Grain Operations Webinar Series
Webinar 2
Budgeting and Capital Project Management for Grain Operations Supervisors
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Objectives

- Define budgeting and the rationale for doing it
  - What is included in a budget
  - How to create a budget
  - How to use a budget
- Introduction to Capital Project Management
  - Picking the right project
  - Project management techniques
- Relationship between budgeting and project management
Budgeting
Budgeting – An Analytical tool

- Goal attainment
- Performance trends
- Variance analysis
Planning for Success

A Budget is:
- The part of the planning process that estimates an organization’s outgoing expenses and incoming revenues.
- A budget is for a specified time period.
- A plan to manage assets and capital.
- A method of establishing targets and goals.
- A means of measuring goal attainment.
- An ongoing process not a static exercise.
- A tool for sustainability, improvement, and growth.
Benefits of Budgeting

1. Track and control spending.
2. Ensure funding of operations (cash flow).
3. Support funding request.
4. Provide a tool for comparative analysis.
5. Identify key performance indicators.
7. Provides a blueprint for sustainable growth.
Budgeting’s Relationship to Planning

Planning outlines “what is possible”.

Budgeting describes “what is expected”.
Where to Start

- Have a Vision
- SWOT analysis
- Goals and objectives
- Business plan
- Key Performance Indicators
- Source data
- Forecasting and planning
- Estimates
Vision

- Defines the optimal desired future state of the business or what the organization wants to achieve over time.

- Looks out 5, 10, 15 or more years in the future.
S.W.O.T. Analysis

- Strengths
- Weaknesses
- Opportunities
- Threats

Defines where you are starting from
Goal

- The result or achievement toward which effort is directed
- Provides detail to a vision
- Target, a means to an end
- Short and long term time frames
- SMART – specific, measurable, attainable, realistic, and timely
Business Plan

- A business plan is a written description of a business’s strategy going forward.
- A map to take you from where you are to where you want to be.
- Communicates the plan to employees.
- Provides direction to decision making and action taking.
- Requires periodic updating.
Key Performance Indicators

- A KPI is a performance indicator used to measure goal attainment.
- KPI’s should reflect the performance of critical actions or activities.
- Quantitative or qualitative
- Measure inputs, outputs, or processes
- Leading indicators - predict outcomes
- Lagging indicators - report outcomes
Source Information

- **Income sources**
  - Volume
  - Storage
  - Drying
  - Blending

- **Operating Expenses**
  - Labor
  - Energy
  - Maintenance

- **Transportation Expenses**
Source Information

- Quality reports
- Inventory reports
- Operating reports
  - Loading/unloading
  - Drying
  - Aeration
- Customer Service
  - Reliability
  - Speed
  - Complaints
- Depreciation schedules
- Regulatory standards
Forecasting vs. Planning

- Forecasting using historical data and trends to predict future events
- Planning is a process that sets specific actions to support the business plan and achieve the desired goals or objectives.
Estimates vs. Assumptions

• Estimate – an approximate judgment or calculation on the value of something. Usually based on some input data or prior knowledge or experience.

• Assumption – a thing that is accepted as true or certain to happen, without proof.
Project Budgeting

- Provides same functionality as an annual budget
- Scorecard for measuring performance against real time and dollars
- Provides format and data for better project management - structure
- Keeps project on track in time and $’s
- Supports project management tools
- Used to evaluate if project met expectations
Capital Project Management
Factors in Capital Project Management

- Project Selection
- Project Justification
- Meeting the “Triple Constraint”
- Approval Process
- Selecting Personnel
- Work Breakdown
- Selecting Measurable Evaluation Criteria
- Communications
- Developing a Bid Package
- Contracts
Factors in Capital Project Management

- Procurement
- Insurance/bonds/warranties
- Project site management
- Project Review
Criteria in Selecting a Project

- Is the project critical to the vision or goal attainment?
- Does the project align and support the business plan?
- Is the project required to be regulatory compliant?
- Is the project required to keep the company viable?
- Does the project meet the minimum return on investment requirements?
- What is the risk associated with the project?
Aligning Capital Program to Company Vision

- Importance of having a clear vision and plan
- Long term and short term goals and objectives
- Develop indicators to measure success of project
- Capital projects should support the visions and fulfill specific objectives or goals
Selecting a Project

Projects fall into one of two areas:

• Voice of the Customer
  Satisfying the “Needs” of the customer

• Voice of the Business
  Satisfying the “Needs” of the business
Justifying a Project

Voice of the Customer

• Service
• Quality
• Reliability
• Repeatability
• Competitiveness
• Appreciation
Enhanced Triple Constraint
Justifying a Project
Voice of the Business

- Two categories
  - Sustainability
  - Continuous Improvement

- Types of projects
  - Volume or capacity
  - Cost reduction
  - Income enhancing
  - Replacement
  - Regulatory
  - Growth or new business
  - Goodwill
Financial Justification

- Time to pay back usually stated in years
- Return on Invested Capital (ROI) – stated as a percentage
- Cash flow
- Expense or fine avoidance
- Sustainability
## Financial Justification – Simple Years to Pay back

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Cost of Project</td>
<td>$ 500,000</td>
</tr>
<tr>
<td>Additional Expenses annually</td>
<td>$ 25,000</td>
</tr>
<tr>
<td>Reduction of Expense Annually</td>
<td>$ -</td>
</tr>
<tr>
<td>Additional income annually</td>
<td>$ 90,000</td>
</tr>
<tr>
<td>Annual income less annual expenses nets</td>
<td>$65,000</td>
</tr>
</tbody>
</table>

Total project cost divided by annual net = 7.69 year to pay back

This simple calculation does not take into account the additional interest cost on the borrowed money or possible increase in required working capital for larger inventories.
Financial Justification – Simple ROI

Simple ROI Calculation
Divide the annual net income by the cost of the project
$65,000 / 500,000 = 13% return on invested capital

Again this does not consider interest cost
Approval Process

- Requestor
- Developer
- Supervisor
- Engineering
- Accounting
- Finance
- Regulatory
- Human Resources
- Management
- Board
Request for Expenditure

<table>
<thead>
<tr>
<th>Request for Expenditure</th>
<th>Date Submitted __________</th>
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<tbody>
<tr>
<td>Name of Project</td>
<td>Submitted by____________</td>
</tr>
<tr>
<td>Reason for Project</td>
<td></td>
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<tr>
<td></td>
<td>Income Enhancement</td>
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<tr>
<td></td>
<td>Safety</td>
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<tr>
<td></td>
<td>Other Regulatory</td>
</tr>
<tr>
<td></td>
<td>Customer Service</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
<tr>
<td></td>
<td>Cost Reduction</td>
</tr>
<tr>
<td></td>
<td>Environmental</td>
</tr>
<tr>
<td></td>
<td>Sustainability</td>
</tr>
<tr>
<td></td>
<td>Quality</td>
</tr>
</tbody>
</table>

General Description of project__________________________________________________________

Describe Benefits of project________________________________________________________________

Cost of Project _______________ Net impact on annual income__________

Years to pay back _______________ ROI ___________________________

Estimated Completion Date___________________________________________________________

Potential Risk__________________________________________________________________________

Approval #1________________________ Date ________________

Approval #2________________________

Approval #3________________________
Selecting Personnel

• Project Manager
• Project Team
• Support Team
• Audit Team
Work Breakdown

• What is to be done
  o Defined in detail
  o Stay within project scope
• When is it to be done by
  o Again be specific
  o Are other steps contingent on its completion
• How is it to be done
  o Be specific
  o Who controls
• Who is it to be done by
  o Be specific, skills required
Measurable Evaluation Criteria

- Develop indicators that will allow you to review and manage the progress being made in the work breakdown section
- Measurable
- Reliable
- Agreed upon up front
Communications

- Intercompany
  - Management, project team, support team, end users

- External
  - Governmental agencies
  - Suppliers and vendors
  - Engineering
  - Contractors
  - Utilities
  - State, county, and local officials
  - First responders and police
  - Neighbors', civic leaders
  - Press
Developing a Bid Package

- Clear objectives and scope
- Financial limits clearly defined
- Time frame clearly defined
- Quality issues clearly defined
Developing a Bid Package

- Site location – property map or Google Earth map
- Location and description of existing structures
- Geotechnical, topographical, or hydraulic info
- Storage Capacity – total volume and # of bins
- Method of receiving – truck, rail, barge, etc.
- Method of shipping
- Processing needs – cleaning, drying, aeration, fumigation, sizing, etc.
- Future Expansion needed
- Equipment preferences
- Safety Policies
Selecting a Contractor

- Reputation
- Quality
- Cost competitive
- Stand behind work
- Resources and knowledge to do the work
- Licensed
- Availability of resources to do the work
  - Time
  - People
  - Equipment
Selecting a Contractor

- Your past experience
- Friends, Associates or colleagues recommendations
- Trade Publications
- Equipment Suppliers
- Competitors – yes competitors
- Engineering firms
- Financial and civil court records
- Insurable
Contracts

- Fixed Bid
- Time and Materials
- Time and Materials - not to exceed
- Cost Plus
Contracts

• Must have a clearly defined scope
  o What is to be done
  o How it is to be done - design, materials, method
  o Who is going to do it - subcontracting language
  o When is it going to be done
  o How much is it going to cost
Contracts

- Contract to be detailed enough to convey the scope (no room for "interpretation")
- May include other provisions such as safety rules, equipment usage, utilities etc.
- Warranties, guarantees, escape clause
- Penalties
- Insurance provisions
Procurement

- Design / Build
- Customer furnish some materials and equipment
- New vs. used equipment
- Allow for profit margin for contractor
  - Spread across equipment and labor vs just labor
Insurance/Bonds/Warranties

- **Insurance (liability)**
  - Protects you
  - Protects contractor
  - Protects third parties

- **Bonds (performance)**
  - Provides financial protection on project

- **Warranties and guarantees (quality)**
  - Provides quality protection
Project Site Management

- Project manager on site for customer
- Project manager on site for contractor
- Safety rules
- Time site is available for work
- Hours contractor will be working
- List of subcontractors and hired services (cranes)
- Lay-down yard, staging areas
Project Site Management

- Tools and equipment usage
- Utility access
- Meals and other personnel issues
- Emergency contacts
- Hour slips
- Scope changes **SCOPE CREEP!!!!!!**
- Quality inspections
- Problem solving process
Project Review

- Compare the finished product to the planned product
- Was work done to contractual scopes defined?
- Did the physical project turn out as expected?
- Did the justifications prove to be valid?
  - Cost reductions or savings
  - Income generation
  - Customer service
  - Regulatory issues addressed
- Were all financial goals obtained?
- Was the project done accident-free?
- Does the project need to be modified?
Summary

- Budgets describe “what is expected” and provides measurement to evaluate “what has been done”
- Budgets are only as good as the data and thoughts that go into them
- Avoid assumptions in budgeting
- Importance of project selection
- Clear vision of what the project is and what results it will provide (part of business plan)
- A detailed written contract clearly defining all aspects of the project scope
- Good communications must exist between all parties
Summary

• Methodology for mediating problems should be established up front
• Take the time to do your homework
• Select the best contractor for “YOUR JOB”
• Protect yourself
• Budgets provide a format and data for better project management
• Budgets keep projects on track in time and $’s
• Review the project
Disclaimer

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