

# Maximizing the benefits of aid for Information Technology

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## **Abstract**

In this paper the author examines critical success factors for aid projects. Many anecdotes about aid projects were told to the author by donor personnel, recipient personnel and the economists responsible for analyzing the projects - especially successor projects which built on previous projects. The successor projects often revealed inadequacies in completed projects. The resulting success factors may be of value to recipient countries in ensuring that the aid they receive will deliver its full potential benefits.

## **Keywords**

National policies, government, culture, developing countries, infrastructure

## 1 INTRODUCTION

This paper is based on the author's experience in South East Asia and the Pacific. The author prepared an Information Technology (IT) strategy for a small Pacific country and provided technical assistance to the Ministry of Finance and Economic Planning. The assignment included building a methodology for prioritizing the allocation of national expenditures. Because a substantial proportion of funding came from aid donors, the methodology needed to be extended to cover the evaluation of aid proposals because they required local senior public sector policy advisors to be involved. Some projects required related expenditures from the

national resources. Many activities which were considered for national funding were satisfied through donor aid funding.

## **2 PLANNING FOR AID PROGRAMS**

### **2.1 What aid do you want?**

The aid that a country may want needs to be identified by a well-reasoned methodology - similar to the method used to allocate national resources. In general there is a surplus of ideas that warrant further examination - these will usually require feasibility studies. From such studies there will be many which need funding in the implementation phase and unless 'user pays' they will also require ongoing funding during the operation phase of the project.

Because all aid projects should be of value to the recipient country and because they will usually lead to ongoing funding drawn from the national budget the same criteria as those applied to national expenditure decisions should be applied to such projects. Only the source of funding should be different - the donor's instead of the nation's budget. Indeed, aid requests should really be for those items which cannot be funded nationally but are the next priority for expenditure - those at the 'margin'.

### **2.2 The national budgeting process**

A methodology for the national budgeting process should be clearly defined. Revenues arise from taxation, duties, user fees and fines.

- If taxation levels are set too high there will be little foreign investment and local investment may move off shore. General economic activity may be depressed. In a subsistence economy there may be only a small tax base.
- If only a small section of the population benefits by a service then it is appropriate that the user pays unless the general population accepts that the service should be subsidized.
- Duties are tied to the movement of goods and generally inhibit trade.
- Fines rarely offset enforcement costs and may have significant compliance costs.

Thus revenue is limited.

Having determined the revenue, public expenditure will be divided into social, defence, environment, infrastructural and economic. Expenditure is clearly constrained by revenue and debt considerations. Many operational expenditures and project opportunities will be promoted by ministries and lobby groups as well as politicians. Therefore the possibilities must be ranked and prioritized.

A clear and well-enunciated policy of national priorities will ensure that potential donors have a clear understanding of projects which will be valued. This will also reassure them that the recipient country can plan and act over intermediate time frames.

It should be noted that there will be feasibility projects and implementation projects as well as ongoing operational outputs, and that some projects lead to improved infrastructure rather than to direct outputs.

Thus a developing country can develop a clear national strategy and look to aid to build on this strategy. The band of projects which fall just below the cutoff in funding available from national sources become the prime candidates for aid projects.

### **2.3 What aid can the donor give?**

A New Zealand view of 'foreign' aid is one of offering to do what we can do well - agriculture, horticulture and animal husbandry - and to do it 'on the ground' alongside local people. Alternatively aid is given as work assignments and training in New Zealand, particularly for civil servants. As citizens in a multicultural society New Zealanders recognize that other cultures have different values arising from fundamentally different world views, and critical comments must be limited by mutual respect and a moral obligation to listen and learn first.

New Zealand has a policy of asking the recipient country what it would like. Aid can clearly make a major difference to the economic well-being of least developed countries. But to ensure success we must identify the essential ingredients of success.

## **3 INGREDIENTS OF SUCCESS**

### **3.1 Getting the right aid**

The motivations of donors need to be understood. They can be: generosity and compassion, mutual benefit or trade, or factors internal to the donor (for example supporting an ailing local industry) and, in the worst cases, simply dumping.

Asking for what you really want requires knowing what you really want. Even governments must do their homework to identify their real needs. Openness and consensus in the political process will ensure support and guarantee that objectives are not subverted. Policies must be clear and enabling to gain the support of nationals and of donors.

Adopting a strong methodology to prioritize development projects will ensure that donors (and particularly agencies such as the Asian Development Bank (ADB) and the International Monetary Fund (IMF)) can readily assert that their contributions are really valuable, are appropriate and free of questionable motivations.

Your need for aid must be 'sold' so how you to put your case is important. This means preparing a well-documented case and presenting it in a way which appeals to potential donors and is aligned to their criteria for aid.

Giving the donor choice is important as it provides the donor with flexibility and may lead to a better fit between donor and recipient.

Donors should be offered a 'choice from your choices'.

### **3.2 Writing the brief**

Ensure that any feasibility studies conducted by outsiders are examined for appropriateness. Many external 'experts' bring ideas which have been formed in a different social and cultural milieu. They may not understand local competencies and may not be aware of even such apparently straightforward factors such as climate, vegetation and local natural resources. Worse, they may not be aware of infrastructural issues such as limited electrical power, water or fuel.

Ensure that the projects fit your priorities. Quietly asking for the right things first is best. It is critical to ensure that you get aid for all three phases of a project: feasibility, implementation and operation. Failure to get aid for subsequent phases can lead to 'rusting monuments' - factories built but not operational; machinery idle for lack of spare parts.

Most cultures are hesitant to place demands on aid agencies and fail to include requests for fine-tuning projects after they have been agreed in principle. Western cultures often expect you to ask for what you want and to be clear about it. If this is not your usual way to seek what you want you may have to respond anyway.

Being able to understand and develop such evaluation techniques as Economic Internal Rate of Return (used by ADB and IMF) means that your priorities can be requested with substantial justification already prepared. By setting appropriate values on local economic costs such as the value of education, the value of preventative health measures, the value of elder care and so on the EIRR techniques will help you focus on projects which will deliver the desired benefits to your country. The objectives of your requests will then be clearly understood by the donor, who may be able to think through aid planning and respond more innovatively. A better fit may be achieved.

### **3.3 Cultural sensitivity**

Cultural sensitivity is essential for a successful working relationship. A poor experience while aid personnel are present will leave the nationals on the project with a poor image of its values. Local recipient 'ownership' is required if the project is to continue to work successfully or be further developed.

The most helpful document I received was one briefing me on the culture of the aid-requesting country. Westerners sometimes need to be reminded of the values of other cultures and that there are older cultures than Western culture. Westerners may need to be reminded that not all cultures appreciate the individualism of the West.

### **3.4 Doing your homework**

Mother knew best when she said you must do your homework. I have seen:

- abandoned fish farms built through aid in a country with the richest oceans in the world - an agenda brought in by a consultant;
- electrical devices installed which were drawing more current than the local generation capacity - a project designed without local knowledge;

- complex engineering projects affecting tidal and river flows - projects needing the same careful planning and modeling as any such major project would receive in the West;
- an ear surgeon flown in to help when the children swam in a polluted lagoon - a project conceived because donors could not acknowledge that a previous failed project had resulted in pollution that needed expensive resolution.

The projects should not have been started without straightforward questions being asked before any commitment to proceed was made. The questions should have been asked by both parties.

Within your own (recipient) government you may need to remove inhibitors such as structural issues and colonial leftovers. Excessive regulation is expensive in all economies. Poor legislation can lead to expensive administration. Bureaucracy has been spread like a disease in the last century but may be thinned down in today's world. Rules controlling the promotion of civil servants may hinder the deployment of local expertise and leadership on short term projects. Government can rarely retain experts in the face of remuneration offers from private enterprise. You may need to accept that your local experts need to be contracted from private enterprise

### **3.5 A fit to local conditions**

Projects need to fit local conditions. While there may be a belief that governmental systems should be sophisticated in mature economies, the Business Process Reengineering (BPR) belief in simplification should be emphasized. The best form of simplification is obliteration - does it really need to be done at all?

An unreliable infrastructure will not support sophistication. Thus the following statements may be made about computing:

- Small distributed computer systems not linked in real time but through store-and-forward messaging may be sufficient.
- Local staff skill levels may be low so focus on small simple systems. This may imply using only PCs and simple languages such as Visual Basic and databases such as *Access*.
- In developing the software a local competency must be left behind - the technology should not push the envelope. Software needs to be well-documented in the local language.
- Local conditions may require some attention to the hardware. Clearly power conditions may be marginal so uninterruptable power supply units may be required. It may not be appropriate to run computers unattended. It may be necessary to ensure that they will shut down cleanly on power failure. You may need to discuss these issues with your suppliers.

Local conditions may also give problems with rats, insects and moulds. In New Zealand, in some areas, we need protection from sulphur fumes. Be proactive - point these issues out to your prospective donors.

### **3.6 Basic competencies**

In many under-developed countries there is a small cadre of well-educated people but they may not be able to meet all the time demands of systems support staff.

The development of local information systems skills - software installation and upgrades, monitoring disk utilization, back-up procedures and elementary problem-resolution - is essential.

The project must leave behind a mechanism which enables local competencies to continue to build towards self-sufficiency. A train-the-trainer regime may need to be created. This will require that leadership opportunities are identified, created and nurtured.

As with any management activity it is necessary to ensure the competencies of your external advisers and to quality-assure their advice. If sensitive, this may have to be done informally. Use all your networks - previous consultants, university contacts from your past, acquaintances. Seek out other success stories.

### **3.7 Keep projects small**

In the new Silicon Valley 'execution' model the emphasis is on handling projects which have early deliverables. A target is often stated as 'deliver something within six weeks which the user can exploit immediately'.

This 'Just do it' attitude enables the recipient user to evaluate the task deliverable and implement it. The user can then ask more precisely for the next deliverable and define what it should contain. This leads to learning so that the next deliverable is more focused. The long-term strategy is to continually adapt to experience and to the learning that is inevitably occurring for the users.

### **3.8 Ownership being left with nationals**

When the consultant moves on, local staff must support the project in the operational phase. A mechanism for on-going advice must be established. The Internet now provides access to advice through low priority e-mail and the World Wide Web. Provided the telephone system is up once a day or so, messages can be moved to international centres of expertise but especially to the original consultant, who can continue to provide liaison and information source references. Such forms of low priority but expert support encourage local staff to take responsibility which they may otherwise avoid because they feel they have insufficient skills.

## **4 SUPPORT ACTIVITIES**

The Internet gives new opportunities for developing countries in several key ways.

### **4.1 Scientific support**

If scientists have participated in an aid project they will have a better understanding of local conditions and competencies. Using the Internet then enables the local staff to remain in contact with the experts. The experts can devise solutions and,

because they understand the local competencies and infrastructure, they can give advice that can be implemented locally by recipient nationals.

Centres of excellence with ongoing international electronic links will ensure that best-in-class knowledge remains available to locals working in the field. Thus the advice available to the recipient should be no less than to staff in a developed country.

#### **4.2 Transfer of data for complex analysis**

Data requiring complex analysis can be forwarded to a research institute in the donor country where it can be analyzed, the results interpreted and quality advice returned. Such analysis projects are likely to be funded under scientific research grants rather than through aid projects.

Empathy and rapport can be built between recipient field workers and the donor country scientists.

#### **4.3 Software support**

Software enhancements and general support can be provided over the World Wide Web. They can be self-installing, reducing the need for expertise at each computer site.

#### **4.4 Computer-based training**

CBT courses can be delivered over the World Wide Web. Because they often require long time periods online it may be best for such material to be distributed on CD-ROM rather than only over the Internet. This is an effective way to keep staff with basic skills in touch with current developments or with changes in the current knowledge base.

Such courses need to be developed using examples which are within the experience of the recipient user and which are culturally appropriate. Indeed such distance education may be the dominant method of all professionals keeping their competencies and knowledge up-to-date in the future.

#### **4.5 Peer support**

The Internet allows staff to maintain contact with their original trainers who might be university staff or peers in the donor country. Most of us have the benefit of ongoing contact with our teachers and peer group. Such people networks need to be maintained.

### **5 A NATIONAL INFORMATION SYSTEMS STRATEGY**

A national strategy may be needed to develop information systems competencies. The first need is to develop an extensive base of software developers competent in simple tools such as *Access* and *Visual Basic*.

Even in the West less than 2% of users of Microsoft *Office* have formal training. Therefore promote wide-spread preliminary training in software products and then form support groups so that the more talented may increase their ability to exploit the software more extensively. Those people can then be available as support staff to others.

It is possible to gain aid for projects in order to set up full training facilities and to staff them with experts for the initial year. Naturally the teaching examples must be suitable and within the experience of local staff for learning to occur.

I believe that courses delivered by experts made available through aid need to focus on finding the best local talents and to build their competencies. It should matter little that they are in the public or the private sector. Indeed a healthy flow between the two sectors builds a pool of competent staff who can be retained on any one project in the public sector. A centre of expertise may need to be established to continue to build on such expertise

## 6 SUMMARY

Nationals of the donor country charged with concluding aid agreements should endeavour to do the following:

- Take the initiative.
- Ask for what you want.
- Give clear justification for what you want.
- Use the donor's rules.
- Ensure that what you want fits with overall government priorities.
- Ensure that every project enhances local competencies and capability.
- Do not be too concerned whether it is 'public' or 'private' good.

These actions will each improve the likelihood of gaining the maximum benefit from the aid. Finally, if you can publish the success stories, especially back in the donor country, you may receive ongoing aid, and a bonding between your nationals and the donors leading to more trade, more transfer of skills and knowledge.

## 7 BIOGRAPHY

Ian Mitchell completed a Master of Science in Nuclear Physics in 1964 and joined IBM as a systems engineer. He has 35 years of experience in information processing and management consultancy. He has supervised large software projects, taught postgraduate courses in software engineering, information systems strategy, management awareness and the management of information technology. He has expertise in public sector software, including financial management software. He has consulted for the Asian Development Bank and has delivered papers in several Asian countries. He is the President of the New Zealand Computer Society, and has been a member of TC 3 and WG 3.3.