

INTEGRATED PROJECT

Building Your Project Plan

EXERCISE 1—DEVELOPING THE PROJECT NARRATIVE AND GOALS

You have been assigned to a project team to develop a new product or service for your organization. Your challenge is to first decide on the type of product or service you wish to develop. The project choices can be flexible, consisting of options as diverse as construction, new product development, IT implementation, and so forth.

Develop a project scope write-up on the project you have selected. Your team is expected to create a project history, complete with an overview of the project, an identifiable goal or goals (including project targets), the general project management approach to be undertaken, and significant project constraints or potential limiting effects. Additionally, if appropriate, identify any basic resource requirements (i.e., personnel or specialized equipment) needed to complete the project. What is most important at this stage is creating a history or narrative of the project you have come up with, including a specific statement of purpose or intent (i.e., why the project is being developed, what it is, what niche or opportunity it is aimed to address).

The write-up should fully explain your project concept, constraints, and expectations. It is not necessary to go into minute detail regarding the various subactivities or subcomponents of the project; it is more important to concentrate on the bigger picture for now.

SAMPLE BACKGROUND ANALYSIS AND PROJECT NARRATIVE FOR ABCUPS, INC.

Founded in 1990, ABCups, Inc. owns and operates 10 injection-molding machines that produce plastic drinkware. ABCups's product line consists of travel mugs, thermal mugs, steins, and sports tumblers. The travel mugs, thermal mugs, and steins come in two sizes: 14 and 22 ounces. The sports tumblers are offered only in the 32-ounce size. All products except the steins have lids. The travel and thermal mugs consist of a liner, body, and lid. The steins and sports tumblers have no lining. There are 15 colors offered, and any combination of colors can be used. ~~The travel and thermal mugs have a liner that needs to be welded to the outer body; subcontractors~~ and screen printers weld the parts together. ABCups does no welding, but it attaches the lid to the mug. ABCups's customer base consists primarily of distributors and promotional organizations. Annual sales growth has remained steady, averaging 2–3% each year. Last year's revenues from sales were \$70 million.

CURRENT PROCESS

ABCups, Inc.'s current method for producing its product is as follows:

1. Quote job.
2. Receive/process order.
3. Schedule order into production.
4. Mold parts.
5. Issue purchase order to screen printer with product specifications.
6. Ship parts to screen printer for welding and artwork.
7. Receive returned product from screen printer for final assembly and quality control.
8. Ship product to customer.

At current processing levels, the entire process can take from two to four weeks, depending upon order size, complexity, and the nature of current production activity.

OVERVIEW OF THE PROJECT

Due to numerous complaints and quality rejects from customers, ABCups has determined to proactively resolve outstanding quality issues. The firm has determined that by bringing welding and screen printing functions "in-house," they will be able to address the current quality problems, expand their market, maintain better control

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over delivery and order output, and be more responsive to customers. The project consists of adding three new processes (welding, screen printing, and improved quality control) to company operations. ABCups has no experience or equipment regarding welding or screen printing. The organization needs to educate itself, investigate leasing or purchasing space and equipment, hire trained workers, and create a transition from subcontractors to in-house operators. The project needs to have a specified date of completion so that the transition from outsourcing to company production is smooth and products can be delivered to customers with as little disruption to shipping as possible.

Management's strategy is to vertically integrate the organization to reduce costs, increase market share, and improve product quality. ABCups is currently experiencing problems with its vendor base, ranging from poor quality to ineffectual scheduling, causing ABCups to miss almost 20% of its customers' desired ship dates. Maintaining complete control over the product's development cycle should improve the quality and on-time delivery of ABCups's product line.

Objectives

Goals	Targets
1. Meet all project deadlines without jeopardizing customer satisfaction within a one-year project time frame.	Excellent = 0 missed deadlines Good = 1–5 missed deadlines Acceptable = < 8 missed deadlines
2. Deplete dependence on subcontracted screen printing by 100% within six months without increasing customer's price or decreasing product quality.	Excellent = 100% independence Good = 80–99% independence Acceptable = 60–79% independence
3. Perform all process changes without affecting current customer delivery schedules for the one-year project time frame.	Excellent = 0% delivery delays Good = < 5% delivery delays Acceptable = 5–10% delivery delays
4. Decrease customer wait time over current wait time within one year without decreasing quality or increasing price.	Excellent = 2/3 decrease in wait time Good = 1/2 decrease in wait time Acceptable = 1/3 decrease in wait time
5. Stay within 10% of capital budget without exceeding 20% within the project baseline schedule.	Excellent = 1% variance Good = 5% variance Acceptable = 10% variance
6. Decrease customer rejections by 25% within one year.	Excellent = 45% reduction Good = 35% reduction Acceptable = 25% reduction

General Approach

1. **Managerial approach**—The equipment will be purchased from outside vendors; however, ABCups's internal employees will perform the assembly work. Due to the type of equipment that is required, outside contractors will not be needed because the company's facility employs the necessary maintenance staff to set up the equipment and troubleshoot as required, after the initial training has been supplied by the vendor.
2. **Technical approach**—The equipment manufacturers will utilize CAD to design the equipment. Initially, the firm will require a bank of parts to be available once the equipment arrives in order to fine-tune the machinery. Fixtures will be designed as required, but will be supplied by the machine manufacturer.

Constraints

1. **Budget constraints**—This project must ultimately increase profitability for the company. In addition, the project will have a constraining budget. It must be shown that any additional expense for both the conversion and producing finished cups on site will result in increased profitability.
2. **Limited plant space**—ABCups is assuming this conversion does not involve building a new plant or significantly increasing facility size. Space for new machinery, new employees, and storage for dyes and inventory must be created through converting existing floor space. If additional floor space is required, leasing or purchasing options will need to be investigated.

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INTEGRATED PROJECT

Developing the Work Breakdown Structure

Develop a Work Breakdown Structure for your project based on the identified goals from the first assignment. Provide a detailed assessment of the various components of the project, going down through the work package stage to tasks and subtasks (if appropriate). Next, assess the personnel needs for the project. How many core team members will be necessary to achieve the project's goals? What are their positions within the organization? Remember to use the project scope as the basis for determining all the elements of the project, the personnel responsible for each component, and the associated budget for each task.

In addition to identifying the tasks and key personnel requirements for the project, construct a Responsibility Assignment Matrix (RAM) that demonstrates the interrelationship among project team members.

SAMPLE WORK BREAKDOWN STRUCTURE—ABCups, INC.

Personnel Table

Name	Department	Title
Carol Johnson	Safety	Safety Engineer
Bob Hoskins	Engineering	Industrial Engineer
Sheila Thomas	Management	Project Manager
Randy Egan	Management	Plant Manager
Stu Hall	Industrial	Maintenance Supervisor
Susan Berg	Accounting	Cost Accountant
Marty Green	Industrial	Shop Supervisor
John Pittman	Quality	Quality Engineer
Sally Reid	Quality	Jr. Quality Engineer
Lanny Adams	Sales	Marketing Manager
Kristin Abele	Purchasing	Purchasing Agent

WORK BREAKDOWN STRUCTURE—ABCups' PROCESS MODIFICATION

Process Modification Project		1000
Deliverable 1	Feasibility Study	1010
Work Package 1	Conduct feasibility study	1011
Work Package 2	Receive technical approval	1012
Work Package 3	Get administrative sign-off	1013
Deliverable 2	Vendor Selection	1020
Work Package 1	Research equipment	1021
Work Package 2	Qualify suppliers	1022
Work Package 3	Solicit quotes from suppliers	1023
Work Package 4	Negotiate price and terms	1024
Work Package 5	Approval and contracts	1025
Deliverable 3	Design	1030
Work Package 1	Factory floor redesign	1031
Work Package 2	Drawings	1032
Work Package 3	Process redesign approval	1033

Deliverable 4	Engineering	1040
Work Package 1	Conduct process flow evaluation	1041
Work Package 2	Determine site for equipment	1042
Work Package 3	Retooling	1043
Work Package 4	Final layout approval	1044
Deliverable 5	Prototype Testing	1050
Work Package 1	Build inventory bank	1051
Work Package 2	Set up trial run	1052
Work Package 3	Trial run	1053
Work Package 4	Quality assessment	1054
Work Package 5	Process documentation	1055
Deliverable 6	Packaging	1060
Work Package 1	Design new packaging	1061
Work Package 2	Coordinate with marketing	1062
Work Package 3	Part assembly	1063
Work Package 4	Packaging approval	1064
Deliverable 7	Sales and Service	1070
Work Package 1	Beta test products	1071
Work Package 2	Sales approval	1072
Work Package 3	Customer approval	1073
Deliverable 8	Initiate Changeover	1080
Work Package 1	Assemble inventory	1081
Work Package 2	Cancel vendor contracts	1082
Work Package 3	Closeout project	1083
Work Package 4	Develop lessons learned	1084

Responsibility Assignment Matrix

	Sheila	Susan	Bob	Lanny
WP 1010	○	□		☆
WP 1020	☆	○		□
WP 1030	☆		□	○
WP 1040	⊕	□	○	☆
WP 1050		○	☆	□
WP 1060	□		⊕	○
WP 1070	○	☆	□	
WP 1080	⊕		○	☆

- Responsible ☆ Support
 □ Notification ⊕ Approval

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