

Eight Challenges to Infrastructure Managers: Competence

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Executive Summary

A plan is only as good as how well it can be implemented. With an infrastructure manager's goals and organizational values in place – written in ink and faithfully practiced – the individuals that comprise it are expected to have a level of competency to accomplish its tasks.

The fruits of an Infrastructure Manager's competence become evident in:

- a. well-managed infrastructure that increases productivity, and thus, the competitiveness of individuals, firms, state;
- b. the sustainability and efficiency of infrastructure manager groups or organizations, through being knowledgeable of the legal, technical, financial and socio-economic impact of their role and able to perform their intended role accordingly; and
- c. the extent and quality of the communication and relationship among different types of Infrastructure Managers (i.e. between operators and end-users, regulators and operators, regulators and end-users, etc.)

Given these goals and indicators, it is suggested that Infrastructure Managers obtain the following set of competencies.

- 1) Law or policy makers
 - a) Identifying or creating the model to use for Infrastructure Managers
 - i) Setting rules or laws on ownership and contracts
 - ii) Tailor-fitting rules or laws to endemic societal behavior
 - b) Institutionalizing incentive and penalty systems
 - i) Creating implementing or regulating bodies with a good mix of experts in the fields of law, economics, statistics, engineering, governance, etc
 - ii) Having a good grasp of various incentive and penalty schemes and creating new schemes, if necessary
 - c) Budgeting
- 2) Regulators
 - a) Faithfully fulfilling or implementing its intended roles
 - i) Possessing a good balance of technical, financial, economic, relational skills
 - ii) Creating and faithfully referring to a well-crafted set of implementing rules and regulations (IRR)
 - iii) Self-regulating against deviance and corruption
 - b) Being dynamic to changes in the market it regulates
 - c) Identifying the appropriate financing and pricing methods to regulate activity
 - i) Discerning the proper approach to use, selecting from a menu of choices: charging toll and franchise fees to consumers, having shadow tolls absorbed by the government, setting price

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- ceilings, setting a maximum rate of return, and setting rules governing transactions of investors with special purpose vehicles.
- 3) Operators
 - a) Running the construction and operation of infrastructure like a business, but managing risk better.
 - b) Building strong linkages with end-users.
 - i) Employing appropriate public relation approaches
 - ii) Providing effective and accessible feedback mechanisms
 - iii) Partnering with the most strategic groups to penetrate consumer communities better
 - 4) End-users (i.e. consumers, clients)
 - a) Being aware and knowledgeable of infrastructure issues.
 - i) Initiating self-learning endeavors
 - b) Prioritizing issues.
 - i) Identifying the order of priority of issues that the spokesperson shall raise to other stakeholders
 - ii) Nominating the proper spokespersons who are responsible and will be accountable to the group
 - iii) Able to negotiate with operators and regulators in behalf of the community
 - c) Openness and ability to be actively involved in maintaining the infrastructure.
 - i) Receptiveness to and absorption of adopted technologies and knowledge to maintain the infrastructure
 - ii) Implementing to unique ways to participate in infrastructure activities when there is a lack of sources; such activities include providing sweat equity and co-financing

The areas of competencies presented above can be used as bases in designing continuing or life-long education programs for Infrastructure Managers. A list of suggested areas of study is presented in the last part of this paper.

The Importance of Infrastructure as a driver of competitiveness

Infrastructure pertains to facilities operated or services rendered by governments or private bodies that support daily activities in the economy. The term infrastructure may refer to either hard infrastructure (i.e. goods and facilities) such as roads, water pumps, and power lines, or soft infrastructure (i.e. services) such as education. The development of a country's infrastructure directly affects various aspects of its economy's over-all growth – from the improvement of its citizens' health through basic water sanitation, to the strengthening of the country's investment climate via an intricate telecommunications system.

Infrastructure is able to drive the competitiveness of society when its capability is maximized by the operators, regulators, policy or law makers, and its end-users or those directly benefiting from infrastructure. These four stakeholders, jointly though in varying capacities, are responsible for not only creating or using, but also maintaining the efficiency of the infrastructure. The incentive for doing so is that infrastructure can enhance the potential and existing capabilities of an individual, firm or country, thus their capacity to be productive increases through the following means:

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- (1) Individuals: by addressing the basic needs of individuals that allow them to function beyond subsistence level, through infrastructure with good quality, sufficient quantity, strategically located and made available at affordable prices
- (2) Firms and organized groups: by increasing the ease of operating business through infrastructure, thus encouraging continuous investments in industries in the country
- (3) Countries: by maximizing the availability of well-functioning infrastructure as leverage for the creation of global markets, eventually facilitating the transfer of skills, knowledge and technology

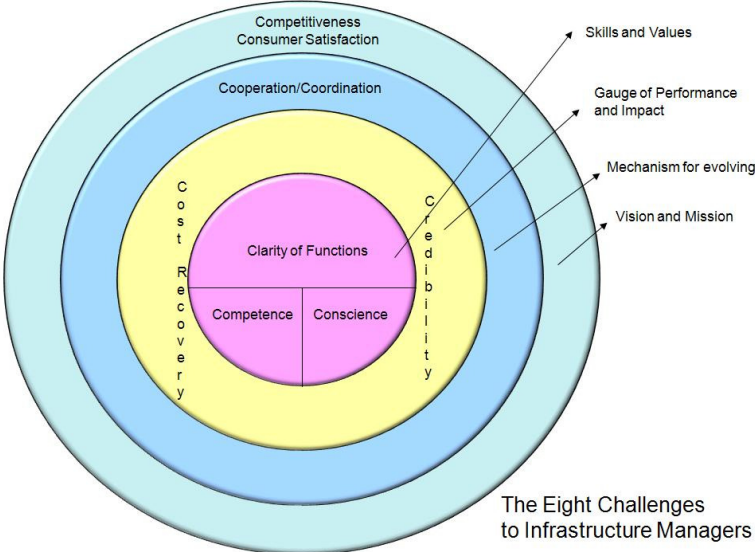
By improving the productivity of individuals, firms, and nations, infrastructure helps increase their competitiveness in the global arena.

Conversely, poor planning and maintenance of infrastructure can result to billion-dollar wastages, such as “white elephants” or large, costly structures that are not put to use. Take the example of the Ryugyong Hotel in Pyongyang, North Korea. The hotel was intended to be the tallest hotel in the world when its construction began in 1987. The construction cost has already ballooned to 2% of the Gross Domestic Product of North Korea, when its construction was ceased in 1992, apparently because it is “structurally unsound” and can no longer be financed. Today, Pyongyang’s white elephant, which stands as its skyline’s tallest structure, is a glaring testament of poor infrastructure management. Many unfinished or underutilized infrastructure facilities, such as Ryugyong Hotel, continue to exist elsewhere.

Competence as one of the Eight Challenges of Infrastructure Managers

The paper “Dynamic Infrastructure Management Toward a Competitive Asia” (Tuazon & Raymundo, July 2007) presented key areas of improvement in Infrastructure management, referred to as the Eight Challenges to Infrastructure Management, particularly in Asia. One of the three central challenges is improving individual managers’ **competence** in their technical, financial and organizational skills. Along with **conscience**, the aforementioned challenge ensures that the intended functions of an Infrastructure Manager, presuming they are properly in place, are being actualized. The graphical representation below shows the relationship of these Eight Challenges.

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Infrastructure Manager Competence as Key to Success

Infrastructure is undoubtedly important to the development of a modern society. While this is so, infrastructure has to be managed well to ensure that the benefits are fully extracted for the right stakeholders. As such, Infrastructure Managers are tasked to ensure that infrastructure goods and services are not subjected to problems arising from lack of proper technical, financial and organizational capabilities.

The Need for Continuing Education

The solution to the perennial problem of poor Infrastructure management in Asia is the continuing education of the Infrastructure Managers to strengthen technical, business and public management skills. Continuing education for the Infrastructure Managers may be spearheaded by academic institutions and experts in a particular infrastructure field.

Collaboration is the key to continuous education, where existing experiences in and conditions of infrastructure management are discussed, best practices are explored and solutions are arrived at through the linkages formed by local and foreign stakeholders. Linkages are the best sources of information on industry and technology trends that are valuable to the Infrastructure Managers. Forming collaborations in coming up with industry- or association-wide projects through these education networks also becomes a very viable option as members may choose to share the costs of the projects.

Given this recommendation, the next section of this discussion paper presents the characteristics of Infrastructure Managers and suggests corresponding areas of study as well as skills to develop to improve the competence of Infrastructure Managers. The suggestions tie together lessons drawn from various, existing studies on infrastructure management. The succeeding discussions can be used as bases in designing continuing education programs for Infrastructure Managers.

Who are the Infrastructure Managers?

An Infrastructure Manager may come in the form of a central government, local government unit, government agency, non-government or independent detached agency, a private corporation, media, financial institution, or a citizens' action group, etc. However, no matter what form an Infrastructure Manager takes, the crucial functions played by Infrastructure Managers may be classified into the following roles: *the operator, end-user, law or policy-maker, and regulator*. Prior to the past half-century, it is most common for infrastructure industries or utility enterprises to be ran by the state. However, in the past decades, the onset of privatization efforts, concession arrangements, and the likes, have involved more actors in infrastructure management. The privatization of industries and the preference for close-to-free market competition for industries, which were previously thought to be more efficient when monopolistic, have lead to the need for regulators. Increased awareness of demand-side (as against supply-side or supplier-centric) economics has also lead to the increased recognition and involvement of end-users in infrastructure management.

The Infrastructure Managers and their Competencies

Leadership, administrative, organizational, technical, financial, human resources, communication, and client-relationship competencies are basic requirements for private or public managers. Similarly, Infrastructure Managers are expected to possess or continually strive to enhance these basic competencies. However, the list of “basic” or common manager competencies cannot be exhausted.

Thus, while there may be overlapping competency areas to develop for each type of infrastructure manager, it is best to present the discussion on competencies on the basis of the scope and limitations of varying responsibilities.

- **Law- or policy-makers**

1. Identifying or creating the model to use for Infrastructure Managers. As previously mentioned, infrastructure management has grown to include several stakeholders over the past decades. With this condition, law or policy makers should be able to create or identify existing models that best fit their infrastructure needs. Such blueprints not only define the responsibilities of actors but also provide systems or mechanisms that will enable them to operate properly, ensuring the end-goal of delivering and maintaining infrastructure adequate for the needs of the consumers.

Subcontracting and privatizing infrastructure industries may entail soliciting, auctioning, drafting fair contracts – processes on issues of ownership which may pose financial and relational risks for the parties involved. Law or policy makers should be able to set parameters for these transactions. Western models and even Latin American models for privatization, subcontracting, private financing, etc., have been in place. The United Kingdom has been endorsing since 1992 the Private Finance Initiative, a model that details the provision of financial support to Public-Private Partnerships (PPP). (International Monetary Fund, March 2004) In some aspects, it has been adopted by other countries as well, such as the United States in its Trans Texas Corridor Highway Development Project.

The challenge for Asian law or policy makers is to consider the uniqueness of their countries’ conditions and draft the laws or policies accordingly. The design has to be tailor-fitted to manage externalities, such as unique cultures and societal behaviors. How will these behaviors will be treated – will they be “fought” or will they be internalized? The Philippines’ “Build-Operate-Transfer Law” or Republic Act 7718 and its corresponding implementing rules and regulations (last amended in 2006) are results of such exercise.

2. Institutionalizing incentive and penalty systems. The bane of infrastructure management is corruption. Charles Kenny of the World Bank provides us the quantitative evidence.

Box 1: The Impact of Corruption in Infrastructure Projects in Asian Countries

“...construction firms report paying an average of 7 percent of government contract values in bribes to win bids or alter terms (Kenny, 2006). In Indonesia, a physical audit of roads built under the oversight of village heads uncovered ‘missing materials’ worth 24 percent of total expenditures (Olken, 2004). In Bangladesh and Orissa, in India, leakage

due to illegal connections or underbilling accounts for as much as 30 percent of generated power (Gulati and Rao, 2006). Similarly, Davis (2004) suggests that unaccounted for water makes up 35 percent of total flows in India. Utilities are also saddled with the cost of staff in place purely to extract rents. Overstaffing in public utilities can be significant, as can bribe payments to obtain 'ghost' employment positions (Castalia, 2004)." - (Kenny, 2007)

Thus, along with laws or policies aimed at installing systems in the infrastructure industries, institutionalizing penalty systems for corruption is imperative. Determining the proper reward and penalty system that will encourage efficiency requires extensive knowledge and study of the needs and operations of the infrastructure industry in the country. Consulting lawyers, economists, statisticians, and businessmen through the creation of regulating bodies can help identify the right approach. The menu of pricing and incentive strategies will be presented hereafter.

3. Budgeting. For long-term projects such as those concerning the planning, constructing, delivery and maintenance of infrastructure goods and services, financial planning is a critical foundation as it tries to best apportion limited resources over a span of years, bearing in mind the sustainability of operations. Depending on the relationship of the law- or policy-maker to the operator and other stakeholders, the financial competencies range from allocating appropriately and sufficiently part of the national budget for the creation and operation of state-ran infrastructure, to determining the most economically viable (and politically sound) ownership structure of PPP arrangements. Competency in budgeting may also include designing the most efficient financial model for regulating bodies.

Regulators

1. Faithfully fulfilling or implementing intended roles. The role of regulators is to ensure that service inefficiencies and market failures (i.e. due to monopolistic activities, overpricing, etc.) are prevented before their onset and remedied when they already exist. For natural monopolies, regulators have the task of preventing market abuses. By doing so, regulators are able to protect the welfare of stakeholders, especially consumers, and manage the system of relationships among the stakeholders when needed. Thus, the skills required from regulators are varied and complex, as they try to address not only market but also systematic failures.

Aside from financial, legal and organizational competencies, it is important for a regulator to have technical competencies. Most infrastructure industries, such as a utility industry like the energy sector, are highly specialized. Thus, engaging engineers and technical consultants can help regulating bodies set technically realistic parameters to complement legal and economic restrictions. Finally, assuming the set of implementing rules and regulations (IRR) as well as incentive and penalty systems truly embody the intended role of the regulator, a regulator is expected to comprehend and properly deliver results based on the IRR's intentions.

2. Being dynamic. While keeping faithful to the IRR, regulators are expected to be continually attuned to the activities of those the industry they regulate and to make amendments to their rules accordingly. The regulator must have the competency to recognize how to streamline internal procedures (i.e. transactions within the regulating bodies' personnel) and external procedures (i.e.

transactions between the regulating body and operators or end-users) to address changing demands or adapt to evolving trends.

3. Identifying the appropriate financing and pricing methods to regulate activity. Pricing and financing methods are used as incentives and disincentives for certain behaviors in the market. The regulator should have a good grasp of financing techniques and pricing methods and have adequate information to discern which technique or method to use in regulating their industry. These host of most common financing and pricing methods are as follows: charging toll and franchise fees to consumers, having shadow tolls absorbed by the government, setting price ceilings, setting a maximum rate of return, and setting rules governing transactions of investors with special purpose vehicles.

Box 2: Special Purpose Vehicle (SPV)

Public Private Partnership financing is often provided through special purpose vehicles (SPVs). An SPV is usually a comprised of a group of banks and other financial institutions that serve to facilitate the financing activities of a PPP. An SPV sells securities, backed by financial assets from the government, to private investors. The SPV uses the payment of the private investors to purchase the government assets. The proceeds will then be used to finance a PPP. The SPV pays the interest and amortization to the investors, part of which comes from the government's share of revenue from the PPP. (International Monetary Fund)

Operator

1. Running the construction and operation of infrastructure like a business, but managing risk better. Designing, constructing, operating and maintain infrastructure are the main functions of this type of infrastructure manager. The roles may be taken on by a single or different actors. The competencies required of this infrastructure manager is similar to that of any manager in that they are required to be knowledgeable and capable in performing a range of tasks such as goods production, service delivery, marketing & sales, finance, information management and human resources.

However, Infrastructure Managers are different because of they often manage public goods/services. Whether the Infrastructure Managers are from a public or private entity, they have to make special considerations in performing their tasks. Their responsibility to the public is glaringly larger than that of a corporation selling non-infrastructure goods, such that decisions made by Infrastructure Managers are thus crucial and sensitive in that their actions potentially affect a wider range of end-users and in some instances an entire country. They should be aware of the broader economic, social and environmental impact of their actions. Lack of competencies, thus, can potentially pose great damage to society due to improper infrastructure operation or service delivery, thus affecting people's living conditions and productivity. So while the competencies required from them include the general managerial skills previously mentioned, the risks of committing errors have a more widespread effect and potentially pose greater danger.

Box 3: Public vs. Private Goods

A public good has both non-rival and non-excludability properties. Non-rival means the good can be used by another person at no additional/marginal cost. Non-excludable means it is not possible to exclude people from using the good even if they don't pay for it. (Stiglitz, 2000)

2. Building strong linkages with end-users. An infrastructure operator should recognize the national economic impact of their operations. They should be able to procure and understand national statistics and relate their performance with the macro environment. Awareness of and concern for the social benefits of their trade should ideally be at par or even greater than business profits. Thus, it is also important for infrastructure operators to learn how to properly communicate with the end-users of the infrastructure, such that they are able to actively involve the end-users by having them:

- solicit valid and implementable solutions to improve efficiency of service; and
- directly participate in operating and even co-financing the infrastructure.

Learning to properly coordinate and form partnerships with local government units or community-based organizations where the infrastructure will be made available can most likely give an operator a better understanding of the concerns on social needs, equity, and inclusion. (Serageldin, Kim, & Wahba, August 2000)

Basic information on infrastructure management may be taught to individual consumers, but it may also be coursed through consumer groups and media for expediency. Truly efficient consultation processes can then be undertaken by initiating such information campaigns and setting up effective systems for feedback.

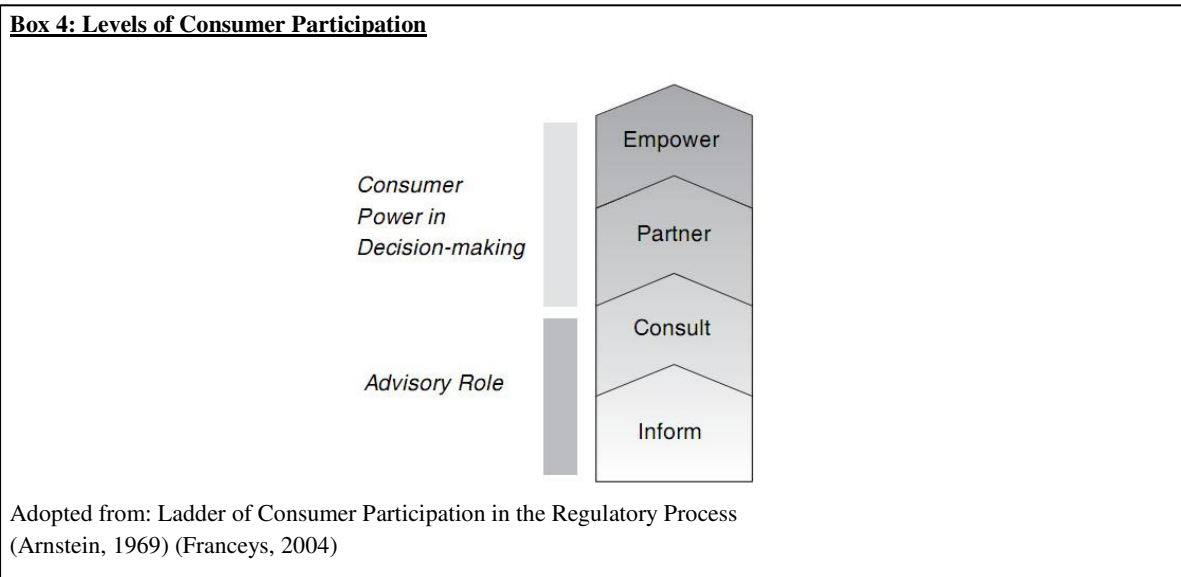
End-users (i.e. consumers, clients)

1. Being aware and knowledgeable of infrastructure issues. As previously mentioned, the mandate of regulators is to ensure that the welfare of consumers is prioritized. Operators are also expected not to sacrifice social benefits for commercial gains. Therefore, consumer participation is essential to provide feedback to the regulators and operators and to provide “checks and balances” to ensure that regulators and operators stay faithful to their intended roles.

In the models for consumer participation of Arnstein (1969) and Franceys (2004), the ability of consumers to monitor and provide feedback begins with information, then consultation. After which, partnerships between consumers and regulators (or operators) can be formed until the consumers are completely empowered to manage or maintain their own infrastructure. (Muzzini, November 2005) The competency of end-users is most expected in the two latter levels of consumer participation – partnerships and empowerment, as the first two levels are mainly initiated by the operators and regulators.

However, even in the first level of consumer participation, end-users can take the initiative to study and process information on their own. This exercise will help them make educated

decisions as to whom and how they want to represent their needs, concerns and suggestions. This shall eventually help ease them in to achieve higher levels of participation.



2. Prioritizing issues. For partnerships to be effective, the consumers that will benefit from the infrastructure should appoint spokespersons, such as consumer groups or community leaders, who are accountable to them. The task of these spokespersons is to help identify the issues that the community is facing in terms of service delivery of infrastructure, pricing, etc. Once these issues have been raised, they should serve as moderators or facilitators to help the consumers in organizing the issues in order of priority. The top of the list should include issues that are most communal, have the greatest impact, and are the root causes of other issues. After this process, the spokespersons are expected to be the face of the group in negotiating and designing contracts that seal the partnership and formalize the obligations between the consumers and the regulators or operators.

2. Openness and ability to be actively involved in maintaining the infrastructure. Community participation becomes attractive as consumers realize that their participation eventually redounds to their long-term access to the infrastructure good/service and the decrease in costs, in some instances. Taking participation a step further, the empowerment defined previously can work if there is a form of local community management for infrastructure. This applies to community-based infrastructure. For infrastructure catering to a larger constituency, it may be best to relegate infrastructure management to different subgroups of the said constituency.

Taking off from a background paper for the Third Global Report on Human Settlements, the “concept of subsidiarity” is the guiding principle for devolving the functions of operating or managing infrastructure. This puts value on the role of the “entity of governance” closest to the community which the infrastructure aims to service, such as local government units and community-based organizations. These entities are believed to be able to deliver these services

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more cost effectively and are easier to monitor by the consumers. (Serageldin, Kim, & Wahba, August 2000)

In a more literal way, consumer empowerment can also be encouraged through technology and knowledge transfer, especially in maintaining the infrastructure. For instance, communities should take the interest in understanding how to properly care for water pumps and perform minor repairs to ensure the uninterrupted supply of such a valuable community need.

Below are examples of consumer empowerment wherein their contributions of the consumers go beyond simply giving feedback.

Box 5: Investing Sweat Equity in the Gawad Kalinga Project

The Gawad Kalinga project, initiated by Couples for Christ which is a religious and non-profit organization in the Philippines, helps build low-cost homes for illegal settlers in the metropolis and provinces. Teams comprised of Gawad Kalinga volunteers and community leaders oversee the construction and maintenance of the communities. However, more than just the participation of individual community leaders, the soon-to-be homeowners themselves and their neighbors actually participate in building the house, such that they put in sweat equity into building the infrastructure.

Box 6: Sharing the costs for infrastructure goods and service provision through the Parivartan project of SEWA

In 1972, the Self-employed Women's Association (SEWA) was formed in Ahmedabad, India to empower low-income women. SEWA also established SEWA Bank, a cooperative bank; and Mahila Housing SEWA Trust, that provides legal and technical assistance on infrastructure services. SEWA is a partner in a citywide slum project called Parivartan. SEWA and MHT act as financial and technical intermediaries, respectively. The organizations motivate families to contribute funds (~\$48) towards an infrastructure improvement package. Families are required as well to contribute money for the cost of maintaining the houses and other community infrastructure. Local industries match their contributions and the balance is covered by the municipality. In turn, the Parivartan participants are ensured of land tenure for a specific amount of time.

(Shri Mahila SEWA Sahakari Bank Ltd., 2007)

Indicators of Success in Infrastructure Manager Competence

The sufficiency and success of the competencies of Infrastructure can be measured by assessing the presence of the following indicators:

- a. Well-functioning infrastructure – All infrastructure goods and services have life spans. The four types of Infrastructure Managers are co-responsible for ensuring that the utility of the infrastructure is maximized, so that in turn, the benefits derived from the infrastructure is optimal as well.
- b. Organizational sustainability of Infrastructure Managers' groups – The operators are able to recover operational and administrative costs, and is able to convert the surplus, if any, to more worthwhile infrastructure investments that will continue to benefit the consumers. In the presence of failures on the part of the operator, regulators should be able to cushion the effect of and correct the deficiencies.

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- c. Consumer satisfaction – Whether the initiative comes from the operator, regulator, end-user or all of them, the measure of competency is the capability to respond aptly to consumers needs and concerns through appropriate infrastructure projects and interventions.

Recommendations

Continuing education through formal education and linkages contribute to increasing the competencies of Infrastructure Managers. Drawing from the ideas raised in this paper, a summary of lessons that can be taken up in continuing education efforts is presented below:

- I. Economic Competency
 - a. Supply and Demand
 - b. Market competition
 - c. System of incentives and disincentives
 - i. Includes assessing pricing techniques, such as setting a price ceiling or rate of return caps
 - d. Public sector economics
- II. Financial Competency
 - a. Investing in infrastructure & risk management (government)
 - b. Investing in infrastructure & risk management (private enterprises)
 - c. Accounting
 - d. Procurement
- III. Legal Competency
 - a. Legal framework for Public Private Partnerships (if present)
 - b. Reward and penalty system
 - c. Guidelines for contracting, auctioning, etc.
- IV. Technical Competency
 - a. Engineering
 - b. Design, construction, maintenance of infrastructure
 - c. Procurement
- V. Social/Public Relations Competency
 - a. Feedback mechanisms
 - b. Selection of representative; Identification and prioritization of issues
 - c. Designing innovative ways to involve consumers and other stakeholders

Below is a mock schedule for a 5-day Infrastructure Management Program, which marries theory and case studies, targeted at improving infrastructure management using the “Eight Challenges to Infrastructure Managers” of the Asian Institute of Management Policy Center:

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Topics	Description
Day 1: Introduction to the principles of infrastructure management and competitiveness	Session 1 Dynamic Infrastructure Management defined using the The Eight Challenges
	Session 2 C1: COMPETITIVENESS Introduction to competitiveness Introduction to the Case Method
	History and current status of Asian infrastructure management
	Session 3 C2: CLARITY OF FUNCTIONS: roles of Infrastructure Managers (stakeholders), the importance of planning, the merits of autonomy
	Session 4 C3: CONSCIENTIOUSNESS: proper values and attitudes in managing and regulating public goods, good governance, social responsibility
Day 2: Competitiveness in Infrastructure Governance, Operation and Regulation	Session 1 C4: COMPETENCE 1. Strategy and Risk Management for Asian Infrastructure Managers
	Session 2 2. Operations and Organizational Management for Asian Infrastructure Managers
	Session 3 C5: COST RECOVERY Financial management of infrastructure industries
	Session 4 C6: CREDIBILITY Managing the perceptions and expectations of stakeholders
Day 3: Infrastructure Management in Asia	Session 1 C7/C8: COORDINATION & CONSUMER SATISFACTION Managing networks Coordination as a mechanism for dynamism Consultation and feedback mechanisms
	Break into learning teams and discuss the causes of problems of Asian infrastructure management in particular industries through selected case studies
	Session 2 Plenary 1 - present the highlights of the discussions of the learning teams - discuss how to address problems with more appropriate and timely infrastructure management practices
	Session 3 Live case/Field trip related to Asian infrastructure management principles or use video conferencing facilities if the location is outside the Philippines
Day 4: Asian Infrastructure-Industry-Specific Discussions	Sessions 1&2 Industry-specific issue 1* (e.g. knowledge management, technology trends, infrastructure for globalization) Industry-specific issue 2*

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Topics	Description
	Break into learning teams and discuss the causes of problems of Asian infrastructure management in particular industries through selected case studies
	<p>Session 3 Plenary 2</p> <ul style="list-style-type: none"> - present the highlights of the discussions of the learning teams - discuss how to address problems with more appropriate and timely infrastructure management practices
Day 5: Asian Infrastructure-Industry-Specific Discussions	<p>Session 1 Industry-specific issue 3*</p>
	<p>Session 2 Round Table Discussion on a pressing infrastructure issue.</p>
	<p>Session 3 Synthesis</p>

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