The subject matter and project management business resources required to successfully deliver large capital projects are time-constrained. The demand for project funding invariably exceeds the supply of time and money.

Investment decisions are made by management on behalf of owners and other stakeholders. Consequently, there is a governance responsibility to ensure that an end-to-end CAPEX process is seamlessly designed to meet the needs of all participants including project sponsors, financial controllers, resource managers and the key stakeholders. This article describes the key stages of this CAPEX process, and the interaction with related follow-on activities.

All organizations incur two types of expenditure: Operational Expenditure, the benefits of which are derived in the reporting period, and Capital Expenditure (CAPEX), the benefits of which accrue over the useful life of the asset procured.

By its nature, Capital investment is of higher value, longer lasting, and inherently riskier. Some CAPEX is mandatory (compliance), some imperative (replacement of key components), and some discretionary (growth investments).

Organizations will frequently need to fund major Capital investments through borrowing or even equity raising.
BUDGETING

The organizational strategy determines the Capital investment level, allocation and priority. Organizations entering a growth phase will allocate a greater proportion of their reserves to long-term Capital investments to underpin and drive that expansion. Conversely, where a business unit is deemed a cash-cow, Capital investment will typically be tightly constrained with a focus on replacement and short-term cost saving measures only.

Required resourcing levels and anticipated operating performance will be forecast based on proposed Capital investment in new buildings, machinery and equipment and vehicles. Increasingly, growth relies also on investments in intangible assets such as software, trademarks and patents. This strategy-aligned proposed Capital investment program is represented by ‘the Budget’.

The capital budget typically contains an approved list of Capital investments categorized by:

- Operating Unit (eg Plant, Division, Department)
- Asset Category (eg Fixed Tangible, Mobile Tangible and Intangible categories)
- Priority (initial prioritization based on strategic importance)
- Investment Reason (eg Compliance, Replacement, Saving or Growth)
- Scale (eg order of magnitude classification: major (>$5m), very large (>1$m), large ($>100k), regular (>10k), minor (<$10k).
- Rough Budget Estimate Overall and spend by period (month, quarter or year)

For most organizations, the Capital budget is prepared annually and factors into the operating plan (eg assuming that we open the 3 news stores budgeted in Q2, I expect my sales and wages bill to increase by x% over last year, and my depreciation and cost of capital charges to increase by y%).

The Capital investment priorities reflected in the budget thus reflect the strategically aligned intent of the organization and needs to be carefully monitored and controlled. Indeed, capital expenditure variances to the approved budget are very carefully monitored by the most senior executive officers and directors. The approved budget and current budget availability status must be effectively communicated to all participants.

Within SAP environments, the Capital investment budget is represented by an Investment Program (a hierarchical
reporting structure) with assigned Investment Program Positions (the individual budget items). These Investment Program Positions (IPP’s) reflect either unique projects (large strategic investment initiatives eg Plant x Refurbishment) or investment pools (Spare Part replacements for Plant y). Recommendations for the configuration of these Investment Programs is the subject for a different blog post.

The budget is typically filtered and confirmed by the executive committee based on Wishlist proposals. Therefore, whilst the Capital Budget is likely the most important step of the CAPEX process to help align Capital spend, the process commences one step earlier: with the Wishlist proposals.

**WISHLIST PROPOSALS**

Every manager wishes they had something more that would make their area of responsibility more efficient and effective. Most of these wishlist items will be of value – and this is indeed what makes the CAPEX process so challenging: there are invariably more good opportunities for investment than human and financial resources available to fulfill them. The challenge of optimizing the CAPEX portfolio decision making relates to:

- Not approving bad investments that destroy value
- Not choosing poorer investment that deliver sub-optimal returns
- Missing out great opportunities for investment altogether

The key purpose of the Wishlist process is to hoover up all these ‘great ideas’ and run them through a preliminary evaluation process so that the departmental CAPEX budget submission contains value items only and ensures that no nuggets of gold are left behind.

For this reason, Wishlist proposals are simpler to complete than Expenditure Requests and are generally more qualitative than quantitative in nature, with only rough estimations of financial costs and benefits. Submission of Wishlist items should be encouraged by all staff members to ensure completeness of consideration, but there is limited benefit spending excessive effort in a Wishlist submission if the item is unlikely to be approved due to competing priorities. Local area responsibility managers are required to select the most promising Wishlist items for their higher-level budget requests. A subset of these group-wide submissions is then normally approved in the final ‘Budget’. The funnel effect of reducing the potential Wishlist items to an approved budget item is illustrated above.

**CAPITAL EXPENDITURE REQUESTS**

A Capital Expenditure Request (CER), sometimes termed Authorization for Expenditure (AFE) or Request for Appropriation (RFA), is the key step in the process to allow procurement activity to commence.

Due to the evolving nature of business and priorities, the Capital budget is seldom executed as planned. New ideas and imperatives emerge; so whilst CER’s are normally linked to a Budget item, there needs to be flexibility to accommodate both Unbudgeted Requests and Budget Shift (reassignment of budget between requests).
It is at this stage that a formal Business Case is normally required, and that delegation of approval policies are enforced.

On approval of a Capital Expenditure Request, an Investment Measure (Project Work Breakdown Structure or Internal Order) is generated in SAP, the approved budget is assigned, and procurement activities can commence.

**FORECASTING**

Once Capital Expenditure is approved and procurement commences, the expected actual costs and timing become more certain. These updated cash flow forecasts are maintained to allow an aggregated view of funding and resourcing requirements to be managed.

Ideally, it is the responsible manager who should complete the forecast, subject to a review and approval by management. Forecasts are done on a periodic basis, and each forecast version can be retained to identify changes.

Effective budgetary control is enabled by comparing the overall budget to the incurred costs (actual, accrued plus committed) and the remaining forecast to complete.

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**Diagram: Approved Capital Expenditure Requests are both budgeted & unbudgeted**

- **Budget Items**
  - Budgeted
  - Shifts
  - Unbudgeted

- **Expenditure Requests**
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- **Approved Measures**
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PROJECT COMPLETION

Asset acquisition costs include all the related costs such as inbound freight, site preparation, labor and material costs to get an asset into a commissionable state on the capitalization date. These costs are controlled in an Investment Measure, which in SAP is either a Project Work Breakdown Structure (WBS) or Internal Order (short-term cost collector much like a Cost Centre, but with a defined purpose).

At the stage of project completion, the following activities are performed:

• The target accounting assignment is transferred from an Asset Under Construction to one or more ultimate Fixed Asset master records
• The Investment Measure status is updated to be Technically Complete to prevent addition costs being incurred
• The accumulated costs are re-allocated (settled) to the final fixed assets
• Any un-utilized budget is returned to the Investment Program to be available in support of future Capital Expenditure Requests

INVESTMENT REVIEW

Every Capital Expenditure Request should define its anticipated business benefits. Some investment reasons are obvious, for example the replacement of critical equipment or adherence to new Health, Safety, Environmental and other Legislative compliance. However, even these investments tend to have a component of derived improvement to the status quo, or justification for more expensive alternative due to extended lifespan, risk profile or other qualitative benefit.

The key purpose of a structured Investment Review is to assess the benefits realization. If the actual results vary negatively, relative to those promoted, the review enables you to understand why, and adjust the assumptions, approach, and controls to help prevent recurrence in the future. In many organizations the Investment Review is undertaken by the Internal Audit functional on a sample basis. The knowledge that the business case outcomes purported in a Capital Expenditure Request will be subject to future review acts as a power factor in ensuring reasonableness, transparency and diligence in the preparation of investment proposals.

Of course, the future is always hard to predict, and often it is the higher-value, innovative investments that have the greatest degree of variability of success. It should not be expected that every investment fully achieves its targets, as it is not in the best interest of stakeholders for an organization to take no risks. What is important is that the
organization learns to assess risk more effectively, and that through a diversified CAPEX investment portfolio achieves the threshold return commensurate with organization’s risk-tolerance profile. So, whilst some initiatives might not succeed, it is equally important that others achieve better than expected results. Any bias in the assessment of expected returns towards being too optimistic should be quickly identified by an effective Investment Review process.

**ANALYZE AND ADJUST**

The most crucial activity in the CAPEX process is the ability to surface relevant and reliable information at all stages in the process from the Wishlist items to the Post-Investment reviews. The goal should be to inspect the process and outcomes objectively, and to adapt continuously to deliver an optimal return on investment in line with the organization’s risk profile.

The ability to track and control Capital Expenditure in-line with the Budget is often seen as a process imperative. However, it should be recognized that the Budget itself is only a management tool to help align the strategic focus of the organization. Expenditure above or below this budget ‘line’ should be assessed on its merits. The Budget is primarily there to help identify where the variations are occurring, to help focus management attention, rather than to prevent any variations from occurring at all. Indeed, the classic ‘annual budget’ process in line with an organization’s Fiscal Year and reporting cycle, is deemed by many to be too rigid in today’s fast-paced environment. Many organizations are therefore starting to operate rolling forecasts as a basis for more agile control.

Furthermore, the line between Capital and Operating Expenditure is increasingly blurred. In line with the recently introduced International Financial Reporting Standard 16 regarding the appropriate capital accounting treatment of Leased Assets, these purchases are now typically processed through CAPEX, with the distinction only as to funding (outright or leased).

Much Capital Expenditure also has a significant Operational Expenditure component. For example, Software purchases typically have an on-going maintenance and support component. Therefore, for effective assessment of an organization’s overall CAPEX return, both Capital and Operational expenditures need to be tracked and evaluated against benefits realization. This detailed analysis of budgets, forecast plans, actual incurred costs and benefits achieved is most effective when based on an integrated single source of data, your SAP Intelligent Core.
CONCLUSION

The Capital Expenditure process is one of the most crucial responsibilities of management to ensure the long-term success of any organization. Key stakeholders include project sponsors and executive management, and all participants have a shared interest in accelerating and controlling the end-to-end process. The goal is the optimal investment of an organization’s financial and human resources to achieve its objectives. An effective CAPEX management solution will ensure policy compliance, seamless security and deep informational content to allow management to make effective choices efficiently and confidently. Comprehensive analytics will help the organization inspect and adapt its processes and outcomes for continuous improvement in efficiency, control and results.

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