

The background of the slide features a close-up, blue-tinted image of a calculator and a line graph. The calculator is positioned in the upper left, with its keypad showing a plus sign, a minus sign, and an equals sign. Below the calculator, a line graph is plotted on a grid. The y-axis of the graph has numerical labels: 125, 130, 135, 140, and 145. The x-axis is labeled with the month 'June' and a specific value '123.74'. The line graph shows a fluctuating upward trend. In the bottom right corner, there is a table with the following visible text: 'ct. chg.', 'Day', '1.2%', and '1.09'.

Finance Matters!

Planning and Performance lead to Profitability



Why do I need to know this “Finance” stuff?

- You can be more effective in assessing which clients or projects to pursue
- Some owners are requiring it during the RFP or shortlist process
- Understanding of basic principals can help you climb the success ladder to the “C-suite”



Basic Terminology

- **Accrual Basis Accounting (A/E)**
 - most commonly used accounting method
- **Cash Basis Accounting (A/E)**
- **Percentage-of-Completion (C)**
- **Completed Contract (C)**
 - should only be used when estimates cannot meet the “reasonably dependable” criteria



Basic Terminology

- **Direct Job Costs**
- **Indirect Job Costs (C)**
- **G&A (Overhead) Costs**
- **Reimbursable Costs**



Basic Terminology

- **Income (Profit & Loss) Statement**

- A summary of a company's profit or loss

- Net income (bottom line) - This figure is arrived at by subtracting total operating expenses from total income

Sample Income Statement

Income Statement

ABC Engineering Co.

As of Period 12/31/2013

	Current	Year-to-Date	Budgeted YTD
Revenue			
4010 Professional Services Revenue	\$ 150,000.00	\$ 2,000,000.00	\$ 2,400,000.00
4011 Reimbursable Revenue	\$ 500.00	\$ 15,000.00	\$ 10,000.00
4012 Subconsultant Revenue	\$ 2,000.00	\$ 25,000.00	\$ 32,000.00
4020 Unbilled Revenue	\$ 45,000.00	\$ 250,000.00	\$ 100,000.00
4110 Interest & Other Inc	\$ -	\$ 5,000.00	\$ 4,500.00
Total Revenue	\$ 197,500.00	\$ 2,295,000.00	\$ 2,546,500.00
Reimbursables			
5110 Architectural Consultant	\$ -	\$ 35,000.00	
5112 Estimating Consultant	\$ -	\$ 6,500.00	
5116 Other Consultant	\$ 5,000.00	\$ 6,000.00	
5210 Travel & Lodging	\$ 700.00	\$ 7,500.00	
5215 Meals & Entertainment	\$ -	\$ 500.00	
5220 Reproduction	\$ 50.00	\$ 2,000.00	
5230 Publications	\$ -	\$ 50.00	
5290 Equipment Rental	\$ -	\$ 400.00	
Total Reimbursables	\$ 5,750.00	\$ 57,950.00	
Total Net Revenue	\$ 191,750.00	\$ 2,237,050.00	
Directs			
6010 Direct Salaries	\$ 65,000.00	\$ 900,000.00	\$ 850,000.00
6110 Architectural Consultant	\$ -	\$ -	\$ -
6116 Other Consultant	\$ -	\$ -	\$ 3,000.00
6210 Travel & Lodging	\$ 300.00	\$ 4,000.00	\$ 2,000.00



Basic Terminology

➤ **Balance Sheet**

- A snapshot of a business' financial condition at a specific moment in time.
- Assets typically presented in liquidity order
 - How quickly assets can be converted to cash
 - Current Assets/Liabilities refer to “within 12 months.”

Sample Balance Sheet

Balance Sheet

ABC Engineering Co.

As of Period 12/31/2013

		Balance	
Assets			
1010	Checking Account	\$	25,000.00
1020	Savings Account	\$	160,000.00
1030	Petty Cash	\$	150.00
1110	Accounts Receivable	\$	650,000.00
1210	Unbilled Prof. Services	\$	150,000.00
1510	Furniture & Fixtures	\$	85,000.00
1515	Equipment	\$	125,000.00
1520	Leasehold Improvements	\$	30,000.00
1530	Accum. Depr. - Furn.&Fixt.	\$	(65,000.00)
1535	Accum. Depr. - Equipment	\$	(100,000.00)
1540	Accum. Depr. - Leasehold Impr.	\$	(15,000.00)
Total Assets		\$	1,045,150.00
Liabilities			
2110	Accounts Payable	\$	15,000.00
2310	Salaries Payable		
2410	Loan on Receivables	\$	50,000.00
2414	Furniture / Equipment Loan	\$	15,000.00
2415	Software Loan	\$	50,000.00
Total Liabilities		\$	130,000.00
Net Worth			
3010	Common Stock	\$	600.00
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Understanding ROI

Return on Investment (ROI)

- Difficult to measure in AEC industry
- Every firm could calculate differently

Return on Investment (ROI)

- Overall Analysis
 - Gives you an overall look at your marketing effort
 - Helps evaluate whether you are spending money in the right place
 - Helps you consider whether you are transitioning from marketing to sales and achieving results.

ROI Example

2016 Revenues	\$5,000,000
2017 Revenues	\$5,800,000
Increase	\$800,000
Avg. profit margin	20%
Net margin increase	\$160,000 $(800,000 \times 20\%)$
Marketing expenses	\$100,000
Net margin less expenses	\$60,000 $(160,000 - 100,000)$
ROI	60% $(60,000 \div 100,000)$

Return on Investment (ROI)

- This method may not be very effective
 - Good for general look at ROI
 - What revenue could you have achieved without the marketing effort?

Return on Investment (ROI)

- What if you didn't measure by revenue?
- Think about measuring by Hit Rate
 - Leads to wins
 - Proposals to wins
 - RFP's to shortlist
 - Shortlists to wins

Return on Investment (ROI)

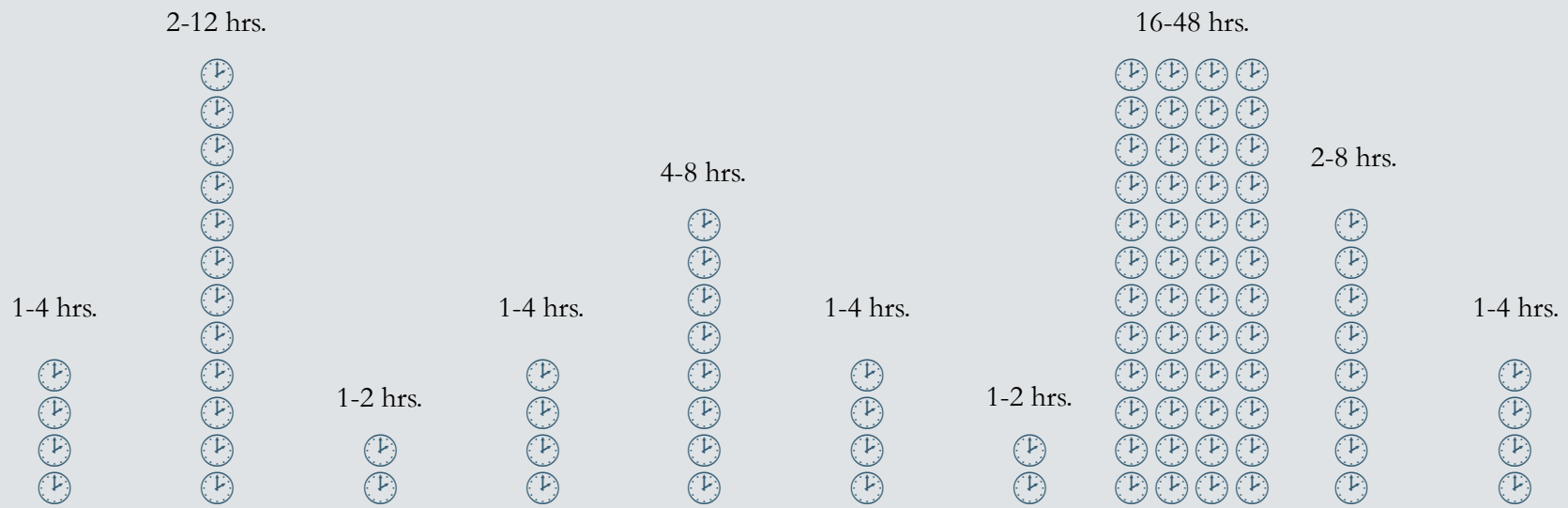
- Analyze your clients
 - Cost of pursuit
 - Client profitability

Example Proposal Cost

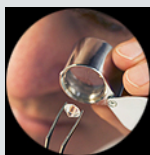
What does it really cost to respond to an RFP?



30 - 96 hours



Acquire



Analyze



Go/No Go



Strategy



Partners



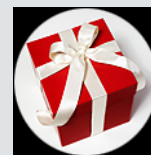
Staffing



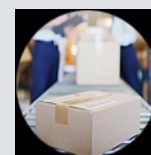
References



Production



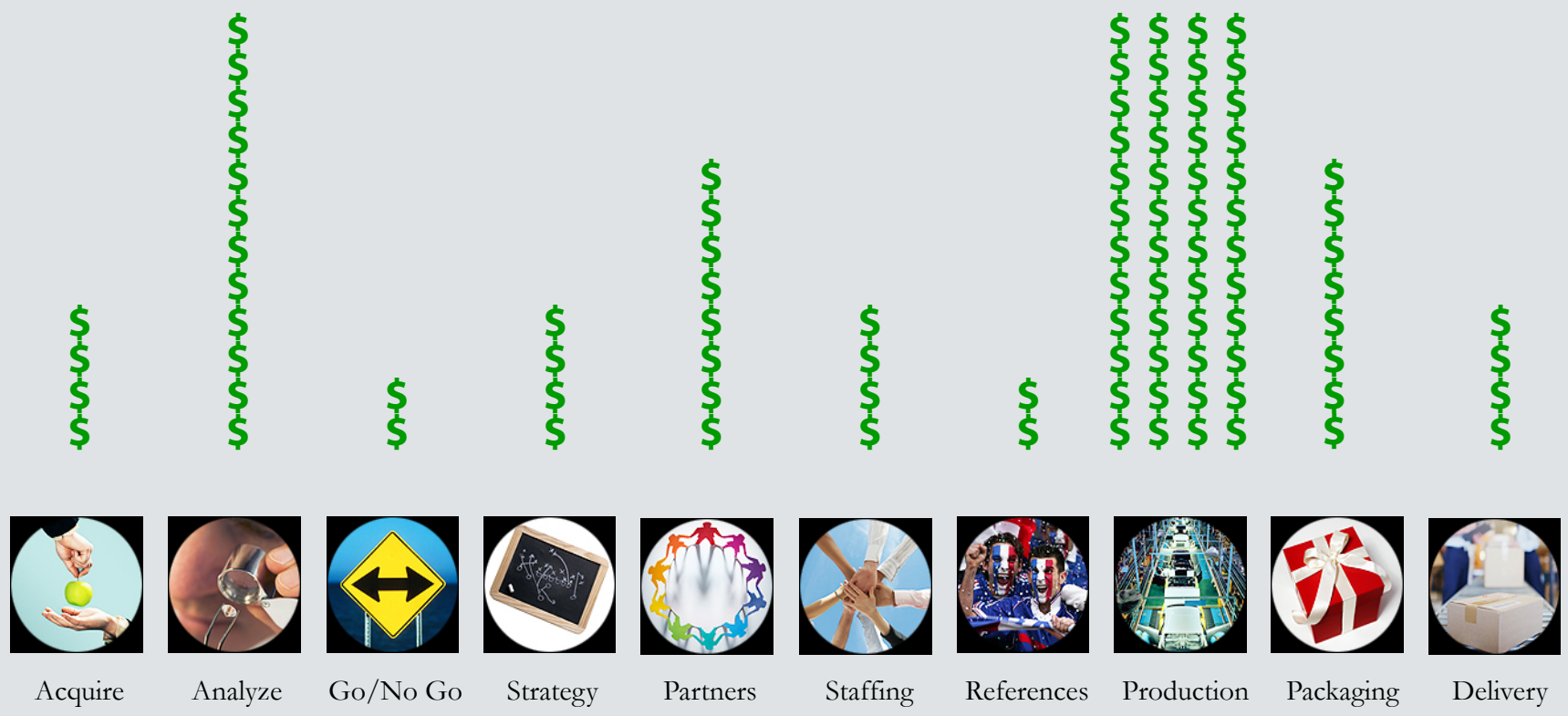
Packaging



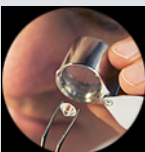
Delivery



\$2,500 - \$7,500



Acquire



Analyze



Go/No Go



Strategy



Partners



Staffing



References



Production



Packaging



Delivery



Important formulas

Contracts

Overhead Rate

- Total overhead costs, including indirect salaries, divided by total direct labor.
- Average of 1.54 (154%) in 2016 per Deltek Clarity Architecture & Engineering Industry Study.

Overhead Rate

Example:

What is the overhead rate for firm ABC Engineering Co.?

Direct labor: \$900,000

Total overhead costs: \$1,285,945

$$\frac{\$1,285,945}{\text{Overhead Costs}} \div \frac{\$900,000}{\text{Direct Labor}} = \frac{1.43 \text{ (or 143\%)}}{\text{Overhead Rate}}$$

Bill-out Rate

- Used for invoicing clients for time spent on projects. Bill-out rate is based on:
 - Salary
 - Companies overhead
 - and the profit the company plans to make.

$$\text{Salary} + (\text{Salary} \times \text{combined overhead}) + (\text{Total} \times \text{Profit}) = \text{Bill-out Rate}$$

Bill-out Rate

Example:

Calculate the bill-out rate for a project manager with an annual salary of \$85,000. The company's combined overhead rate is 150%, and their desired profit is 20%.

_____ + _____ + _____ = _____

Hint: There are 2080 work hours per year.

Salary + (Salary x combined overhead) + (Total x Profit) = Bill-out rate

Bill-out Rate

Example:

Calculate the bill-out rate for a project manager with an annual salary of \$85,000. The company's combined overhead rate is 150%, and their desired profit is 20%.

$$\underline{\$40.87^*} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

**Annual salary of \$85,000 ÷ 2080 hrs in a year = \$40.87 base rate.*

Bill-out Rate

Example:

Calculate the bill-out rate for a project manager with an annual salary of \$85,000. The company's combined overhead rate is 150%, and their desired profit is 20%.

$$\underline{\$40.87} + \underline{\$61.31^*} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$*\$40.87 \times 150\% = \$61.31$$

Bill-out Rate

Example:

Calculate the bill-out rate for a project manager with an annual salary of \$85,000. The company's combined overhead rate is 150%, and their desired profit is 20%.

$$\underline{\$40.87} + \underline{\$61.31} + \underline{\$20.44^*} = \underline{\hspace{2cm}}$$

$$*(\$40.87 + \$61.31) \times 20\% = \$20.44$$

Bill-out Rate

Example:

Calculate the bill-out rate for a project manager with an annual salary of \$85,000. The company's combined overhead rate is 150%, and their desired profit is 20%.

$$\underline{\$40.87} + \underline{\$61.31} + \underline{\$20.44} = \underline{\$122.62}$$

The bill-out rate (rounded to the nearest dollar) would be

\$123

Charge (Target) Multiplier

- The employer's bill-out rate divided by its payroll rate.
- Typical range of 3.0 to 3.5 in the AEC industry

Charge (Target) Multiplier

Example:

What is the charge multiplier for a Principal that is billed at \$175 per hour and has an annual salary of \$115,000?

$$\frac{\$175}{\text{Bill-Out Rate}} \div \frac{\$55.29^*}{\text{Payroll Rate}} = \frac{3.17}{\text{Charge Multiplier}}$$

**Annual salary of \$115,000 ÷ 2080 hrs in a year = \$55.29 base hourly rate.*

Net Labor Multiplier

- Net revenues (generated by in-house labor only, without reimbursable expenses) divided by total direct labor (without benefits).
- Key measure of efficiency, actual results.
- Average of 3.02 in 2016 per Deltek Clarity Architecture & Engineering Industry Study

Net Labor Multiplier

Example:

What is the net multiplier for firm ABC Engineering Co.?

Direct labor: \$900,000

Net Revenues: \$2,442,050

$$\frac{\$2,442,050}{\text{Net Revenues}} \div \frac{\$900,000}{\text{Direct Labor}} = \frac{2.71}{\text{Net Multiplier}}$$

Net Profit Ratio

- Net profit (income minus expenses) divided by net revenues.

Example: ABC's net profit (after taxes) is \$250,405 and its net revenues are \$2,442,050; the net profit ratio is 0.10 (or 10%).

Note: Pass-through items such as consultants, reimbursable expenses, bonuses, and other discretionary items may or may not be included.



Different Forms of Contracts

- Oral Contract
 - Formed when parties exchange verbal promises
- Written Contract
 - Letter of intent
 - Letter of agreement
 - Standard form (AIA, CASE)
 - Customized form

Typical Contract Provisions

- Scope of Work
- Responsibilities of Design Professional
- Responsibilities of the Owner (other party)
- Construction Cost
- Ownership & use of documents

Typical Contract Provisions

- Alternate dispute resolution (other than litigation)
- Waiver of consequential damages
- Limitation of liability
- Termination of services

Important Contract Provisions that Marketing / BD can review

- Scope of Work
 - Critical to be specific
 - Ask the client questions
- Alternate dispute resolution (other than litigation)
- Limitation of liability

Other Contract Items?

6.1 PAYMENT OF COMPENSATION

In exchange for client's early payment to Architect-Engineer, if client pays Architect-Engineer no later than fifteen (15) days after the date of the invoice Architect-Engineer will accept as full payment for the amount due that period, **a three and one-half percent (3.5%) discount** on the amount invoiced or, if client pays after fifteen (15) days but within one hundred fifteen (115) days of the date of the invoice, a prorated daily rate for each day the payment is accelerated.



PROFITABILITY

Ways to help the firm be profitable

Define your firm

Don't become a commodity

Improve fee strategy

Define your firm

- Don't pursue clients that don't match your services
- Helps establish client expectations

Don't become a commodity

- Familiar pricing strategy?
 - No project too small
 - We can work anywhere
 - Do it for what the client wants to pay
 - Let them pay when they want to pay

Improve fee strategy

- Don't use past fee proposals (w/o some analysis)
- Calculate overhead rates yearly

Improve fee strategy

- Don't estimate what the client wants to spend
 - Reduce the scope before reducing the fee
- Don't take the SWAG approach



“Tell me and I forget. Teach me and I remember. Involve me, and I learn.”

- Ben Franklin

Contact

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