

Categories of Financial Systems

a simple framework of planning and financial management processes and systems

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Do you really have the right planning and financial systems? A simple framework of seven categories can help you sort out the plethora of vendor offerings and marketing claims that make it difficult to know what's what.

You can use this framework to understand what systems you do and don't need, to develop a strategy for improving your internal business processes, and to compare competing vendor products.

The Categories

Business and financial planning tools can be categorized by the seven business processes they support: 1

- 1. Performance management:** setting goals for an organization; assigning subsets of those goals to managers; and tracking managers' performance on their objectives.
- 2. Budget aggregation:** aggregating proposed budgets from various managers throughout an enterprise; and then distributing approved spending authorities back to managers.
- 3. Process modeling:** mapping steps in a process and assigning costs to those steps to guide process improvements.
- 4. Product/service costing:** assigning all costs (direct and indirect) to a department's products and services.
- 5. Integrated planning and costing:** developing an operating plan; assigning all costs to a department's products and services; and linking budget requests to proposed deliverables.
- 6. Project management:** planning the resources required by specific projects; and gathering data about projects to track actual costs and results.
- 7. Tracking:** collecting data throughout the year on actual performance, and comparing it to plans.

For each category, this white paper describes the concept and purpose of the business process, and overviews how it works. Then it offers guidelines on what comes before what, and how to determine your own business systems strategy. An appendix describes the functionality of

software, and lists examples of products.

1. Performance Management

Strategic planning and corporate performance management (CPM) processes set goals for an enterprise, and then break those goals down into specific objectives for managers within the organization.

The purpose of performance management is to align managers with enterprise strategies, and to ensure that all the necessary pieces are in place to execute each strategy.

Business Process

Objectives may be represented in a tree structure, like an outline, where each enterprise strategy is broken down into specific objectives assigned to each senior executive. Each senior executive then breaks down his/her objectives into sub-objectives for subordinate groups, rippling strategies down through the organizational structure.

Planning processes may work upward (with managers proposing their own objectives) and downward (deconstructing strategies), but ultimately all managerial objectives must be aligned with the high-level enterprise strategies.

Actual results can then be tracked against these objectives.

Strategies generally refer to the new things an organization must do to achieve its goals. Operational processes (the "keep the lights on" work) are often excluded from such planning processes.

2. Budget Aggregation

Budgeting processes forecast the resources required by each manager in the coming year, and then allocate spending authorities.

The purpose of budgeting is to ensure that managers don't spend more in aggregate than the enterprise can afford, and to direct resources to the parts of the enterprise that need them most.

Business Process

Managers propose budgets, which are rolled up through the organizational structure to an enterprise-level budget. Executives allocate available resources, and approved budgets roll back down through the structure until each manager is granted a spending authority.

Costs are generally forecasted in a set of general-ledger expense codes such as compensation, travel, vendor services, etc. Of course, both direct and indirect costs must be planned in the budget. Costs are not necessarily associated with products and services (the subject of categories 4 and 5).

Both capital and operating expenses must be planned. Effective budgeting processes integrate these two "colors of money" in a single decision-making process, since it makes no sense to plan capital expenditures without the operating-expense budget to deploy the new assets (or vice versa).

3. Process Modeling

Internal processes are mapped and changes are modeled to redesign internal processes.

The purpose is to save money, improve quality, or reduce risk by better structuring, eliminating, or streamlining steps in a process.

Business Process

A specific process is selected, typically defined by its purpose or outcome. Generally, only a few key processes are modeled (not everything an organization does).

The steps in the process are modeled, generally with a link to the organizational structure to define who does each step. The hand-offs from step to step are typically defined.

Costs may be attached to each step. These costs may be simply direct costs, or they may be full costs; costs are calculated outside this process.

The process can then be changed, with analysis of results in terms of time and money.

4. Product/Service Costing

Product/service costing publishes the rates for each product and service offered by an organization.

It may also publish the total cost of specific projects and service-level agreements (rates times volume, plus reimbursables, for all members of the project or service-delivery team). ²

Rates (the cost per unit delivered) are used for competitive benchmarking (outsourcing comparisons), total-cost-of-ownership calculations, and chargebacks or similar governance processes.

The purpose of calculating total cost (a budget for products and services) is to understand the value to be delivered by a given budget, to match clients' expectations to the approved budget, and to drive cost allocations.

The process of product/service costing may also illuminate opportunities for process improvements, such as resources being spent on activities which are not critical to producing a department's products and services.

Business Process

Product and service costing and rate-setting processes assign *all* costs (direct and indirect) to the products and services that an organization "sells" to other departments within the enterprise.

Costs are known, coming from an approved budget.

Direct costs are assigned to specific products and services. Indirect (support) costs are assigned to pools which are then amortized into the costs of products and services. For example, in IT, the costs of a data center may be put in a pool which is then assigned to services like email, applications hosting, etc.

5. Integrated Planning and Costing

Operational planning (the one-year tactical plan) forecasts the business to be done in the year ahead, and how the work will be accomplished.

From this plan, both budgets and rates can be extracted.

Since budgets describe the costs of proposed products and services, funding can be decided based on the products and services the enterprise would like to "buy" from the organization (termed "investment-based budgeting"). ³

A budget for deliverables also clearly defines exactly what can be expected for a given level of

funding, and provides a foundation for governance and demand management.

In addition, all the benefits of category-4 processes are accomplished.

Business Process

Managers first decide (or refine) their catalog of products and services, those sold externally to clients as well as those sold internally to one another.

Then, managers forecast specific sales of those products and services to specific customers, both clients and peers within the organization. Sales forecasts may portray different scenarios, from baseline ("keep the lights on") to an optimistic forecast that includes speculative projects and services.

Next, costs are calculated for the planned products and services, as in category-4 processes. Since this is a budget planning process, costs are driven by the requirements of specific deliverables, both baseline and speculative.

Headcount is modeled such that compensation costs are an output, not an input, of the plan. Indirect costs are amortized such that the costs of one deliverable aren't affected by the approval (or elimination) of other proposed deliverables.

The resulting plan is first scrutinized internally to ensure frugality. Then the budget is presented to clients, and ultimately submitted to the enterprise for negotiation.

A catalog with rates is produced based on the same business model and cost data.

6. Project Management

Project-management processes focus on specific projects or service-delivery processes (treated as projects).

The purpose of project-management processes is to ensure reliable delivery by planning in advance the resources and time required by projects.

Business Process

For each project, key steps and their interdependencies are mapped, and both elapsed times and resource requirements (money, infrastructure, and hours of staff time) are attached.

Based on this data, managers can see what tasks can be done in parallel and can identify critical paths which determine the total elapsed time for the project.

Reliable delivery is facilitated by clarifying the individual accountabilities and due dates for each task, and for each member of the project team.

In some cases, time is tracked in the same system to associate staff's billable hours with projects (similar to time tracking in category-7).

7. Tracking

Tracking is the process of collecting data throughout the year on actual results, and comparing it to plans.

The purpose of tracking is fundamentally to satisfy enterprise financial reporting requirements.

Tracking also helps managers at all levels understand what has happened and what needs to happen to meet the plan. It also provides historic data that helps identify cost-savings opportunities, and is one input (among many) to future years' plans.

Business Process

Financial transactions are tracked in the enterprise general ledger system.

Additional processes are required to associate costs with products and services, and with specific sales (projects and SLAs). These additional processes gather time-card data to assign compensation costs to deliverables; and they measure utilization of infrastructure to associate the cost of assets to deliverables.

The data is used to produce invoices for work delivered, and for analysis of the source of costs and cost-savings opportunities.

Strategy: What Do You Need?

You may or may not need to invest in all seven categories. Before developing your strategy, let's narrow the list to the ones you most need.

Consider which of the following describes the issues of concern to your leadership team; and as you do so, make a list of which categories warrant your attention:

We're struggling to satisfy basic reporting requirements:

Category-7 general ledger system.

Managers aren't clear about their objectives:

Category-1 performance management.

Caution: Performance management processes only work in disciplined cultures where plans are respected and attainment of documented objectives is measured. Ironically, the organizations which are most conducive to highly structured strategic planning processes are typically those which need them the least, since managers are generally already reasonably aligned with the goals of their superiors.

Managers' objectives aren't aligned with bosses' strategies and objectives:

Category-5 planning and costing.

Note that a planning and resource allocation process (category 5) can align actual performance even more effectively than a written plan.

It's cumbersome to administer the budget submission and decision process:

Category-2 budget aggregation systems.

Caution: The roll-up and roll-down processes are mechanical, and add only marginal value to decision making.

Process-improvement teams struggle to design better processes:

Category-3 process modeling tools.

Note that these tools do not help you identify which processes are worth improving; that's more likely to come from category-5 planning and costing processes. Process modeling focuses on one process at a time -- one you've already selected.

Process-improvement teams struggle to identify inefficient processes:

Category-5 integrated planning and costing systems.

Clients expect more of us than we have resources to deliver:

Category-5 integrated planning and costing systems.

With investment-based budgeting, everybody understands what the budget does and does not pay for, effectively managing expectations.

We have to cut costs, and want to manage demand at the same time:

Category-5 integrated planning and costing systems.

Clients don't understand the value we deliver:

Category-5 integrated planning and costing systems.

Our budget, allocations, or rates are not trusted:

Category-5 integrated planning and costing systems, or category-4 product/service costing models.

A transparent cost model is necessary to build trust in an organization's rates, and to calculate fair allocations.

We're being compared to outsourcing, and struggle to calculate like-to-like costs:

Category-5 integrated planning and costing systems, or category-4 product/service costing models.

Budget decision-making is not driven by the strategic needs of the enterprise or the investment opportunities at hand:

Category-5 integrated planning and costing systems.

A major shortcoming of traditional budget decision-making processes (category 2) is that funding is not linked (or is only loosely linked) to what each organization is expected to deliver in the coming year.

By submitting a budget for proposed products and services, funding is decided based on the needs of the business (not arbitrary numbers like a percentage off prior year's spending). As a result, departments are automatically aligned with enterprise strategies, low-value activities are eliminated, and shareholder value is enhanced.

We need a business-driven governance process to align our priorities and manage demand:

Category-5 integrated planning and costing systems, followed by category-7 chargeback systems (with or without actual chargebacks).

Product/service rates are prerequisite to effective governance processes.

We don't have sufficient resources for innovation and infrastructure:

Category-5 integrated planning and costing systems.

We struggle to deliver projects reliably due to lack of resources:

Category-5 integrated planning and costing systems.

We struggle to deliver projects reliably due to poor project planning or execution:

Category-6 project management systems.

We charge fee-for service (chargebacks) or have a resource-constrained governance process, and need to improve the accuracy of invoices:

Category-7 time-tracking, infrastructure utilization, and chargeback systems.

Add-ons that track time and infrastructure utilization are necessary if the organization charges clients (fee-for-service) for their purchases. Even if you don't charge back, they're required to establish a governance process that gives clients control of a finite "checkbook" created by the organization's budget.

Caution: This can be an expensive investment, and staff may resent time-cards until the governance process has evolved to the point where people know that the purpose of time reporting is to generate invoices that bring in revenues.

We have product/service costs, and want to fine-tune our calculations using historic data:

Category-7 time-tracking, infrastructure utilization, and analytics tools.

Harvesting data on actual performance to guide process-improvement efforts and to fine-tune future plans requires all the same time-tracking and infrastructure utilization systems described in the prior issue. The data may feed an invoicing system (above) as well as an analytics tool.

Strategy: Long-term Plan

A strategy sequences all the needed categories into a step-by-step plan for evolving your planning and financial management processes. If many of the above issues are pressing, a logical strategy might be as follows.

The first step is generally addressing the basic mechanical requirements of a general-ledger system (category 7) and a budget aggregation and decision-making process (category 2).

Next, the development of business and financial planning disciplines might focus on installing a category-5 integrated planning and costing process. This has many benefits in itself, and is prerequisite to governance and tracking processes that require product/service cost models.

Following this step, business-driven governance processes can be implemented. While they may initially be less than perfect (until better category-7 tracking systems are installed), clients can be empowered to set priorities within the limits of available resources.

Then, either category-6 project management is installed to improve delivery, or category-1 performance management is implemented to improve alignment and measurement of managers' performance on their objectives.

Finally, the fine-tuning permitted by better historic data (category 7) is implemented.

Analytics are generally only valuable when planning and governance systems (category-5) are well developed, such that better historic data will result in better plans.

Conclusion

The processes and tools that run the business -- well, they run the business. Introducing new systems can fundamentally enhance the effectiveness of an entire organization.

This taxonomy of business and financial planning processes and tools can help you translate your organization's needs into practical next steps, and select the right tools to take your organization to the next level of business effectiveness.

APPENDIX: Software Solutions ⁴

1. Performance Management

Software Functionality

Tools allow managers at all levels to input their objectives and link them to organizational strategies.

They offer views (reports) that help analyze all the pieces that are planned within a given strategy, as well as all the objectives of each managerial group.

Software may also support modeling, where outcomes are forecasted based on input assumptions.

Software may also track progress, where the achievement of objectives is entered by managers. Reports include dashboards and balanced scorecards.

Costs may be forecasted by managers for each of their objectives, allowing a roll-up of the total cost of a strategy. However, costs are calculated by managers outside these systems.

Examples of Products

A3 Solutions, Calumo, Clarity Planning, IBM Cognos, Infor PM (Extensity), KCI Control, Longview Solutions, macs Controlling, Oracle Hyperion, Planview, Prophix, SAP Business Objects, SAS Performance Management, and Targetik.

2. Budget Aggregation

Software Functionality

Tools allow managers to enter their budgets, and then create summary reports at various organizational levels, and with various aggregations of expense codes.

Some systems track managers' status at entering their proposed budgets and keep an audit trail. Some systems are linked to the general ledger so that managers' inputs can be initialized at prior-year levels (the opposite of zero-based budgeting), and so that approved budgets can later be compared to actual spending (plan versus actuals) to identify variances and project the remainder of the fiscal year.

Some systems include business modeling tools which forecast budgets based on past spending, adjusted by key drivers which may be organized into scenarios.

Examples of Products

Acteon BudgetGuide, Adaptive Planning, Alight, Centage Budget Maestro, Clarity Budgeting, Corporate Planner, DynacBudget, Global Software Budget Manager, Host Analytics, IBM Cognos, macs Controlling, Microsoft Forecaster (FRx), OutlookSoft EAP, PerpetualBudget, Prophix, Questica TeamBudget, Satori V-i-Performance Planning, and Whitebirch Planning.

3. Process Modeling

Software Functionality

Tools model the workflow and link costs to activities, and activities to processes. They allow what-if scenarios that predict the impact of process changes.

These tools are not designed for costing the products and services of an organization.

Examples of Products

ICMS CostMapper, Lead Software, macs Controlling, and Primary Matters.

4. Product/Service Costing

Software Functionality

Products in this category may be limited to a cost per item in the product/service catalog, or they may also assign costs to every project and service-level agreement (required if the tool is being used to calculate allocations).

Tools allow managers to enter their products and services catalogs, their deliverables (instances of those products and services, such as service-level agreements with specific customers), and their budgets.

The software amortizes indirect costs to the appropriate deliverables.

First-generation costing models (activity-based costing) put indirect costs into cost-pools (perhaps labeled as activities). Costs may flow from one pool to another before reaching the external products and services, but they always flow downward. They're simple to set up but lead to significant distortions.

More advanced second-generation products represent internal support products and services as "sales" to peers. Indirect costs may flow down, sideways, and upward, creating a realistic spider-web of support relationships. Second-generation models are capable of resolving the resulting circularity, and deliver far more accurate amortization of indirect costs. 5

Category 4 costing processes associate costs with products and services; but a key limitation is

that they require a known budget as input. For example, headcount and compensation costs are an input, not an output, of the model; and the amortization of indirect costs is based on a known level of direct costs.

Category 4 tools are not designed for budget planning and negotiation, where costs (such as staff-augmentation contractors) vary based on scenarios about what is to be done in the year ahead, and where the base over which indirect costs are amortized varies depending on the outcome of the budget decision process. They are used *after* budget decisions are made to allocate costs to products and services.

Since category-5 integrated planning/costing processes do everything that category-4 stand-alone product/service costing systems do (and much more), there's little reason to implement a category-4 process (or product) and then later replace it with an integrated category-5 system.

Examples of Products

ABM Technologies ace, Acorn ABC/M, and ITEXC ClearCost.

5. Integrated Planning and Costing

Software Functionality

To plan budgets based on the needs of the enterprise requires a different format for budget submissions. Instead of budgeting for costs such as compensation, travel, and vendor services, budgets described the cost of proposed deliverables -- the organizations products and services.

Category-5 tools accomplish this by integrating business planning, product/service costing (category 4), and budgeting.

Tools gather managers' inputs of product/service catalogs, and the specific "sales" of products and services (projects and SLAs). All costs, direct and indirect, are then linked to those sales.

The software also gathers other business planning inputs critical to costing, including categories and costs of various types of staff (including contractors) and the time set aside for sustenance activities (such as professional development, process improvements, and customer relations) for each.

The software calculates compensation costs (including staff augmentation contractors) by projecting headcount based on the requirements of the deliverables. It amortizes indirect costs with consideration of varying levels of business, from the pessimistic baseline to the optimistic proposed plan.

Reports describe the budget required for products and services, as well as traditional budget reports such as general-ledger expense codes by manager, and allow executives to view

various scenarios and approve or disapprove specific projects and services.

Rates (unit costs) are extracted from the same data.

This category of software feeds category-2 budget aggregation systems, helping managers prepare their submissions to traditional budget processes.

Examples of Products

NDMA FullCost.

6. Project Management

Software Functionality

Tools in this category allow managers to lay out the tasks, assign resources to each, and plan interdependencies.

Some tools also collect data on execution, such as time and money actually spent on tasks, which may be fed into category-7 tracking systems to associate general-ledger costs with projects.

Examples of Products

macs Controlling, Metier, Microsoft Project Server, and Primavera.

7. Tracking

Software Functionality

General-ledger systems capture actual spending by managerial group and by expense code.

Add-ons to general ledger systems may associate costs with projects, with activities (activity-based costing), or with products and services.

Time-tracking systems (time-cards) associate staff time (both employees and staff-augmentation contractors) with projects and services, as well as indirect sustenance and administrative tasks.

Infrastructure-utilization systems track use of assets like hardware and software.

Examples of Products

General ledgers: Cerner, Coda, Glovia Services (Fujitsu), J.D. Edwards, Microsoft Dynamics (Great Plains), OpenPro, Oracle Financials, QuickBooks, SAP Financials, and Sungard Banner.

Time-tracking: Microsoft Project Server, OnTrax Timesheets, and TimeScope (timesheets).

Add-ons that associate costs with activities or products/services for chargebacks: ComSci, Nicus M-power, Oros (for SAP), and SCA Technologies.

Add-ons that associate costs with activities or products/services for analytics: Apptio, Digital Fuel, myABC/M, and SAS Activity-Based Management.

Footnotes

1. The scope of this framework is limited to systems whose primary intent is planning, budgeting, costing, and financial management. It excludes general-purpose financial reporting (general ledger) and financial or market modeling (decision support).
2. Budget numbers include reimbursable expenses (aka, "pass-throughs") and entire project/service-delivery teams. Rates exclude reimbursables and, in some cases, are limited to individual groups rather than entire project teams. For example, rates per hour always exclude the costs of other members of a project team. On the other hand, rates for infrastructure services (such as e-mail) typically include both direct costs and all members of service-delivery teams. With these differences, both budgets and rates should be extracted from the same basic business plan and cost data.
3. Meyer, N. Dean. "Investment-based Budgeting." Ridgefield, CT: NDMA Publishing. 2008.
4. The examples of products in each category are far from comprehensive. Products are categorized based on available marketing data. Vendor feedback will be welcomed.
5. Meyer, N. Dean. "Second Generation Costing Models." Ridgefield, CT: NDMA Publishing. 2008.