

COST/RISK EVALUATION OF PROJECTS, MODIFICATIONS AND CHANGE PROPOSALS

Do you have a number of different projects and change proposals, all competing for limited budget and resources?

APT-PROJECT will:

- Evaluate and demonstrate why some proposals are not worthwhile
- Compare and prioritise dissimilar projects or modifications
- Use range estimates and engineering knowledge to the full
- Discover what data is worth collecting and for what reason
- Calculate the premium paid for safety, legal compliance, public image and other intangibles
- Record the assumptions about anticipated benefits at the time of justification.

SOFT DATA

The procedure helps engineers to think in business terms. It does this by prompting considerations of costs and benefits in the form of range estimates, supported by in-house and cross industry reference data.

Worst and best case interpretations are then used to evaluate the worth of the project against available resources and external constraints (such as legal requirements or environmental obligations).

The results are presented 'in value for money' terms, either as simple payback or the more comprehensive Net Present Value, Internal Rate of Return and other cost/benefit criteria.

THE VALUE OF INTANGIBLES

Indirect benefits from a project (such as improved safety, employee morale, public opinion etc.) are evaluated also, by showing the 'premium paid' over and above the quantified benefits. This provides a visible and consistent method for prioritising safety impact, the urgency of legal compliance and welfare objectives.

COMPARING DIFFERENT PROJECTS OR INVESTMENTS

APT-PROJECT provides a ranked listing of competing options, each evaluated for costs, risk and payback.

Efficiency improvement ideas can be compared with technology upgrades, new operating procedures ranked alongside plant modifications, acquisition of safety equipment against environmental treatment facilities. In all cases, the common cost/risk basis allows direct comparison; a priority list is generated and maintained for all investment opportunities - ranked by 'value-for-money.'

PROVEN IMPACT

Developed over eight years of practical usage in several industries, APT-PROJECT has ensured that consistent assumptions, safe use of range estimates and a sound business basis are used for justifying expenditures.

In one case alone, some 1000 projects and change proposals were evaluated over a six month period (average 1 hour per evaluation); 40% were clearly shown to be uneconomic.

The rejected projects would otherwise have received at least a preliminary engineering study, so a saving of £500,000 resulted. The ranking of approved projects was agreed by all and rejected proposals understood and accepted.

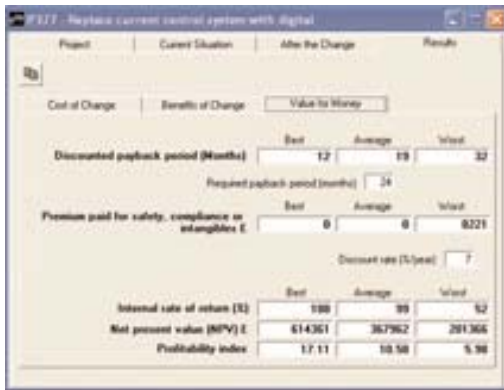
In an environment of ever increasing change, just keeping track is hard enough. APT-PROJECT ensures that the right projects go ahead and the time wasters do not.

TECHNICAL SPECIFICATIONS

APT-PROJECT performs:

- Discounted payback analysis,
- Net Present Value
- Internal Rate of Return
- Profitability Index

assessments, each with 'worst case' and 'best case' testing for sensitivity. The software calculates the 'premium paid for safety/intangibles' whenever hard performance or risk benefits are insufficient to justify the capital investments. This allows prioritising of legal compliance projects, or safety/intangible objectives among the business-oriented alternatives.



CUSTOMISED ASSISTANCE

The incorporated financial procedures are carefully designed for non-financial personnel (engineers, technicians and operators) and include customisable look-up facilities for reference data. Such 'assist' functions include

- **risk data** (failure rates, incident frequencies and probability information)
- **cost data** (standard rates for labour, contractors, equipment hire, facilities etc.)
- **unavailability consequences** (downtime costs, lost opportunity costs, penalties, intangibles).

Many of the software functions are selectable allowing restricted access to sophisticated capability, or safer and easy-to-understand functions for normal daily usage. Such features include the finite/infinite project lifespan, staged expenditures, deferred benefits and several of the financial calculation features.

The analyses are held on a central database, allowing sorting, ranking and prioritising by payback rates, NPV and other criteria. The database is structured along Asset Management lines, allowing easy navigation and exploration of associated projects, equipment or analyses.

SOFTWARE REQUIREMENTS

APT-PROJECT is a PC or Network-based software tool. It is a free-standing calculator utility, with a MS ACCESS™ database to hold all studies and assumptions.

While the software itself is very easy to understand and operate, a one day training course in the principles of cost/risk evaluation, the safe use of weak or 'soft data' and in change control processes is available and recommended.

THE ASSET PERFORMANCE TOOLKIT

APT-MAINTENANCE: cost/risk evaluation of planned maintenance, optimal intervals, preventive, predictive or reactive strategies

APT-INSPECTION: optimum inspection, condition monitoring and testing strategies, optimal condition reaction points, alternative monitoring methods

APT-PROJECT: evaluation of projects, change proposals and any new initiative that needs investment justification and approval

APT-SCHEDULE: shutdown strategies, optimum task grouping and timing, opportunity evaluations and work planning constraints

APT-LIFESPAN: asset replacement decisions, repair versus replace options, life extension work, alternative designs

APT-SPARES: critical and slow moving spares strategies, optimum holding levels, 'pooling' options, alternative suppliers

APT-STOCK: consumables and materials purchasing strategies, min/max stock, reorder quantities, supply options, storage requirements

As part of a continuing improvement programme, Asset Performance Tools Ltd reserves the right to change the above specification without notice.

DECISION SUPPORT TOOLS LTD

19 Prince Henry House, Kingsclere Park
Kingsclere, Hampshire RG20 4SW, United Kingdom
Tel: +44 (0)1635 299200 Fax: +44 (0)1635 299555
Email: enquiries@decisionsupporttools.com
Website: www.decisionsupporttools.com
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