



PLENARY SESSION III

Moderator

David Hong

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Panel Speakers

Christian Delvoie

Director, Infrastructure Department, East Asia and the Pacific Region, The World Bank

Nicholas Moore

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President and CEO, Nomura Asset Management Co., Ltd.

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President, Shell Gas & Power for Asia Pacific Region

Pierre Victoria

Vice President for Institutional Relations, Veolia Water

Dominic Barton

Chairman, Asia Pacific McKinsey & Company

Private-Public Partnership for Infrastructure Development

David Hong (Moderator)

Ladies and gentlemen, it is my pleasure and honor to be moderator for Plenary Session III, "Private-Public Partnership for Infrastructure Development." As indicated by a business study by the Asian Development Bank, Japan Bank for International Cooperation (JBIC), and the World Bank, it is estimated US\$1 trillion will be needed for infrastructure investment and development in East Asia over the next two decades. With this amount, it has become increasingly important to maintain a healthy and strong partnership between private and public sectors. This is the time for us to cover the potential gap hindering the development of such partnerships in creating a model to cope with the financing difficulties. Hopefully, we will be able to discover solutions or at least a direction for the following eighty minutes.

Let us break down the issue into several dimensions. The dimensions which we are to cover in this session are number one, defining the function and the impact of partnerships in public and private sectors that can help finance infrastructure projects; number two, identifying feasible forms of infrastructure finance and requirements to successfully implement this model, including BOT (Build-Operate-and Transfer), OT (Operate-Transfer), ROT (Rehabilitate-Operate-Transfer), etc.; number three, exploring the reliable policy alternatives for policymakers; number four, uncovering the challenges and opportunities for the private sector so as to change challenges into opportunities; number five, characterizing the role of multilateral institutions and specifying their potential contributions; number six, initiating project finance under a sound risk-sharing mechanism.

Today well-known experts in the Asia Pacific region will share their valuable views and expertise on the issues. Let me briefly introduce them: Christian Delvoie, Director of Infrastructure Development in East Asia and Pacific region of the World Bank; Nicholas Moore, Head of the Investment Banking Group of Macquarie Bank; Takumi Shibata, President and CEO of Nomura Asset Management Co., Ltd.; Peter De Wit, President of Shell Gas & Power for the Asia Pacific region; Pierre Victoria, Vice President for Institutional Relations of Veolia Water; Dominic Barton, Chairman of Asia Pacific McKinsey & Company. Now let us welcome Christian Delvoie for his presentation.

Christian Delvoie

We have set a very challenging agenda today, and I hope we will be able to answer it during the question

and answer. But since I am starting, I will simply focus on the broad findings and the environment of infrastructure challenges that East Asia is facing over the next few years.

Basically two years ago, the ADB, JBIC, and the World Bank started a study of East Asia with two objectives in mind. One was to try to review the East Asia story and lessons from the 1997 crisis. Now the countries are resuming fast growth. The second was also to review whether the current framework for decision makers was still appropriate. So these were the two broad objectives of the study, and I had the pleasure of directing the World Bank side from Washington.

During this short presentation, what I will try to do is to make very brief points on three different topics. One is infrastructure challenges: Is the past East Asia model of development still valid for the future or what needs to change? The second question is: What is the famous new model that we are proposing to policymakers? The third is: What is the relevance for public and private partnership?

First is on the infrastructure challenges in East Asia. You all know the East Asia developmental model. Overall, East Asian development has not followed the same pattern of Latin America, Eastern Europe, or other parts of the world. Basically, East Asia focused on a model of development which was based primarily on very strong savings, strong investments, and strong infrastructure investments that support growth. All these are macroeconomic parameters. Broadly speaking, this model has been highly successful. Over the last 30 years, the region has grown on average by over 5% or in some countries by 8 or 9%. Despite shocks, it does remain quite stable, and over the last ten years the growth rate of the region was still able to move to the 7-8% level. Infrastructure has been an integral part of the model of East Asian development. There is always a debate on whether growth led infrastructure, whether infrastructure led growth, or what has been the balance between. But overall, everybody agrees that infrastructure, poverty reduction, and growth have gone hand in hand in East Asia in the past. Basically, this infrastructure development growth model was based on export-led growth: finding areas where you could export, building infrastructures around that, and improving competitiveness. Looking at the future, is that model still valid?

I would like to present to you five challenges today which are going to perhaps change a little bit the parameters and the way we are looking at infrastructure investment in the future.

The first one is urbanization. In the past, infrastructure was led by exports, by industrial manufacturing. In the future, urbanization is going to be one of the key drivers for infrastructure development. Over the next 20 years, East Asia is going to be an urban continent. 50% of the population is going to be urbanized. Over the next 20 years, 500 million people are going to be urbanized and 350 million in China alone. Any roads you build are going to lead to a new city. That is basically the parameters. This is unprecedented in the world. Europe took basically five centuries to urbanize 500 million people and the United States 200 years. Here, it is going to happen in twenty years.

The second issue is inequalities. In the past, when you built a basic infrastructure, the correlation between growth, poverty reduction, and infrastructure has been quite good. This is still the case when I look at a situation like Vietnam today. However, once you move up the revenue chain, what you find is

that this gap of development between the urbanization and metropolis, which are highly competitive, and the rural areas and landlocked countries is increasing. So the second challenge that East Asia faces is growing inequalities if we simply follow the past model.

The third big challenge is governance parameters in East Asia. In the past, infrastructure development was taking and moving along basically with, what I call, visionary leaders supported by strong planning institutes and somewhat direct financing through state development banks and others. The crisis of 1997 showed the limit in that model. But over the last 10 years in East Asia the whole governance structure is changing fundamentally. First, I see an increasing trend of decentralization. Most of the countries in East Asia today from China, the Philippines, Indonesia, and even Vietnam are moving very quickly towards decentralization. This is eroding the powers of the center. Second, it is democratization. The roles of the visionary leaders in the past have to be redefined in the new democracy. In addition to that, with increasing income, what you find is a host of new actors. Third, environment is also becoming more complex because there are various actors in development. In the past, the development model was basically based on state and enterprise. Today you have public-private partnerships, municipality entities, and a break up of energy sectors. You have a host of different agencies so that the coordination function becomes much more important. And finally, in terms of accountability, focus on corruption has become the key focus especially with an increasing voice in those new democracies. So these governance parameters are really challenging today how to reconcile the need for a central vision. It is because you are growing fast with a whole new environment that is much more messy than in the past.

The fourth big trend is regionalization and competitiveness. This region is the most dynamic in terms of export growth. Today, exports from East Asia account for about 20% of total world exports. The amount within intra-regional trade is 40%, increasing over the last 10 years from 30% to 40%. So you have much more regional integration happening across the countries. This plus all the other concerns of security and the need to integrate landlocked regions to avoid inequalities and so on are clearly putting a premium on regionalization and regional agreements among the countries.

The fifth challenge is the environmental challenge which is very clear today when you look at the oil crisis or when you try to project the energy needs. In the past, growth was leading in the minds of the leaders. Today what you are looking at is the standard of living, no longer only growth. I think growth and environment should go hand in hand because of the greater impact of the fast growth of East Asia.

So that is basically the new environment that we are all trying, and I think East Asian leaders are trying, to get a handle on. What is the role of new planning agencies? How do I put this in a regulatory framework? What should I do to manage both state-owned enterprise and private sectors?

In response to that, we are trying to review what the broad policy framework was. Clearly what we see is four different elements. What we are all looking at as an objective is, what we call, inclusive development. Some call it poverty reduction, or policy growth, or equitable growth, but let's call it "inclusive development." Inclusive development means making trade-offs between competitiveness and access, between environment and growth, and trying to improve the overall environment development challenge of the country. That is the main objective. That should be supported by three legs. The first leg,

which is crucial and which has to come from the top in the country, is coordination issues. You have to have a central government with a strong vision. You cannot simply rely on market forces. Why? That is because you have huge growth and huge urbanization. You need to balance new ways of providing a vision with new ways for the planning institutes to change and to establish the appropriate incentive frameworks. That is the first big challenge that we see in terms of overall coordination between the center and decentralization. Second, which is looking from the bottom, is the accountability. Whether you have public or private providers, the key rule today is how to improve efficiency and accountability of that institution to users and taxpayers, i.e., how to make sure that those users and providers are working well. That really involves clarifying for the central government the role of social objectives, the level of subsidies compared to the level of cost recovery and the mechanism to support them. Third, which all the private sectors know very well, is the risk management framework. Infrastructure investments are long term, bulky, and highly costly. So what is the risk management framework whether you are public or private? What are the rules of the game that the government is going to put in place so that it is very clear to all actors what they should be doing in implementing the broad vision and delivering the services? So that is basically how we redefine the framework.

Turning very quickly to the public-private partnership framework, I would like to make three points. Just to launch a little bit of debate, I would like to be a little controversial.

The first point is that the region needs about US\$200 billion per year in infrastructure investments: US\$1 trillion for the next five years. That is the conservative estimate. It was estimated with the macroeconomic model. My first point here is that in East Asia I am not convinced that we have a financing problem. When I look at the current account surplus and the level of savings, I know that China does not need to import foreign capital. What it needs is to import foreign technology, technology skill transfer, better discipline, and improved efficiency. Better financing exists in East Asia at the macro level. It is very easy for somebody at the World Bank to say that when you look at the ground you have a very different situation. The situation of China is not the same as Indonesia or the Philippines, where you still have very weak macro fundamentals and where you have an absolute need for extra financing. But usually, my own experience is that financing always follows good investments. If the framework is right, the key issue is not the financing; it is putting the framework right. When the framework is right, the financing is going to come. This being said, the issues are how to get predictable frameworks, how to improve efficiency, how to improve financial intermediation. So you have all those things to work on in order to get the financing.

The second point is that I do not really care about the debate between public and private. Ownership does not matter. Basically when we look at public and private, experience has shown that public and private are not in competition. They are complementary. Infrastructure by its nature always has a very large public component because of its externality. Even when it is managed and financed by the private sector, you cannot have water concessions in the big city failing. The public sector has to take it over and rebuild, because it provides an essential public service. So you have the murky area between public and private. That does not mean you do not need private investors or public investors. What you need is a broad framework for accountability and for risk management, whether you are public or private--, and trying to see what is complementary between the two. It is my third point.

Despite all of these, the role of the private sector remains fundamental. If you look at broad numbers even in 1996, the total level of investments of private infrastructure investments in the region was only 20% of the needs. In 2003, it was 5%. It is very minimal. Nevertheless, the private sector in every single country has provided the impetus for competition, for technology transfer, and for efficiency because they have the major leverage in trying to improve the whole policy framework and the efficiency of investment.

Therefore, I still believe today the key challenge is to re-think -- no longer private or public -- what the environment is, what the new solutions are for a PPP framework, and what the environment has to derive from whatever actor is there to improve the efficiency. I think that this is the main lesson that we should all learn from the 1997 crisis.

David Hong

Thank you for laying out the groundwork for the discussion emphasizing environment and framework. Indeed, those are really important. As you said, social financing and ownership are secondary, but the way public and private sectors share the risks and rewards in a way that brings incentives to both sides is important. I appreciate your point.

Nicholas Moore

In this presentation, I am going to show slides hopefully that are entertaining. I am from Macquarie Bank. This first slide here is showing that Macquarie has 78 assets across the globe in infrastructure. 78 assets mean that we are actually managing those assets on behalf of a pool of investors based all over the world. This slide explains the assets in Australia, in Korea, such as a whole range of railways and subways and things like that, lots of assets in the U.K., including toll ways, airports. On the left side, you will see the assets in the U.S., but you will see far less assets surprisingly in the U.S. than the rest of the world, which is a somewhat surprising outcome. So Macquarie Bank has been in this business for about ten years of developing, buying, financing, and managing infrastructure assets for private sector investors. All these infrastructure assets are servicing obviously their communities. My presentation will be about the balance between how it has happened we ended up being here, what demands from the investor sides are, and what the concerns from their community side are. I think the underlying phases we would have are that there is a huge amount of money out there, but the difficulty is how the community will be comfortable with this whole idea of private sector provision of infrastructure.

The second slide we often use is basically indicating that the amount of spending within communities by government on capital for infrastructure has fallen virtually across the globe in every community. Again the U.S. is a bit of an exception as you can see on the right side, which partly reflects defense and community concerns. Basically, every community we go to, we see the same picture of fallen capital expenditure by governments. The reason is pretty clear: in democracy there are more votes in terms of

pension, welfare, health, education, and regional provision of capital. Various economists actually argue that as the society is developed and becomes more service intensive, the actual need for infrastructure falls. I think all our experiences in our societies indicate that might be the case, but still the provision of infrastructure is lagging behind the need. We all know that our trip to work in America takes longer and longer every time we go. The trip on the train takes longer and the train is more crowded. The queue in hospitals is getting longer. So I think it is pretty clear whether it is the developed or developing world, there is an ongoing need.

The next slide is a good new story. As reflected here, the amount of capital available to meet the needs of the community is increasing dramatically. Every market we are looking at, we see a similar slide to this. The actual wealth of the community is outgrowing whether it is in China, the U.S., Australia, or Canada. The actual amount of capital available particularly in the pension funds is increasing dramatically. Of course, these are long-term assets that are looking for long-term income flows to match. So there is a large amount of capital available to meet the needs to the community, and, in recent times, we have actually seen the allocation of these pension funds. The allocation for these pension funds for infrastructure has been increasing in each of the markets. So ten years ago, the average pension fund had no allocation to infrastructure. Today it is something like 4%, 5%, 2%. The bigger issue is not so much the allocation by the pension fund but viability of the projects. Investors just cannot find the projects necessary to invest their funds in. So in a market situation for the supply and demand point, there is a huge amount of capital looking for these projects. Investors have long requirements and needs for cash flows. The projects just are not coming through. The project, as we can guess, is different in the developing world versus the developed world. The developed world is obviously moving up the spectrum and looking a lot more for social infrastructure being provided by the private sector as well as basic economic capital.

So why are not there more projects for infrastructure capital? Part of the reason is the community's concern. We just bought an asset in America called Chicago Skyway. And we had an anchorman coming from CNBC, which of course is a privately-owned broadcaster, a private contractor. He was talking about the potential privatization of the New Jersey Turnpike. He was unbelievably concerned because he used the Turnpike every day and what will happen to him if the private sector owns this asset. It is remarkable what the private sector could possibly do if they run the road. But he was a very sensible person actually saying that he was very concerned about what might happen. There is a whole range of community concerns about the private sector running the assets. Obviously the big one is reflected in the New Jersey Turnpike. As you are giving a monopoly to the private sector, they will abuse it and they will charge more. So if something is provided by the private sector, it will cost more. The quality of service will be poor because there is no competition. If there is financial distress, the theory is somehow that infrastructure will be no longer provided. So if the tollway becomes insolvent, the bankers will step in and turn off the tollway. There will be environmental degradation if we have too many tollways being built. In terms of existing users, jobs will be at stake. Of course there is also the "NIMBY" (not in my backyard) issue that people will not want any infrastructure near them.

Of course, all these issues can be addressed and have been addressed on a regular basis. There is a whole range of models out there. PPP covers a whole broad range of engagement between the private

and the public sector. What model best fits the circumstance? Of course, it comes down to the simple question of who is able to best manage the risks involved with the particular assets. Those people who are best able to manage them should be responsible for it. It is necessary for the community to sit down ahead of time and do a simple risk allocation. Doing a simple risk allocation actually passes to the private sector as many simple risks as possible. Risks that are simple can be quantified such as the costs of delivery of the asset, usage, and full life cycle in terms of the asset. All these things can be quantified and worked out ahead of time. The return of course comes to the private sector through the provision of that asset. How is that calculated? Now throughout the whole world, the questions of how it is calculated and how the return should be calculated have been a subject of a whole range of complex models. What we have been saying is very simply that the market will decide this point simply if there is a transparent, open tendering process. There are many people who are willing to step up and deliver this project if there is a clear, transparent model that is going on a competitive tender basis. In our experience, the market continuously delivers what the community actually expects initially. So what we have been saying is that services are delivered at lower cost, projects can be delivered at a lot cheaper cost and delivered ahead of time if that framework is set up ahead of time in the tendering process.

The chart here basically tries to talk about all various sorts of interactions between the private and the public sector. On top you can see simple government provisions where all the risks and benefits ownerships remain in the public sector. On the bottom of the page, you see privatization with all the risks and benefits are provided to the private sector. On the right hand side, the government will protect the interest of the community through the regulatory regime. Between those two extremes we have got all the settled areas such as BOOT projects and public-private partnerships where the risks are juggled and risks are exchanged on a different basis depending upon the sensitivity of the community. Anything is possible in this area. The key point is actually finding ahead of time before going out to make the competitive tendering bid.

The final point is that capital that does invest in community assets has to be responsible capital. It has to be capital that is actually looking at the long term in terms of servicing the community, not just based on the simple financial returns in the short term. We see time and time again that this leads to an enormous amount of trouble. When the community steps back and actually chooses the people who provide the assets, they actually do more than just look at the price. They actually look at things like certainty, commitment to the asset, commitment to the region. The bottom line is that the community has to believe that there is value for the money being provided. There is no shortage of money out there. It comes back to the community actually being satisfied with the model on which the capital can be applied to meet their needs.

Private-Public Partnership for Infrastructure Development

Nicholas Moore

Head of Investment Banking Group, Macquarie Bank

Macquarie

78 assets, 16 countries - global positioning, local asset managers

Assets by Country:

- Canada:** 407 ETR, AltaLink, Cardinal Power, Leisureworld*, Sea To Sky
- USA:** Atlantic Aviation, AvPORTS, Chicago Skyway, Detroit-Windsor Tunnel, Michigan Elec. Transmission Co, Norwind Aladdin, Parking Company of America, SR125 South, Thermal Chicago
- South Africa:** Batavia Platinum Corridor, N3 Toll, N4 Maputo Toll
- Tanzania:** Kilimanjaro Airport
- UK:** Argiva, BBC Broadcast*, Birmingham Airport, Bristol Airport, Energy Power Resources (UK), Exeter Airport*, NM Renewable Energy, M1-A1 Link, M6 Toll, South East Water, Wales & West Utilities, Wightlink
- Portugal:** Tagus Crossings
- Belgium:** Brussels Airport
- Denmark:** Copenhagen Airport
- Sweden:** Arlanda Express, Energy Power Resources (Europe)
- The Netherlands:** YBR Group, NRE*
- Germany:** Warnow Tunnel
- Japan:** Hakone Turnpike
- New Zealand:** ElderCare*
- Australia:** Adelaide Airport, Airtrain Citylink, Airtaxi Networks, Asia Pacific Transport, Broadcast Australia, Melbourne CityLink, Dampier-Bunbury, Macq. Reg'nal Radioworks, Electranet SA, Goudok Ebbare Pipeline, M1 (Eastern Distributor), M2, M4, M5, EastLink, Multinet, Prospect Water, Retirement Care Australia, Sydney Airport, Trans toll, United Energy Distribution, Westlink M7
- South Korea:** Baekyang Tunnel, Cheonan-Nonsan Expressway, C.J. CableNet*, Daegu-Busan Expressway, Daegu East, Incheon Expressway, Incheon Grand Bridge*, Korean Independent Energy, Kwangju 2nd Beltway, Section 1, Kwangju 2nd Beltway, Section 3, Machang Bridge, Seoul Chuncheon Expressway, Seoul Subway #9, Soongsan Tunnel, Woomyunsan Tunnel*
- Italy:** Rome Airport

* Subject to financing and customary closing arrangements.
As at 14 July 2005 - the assets listed are managed on behalf of investors with various direct % stakes held in each

A need has developed for the private provision of infrastructure

- Budgetary pressures have led to a general decline in public sector investment over last 30 years, creating opportunities for private investment

Public Sector Investment as % Total Govt Expenditure

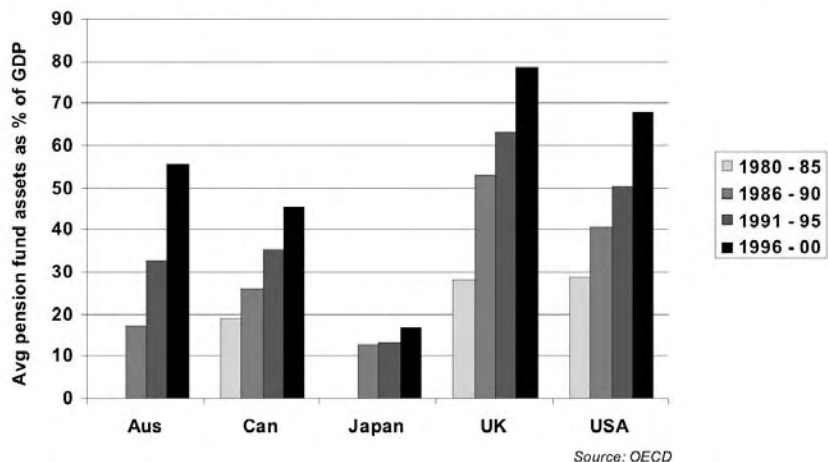
Country	1971 - 80	1981 - 90	1991 - 00	2001 - 03
Can	11.0%	7.0%	5.5%	6.0%
Aus	14.0%	8.0%	6.5%	6.5%
Fra	9.5%	7.0%	6.0%	6.0%
Ger	11.5%	7.0%	4.5%	3.5%
UK	12.0%	5.5%	4.0%	3.5%
USA	8.0%	6.5%	6.5%	7.0%

Source: OECD


Pool of capital growing



- Average pension fund assets as % of GDP growing globally



Pool of capital growing (cont)



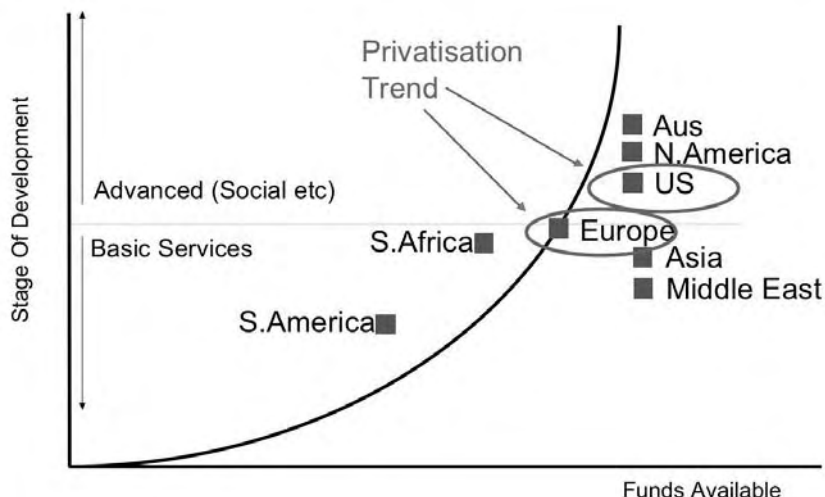
- Institutions beginning to increase their allocations to infrastructure
 - In Australia, previously allocations of between 3-5 %
 - Now trending towards 7-10% and, in some cases towards 20%
- Growing base of infrastructure investors globally
 - Traditional players (dedicated funds, construction groups, etc)
 - Pension funds
 - Private equity
 - Retail

	Australia	Europe	United States	Canada
Funds Under Management	US\$630bn	US\$2,650bn	US\$19,520bn	US\$808bn
Property Allocation	10%	6%	4%	10%
Infrastructure Allocation	4%	<1%	negligible	2%

Source: Macquarie



Global infrastructure market snapshot



Community concern about the natural role of government



Globally, when it comes to infrastructure delivery, the community has concerns

"The bottom line here is the State of New Jersey... is going to run the road as well as it can for the good of the people who use that road. If that road is now in the hands of a private corporation, that private corporation is going to run that road as best it can to make its own profit..."

There is no alternative to the New Jersey Turnpike. They could let it go to rack and ruin - that's the only road...

... I've got to tell you as a daily user of the New Jersey Turn Pike this strikes me as a really bad idea".



Mark Haines, Host Anchor
CNBC Squawk box, 1/2/05



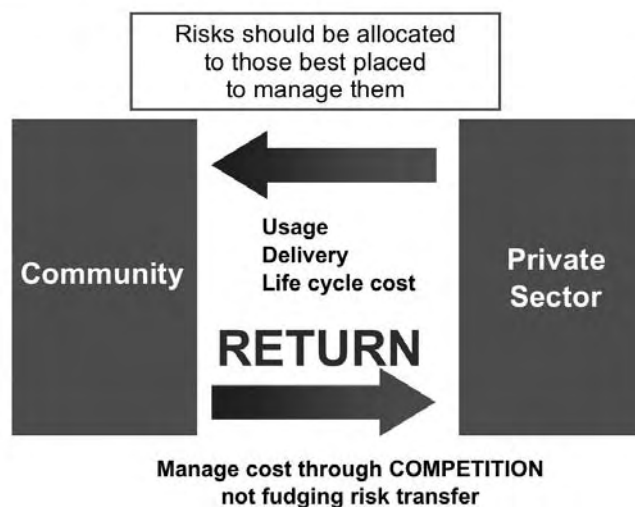
Community concerns are not homogeneous



- ➡ Costs more
- ➡ Lower quality of services
- ➡ Interrupted service in distress
- ➡ Environment
- ➡ Jobs
- ➡ NIMBY
- ➡ **BUT CAN BE ADDRESSED**



Private Sector ownership creates most value for Community





The Community has choices



Delivery method	Asset ownership	Operating risk	Residual value risk	Examples	Community safeguard
Government Provision				<ul style="list-style-type: none"> Libraries Community Centres 	
Public Private Partnership				<ul style="list-style-type: none"> Courts Special purpose accommodation 	<ul style="list-style-type: none"> Specific concession <ul style="list-style-type: none"> Setting not service
BOOT				<ul style="list-style-type: none"> Toll Roads Water and waste water assets Prisons and hospitals Sporting facilities 	<ul style="list-style-type: none"> Clear concession <ul style="list-style-type: none"> Limited term Fixed price Limited rights
Privatisation				<ul style="list-style-type: none"> Energy assets Airports Ports 	<ul style="list-style-type: none"> Regulation

Government
 Private Sector



Conclusion



Responsible capital only

- Constraint is community concerns of private ownership of essential assets
- Community acceptance of parties, asset and services decided by more than simple price criteria
 - Certainty – quality, safety, reliability
 - Commitment to the asset
 - Commitment to the region
- Local capital preferred
 - Reduces political risk
 - Alignment of interests
 - Investment commitment



Demonstrable value for money
Cost and Quality of Service

David Hong

One sentence, which struck me most, was that private ownership creates the most value for the community. I wonder from your experience, if there are any kinds of policy or legal issues that could hinder private-sector infrastructure in the development of an Asian country. If we have time later, I would appreciate it if you could elaborate on this further.

Takumi Shibata

We have listened to two speakers so far and Christian Delvoie basically gave us a solid view of infrastructural needs in the context of private-public partnership. Nicholas Moore gave us a view focusing on the important issue of deliverability of the market in the face of community concern. I would like to get down further and talk about some issues regarding the need for a mass production approach.

There may be some merit in promoting simple and standardized schemes for small-scale public-private partnership projects across Asia based on the emerging example of Japanese efforts and, to a greater extent, Korean efforts. This essentially calls for a mass production approach to public and private partnerships across Asia.

Regional infrastructure needs are not necessarily limited to large-scale projects, such as airports, highways, or major power stations; but they also extend to many relatively small projects such as schools, hospitals, government housing, and nursing homes. Taken individually, these projects do not necessarily attract serious attention from senior project finance bankers or lawyers. The high-end professionals are rightfully inclined to chase large and complex projects which involve complex negotiations, structuring, and documentation and which generate substantial fee income. The simple fact of the matter is that small-scale projects do not generate large enough fees for professionals. So they just walk away.

How do we, therefore, achieve public and private partnerships for small projects? It is my contention that the answer to this challenge lies in standardizing financial structures across many small projects. Simplification and standardization of documentation produces various advantages - simple legislation, straightforward and transparent bidding processes, reasonable transaction costs, and pool securitization potential.

BOT-style project finance is a well-established financial methodology. It is a very powerful tool for putting together complex and large-scale projects, ranging from independent power plants and grids, through toll roads, bridges and tunnels, to water and sewage systems. Each large project represents a large agglomeration of risk. This "risk pie" can then be divided appropriately by the magic hands of project finance and will therefore naturally seek to limit his exposure to the areas of his competence. Power companies will seek to limit their exposures to power project risks only, gas suppliers want to limit their exposures to the gas supply risks only, and construction companies want to limit their exposures to construction risks only. The magic wands of the project finance professionals can achieve such a risk allocation on every project, through complex BOT schemes, only if the scale of each project justifies their involvement.

But how do we achieve this for smaller projects, for example, the construction of schools, hospitals, residences for government employees, and nursing homes? These projects are typically small but must be of high priority for municipal governments and the residents. The answer lies in simplicity and standardization - possibly as represented by build-transfer-and-operate, or BTO schemes. If the BTO schemes are too simple, we can also accommodate a simpler version of BOT schemes, such as triparty structures. More importantly, we can learn from Korean attempts at introducing BTO schemes to the PFI arena. The key point here is simplicity and standardization.

Let's now look at how Japanese municipal governments are taking on this challenge through the active use of public and private partnerships. We turn to the government-sponsored committee for promoting PFI, which established basic frameworks for PFI in the year 2000. Over the following five years, there have been 205 PFI projects, of which, 152 projects, or 74% have involved municipal government participation. Of these projects "Education and culture," e.g., schools and libraries, represented 32%, "Health and environment," e.g., hospitals, waste management, water and sewage, represented 18%. "Urban regeneration," e.g., public housing and parks, represented 13%. The message is that these are more down-to-earth projects that are connected to local government affairs.

Of all types of PFI scheme, the build-transfer-operate (BTO) type accounts for 67%, while the build-operate-transfer (BOT) type accounts for only 23%. In BTO schemes, upon completion of the project, the legal title of the resulting property is transferred from the private sector sponsors to a local government; but operations will remain in private hands. This is convenient for several reasons: local governments are not faced with delicate political questions over property ownership as Nicholas Moore stated. Private sector sponsors can limit their capital risks to the development and construction phases only and can focus on ongoing operating efficiencies. Bankers can provide long-term tenure of loans based on simple documentation and due diligence and on the municipal government's pledge to maintain each project in good standing.

While appreciating the benefits of the sophistication inherent in BOT schemes, the simpler BTO or BTL method can be a powerful tool for simple bank loan financing and will eventually become the means to produce a pool of many small public projects for securitization. Multiparty BOT is complex, it requires sophistication and large scale projects, but there are not many such projects. The simple version of triparty BOTs involves low levels of sophistication, middle and small-scale projects, and could involve many projects. BTO, as I said, is very simple and BTL also has the same characteristics. So this is a mass production approach to public and private partnerships. I am aware that Japanese attempts at this simple BTO approach are being studied closely around the world, and also the government of Korea has pioneered a way of legalizing simple frameworks for BTLs. The key statement here is, if we could standardize the key financial provisions for BTO loans across borders within Asia, we would be able to develop a highly diversified securitization market across Asia. I would be happy to become one of many institutional investors to participate in a region-wide PPP securitization market. We should also aim at using investment trust schemes in the future to create pooled investment products as well as examining other vehicles, such as collateralized debt obligations or CDO.

Standardization, Securitization, and Liquidity: A Mass Production Approach

Takumi Shibata

President & CEO, Nomura Asset Management Co., Ltd.

Small but Important ...

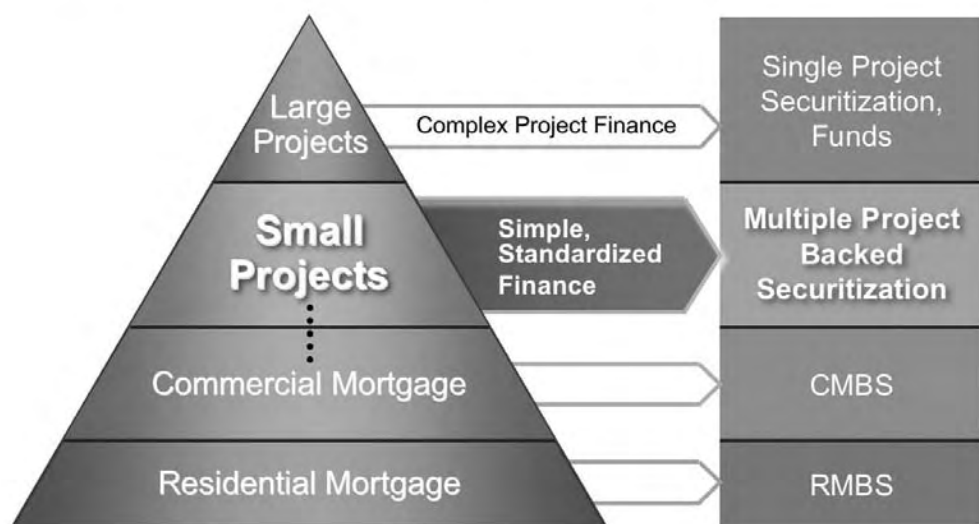


Documents!!



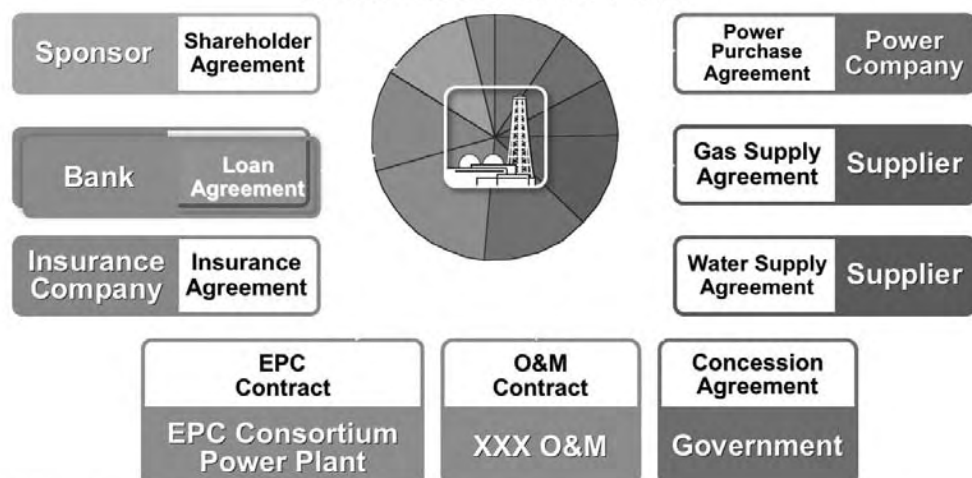
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Large & Complex or Small & Simple



Limited Recourse Project Finance

Risk Pie: A Power Plant



EPC: Engineering, Procurement and Construction

Simple PFI Markets Developing in Japan

Projects for	# of Projects	%
Municipal Governments	152	74%
Central Government	27	13%
Other Public Entities	27	13%
Total	205	100%

Source: Cabinet Office, Government of Japan

as of August 1, 2005

Simple PFI Markets Developing in Japan

Projects for	# of Projects	%
Education, Culture	65	32%
Health, Environment	37	18%
Urban Regeneration	27	13%
Public Facilities	24	12%
Social Security	12	6%
Security	9	4%
Industry	8	4%
Others	23	11%
Total	205	100%

Source: Cabinet Office, Government of Japan,
Produced by Nomura Asset Management

as of August 1, 2005

Simple PFI Markets Developing in Japan

Project Structures	# of Projects	%
BTO	137	67%
BOT	46	23%
BOO	11	5%
RO	7	3%
RTO	3	1%
DBO	1	0%
BT	1	0%
Total	205	100%

Source: Cabinet Office, Government of Japan,
Produced by Nomura Asset Management

as of August 1, 2005

BTO Standardization

Project Structures	# of Parties	Level of Sophistication	Project Size	# of Projects
Multiple-Party BOT	Several	High	Large	A Few
Tri-Party BOT (Government, Operator, Lender)	A Few	Low	Middle, Small	Many
BTO	A Few	Low	Small	Many



Loan Arrangements by Nomura

Projects	Scheme	Total
Kanagawa University of Human Services	Non-recourse Loan \11bln, 30 years BTO	Total \50 billion
Collabo Shiga 21	Non-recourse Loan \2bln, 30 years BOT	
Suginami Town Hall	Non-recourse Loan \7bln, 33 years BOT	
Omihachiman City Hospital	Non-recourse Loan \14bln, 32 years BOT, 1st rated PFI Loan in Japan	
House of Representatives Akasaka Sigma Tower	Non-recourse Loan \13bln, 27 years BTO, 1st PFI Loan using Classified Share Scheme in Japan	
Ministry of Finance Employee Housing -Mishuku, Hirakata-	Non-recourse Loan BTO	

David Hong

Takumi Shibata pointed out an interesting case about small-scale infrastructure projects and financing and also the aspect of regulatory and accounting systems, etc. Another interesting idea is multiple project-backed securitizations. I wonder in Asia which economy would be ready to gain benefits from this scheme. Later when we have a chance, we can go further.

Peter de Wit

It is pleasure to be here to talk about infrastructure development. I would like to give some views from the private perspective in terms of the energy infrastructure.

It is pretty obvious that, as has already been said, significant investments in infrastructure are going to be required in this region in the years ahead. The Asian Development Bank in the recent study suggested that up to US\$200 billion a year will be needed in the developing countries of East Asia alone. As governments face ever increasing demands on their budgets, they will be looking to the private sector to provide some of this infrastructure investment.

There will, however, also be considerable global competition for this private capital, and investors will clearly favor those countries with stable and predictable regulatory commercial frameworks that provide a supportive investment climate. Of course, many countries in this region have a very good record in providing that kind of climate and in the Asian Development Bank report, it was mentioned that 67% of global companies said that they would be expecting to increase investment in East Asia over the next couple of years.

My comments today will focus on the particular challenges and partnerships needed to develop energy infrastructure. However, I also believe that we can draw some wider lessons from energy projects for infrastructure developments in general. I should say that companies like Shell indeed have had long experience of working in partnership with governments and the public sector in general. For example, we commenced the transportation of gas from South East Asia to the Japanese market 35 years ago in concert with the Brunei government, and today that partnership is alive and well and unchanged. And that can be said for similar types of activities with government and government entities in Malaysia, the Philippines, China, and a number of other countries in the region. So we have had some experience in how to go about the difficult issues of partnerships with public enterprises.

Let me say a few words about the Gas and Power business at Shell. We are the second largest IOC natural gas producer in the world, and we have interests (when we talk about infrastructure) in pipelines, liquefied natural gas (by the way, liquefied natural gas is merely natural gas that is in liquefied form to

make it easy for transportation), LNG, shipping, gas-fired power generation, coal gasification, gas to liquids conversion and product application, etc. We have a presence in each of the three key gas markets, namely, Asia Pacific, Europe, and North America. And as I mentioned, the countries of this region in particular have played a key role in our development over the last thirty to forty years, and we certainly see that continuing well into the future.

We have the advantage of operating in a market where demand for our product is rising very rapidly. The International Energy Agency predicts a 60 percent increase in global energy demand in the period to 2030 and the fastest pace of that particular growth in this region. Developing Asian countries are likely to account for over 42 percent of world growth in energy demand but there will also be ongoing increases in demand in established economies, such as here in South Korea. Within that overall growth in demand, global natural gas usage is forecasted to rise by up to three percent per annum while LNG demand is likely to grow at an astonishing rate of around ten percent certainly over the next ten to fifteen years.

So I will focus my comments to the liquefied natural gas business because it is a very important part of the energy mix in this region and because it also presents its own particular infrastructure challenges.

LNG offers significant advantages as a source of energy - not least for its flexibility, diversity of supply, and importantly its environmental benefits. And those advantages are increasingly being recognized in markets around the world, not the least in Asia, and it should be noted that Japan and Korea are currently the world's largest two importers of LNG.

As a result, we are now seeing a massive expansion in the number of LNG projects being developed around the globe, reflecting investor confidence that demand will continue to increase at a rapid rate. Research by the bank ABN Amro shows that over the last nine years, US\$30 billion has been invested in LNG projects, but a staggering US\$75 billion will be invested in the next two years alone. So this is some impression of the increase in this business.

Going back to the organization I work for, over the past five years, joint ventures in which we have a leading role in many cases with government partners have constructed eight new liquefaction facilities representing around twenty percent of the world's LNG expansion capacity in that period - an investment of US\$9 billion. We also have interests in the same number of new facilities under construction at this time so the pressure on companies like us have come up with new supply projects that are quite intense. At the same time, we completed a regasification terminal in Hazira, India as well as agreeing to contracts to supply LNG into China, commencing next year in 2006. These projects are important examples for a number of South East Asian countries which need to start importing LNG and are planning to do so, and many of them probably through cooperation between private industry and governments or government institutions.

This highlights of course that investment in the infrastructure in energy production is only one part of the

total chain. We also need the equivalent investment in the infrastructure in receiving countries to import and distribute gas and to generate and supply the electricity to the end consumer. These investments are in many cases in concert with different governments need to be developed simultaneously if the investments are to be efficient. Of course that is quite a challenge.

One of Shell's biggest energy infrastructure developments is the Sakhalin II project, which many of you have heard of. The project will supply LNG to Korea, Japan, and North America and will become one of the world's most strategic gas supply sources in years to come. It is one of the largest and the most challenging energy projects ever undertaken in the world both in technical and commercial terms. This would have been impossible without the strong active support of the Russian Government both on Sakhalin Island and in Moscow. Equally important has been the need to ensure that its development brings benefits to the local community on Sakhalin Island which underlines the fact that no major infrastructure project certainly that one we could be associated with can be seen in isolation from the wider context in which it is being built. This means in addition to any formal public-private partnership, there needs to be links between the private sector developer and the wider public bodies representing the needs of the local community.

In Sakhalin that means a clear focus on bringing economic opportunities to a very remote part of Russia. As a result, about US\$6 billion will be spent on Russian labor and related taxes over the life of the project. And at the same time, more than US\$700 million is being spent by the private developers on improved infrastructure on the island ranging from bridges and roads to new telecommunications systems, ports, and railways.

Let me now turn to the funding of energy infrastructure projects or at least part of it. The hallmark of these projects is that they are expensive, and although a lot of progress has been made in reducing unit costs on a project-by-project basis, the fact is the scale of projects is increasing very rapidly making them very capital intensive. Energy projects, especially LNG developments, are also very complex. As you can see here, they are part of a long value chain and their success is dependent on the strength of every link in that chain - whether in project management or technology; gas field development, shipping or marketing, and public-private partnerships can be an effective way of managing many of these demands by combining the different experience and strengths of each particular sector.

In infrastructure projects of this scale, always amounting to billions of US dollars, investors will also be looking for some assurance about returns over the long term, and it is important that partners, especially public sector partners, understand the need for private companies to provide a return to their shareholders.

This means among other things that ensuring the various contracting arrangements, particularly those relating to sales commitments are structured to provide a clear and long-term return.

As I mentioned earlier, energy projects are often developed in partnership with governments or government companies or government institutions especially in developing economies as governments wish to keep strong control over their energy resources and supplies. While this brings challenges, many successful partnerships have been established in this region and continue to be developed as more countries look to improve their energy infrastructure to meet growing demand.

Many of these partnerships are in China, where the demand for new investment in infrastructure is extremely high and where demand for energy is growing the fastest of the economies in the world. One example of this kind of partnership approach is in the North West Shelf LNG project in Australia which will supply LNG to the Guangdong terminal in southern China starting next year. Under the terms of the supply deal, the state-owned China National Offshore Oil Company gained an equity stake in the Australian supply project, underlining the range of innovative partnerships that are increasingly being seen in these large energy infrastructure developments. Other recent infrastructure partnerships between Shell and Chinese government-owned companies involving multi-billion dollar investments have been concluded in coal gasification, petrochemical production, gas pipelines and distribution, oil and gas production, and oil products marketing.

I think we are likely to see more of these complex partnerships in the energy sector not least; as on the one hand, governments are seeking access to advanced technology and commercial expertise, and national oil companies especially in Asia Pacific, are seeking to acquire interests in upstream projects and infrastructure outside their own countries.

So what conclusions from the LNG scene can we draw? Firstly, these infrastructure projects are very expensive, they are complex and risky, and, therefore, investors will need supportive overall political and economic frameworks. Governments will take a particular interest in major energy infrastructure projects and will often want a stake in them. These public-private partnerships can be very effective provided the key interests of private shareholders are safeguarded. And lastly, that means relationships based on trust are key. Our experience in Asia Pacific has been that these long standing relationships between the public and private sectors can be developed and can work to the benefits of both parties.

David Hong

Peter de Wit presented an interesting case in contrast to Mr. Shibata's small-scale infrastructure projects. Here you talked about energy infrastructure. As you said, it usually is large-scale, expensive, and labor intensive. You say funding is only a part of the long value chain process that includes project management, technology, developing, shipping, etc. This is very interesting case. I wonder whether we should try to make things even more complicated by bringing in the environmental concern. What would happen to the funding of the operation? If time allows we can talk about that more later on.

Pierre Victoria

Veolia Environment is a French company which is the world leader in environmental services, providing services to public and private clients in four main fields: water and wastewater, waste management, energy services, and transportation. Veolia Water is the Veolia Environment division for water and wastewater services.

Infrastructure and services improvement are world-wide challenges. Today one billion people do not have access to drinking water; two and half billion people do not have any sanitation. Most of these populations live in Asian countries. The international community is working to reach its own commitments to reduce the number by half, providing them with water and sanitation. To do that, we have to implement solutions that require a coalition between all stakeholders and mainly between public bodies and private companies.

Veolia Water is a long-term operator in 55 countries and is involved in approximately 5,000 ongoing public-private partnerships. In Asia, we are mainly active in three countries: Korea, China, and Australia. To face the challenges, today a lot of municipalities would like to benefit from different forms of public-private partnership. Veolia Water is a partner of many cities like Incheon in Korea; Shanghai, Shenzhen, Chengdu, and Tianjin in China; Adelaide, and Sydney in Australia; and many main cities like Paris, Berlin, Prague, The Hague, Budapest, Bucharest and so on.

Now I would like to share with you some lessons learned on how to improve water infrastructure services through PPP.

The figures of this table come from the World Bank. What you can see in this chart is that maintenance needs in water are as important as new investment requirements. In fact, when we have a look at all the world, you see that the maintenance needs are more important than new investment requirements. The case of Asia-Pacific is a bit different since the new investment requirements are a little higher important than maintenance needs. Optimizing the use of existing infrastructure so that it can serve more people is the goal of a good service operator, whatever public or private. For instance, one of the professional operator's priorities is to reduce network leakages, which overpass 50% in some services. It is very crucial to understand that increasing network efficiency improves drinking water supplies to outer districts where less wealthy communities usually live. So that is the first lesson.

The second lesson is that BOT contracts are not necessarily the most suitable contracts. Today lease and concession contracts are more adopted than BOT, because it brings to the municipalities all the know-how and skills they need, not only the technological ones, but also the managerial ones and wide know-how transfers. Today, in Asia, a lot of municipalities prefer concession and lease contracts than BOT.

The third lesson is that a private operator plays a pivotal role in optimizing the investment's program and

facilitating the financing. There are three reasons: first, it provides a guarantee that financing will be put to good use. Second, if municipalities have to make new investments, the private sector brings its expertise to help the municipality optimize the investment program. Third, the private operator provides some of the financing under concessions depending on available cash flow, but it also plays the role of catalyst for raising funds from other financial partners.

The fourth lesson is the need to channel a greater part of the financial flows of water toward municipalities. As Christian Delvoie previously said, decentralization is implemented in numerous Asian countries, and local government authorities are the best located to provide this local service. This is why it is important to channel more of the financial flows of water toward municipalities.

The fifth lesson is looking systematically for local currency financing. We now know the limit of international financing in particular due to exchange risks, so the solution is to mobilize local financing and savings. Our experience demonstrates that it is advisable to match the currency denominating revenues and debts as it is in China.

The sixth lesson is the need for a mature local financing market which is able to understand, to bear the sub-sovereign risk, and to provide long-term financing. Today, it is absolutely necessary for financial institutions to be more open to a sub-sovereign risk approach, which for the time being remains mainly limited. So lenders should adapt their credit policy to understand and evaluate sub-sovereign risk.

In conclusion, when we speak about PPP, we have to speak about trust and the way to build trust among all the stakeholders. Trust is the key word. Every contract starts from trust. What does “trust” mean? It means clear sharing of roles between partners involved, such as local authorities, constructors, lenders, operators, etc.; transparency through procedures for transferring information; a strict respect of the autonomy given to the private partner; performance evaluation criteria; a contract review mechanism in order to take into account new events which may modify the contractual equilibrium; and finally a clear procedure to solve potential misunderstandings. No long-term contract can last without trust. Trust is essential not only between public authorities and a private company. Trust of the population is also crucial. In particular, when a PPP addresses a basic service, such as water, we have to improve a culture of mutual respect and dialogue aiming at promoting trust as the basis for a successful PPP.

Public Private Partnership for Infrastructure Development

Pierre Victoria

Vice President for Institutional Relations, Veolia Water

Public Private Partnership for infrastructure development

PECC,

Seoul

September 6th, 2005



Water infrastructure and services improvement, a world wide challenge

- The beginning of the third millennium gave rise to greater awareness about the crucial importance of access to water, particularly in the developing countries.

- One billion people do not have access to drinking water.
- Two and half billion people do not have any sanitation.
- Most of these destitute people live in Asian countries.
- No one organisation can single-handedly deal with the current situation.



Veolia Water, a service operator, not a civil contractor

- Veolia Water is a long term operator in 55 countries and is involved in approximately 5,000 on-going Public Private Partnerships.
- In Asia, we are mainly active in 3 countries: China, South Korea and Australia
- To face the challenges of water infrastructure and service improvement, some municipalities choose to benefit from various forms of private sector involvement.
- Veolia Water is the partner of many cities all over the world.



Lessons learned from Veolia water development in Asia / Pacific (1)

- 1 - Maintaining and optimizing existing assets, not only building new ones
 - ➔ As analysed by the World Bank, globally the maintenance needs are as important as new investments requirements

Expected annual investments needs: 2005 – 2010

(Source: World Bank Policy Research Working Paper - July 2003)

	New investment		Maintenance		Total	
	US\$ Mn	% GDP	US\$ Mn	% GDP	US\$ Mn	% GDP
By income group						
Low income	49 988	3.18 %	58 619	3.73 %	108 607	6.92 %
Middle income	183 151	2.64 %	173 035	2.50 %	356 187	5.14 %
High income	135 956	0.42 %	247 970	0.76 %	383 926	1.18 %
<i>Sub - Total</i>	369 095		479 624		848 620	
Developing countries by region, out of which						
East Asia & Pacific	99 906	3.67 %	78 986	2.90 %	178 892	6.57 %
Europe and Central Europe	39 069	2.76 %	58 849	4.16 %	97 918	6.92 %
Latin America & Caribbean	37 944	1.62 %	32 878	1.40 %	70 822	3.02 %
<i>Total all developing countries</i>	233 139	2.74 %	231 654	2.73 %	464 793	5.47 %
Total World	369 095	0.90 %	479 624	1.17 %	848 719	2.07 %

Lessons learned from Veolia water development in Asia / Pacific (2)

- 1 - Maintaining and optimizing existing assets, not only building new ones
 - "Optimize the use of existing infrastructure so that it can serve more people" is the goal of a good service operator (whatever public or private).
 - Optimizing the capabilities of existing infrastructure reduces the need for new investments.
 - Better infrastructure maintenance and longer investment calendars are the least risky and most economical solutions.
- 2 - From limited BOT contracts to large scope concession contracts
 - In Asian countries, the trend is more and more oriented towards bringing, through a private operator involvement, not only new technology in the frame of BOT but also training and managerial skills.
 - Lease or concession contracts allow to cope with optimising the whole cost structure of a service. It is not the case of BOT schemes.
 - Although it has been considered a success, the Chengdu BOT is a limited solution to infrastructure improvement for 3 main structural reasons.

Lessons learned from Veolia water development in Asia / Pacific (3)

- 3 - A private operator plays a pivotal role in optimizing the investment's program and facilitating its financing.
 - When a private operator steps in and upgrades service, it lays the groundwork for good use of the financing earmarked for new projects. It provides a guarantee that the financing will be put to good use.
 - If new investments are needed, one of a private operator's roles is to bring its expertise to help the municipality optimize the investment program: having a private operator involved can also substantially lower the cost of the investments and avoid unnecessary investment.
 - Although a private operator can provide some of the financing under concessions, depending on available cashflow, it primarily serves as a catalyst for raising funds from other financial partners.
- 4 - Channeling a greater part of the financial flows of water toward municipalities



Lessons learned from Veolia water development in Asia / Pacific (4)

■ 5 - Looking systematically for local currency financing

- Given the limits of international financing (in particular due to exchange risks), the solution relies on the capacity to mobilize local financing and local savings.
- Our experience demonstrate that it is “advisable” to match the currency denominating revenues and debts.
- For instance, in China, Veolia Water is involved with municipalities in 12 Public Private Partnership, which serves 14.6 million inhabitants and provides the equivalent of 1 billion US\$ financing (40 % in equity and 60 % in debt). Local partners contribute to 50 % of the CV US\$ 400 million equity, and over the CV US\$ 600 million debts, 80 % were denominated in Rmb.



Lessons learned from Veolia Water development in Asia / Pacific (5)

■ 5 - Looking systematically for local currency financing

Veolia Water major contracts with Chinese Municipalities

	Type of PSP		Water sector			Population served in drinking water (million)	Financing (Debt + Equity)
	Nature	Total	Drinking Water	Wastewater	Global operational responsibility		
Renovation of existing assets	BOT	1	1	0	0		• Equity (around) Cv = us\$ 400 millions (local partners around us\$ 200 millions)
	Lease/BOT	1	1	0	0		
	Concession	7	2	5	0		
New assets	Joint venture	1	1	0	0		
Sub-Total :		10	5	5	0	10.5	
Water company global operational responsibility	Concession (joint ownership with Municipality)	2			2 1= drinking water 1= drinking & waste water	4.1	• Debt (around) Cv = us\$ 600 millions - - us = us\$ 100 millions - Rmb = cv us\$ 500 millions
	TOTAL	12	5	5	2	14.6 million	

Lessons learned from Veolia water development in Asia / Pacific (6)

- 6 - The need for a mature local financing market, able to understand and to bear the sub-sovereign risk, and to provide long term financing
 - Basic public services being under the direct responsibility of sub-sovereign entity, financing basic services supposes that a sub-sovereign risk is accepted by lenders and / or investors. Governments should promote local capital markets and savings, local financing for water services investment.
 - Developing access to basic services means accepting the undeniable role and responsibilities played by sub-sovereign entities. Such recognition means that financial institutions should now be more opened to a "sub-sovereign risk approach" which for the time being remains mainly limited.
 - Lenders should adapt their credit policy to understand and evaluate sub-sovereign risk.



Conclusion: Building trust

- Trust is the buzzword: every contract starts from trust. No fund can be raised without trust.
 - It means a clear sharing of roles between partners involved (local authorities, constructors, lenders, operators, lenders, etc), transparency through procedures for transferring information, a strict respect of the autonomy given to the private partner, performance evaluation criteria, a contract review mechanism in order to take into account new events which may modify the contractual equilibrium, a clear procedure to solve potential misunderstandings.
- No long term contract can last without trust.
- Beyond trust between the contractual parties, trust of the population is also crucial, in particular when a PPP addresses a basic service such as water. A culture of mutual respect and dialogue aiming at promoting trust is the basis for a successful PPP.



David Hong

Pierre Victoria presented another very unique and interesting case about water projects. As we know, water is a basic need. In this kind of case, politics usually get involved especially in pricing. In Asia, democracy is not very sound. Therefore how can we manage the risk of private sector investment in this kind of project? We can elaborate on this further later.

Dominic Barton

Given this final slot, what I would like to do here is to focus on a couple of areas. The basic overview that we wanted to talk through was, as Christian Delvoie has done the research and shown, that there is a huge amount of infrastructure investment that is required. On the US\$165 billion annually which comes from the report, I agree with Christian Delvoie that it probably is underestimated. If you look at the bottom-up demand for that from the various countries at least from what we have experienced, I think it is higher. If you look at what may happen in North Korea, look at the aging population and so forth, I think there is a big number. Obviously, it is a massive issue across the region.

Secondly, we would very much subscribe to, what every one is saying at this table, the partnership that is required given the risks and size of it. But we believe that the private sector should, in fact needs, to play much more of a role in building this.

Given risks and complexities of projects, this is obviously a very difficult business to be in. But we think there are many things that could be done more at the micro level in terms of how the projects are planned. How they are managed in the process can lead to some very significant savings or effectiveness improvements. Just to put a number on it, we have seen from our experience in Asia working across six countries and four cities in China, it is anywhere in the range of 10-20% improvement. How you measure is obviously difficult, and that is what we are trying to do. But if you look at the outlay of capital in there as a benchmark, that can be in the order of US\$16-20 billion if we are going with the US\$165 billion number. So that is a big price that we think is available from better planning and project management. I guess where we are coming from is very much moving from the satellites to the trenches.

In that context, what I will do is to skip just three slides. The second one I would like to show is mainly European examples and some of the Asian ones. I think it is important to understand that we often do get the big overruns, and we do not get the results we required. This has happened across the world. No one country is singly better than others at it. What I would like you to look at here is the numbers that are there, big numbers. I think again there are many things that can be learned from it as number of people described here.

On the final page what I am just going to focus on is this chart of project design and management. I do want to focus on it. If we just look at the three phases, there is the infrastructure master planning. How big should the airport be? What sort of dimensions are we putting into it? The forecast that goes with it.

Then, there are project planning and project realization. In Asia, we found 50% of the problems, or if you want to call it “opportunity” in that first bucket: the actual forecasting and planning of what you are doing. Then about 30% of it in the far right hand side is on the project realization. This is the basic project management making sure people are meeting the times they need to do it in and so forth. In the middle box, there is the project planning which is roughly about 20%. That gets into the areas of purchase cost.

As Christian Delvoie mentioned, the difficulties or challenges we face in the region are unprecedented in history -- the growth we are seeing and the shift we talked about in the urbanization in China. If you also look at the inter-regionalization that is going on, for example, if you look at the greater Mekong area, when you are thinking about Vietnam, you have to think about it in terms of that context. Governments are having to think beyond their normal jurisdictions. We find that quite challenging even in China when we are working with different cities. They are actually competing with each other. When you are thinking about airport design, this is not just a matter of public good. You have got competitions from other cities that are not that far in terms of where the airport can be designed. That is another dimension of complexity to it. So speed, inter-regionalization, risks, and the increasing demand make that challenging.

The only point I would like to focus on is the infrastructure master planning. It is actually demand analysis and pricing. We find that there is a significant improvement by just applying basic market forecasting and some of the scenario planning that Shell has invented and used very well in the past. These are basic processes just to get a sense of how fast you think it can grow. It is very difficult to predict in these turbulent times. What are the scenarios? What are the modules you can apply or not apply to the process? In terms of the project planning, I mentioned here that there is actually a lot of money on the table in terms of purchase cost. If you look at the projects we have done in the Philippines and Indonesia, you can find savings in the order of 25% of purchase cost -- the steel and equipment that you are looking at. Just how you do the tendering for that process and who is involved? Obviously, there is the corruption issue and so forth, but there are many things you can do even in rather difficult conditions.

In the final part on the project realization, there are project managers and people who do it. It does not sound very interesting or insightful, but it is critical. We found that in many of the projects you do not have the right trained people. It is not just the technical skills that are required. It is actually the project management skills, because inevitably you will get hiccups. You have never seen a project that has 80% of the plan run on plan because of shocks in systems.

I think I will just conclude with that. We think there is a lot of money on the table by managing the process not just on the technical side in terms of doing this effectively.

Creating Value Through Private-Public Partnerships for Infrastructure Development

Dominic Barton

Chairman, Asia Pacific McKinsey & Company



Creating Value Through Private-Public Partnerships for Infrastructure Development

Dominic Barton
McKinsey & Company
September 6, 2005

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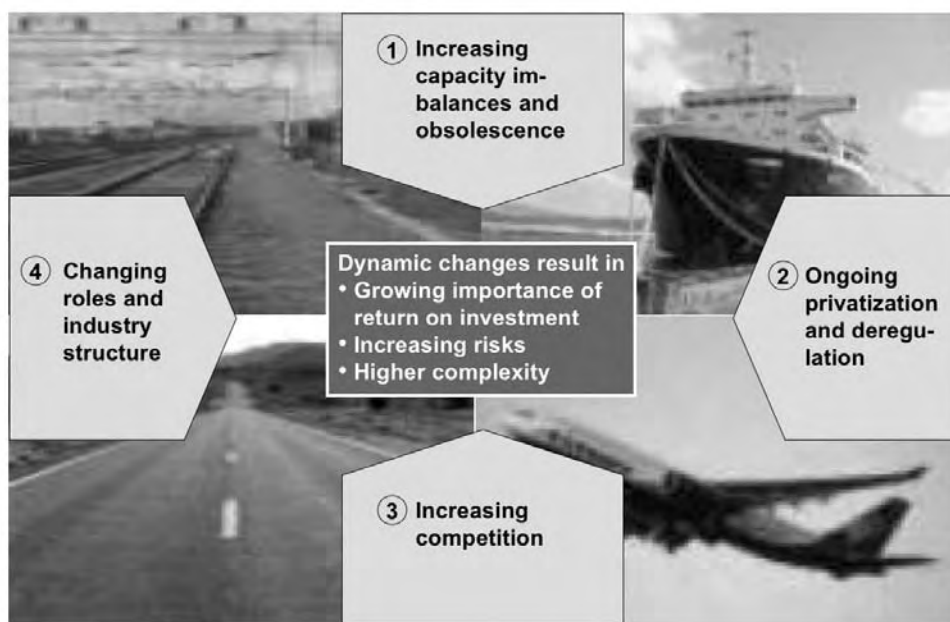
EXECUTIVE SUMMARY

1. **There is an enormous need for infrastructure investment in Asia...**
 - Asia needs to spend at least US\$165 billion annually on infrastructure from 2006 to 2010
 - There are 4 types of infrastructure assets – regulated assets (e.g., electricity, water); transportation assets; long-term assets (e.g., power generation plant with long-term contracts for input); social infrastructure. Each has its own advantages and risks
2. **The public sector can't do it by itself – governments can't fund investments as they traditionally have and infrastructure investments are more efficient and effective when done in cooperation with the private sector - a rapid increase in private-public partnerships (PPPs) is expected**
3. **But creating value from infrastructure investments is getting harder**
 - Rapid changes in the market make focusing on ROI imperative, and increasing project risks and complexity
 - We estimate that the difference between 'doing it well' versus 'average performance' today is worth between \$16-20 billion a year
4. **Getting it right will require...**
 - An institutional framework for investors to take on risk
 - Careful project design, structuring, and management

EACH TYPE OF INFRASTRUCTURE ASSET HAS ITS OWN ADVANTAGES AND RISKS

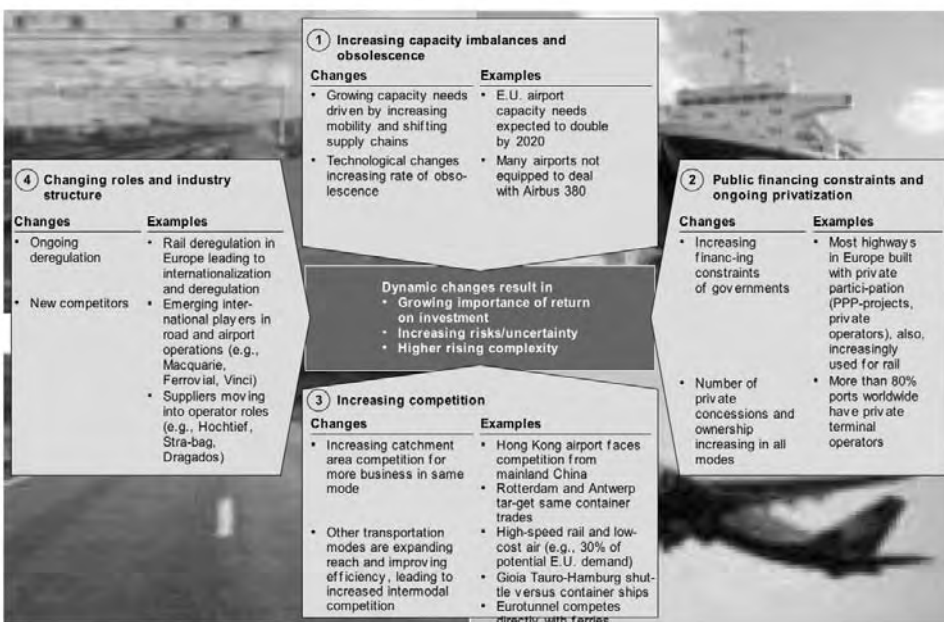
	Regulated assets	Transportation assets	Long-term contracted	Social infrastructure
Example	<ul style="list-style-type: none"> High voltage electricity transmission Local distribution of electricity and gas Long distance gas transmission Water and waste water 	<ul style="list-style-type: none"> Toll roads, bridges, and tunnels Airports Ports 	<ul style="list-style-type: none"> Power generation plant with power purchase agreement and long-term contracts for input 	<ul style="list-style-type: none"> Schools Hospitals Prisons
Pros	<ul style="list-style-type: none"> Attractive ROEs (especially in the U.S.) Returns have attractive characteristics <ul style="list-style-type: none"> Low volatility Positive correlation with inflation Low correlation with public equities Assets have high barriers to entry 	<ul style="list-style-type: none"> Few competitors Variation from asset to asset but underlying cash flows can be attractive, particularly when underlying assets are monopolistic 	<ul style="list-style-type: none"> Potentially higher returns than other sub-assets Contracts may transform cash flows of long-term contracted assets (such as power generation) and generate stable returns Established risk management structures exist (e.g., credit derivatives) Somewhat smaller than regulated assets or transportation assets 	<ul style="list-style-type: none"> Depending on the project, cash flows may be fully contracted with little operating risk Growing market (particularly in the UK) Somewhat smaller than regulated assets or transportation assets
Cons	<ul style="list-style-type: none"> Typically very large investments Regulatory risk Upside limited by regulation Generally lower returns than other categories Regulatory process is complicated, time consuming, and expensive 	<ul style="list-style-type: none"> Often very large investments Revenue based on usage levels, which can fluctuate Risk of competition (e.g., alternative routes or modes of transportation) 	<ul style="list-style-type: none"> Counterparty risk Inflation indexed, driven by contract Recontracting risk 	<ul style="list-style-type: none"> Government as counterparty Political and communication sensitivity

IT'S GETTING HARDER TO CREATE VALUE



IT'S GETTING HARDER TO CREATE VALUE

DETAILS



NEED FOR STRONGER ROI ORIENTATION DUE TO INCREASED RISKS AND UNCERTAINTY

Increasing need for measurable ROI

- Must deliver value at each point of the value chain (BU focus) because of growing disaggregation in operators, customers, and suppliers
- Stronger ROI orientation** as result of growing involvement of private equity and shareholders and increased accountability of governments on spending taxpayers' money



Higher risk


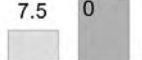


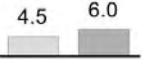


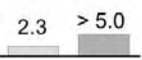


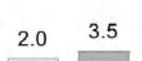

- Increasing uncertainty** of market demand and customer behavior
- Must cope with **higher risk of obsolescence** (both on hardware and software side, e.g., traffic control systems) due to acceleration of technological developments
- Complex new contractual relationships** requiring professional risk management over the whole project life cycle

Growing complexity

- Rising project complexity due to **increasing number of players** in infrastructure projects, which result in more interfaces, changing roles, multiple financial, and regulatory models
- Planning complexity** accelerates as asset owners, infrastructure and service operators are increasingly separated



THE DIFFERENCE BETWEEN GETTING IT RIGHT OR WRONG HAS BIG COST IMPLICATIONS

Example	Budget overruns € bn	Delays and start-up problems	Incorrect capacity & revenue plans	Total value lost vs. plan € bn
		<ul style="list-style-type: none"> 6 months delay 18 months of unreliable service after opening 	<ul style="list-style-type: none"> Overestimated market share gain in freight and pax by 200% 	 ~7.5
		<ul style="list-style-type: none"> 1 year delay of construction Legal and technical issues 	<ul style="list-style-type: none"> Unforeseen capped government funding 	 ~1.5
		<ul style="list-style-type: none"> 1.5* year delay of construction Technology choices still not finalized 	<ul style="list-style-type: none"> Annual revenues shortfall of €20mn 	 ~3.0
		<ul style="list-style-type: none"> Initial issues with connectivity to downtown area Complaints about facility hygiene levels 	<ul style="list-style-type: none"> Handles only ~60% of current capacity Losing market share to Singapore 	 ~1.5

* Project still not finalized and costs could go even higher

Sources: Annual reports; Reuters; Jane's Airport Review; team analysis

THE PUBLIC SECTOR CAN'T DO IT ALL: THE NEED FOR PRIVATE-PUBLIC PARTNERSHIPS FOR INFRASTRUCTURE INVESTMENTS IS EXPECTED TO GROW

Global projects including some form of private-public partnership*, \$ bn, %



* Projects up to 2015-2020 that are planned, funded, or in execution


** Including Africa and Middle East

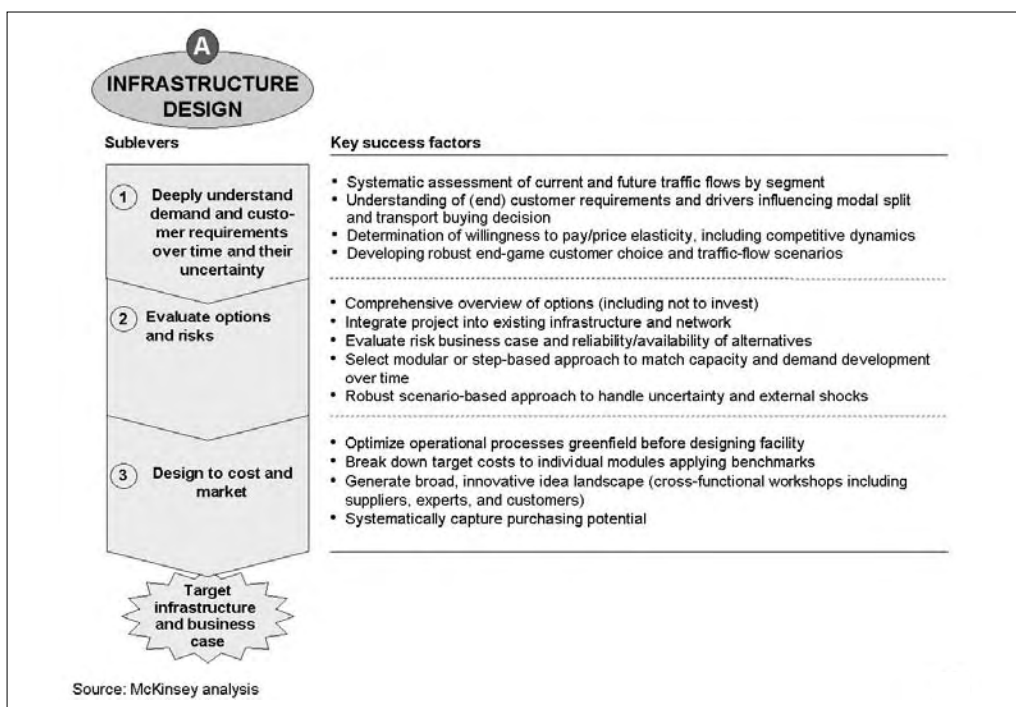
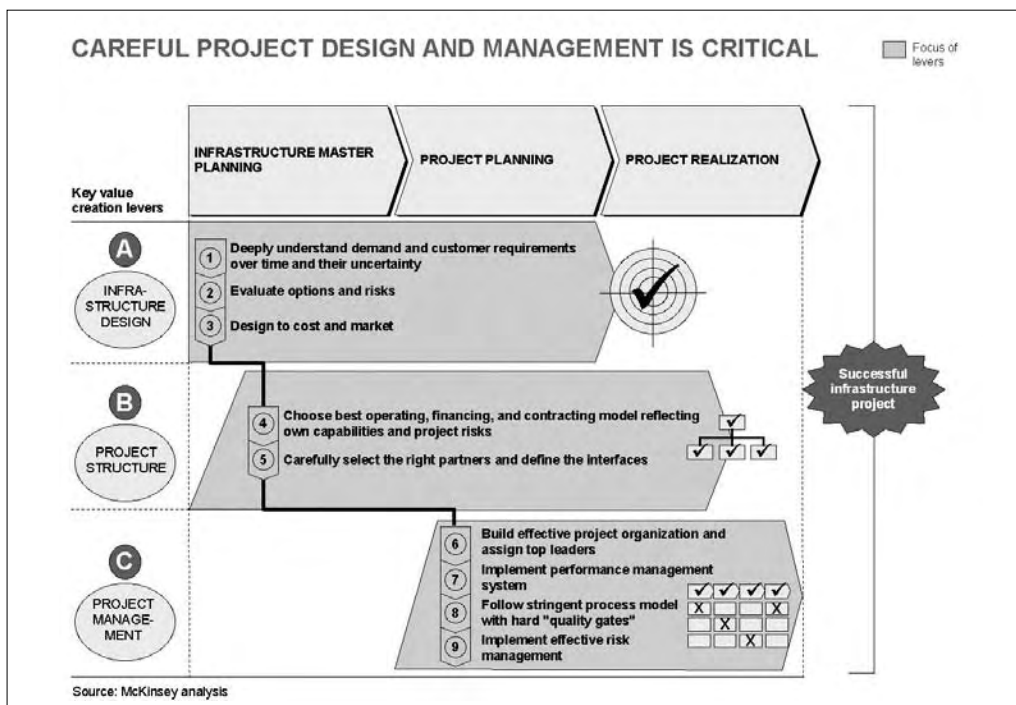
Sources: Public Works Financing; team analysis

PPP EFFECTIVENESS

- **Price and timing certainty**
 - Only 24% of PPPs late vs. 73% for public projects
 - Only 22% of PPPs over budget vs. 73% of public projects
 - These risks born largely by private participants
- **Better services**
 - In the end Government / taxpayer still pays, but reason you do this is to get better performance
- **Innovation**
- **Catalyst for public sector reform**
 - Pinpoint reaching to where public efficient already
- **Catalyst for capital markets and international role**

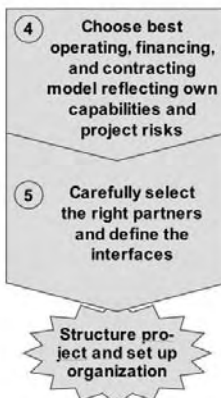
AN INSTITUTIONAL FRAMEWORK NEEDS TO BE IN PLACE FOR INVESTORS TO TAKE ON RISK

- Institutional framework – need clear contracting environment to ensure competition, quality delivery, proper risk transfer, certainty to private sector that contracts will be enforced
 - Government expertise – need skills for government to protect itself, ensure risk transfer, make decisions, act rapidly, and manage a portfolio of projects
 - Risk transfer – need to adequately shift risk to the private sector
 - New risks for the private sector – need framework for enforcing contracts against a country
- 
- ADB and the World Bank have been effective in helping provide 'institutional framework' and risk environment for private sector players in emerging countries (e.g., Laos)



B PROJECT STRUCTURING

Sublevers



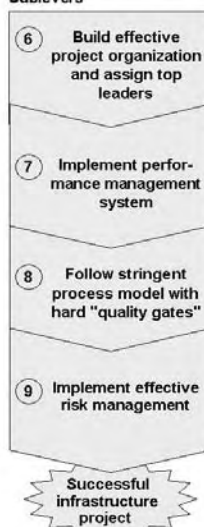
Key success factors

- Understanding of key efficiency levers, project-inherent risks as well as underlying assumptions ("project view")
- Understanding of own core competencies and potential deficits ("owner view")
- Structure project models to minimize life-cycle costs and minimize risk exposure through optimization of risk allocation
- Ensure incentive system that generates maximum customer surplus/revenue capture at required service levels
- Define the required competencies and partner characteristics
- Systematically screen market and select most suitable partners
- Create well-defined interfaces, contracting and steering/incentive mechanisms between the project partners

Source: McKinsey analysis

C PROJECT MANAGEMENT

Sublevers



Key success factors

- Establish most effective project organization with clear tasks, incentives, and accountabilities
- Determine required level of top management attention and qualification of leaders
- Invest in talent and continuously build capabilities
- Increase transparency about expected people behaviors (focus on value-added activities) and results
- Implement a performance assessment process, to be used as a decision-supporting tool for personal development and incentives
- Develop coherent career paths
- Define and follow clear project execution process with well-defined phases and decision points (milestones, quality gates)
- "Hard" interface between project client and (internal) project contractor
- Determine potential bottleneck steps in key processes and design robust fallback options
- Implement steering processes with clear responsibilities and escalation hierarchies
- Ensure adequate resource planning
- Establish (controlling) systems to create continuous transparency on cost-to-complete
 - Cost
 - Time
 - Output deviations
- Continuously monitor, quantify, and manage risks during execution
- Institutionalize effective risk management at different organizational levels allowing fast and flexible response to changes in risk

Source: McKinsey analysis

David Hong

Dominic Barton provided almost a complete project value chain and let us know how to get it right. This is a very good and logical way of wrapping up the presentation. Now let's have time for a few questions from the audience.

QUESTIONS & COMMENTS FROM THE FLOOR

No. 1: Christopher Findlay from Australia

We heard a lot of discussions on the panel about the efficient allocation of risks, importance of governance, and good planning. I was a bit interested that we did not hear about the relationship between prices and cost. I believe that was the biggest issue in getting a good bunch of infrastructural PPP projects off the ground.

It was not hard, as I understand it, to get money for a toll car project and a bit harder to get money for water projects. For various reasons, I think energy varies between countries by the stage of development. The roads are probably not bad but I think some of you on the panel have had experiences trying to put up a toll and find difficulties even in the developed countries. So I would be interested in the comments on the significance of the degree prices cover the cost, how important that is to get these projects off the ground, and what you need to do to get it right.

Christian Delvoie

I think some actual investors are in a better place to answer that question. Clearly, infrastructure projects may be very big and costly. You mind the appropriate financing but in the end somebody has to pay: users or taxpayers? Every infrastructure project has costs to maintain and to operate. In the end, somebody has to pay for it. The question that you are facing today in many countries in East Asia is the appropriate balance and mechanism between subsidies. Basically, the issue is accountability and the sound framework that you need to put into whether you are a private or public agency. It is exactly the same reality. It is basically that you have social objectives but you have the cost of running the business. In the public private partnership, how do you make that very transparent in your accountability framework? It is not easy because when you design a subsidy scheme, you rarely see the subsidy scheme disappear. You put it in place, you do not need it five years later, but they still remain there. They balloon like Indonesia today in terms of energy subsidies. So that is the real issue, and I fully agree with you that it is a major issue.

Let me just say that the key issue today in my mind is not financing. Financing is there. The availability of good projects, the pipeline of good projects, and the issue of master planning are more important. When I look at the Philippines and Indonesia, what is missing today is the pipeline of good projects. It is not the financing. People jump saying that we need 2,500 mega watts of new power every year. We do not see them coming. There is not enough project. The project pipeline is dry, development master planning is not in place, and you do a lot of bilateral deals at the same time. That is why I fully agree that the issue of cost efficiency is enormous. US\$165 billion is based on the macro-economic model based on efficient pricing. So the actual demand is already 25-30% higher based on my experience on actual projects in East Asia, and it is only limited to a certain amount of projects.

No. 2: Young Soogil from Korea

Thank you very much to all the panelists for your well prepared presentations. I am looking for a message or two which we PECC may pass on to the APEC Economic Leaders or the APEC Finance Ministers who will meet in Jeju in two days. Now this probably is a question addressed to Christian Delvoie. We know that there is a lot of need for investment in infrastructure in this region, and we also have no shortage of funds that can potentially be utilized in order to finance except that the savings are exported to the United States for the purpose of financing consumption and so on. That is the flashpoint right now across the Pacific. Now we all see there is a room for catching two birds with one stone if only we could stimulate investment infrastructure in the East Asian region on a massive scale, which then would help the East Asian governments to stimulate the domestic demand-led growth. We all know that they have been trying very hard to stimulate domestic demand, but somehow except in China that has not been successful. Exports are booming but not domestic demand, investment, or consumption. In Korea, for example, we talk about bipolarization of the economy: exports sector on one hand and domestic sector on the other hand. But the linkage of the operation seems to have been lost somehow maybe under the impact of globalization. If we could provide a stimulus directly addressed to domestic demand, it can help them to stimulate growth. At the same time, that will help to adjust a way or reduce the trans-Pacific imbalance that exists in the region. So I wonder if we may think about some political message that can be carried in this direction.

Christian Delvoie

I am not a political guy. So you will excuse me with many of those issues of which you will have to pass on to your leaders.

To give two or three messages here, one is that infrastructure is no longer a country issue. It is a regional issue when you look at the global impact of infrastructure or energy demand over the next 20 years.

When you look at regionalization, security, or the spread of diseases, clearly right now if you want to manage infrastructure, you have to look at it much more regionally: not only in terms of physically but also environment for infrastructure. The second point I want to mention is financial intermediation is going to be a key. East Asia is not like Latin America. Latin America had to diversify its financial system in order to attract savings because it did not have enough savings. In East Asia, you have a lot of savings, and the financial markets are underdeveloped. You have lot of liquidity but it does not invest in infrastructure projects. So I think this is something you may also want to consider. On the savings being exported to the U.S. and keeping them here for major infrastructure investments, you have to be a little careful. I will be going from here to Indonesia and then Thailand where you know there is a big debate on the mega projects. The question of stimulating demand to massive scale infrastructure, up to some point, you need first to get your macro economic fundamentals very clear. You need to manage your inflation expectations. When you do that, you have to know you are going to lose at least 25% in efficient investment. If you put infrastructure investment too soon, it is not going to be needed. So the basic rationale is how to plan them together. Putting the pipeline together in preparing your system makes a lot of sense before you go too far ahead. In investing, it would be the same thing as people putting a hole in the sand and putting it back continuously if you do not know how to maintain and to plan properly for your investment.

So I do not have a big message on this, but I thought that one of the reasons why PECC held the infrastructure meeting here was precisely to try to review the role of infrastructure in future growth in the region. In that sense, I think that is very appropriate.

No. 3: Kim Dietrich from the United States

I am from the University of Southern California and a frequent user of the Chicago skyway and New Jersey Turnpike. This question goes to Nicholas Moore from Macquarie Bank. I am curious about how you handle for your investors' risks involved with politics of pricing public services like this, and obviously this has allocative implications. My question is the pricing of these services and this kind of environment.

Nicholas Moore

The most important thing is that the concession agreement has actually been awarded in some defensible way, because inevitably this concession agreement can be challenged by future political action. So going back to the point of transparency, to the extent that the concession is transparently given and given on the basis of merit rather than patronage, that is a good defense, number one. The second defense that is very important is the involvement with local funds. Local funding is important, and there

are local funds available in all these markets. For our Korean assets, a large bulk of funds comes from here in Korea. If you ask Korean investors political and currency risks, the answer is, of course, "no." So the lowest cost capital for infrastructure will always come out of the domestic market. It is interesting to note that we have recently bought a number of roads in the U.S. and that we can buy the roads in the United States at a higher return to our asset investors than roads in China. The roads in China today are trading at a low price. But trading at a lower price than the roads in the United States -- it is because there are different capital pools actually accessing both of the two markets. The third element, which is critically important, is demonstrating on an ongoing basis that the services being delivered by the concession holder is actually a good service, value for the money, and hopefully getting better. So for things like airports and other facilities, they actually demonstrate to the community, the users, that the facility is better and it feels better. The community will recognize that they are getting a good deal. To the extent on the other of the spectrum of a deal done beyond the community case, the community believes that they are being ripped off in terms of pricing and services pool, so evidently at some stage, it is just a question of time, the community will come back and revisit the concession arrangement.

So I think these three steps are the most important in terms of making sure that you end up with the very valuable assets, not just meaningless promises from the moving group in the community.

No. 4: Kenneth Waller from Australia

I am very interested in the point being made that it is the demand that is too short to bring the projects on. Given that the infrastructure demands, because of urbanization, is enormous, what is the critical reason, since we have all the cash -- the local cash apparently -- that the projects are not being brought forth given the demand? One would have thought that the pressure on government is enormous to see things through and that we have seen that it is no longer possible to do this on budget. Is it the planning process within certain emerging markets that is weak or is it the public sector that is not performing well? If that is the case, why isn't there pressure being felt by Ministers who are responsible for delivering services? The other question then is what PECC, ABAC, and other organizations related to the Asia-Pacific region can do to encourage the release of the pipeline bringing it on as it is wanted.

Nicholas Moore

The most important element in an infrastructure project from our experiences is local demand, the actual community who wants the project. Now the problem with that is actually defining who are going to be beneficiaries of the project and who are going to suffer. Certainly there is always automatic opposition to any project by people who are directly affected whereas the average community that will be the

beneficiaries put their hand up that the project should go ahead. I think that is the same with every community of actually making sure that the political voice of the people who are beneficiaries actually comes through. At the end of the day, why would politicians use political capital on something that is questionable from the community viewpoint? The community actually has to say, "We thought about this. We actually want to go ahead and do it." So from our experiences, it is a very much a political issue and community issue. Of course you would expect, depending upon which community you are in, that public service will be followed by politicians. Occasionally, they will be getting out ahead of it. For example, we have seen here in Korea, where the government being both on the political side and the public sector side, it actually gets out ahead of the community to a larger extent and enormous amounts of planning and enormous amounts of early stage of development have a clear framework as we have been talking about before. Then the whole range of projects is being delivered to the community. Sadly to tell you, this is more of the exception than the rule. I think in the U.K. we will see it to an extent. In Korea, it is seen to a certain extent. But mostly you just do not have it. It is just not worth the political effort from our experience.

Christian Delvoie

Let me add one or two points based on my limited experience of East Asia. In particular, we are completing specific studies in Indonesia, the Philippines, and Vietnam.

The question is rather complex because what is happening in Indonesia and the Philippines is the role of the planning agencies are changing and they have lost their value. Right now they are a little bit in a mess because there is decentralization taking place at the same time. In Indonesia, we need about 2,500 mega watts per year in average for the next ten years at the rate they are growing. Everybody knows it. But when you see how decisions are made between LNG terminals, new power plants, the framework which the private sector is being called, and the type of transaction which I have been putting on the table, they do not square off. If you add to that issue pricing policies, simply the whole development plan of the energy sector does not square off. In Vietnam, I see a little bit the same things. It has a much better organized government, but when you look at the LNG, the second terminal of gas compared to the high development rate, the pressure on energy is very high. So you are talking there again 2,500-3,000 mega watts, and a billion dollars per year are going to be needed. So the needs are enormous. The private sector is interested in financing but the pipeline project is not there. The conditions on which they would finance are not simply there yet. So we are trying to find an appropriate policy environment, an appropriate pipeline of projects, and a little bit of clarity in that whole environment. Then you will see really the financing coming. Finally, in East Asia, many people say there is an "East Asian Way."

"East Asian way" means negotiation, "I know the guy and you know the guy. We meet and we are going to resolve." Investors in the World Bank also say there is an East Asian Way, but in the end there is no

free lunch. Somebody is going to pay. Any investors are going to ask for a certain number of guarantees either explicitly or implicitly. Secondly, even with the East Asian Way, it is not going to be able to respond to the type of needs that you have today. So whether you are in public or private, you have to try to find the way for financing. The key issue today is really to think through accountability, risk management framework, accountability framework, and the governance framework overall in which infrastructure investments are taking place. I think this is what is missing today in many countries.

I am not going to talk about China where we are extremely involved also, but financing is certainly available, so that is a very different ballgame altogether.

Takumi Shibata

Finance will always come, but it always comes last. The private sector will always come to a public-private project, but they would only come after the public sector is ready. When you talk about building a new toll road in the Southern part of East Asia, you have to negotiate with several thousand landowners. That is not something that private sector professionals are good at. When you think of organizing a project for a power plant, we can get some guarantees from government-owned railways for transportation costs. Again, the private sector will have a hard time negotiating with various government-related agencies. So there is a clear cut separation in responsibility between the public and private sector. Unless the foundation is laid by the public sector, private sector operators cannot work on the project. So I tend to believe there will be a great number of major projects to be built only if the ground is cleared.

Peter de Wit

I will make a comment on energy. I sympathize with the comments by Takumi Shibata. There is such a demand for new projects in the energy business. All of us are getting larger, more complex, and have difficult areas to develop. But we have a shortage of project managers. It is industry wide. The contractors are finding it is more difficult to choose projects because they have got too many projects to choose from. So we have a manpower issue, which is going to take some years to resolve.

Takumi Shibata

The chairman earlier asked which country would be ready for the mass production approach. Certainly, Japan and Korea have started, Taiwan has potential, and Malaysia and Thailand also have a good chance. The basic contention here is that if there is a framework, the money will come.

In fact, there are a few preconditions in order for this framework to be appropriate: one, a process of bidding proceeded by good governance of a local government. Two, there is a requirement for an

appropriate level of savings in the home country. These are sort of preconditions or must-haves. But there is also the issue of nice-to-haves. We need to have a very good syndicated loan market domestically and also a very good domestic bond market. Also, we need to have a good offshore bond market, and a syndicated loan market internationally is nice to have.

I think the Asian bond market initiative is very important. The beauty here is that Asian countries can skip the evolutionary development process of capital markets because they can learn from examples of the U.S. or European market, so good role models are already there in those countries. Also, we are encouraged by early development of the asset-based security market, especially involving Korea. The securitization market has been done. Apparently what is happening in this region is contradicting a traditional wisdom that the market needs to repeat the pattern of development. We are very much encouraged. If a simple and standardized PFI for the projects is done, it is very good. In that sense, they can pool local government credit. If the market participants cannot securitize the pool of local government credits, they should exit the market.

An important message to the Ministers who meet at APEC in this regard is to stress the importance of the Asian bond market initiative. What is currently missing in that debate is a requirement for a diversified investor base across Asia. Credit evaluation is a job for intermediaries and also of fund managers. Any intermediaries who are market makers will tell you that unless there are number of buyers and sellers in the institutional market, there will be no market. Because of the appearance of the importance of intermediaries, people tend to think of the importance of infrastructure, settlement schemes for the region, and the importance of having market makers. But those infrastructures are going to be useless unless there is variety of institutional investors. That is my contention.

David Hong

I am afraid that the time is running out, so we will conclude the session. Private sector participation in infrastructure development is the key to the needs of infrastructure in our region. At the same time, it is an opportunity to develop a financial market in this region, including a long-term local currency bank market. Our discussion has emphasized the need to find a financing solution to the development of infrastructure projects in the region. There are many long-term challenges that still need to be addressed. Many are related to legal policy and regulatory frameworks. Our speakers have discussed the issues related to infrastructure in the various important areas and given us very valuable insights how the private sector is contributing to their development. I believe that the very important issue here is development of securitization. This underlines the various recommendations, that PECC has previously made to promote these markets particularly as a result of our discussion on the local currency bank market. That discussion in this session underlines the need to speed up progress in an effort to develop securitization. Especially, we have the challenge related to infrastructure financing. Participation of international financial institutions and the private sector in the policy dialogue are important for the success of this effort. PECC is a forum to bring together officials, businessmen, and experts who should play a key role in this process.

This has been a very fruitful session. I would like to invite all of you to join me in thanking our panelists for their excellent presentations.