

EnterpriseROI™ Glossary

A

Accounts Payable: The accounts payable represents the current liability on the balance sheet, representing short term obligations to pay suppliers.

Activity-Based Costing (ABC): A financial analysis costing methodology that associates specific efforts and personnel with specific tasks, allowing the tasks to be analyzed, and the current costs dedicated to specific tasks to be well understood. A simple activity based costing analysis can be: Number of times tasked performed annually * avg. time takes to perform * burdened salary (\$/hour) = activity cost. In order to derive savings estimates and ROI for projects, it is often important to do an activity based costing analysis, measuring/estimating the current cost for the activity, and demonstrating reduction in number of tasks, avg. task time, or person required to perform the task, in order to demonstrate savings. Activity based costing is included in many of the detailed benefits and costs. Formal Definition: ABC is a costing system that identifies the various activities performed in a firm and uses multiple cost drivers (non-volume as well as the volume based cost drivers) to assign overhead costs (or indirect costs) to products. ABC recognizes the causal relationship of cost drivers with activities.

Analysis Period: The time for which the costs and benefits are tallied and analyzed. For IT infrastructure investments, a three year analysis period is standard because most IT infrastructure investments are obsolete after that time frame, or need to return value in this time frame due to risk. For business process improvements or more strategic programs, a five year analysis period is typically more appropriate. The analysis period can be set for a particular business case analysis, and is applied to all projects within that analysis (business process analyses or TCO analyses).

Asset: An asset is anything owned by an individual or a business, which has commercial or exchange value. In IT, assets are typically the servers, computers, storage devices and other hardware, as well as software applications.

Availability: The amount of up-time a user experiences in using computer systems and applications. Availability is typically measured as a percentage, with best practice availability of 99.999%. The inverse of availability is downtime; the amount a system is unavailable for the desired function.

B

Balance Sheet: A company's financial statement that reports its assets, liabilities, and shareholders' equity at the time of reporting. The balance sheets record the details of the assets, liabilities and shareholders' equity, resulting in the following "balanced" formula, where one side of the equation, the assets, must be equal to the liabilities + shareholders' equity: $Assets = Liabilities + Shareholders' Equity$. Formal Definition: The balance sheet is an itemized statement that lists the total assets and the total liabilities of a given business to portray its net worth at a given moment of time. The amounts shown on a balance sheet are generally the historic cost of items and not their current values.

Base Case Financials: The current financial plan without the costs and benefits of the planned project. The base financials are often referred to as the "do nothing" plan.

Benchmark: A benchmark is a study to compare actual performance to a standard of typical competence; or, a standard for the basis of comparison as being above, below or comparable to.

Benefit Schedule/Adoption Curve: Applies a discount to benefits over the analysis period for the entire project, or on an individual basis (override). Can be used to model a delay in realizing benefits due to a staggered roll-out schedule of a particular feature, delayed training, adoption delays, or any other risk or realization factor. Used for refined cost and benefit modeling, what-if analysis and risk adjustment.

Best Practices: A demonstrated capability that meets desired results to achieve best-of-breed performance. Applying best practices to IT will help improve the capability and maturity of the people, process and technology - helping to reduce costs, improve effectiveness and generate ROI™.

Beta: The Beta is a quantitative measure over an extended period of the volatility of a given stock (or instrument) relative to the volatility of the market. A score greater than 1 means the stock is more volatile than the market, lower than one, less volatile.

Book Value: Book Value is an accounting term which usually refers to a business' historical cost of assets less liabilities. The book value of a stock is determined from a company's records by adding all assets (generally excluding such intangibles as goodwill), then deducting all debts and other liabilities, plus the liquidation price of any preferred stock issued. The sum arrived at is divided by the number of common shares outstanding and the result is the book value per common share. Book value of the assets of a company may have little or no significant relationship to market value. * Tangible Book Value is different than Book Value in that it deducts from asset value intangible assets, which are assets that are not hard (e.g., goodwill, patents, capitalized start-up expenses and deferred financing costs). * Economic Book Value allows for a Book Value analysis that adjusts the assets to their market value. This valuation allows valuation of goodwill, real estate, inventories and other assets at their market value.

Breakeven: The time period from the start of the project until the cumulative cash flow turns positive or for the project to breakeven.

Burdened Rate: All salaries are calculated as burdened, meaning that they are increased by $(1 + \text{burdened rate}) * \text{salary}$ to reflect the true cost of a staff member to an organization. An average burdened rate of 26% is used in the United States and is comprised of the following items: *Insurance Benefits (health, life, ADD, etc.) - approximately 10%-15%; *Taxes (FICA) - around 7.65% for employers share; *Retirement (401k, SEP, profit sharing) - around 5% (will vary by company) These items total to a range of 26% to 37% and are the most common benefits that organizations offer to employees. Other factors to consider include, but are not limited to, parking privileges (free or reduced rate if in an urban area), child care (free or reduced), meal plans, car allowances, transportation and telecommunication reimbursements and other fringe benefits.

Business Case: An analysis of a particular project or set of projects to determine the costs, benefits, strategic value and risks. The business case is used to determine whether a project or set of projects represent a worthy investment, and to establish target goals for improvements and performance.

Business Operating Efficiency: A project benefit used in calculating the benefits of a project or initiative and the ROI. Calculates the impact the project has on the business units and operating expenses. These impacts include helping to increase productivity, reduce the risk of productivity losses, avoid purchases, reduce expenses and reduce overhead. Business Operating Efficiency calculates the project's impact on reducing key corporate operating expense includes including: Cost of Goods Sold (COGS), Sales and Marketing (S&M), General and Administrative (G&A), Research and Development (R&D), Interest Expenses and Depreciation.

Business Operating Efficiency Projects: A strategic project classification reflecting business unit focused initiatives which help reduce business unit operating expenses, cost of goods sold, or depreciation by helping business units to increase productivity and efficiency, avoid purchases and expenses, and avoid risk related losses.

Business Strategic Advantage: A project benefit used in calculating the benefits of a project or initiative and the ROI. Calculates the impact the project has on the corporate revenue and sales. These impacts include helping to increase sales productivity, customer acquisition and loyalty, increase sales effectiveness or the launch of a new business. The benefits are reflected as impacts to Revenue on the corporate financials. The calculation includes impact on revenue, and a calculation of net margin contribution of the benefit. The net margin contribution of the benefit is what is actually used in the net benefit, TCO and/or ROI calculation.

Business Strategic Advantage Projects: A strategic project classification reflecting projects focused on increasing revenue and sales. These projects include those which help to increase sales productivity, customer acquisition and loyalty, increase sales effectiveness or the launch of a new business.

Business Unit Costs: Costs incurred by business units in implementing an IT project, and collected to perform an ROI Analysis. Business Unit Costs represent one of two costs for a planned project, the other being IT Costs. The business unit costs typically include: Business process reengineering / Change Management, Project Management, Administrative, User Training and Other.

C

Capital Assets: Any asset of a long-term nature having continuing value to the business. Examples are facilities, buildings, land and equipment.

Capital Expenditures: The expenditures to acquire or improve IT assets.

Cash: The amount of a company's legal tender balances, and the value of assets that can be converted into cash immediately. The cash total usually includes bank accounts and marketable securities, such as government bonds and banker's acceptances.

Cash Flow Analysis: An analysis of the costs and benefits of the project over time. In a cash flow analysis, the positive (benefits) and negative (costs) are plotted on a time line, to determine the required investment and potential value of the project. Cash flow analysis is conducted using annual buckets.

Cash to Assets Ratio: The cash to assets ratio is a measure of a company's liquidity, indicating the proportion of assets which are in cash. The ratio is calculated as cash divided by total assets.

Cash to Liabilities: The cash to liabilities ratio is a measure of a company's ability to meet its liabilities, and is calculated as cash divided by total liabilities.

Cash to Working Capital: Compares the ratio of cash divided by working capital, where working capital is calculated as accounts receivable + inventory - accounts payable. This ratio indicates the proportion of working capital that is comprised of cash, whereby a low ratio indicates a company which may have trouble meeting its short-term commitments.

Corporate Financial Category: Income statement cost categories used to help the IT team and stakeholders analyze the impact of IT on corporate financials, and to help compare current and planned performance versus peers. The Corporate Financial chart of accounts: Revenue (sales) COGS, S&M, G&A, R&D, Interest Expense, Depreciation.

Cost-Benefit Analysis: A comparison of the project costs versus the projected benefits, analyzing the positive (benefits) and negative (costs) cash flows for the project. In generic terms, the tool uses ROI analysis to refer to what is more properly represented as a cost-benefit analysis. Formal Definition: Cost-Benefit Analysis is the method of measuring the benefits anticipated from a decision by determining the cost of the decision, then deciding whether the benefit outweighs the cost of that decision.

Cost of Capital: The cost of capital is the interest rate at which a company can borrow money. This rate is typically equal to, or some calculated rate above prime rate, or other standard international financial lending metric. Cost of Capital is used as the default in the discount rate the net present value and Risk Adjusted ROI of the project - used as the discount rate for these calculations. Formal Definition: Cost of Capital/Funds is the rate of return that a business could earn if it so chose other investments with the equivalent risks. Also, can be stated as opportunity cost of the funds used due to the investment decision.

Cost Center: A cost center is a non-revenue-producing element of an organization, where costs are separately figured and allocated, and for which someone has formal organizational responsibility.

Cost of Goods Sold (COGS): An income statement expense on the corporate financials that reflects what it takes to produce the products sold. COGS is part of the company's operating expenses. Formal Definition: COGS is a figure representing the cost of buying raw material and producing finished goods. Included are precise factors, i.e. material and factory labor; as well as others that are variable, such as factory overhead.

Cumulative Benefits: Over the ROI analysis period, the cumulative benefits generated by the investment. For each year, the sum of the current and all prior years' benefits.

Cumulative Costs: Over the ROI analysis period, the cumulative costs of the investment. For each year, the sum of the current and all prior years' costs, including the initial cost.

Current Practices: Current Practices subjectively rates the organization's management practices and environment compared to a typical company.

Current Ratio: Calculates as current (i.e. 12 months or less) assets divided by current liabilities. This ratio determines if a company has sufficient level of liquidity to pay its current liabilities. A ratio of 200% is preferred, and 100% is often considered the minimum.

D

Declining-Balance Depreciation Method: The declining-balance depreciation method is an accelerated depreciation method in which an asset's book value is multiplied by a constant depreciation rate (such as double the straight-line percentage, in the case of double-declining-balance.). This depreciation method is allowed by the U.S. tax code and gives a larger depreciation in the early years of an asset. Unlike the straight line and the sum of the digits methods, both of which use the original basis to calculate the depreciation each year, the double declining balance uses a fixed percentage of the prior year's basis to calculate depreciation. The percentage rate is $2/N$ where N is the life of the asset. With this method, the basis never becomes zero. Consequently, it is standard practice to switch to another depreciation method as the basis decreases. Usually the taxpayer will convert to the straight line method when the annual depreciation from the declining balance becomes less than the straight line.

Depreciation: When a purchase is deemed a capital expense, usually when it exceeds a corporate accounting threshold, the cost of the asset, rather than being taken as an operating expense, is depreciated, whereby the cost of the item is expensed over time using one of several depreciation schedules. The cost of the asset is apportioned over a multi-year period to account for the fact that the purchase is a long-term tangible asset. Formal Definition: Depreciation is the amount of expense charged against earnings by a company to write off the cost of a plant or machine over its useful live, giving consideration to wear and tear, obsolescence, and salvage value. If the expense is assumed to be incurred in equal amounts in each business period over the life of the asset, the depreciation method used is straight line (SL). If the expense is assumed to be incurred in decreasing amounts in each business period over the life of the asset, the method used is said to be accelerated. Two commonly used variations of the accelerated method of depreciating an asset are the sum-of-years digits (SYD) and the double-declining balance (DDB) methods. Frequently, accelerated depreciation is chosen for a business' tax expense but straight line is chosen for its financial reporting purposes.

Direct Benefit: A first order effect of the proposed project and investment, where the project will directly lead to an efficiency and effectiveness gain resulting in improved productivity, labor savings, purchase avoidance, capital expense savings, or a direct revenue/ profit improvement. An example of a direct benefit for the Engage to Close (Sales) process is the reduction in sales administrative overhead, whereby the sales manager is provided with tools to automate

forecasting and planning, thereby directly resulting in time savings and productivity gains.

Discount Rate: Discount rate is utilized in the calculation of Net Present Value and Risk-adjusted ROI. The discount rate is set by default to the estimated cost of capital, but should be adjusted upwards from this rate to account for additional opportunity cost and risk.

Discounted Cash Flow: Discounted cash flow is a valuation method best used to evaluate a business established for the purpose of fulfilling a specific project, in certain startup and other companies where cash flow is more important than net income, and when a certain time frame is set where an investor wishes to see his investment returned over a specific period of time. In discounted cash flow, the present value of liabilities is subtracted from the combined present value of cash flow and tangible assets, which determines the value of the business.

Double Declining-Balance Depreciation Method (DDB): Declining balance depreciation rate which is twice the straight-line rate. See "Declining-Balance Depreciation Method".

E

Economic Value Add (EVA®): Economic Value Added is the Stern Stewart & Co. financial performance measure most directly linked to the creation of shareholder wealth over time. EVA is net operating profit minus an appropriate charge for the opportunity cost of all capital invested in an enterprise. As such, EVA is an estimate of true "economic" profit, or the amount by which earnings exceed or fall short of the required minimum rate of return that shareholders and lenders could get by investing in other securities of comparable risk. For calculation purposes $ROI\text{ EVA} = \text{Net Profit} - \text{Cost of Equity} * \text{Shareholder Equity}$ Cost of Equity is calculated based on the Risk Free Rate + (Company Beta x Market Risk Premium) = .03723 + (Beta * 7.0%)

EVA® per Employee: The EVA / Employee Bar Chart graphs the comparative EVA per Employee for the company and the peers, where $EVA = \text{Net Income} - \text{Cost of Equity} * \text{Shareholder Equity}$. An important ratio for comparing companies in their ability to create value on a per employee basis.

Exchange Rate: The current market price for which one currency is converted to another. If the U.S. exchange rate for the Canadian Dollar is \$1.50, this means that 1 American Dollar can be exchanged for 1.5 Canadian dollars.

F

Formal IT Budget: The Formal IT Budget represents spending which is controlled and allocated to the IT department. This spending is grouped into the following chart of account categories: Data Center and Servers, Distributed Processing, Purchased Software, Purchased Services, Communications, Development, Maintenance, Operations, Overhead Supplies and Other. The Formal IT Budget does not include Business Unit IT Spending, which is accounted for in the business unit operating budget, and hidden Shadow (Indirect) IT spending, unofficial spending of time and reimbursed expenses on IT.

Formal IT Spending: Represents spending which is controlled and allocated to the IT department and usually represent 50-70% of Total IT Spending. This spending is grouped into the following chart of account categories: Data Center, Servers and Client Computers, Purchased Software, Purchased Services, Communications, Development, IT Operations and Administration, Overhead Supplies and Other. The Official IT Spending does not include Business Unit IT Spending or hidden Indirect (shadow or rogue) IT spending.

Full Time Equivalent (FTE): A measurement of the relative headcount which is applied to perform a particular task. FTEs can be specified as full headcounts or fractional headcounts. A full time person does not have to be assigned to the task on a full time basis, rather the time they work on the task divided by the work hours a typical person works per year. As an example, a PC technician spends 10 hours each work week performing support services on servers. Over the course of a year, working 47 weeks when holidays and vacations are excluded, this equates to a total of 470 hours. With 1880 hours worked per year per person on average (US), $470/1880 = 0.25$. Therefore, .25 FTEs are allocated to this task.

Future Value: Future value is the amount of money that an investment made today (the present value) will grow to by some future date. Since money has time value, we naturally expect the future value to be greater than the present value. The difference between the two depends on the number of compounding periods involved and the going interest rate.

G

GAAP Accounting Rules: A set of nationally (United States) recognized accounting standards referred to as Generally Accepted Accounting Principals (GAAP). Using GAAP accounting standards, costs and benefits are accounted for in a recognized way to assure consistency with your firms accounting principals, and for comparing various projects and investments with one another.

General and Administrative (G&A) Expenses: An income statement operating expense that reflects costs associated with business administration, typically including executives, overhead, information technology, administration, human resources and other costs not associated with COGS, sales and marketing, research and development, interest expenses and depreciation. Formal Definition: G&A usually refers to the indirect overhead costs contained within the General and Administrative expense / cost categories (see also SG&A).

H

Hurdle Rate: The rate at which a project's internal rate of return (IRR) must exceed in order for the project to be deemed worthy of further investigation and investment. These hurdle rates vary dramatically. For non-risk adjusted IRRs and larger IT projects, hurdle rates are typically 120% or more. Formal Definition: Hurdle Rate is a term used in the budgeting of capital expenditures meaning the REQUIRED RATE OF RETURN in a DISCOUNTED CASH FLOW analysis. If the expected rate of return on an investment is below the hurdle rate, the project is not undertaken. The hurdle rate should be equal to the INCREMENTAL COST OF CAPITAL.

I

Income Before Extraordinary Items (Net Income): This item represents the income of a company after all expenses, including special items, income taxes, and minority interest - but before provisions for common and/or preferred dividends. This item does not reflect discontinued operations (appearing below taxes) or extraordinary items. This item includes (when reported below taxes): 1. Amortization of intangibles 2. Equity in earnings of unconsolidated subsidiaries 3. Gain or loss on the sale of securities when they are a regular part of a company's operations 4. Shipping companies' operating differential subsidies (current and prior years). This item, for banks, includes net after-tax and after-minority interest profit or loss on securities sold or redeemed.

Income Statement: Part of a company's financial statements summarizing revenues and expenses during an annual period. The Income Statement is also referred to as the profit and loss statement. Income Statement items include: Revenue, COGS, Operating Expenses and Depreciation.

Indirect Benefit: Not a first order direct benefit of the project, but a higher order effect of the proposed project and investment, where the project will help influence the derivation of a benefit, but will not cause a direct improvement. An example of an indirect benefit for the Engage to Close (Sales) process improvement is the resultant boost in customer satisfaction from the solution's use, and share of wallet increase from existing customers. In this case, the sales professionals need to use the solution to improve communications and correspondence to users, the customers in turn need to feel more satisfied with the company and products as a result, and make a subsequent decision to purchase more of the company's solutions as opposed to other alternatives.

Industry Average: The average of all of the companies in the database that are in the selected industry, classified by SIC code. To see the selected SIC code for an industry, select the industry in the Company Profile.

Initial: The time period for initial investments - the one time costs related to the purchase of capital assets, and service fees.

Intangible Benefits: Benefits that are strategic benefits derived from the planned project, but not reliably quantifiable in absolute monetary terms. Instead, Key Performance Indicators are used to quantify the intangible benefits. Key Performance Indicators include business measures, metrics, or ratios which indicate how the company is performing on meeting strategic goals. Intangible Benefits are typically categorized as follows: - Brand Advantage -reinforcing, advancing or changing a company's brand. Example key performance indicators would include ratings such as brand loyalty and repeat customer rates. - Strategic Advantage - working towards or meeting overall corporate objectives. Example key performance indicators would include key financial indicators such as return on equity, days sales outstanding, inventory turns, sales productivity or other key financial performance measures. - Competitive Advantage - releasing solutions faster, developing solutions less expensively, better addressing customer needs, meeting changing market demand, scaling easily and more cost effectively, and gaining market share. Example key performance indicators include market share, advertising and marketing effectiveness, new customer acquisition rates, and quality rankings. - Intellectual Capital - increase in relevant

knowledge gained by the staff, and the perceived market value from those gains. Example key performance indicators include including new product launch rates, product revenue shares (new vs. existing), patent filings, research and development expense ratios, and professional development. - Organizational Advantage - enabling an organization to function more effectively, or reinforcing or recreating a corporate culture. Example key performance indicators include professional training and development metrics, project work and productivity metrics, service level metrics, satisfaction rankings, innovation and development metrics, and quality metrics.

Interest Expense: The cost to the corporation in interest payments for borrowing money.

Internal Rate of Return (IRR): Want to know what a similar investment would need to earn in order to compare with the returns on this project? Internal rate of return (IRR) calculates the interest rate received for an investment consisting of costs and income that occur over the analysis period. By analyzing the costs, and when they occur, compared to the benefits over time, the IRR calculation estimates the return from the project as an interest rate calculation. In more technical terms, IRR is the DISCOUNT RATE which makes the NET PRESENT VALUE of a project equal to zero. The IRR calculation is used to derive the value of r , whereby given a series of net benefits (I), the equation yields zero as the NPV. The calculation is performed iteratively, where a computer program guesses at the value of r , and then continuously refines itself, until the equation yields a result at or near zero. Formal Definition: IRR is also called the dollar-weighted rate of return; the interest rate that makes the present value of the cash flows from all the sub-periods in an evaluation period plus the terminal market value of the portfolio equal to the initial market value of the portfolio.

Inventory: Inventory is the raw materials, work in process and finished goods recorded as an asset on the company's balance sheet. A high inventory level carries with it a cost to the company in initial expense and on-going carry costs.

IT Cost Reduction Projects: A strategic project classification reflecting IT focused initiatives which help to reduce IT Operating Expenses by increasing IT productivity, avoiding IT purchases, reducing fees and contracts or reducing IT headcount.

IT Cost Reductions: A project benefit used in calculating benefits and ROI. Calculates the increases in IT productivity, reduction in headcount, purchases, support, maintenance, contracts, facilities and overhead. Savings get mapped to specific IT budget categories to analyze the impact on the IT Operating Budget, which includes the following categories: Data Center and Servers, Distributed Processing, Purchased Software, Purchased Services, Communications, Development, Maintenance, Operations, Overhead Supplies and Other. As well, IT Cost Reductions affect the corporate budget, particularly helping to reduce IT expenditures contributing to General and Administrative and Depreciation.

IT Costs: The costs budgeted to IT for the planned project, and collected to perform an ROI Analysis. IT Costs represents one of two costs for a planned project, the other being Business Unit Costs. The IT Costs typically include: Capital Purchases, Support and Maintenance Fees, Planning, Implementation and Development Labor, Training, Professional Services and Contractors, and Overhead. The costs are typically allocated to an IT budget category, in one or

more of the following chart of accounts: Data Center and Servers, Distributed Processing, Purchased Software, Purchased Services, Communications, Development, Maintenance, Operations, Overhead Supplies and Other.

IT Value Chain Management: Calculating the Value of IT has been a challenge for CIOs, who are responsible for managing costs and maximizing the impact of IT on the business, and for IT solution providers, who need to demonstrate that the investment in their solutions has made a positive impact on the organization. Record spending on IT, with companies showing little returns from these investments, has left a crisis of confidence in its wake. To help companies analyze and manage the Value from IT, Alinean has developed a methodology, IT Value Chain Management, optimizing, measuring and managing the business impact of IT: 1) across the Business, from micro-economic analysis at the project level, to macro-economic analysis at the corporate financial level and 2) for all Stakeholders: from the Project and Business Unit Managers, Cx level executives and Directors, to the Shareholders, Customers and Supply Chain. The methodology is explained in the free e-book of the same name (see Resources).

K

Key Metrics: Values tracked within a project and business case and utilized to confirm key values used to create an analysis, and summarize the audit log showing who entered the data, and when it was last modified (if at all). Values which have not been edited should be checked to be sure they represent actual data needed to generate an accurate and realistic analysis of the project.

Key Performance Indicators "KPIs": Formal Definition: Key Performance Indicators are those empirical data points that indicate how well, or poorly, a project, initiative or plan is performing against preset goals and objectives. Normally, in business or strategic planning, a company will set targets over a specified period that the business believes are attainable and track performance over time to those targets or objectives. In the project analysis, various KPIs are used in this way to track predicted improvements in business metrics as predictors and measuring points which can be measured and tracked against the goals to see whether the project is achieving planned cost and benefit goals.

Knowledge Worker: A classification of a broad group of employees who used computers daily to perform tasks, create, collaborate, and process and route knowledge. Knowledge Workers as used in the Peer Comparison analysis is the broadest sense of the term, referring to professional workers.

M

Management Practices: See "Best Practices"

Mandatory Projects: A strategic project classification focused on meeting corporate governance rules, legal requirements, or other mandated initiative. These projects sometime include vendor mandates, such as migrating to a new platform due to lack of continued support.

N

Net Contribution from Incremental Revenue: The net benefit that is realized to the corporation from a revenue improvement, calculated as the net revenue improvement multiplied by the appropriate profit margin for this revenue.

Net Present Value (NPV): Net Present Value is the sum that results when the discounted value of the expected costs of an investment are deducted from the discounted value of the expected returns. The Net Present Value (NPV) benefit is a calculation that measures the net benefit of a project, in today's dollar terms. The NPV savings calculation consists of two financial concepts, these are: > The "net" part of the NPV savings calculation is the difference between all of the costs and all of the benefits (savings and other gains). > The present value portion of the NPV calculation takes into account the time value of money, to adjust the expenditures and returns as they occur over time so that they can be evaluated equally. The NPV calculation evaluates a set of costs and benefits over time in order to account for the time value of money. The cash flows are the amounts and times of the various costs and investments, and these are brought into a common term, today's dollars, so that the net benefit can be evaluated. NPV calculation uses the formula: $NPV = \text{Initial expense} + \text{discounted Cash Flow (Expected Benefits - Expected Costs) for Year 1} + \text{discounted Cash Flow (Expected Benefits - Expected Costs) for Year N}$ Projects with low initial costs and greater initial savings yield higher NPV savings calculations. The NPV Savings is one of the most popular and accurate methods used to assess IT project viability, using discounted cash flow to accurately quantify the net benefits from a project. Rather than the ROI percentage, a ratio of net benefits to the costs, the NPV savings uses discounted cash flow to quantify in today's dollar terms the projected net gain from the project in net dollar terms. Formal Definition: NPV is a method used in evaluating investments, whereby the net present value of all cash outflows (such as the cost of the investment) and cash inflows (returns) is calculated using a given discount rate, usually REQUIRED RATE OF RETURN. An investment is acceptable if the NPV is positive. In capital budgeting, the discount rate used is called the HURDLE RATE and is usually equal to the INCREMENTAL COST OF CAPITAL

Net Tangible Benefits: An analysis of the financial viability of a project. Net Tangible Benefits compares costs versus savings to generate key financial metrics, including ROI, NPV, IRR and payback period.

O

Operating Expenditures: The amount paid for on-going operations expenses which for IT typically includes IT operations and administration labor, purchased services and overhead.

Operating Expenses: An income statement term that refers to the essential items a company spends money on in order to remain in business. These expenses include cost of goods sold, labor and fees for sales and marketing, general and administrative, research and development and interest expenses.

Opportunity Cost: Cost of the foregone opportunity from an alternative use of a resource. As an example, a building that has been paid for still has an opportunity cost in that the owner is foregoing the opportunity to either rent or sell the building. Formal Definition: Opportunity Cost is widely used in business planning in evaluating capital investment. A company measures the projected

return against the anticipated return it would receive on a highest yielding alternative investment that contains a similar risk profile.

P

Payback Period: Payback Period, in capital budgeting, is the length of time needed to recoup the cost of CAPITAL INVESTMENT. The payback period is the ratio of the initial investment (cash outlay, regardless of the source of the cash) to the annual cash inflows for the recovery period. The major shortcoming for the payback period method is that it does not take into account cash flows after the payback period and is therefore not a measure of the profitability of an investment project. For this reason, analysts generally prefer the DISCOUNTED CASH FLOW methods of capital budgeting; primarily, the INTERNAL RATE OF RETURN and the NET PRESENT VALUE methods. The payback period is measured from the start of the project, until the occurrence when the cumulative benefits, exceed the cumulative costs. Payback period is important because it measures how long it takes for the investment to begin generating a positive cash flow. A longer payback period generates risk, especially if the project time line is delayed or benefits occur later than expected. A shorter payback period does not assure substantial returns for the investment, but assures that there will be positive returns and that the benefits occur early in the cycle and quickly offset the initial investment costs.

Peer Average: The average of the selected peers, excluding the company for which the analysis is being performed, and any invalid data points for included peers.

Period of Analysis: The period of analysis for ROI business cases, set at three years for most infrastructure projects And five years for most business process improvement or strategic projects.

Profit Before Taxes: Profit Before Taxes is operating profit minus all other expenses (net).

Project: A project is a company initiative which requires a Business Process Analysis (BPA - for business reengineering, change management or strategic initiative projects) or TCO Analysis (for competitive comparisons on IT infrastructure type projects). The Projects are analyzed and the cumulative impact - costs and benefits - are rolled up into a portfolio analysis called a Business Case. A Business Case consists of one or more projects and analyses over a given analysis period.

Project Implementation Plan (months from kickoff to deployment): Applies a delay on the recognition of benefits so that benefits are not realized until the month after the indicated deployment schedule. Benefits cannot be realized typically prior to the deployment of a project, so the setting of this value to accurately reflect planning, setup, development, installation and rollout period is important. This value can be set for the overall project and affect all benefits, but also be set at a benefit by benefit level to account for various schedules in implementing specific features or functions which will result in key benefits.

Project Schedule: The project schedule designates the starting date of the project in an overall Business Case Analysis. A project is analyzed on a detailed level with a starting date called Initial, and then a deployment schedule, costs and benefits over an analysis period (Year 1, Year 2, Year 3 etc....). When the project is

placed into a Business Case, this Initial starting date is absolutely mapped to a year and quarter, allowing for the precise measurement of costs and benefits according to corporate timelines. As well, projects can be moved in time for what-if analysis, accelerating some projects forward, while postponing others and determining the impact on project ROI, benefits, costs and corporate financials.

Proposed Plan: The proposed financial plan with the costs and benefits of the planned projects simulated against the base case financials.

R

Realized Benefits: Often the benefits from implementing a project are not directly translated into bottom line savings for the company. Direct benefits, such as productivity improvements, may not indeed help the workers be more productive, but don't result in direct headcount-savings, or the predicted strategic benefits derived from additional work time. These users may squander the re-gained time for non-work related tasks. The realization of benefits becomes even more difficult when considering indirect benefits. To account for the lack of direct translation to bottom-line benefits, a discount rate is provided, often called a realized benefit factor. This discount rate should be provided individually to each direct and indirect benefit in order to make the results more realistic and achievable. The realized benefit should be set to model: User adoption issues - based on ease of use, business process re-engineering, capability of the individuals, training, culture, management focus and objectives and other factors) Translation issues to real productivity savings - the ability to reap full time equivalent savings from the productivity enhancements, or predicted strategic benefits. Risk of multiple dependencies to achieve results - the impact of risk in achieving benefits which are indirect, relying on a chain of benefits to produce a higher order effect. For indirect benefits, the expected benefits should be heavily discounted into the 10-40% range to account for the complex chain of adoption and savings that need to be realized in order for the ultimate predicted benefit to be achieved. For direct benefits, the range is typically between 50-100%.

Realized Total: The resultant total benefits used in the cost-benefit analysis. The realized benefits are scaled by the deployment schedule, direct/indirect benefit scalar and benefit schedule/adoption curve. The realized costs are scaled by the allocation table to reflect various quarterly allocations of costs during deployment and on-going management / maintenance.

Research and Development (R&D) Expenses: An income statement operating expense that reflects the costs of research and development, the investments in developing new intellectual property, products or procedures.

Residual Values/Options: At the end of the analysis period, three years for ROI analysis, the value remaining in the solution for the rest of the solutions life, minus any costs to obtain such ongoing value. Value can be the net benefits expected over the remaining useful life (beyond Year 3 or Year 5 depending on the analysis period), or can be the option value of implementing the solution (the incremental upgrade costs that are avoided by moving to the new platform today, versus in the future). Residual Values/Options are specified as Year 3 or Year 5 benefits, and are risk adjusted, and discounted in the NPV savings calculations.

Return on Assets: A financial ratio used to calculate the financial benefits that are derived from the purchased assets, represented as $ROA = \text{Net Income} / \text{Total Assets}$. For IT, ROA is often used to describe the Return on Total Assets, which represents the total benefits being derived by the asset, divided by the total investment in the asset. This approach helps to measure the long term benefits of large infrastructure asset investments such as data warehouses or ERP systems, especially those assets that are enhanced over time.

Return on Investment (ROI): ROI is the ratio of the net gain from a proposed project, divided by its total costs. In a formula, this can be represented as: $ROI = \text{cumulative net benefit} / \text{total costs}$. When calculated, ROI is represented as a percentage demonstrating the value of the investment comparing costs to net benefits. As an example of how the ROI formula can be used to evaluate a solution, if a project has an ROI of 200%, the total net benefits derived from the project are double those of the expected total costs to implement the project. This means that every one dollar invested in the project returns a net benefit of \$2 in return, plus the original dollar invested. As such, the ROI calculation represents the relative value of the project's cumulative net benefits over the analysis period, divided by the project's cumulative costs, expressed as a percentage. The ROI calculation does not use net present value terms in its calculations.

Revenue (Sales): The dollar amount of sales during an annual period, including gross sales, discounts and returns. Revenue is often called the "top line" from which cost of goods sold is subtracted to calculate net revenue, and operating expenses and depreciation are subtracted to determine before-tax earnings. Formal Definition: Revenue is the monetary amount of annual sales, including returned merchandise and discounts, i.e., it is the top monetary figure from which costs are subtracted to determine net income.

Risk Adjusted Discount Rate: The discount rate used in Net Present Value calculations within the ROI analysis. The discount rate takes the company's cost of capital and adjusts it upwards to account for Project Risk. A higher discount rate is automatically set when the project risk assessment represents a risky project, discounting future cash flows in the NPV and Risk Adjusted ROI calculations.

Risk Adjusted Discounted Cash Flow Analysis: A financial analysis method which factors risk into the analysis of net tangible benefits. Uses a risk adjusted discount rate to factor project risk into the financial calculation of net present value. Discounts future cash flows using a higher discount rate than the nominal cost of capital rate used in standard present value calculations. This higher risk adjusted rate is used to discount future cash flows to account for uncertainty in assumptions and possible issues in controlling costs or realizing returns.

Risk Adjusted Return: Risk Adjusted Return is when we subtract from the rate of return on an asset a rate of return from another asset that has similar risk. This gives an abnormal rate of return that shows how the asset performed over and above a benchmark asset with the same risk. We can also use the beta against the benchmark to calculate an alpha which is also risk adjusted performance.

Risk Adjusted Return on Investment (ROI): Risk Adjusted ROI is the ratio of the net present value of the net gain from a proposed project, divided by the net present value of its total costs. In a formula, this can be represented as: Risk Adjusted

ROI = Net Present Value Cumulative Net Benefit/Net Present Value of Total Costs)

Risk Assessment: Quantifies the potential issues a project might have, particularly those issues which may effect achievement of cost, benefit or strategic goals. The risk assessment consists of listing each possible risk, and quantifying the likelihood of occurrence and potential impact, to create a risk assessment score. The score is used to adjust the discount rate, in order to calculate a risk adjusted discounted cash flow analysis. Typical project risks include: > Labor Resources - the risk that required resources may not be available, not have the proper skill set or training, or rely on a small group of experts that cannot be retained easily. > User Acceptance - users may not accept the solution and rebel, or more likely, they will not adopt all or some of the key features, which reduces the benefits substantially. >Compatibility - the solution may not be compatible with current or future operating systems, platforms or other applications. > Vendor - the vendor may not be able to deliver the solution in the promised time frame or to the required specifications. The vendor may be a start-up, or not financially sound, so they may not be around in several years to support the solution and deliver required updates and upgrades. > Management Commitment and Funding - the senior management and the stakeholders may not be fully committed to the project with management support, and especially funding. > Market or Strategic - the market may shift, competitors may change their strategy, or the company may change strategic direction, changing the project requirements, or changing the business benefits equation. >Schedule - the project requirements may drive a schedule that is unrealistic. The overruns in schedule may cause cost overruns, delays to benefits, and impacts to other dependent projects. > Legal and Governance - there may be legal and governance risks and exposures in the project, such as not being able to implement the project in time to meet legal regulations, or a failure that may risk legal exposure. The project or issues with the project may also effect compliance with governance issues such as financial reporting requirements. > Organization - there may be risks to the organization as a whole, such as a risk involving employee morale or organizational dynamics should issues occur. > Dependencies - there may be risks that can affect family of dependent projects, such as delays, resources or budgets.

Risk Mitigation: Tools and management processes that are implemented to help reduce the potential issues that might affect the project's success including budget, schedule, requirements and realization of expected returns.

ROI Dashboard: A model developed by Alinean to enhance traditional ROI analysis and make it more suitable to the analysis of Information Technology solutions. ROI Dashboard is used effectively to analyze the viability of a project, and to help stack rank projects competitively for optimal selection. ROI Dashboard includes traditional financial analysis, the calculation of net tangible benefits, including ROI, NPV, IRR and payback period. ROI Dashboard extends traditional ROI analysis to include Risk Assessment and risk adjusted discounted cash flow analysis, as well as intangible benefits (key performance indicators).

ROI Selling: A solution selling approach which uses ROI to develop a quantified cost-benefit analysis for the prospect. ROI selling helps prospects build conservative business cases for implementing a proposed solution, helping the prospect uncover the current costs, and documenting the implementation costs cost savings, strategic benefits and risks.

ROI Templates: A set of pre-built ROI analyses for the most popular IT and business process improvement projects. Contains all of the costs, tangible benefits, intangible benefits and risks which the team should consider. Data collection and calculations are automated. Default metrics are provided for typical projects, and these can be easily customized to create personalized business cases.

ROIT™: Alinean's Return on IT (ROIT™) is a single key performance indicator that helps measure the efficiency and effectiveness of IT Spending against overall company performance. The metric is a top down measurement of IT spending productivity correlating IT spending with financial performance into a single, concise comparative metric for current performance assessment and planning. As detailed disclosure of most companies' IT spending is unavailable in the public domain, Alinean has leveraged its partnerships and proprietary research and methodology into a predictive model to estimate IT spending for purposes of ROIT™ calculations. By identifying overall ROIT™ performance, companies have a meaningful business planning tool that allows them to determine both the appropriate level of IT expenditure and appropriate level of expected results relative to competitors. How ROIT™ is Determined. The traditional ROI formula is as follows: $ROI = \text{Net Benefits} / \text{Costs}$ For a project with an ROI of 200%, an investment of \$1 in the project will yield a \$2 net return – the original \$1 investment and a \$2 incremental return in either cost savings or net profits from incremental revenue. To measure the overall ROI of IT, the traditional ROI formula is used to compare how overall company benefits from IT investments relative to the costs of IT. $ROIT™ = \text{Net Benefits of IT to the Corporation} / \text{Total IT Investment relative to the costs of IT}$. The benefits are measured using an overall corporate performance metric against which many executives and business units are measured against - the Stern Stewart EVA® metric – an overall measure of a company's sustainable profitability. Although IT is not wholly responsible for positive and competitive EVA results, it is an important and vital contributor and EVA is the overall net benefit or result of corporate investments and spending, including IT. As such, it is a good measure of the end result of IT spending, albeit not a direct causal benefit in all instances. The costs in the ROI of IT formula can be measured as the total IT spending including formal IT spending, that allocated and controlled by the CIO and IT group, business unit IT spending, the IT budget controlled by business units and leaders, and shadow IT spending, the hidden expenditures of business units and users, to get a complete picture of the total IT investments. The formula for ROIT™ is represented as: $ROIT = EVA / IT \text{ Spending}$ Where: $EVA = \text{Net Profit} - \text{Cost of Capital} * \text{Shareholder Equity}$ $\text{Shareholder Equity} = \text{Assets} - \text{Liabilities}$ Cost of Capital is calculated using the weighted average cost of capital (WACC) formula. Therefore, a company with sustainable profitability and frugal IT investments will have a higher ROIT™ than companies with lower profitability and higher IT investments (i.e. will have a lower ROIT™). Increase the IT investment and their needs to be an impact on EVA in order to generate a measurable ROIT improvement. Conversely, reduce spending without a negative impact on business profitability and ROIT will improve as well.

S

- Salary Increases:** Salary increases are used to factor the impact of future increases in labor costs. The salary increases are applied to future years subsequent to year one for an analysis on a compound basis.
- Sales and Marketing Expenses:** An income statement operating expense that reflects the costs of selling and marketing the products, typically including sales and marketing labor, expenses and advertising.
- Sales General and Administrative (SG&A) Expenses:** An income statement operating expense which combines sales, marketing, general and administrative expenses. Formal Definition: SG&A refers to the indirect overhead costs contained within the Sales, General and Administrative expense / cost categories.
- Sales to Assets Ratio:** The sales to assets ratio is calculated as sales revenue / assets. This is a good efficiency measure when comparing companies to see who is generating more sales revenue from fewer or superior asset utilization, or who will need higher asset investments to grow.
- Sales to Inventory Ratio:** The sales to inventory ratio are calculated as sales revenue divided by inventory. This ratio indicates the level of inventory needed to generate a particular level of sales.
- Salvage Value:** The residual value of an asset at the end of its useful life usually assessed at a small fraction of the original purchase price for IT assets (see Residual Value/Options for assessing IT investments that have additional value at the end of the analysis period).
- Sensitivity Analysis:** Process by which the crucial elements of a business case are analyzed to determine how changes to these elements due to risk and uncertainties in forecasting, will affect the results. Using the Realized Benefits and Schedules, which can be set for each project overall or at the benefit level, various what-if scenarios and benefit realization and schedule / adoption curves can be modeled.
- SG&A per COGS:** The SG&A per COGS ratio illustrates the comparison of Sales, General and Administrative (SG&A) spending as a percentage of total COGS.
- SG&A per Net Assets:** The SG&A per Net Assets ratio illustrates the Sales, General and Administrative (SG&A) spending as a percentage of Net Assets.
- SG&A per Revenue:** The SG&A per Revenue ratio illustrates the Sales, General and Administrative (SG&A) spending as a percentage of total company revenue. This measure shows the efficiency of revenue generation to overhead expenses. A lower percentage represents a company that can generate more revenue with lower overhead costs.
- Shadow (Indirect) IT Spending:** Unofficial and often hidden expenses by users on IT. These expenses include hidden purchases of computing equipment, peripherals, software and media on expense reports, time spent helping peers train or solve issues, programming and customization of applications, and self-learning. Although difficult to precisely measure, estimates place most organizations as having 3-8% of Total IT Spending as indirect.
- Shareholders' Equity:** A balance sheet metric that records the investment capital received from investors in exchange for stock (paid-in capital), donated capital,

and retained earnings. This is equal to: Shareholder Equity = Assets minus Liabilities. Stockholders' equity is often referred to as the book value of the company. Formal Definition: Shareholders' equity is total assets minus total liabilities. It is the same as EQUITY, NET WORTH and stockholder's equity.

SIC Codes: A standard series of 4-digit codes that are used to categorize business activities into standard industry classifications.

Stakeholder: Any person whose actions affect the business, or whose actions are effected by the business. Principle stakeholders in IT include the IT staff, business unit managers, employees, executives, directors, customers, shareholders/investors and supply chain.

Straight-Line Depreciation Method: Straight-line (SL) depreciation method allows an equal amount to be charged as depreciation for each year of the expected use of the asset. It is computed by dividing the adjusted basis of a property by the estimated number of years of remaining useful life.

Strategic Plan: A plan outlining the overall direction for the business and organization, establishing the mission, vision, goals, measures and strategies for important initiatives.

Sum-of-the-Years Digits (SYD): SYD is the accelerated depreciation method in which a constant balance (cost minus salvage value) is multiplied by a declining depreciation rate.

Sunk Costs: Investments made in a project or assets in prior periods, and which are not being considered as part of the current analysis.

T

Tangible Benefits: Tangible Benefits are benefits which can be quantified reliably into absolute monetary terms. The benefits typically include productivity improvements, purchase avoidance, or revenue improvements.

Top Benefits: The highest ranking benefits across a set of projects, measured on a realized cumulative basis over the analysis period.

Total Assets: A purchased item that maintains an existing economic value to the corporation. The Total Assets are represented as a balance sheet item showing what a firm owns. Assets are purchased to increase the value of a firm or to benefit the firms operations. Some examples are cash, accounts receivable, inventory, real estate, and securities.

Total Cost of Ownership (TCO): Quantifies the total cost of an asset throughout its useful life (life cycle costs), including acquisition costs, labor, hidden cost and availability.

Total IT Spending: Total IT Spending reflects the sum of the Formal IT Spending, Business Unit IT Spending on IT, including budgeted labor, training, and purchases, as well as Indirect IT Spending, unofficial and often hidden spending on IT by users including un-official purchases of items such as handheld computers, peripherals and media, as well as time spent on peer support and learning (Shadow IT Spending).

Total Liabilities: A balance sheet item used to specify the company's legal debts and obligations. Typically, liabilities are estimated via accrual accounting. Liabilities include: loans, accounts payable, mortgages, deferred revenues and accrued expenses. For example, the unpaid value of a mortgage or outstanding money owed to suppliers would be considered a liability.

V

Value: Value is most often measured as a performance ratio, in general comparing the Output generated, versus the Input it took to generate the Output. Value can be calculated as: $\text{Value} = \text{Output} / \text{Input}$ For IT, because it is a productivity tool, macroeconomic value is best captured by trying to determine how productive the organization is using Information Productivity®, the ratio of EVA, the true economic output of a company, compared to the input, Information Management expenses, referred to as SG&A on the income statement (see Information Productivity for more information).

Vertical Financial Analysis: Vertical Financial Analysis allows comparison of the financial ratios of a company in time - past, present and future.

W

Weighted Cost Of Capital (WACC): The Weighted Average Cost of Capital represents an organization's cost to fund new projects based on the return it must provide lenders and shareholders in order to raise funds. The cost of capital is determined on a weighted average based on the organization's mix between debt and equity and the respective interest expense (debt) or shareholder returns (equity) requirements. $(\text{WACC}) = ((\text{Equity} / (\text{Debt} + \text{Equity})) * \text{Cost of Equity}) + ((\text{Debt} / (\text{Debt} + \text{Equity})) * \text{Cost of Debt})$ where the Cost of Equity = Risk free rate + (Stock's Beta x Market Risk Premium). The risk free rate is based on the 10-year treasury yield index provided by Reuters (WCB:TNX quote data). The company Beta is provided by Reuters and represents the week-to-week percent price change to the relevant index's week-to-week percent price change for a given period. The Market Risk Premium represents the reward for investors for taking the risk of putting their money in stocks generally. Market risk premium is determined for the economy as a whole, and for the US economy is around 7%. This represents the margin by which the market as a whole has surpassed the performance of risk-free securities over a long period of time. This does not take into account the short term peaks and troughs of the markets, but considers a more secular trend spanning many decades. The underlying assumption is that (over a long period) investors would have driven the prices of shares up or down so as to equate the yield from shares to be equal to the return below which they would not have invested in the market. Over 1926-1996, the arithmetic average of this value is about 7% in the US market. (This number is updated every year in the handbook 'Stocks, Bonds, Bills and Inflation' published by Ibbotson Associates).

Workforce IT Spending: The Workforce IT Spending compares the IT spending estimates per employee and per information worker. Higher spending per employee or information worker without subsequent performance/productivity gains today or in the future highlights inefficient spending.

Working Capital Productivity: The working capital productivity ratio compares sales revenue to working capital, calculated as sales divided by working capital, where working capital is defined as accounts receivable + inventory - accounts payable. This measures the needed cash to generate a specific level of sales. This is a good efficiency measure when comparing companies to see who is generating more sales revenue from lower working capital requirements, or who needs more working capital to generate more revenue.

Y

Year 1 through 5: The annual analysis periods, measured in cumulative 12 month periods from project start.