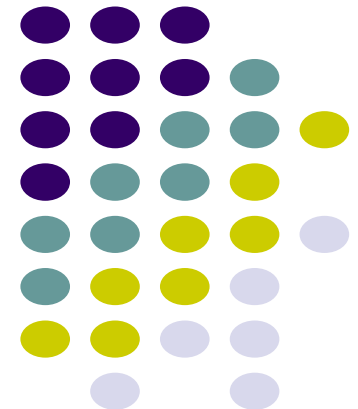


Toward the Competitiveness of Construction Industry

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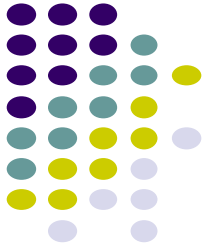


3rd ODA Project Education & Human Development Seminar at Jakarta MRT
Jakarta, 4-8 March 2015

Outline

1. Introduction
2. Challenges of construction industry
3. Direction of development
4. Closing remarks – The importance of knowledge and innovation





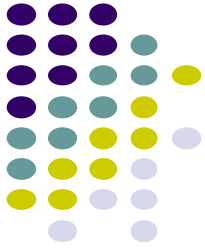
Introduction

1. Construction sector plays an important role in Indonesian economic development:
 - contributes significantly to GNP;
 - supports other sectors development;
 - represents nation's social, economic, & cultural pillar.
2. Infrastructure fund (2013):
 - 4-5% GNP; IDR 350-450 T;
 - 3 main ministries: Publ. Works, Transp., & Energy;
 - Government 70% (APBN, APBD, BUMN, Loan, PPP); private 30%;
 - to have an economic grow of 7-8%/year, it requires 6% GNP investment; equivalent to 600 T rupiah.
4. Construction sector is now in a discouraging condition:
 - limited infrastructure → investment & development obstacle;
 - low productivity & quality; damaged roads, construction & building failures;
 - high rate of construction accidents;
 - low actors' competitiveness (human resources, business entities, & sector).
5. Need to identify challenges & development direction.

Table 1: Construction Sector Contribution, GNP/capita, & Total of Manpower (2013)

| Region | GNP | | GNP/Capita | Construction Sector | | Man Power | |
|----------|---------|------------|------------|---------------------|-----------------|------------|-----------|
| | (T Rp) | Growth (%) | | (US\$) | Contribution(%) | Growth (%) | (million) |
| National | 9.084,0 | 5,8 | 3.500 | 9,99 | 6,6 | 120,20 | 5,2 |

Source: BPS, 2013



Challenges of Construction Industry

1. Construction is a very fragmented industry; at least in 6 dimensions:
 - a. **In construction process**: from materials to built infrastructure; manufacturer → distributor → supplier → sub-contractor specialist → general contractor.
 - b. **In project coordination**: owner, consultant, contractor.
 - c. **In project life cycle**; from needs to demolition; idea → conceptual plan → Pre-FS → FS → basic design → EIA → DED → procurement → construction → supervision → operation → maintenance → rehabilitation → demolition.
 - d. **In project delivery system**: DBB, EPC, DB, Performance based contract; PPP.
 - e. **In sector responsibility**: Ministry of Public Works; Ministry of Transportation; Ministry of Housing; Ministry of Telecommunication; Ministry of Energy; Electricity, etc.
 - f. **In regional authority**: national, provincial, regency, city.
2. In consequence, there is always **delay, idle, and waste**, making construction industry less competitive; planning & coordinating are very important; the basics of project management.
3. Not as in manufacturing industry, work accomplishment in construction industry depends more on talented and skilled manpower.
4. Resources are always limited; challenges become more constraining; should build not only an economic infrastructure, but **a sustainable infrastructure** in a finest built environment; **triple bottom lines principles**.
5. Making competition harder and harder.
6. Construction industry should become more and more competitive.



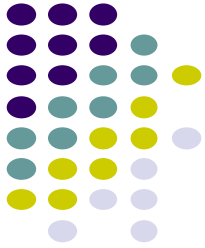
Direction of Development (1/4)

1. The future of competitiveness; creating values for money (VfM); developing sustainable infrastructure:
 - would not only **depend on productivity & efficiency**, because physical resources are always limited;
 - but **much more on creativity & innovation**, based on knowledge which is without limit.



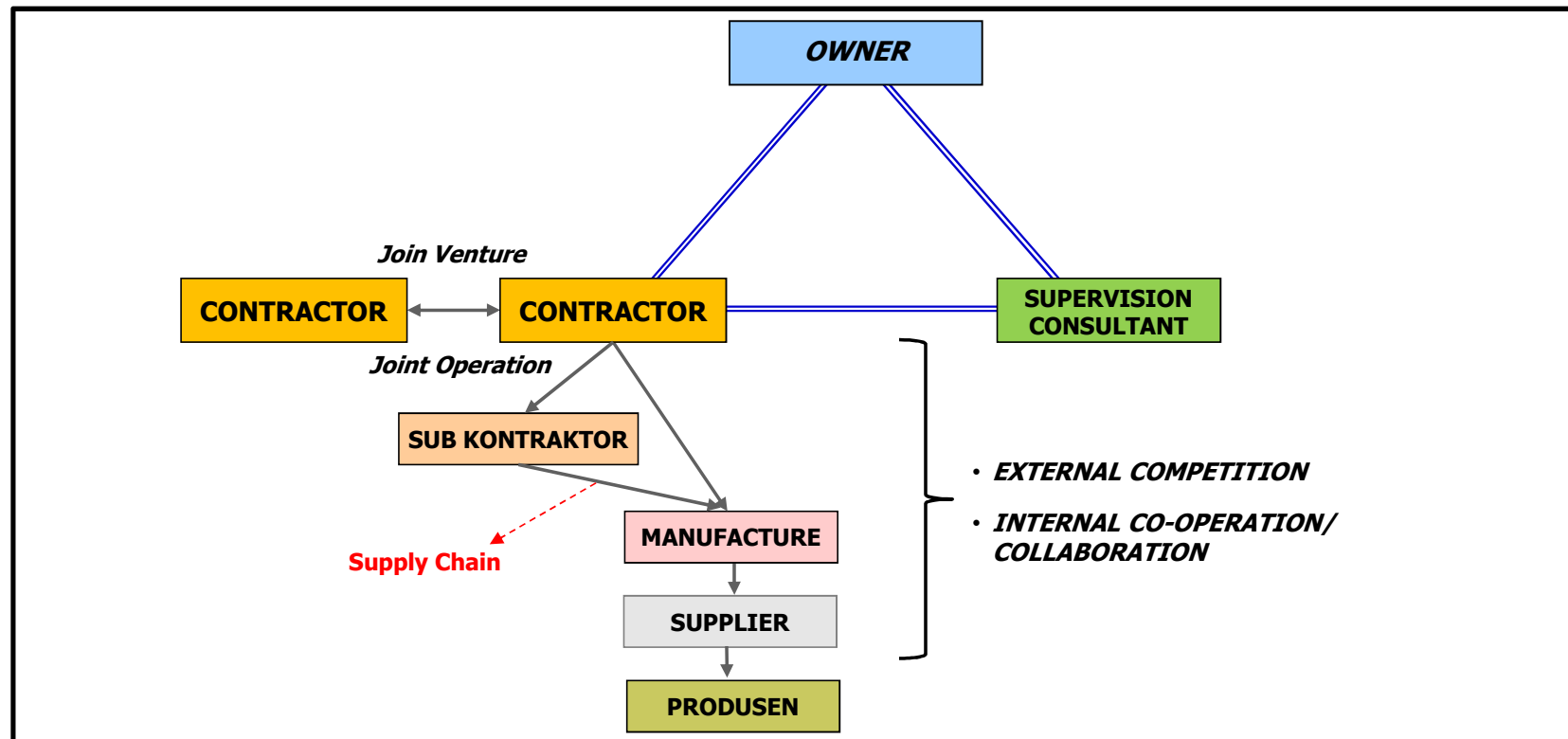
2. Keywords of creativity & innovation: **open mind, trustworthy, collaboration, multi-disciplinary knowledge.**

3. Four types of relationship:
 - a. Counter productive (lose-lose);
 - b. Competitive (win- lose) - transactional;
 - c. Co-operative (win-win) – preferred;
 - d. Collaborative (win-win) – strategic.
4. We should move from win-lose to win-win; to have internal collaboration, while participating in external competition.
5. Strategies:
 - a. Adopt **lean concept** (T, F, V):
 - enhance flow smoothness; supporting activities;
 - improve transformation;
 - create values.
 - b. Improve **supply chain management** (SCM).
 - c. Develop **integrated value chain**; JO; JV; **partnership**;
 - d. Promote **alternative project delivery** (DBB, EPC, DB, PBC, PPP, etc).



Direction of Development (2/4)

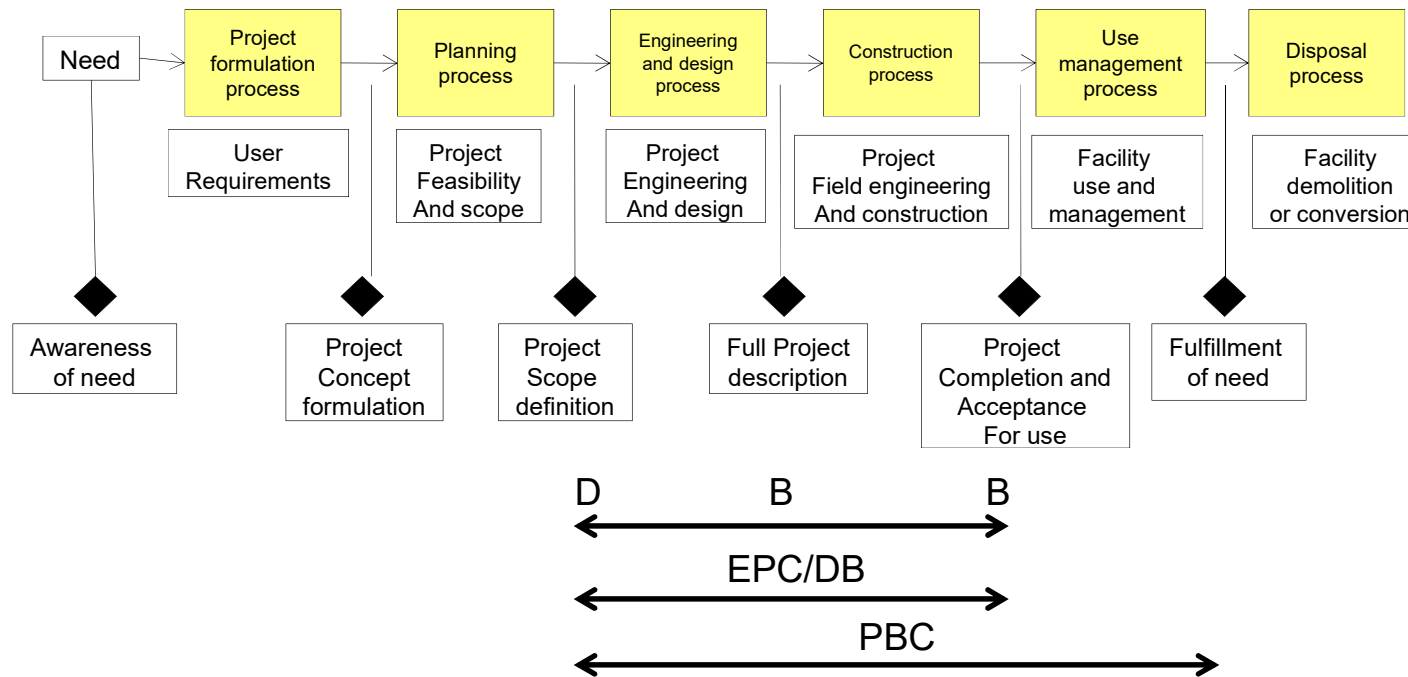
PARTNERSHIP TOWARDS INTEGRATED VALUE CHAIN





Direction of Development (3/4)

Promoting Alternative Project Delivery (APD)



Note:

Promote Construction Management (CM), Design Build (DB), Performance Based Contract (PBC) project delivery; Way of facilitating the growth of specialized contractors.



Direction of Development (4/4)

PPP Development in Public Procurement

What & why:

1. Definition: Public & private co-operation in infrastructure financing in order to attain more efficient funding (Delmon, 2009).
2. PPP is one of public procurement alternatives.
3. Our permanent challenge is how to provide better public service, through better quality, cost, delivery, and sustainability.

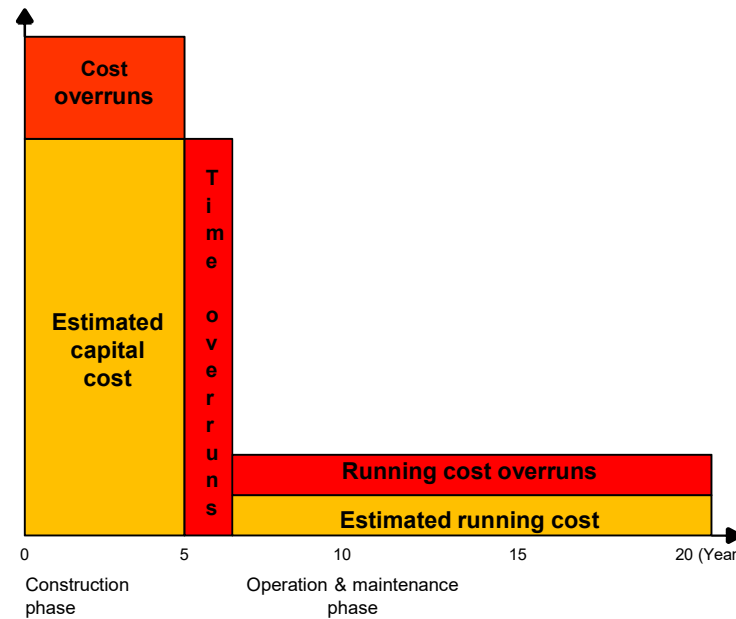
PPP → Public service provision → economic development



PPP Development in Public Procurement

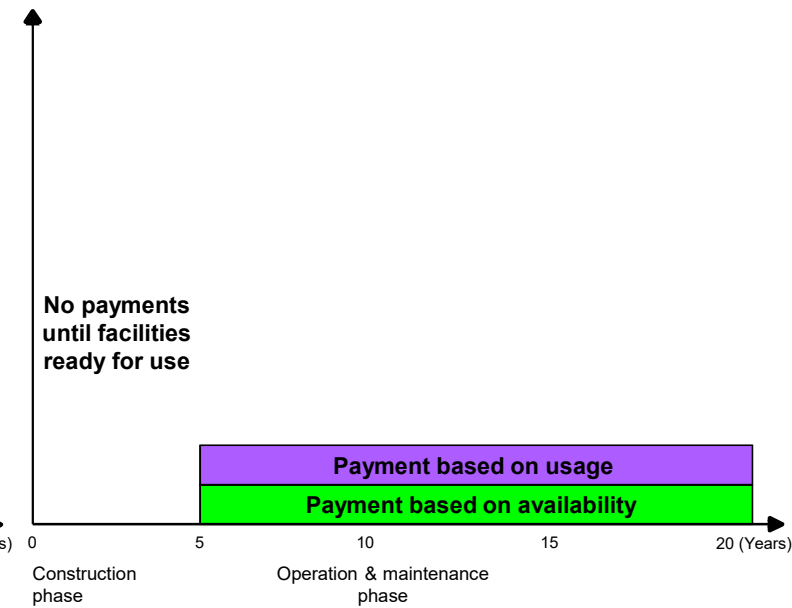
1. PPP is one of public procurement alternatives; public & private co-operation [in infrastructure financing](#) in order [to attain more efficient funding](#) (Delmon, 2009).
2. Challenge: how to provide [better public service](#), through [better quality, cost, delivery, and sustainability](#).

PPP → Public service provision → economic development

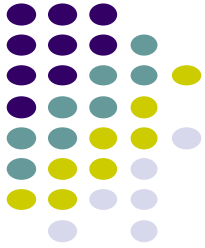


Traditional Public Procurement

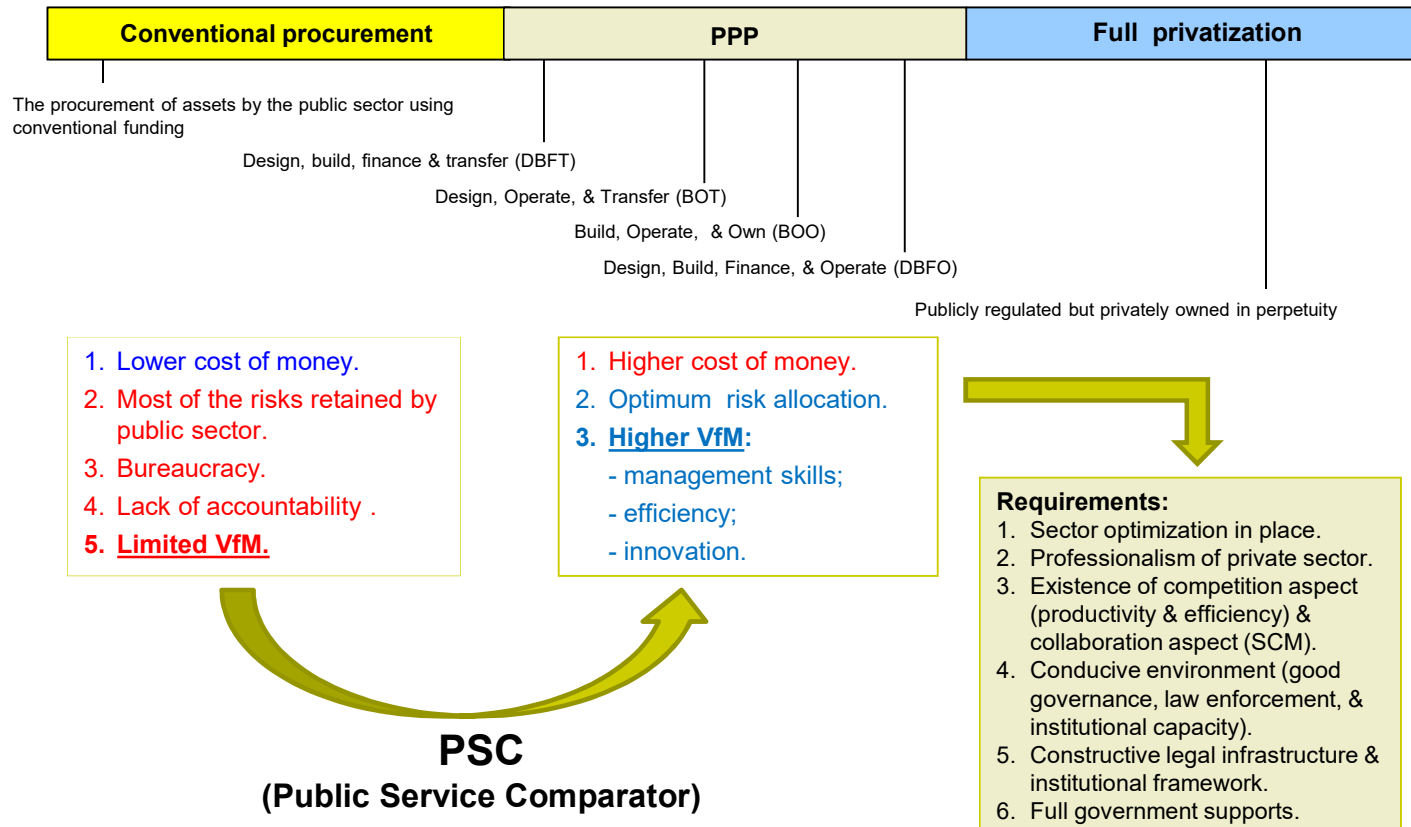
Source: Price Water House Coopers (2003)



PPP Public Procurement



Full Range of Public Procurement Options (KPMG, KLegal)





Scope of Infrastructure in PPP

1. Indonesia (Presidential regulation - PP 67, 2005 on PPP - more economic development dimension):
 - a. Toll and bridge roads;
 - b. Transportation;
 - c. Irrigation;
 - d. Drinking water;
 - e. Waste water;
 - f. ICT;
 - g. Electricity;
 - h. Oil & gas.
2. Other infrastructures:
 - a. School;
 - b. Hospital.



Reason for PPP

Basically to increase VfM; better public service:

a. ADB (2008):

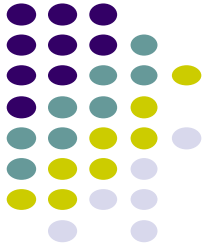
- improving [public services](#) by attracting private sector participation;
- improving the [efficiency and effective of public resources](#);
- [restructuring public sector](#); reallocation roles, incentives, & accountability.

b. European Commission's Division of Regional Policy (2003):

- [providing added values](#) for users;
- [providing alternative management patterns](#).

c. World Bank (2011):

- a way of [introducing private sector technology and innovation](#) in providing better public services through improved operational efficiency;
- incentivizing the private sector [to deliver projects on time and within budgets](#);
- [imposing budgetary certainty](#) by setting present and the future costs of infrastructure projects over time;
- [supplementing limited public sector capacities](#) to meet the growing demand for infrastructure development;
- [extracting long-term value-for-money](#) through appropriate risk transfer to the private sector over the life of the project – from design/ construction to operation/maintenance.



PPP - Global Development

1. UK: probably the most advanced in PPP; since 1992; in 2004, > 500 agreed PPPs, accounted for 12% of all public sector expenditure:

Table: Savings from PPP

| Construction Projects | Previous experience | PPP experience |
|--|---------------------|----------------|
| Cost to the public sector exceeds price agreed at contract | 73% | 22% |
| Delivered late to public sector | 70% | 24% |

Source: NAO (2003)

2. Other countries with PPP programs: Australia, Canada, Chile, Czech Republic, Finland, Germany, Greece, Hungary, Ireland, Italy, Japan, Korea, the Netherlands, Portugal, Spain, and Singapore.
3. South Australian Case:
South Australia's infrastructure is ageing & in need of modernization after more than 2 decades under investment. The need of substantial new infrastructure investment is pressing, but resource available through state budget are limited and borrowing is unfashionable. South Australia has therefore decided that future prosperity of the region will depend on a substantial increase in PPP. Over the next 5-10 years.
4. 70 countries are developing their owned PPP programs (International Financial Services, London).
5. Intensive support for PPP through varies initiatives: EU Growth Initiative, WB, & ADB.

PPP – Strategic Issues



1. PPP involves detailed sector knowledge (transportation, education, health, etc.) as well as knowledge of financing, risk, legislations, and developing innovative ways to provide and deliver public services.
2. High bidding costs:
 - a. The complexity of the process; expensive procurement method, both for the provider; in particular those who fail to win the project and the public sector body.
 - b. The Adam Smith Institute (1996):
 - PPP tendering costs are far greater than the average tender costs;
 - The tendering costs are likely to be underestimated, since many of the consortia (SPV) reveal only the cost of achieving preferred bidder status. The full costs (incl. contract negotiations) are perhaps 1% more;
- No economies of scale with PPP tendering; tendency for costs to increase as a percentage of the total.
3. Refinancing & finance charges:
 - Refinancing is an established technique whereby improved financial terms can be obtained if risks have been demonstrated to be successfully managed;
 - The costs of finance: although it is more expensive for the private sector to borrow money; the greater expertise of private sector management & risk management compensates this additional charge (VfM).
4. The impact of the introduction of directives for public procurement with the following objectives:
 - a. Modernization in order to take account of new technologies & changes in the economic environment.
 - b. Simplification to make procedures more understandable.
 - c. Flexibility in order to meet the needs of public purchasers and economic operators.



PPP – Indonesian Case (1/2)

1. Most parties consider infrastructure as an economic development boosting factor, instead of focusing on public service improvement: focus on macro-economic policy, to reach a 6.5-7%/year economic growth, a 5-6% GNP/year infrastructure investment is required.
2. PPP pattern development is part of infrastructure construction acceleration policy to increase economic competitiveness, stated in:
 - the National Long-term Development Plan (RPJP) 2005-2025;
 - the National Mid-term Development Plan (RPJM) 2015-2019;
3. PPP is also considered as a solution to solve government fiscal limitation in:
 - responding increasing demands on various infrastructure facilities to support economic investment and development;
 - facing increasing pressure on state budget (APBN) to rehabilitate, operate, and maintain existing facilities;
 - improving infrastructure service with compliance to the minimum service standard to guarantee public welfare and quality of life.



PPP – Indonesian Case (2/2)

4. Definition of PPP:
 - a. Provision of infrastructure through the cooperation agreement or concession between Government and Business Entity (Presidential Regulation No. 67/2005 Jo Perpres 13/2010 Jo Perpres 56/2011).
 - b. A form of business co-operation between the Government and business entity in the provision of infrastructure (Bappenas).
5. Sector optimization has not been realized; only short term consideration i.e. to build more and more, quantity of built infrastructure is not yet sufficient; even physical scientific master planning is not considered.
6. However, PPP system is in development; *legal infrastructure and institutional frame work* has been set up in stages; practices in developed countries serve as benchmark.
7. PPP Leadership and coordination between institution are still weak.
8. Private initiative and politics in PPP are very high; this is positive provided that government is strong enough in regulating and controlling.

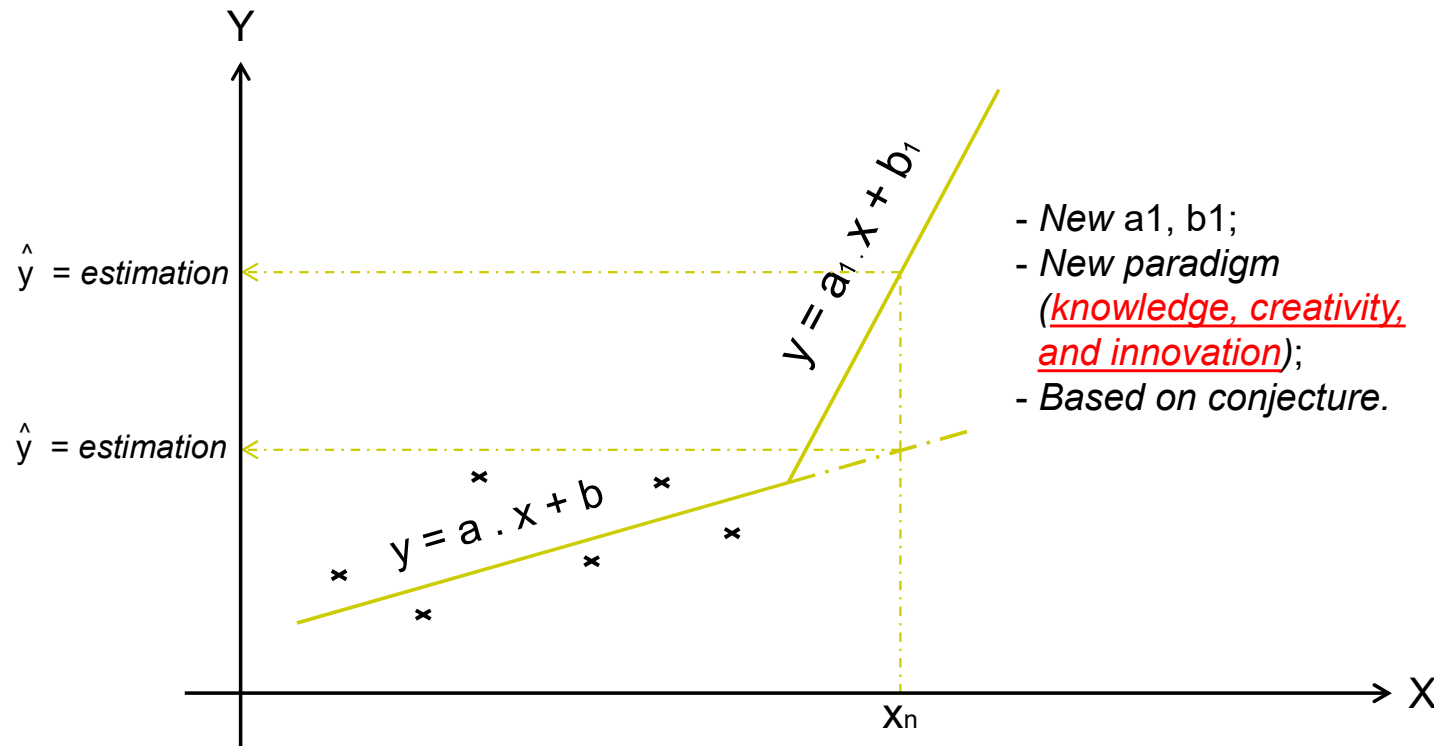


Closing Remarks – The Importance of Knowledge & Innovation(1/2)

1. To conclude, we're getting back to Karl R. Popper's - an Austrian British science philosopher - great work: 'Conjectures & Refutations: The Growth of Scientific Knowledge', 1962.
2. The future: Projection vs Conjecture:
 - a. Future developments would be very dynamic, changes could occur radically.
 - b. *Linear projection* is no longer sufficient; we have to understand *conjecture & refutation*.
3. *All problems seeks solutions that create new problems; if we continue reacting the same way linearly, we miss the luxury of exploring the new challenges and solutions* (J.L. Fernandez-Solis, 2009).
4. *Conjecture is an idea which is consistent with data, but not yet proven:*
 - construction industry: fragmented, benefits from manufacturing concept; *transformation, flow, & values (T, F, V); supply chain, integrated value chain*;
 - transportation: is no longer an infrastructure development problem; *flow of containers*;
 - BIM: role of ICT in 'project life cycle';
 - concrete placing technology; self compacting concrete; slurry concept.
 - sustainable infrastructure, green building, etc.: applying alternative approach of planning, *integrating different knowledge & expertise; multi disciplinarily researches*.



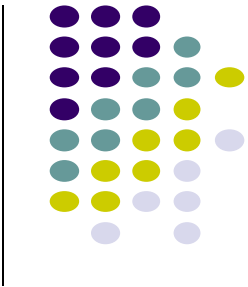
Closing Remarks – The Importance of Knowledge & Innovation(2/2)



Epilogue



'Every morning in Africa, a gazelle wakes up, it knows it must outrun the fastest lion or it will be killed. Every morning in Africa, a lion wakes up. It knows it must run faster than the slowest gazelle, or it will starve. It doesn't matter whether you're the lion or a gazelle-when the sun comes up, you'd better be running'



THANK YOU

Prologue



‘There is no such thing - as the favourable wind - for those who do not know where to go’

(Lucius Annaeus Seneca, 5th BC)