

Managing the project cycle for time, cost and quality: lessons from World Bank experience

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This paper describes the World Bank's Project Cycle which defines the project development process of moving from conception to completion. Lessons from evaluation are presented for improving both the process of managing the project cycle as well as improving the content of projects. The ultimate purpose is to accomplish the projects' objectives within time, cost and quality of performance parameters.

Keywords: project development, World Bank Project Cycle, performance

WORLD BANK PROJECT CYCLE

The World Bank itself is an international organization owned by more than 100 governments who appoint its Executive Directors based on percentage of capital ownership. The bank borrows money on the open market and reloans that money at a near market rate of interest for projects in developing countries in almost all sectors. In addition, it operates a soft loan

window called the International Development Association which loans money provided by developed country governments to the poorer countries on extremely easy terms. The bank's international staff has its headquarters in Washington DC across the street from its sister agency, the International Monetary Fund.

The development cycle for World Bank projects has been described in an article by Warren Baum (see Figure 1). The Bank defines six sequential steps: identification, preparation, appraisal, negotiations, implementation and supervision and ex-post evaluation. Other organizations use slightly different terms but most think of the process as a cycle (Figure 2). In reality, even though one can learn from experience, one can never return to the past. So the cycle is really a spiral, circling through the required steps but always moving on to new projects. The cycle consists of a series of steps separated by decision points. The process moves toward implementation and start-up of operations (Figure 3). Evaluation is an ex-post look to seek if the objectives were accomplished and if they were the right objectives.

The distinctions among the various stages of the project cycle, especially the earlier ones of identification and prepara-

1. Identification
Selection by Bank and borrowers of suitable projects that support national and sectoral developmental strategies and are feasible according to Bank standards. These projects are then incorporated into the lending program of the Bank for a particular country.

2. Preparation
Borrowing country or agency examines technical, institutional, economic and financial aspects of proposed project. Bank provides guidance, and makes financial assistance available for preparation, or helps borrower obtain assistance from other sources. This takes time, typically one to two years.

3. Appraisal
Bank staff review comprehensively and systematically all aspects of the project. This can take three to five weeks in the field and covers four major aspects: technical, institutional, economic, and financial. An appraisal report is prepared on the return of Bank staff to headquarters and is reviewed extensively. This report serves as the basis for negotiation with the borrower.

4. Negotiations
This stage involves discussions with the borrower on the measures needed to ensure success for the project. The agreements reached are embodied in loan documents. The project is then presented to the Executive Directors of the Bank for approval. After approval the loan agreement is signed. The project can now go into its implementation stage.

5. Implementation and supervision
The borrower is responsible for implementation of the project that has been agreed with the Bank. The Bank is responsible for supervising that implementation, through progress reports from the borrower and periodic field visits. An annual review of Bank supervision experiences all projects underway served to continually improve policies and procedures. Procurement of goods and works for the project must follow official Bank guidelines for efficiency and economy.

6. Evaluation
This is the last stage. It follows the final disbursement of funds for the project. An independent department of the Operations Evaluation Department, reviews the current report of the Bank's Projects staff, and prepares its own assessment of the project, often by reviewing materials at headquarters though field trips are made where needed. This ex-post evaluation provides lessons of experiences which are used in subsequent identification, preparation or appraisal work.

Figure 1. Development cycle for World Bank projects as described in paper by Baum (see bibliography)

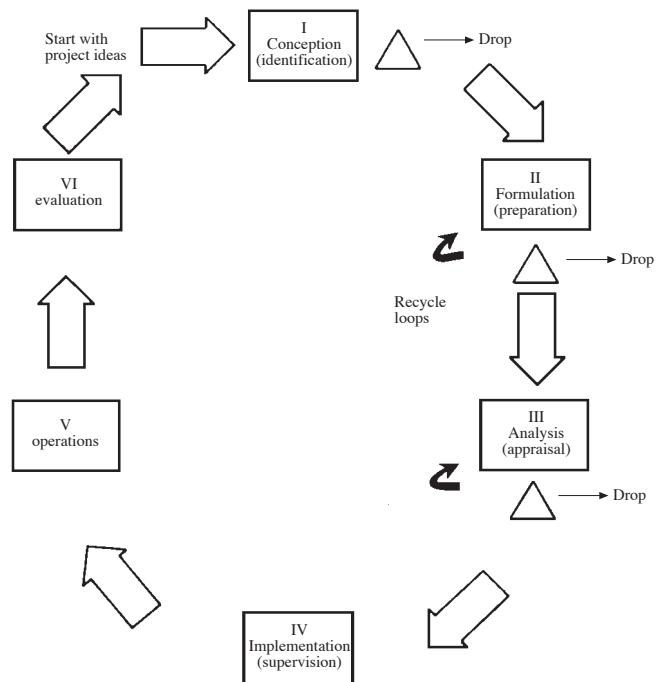


Figure 2. Phases of the project cycle (recycle loops added)

tion, are often blurred in practice, and their relative importance can vary greatly, depending on the character and history of each project. The process is an iterative one; the same issues may be addressed, with varying degrees of detail and refinement, as the project advances through the cycle. As Baum has said,

The project approach has proved a potent instrument for rationalizing and improving the investment process. Its principal advantage lies in providing a logical framework and sequence within which data can be compiled and analyzed, investment priorities established, project alternatives considered, and sector policy issues addressed. It imposes a discipline on planners and decision makers, and ensures that relevant problems and issues are taken into account and subjected to systematic analysis before decisions are reached and implemented. Correctly applied, it can greatly increase the development impact of a country's scarce investment resources.

The project approach also has its limitations. It depends on quantitative inputs of data and can be no more reliable than those data. It also depends on estimates and forecasts, which are subject to human error. Value judgements must be made, but the project approach should at least force them to be made explicitly. Risks can be assessed but not avoided, and projects must be designed and implemented against a constantly shifting background of political, social, and economic change. In the last analysis, the effectiveness of the project approach depends on the skill and judgement of those who use it.

After a project is conceived or identified, the next steps are preparation by the government and then appraisal by the World Bank in which the feasibility of the project is analysed on technical, financial, economic, social and institutional grounds. This process (Figure 4) is similar for both the preparation and appraisal stage, but from the different viewpoints of the borrower and the bank.

In fact, in many cases there may be a series of iterative loops of pre-feasibility, feasibility and then design (Figure 5). This iterative process is used to eliminate unfeasible projects and to structure the design of a project for an optimum rate of return or benefit. It is important to note that costs increase rapidly as you move from stage to stage. A pre-feasibility study might cost \$10 000, a feasibility study \$10 000 and the detailed engineering for a \$10M project could be as high as \$600 000 to \$1M.

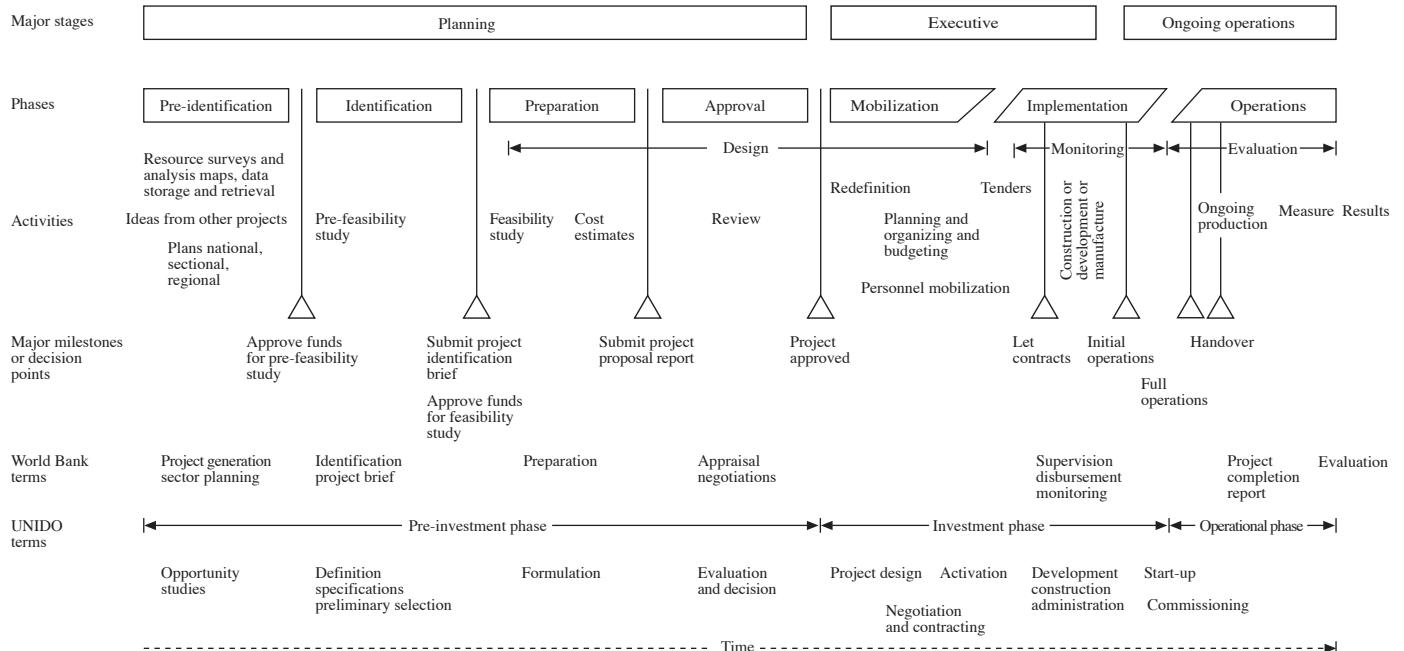


Figure 3. The complete project cycle from implementation to start-up

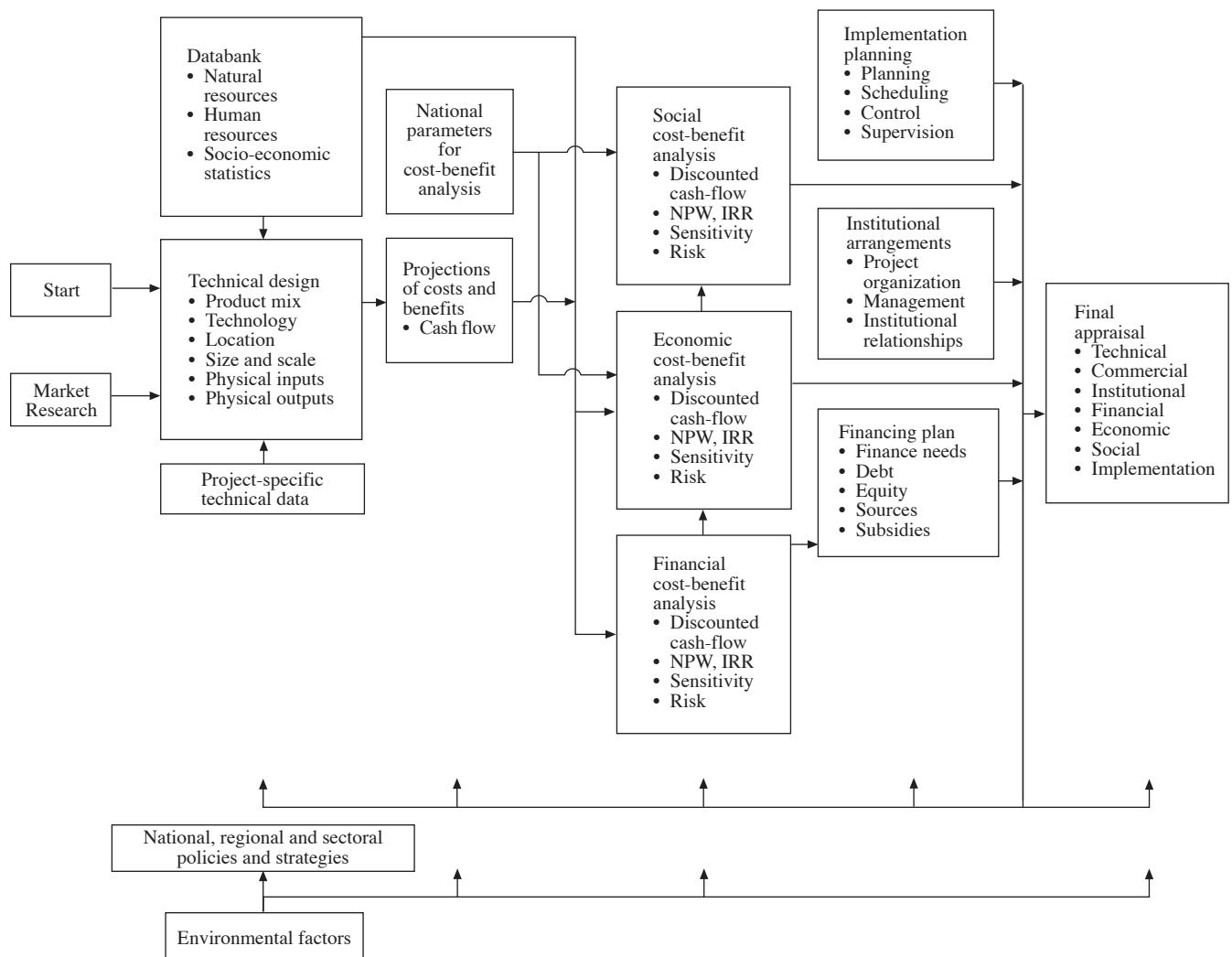


Figure 4. Flowchart of the project preparation/appraisal process

LESSONS FROM EXPERIENCE—PROCESS

Over the past 40 years, the World Bank has learned a great deal about how to manage the process of the project cycle. The most important lesson is that countries must actively manage the entire cycle. They should have a standard process that they understand and use. The various steps of identification and feasibility should be well established and the decision points for approval should be maintained. Too often, those with special interests and power will avoid or evade the process and a project will start without the normal approvals. A related problem is the failure to manage the early stages of a project. A month's delay is still a month, whether it is at the beginning or the end of the cycle. However, delays are not often visible in the earlier stages. There is also a question of who is in charge of the earlier stages, when a project manager is appointed and the problem of transition from phase to phase when responsibility is transferred to another unit or department. It is less expensive to buy time in the earlier stages of a project when small amounts of money are being spent per week, rather than at the end when weekly expenditures have peaked. One of the challenges of managing the earlier stages of the cycle is to give visibility to these issues and to force timely decisions.

Another issue is cost. The project process is a series of decisions made at the end of each data gathering and analysis phase with increasing detail and cost for each stage of design. It is important at each stage to only buy enough information to allow management to make a decision at that stage. A typical problem with engineering firms is their tendency to try to perform and to charge the client for more detailed engineering than is needed at that stage. This also relates to the issue of trying to kill unfeasible projects with economic and financial analysis early in the cycle before spending money on expensive engineering design.

One of the other benefits and purposes of extensive financial and economic analysis in the early stages is to guide the design to an optimum solution. One purpose of economic analysis is to restructure a marginally unfeasible project into a feasible one. For example, in some countries this may mean designing a labour intensive versus a capital-intensive project. However, such economic analysis should be done before, rather than after detailed design. The manager of the project cycle, if there is one, must be cognizant of these types of issues.

The process of screening project ideas in the identification and feasibility stages is very much a process of information storage and retrieval. A pre-feasibility study, for example, is basically the collection and analysis of information. It is important to establish filing systems that can retrieve earlier studies, because a project that is not feasible today may be feasible tomorrow.

The progress of a new project through the stages of the cycle can be unduly delayed by a failure to integrate the project process with the country's yearly budget process. A typical problem is the failure to include money for a feasibility study in the government budget, resulting in a whole year's delay until the next budget cycle. In the later stages, a similar problem exists in relation to the government personnel system. An all too fre-

quent cause of project delays is the failure of personnel agencies to approve new job descriptions, or for the Public Service Commission to delay recruitment for new positions required by the project. During each stage of the analysis and design, it is necessary to plan and budget for the effort required in the next phase. The consideration of these activities and costs is part of the decision process for that stage.

In managing the entire project cycle, it is critically important to have a summary plan for the entire process with the required activities, logical sequence, estimated durations and budgeted costs. At each stage, this summary plan can be updated and revised as a result of the additional information that has been gathered. At the same time, a 'rolling wave' detailed plan for the next phase should be prepared as part of the decision to proceed. Good time and cost planning and effective decision-making in this manner can help to avoid the problem of 'buy in', where a Ministry purposely underestimates the costs with the hope that once the project is started the government will be forced to complete it regardless of the cost overruns incurred.

A serious problem in the overall time it takes to complete the cycle for a project are the delays caused by slow start-up of the next phase when there is a transition in organizational responsibility between phases. A typical example is the long delay that often occurs between approval of a project by the World Bank Executive Directors and the actual start-up of implementation in the borrowing country. One solution is to appoint a project manager earlier in the process before bank approval. This can help get things started earlier, but it carries risk of delay in approval or the possibility even of rejection of the project. In this case, the project manager is left hanging in the wind. A related issue is the question of how much detailed design is done before project financial approval.

Finally, it should always be remembered that during the two to five year process of project development, there will be changes in the environment that probably should be reflected in the project. The objectives of a project are not immutable, but must be adapted to the changing situation. These are some of the lessons on managing the *process* of the project cycle.

LESSONS FROM EXPERIENCE—CONTENT

There are also lessons to be learnt from the *content* aspect of the project cycle. A twelve year review of World Bank projects recently indicated that more than 9% did not meet their desired objectives over time. One can analyse these reasons for disappointment and can also learn from the most successful project. In most cases, the reasons for the failure turn out, quite naturally, to be the converse of the reasons for success.

Foremost is the issue of the degree of the borrower's understanding of, commitment for and support of the objectives of the project. All too often, the foreign aid and international financing agencies turn out to be more committed to the project than the potential local beneficiaries. It is interesting to note that in almost all countries, they refer to 'the World Bank project' rather than the country's project, their project or at least the World Bank 'financed' project. This naming of the project as a foreign entity

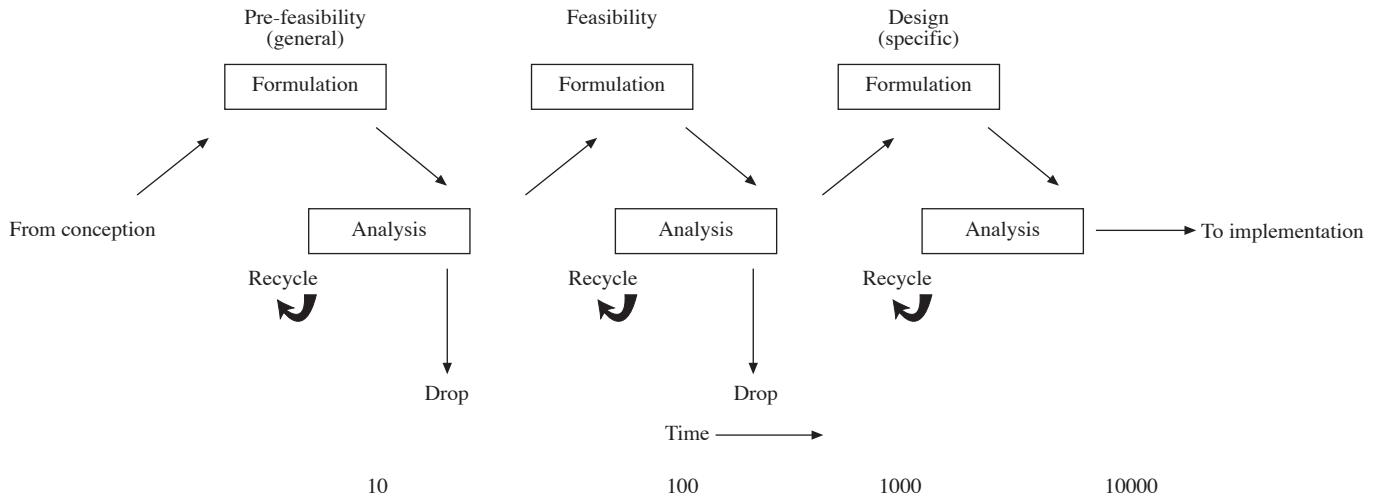


Figure 5. Formulation/analysis phases with iterative loops amplified

is symbolic of a lack of ownership of the project by the local stakeholders. The answer to this problem is early and continual active participation of a wide range of local stakeholders in the preparation and design of the project. This is also a way of improving the feasibility of the project.

A classic case reported by Korten is the failure of Philippine central government engineers to listen to local farmers who said that yearly heavy rains would wash out the small dams that were being designed far away in the capital city of Manila. It is not always easy to learn how to listen, but local information can improve the feasibility of a project. The World Bank has pioneered the use of a series of Action Planning Workshops, including a project start-up conference to involve local stakeholders. The Bank has also had some success in participant observer evaluation processes, whereby a social scientist lives in a community with project beneficiaries to obtain as wide a view as possible of the effects of the project on the society.

Another key problem is the initial weakness in institutional capacity of the borrower to implement and then to operate the project (which will involve a much larger scale after the project). The bank has also discovered that elements within the project intended to strengthen institutional capacity are difficult to implement and often do not lead to the required improvement in performance. Here again, a long-term view is necessary and local involvement in the planning of the institutional strengthening program is crucial for success.

In the 1984 Review of Project Performance, the Evaluation Department of the Bank focused for the first time on the issue of sustainability, or whether the desired level of project benefits will continue to be received after the implementation period is complete and during the long operating life of the project. Here, the picture was much more negative. Of a sample of 25 agriculture projects, over half had not sustained the expected level of benefit five years after the completion of project implementation. One of the conclusions of the Bank's own evaluation was that expediting of the implementation phase often worked at cross purposes to the long-term sustainability

of project benefits. The review concluded that not enough attention was paid by the bank to postcompletion sustainability. It is interesting to notice that the World Bank's Project Cycle does not even include the operations phase. One of the conclusions of the study was that more attention had to be paid to institutional and socioeconomic/cultural issues to enhance sustainability.

Lastly, two interrelated problems have come to light in the past decade. These are the dependence of the success of the project on the right policy environment and the changes in policy forced on a country by an unfavourable external environment. For example, some countries such as Zambia were slow to react to the rapid rise in oil prices in the 1970s. Politicians, even in the USA, were reluctant to use price policy as a way of controlling oil imports. Similarly, an agricultural project to grow more maize or corn cannot succeed if the country's price policy does not provide farmers with sufficient incentives.

The process of managing the project cycle should ensure that these factors of success and failure are effectively analysed during the project development cycle. The greatest challenge for implementors within organizations such as INTERNET is how to involve themselves early enough in the project cycle to have sufficient impact on project design to avoid some of these problems. The challenge for governments is to establish the necessary governmental machinery to manage the entire project cycle process.

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