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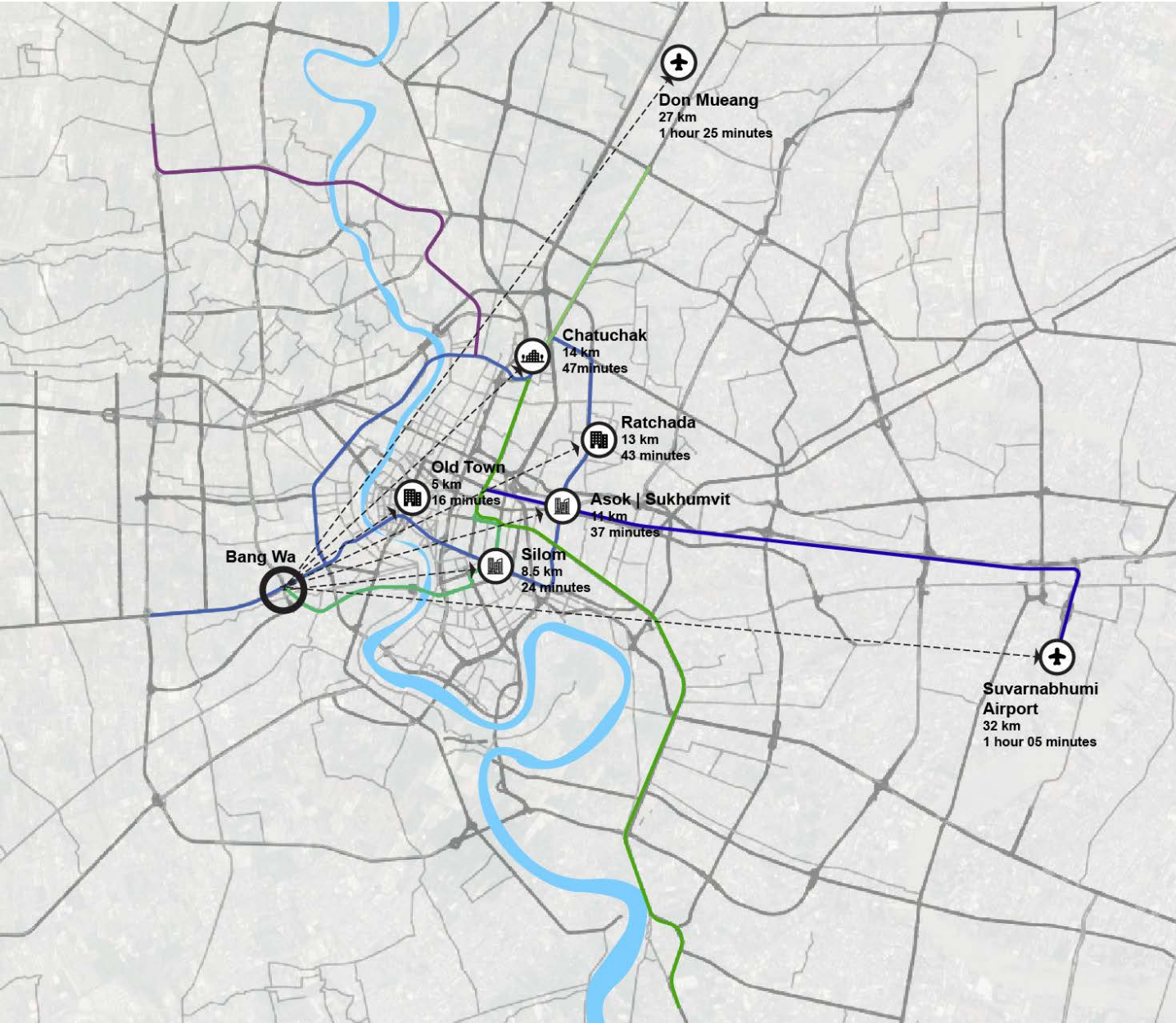


Global Future Cities
Transit Oriented Development Plan (TODP)
for Khlong Bang Luang Area
Bangkok, Thailand

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Department of City Planning and Urban Development, BMA.

Project Background

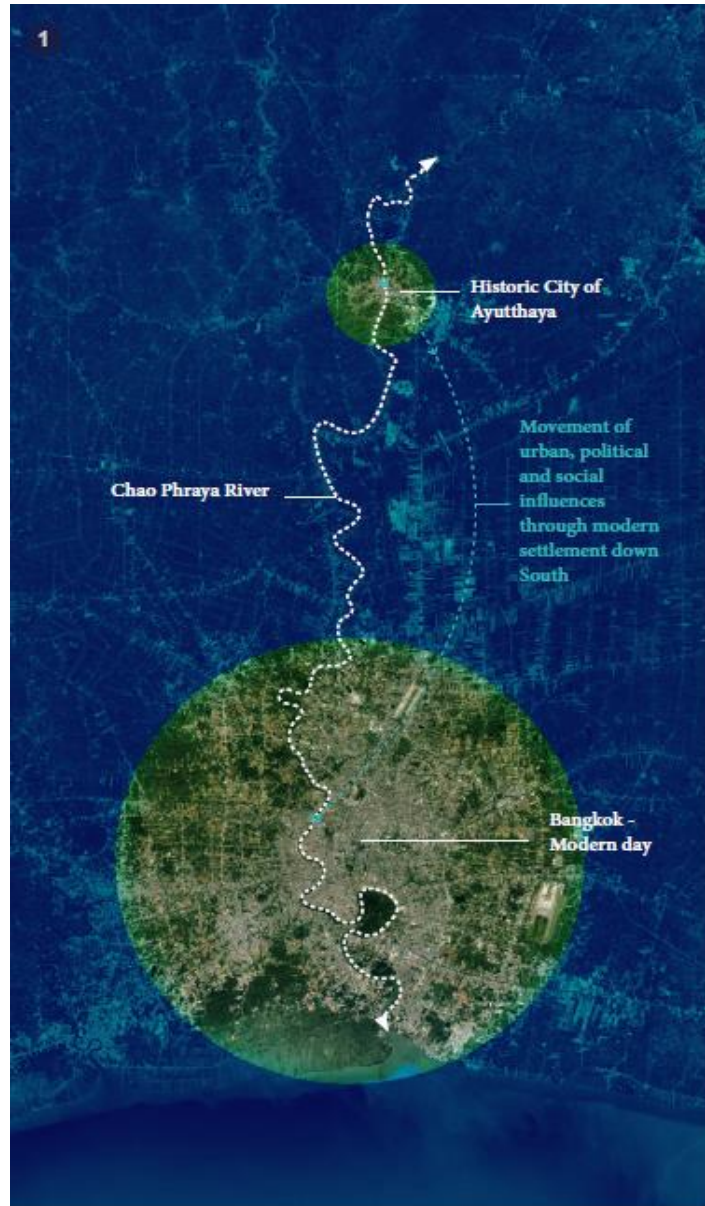


Background

- Bangkok is one of the world's largest cities with a population of 15 million in 2020. Rapid urban expansion has resulted in severe traffic congestion in the city.
- Bangkok has recently been considering the utilization of Transit Oriented Development (TOD). TOD is a planning mechanism that organizes urban development in relation to transit nodes and considers ease of access to that node..

Project Background

Context:
From the
Past to the
Future



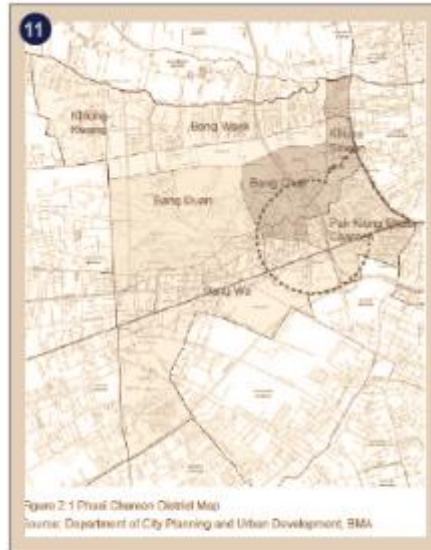
AN INFLUENTIAL ROUTE FOR LOCAL AND REGIONAL COMMERCE IN THE PAST, KHLONG BANGKOK YAI AND ITS SURROUNDING CONNECTIONS CAME INTO BEING TO CUT TRAVEL TIMES AROUND THE CHAO PHRAYA RIVER LOOP AND CREATE A GATEWAY FOR COMMERCE.

THE MIX OF USES IN THE HISTORY OF THE PLACE, FROM ECONOMIC TO CULTURAL TO RESIDENTIAL TO COMMUNAL, CAN EFFECTIVELY BE REFERENCED AND REVIVED IN THE PRESENT THROUGH THE TOD REGENERATION OPPORTUNITY.



Project Background

Identity of Project Area



KHLONG BANG LUANG IS A UNIQUE 200-YEAR-OLD COMMUNITY THAT IS SEEN AS A QUIET, RIVERSIDE EXAMPLE OF AN AUTHENTIC BANGKOK EXPERIENCE, WHERE THE PAST AND PRESENT MEET.



Project Objectives



Preparation of a Transit-Oriented Development Plan within the specified Klong Bangluang area and Bang Wa BTS station to help demonstrate how the government's investment in enhanced transport access and connectivity can drive inclusive economic planning and sustainable development.

Encouraging compact mixed-use development near new or existing public transportation infrastructure that provides housing, employment, entertainment and civic functions within walking distance of a transit station.

Increasing public transport patronage via enhanced transport accessibility and intermodal connectivity, while encouraging the use of bicycles and walking.

Supporting universal design to ensure accessibility for the under-served and disadvantaged, including the elderly and persons living with disabilities.

Desired Outcomes and Impacts

Expected benefits / outcomes

- **Transportation:** Increase the utilisation of all forms of public transport in the specified KBL area and Bang Wa BTS Station by providing more commuting options, while simultaneously building connectivity through a multi-tiered transport model.
- **Urban Development:** Promoting a comprehensive, multi-tiered approach to area-based planning that links transport to wider issues of land-use, housing and local economic development.



Phetkasem Road underneath Bang Wa Station



BTS Bang Wa Station

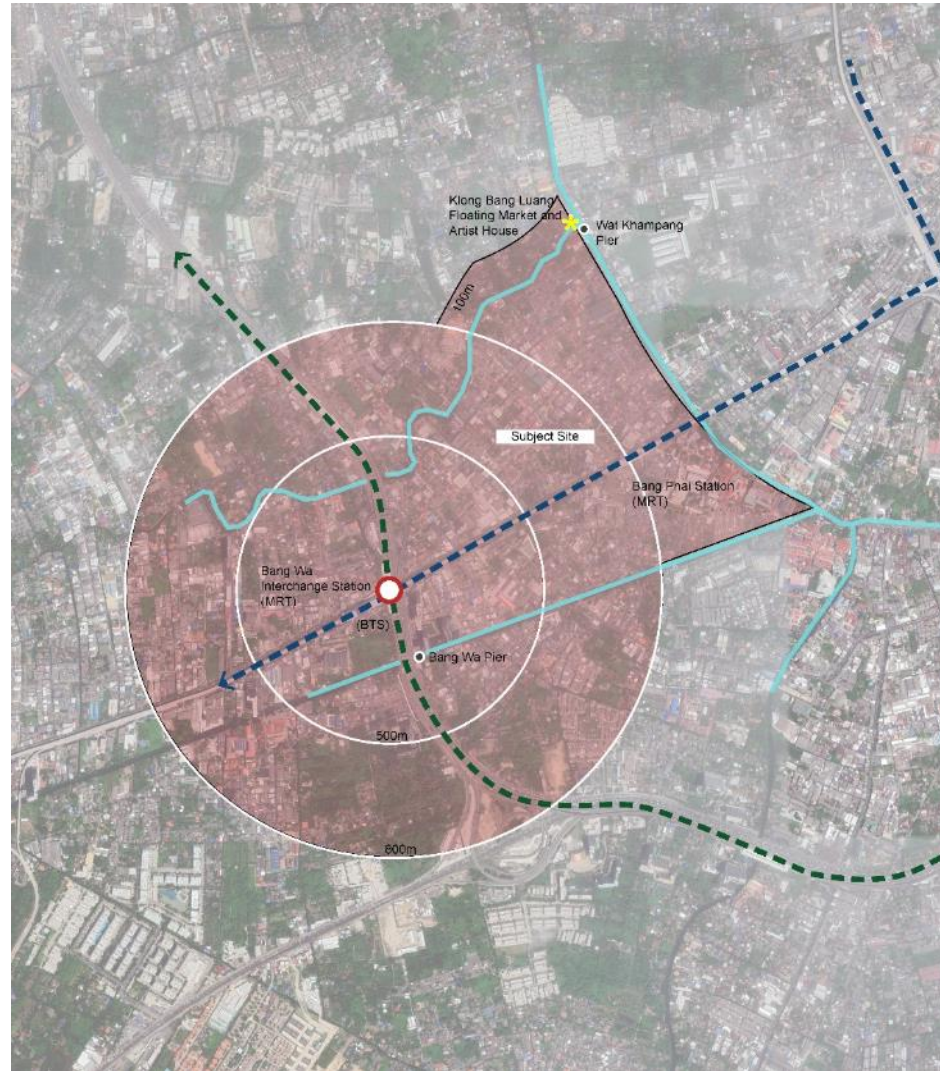


Project Scope and Current Status

Project site



Project scope



Output 1 - Background Analysis and Framework

- Comprehensive Background Analysis
- TOD Case Studies
- Structured Survey and Key Informant Interviews



Output 2 - Stakeholder Consultation and Community Engagement

- Stakeholder Analysis
- Participation Process
- Focus Group Discussions
- Key Informant Interviews



Output 3 - Vision

- Future Trends for Bang Wa
- Development Scenarios
- Scenario Scoring



Output 4 and 5 - TOD Plan

- Context & Vision
- TODP Strategies
- Focus Area Strategies
- Economic Strategies



Output 6 - Implementation Roadmap

- Phasing and Prioritisation
- Financial Planning
- Governance Framework
- Business Cases
- Costing



Output 7 - Capacity Building

- Organisation of a Capacity Building Programme
- Documentation of Lessons Learned

Current Status

Planning and Regulation

Existing Densities

As can be seen in Figure 3.26, a large proportion of the site does not reach even the very lowest density recommendations put forward in the proposed density strategy. This is particularly noticeable for the station core zones which are significantly below the minimum recommended density of FAR 5. The station core zones should have the highest density possible (particularly around interchange stations such as Bang Wa) as they offer the greatest potential for new development. With this in mind, it is recommended that the sites which are currently being under-utilised (such as the plot to the south of Bang Wa MRT station) should be considered for redevelopment.

When doing so, it provides the prospect of designing a fully TOD-compatible scheme which can deliver a mix of uses (including the potential for community uses), appropriate public realm (such as a better designed arrival space and plaza) and integration of different modes of transport (MRT/BTS, bus, taxi, cycling etc.) in one space. An example of how this can be achieved for Bang Wa and Bang Phai stations is shown in Chapter 6.

Residential density can be achieved in a number of ways. Section 3.6 looks at different methods of increasing density in existing neighbourhoods through plot sub-division, amalgamation and incremental approaches.



Figure 3.26 Existing Plot Densities

Legend

Estimated Floor Area Ratio (FAR)

0 to 0.5	2.5 to 3.5
0.5 to 1.5	3.5 to 5.5
1.5 to 2.5	5.5 to 11

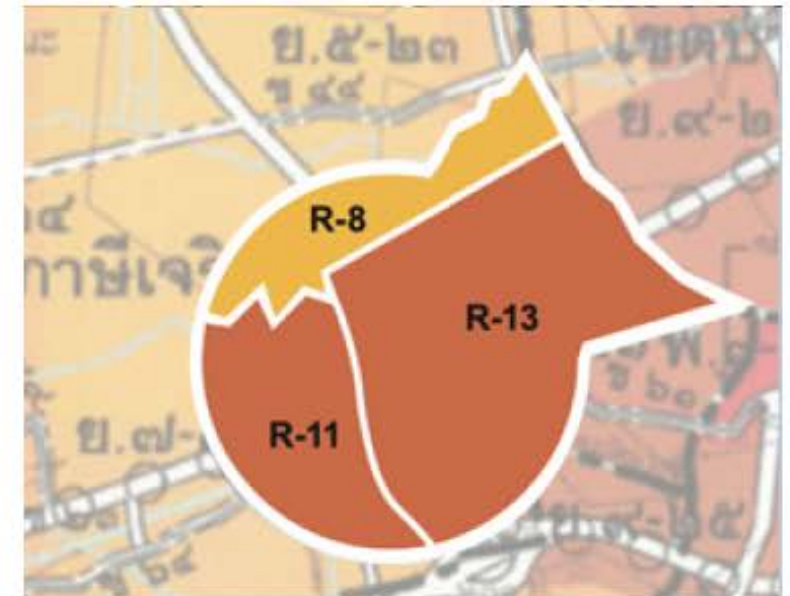


Figure 3.27 Study Area (Draft) Bangkok Comprehensive Plan 2019 (B.E. 2562)

Legend

FAR	Description
4.5	R.8 Medium-Density Residential Zone: Residential Areas with potential extension of developments from the inner city, plus suburban community node, industrial and industrial estate areas.
6	R.11 High-Density Residential Zone: Inner-city residential areas that enhance and preserve natural scenery and environment.
7	R.13 High-Density Residential Zone: Inner-city residential areas that locate within the public transport service areas.







Current Status

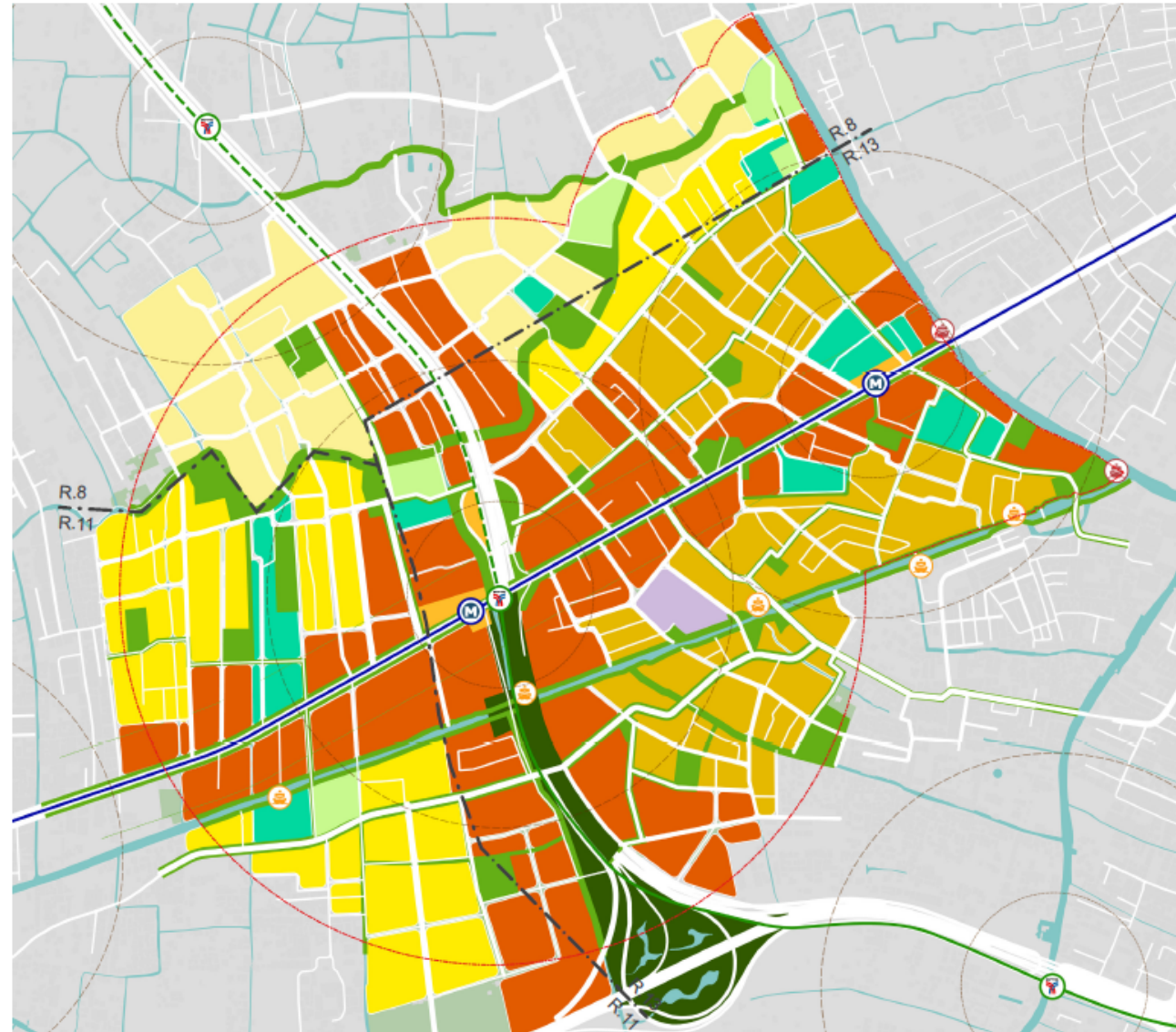
Planning and Regulation (Land Use Zoning Plan)

Land Use Strategy for TODP

The Land Use strategy for Bang Wa and KBL is designed to compliment and support the Bangkok Comprehensive Plan Land Use Zoning, adding additional detail on appropriate locations for different permitted uses. Whilst the Bangkok Comprehensive Plan designates medium to high density residential categories (R8, R11 and R13) there is some flexibility within the zoning to provide non-residential uses. Therefore the land use strategy (right) seeks to add further guidance on suitability of different areas for the mixed use development which is an essential ingredient to successful TOD. The land use plan should be read in conjunction with the density plan (Figure 3.25). Provision has been made for some light industrial uses to the south-east of Bang Wa station, close to the Phasi Charoen Canal. The intention is to develop a cluster for local craft, production and making in this area, complimenting existing businesses already operating in this area.

In line with TOD best-practice, mixed use development is concentrated around the MRT and BTS station cores as well as along major arterial roads such as Ratchaphruek and Phetkasem Roads, forming mixed use nodes and corridors. In recognition of the importance of the cultural heritage sites (e.g. temples and shrines) and community amenities (e.g. schools, hospitals and universities) these sites have been identified on the plan to ensure their protection. Residential areas are further subdivided by their relative density which is in alignment with the Bangkok Comprehensive Plan. As per the guidance in the Comprehensive Plan, although these areas should be predominantly residential areas, complimentary uses are also permitted as per the relevant guidance in Table 3.2.

-  **Mixed Use**
Provides flexibility for a range of uses including residential, commercial, office, retail, hospitality and community / civic amenities.
-  **Residential (Higher Density)**
Higher density residential development aligned with parameters in Bangkok Comprehensive Plan.
-  **Residential (Medium Density)**
Medium density residential development aligned with parameters in Bangkok Comprehensive Plan.
-  **Residential (Lower Density)**
Lower density residential development aligned with parameters in Bangkok Comprehensive Plan.
-  **Light Industry**
Light industrial uses which support local SMEs, production, making and local crafts
-  **Community & Civic Uses**
Including temples/religious amenities, clinics, hospitals, schools, colleges, universities and other civic uses.



Current Status

Planning and Regulation (Open Space Plan)

With most of the study area already containing consolidated development, finding land to create open space is challenging, particularly to the east of Bang Wa station. The Bangkok Comprehensive Plan indicates that the opportunity exists to develop a larger open space to the south of the site, within the highway interchange junction. Combined with utilizing the space underneath the highway infrastructure, there is the opportunity to initiate a larger district scale park to the area which can connect new development in this zone to Bang Wa station via a linear park. However, smaller, more local open space is also important and a variety of approaches to open space will be required to incrementally expand the network of open spaces within the TODP. This could be achieved via:

- Maximise, and where required, improve existing open spaces and parks in the study area. Include the local communities in the design and planning of these spaces.
- Any new development of significant size in the area should be required to provide public open space as part of its design, especially if the development is proposing higher density and additional residents.
- Small, tactical interventions at the neighbourhood scale have the potential to make a big impact. For example, reallocating street space to create open space can create opportunities for play and leisure areas, mitigating the lack of outdoor space at home.
- Create communal gardens in place of parked cars to create places neighbours can gather and children can play

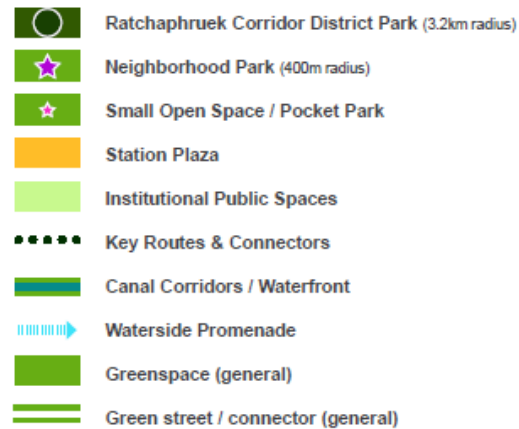
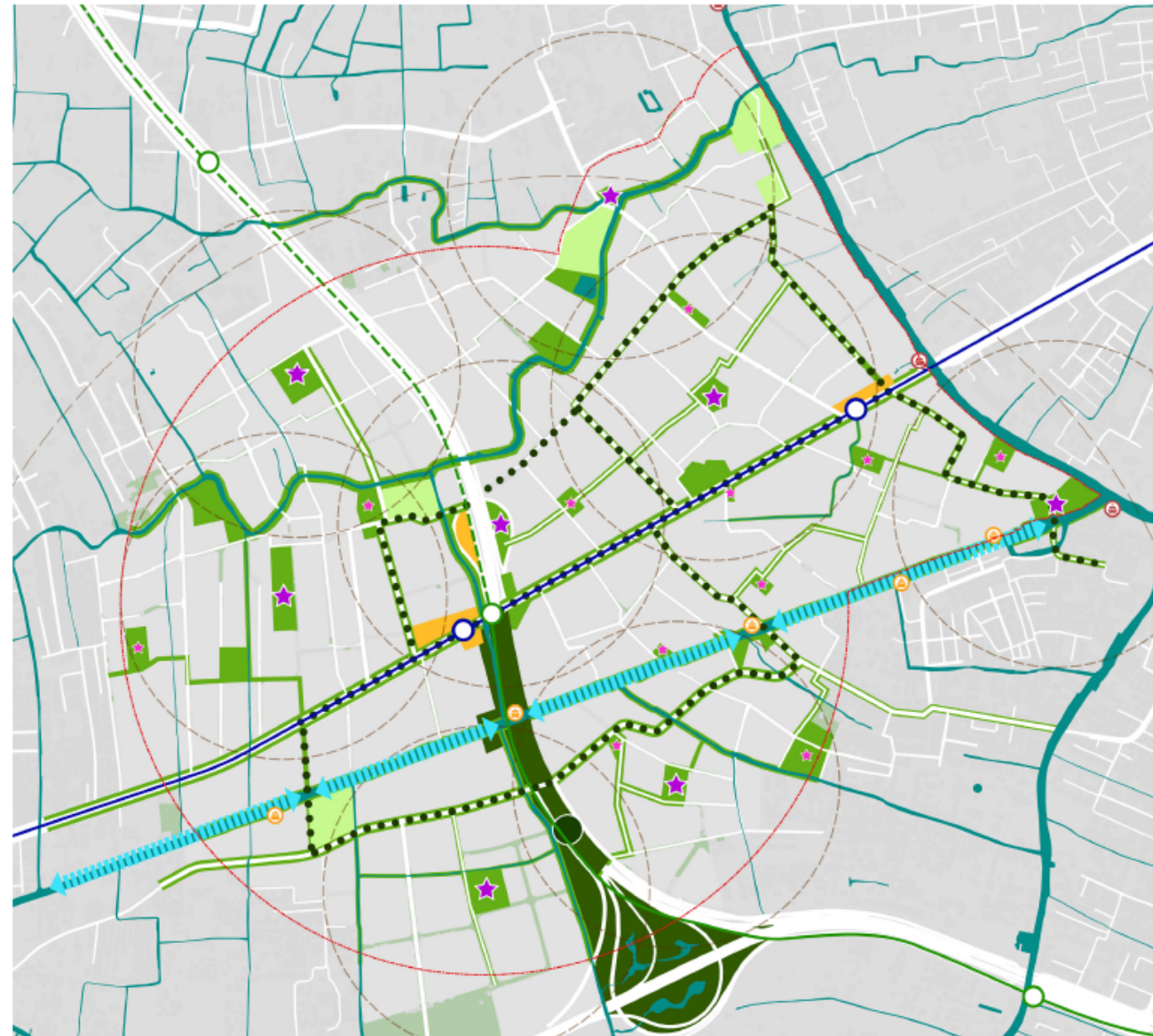
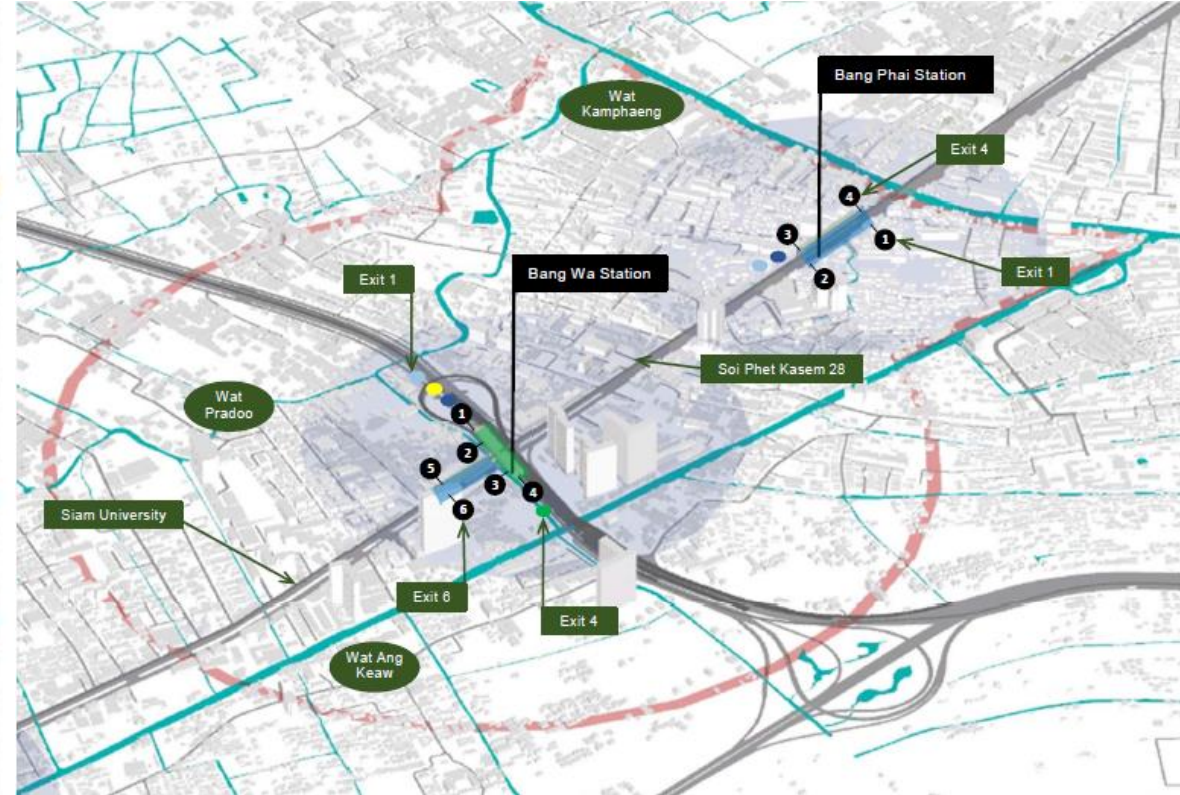
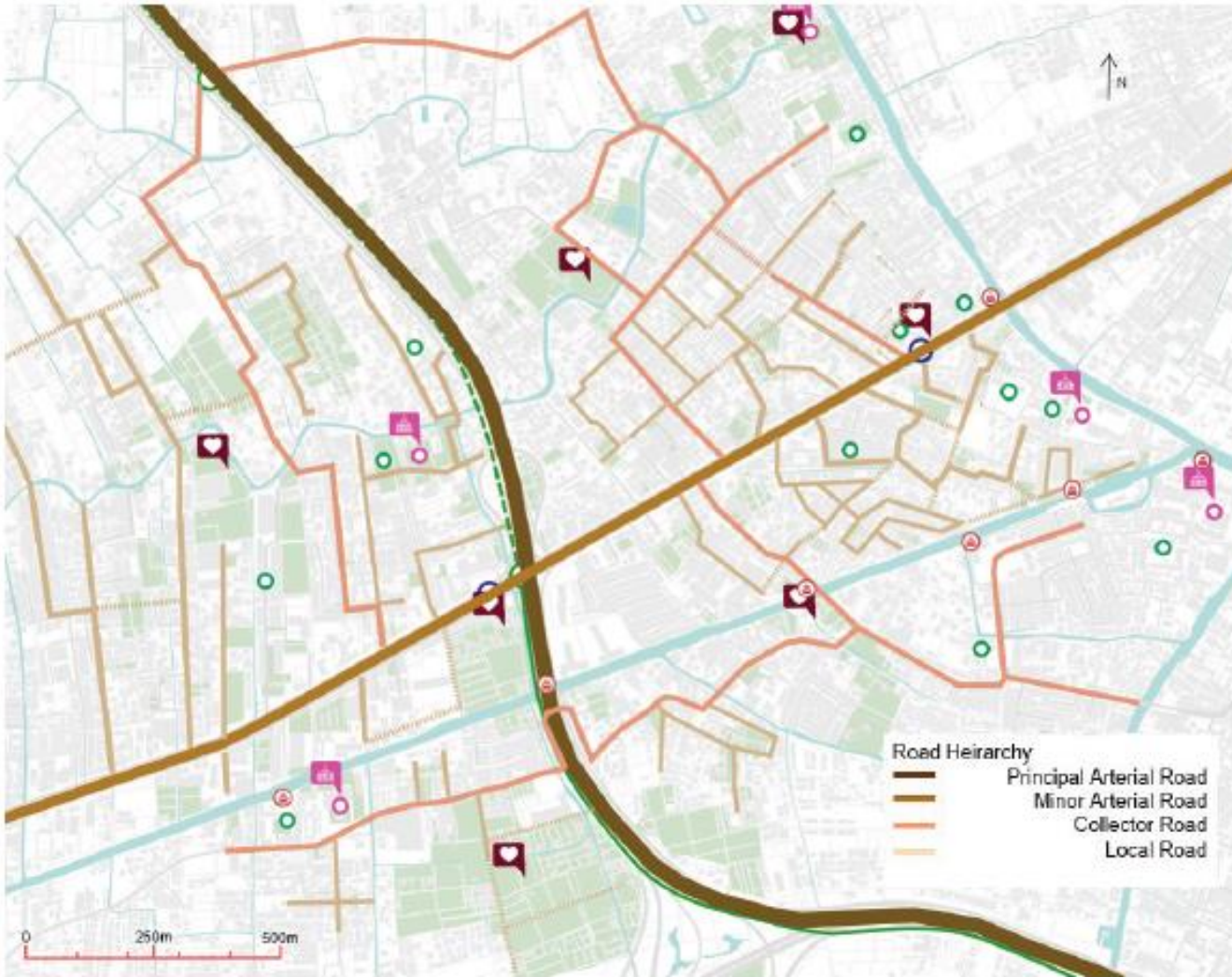


Figure 3.12 Proposed Open Space Framework



Current Status

Planning and Regulation (Transportation Plan)



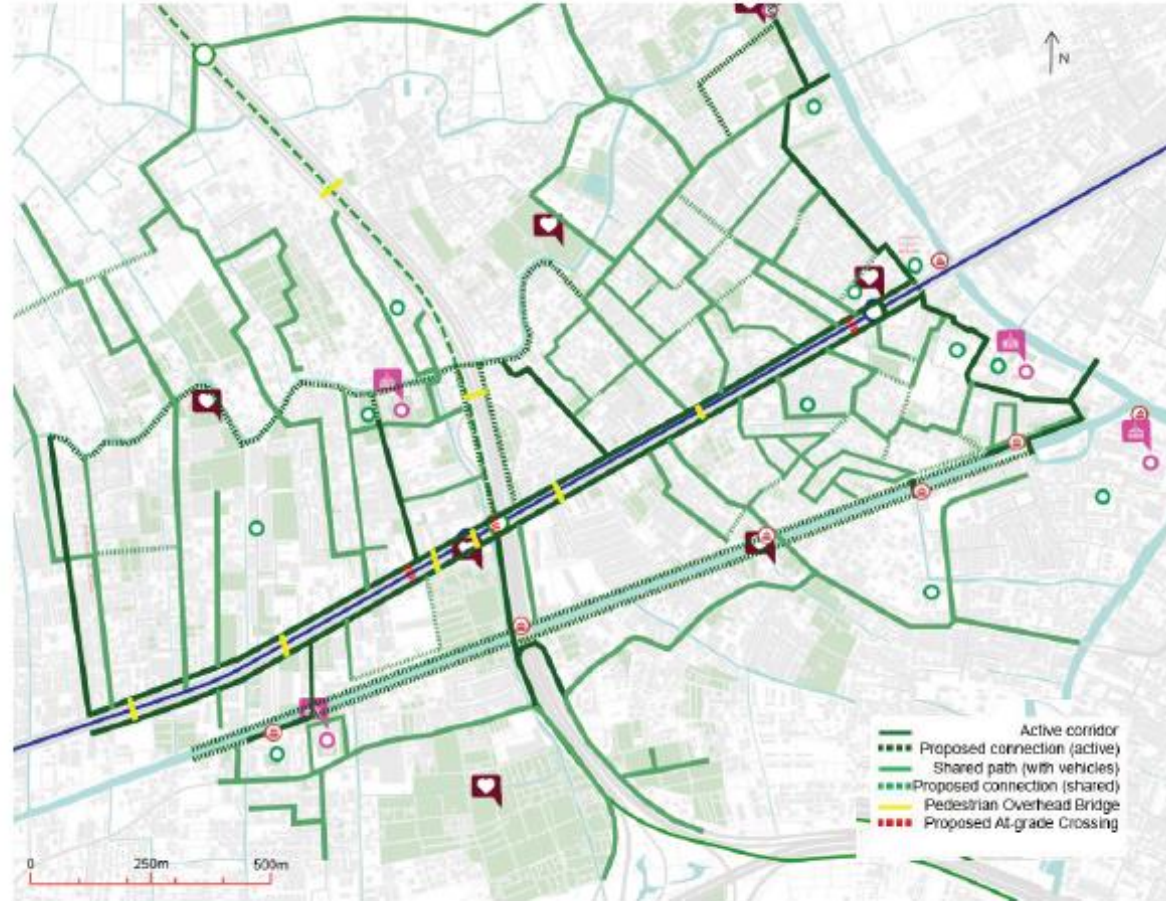
Traffic Survey & Questionnaire

Road Network Planning

Current Status

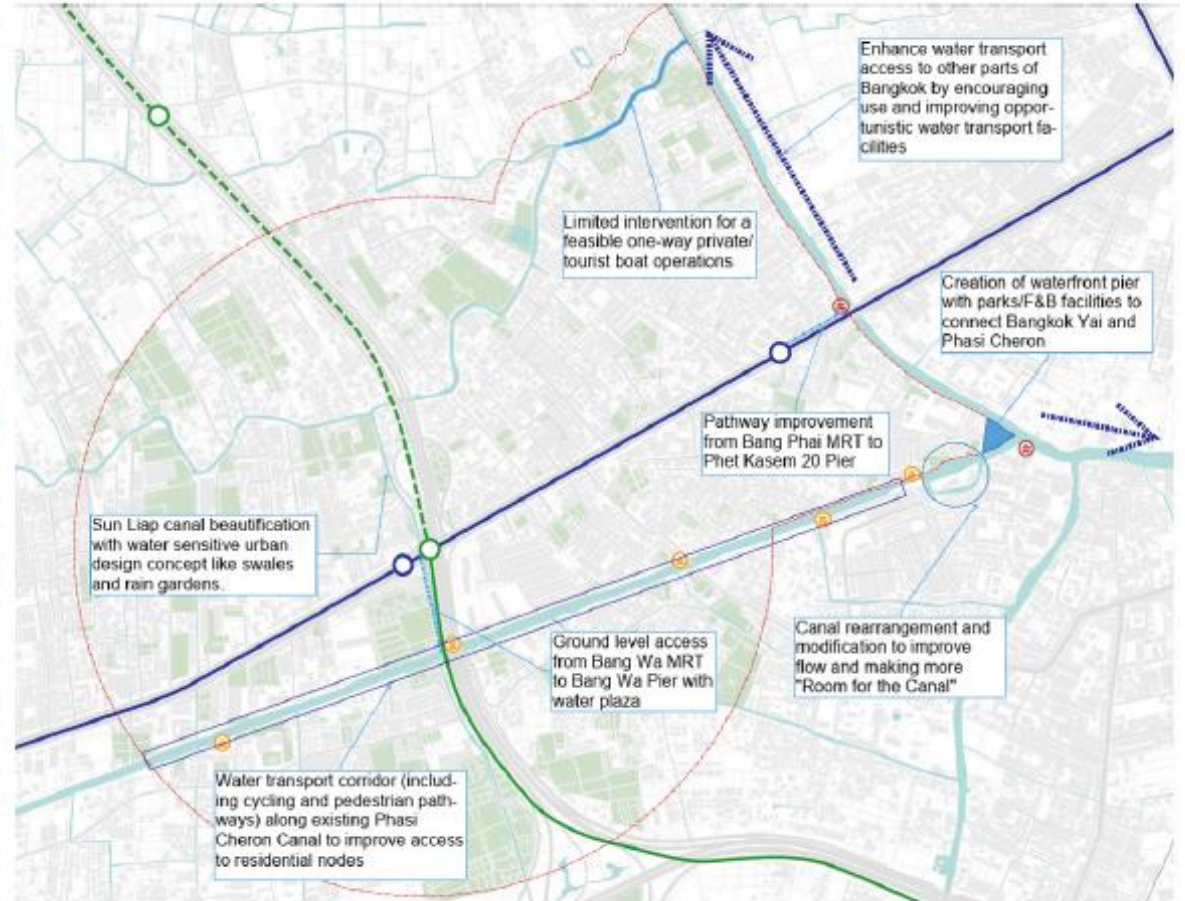
Planning and Regulation (Transportation Plan)

Figure 4.17 Proposed pedestrian and cyclist network for Khlong Bang Luang area



Cyclist Network Planning

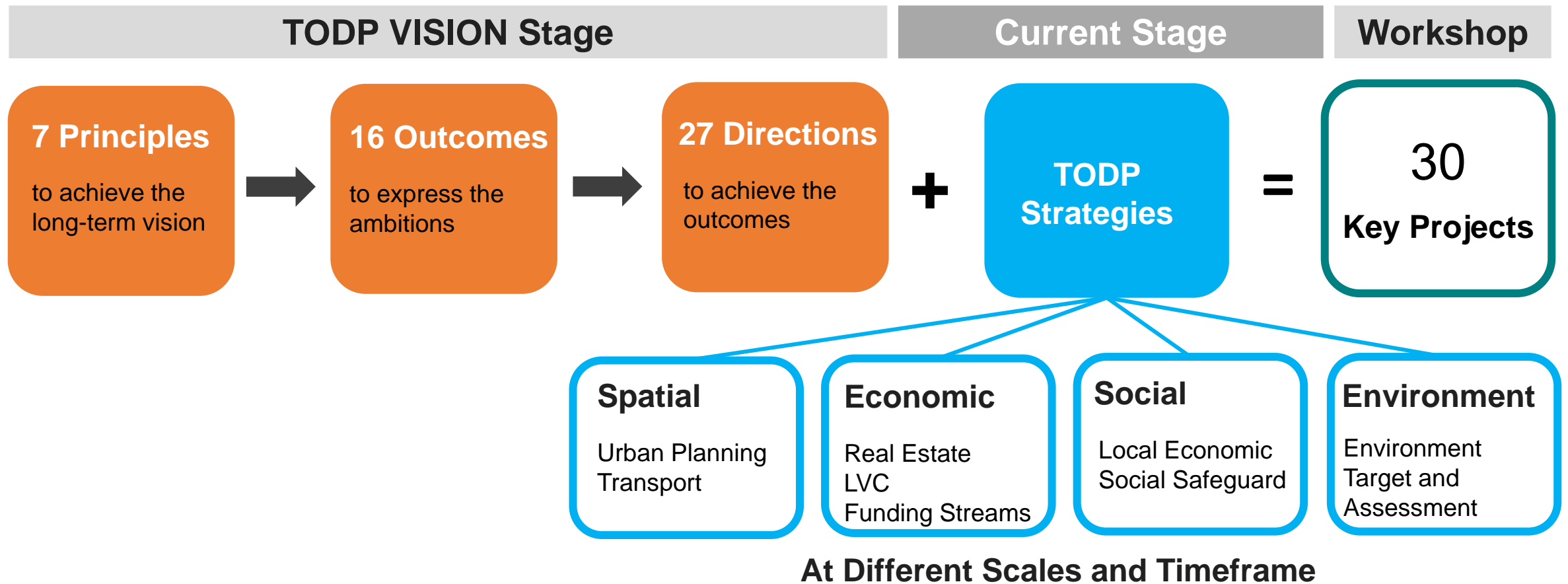
Figure 4.18 Proposed water transport enhancement for Khlong Bang Luang area



Water Transport Network Planning

Current Status

Vision Framework : a connected neighborhood of opportunity and diversity which enhances its cultural heritage and unique environmental setting



Current Status

Which direction BW & KBL can go?

10 Global Trends

Top 10 City Trends for Bang Wa and KBL:



TODP

Capture

- 3 Scenarios
- Cultural Heritage and History
 - Health and Wellness
 - Knowledge and Collaboration

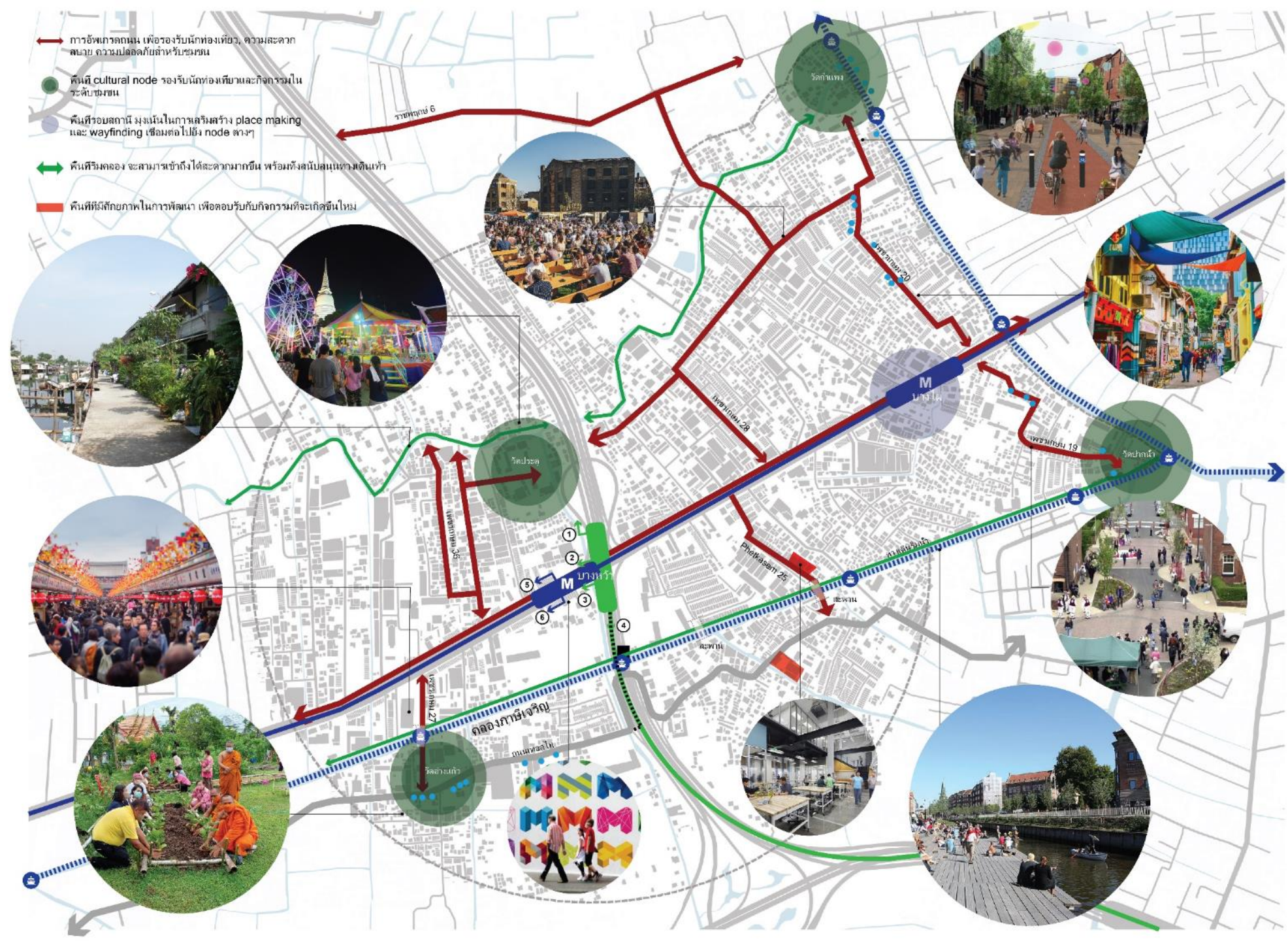
Scenario 1: **Cultural Heritage**

Promote existing values to attract visitors/ tourists through preservation of residential area and improvement of facilities



10/13/2021

1. Place branding, wayfinding strategy from the BTS/MRT station and other transport nodes
2. Streetscape improvement
3. New public squares at Wat Kamphaeng, Wat Pradu Bang Chak and Wat Ang Kaew
4. Implementation of pocket park network where spaces are possible along the proposed upgrade streets
5. Canal-side promenade and public spaces – potentially along Phasi Charoen and Bangkok Yai canal
6. Renovation of townhouses, their front-yard and streetscapes
7. Conversion of buildings at empty/unused into maker spaces for local craftsman and creative industries

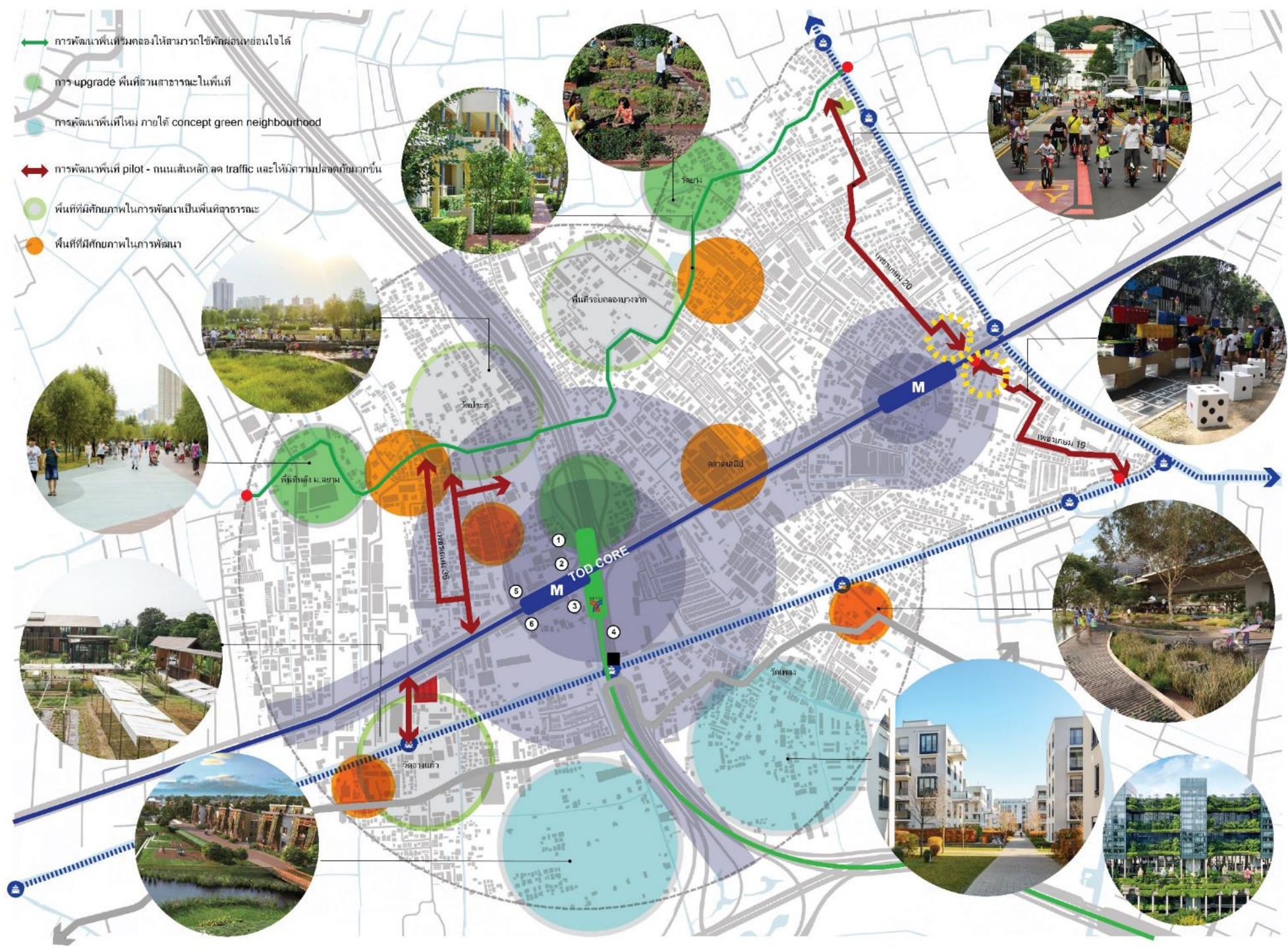


Scenario 2: **Health and Wellness**

Promote greenery concept and utilize the lands through environmental improvement in order to enhance the local residents' health and wellness



1. Restoration of waterways along Bang Chak Canal
2. Conversion of empty spaces into green public space, potentially support flood mitigation at proposed location
3. Public spaces upgrade below road and BTS/MRT structure and the area around Bang Wa Station
4. Existing small pocket spaces in the community areas to be turned into pocket park to support local uses such as urban farming
5. Development of sustainable eco-residential zones with mix used support facilities to showcase green neighborhood development
6. Traffic filtering, access restriction and temporary downgrade specific roads to function as public area to support local uses and safety
7. Streetscape improvement and regeneration of highlighted streets



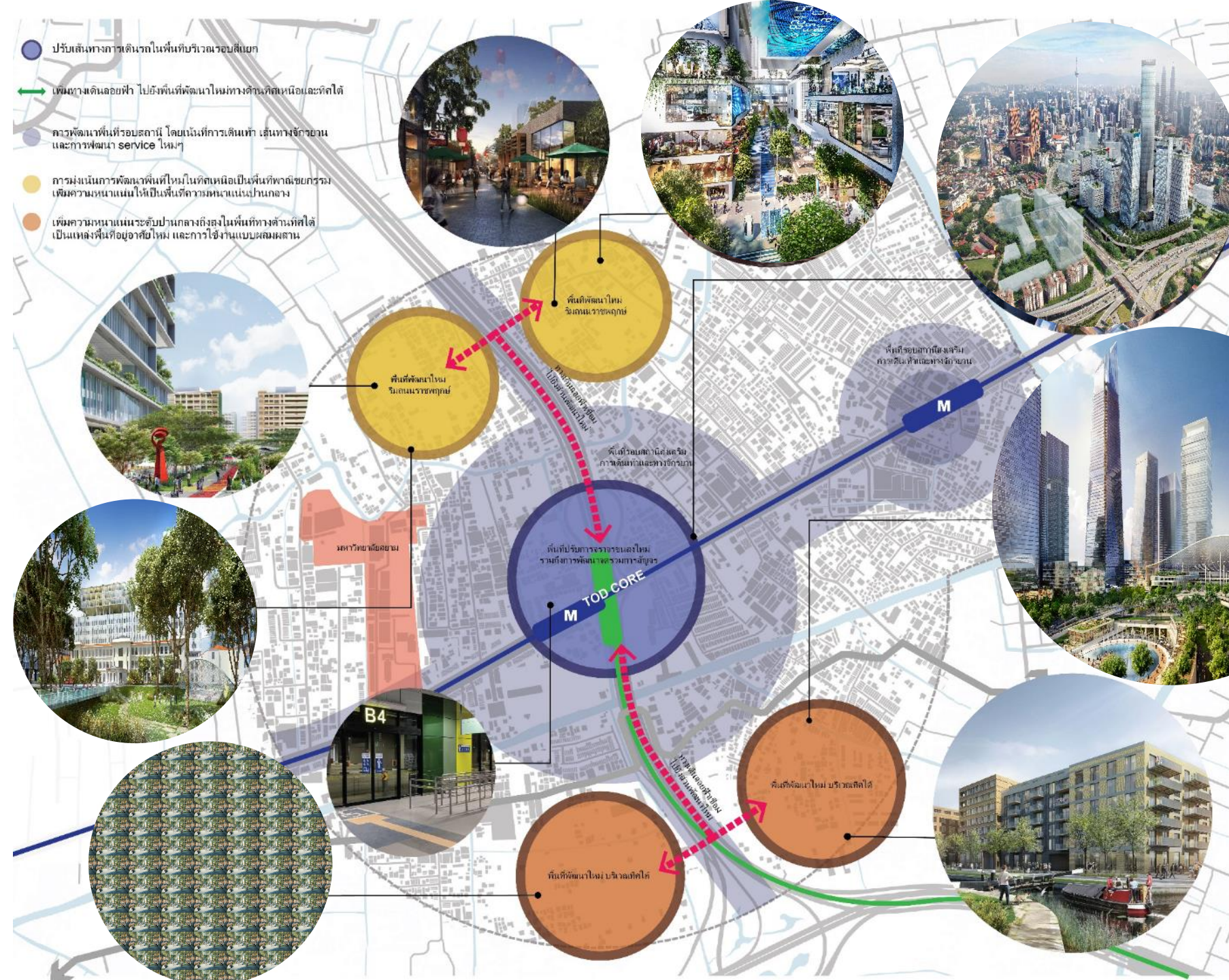
Scenario 3:

Community, Collaboration, Knowledge and Innovation

Promote Bang Wa area to be an alternate city of business district through the integration of local community and business/ private sector investment



1. Traffic reconfiguration along the Ratchpruek Road around Bang Wa Station
2. Public spaces upgrade below road and BTS/MRT structure and the area around Bang Wa Station
3. Conversion of vacant / degraded building stock in station core area into offices and spaces for SMEs and creative industries at the area behind Siam University
4. Proposed Commercial facilities to support Siam university along Ratchapruerk Road
5. Vacant zone at the south of the site to be developed as a new mixed use residential quarter including affordable ones.
6. Creation of sky bridges to connect the mixed use commercial zone in the north and the new residential quarter in the south to the Bang Wa Station.
7. Creation of public realm around the station core acting as station plaza with universal design



Challenges and Opportunities

The Transit-Oriented Development Plan (TODP) for Bang Wa and KBL is a timely opportunity to think differently about neighbourhood planning in Bangkok. Around the world, the Covid-19 pandemic has made cities think about how they can foster healthier environments and lifestyles as well as build resilient cities and societies.

Vision Statement

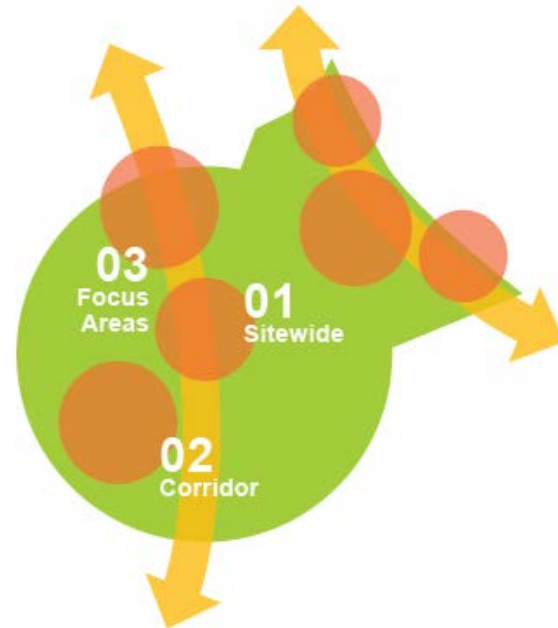
To create a purposeful, connected, vibrant, inclusive and sustainable urban destination through an equitable TOD.

TOD Pillars

People

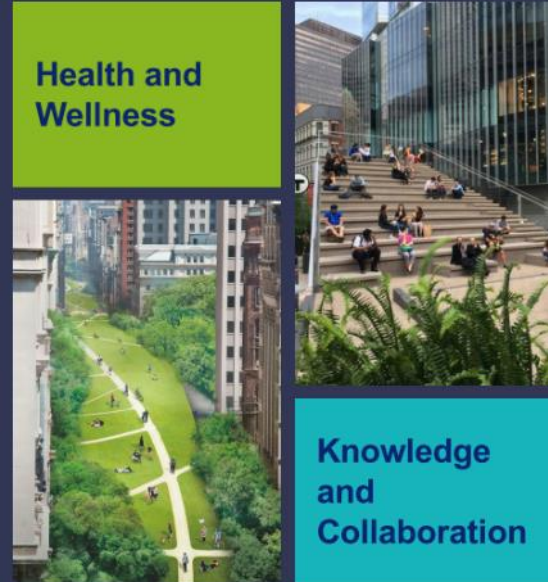
Place

Opportunity



TOD Uses

Health and Wellness



Cultural Heritage and History



Knowledge and Collaboration



Challenges and Opportunities

Public Participation

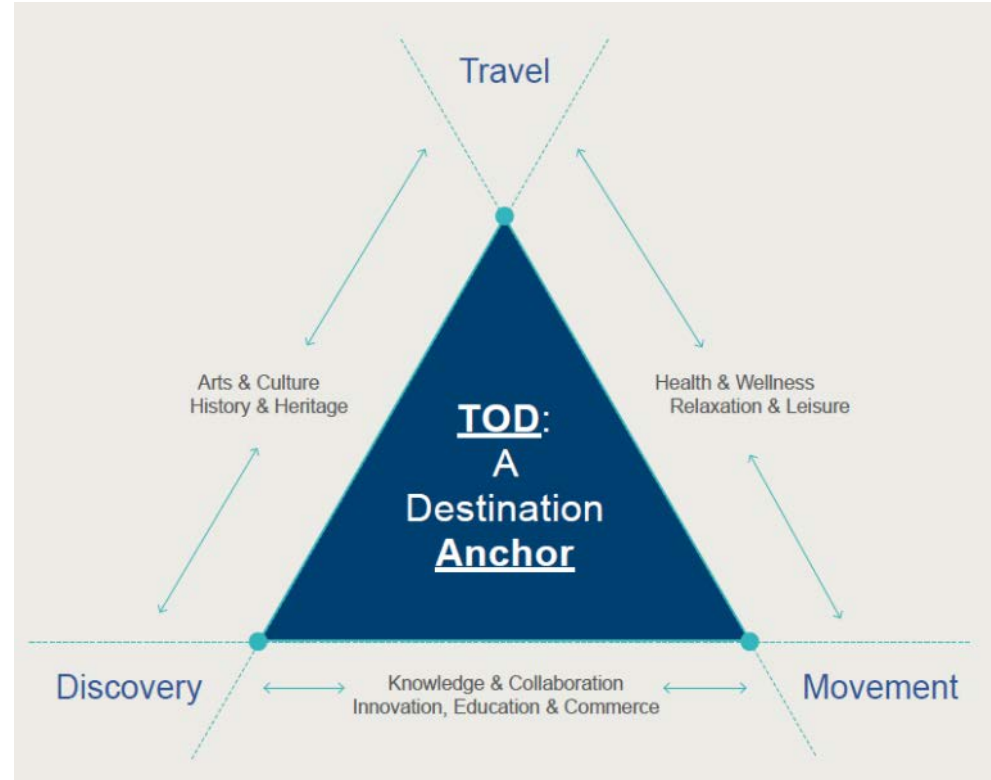
Sharing of proposed scenarios with the community in a workshop



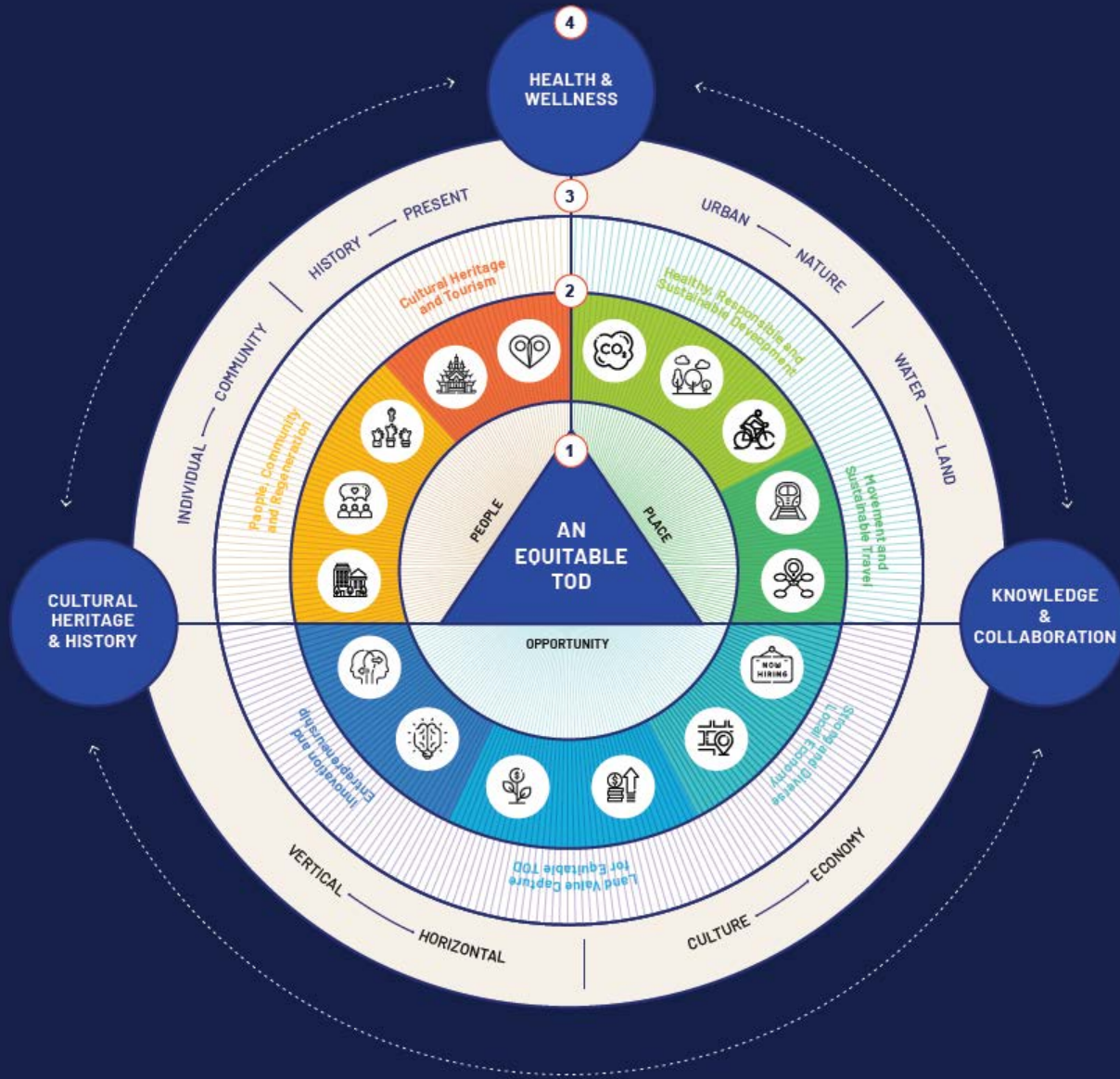
Challenges and Opportunities

Public Participation

Sharing of proposed scenarios with the community in a workshop



Lessons Learned and Key Risks

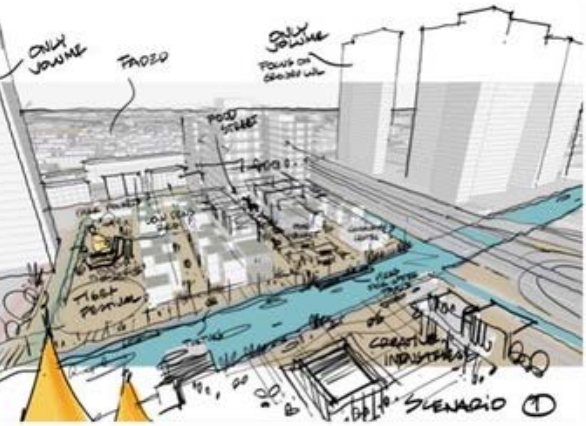


Lessons Learned

- Learning on Equitable TOD
- SDGs
- Stakeholder Engagement
 - Stakeholder Analysis
 - Public Participation Process

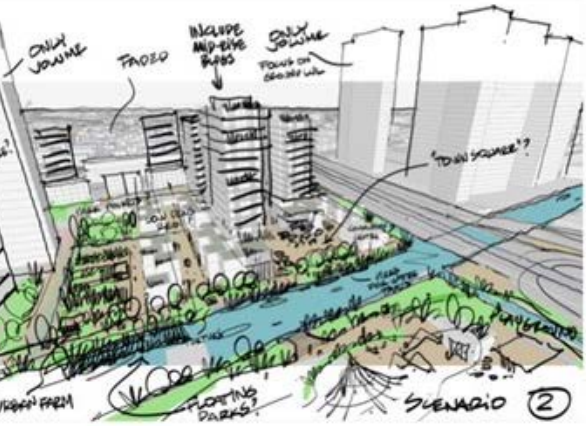
Key Risks

- TODP Implementation
- Proper Regulation for Bangkok's Context.



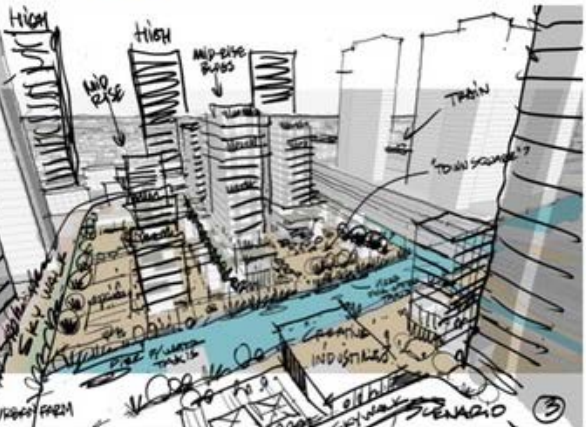
Scenario 1

Heritage & Culture



Scenario 2

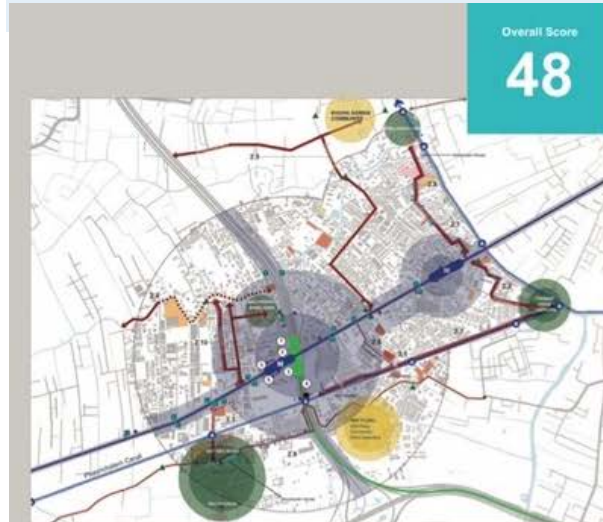
Health & Wellness



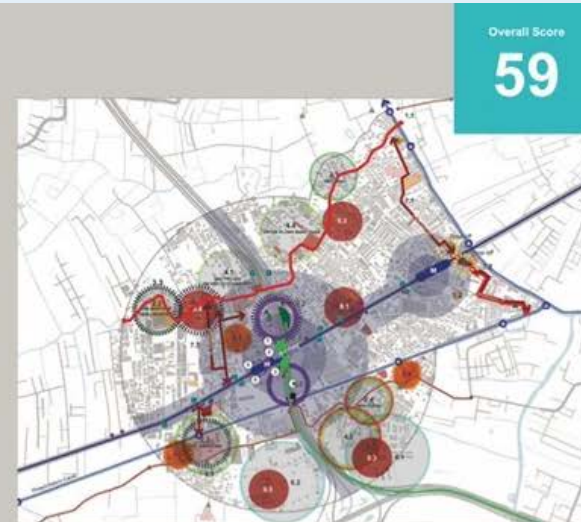
Scenario 3

Knowledge & Collaboration

Thank YOU.



Scenario 1:
Culture and Heritage



Scenario 2:
Health and Wellness



Scenario 2:
Knowledge and Collaboration