Pollution Prevention Payback Pyramid

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When a company first decides to embrace Pollution Prevention (P2) as a means of doing business, they usually develop a P2 Plan to give form to their program. A major point in most P2 Plans is the establishment of goals.

One of the advantages of P2 projects is the quick payback that usually results.

Goals are set by a variety of means. Sometimes, a team will try to assess potential P2 activities to determine how much of their generated wastes can be reduced. In other cases, the plant manager or company president will mandate a percent reduction (often without basing it on realistic capabilities). Both of these practices set a fixed quantity or percent which may vastly under- or over- state the company's practical capability. These goals are frequently set *before* the Plan is developed and the Plan is based on merely obtaining the goals.

The Pollution Prevention Payback Pyramid (P4) method allows the company to meet realistic goals without a dedicated budget while maximizing pollution prevention potential.

A company puts the P4 method into practice by:

1) Identifying all projects that will reduce the waste generated (or disposed of) by the company and performing a payback analysis on these potential projects.

2) Ranking the projects in increasing payback periods.

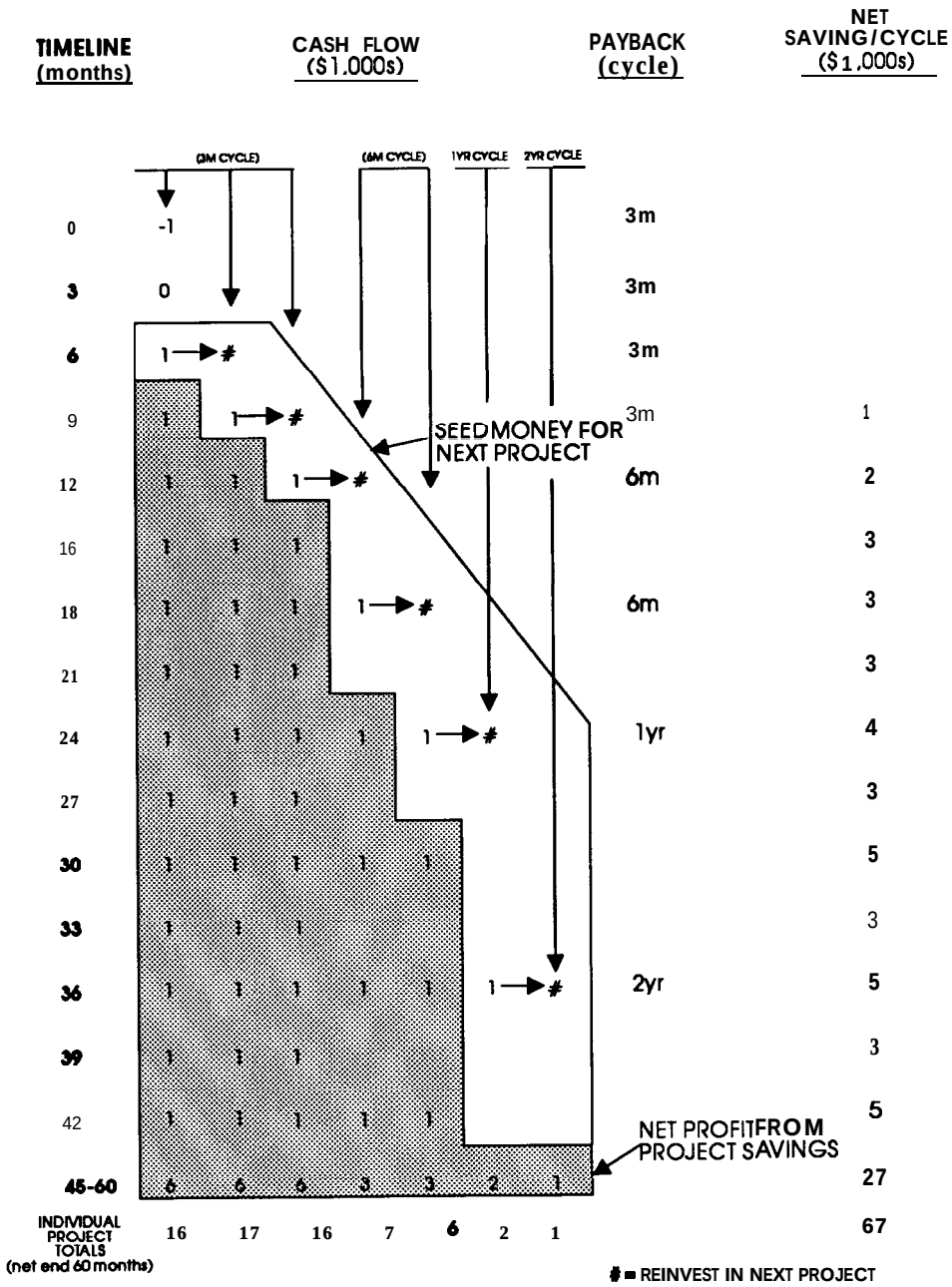
3) Committing to fund all projects with a payback of 3 months or less the first year; funding all projects with a payback of 6 months or less the second year; 1 year paybacks the third year; and 2 year paybacks the fourth year.

As shown in the example, the savings from the earlier shorter paybacks will finance the later longer payback projects. A 3 month payback project costing $1000 will save the company $4000 a year, every year! But more importantly to management, any projects with paybacks of 12 months or less do not have to be budgeted since savings will more than equal costs before the end of an annual budgetary period.

Problems to be expected in trying to implement this plan include:

1) Managerial resistance to loss of line item approval since all projects that meet the requirements are already considered approved.

2) Necessity to have as realistic and as accurate project plans and estimates as possible.



EXAMPLE

The first project (see first column under cash flow above) was funded by $1000 at time = zero, providing a $1000 return for the company every 3 months thereafter. This returned the original investment at time = 3 months and provided $1000 seed money for the second project at time = 6 months. The $1000 return every 3 months after that was considered net profit.

After 60 months, the $1000 investment, (* which was returned to the budget before the first year was out and therefore was not really spent), had earned $67,000 in waste reduction savings and funded 7 additional projects. The $67,000, which includes a $3,000 net in the first year, is profit to the company. Or it could be reinvested in additional Waste Reduction projects.

This simplistic example assumed that each project cost $1,000 and took the whole estimated time period to pay back the investment. It also assumed that the estimates for the costs and benefits of the projects were equal and accurate.