



# Prioritising Technology Investments

## The Technology Investment Challenge

In Financial Services, at least, a significant trend in recent years has been the increasing investment in information technology, for example, replacing manual processing with software applications. Banks and other financial institutions are now heavily dependent on their information processing systems and development can account for a significant proportion of total IT spend. Development spending in one year intended to create value through, for example, support for new product features also creates a corresponding ongoing multiyear burden: not only for maintenance of the software itself but also the ongoing operational costs. In addition, if enhancements to the application portfolio are not managed in a rational framework then continued development increases the complexity of the resulting software systems. This leads to a disproportionate increase in support costs compared to the value delivered. This paper addresses the former issue describing an approach to prioritise investments to deliver the best value.

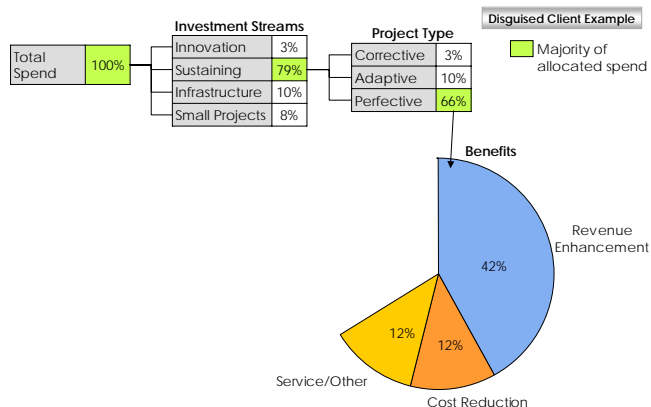
## Classifying Software Development Spending

Application software development projects fall into three categories:

- **Perfective.** Making discretionary changes to add new features and develop new products/markets;
- **Adaptive.** Making, typically mandatory, changes to adapt software to external factors, such as, legal/regulatory compliance, hardware and operating system upgrades, etc.;
- **Corrective.** Fixing faults in the software. These fixes may be to repair either software failures or functional deficiencies (e.g., where the software does not meet its advertised specification) and are mostly unavoidable mandatory changes.

Analysis of development portfolios (Exhibit 1) often shows that the majority of budgeted spend focuses on discretionary perfective developments (usually aimed at increasing revenue)

Exhibit 1 - Classification of Development Spend



Source: Sixhills experience



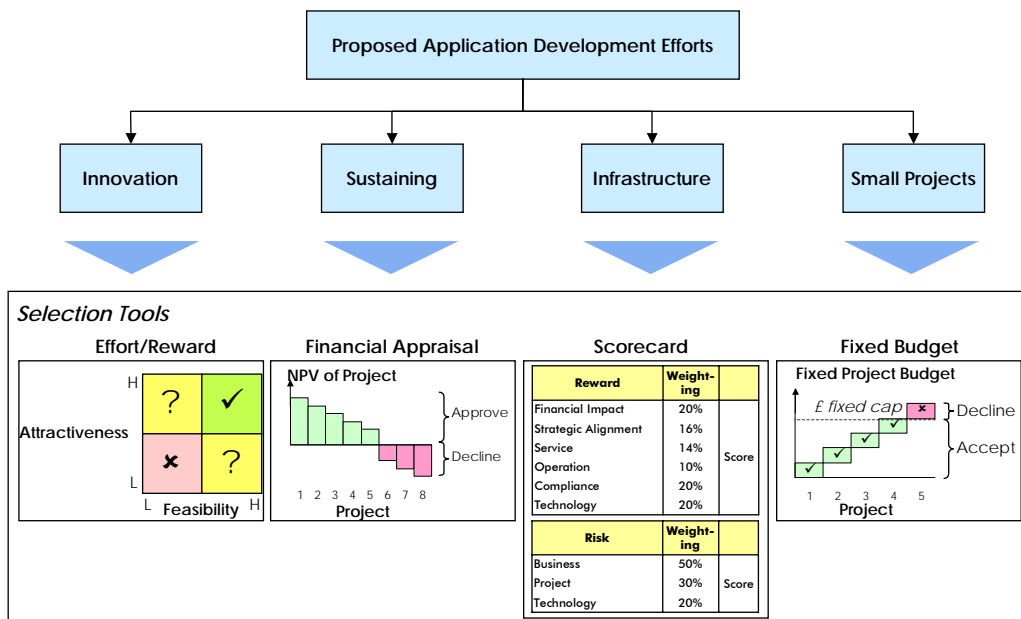
Despite the significance and size of the investments involved, we often find that the decision processes are not well managed. Specifically, projects are only either approved or turned down – they are rarely compared to each other for purposes of prioritisation. The development budget is simply allocated until it is exhausted leaving more well-deserving projects which arise later with no funding, as there is often little will to stop projects once they are funded and underway.

By contrast, a rigorous comparative prioritisation process could move forward investments with the higher returns and defer (or cancel) those with the lower return. As a result, the cash flow of the organisation would be significantly improved.

## Technology Investment Prioritisation

We have developed a very practical framework to assess and prioritise investments and so freeing up cash from an organisation's investment portfolio consistent with its strategic objectives: 'Technology Investment Prioritisation'

Exhibit 2 - Prioritisation Framework



The framework (Exhibit 2) embraces a set of tools and methods used to evaluate and prioritise investments. The method used depends on the macro level classification of the proposed development spending, e.g.,

- Innovation – it can be quite difficult to justify investments supporting new and untried business models using traditional valuation methods yet these projects can hold the key to significant new sources of value (as 'disruptive' innovations). A soft, almost 'gut feel' framework such as an *effort/reward matrix* can be useful here to visualise the relative positioning of different projects – linking the attractiveness of the opportunity with an assessment of its feasibility and timing;
- Sustaining – for those investments supporting the existing business model, rigorous *financial appraisal* and justification is necessary. As



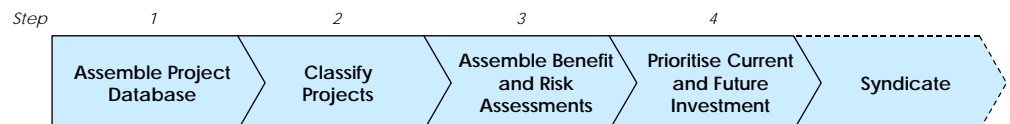
these investments often form the greatest proportion of spend, they can also be the greatest waste of money if they do not deliver their promised benefits;

- **Infrastructure** – projects to build infrastructure (e.g., e-mail, Management Information systems, etc.) often appear to have relatively poor financial justification. However, they can be significant enablers to an organisation. The financial analysis should therefore be supplemented by a descriptive weighted **scorecard** technique based on **well defined** quantitative and qualitative descriptions (e.g., related to achievement of strategic goals or impact on internal business processes). Also, the scorecard can be used as a supplementary selection gate if a large number of attractive projects have already survived the fundamental financial assessment;
- **Small Projects** – Small projects can be too numerous and of sufficiently low value to warrant one of the full-scale methods above. Applicable methods can vary but simple capping of spend with a **fixed budget** based on suitable business factors can often be appropriate. Clustering of like projects may reveal larger investment streams that are running ‘under the radar’. To prevent this small project budgets should be fixed at a small percentage of the total expenditure and the newly exposed investment streams subjected to the more rigorous techniques above.

## Approach

Technology Investment Prioritisation comprises a four step approach to the optimisation process (Exhibit 3).

### Exhibit 3 - Optimisation Approach



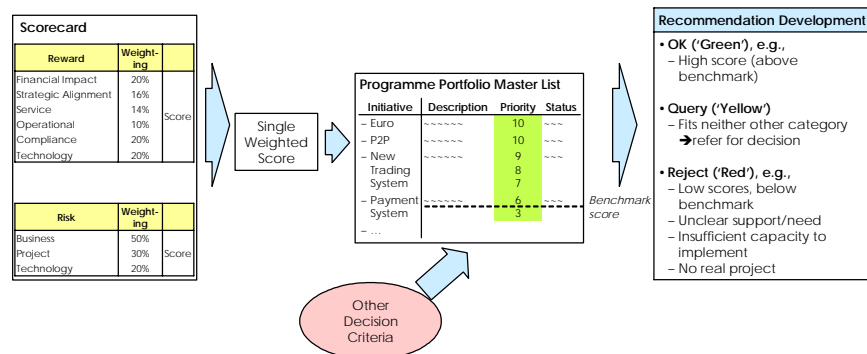
- **Step 1 - Assemble Project Database.** First, the proposed investments are collated into as complete a list of possible, by polling the key stakeholders and business sponsors throughout the organisation. The initial list so constructed is often quite rough with missing data. The quality and extent of this initial dataset can itself be quite illuminating indicating, amongst other things, the overall level of investment expertise within the organisation. The initial list is then improved by scrubbing and cleaning in follow-up investigations and data gathering. The key deliverable from this stage is a comprehensive database of proposed (even, running) projects
- **Step 2 - Classify Projects.** Second, development spend is classified at the macro level to determine the appropriate prioritisation methods. The objectives of the prioritisation work are set at this stage based on the key business drivers (e.g., to focus on growth,



to build key infrastructure, etc.). The necessary tools (e.g., scorecards) are then built from scratch or adapted from existing templates. A key deliverable from this stage is a thorough assessment of the currently proposed development expenditure

- Step 3 - Assemble Benefits and Risk Assessment.** Third, the cost, benefits and risks of the proposed investments are established together with possible alternative options. As a first pass, investments are evaluated at project level. Descoping projects at feature cost level to reduce spend is also possible, but time consuming. If the organisation uses an established traditional heavyweight development lifecycle methodology (rather than iterative/agile) then the opportunity offered by descoping may be limited once projects are underway. The projects are scored using the scorecard developed in the prior step, usually by referring to the project teams and other sources
- Step 4 - Prioritise Current and Proposed Investments.** In the final step, the proposed investments are ranked in terms of the agreed risk and return metrics (Exhibit 4). Recommendations can then be made based on the decision factors chosen. This step may iterate depending on constructive feedback during the process of syndicated the recommendations across organisation

**Exhibit 4 - Developing Recommendations – Scorecard Example**



### What does this mean?

Experience suggests that savings of at least 15-20% of the development budget are possible by applying a rigorous prioritisation methodology. As IT development budgets for large banks and institutions often exceed \$200m, the savings can themselves amount to a one-time benefit of \$30-40m. Institutionalising the prioritisation framework as a primary management discipline renders a structural change ensuring savings are captured year-on-year.

Based on this savings potential, a compelling case with substantial ROI can be made for a self-funding project to manage down the discretionary development spend. Not only can costs be contained, however, since judicious readjustment of budgets ensures that new business opportunities get a fair share of resources, so avoiding the trap of the 'Innovators Dilemma'

Gueritz, September 2003