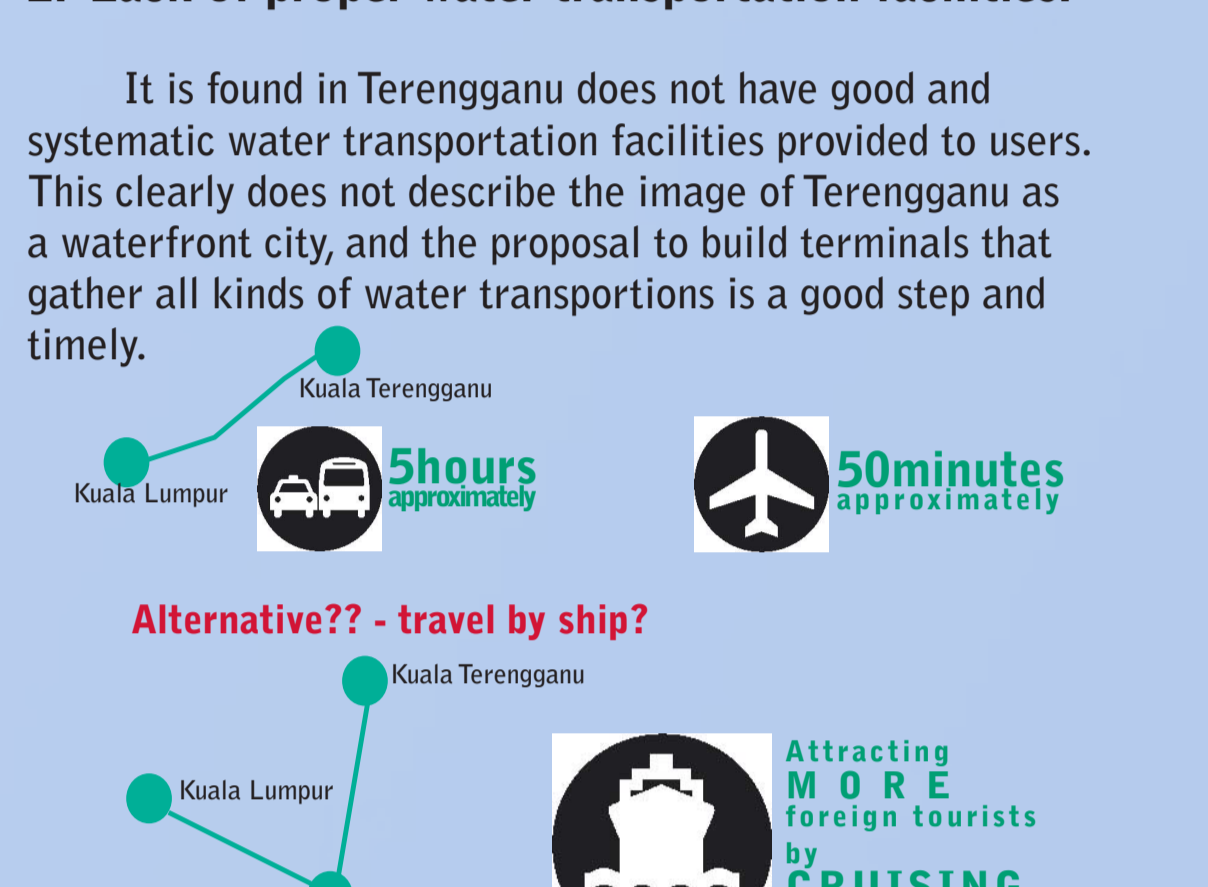


Have built-in flexibility wharf to allow the berthing of different types and sizes of international cruise vessels.
As a one stop center of boats and ferries services supporting a river cruise industry along the Terengganu river to places of tourist spots in Kuala Terengganu.
Boosting local tourism by integrating water transportation hub with well-known modern and heritage waterfront water transportation hub as a new tourist attraction, local entertainment and leisure.

1. Lack of Foreign tourist.
Terengganu rich with natural beauties and wealth of culture and heritage. However, this city is still a hidden treasure. Attracting only 2.87 million in 2007, 89.5% of which were domestic tourist. These statistics show the government's efforts in promoting Terengganu still attracting domestic tourist.



2. Lack of proper water transportation facilities.
It is found in Terengganu does not have good and systematic water transportation facilities provided to users. This clearly does not describe the image of Terengganu as a waterfront city, and the proposal to build terminals that gather all kinds of water transportations is a good step and timely.



1. Terengganu has the potential to be an international cruise ship port of call centers because it is located between existing routes from Singapore to Thailand, Vietnam, Hong Kong and China. This cruise terminal construction soon to promote the growth of foreign tourist arrivals to Terengganu.

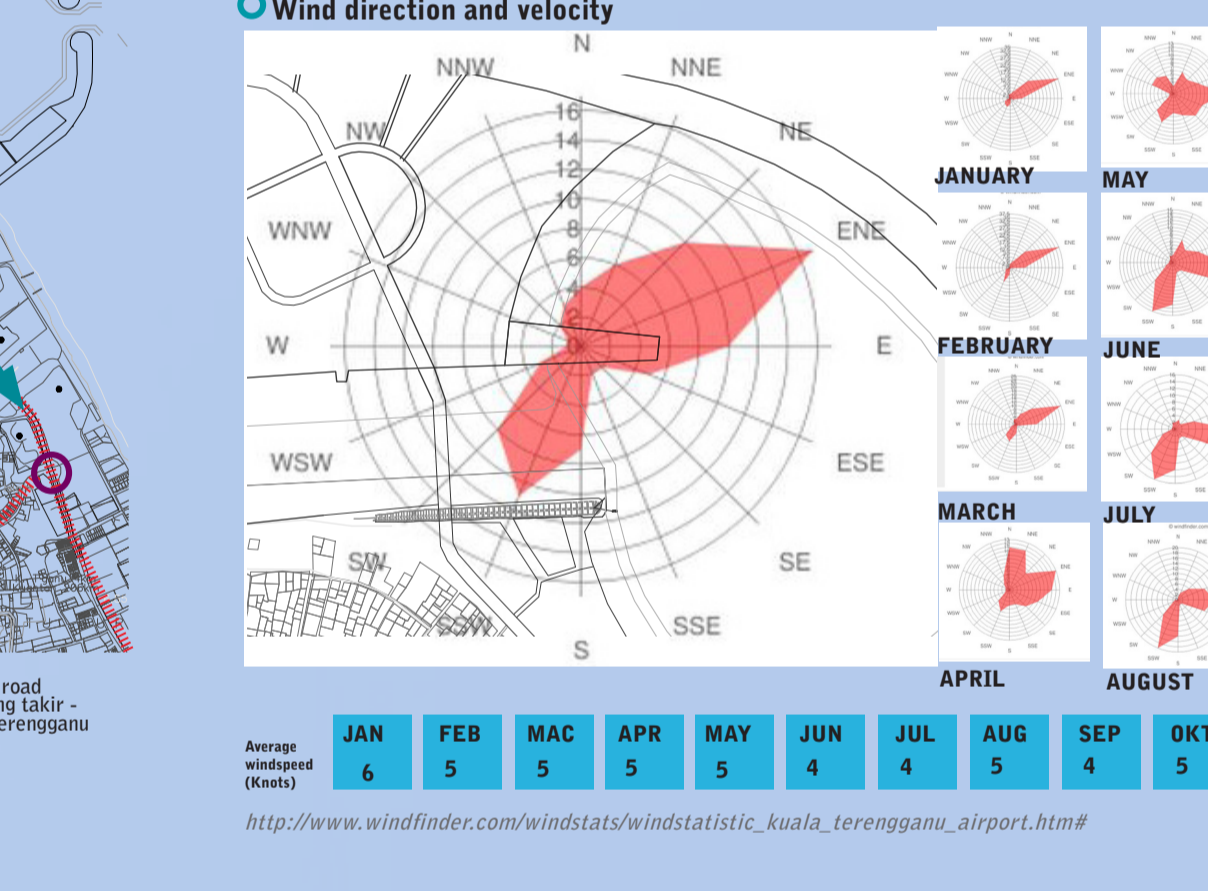
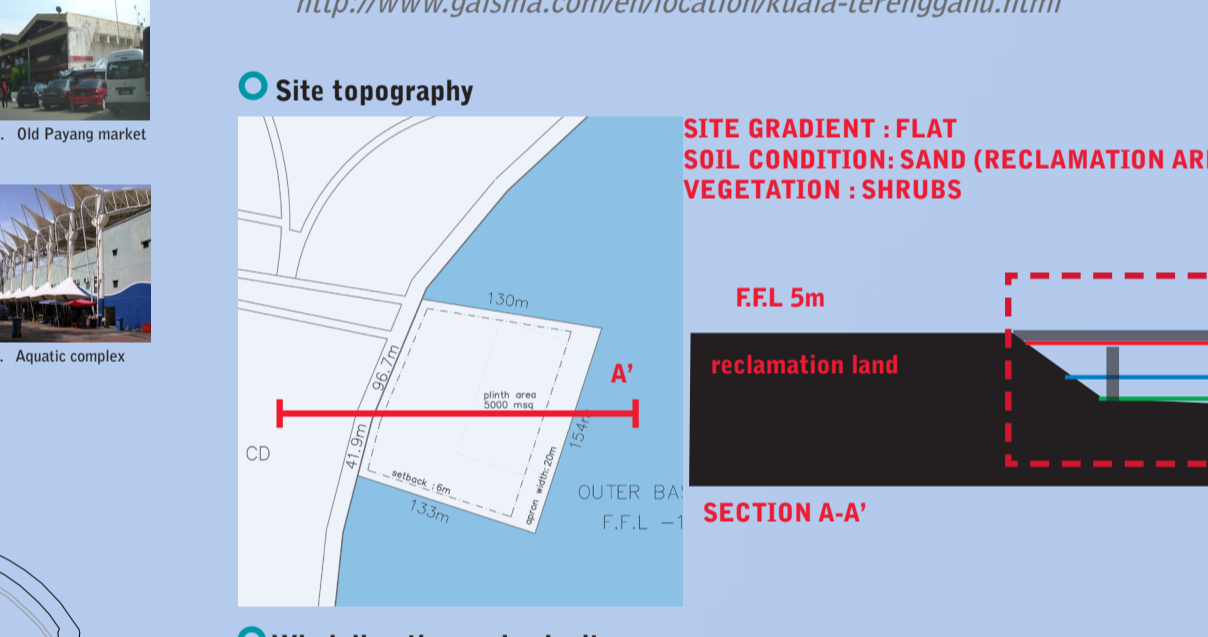
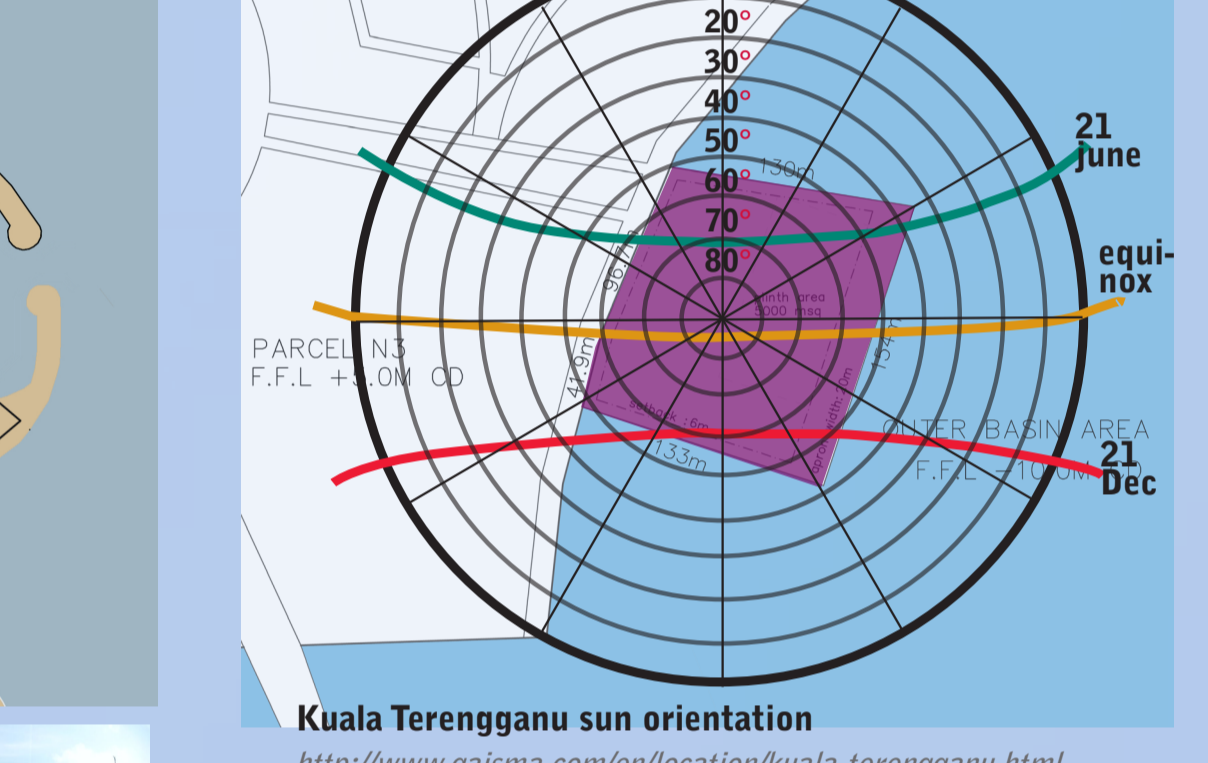
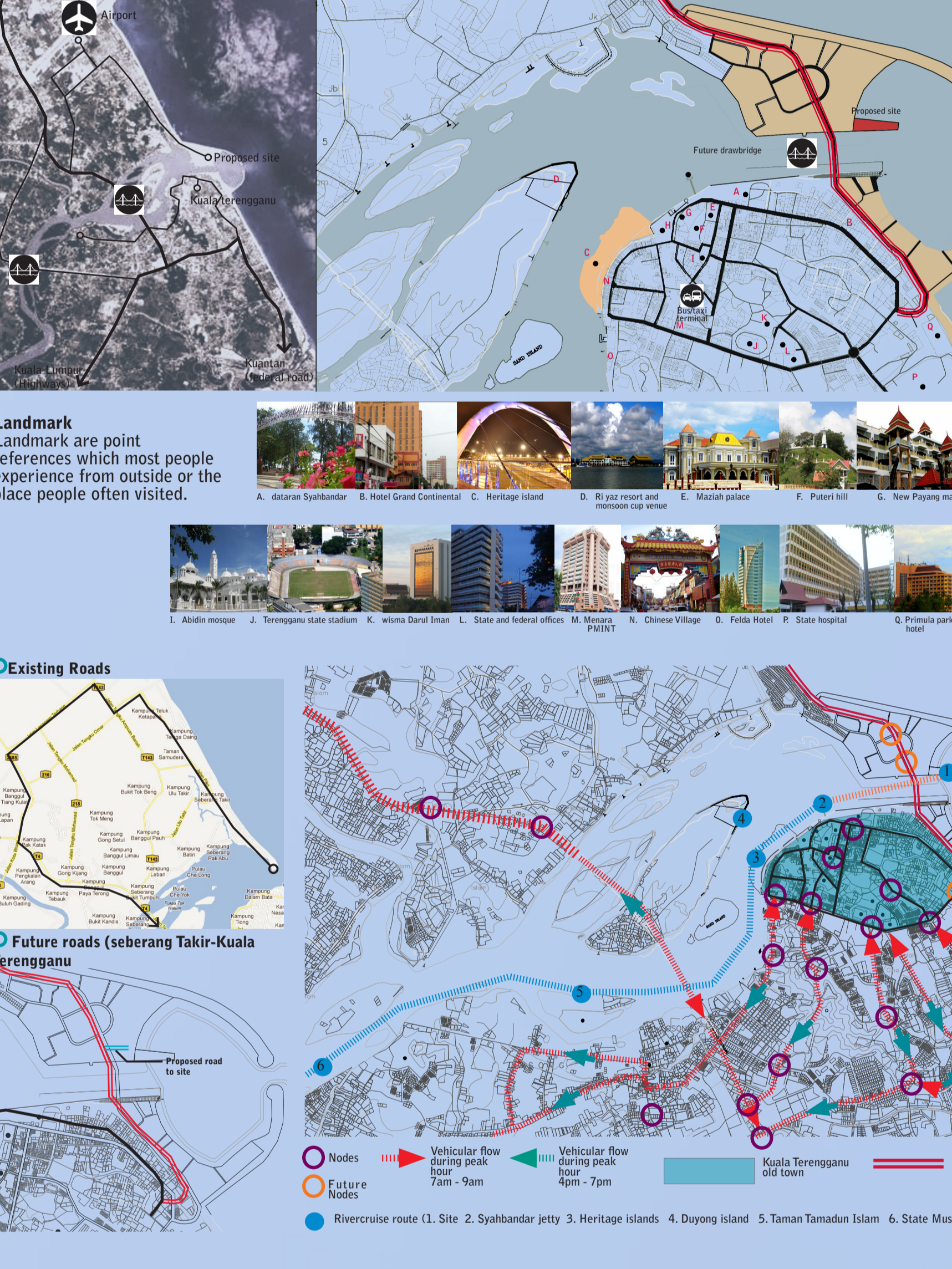
2. Before the bridge across the river Terengganu developed at around the 1960's, the Water transportation became a very important service. Ferry service is provided to connect the land routes from Kuala Terengganu to Kota Bharu. Once the bridge is built, a ferry service started to decline. Now the ferry and passenger boat service is only available to travel to the islands in the vicinity of Terengganu.

3. Recently, Taman Tamadun Islam management make an effort to revive the excitement of water transportation by introducing river cruise services as a new tourist attraction in Terengganu.

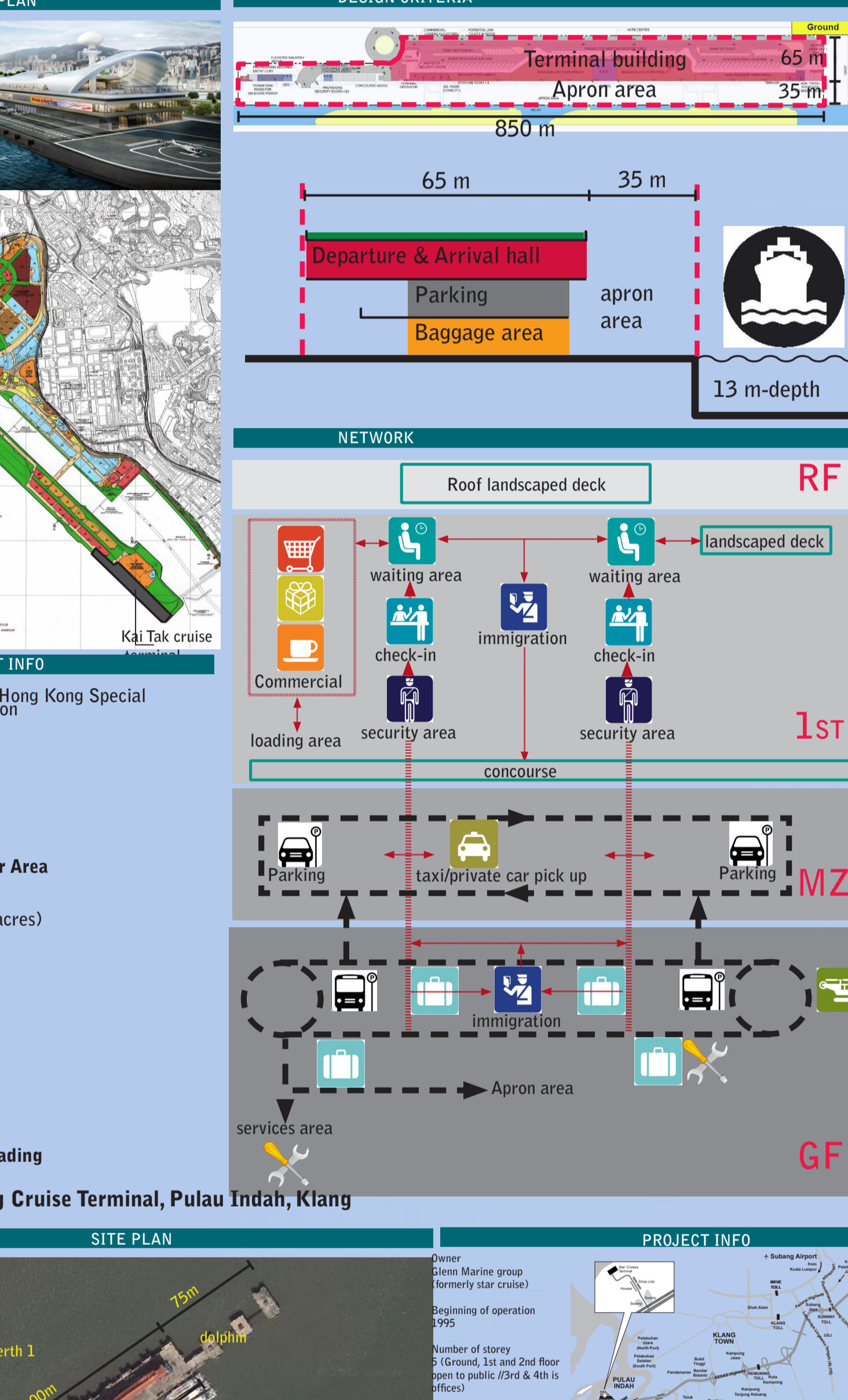


SITE FEASIBILITY

1. Macro context
2. Micro context



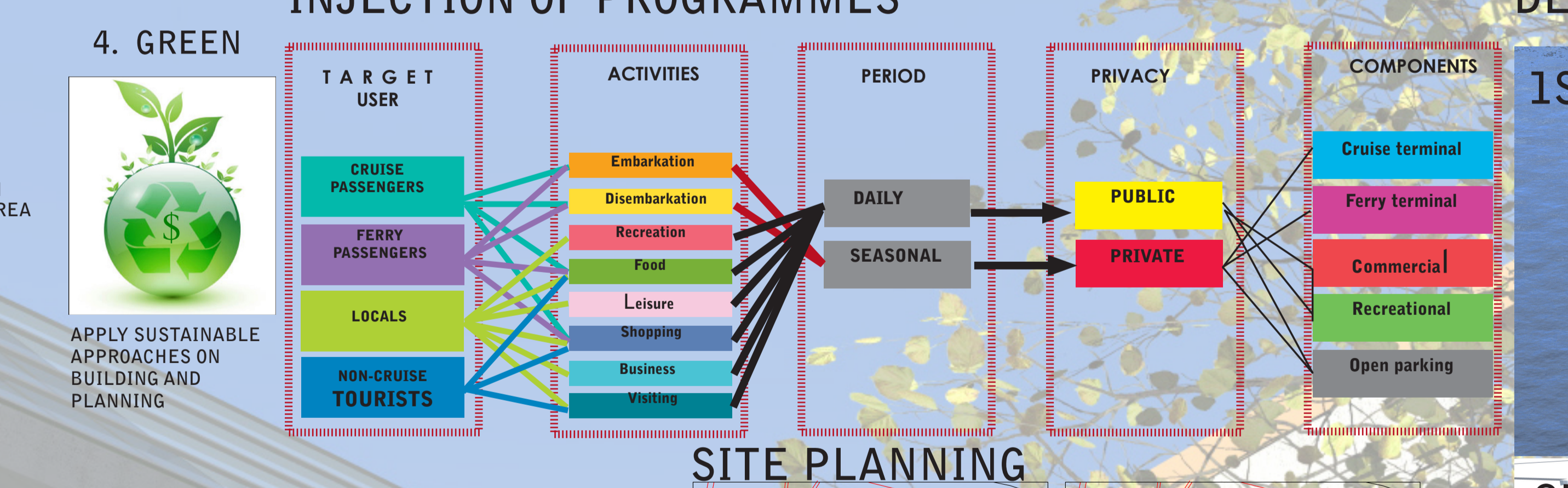
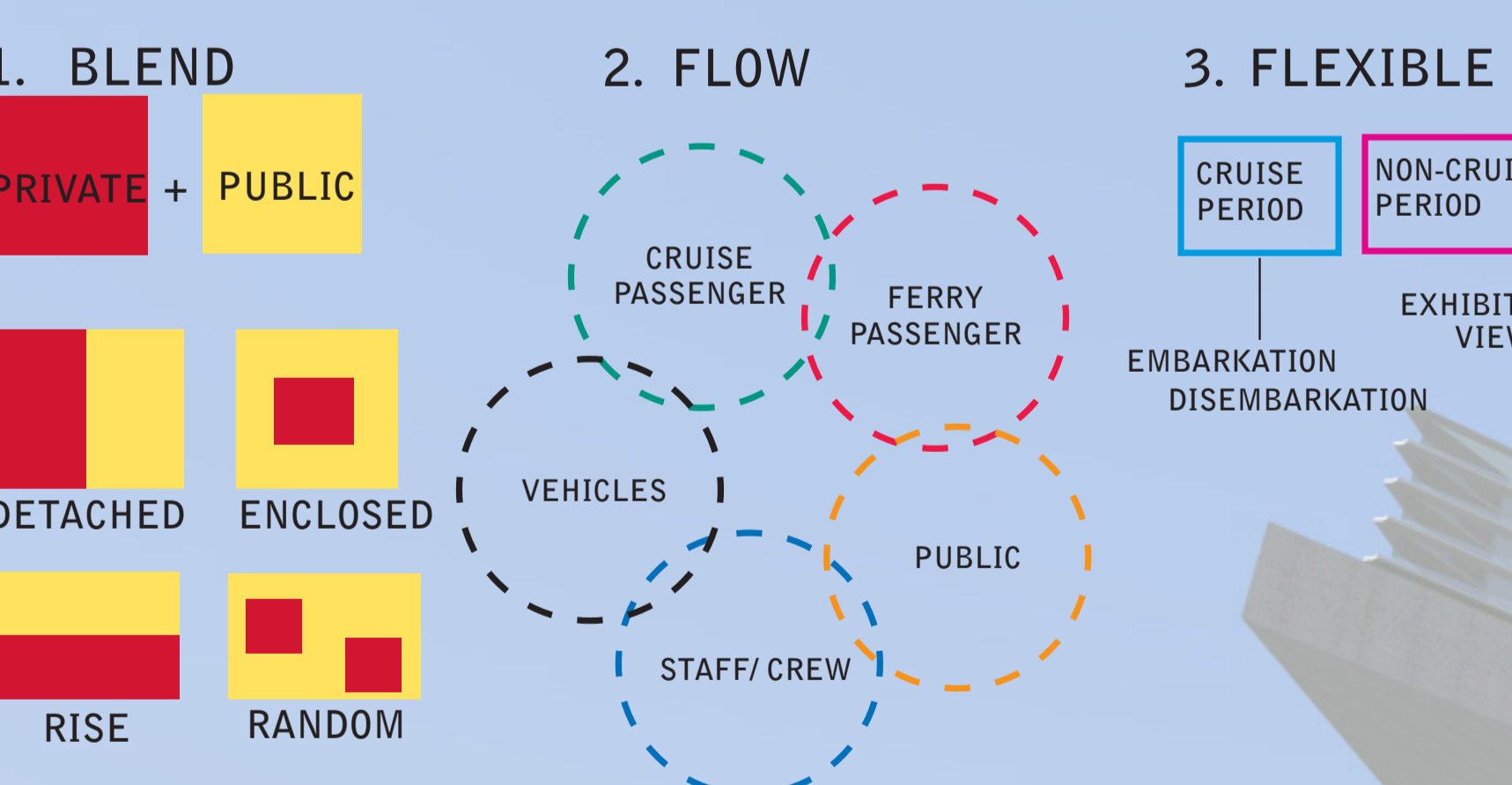
PRECEDENT STUDIES



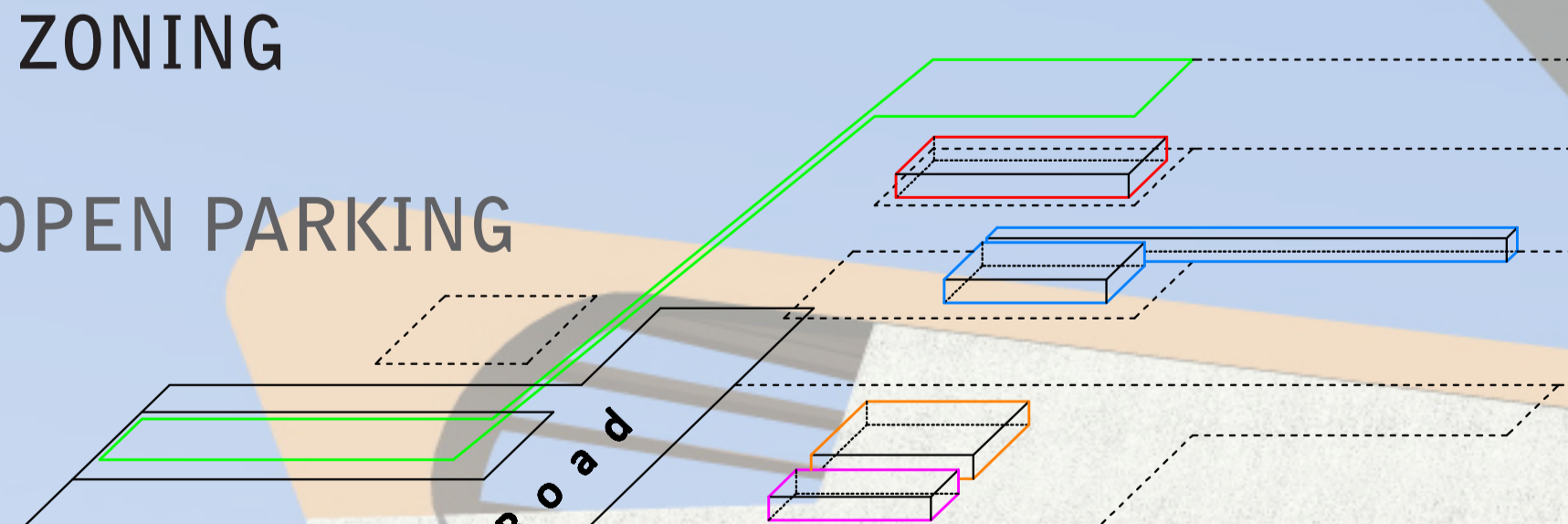
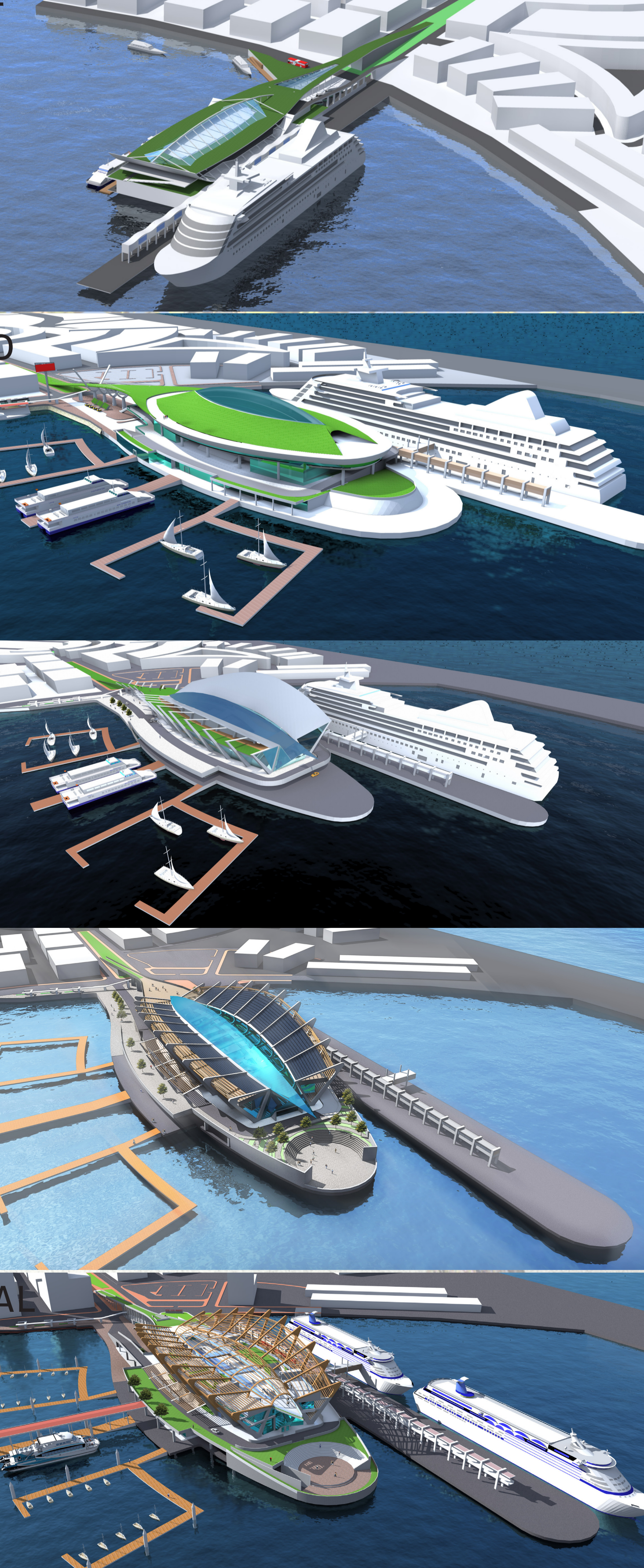
Strength Weakness Opportunities Constraints

- Strength:**
 - 1. Strategic location: The site is protected by wave breaker. Vessel can berth and maneuver without disturbed by strong wave.
 - 2. Low tidal variation range which the highest tide is 2.13m and the lowest tide is -0.1m
 - 3. Good views. Facing the China south east sea and Kuala Terengganu town.
 - 4. Enough depth of sea water at outer basin area for cruise vessel berthing and maneuver
- Weakness:**
 - 1. The drawbridge is still in plan, if it is not build yet, the cruise terminal users will use long distance of existing road through the Sultan Mahmud bridge to go to town.
 - 2. Heavy traffic on Sultan Mahmud bridge during peak hour create unpleasant journey for users who choose to use land transportation from town to terminal building.
 - 3. Managing cruise vessel, ferries and water taxi at same place need good and systematic schedule to avoid heavy traffic at muara.
- Opportunities:**
 - 1. Accommodate civic facilities for local people especially from Seberang Takir village.
 - 2. Helps to increase water taxi industries
 - 3. Proposing on stilt pier base as a solution of construction method of the cruise terminal to allow sea water flow and avoiding coastal erosion
 - 4. Future road and drawbridge that connecting Kuala Terengganu town to Seberang Takir shortening the distance and save a lot of travelling time.
- Constraints:**
 - 1. Strong wind velocity during Northern east monsoon affecting cruise vessel ferries schedule
 - 2. Special design characteristic of terminal building are required to protect the building from strong wind
 - 3. During monsoon period, the terminal will not be operated.

DESIGN STRATEGIES



DEVELOPMENT OF IDEAS



CONCEPTUAL IDEA AERODYNAMIC
Aerodynamics is a branch of dynamics concerned with studying the motion of air, particularly when it interacts with a moving object.
Reduce wind impact + connecting boulevard with cruise terminal

