

Urban Action : Smart City 4.0 Development

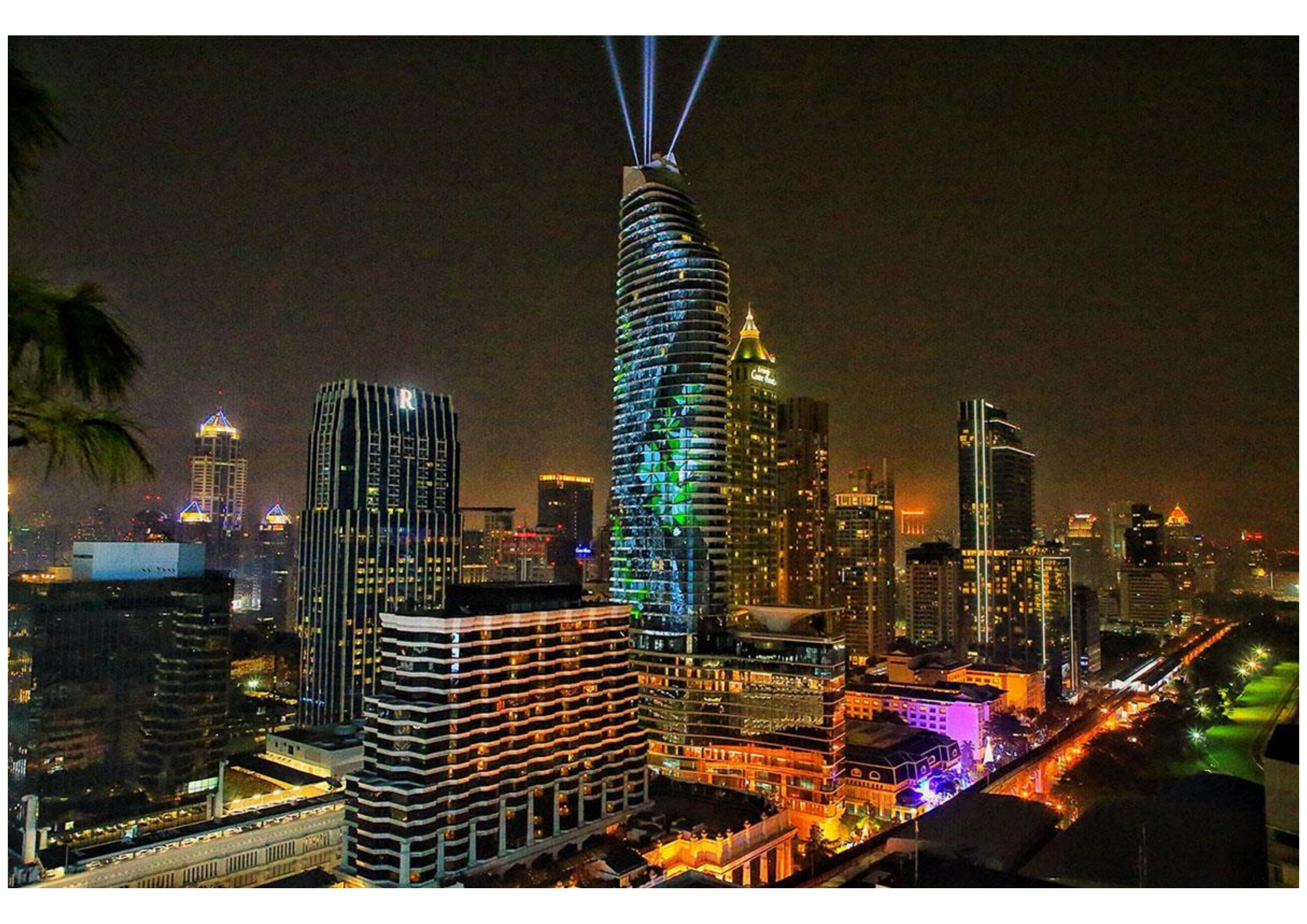
Asst.Prof. Pongporn Sudbanthad

15th NSTDA Annual Conference 2019 - Mar 26th , 2019



MRB Project with MQDC





Icon Siam Project



Whizdom 101 Project with MQDC



Project is under development and expected to be completed by 2018. All Perspectives are conceptual only and are subject to change without notice at the discretion of the developer. The developer reserves the right to make additions, deletions and modifications to the project as may deem appropriate or desirable. Dimensions and square footage are approximate and may vary.

BEST INFRASTRUCTURE


RANGE OF
VARIOUS TYPES OF RESTAURANT,
SHOPPING, ENTERTAINMENT,
LIVING & ACCOMMODATION,
SPORT & EXERCISE
AND MANY MORE


GOOD ENVIRONMENT
BIG PARK


THAILAND'S 1st
FULLY-INTEGRATED
DIGITAL ECONOMY


PRIME AREA
WITH DIRECT
BTS ACCESS


COMING
TOGETHER OF
PUBLIC & PRIVATE
SECTORS


LIFESTYLE INTEGRATING
RESIDENTIAL & COMMERCIAL
FACILITIES INTO ONE
DIGITAL PLATFORM



Forestias Project with MQDC



office building, community center, family life center, 4-star business hotel and serviced apartment



Medical Complex



Whizdom Condo



Town Center



6-Star Boutique Hotel



Mulberry Grove Residences



Forestias Forest



Forest Pavilion



The Aspen Tree Residences

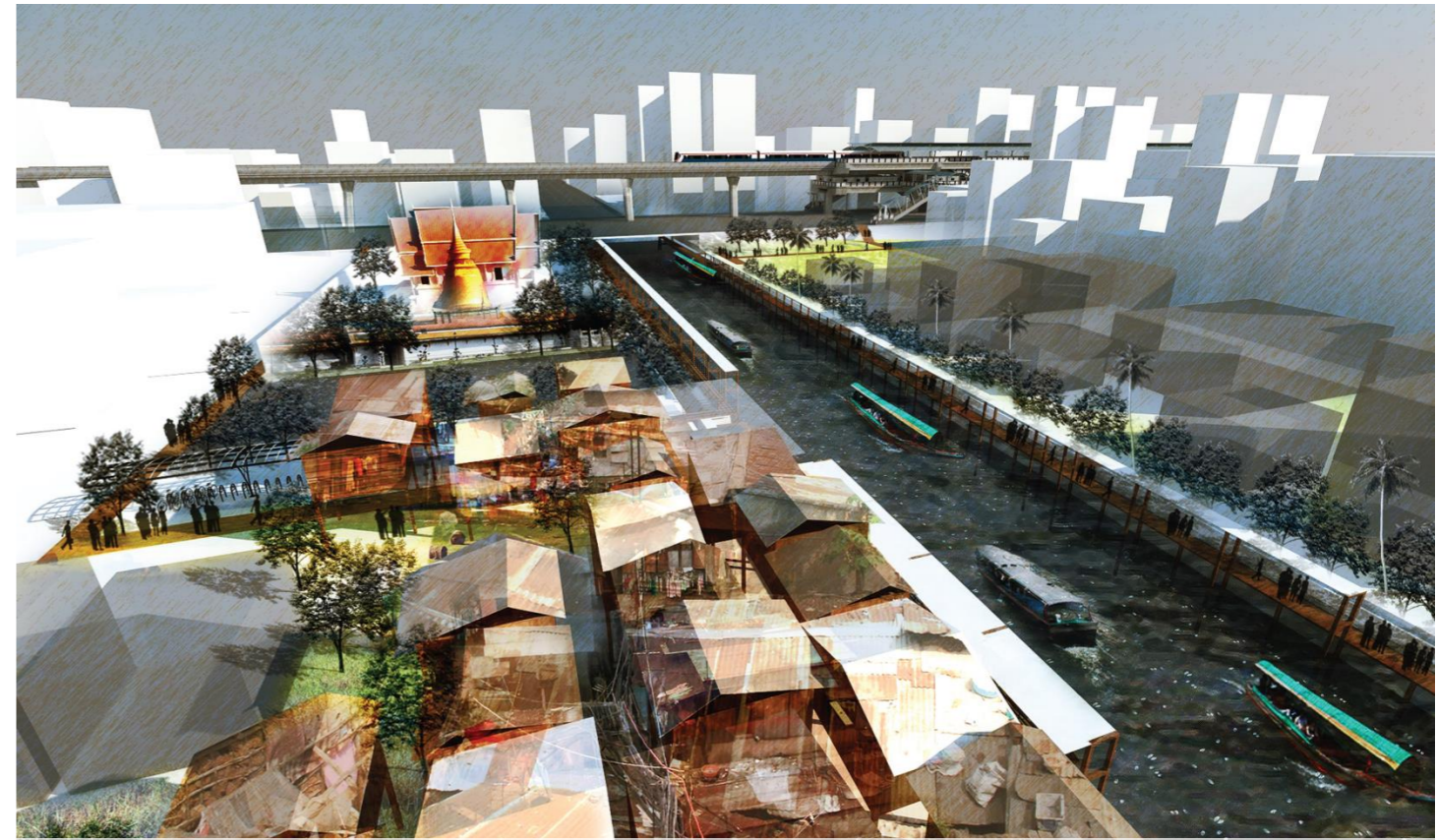
From Holcim Awarded Project: Resurrection of Urban Canal System in 2014



The *Resurrected Canals* concept offers an answer to the notoriously congested traffic conditions in Bangkok, Thailand. The project proposes to revive the ancient canals of the city to create a modern network of waterways and supplement existing Metropolitan Rapid Transit (MRT) systems. A train-to-boat transfer station and pier will be built as a prototype, to be positioned along various intersections of canal lines and rail stations. The development of water transport will not only reduce commuting time for residents, but also provide social services at key locations. This major infrastructure project will also introduce flood control and pollution reduction measures.



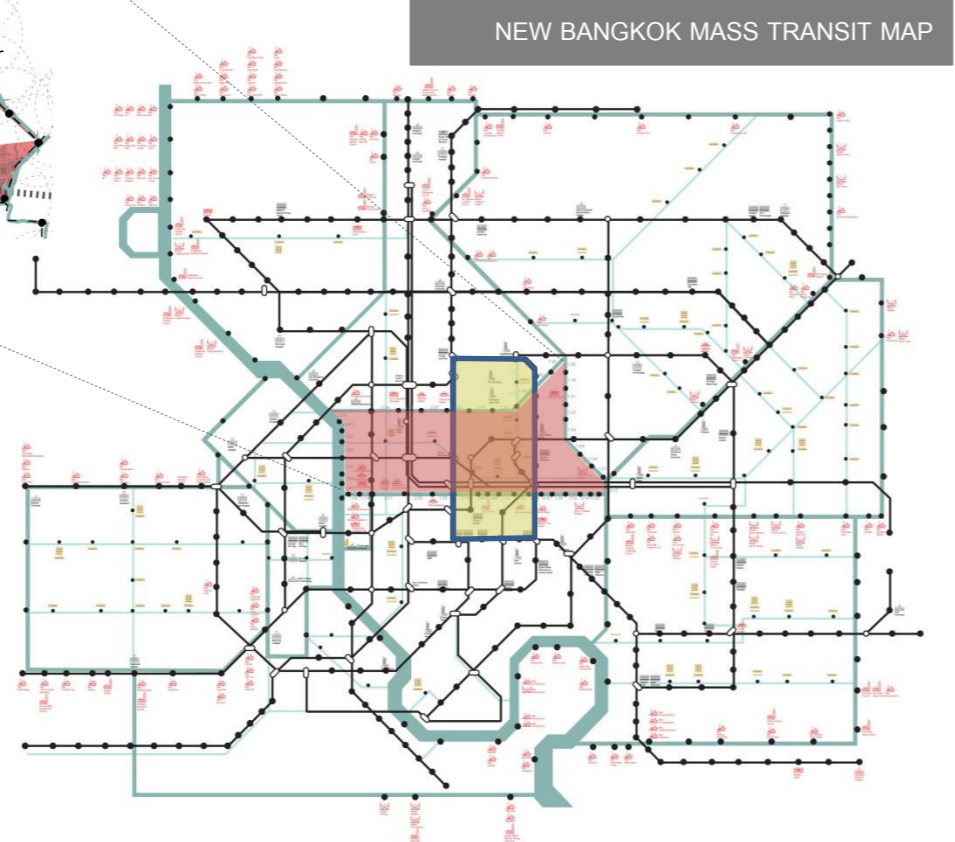
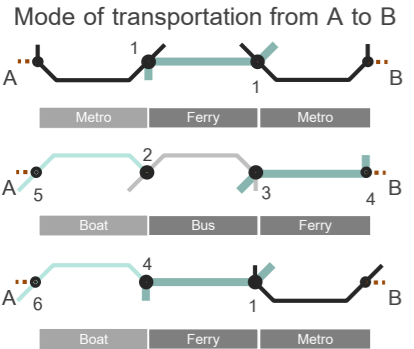
The jury applauds the bold vision of the project, particularly its aim to rehabilitate a historic city network, which – though crucial for the definition of the urban fabric – was unfortunately compromised due to both formal and informal growth over time. Furthermore, the idea to combine technical exigencies with social needs is an excellent feature of the planning proposal, one that reclaims infrastructure as residing in the public domain and being truly important matter of concern for society at large.



Synthesis photo: The project will not only create the water transit network and also the transfer station but also urban and community space.



Master Plan Phase 1: Chao Phraya - Saen Saeb - Lad Phrao - Bang Sue



NEW BANGKOK MASS TRANSIT MAP



Overall image: Main Transfer Station area (Bang Sue Canal) and connection to BTS station (Saphan Kwai) with bike, pedestrian and skywalk



Overall image: Main Canal Community area (Bang Sue Canal) and Sub Transfer Station

Master Planning Progress in 2017



Master Planning Progress in 2018

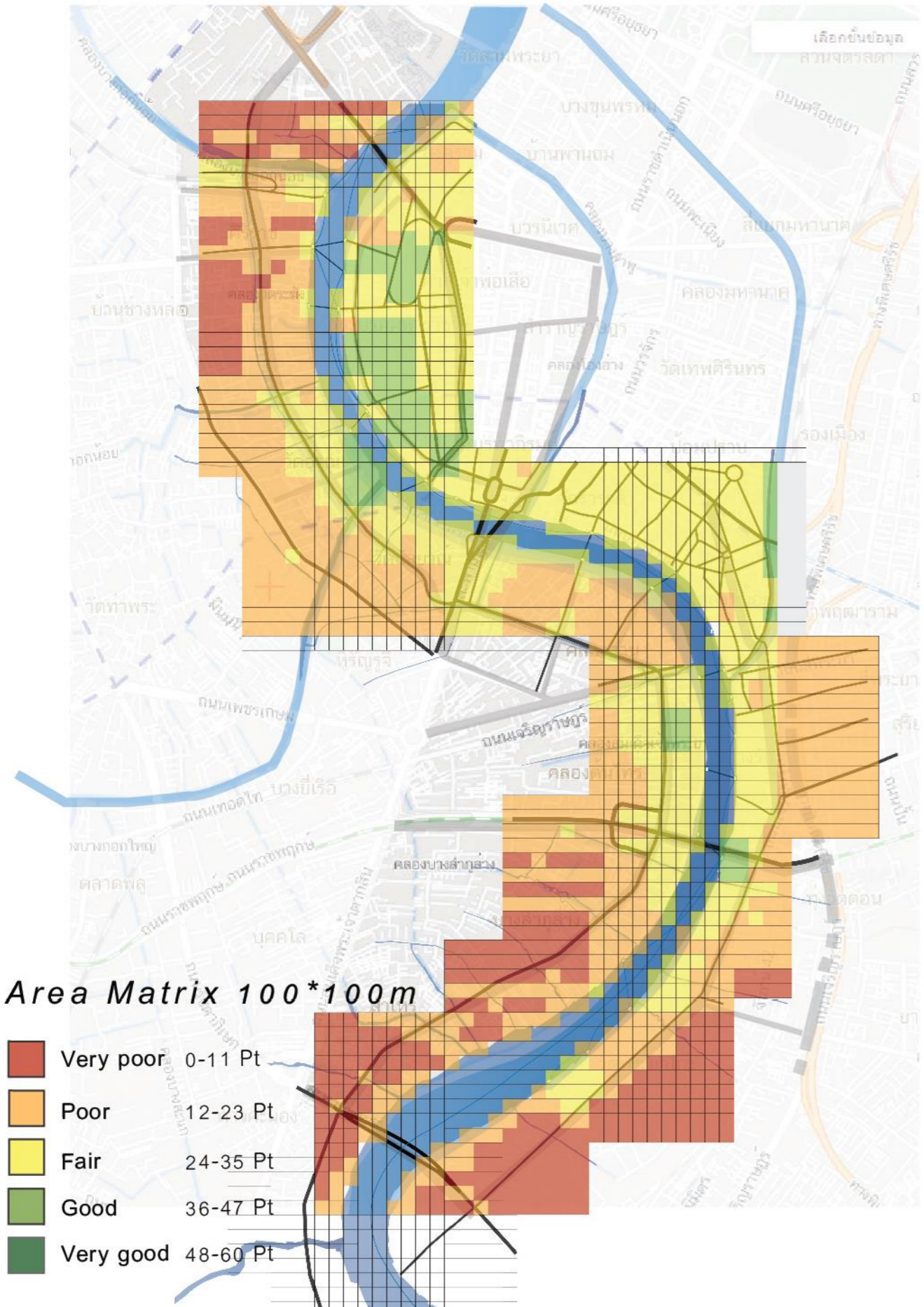




Urban Action-Learning Process for Chao Phraya Tourism TOD Master Planning in 2017



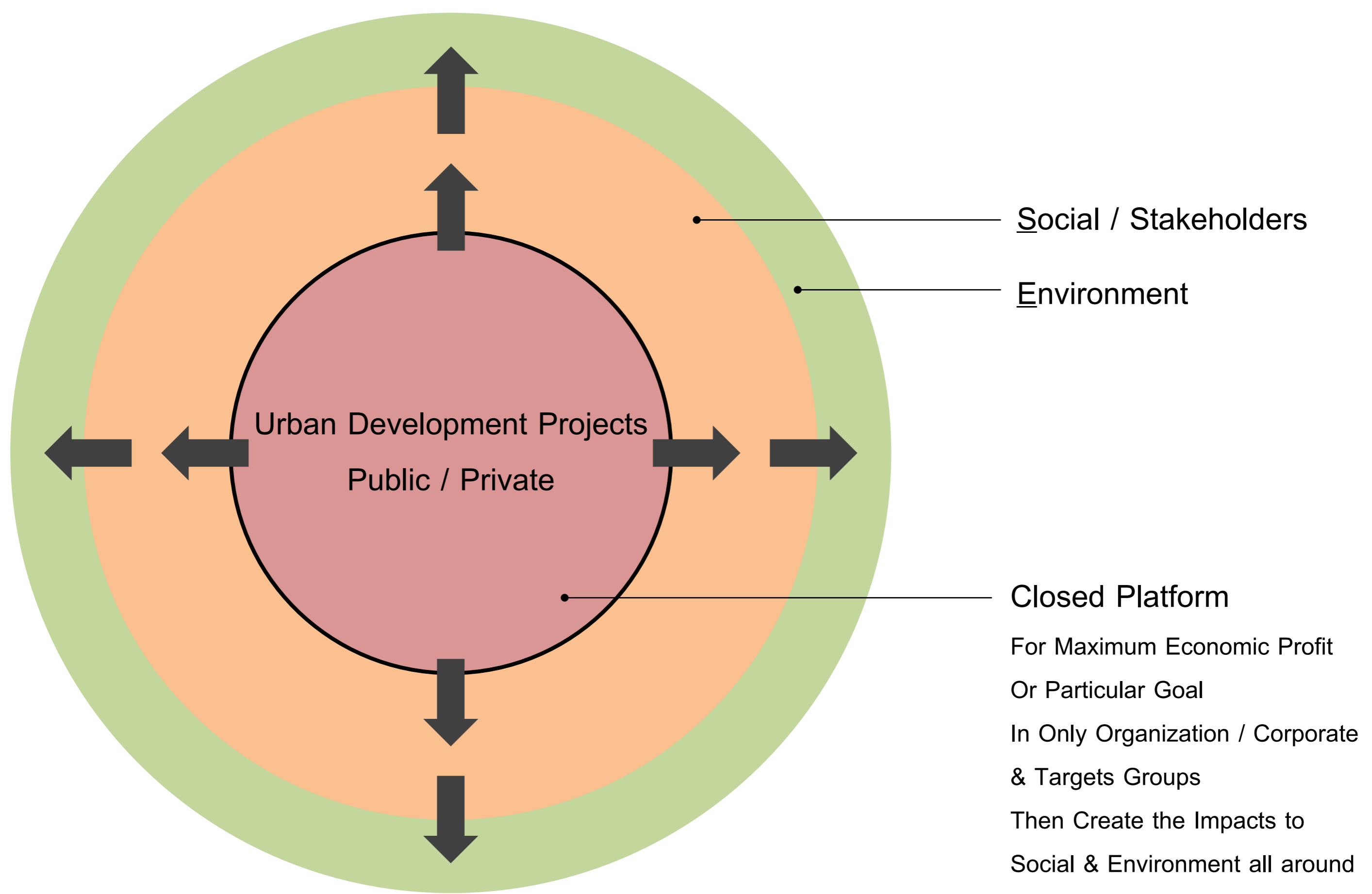
Area Evaluation - Urban Layers & Matriculation / Overall Analysis



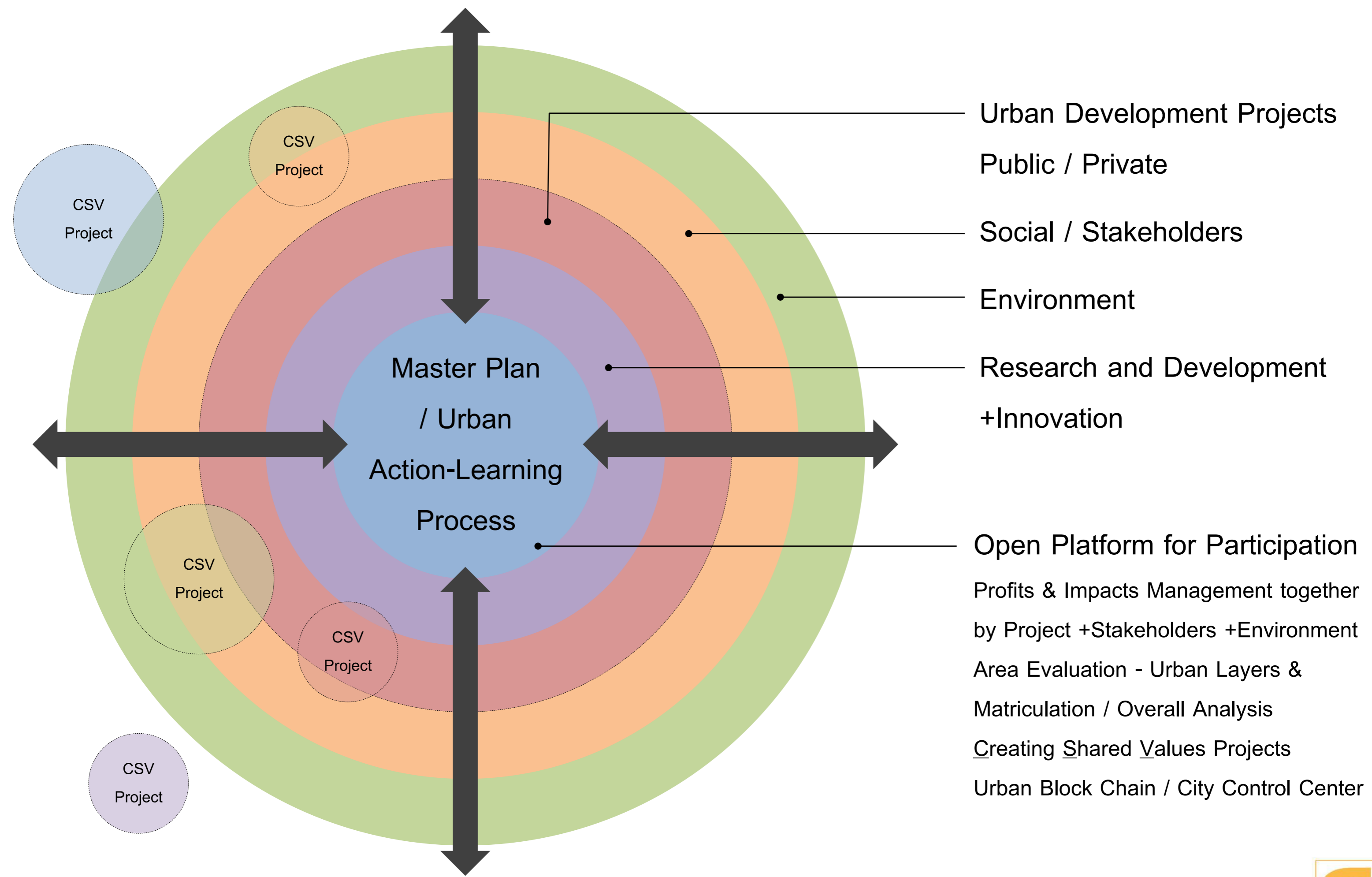
From Chao Phraya Tourism TOD Master Planning

Urban Layer	From Chao Phraya Tourism TOD Master Planning																Remark
	Tourism Intro	Events & Festival Supports	Tourist Destination Value	Number of Tourists	Transit Connectivity	Vehicles & Road	Bikes & Walkways	Boats & River	Trains & Rails	Traffic Situation	Development Projects	Tourist Safety Maintenance	Service Facilities	Environmental Impacts	Urban Relationship	Totals : Color code	
Row2/5	0	0	0	0	2	1	0	0	0	1	7	2	2	2	1	9	
Row2/6	0	0	0	0	2	1	0	0	0	1	7	2	2	2	1	9	
Row2/7	0	0	0	0	2	1	0	0	0	1	7	2	2	2	1	9	
Row2/8	0	0	0	0	2	1	0	0	0	1	7	2	2	2	1	9	
Row2/9	0	0	0	0	2	1	0	0	0	1	7	2	2	2	1	9	
Row2/10	4	0	2	2	4	2	1	0	0	1	7	2	2	2	1	15	
Row2/11	4	0	2	2	4	2	1	0	0	1	7	2	2	2	1	15	
Row2/12	0	0	0	0	2	1	0	0	0	1	7	2	2	2	1	9	
Row2/13	4	2	1	1	3	1	1	0	0	1	9	3	3	2	1	16	
Row2/14	0	0	0	0	5	0	0	5	0	0	4	0	0	4	0	9	River
Row2/15	0	0	0	0	5	0	0	5	0	0	4	0	0	4	0	9	River
Row2/16	7	2	3	2	9	0	2	5	2	0	8	2	2	4	0	24	River
Row2/17	7	2	2	3	4	0	2	0	2	0	8	2	2	4	0	19	
Row2/18	9	2	4	3	10	3	3	0	2	2	9	3	2	4	0	28	
Row2/19	12	4	4	4	11	3	4	0	2	2	10	4	2	4	0	33	
Row3/1	0	0	0	0	2	1	0	0	0	1	7	2	2	2	1	9	
Row3/2	8	2	4	2	5	1	3	0	0	1	7	2	2	2	1	20	

Urban Development Projects & Conventional Process



Master Plan / Urban Action-Learning Process



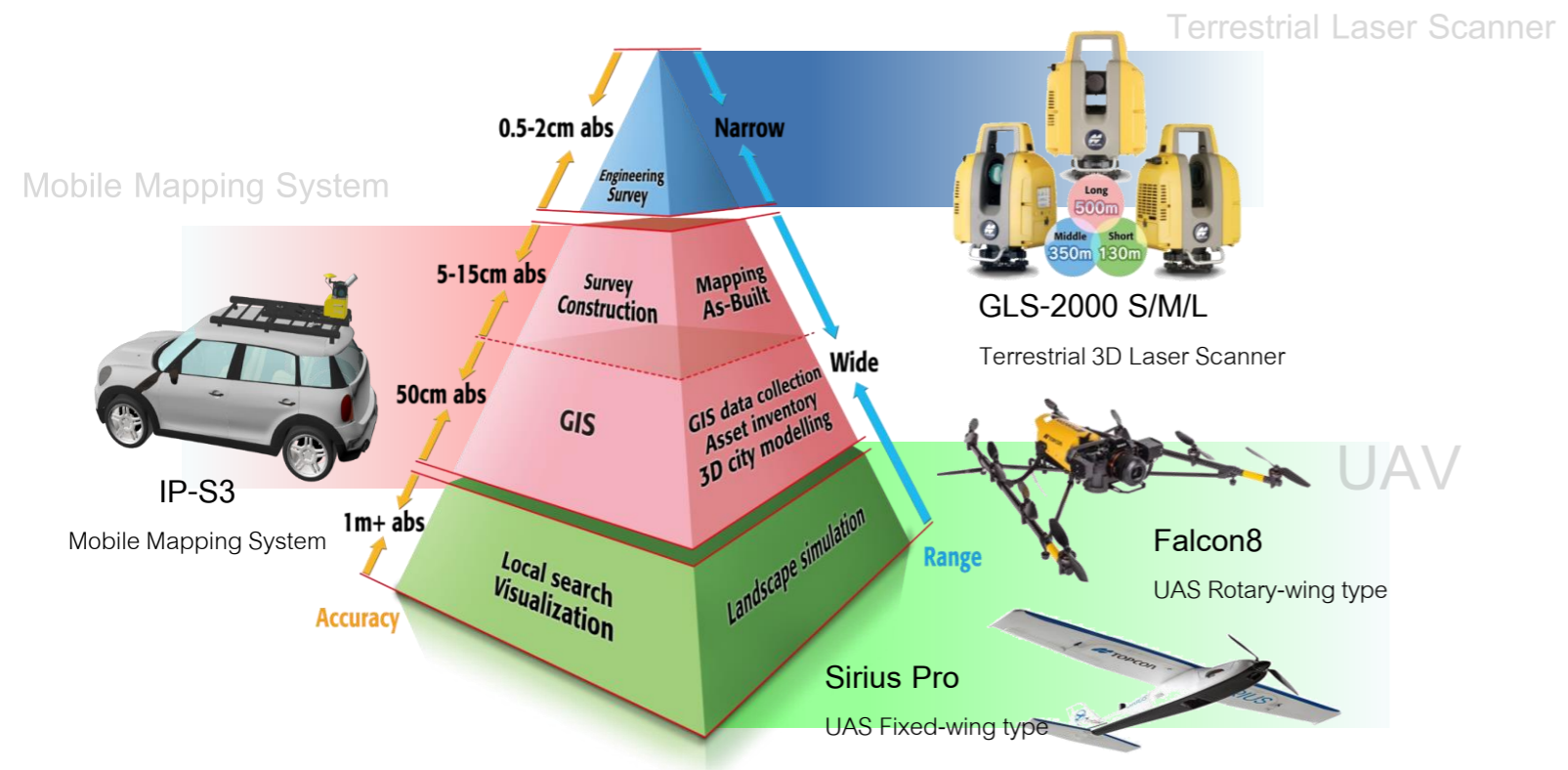
Urban Action-Learning Tools : GIS Scanning & 3D Model builder



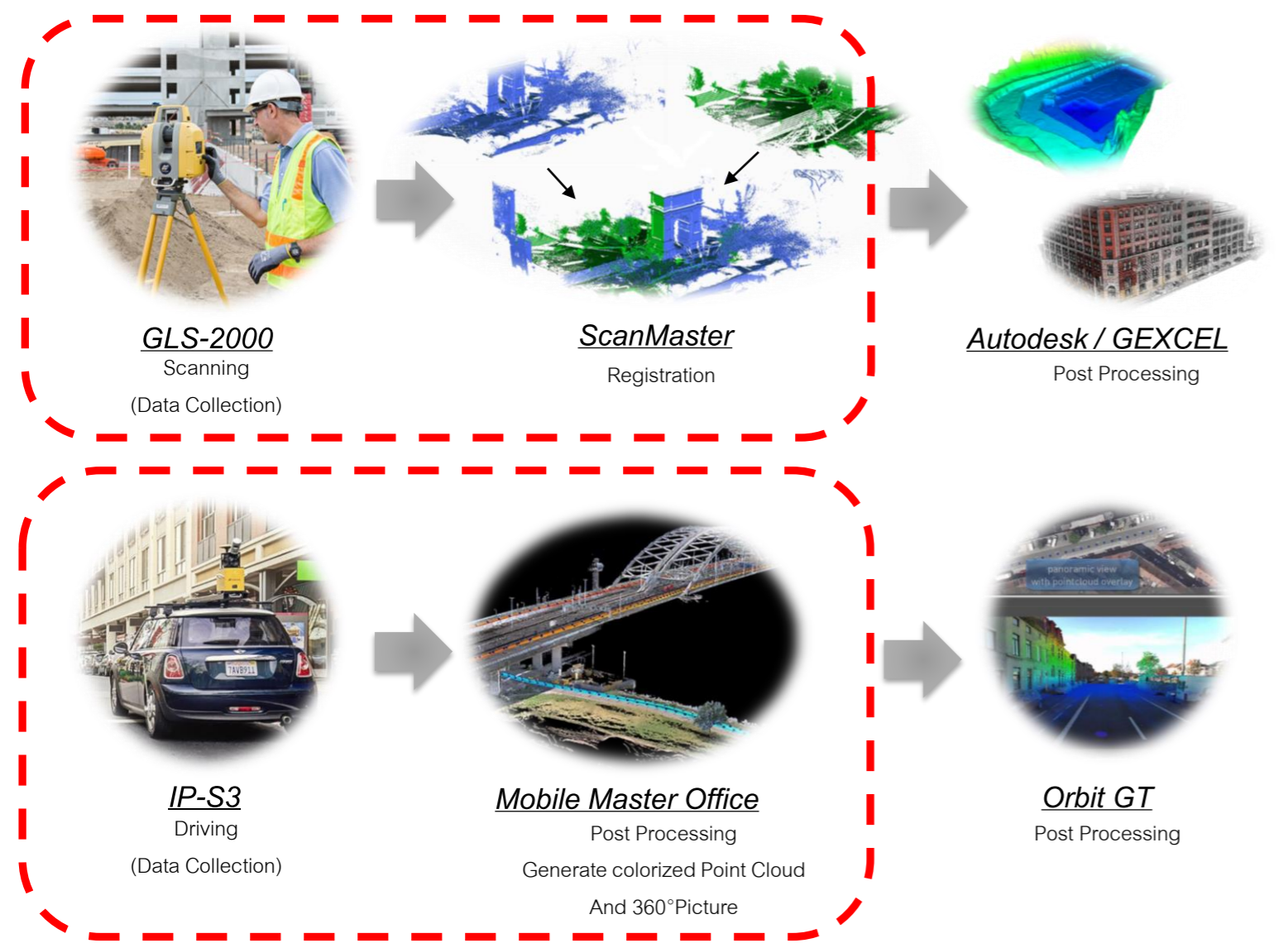
From Lad Phrao Canal Master Planning



Urban Action-Learning Tools : Beyond to Smart City Control Center



Scanning Workflow



GIS Scanning Hardware + Software

Data Storage and Management System

- Static Data Collection System (Often Update)
- Dynamic Data Collection System (Real-time)
- Architecture, Engineering & Construction Softwares
- From Building Information Model (BIM)
- To City Information Model (CIM)

Human Supervisor + AI Analysis System

- Urban Layer / Indicators Built
- Area Evaluation & Rate
- Problem Notification
- Possible Equation & Hypothesis

Solutions & Propositions

Video / Perspective & Animation for Understanding

Implementation / Open & Transparency Platform

- Urban Block Chain Built
- Censor & Alert System