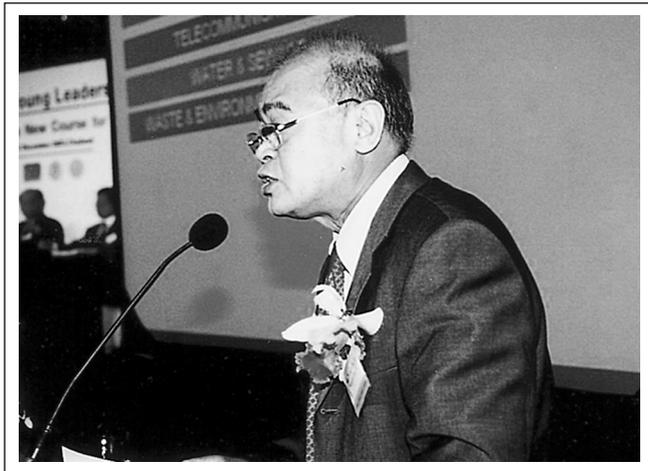


Sub-theme: Identifying Asia's Engines for Economic Growth



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The Managerial & Leadership Challenges in Infrastructure

Mr Kuwata, distinguished panelists, ladies and gentlemen, first of all, let me thank Hitachi for inviting me to speak at this Young Leaders Initiative. I certainly believe it is a noble enterprise and I am proud and honoured to be part of it.

Unlike the previous speakers who have to go on more micro/macro views, I have chosen to speak on the leadership challenges that face Asian countries with respect to physical infrastructure, particularly in the energy area. It is an area that will continue to make many demands on Asian countries in this millennium and there are many technological, economic, socio-cultural tasks that we have to face in order to deliver reliable and cost-effective infrastructure. I sincerely hope that you, our future leaders, will be up to its many management and leadership challenges.

The Challenges with Infrastructure

You do not need precise numbers to realise that the demands for infrastructure are large and growing. We need so many roads, power plants, transmission systems, airports and seaports with terminals, telecommunication networks, satellite systems, water and sewage systems, waste and environmental cleanup facilities. To build such infrastructure costs a lot of money. A megawatt of power requires roughly \$1 million of investments, so a relatively modest need like 1,000 megawatts per year for the Philippines still demands \$1 billion. A kilometre of a good, greenfield highway might require close to \$1,000,000, so 1000 kilometres of roads demands about \$1 billion.

The need for infrastructure is conspicuously heavy in our cities, which are choking from traffic, pollution, and overused facilities. But the demands are just as significant in the far-flung rural areas which hope to be connected to the national and the global economy with power, telecommunications, and roads. The cost/benefit considerations for building infrastructure in the rural areas are tougher relative to the more compact configurations in the cities. The costs are compounded if you consider the geography of an archipelagic country like Indonesia or the Philippines. These countries would need more airports, seaports, power plants than a contiguous country.

Moreover, it is not easy to build infrastructure. There is citizen resistance aptly called for a time now, NIMBY, or "not in my backyard." This behavior impacts on power plants, especially if it is coal or nuclear because of suspected pollutants, garbage landfills because of the smell, and airports because of the noise and the safety. Even a seemingly less threatening facility like an electricity transmission tower arouses fears, probably unfounded, of cancer risk. Because of such resistance, the costs of building infrastructure have become heavier, partly because of the price of obtaining right-of-way and community approvals, and even more because of the delays in construction. In the near term, it would be reasonable to expect that the difficulties of implementing infrastructure will worsen, rather than lighten.

Another matter that has a significant impact on infrastructure is the matter of who will pay. In the past, it was usually very simple. It was government or put more accurately, it was the taxpayer who would foot the bill. But for countries that faced budget deficits, or who had more important priorities like education or health or the military, there was never enough money for physical infrastructure. It became a postponable expenditure. Because governments were short of funds and because some economists felt that it was the smarter thing to do, the private sector has assumed a greater role in providing infrastructure.

This has certainly been true in the past decade, particularly in industry sectors like power and telecommunications. Following severe eight to twelve hour brownouts in the Philippines, the Build-Operate-Transfer schemes, or more simply known as BOT programmes were accelerated. The programme enabled private companies to construct power plants as long as all its production was bought and guaranteed by the government. Under these schemes many multinational and Asian companies built power plants, supported by power generation manufacturers like Hitachi and international bankers.

It was a phenomenon that initially was applauded. The praise turned to censure when too much capacity was built and the price of electricity became a burden that consumers stridently complained about. The story was much better in telecommunications, where cellphone technology, which is easier and cheaper to provide than the more traditional land lines, brought consumer prices down, expanded usage, and generated tremendous profits for the telecommunications service providers. There have also been efforts to privatise other infrastructure facilities like water, airport terminals, waste management systems, sometimes with success, but in others with controversial difficulties. Certainly over the past decade, we have seen firms like Southern Electric, Lyonnais de Suez, Thames Water and Anglia Water, and Frankfurt Airport leaving their secure markets in Europe and the US to become multinational and to provide service and make profits in developing country markets.

As the private sector took on a larger role, you also saw the emergence of a more powerful regulator. For natural monopolies such as in water or electricity distribution, it was inevitable for the regulator to play a more vigilant role. At one end, he had to make sure that the private sector did not make unbridled profits. But at the other end, he had to encourage investments, making sure that creditors of these projects were paid and investors had adequate returns. Remember that risks are supposed to be higher in developing countries, so higher profits are expected. In the argot of the financiers, the debt service coverage ratios had to be comfortable and the internal rates of returns were satisfactory.

In addition, the host governments would have to insure that the investment climate had an atmosphere of fairness. In simple terms, this meant that the contracts were respected and if there would be disputes, these would be settled through arbitration rules or in courts whose probity was beyond question. Also for contracts that were bidded out, there would be a level playing field, and offers would be made competently and offers would be competently and justly compared, with no special privileges to a local company, or worse, a crony of the administration.

With the private sector now more involved in infrastructure, we have to reckon with the changing regulatory attitudes towards pricing and its impact on investments. Ideally, contracts should have a stable regulatory regime so that investments flow in a systematic and seamless manner. What we have experienced in the Philippines however, is what I call the "vicious cycle of power crises." In the early 90's, we had twelve hour brownouts. We encouraged the private sector with BOT schemes, guaranteed high returns and suspended some rules especially on the environment. A supply glut followed, consumers complained, and regulatory rigour followed. The private sector was demonised and contracts were renegotiated. Now shortages are forecast for year 2007 but the private sector is reluctant because of recent experience, and we will soon be back to the brownouts of the early '90's. We certainly have to do a much better job of encouraging infrastructure investments.

Failure in Infrastructure

We must also emphasise that implementing an infrastructure project is no walk in the park. In fact, it might be useful to describe some monuments of failure, of which every country has its share.

In the Philippines, two facilities stand out. The first that I will highlight is the Bataan Nuclear Plant, which was bidded out and constructed during the Marcos years, but has never been operated. The plant was riddled with charges of corruption that spiked its total cost and accusations of inadequate safety measures (perhaps, unfairly because it survived the Mt. Pinatubo eruption). It still juts out to the China Sea, a sad tale of a 600 megawatt Westinghouse plant. It was completed some 30 years ago yet never operated. A Taiwanese plant of the same

size, built around the same time by the same supplier, operated, expanded, and thrived. Bataan was a straightforward government contract to a private sector supplier. Corruption charges involving a Marcos crony led to extended legal challenges that eventually were decided by a U.S. court. Safety concerns, especially after Three Mile Island and Chernobyl, made government postpone and eventually decide against operations.

A second monument is one you see as you land in the Manila's international airport. There is an airport terminal, built under the aegis of the Frankfurt Airport Group, that has lain idle for a year now. The project was developed as a variant of the Build, Operate, and Transfer scheme. But there have been charges of a flawed, even an illegal contract, corruption, and shoddy construction. The contract, which was declared illegal by the Philippine Supreme Court, has prodded the Frankfurt Group to seek redress with the World Bank. A resolution is not yet in sight, and in the meantime, the project has hugged the headlines in both Manila and Frankfurt. In this case, it was a private sector initiative to construct an international airport terminal, and also to operate and maintain (O & M) the facility.

Clearly, there are lessons in these examples so that you, the leaders of tomorrow can do better than our generation in implementing these projects. Hopefully you can do a better job in choosing the right contractor so that you have a cost-effective and reliable plant. You can ensure a fairer bidding process so that the final decision is accepted by a short list of competent and capable suppliers. You can monitor the project such that it would certainly satisfy an international standard, and guarantee that safety and environmental rules are complied with. You can better inform the public and the government of progress and the benefits of the projects so that community acceptance and even praise is obtained. This wish list of better systems and standards may seem obvious and reasonable, but we all know so well that many infrastructure projects are accompanied with criticism, challenge, and controversy.

Preparing Yourself for the Infrastructure Challenge

Most infrastructure projects can succeed only by utilising a wide range of people resources, a multiplicity of actors playing vital roles in a challenging enterprise. First, there are the project sponsors and I am using here the example that I have in one of the plants, my supervision with 'Centerina Plant', or the providers of equity, which oftentimes consist of a consortium of local and foreign partners. Then there are the lenders who in a big project can include multilateral agencies like the World Bank or ADB, export credit agencies like IFC for the US, JBIC for Japan, or KFW for Germany, commercial banks, and bondholders like insurance companies, all organised with the help of an investment bank. There is a heavy government presence for approvals have to be obtained with many agencies. The project has to be endorsed by the host department (e.g. Transportation for an airport terminal and Energy for power), and approvals are necessary with the Environment department, the Board of Investments, the Central Bank, and increasingly more important, the local government.



Then, there are various specialists who have vital contributions to the project. There are lawyers, both local and international, and I notice in the list of participants in the Young Leaders, there are many people in the law who are standing debators. I was just telling some of them that I have to sign this \$500-an-hour-contract which can be quite steep, to draft the contracts that would clarify the relationships between the parties over as much as a 25-year time frame, and when problems emerge, the process of dispute resolution. Once you're going to dispute, then you have to go to London for a resolution. You have to pay for the Queen's Counsel at roughly 375 pounds an hour which brings you to about \$700 an hour. There are the engineering advisers and consultants who provide advice on a variety of technical issues from equipment choice, construction schedules, environmental commitments, and operating alternatives. And there are the business consultants in market forecasts, systems, organisation, risk management, among the key subjects. As someone put it, these specialists

constitute a “food chain” of experts whose large fees are dependent on infrastructure projects.

Institutional relationships are intricately woven together by contracts and agreements that are put together by competent, often highly paid professionals, after protracted presentations, bids, and negotiations. They provide the glue for an infrastructure project that may take five years to build and 25 years to maintain.

Understandably, it requires considerable management and leadership skills to orchestrate the work of these many respected institutions and highly qualified individuals over an extended period. For instance, in the case of say a 300-megawatt power project, it would take a minimum of four years from project concept to project completion including some two years of construction time. And the power purchase agreement accompanies the project may have a 25 year life. Many approvals have to be sought, consensus has to be reached, and for the inevitable project crises, damage control has to be applied.

Summary

There are many managerial roles that have to be filled in an infrastructure project, and I hope that some of you will have a chance to serve in this capacity in your careers. It will provide a special learning experience. I have always felt that management can be the most multi-disciplinary of activities, especially in infrastructure. Depending on your assignment, you may have to know enough about economics, engineering, psychology, finance, or sociology and the law.

By way of summary, let me put together my own short list of managerial do's and don'ts so that you can do a better job with respect to infrastructure, especially if you are in the private sector:

- 1) Do a competitive tender, but put together a competent team that would evaluate the various proposals;
- 2) Do not skimp on talent, organise an A-team, and hire the best lawyers, engineers, consultants to help;
- 3) Choose your partners wisely, particularly your foreign partners and be careful with your shareholders' agreements;
- 4) Identify the areas of highest value creation, and oftentimes they are at the early stages of negotiations, and prepare accordingly;
- 5) Get ready for what will go wrong, for no matter how well you plan, something will fall through the cracks; and
- 6) Be ready for a public face, including the uncomfortable role of the villain, because you're in the infrastructure business and it will be easy for others to say that your project is too costly, too late, and too harmful.

On a final note, infrastructure does not just call for managerial roles, but also for leadership roles. The arena of activity is not limited to the confines of an office or a plant site. Oftentimes, it brings you to the larger arena of new technologies, international finance, local and national governance. One gets involved not just in arguments over construction programmes but in debates over national policy. If you become a CEO of an infrastructure company, national officials may look at you as a mover and a shaker who should be listened to with respect to the national budget, the right technologies, or geographical priorities. The job gets tougher, but you are young and can prepare for those challenges. And if you do a better job, we will succeed in providing vital services to our citizens especially those who are poor, and we will not have the monuments of failures in infrastructure, as we have now.

Thank you very much.