



# POLICY BRIEF

Accelerating Infrastructure Development in Indonesia

## PUBLIC PRIVATE PARTNERSHIP IN MEGA INFRASTRUCTURE PROJECTS

With a total population of more than 10 million people, Jakarta experiences problematic annual issues ranging from congestion due to the high volume of traffic and floods. To overcome this matter, **Centre for Sustainable Infrastructure Development** proposed the concept of multi-function tunnel called the Public Railways and Stormwater Infrastructure (PRASTI) tunnel which integrates airports, mass rapid transport (MRT), flood control system, commercial areas and telecommunication.

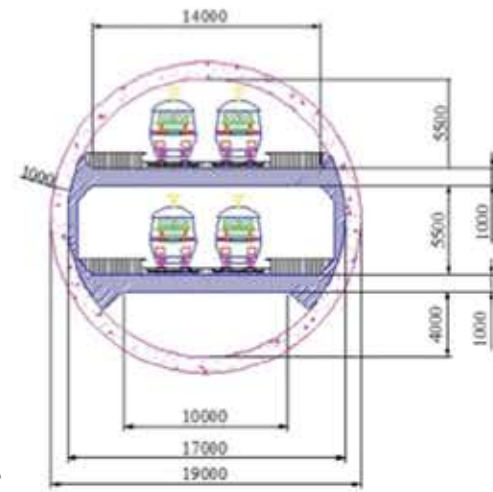


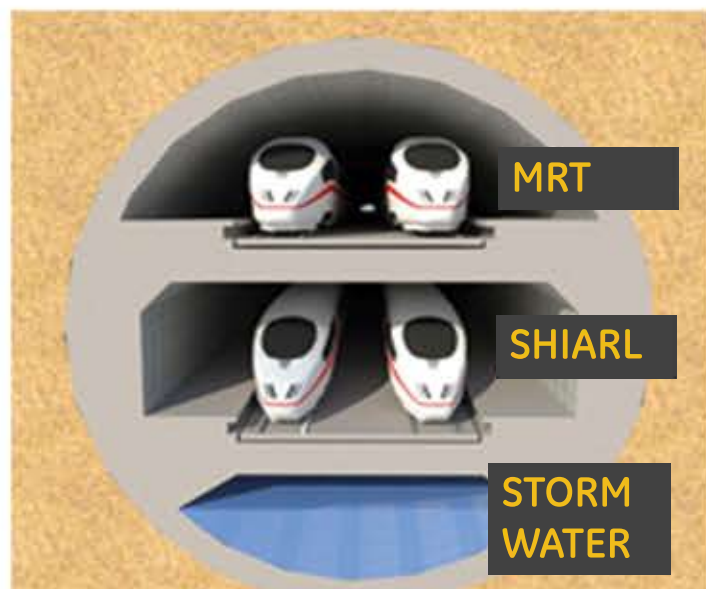
Figure 2  
Dimension of PRASTI Tunnel

The integrated functions based on value engineering approach is expected to provide added value to the project. The result showed that the initial cost of PRASTI Tunnel development which comprises a diameter of 19 m span along 9 Km worth 20.4 trillion rupiah and takes about 167.89 billion rupiah for O-M cost with IRR of 10.67%.

Although the IRR shows attractive figure, it still not meet Minimum Attractive Rate of Return (MARR) that set about 12%. Therefore, a public – private partnership scheme is recommended to improve the feasibility thus attract private sector in participating in the project.

A simulation conducted to produce optimal financing schemes for both government and private sectors. This simulation involves scenarios that consider public and private sharing in the initial cost; operational and maintenance costs; and revenue. The result can be seen on table 1.

Figure 1  
Visualization of PRASTI Tunnel



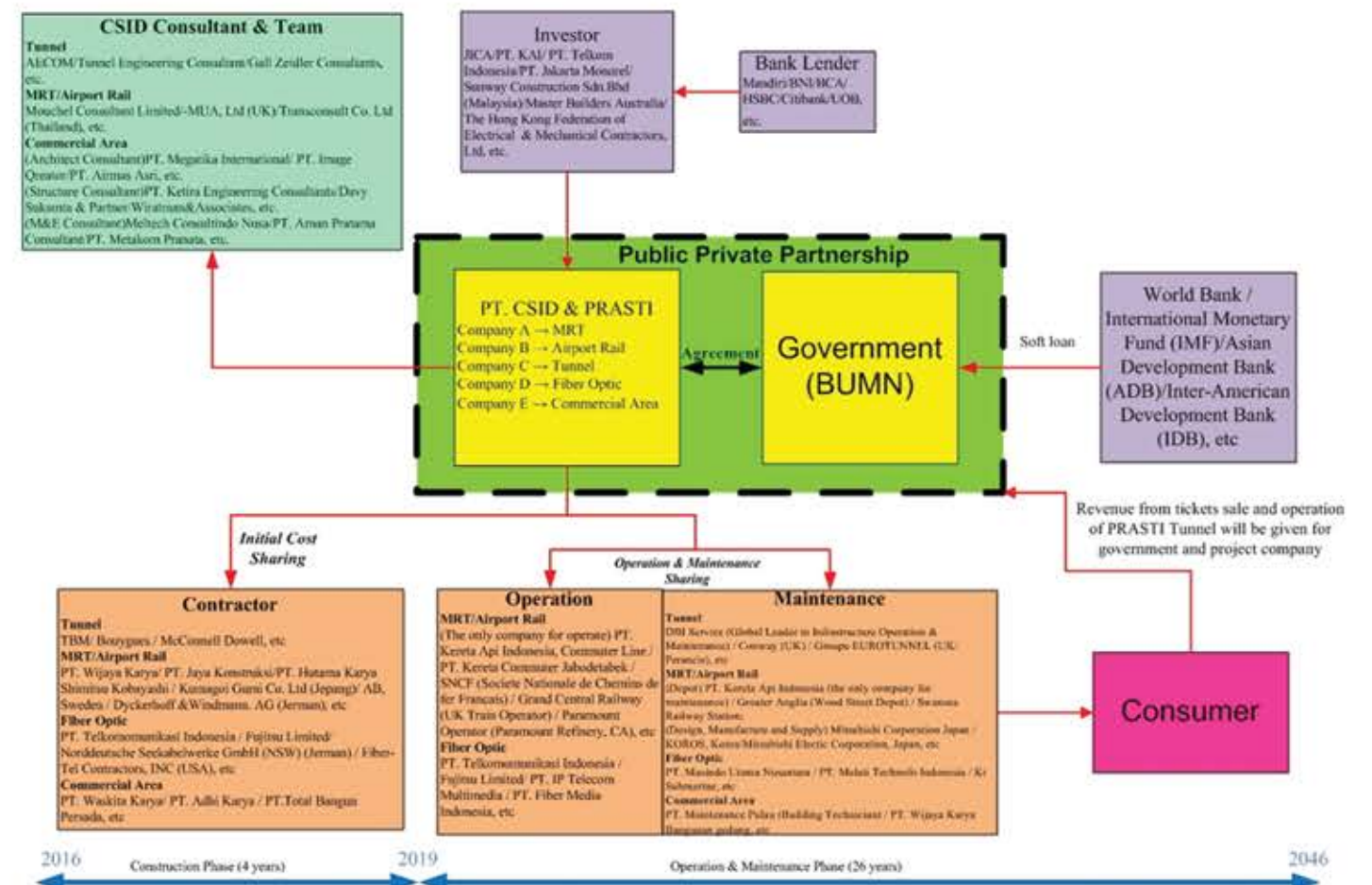
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Table 1.  
Simulation Scenario of PRASTI Tunnel

Scenario	Initial Cost Sharing (%)		O&M Cost Sharing (%)		Revenue Sharing (%)		IRR
	Government	Private	Government	Private	Government	Private	
1	60	40	60	40	40	60	18,58%
2	60	40	50	50	40	60	18,40%
3	60	40	40	60	40	60	18,23%

Figure 3.  
PPP Institutional Scheme in PRASTI Tunnel Development





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## GENERATING SMART BUILDING USING VALUE ENGINEERING

Technology developments have a major impact on the history of civilization. Newest technology arise to give positive impact to the quality of life. Information and Communication Technology (ICT) is believed as one of the most substantial invention considering its impact to the human life these days. ICT also plays significant role in changing behaviour various industries such construction industry into an automation system. It can be seen from vast development of Smart Building around the world.

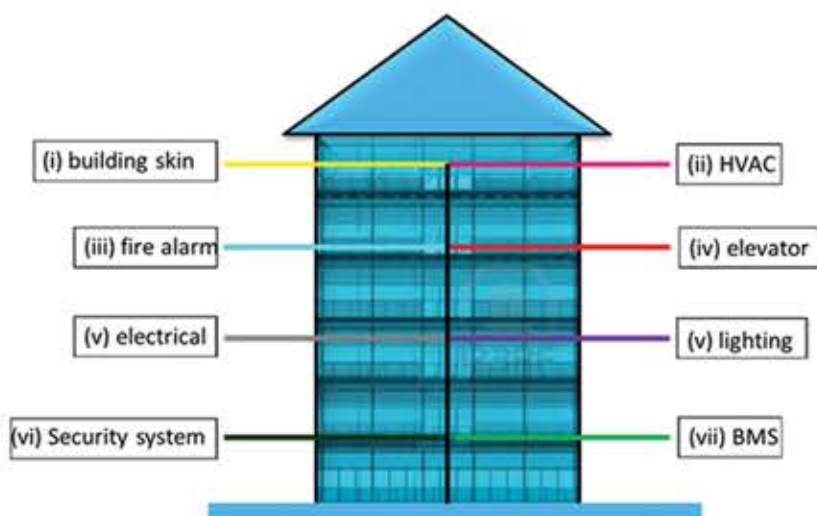


Source: <http://www.asiagreenbuildings.com>

The use of value engineering methods in smart building concept has been generating functions that integrated in a Building Management System (BMS). It consists of all existing system in the building and managed through a command control system.

As a comparison, construction cost of smart building concept pays 25% greater than the initial cost of conventional buildings. But the operating and maintenance costs during the life cycle of 30 years, smart building could save up to 38% than conventional buildings. In longer term, smart building argue as one of the solution to increase building efficiency and promote sustainable development for construction sector.

Figure 4  
Smart Building Concept



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## IMPROVING PROCESSES IN EXPORT SHIPPING CARGO IN SEA FREIGHT MANAGEMENT

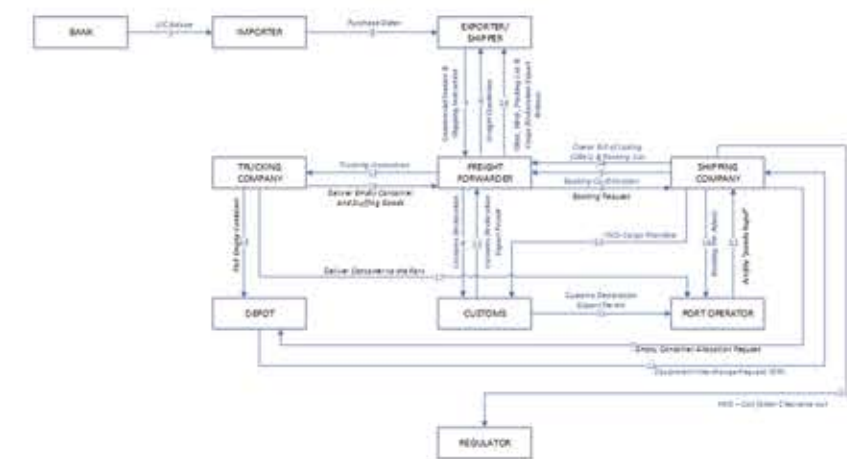
International trade market expansion occurred mainly in Asia - Pacific region resulting in demands efficiency of logistics activities, including the quality level of security, safety and services. Indonesia's logistic sector through port connectivity is expected to integrate islands and connects with worldwide economic activities, hence increasing national competitiveness in global market.

Established port such Port of Singapore has five major processes undertaken to perform export shipping cargo namely Shipment Notification Process, Obtain Empty Container Process, Pick and Pack Process, Prepare Export Documentation Process, dan Release Export Process.

Meanwhile, Port Klang Authority (PKA), Malaysia has four processes comprises of Document Preparation Process, Inland Transportation and Handling Process, Customs Clearance and Technical Control Process, and Port & Terminal Handling Process

On the other hand, Indonesia marine cargo export activities conducted through various consideration as the flow of activities, sequence and synergic document processes. It is developed into four major processes including Business to Business Phase, Cargo Management System, Stuffing Goods into Empty Container, Vessel Management System (VMS).

Figure 5.  
Stakeholder Interaction in Indonesia's Marine Export Cargo Activities



Improving export system process in Indonesia's port required following actions but not limited to separate the functions of freight forwarder with warehouse operators to improve the efficiency of storage and conduct a review about effectiveness of process using export card.