



**he  
Operations  
Plan**

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*Chapter 6*

"It is not the employer who pays wages—he only handles the money. It is the product that pays wages."

— Henry Ford  
*Manufacturing entrepreneur and philanthropist*



**overview:** The operations portion of a business plan is concerned with the day-to-day functions of running a business. Focused on administrative and production processes, the operations plan helps social enterprises increase efficiency, improve quantity, and reduce costs. It is the operations plan that an astute manager studies for capacity gaps or bottlenecks that may be costing the enterprise money or for opportunities to respond to customer demand on product or service specifications. The operations, or production, plan is paramount for manufacturing companies that manage a labyrinth of complex processes to fabricate raw materials and move them to the market as products. Service businesses, too, must have a good operations plan to ensure they are effectively managing their highly perishable product—time.

Whether yours is a manufacturing or a service business, this chapter is intended to help you construct an **operations** or **production** plan. It includes situational analyses to help you set sound targets by examining your current operations **process, capacity**, and productivity. You will analyze human resources, equipment, time and space needs, and their costs to formulate the plan. The body of the operations plan is a series of strategies aimed at accomplishing your operations objectives, including plans for improving **productivity, scheduling, information flows, inventory management, quality control, research and development**, and a **budget** for your operating costs.

### Treatment of Operations Planning in This Manual

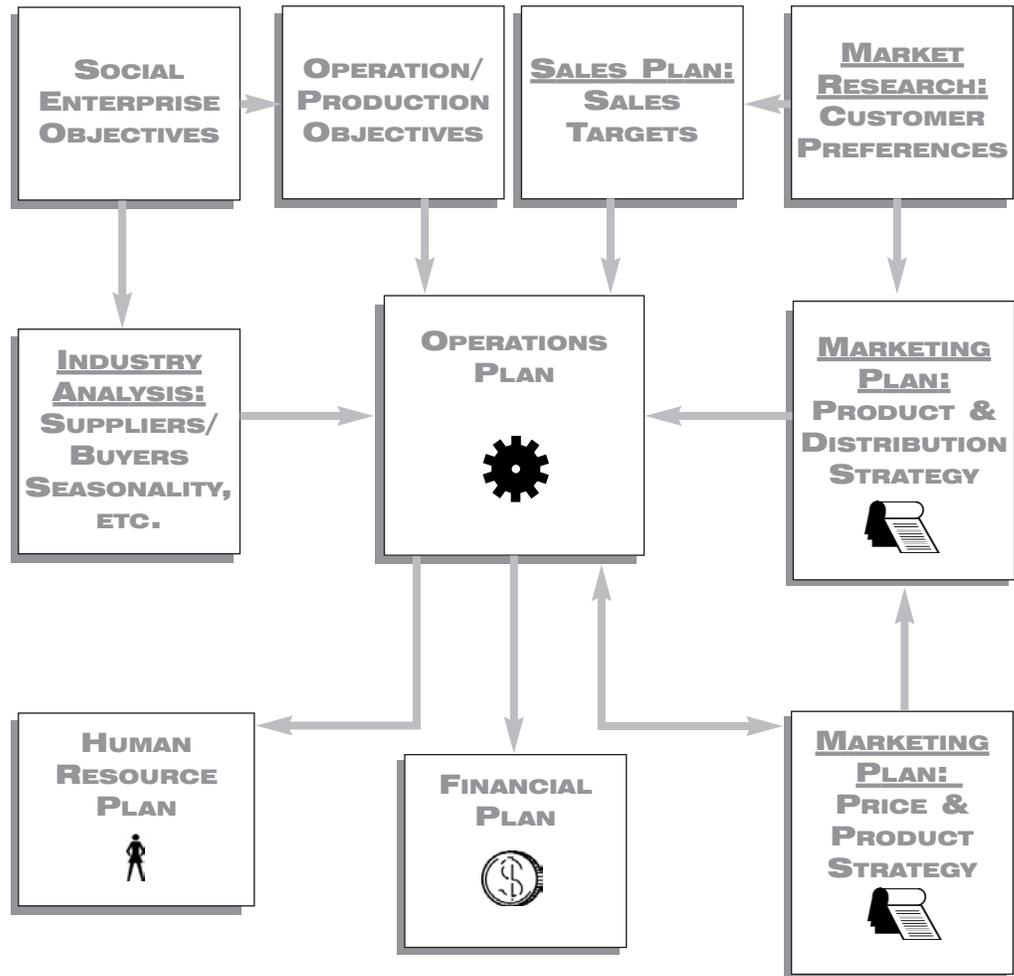
Information needed to formulate an operations plan for manufacturing and service industries converges in some areas and diverges in others. Since "production" (see definition) planning and costing are more detailed and technical for a manufacturing business and include aspects of operations, this chapter is tailored to suit the needs of manufacturers. It assumes that those who run service businesses will be able to adapt or extrapolate tools to develop their operations plan. Note that if your social enterprise is new and lacks an operational history, you may not be able to complete some of the exercises in chapter.

As with other sections of the business plan, operations components are inextricably linked with other business functions, which complicates the handling of this subject. In the following exercises we have attempted to segregate operations variables, recognizing, however, that changes to one will inevitably impact the others. Good operations planning is the ability to manage these variables and understand that operations choices may require tradeoffs at times.

## EXHIBIT 6A: INFORMATION FLOWS FOR THE OPERATIONS PLAN

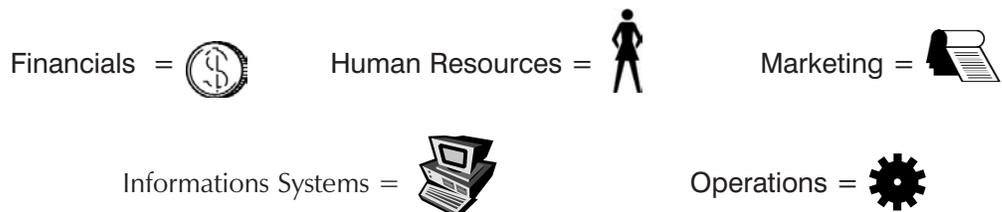
**Operations**—most closely identified with service businesses; operations are the stages or steps required to provide a service or manage a process.

**Production**—used in reference to the stages or steps required to manufacture physical goods. Manufacturing companies may also have operations stages associated with the nonproduction side of their business, such as tracking and managing inventories, purchasing raw materials, or selling goods.



### Guide to Icons

This chapter periodically uses icons (below) next to certain questions or sections to alert the reader to the fact that decisions made in the operations plan have implications for other segments of the business plan. The information flow diagram in exhibit 6A illustrates these relationships.



## Operations/Production Process

### PROCESS MAPPING

#### **Rationale:**

Step-by-step mapping of your operations or manufacturing is a useful way to visualize the whole process. Called a **flow diagram**, this instrument facilitates the identification of bottlenecks, inefficiencies, and information-sharing problems within your social enterprise, which ultimately eat into your profits. The diagramming also helps you determine operating and production costs and skill and labor requirements for each stage. In the course of this chapter we use flow diagrams for three purposes—assessing process, productivity, and capacity. This exercise begins with the mapping of each stage of your operations and production process (manufacturing businesses).



**Business manager, production manager, inventory manager, production supervisors, PO business advisor**



#### **Diagramming the Operations Process**

##### Step 1: Operations Stages

- ▲ Map the process—make a flow diagram—depicting each stage of operations. An example for TARTINA is given in exhibit 6B.
- ▲ The flow diagram and corresponding **Operations Stages Table** (exhibit 6C) should answer the following questions:
  - What are the different stages?
  - Who is responsible for each stage of operations? (Exhibit 6C)
  - How does work get transferred from one stage to another?
  - Is any part of your operations **outsourced** (contracted to another business or individual)?

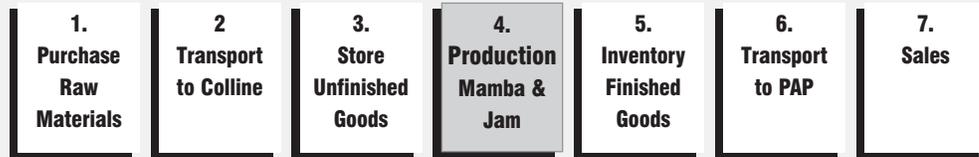
##### Step 2: Production Steps

- ▲ Map the production steps (exhibit 6E); respond to the same questions as for operations stages (above).
- ▲ If your processes vary dramatically among products (e.g., manufacturing is different for peanut butter and jam), draw a map for each product (see exhibit 6D for Mamba).
- ▲ Exhibit 6E identifies the responsible party for each production step.

.....  
**Flow diagram**—a step-by-step map of your operations process. Flow diagrams facilitate identifying bottlenecks, inefficiencies, and information-sharing problems within an enterprise, as well as determining operating and production costs and skill and labor requirements for each stage of the process.

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**Outsource**—to contract to another company or individual a business function such as assembly, distribution, sales, etc.

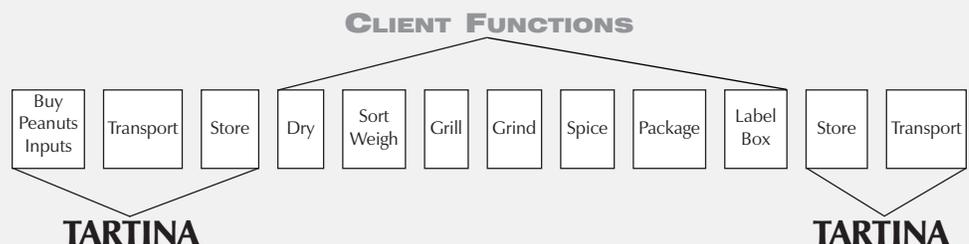
**EXHIBIT 6B: FLOW DIAGRAM FOR TARTINA OPERATIONS STAGES**



**EXHIBIT 6C: OPERATING STAGES FOR TARTINA**

Operations Stage	Responsible Party
1. Purchase raw materials and inputs <ul style="list-style-type: none"> <li>• Fruit (for jam production)</li> <li>• Peanuts (Mamba) and labels, containers, other nonmarketing-related assets</li> </ul>	1. <ul style="list-style-type: none"> <li>• Clients</li> <li>• Approved by Business Manager; executed by Production or Marketing Manager (depending on item in question)</li> </ul>
2. Transport from purchase point to Colline	2. Driver
3. Store in unfinished goods inventory (peanuts and production inputs)	3. Inventory Manager
<b>4. Production (detailed separately, 6D)</b>	<b>4. Production agents &amp; Manager</b>
5. Store in finished goods inventory	5. Inventory Manager
6. Transport to sales outlets/force in Port-au-Prince (PAP)	6. Driver
7. Sales in PAP	7. Marketing Manager & sales force

**EXHIBIT 6D: FLOW DIAGRAM FOR PRODUCTION OF MAMBA PEANUT BUTTER**



**EXHIBIT 6E: PRODUCTION STEPS FOR TARTINA**

<b>Production Step</b>	<b>Responsible Party</b>
1. Purchase peanuts and labels, containers, other nonmarketing-related assets	1. Approved by Business Manager; executed by Production or Marketing Manager
2. Shelled peanuts are dried in the sun	2. Guard
3. Store in unfinished goods inventory	3. Inventory Manager
4. Select and weigh high-quality peanuts	4. Production agents
5. Record quantity of peanuts; distribute	5. Production agents
6. Grill peanuts	6. Clients
7. Grind peanuts	7. Clients
8. Add spices/salt (all except unsalted PB)	8. Clients
9. Fill containers with peanut butter; glue labels	9. Clients
10.Box containers for shipping	10. Clients
11.Store in finished goods inventory	11. Inventory Manager
12. Ship to customers	12. Driver

**Explanation of TARTINA Model**

What is not evidenced in TARTINA's operations process is the role of the clients—self-employed women. In order to realize the cost advantage of buying production inputs in bulk, and overcoming the clients' lack of access to supplies, TARTINA centralized its purchasing and storage functions (see Lessons Learned in Chapter 9). In turn, TARTINA sells peanuts, containers and labels directly to the clients at cost. This system has two important benefits for TARTINA's viability, to regulate quality and keep production costs down in this narrow margin business. For clients, it allows year-round access, a time saving advantage of purchasing from the production site and higher income due to lower priced inputs.

**Productivity**

Productivity in operations measures the time and number of people it takes to produce a good or deliver a service. If your social enterprise is able to increase its productivity by producing more goods in less time, it will subsequently be able to increase its profitability.

Identifying bottlenecks that constrain or slow processes is a good starting point for increasing productivity. Cutting out unnecessary stages and eliminating duplication of efforts are two methods for streamlining your operations process. The acid test is if you can increase productivity without decreasing quality.

## Methods to Improve Productivity

**Labor organization.** The organization of labor within your social enterprise has a bearing on your overall productivity. The layout or floor plan of your facilities and the tasks at hand determine how labor should be organized.

A *line approach* is when each worker is responsible for one particular task and, upon completion the task, passes the work to the next person in the line. A line approach is an excellent method for assembly businesses or when tasks can be isolated. Its drawbacks are worker boredom and the potential for a vacuum effect if a worker is absent. Job rotation can reduce both of these problems.

A *team approach* is when a group of workers is responsible for all tasks related to an operations or production stage. Using this approach depends on the complexity of the process and the skills and training needs of the workers. For building human resource capacity, a team approach is preferred.

Both approaches have implications for supervision. With a line, fewer floor supervisors are usually needed, whereas with a team, a supervisor is generally designated for each team. In the latter case, workers can be promoted to be team leaders, which has the added benefit of motivating them. The labor method chosen should contribute to the achievement of social and business goals.

**Specialization.** Workers' productivity can be increased if they develop particular technical competence in a production or operations stage or product. Specialized workers produce at a faster pace and with more precision than those who are not specialized. Specialization requires training and careful planning to ensure that enough workers are skilled in a specialization and that they can cover for one another if one is out.

**Technology.** It is a given that using technology enhances the production or operations process. A good computer system can manage inventories, billing, and distribution with greater speed and accuracy than a human being. Machinery for manufacturing has the same benefits. The main constraint to using technology in a social enterprise is its often prohibitive costs. Adding technology, however, does improve product standardization and the ability to compete. Therefore, selective use of appropriate technology (including low technology) is encouraged. For example, TARTINA Enterprise added simple grinding machines, which it motorized with car batteries to produce peanut butter. This enabled TARTINA to greatly increase its productivity as well as respond to customers' demands for a highly standardized product.

**Scheduling.** Advance planning and operations scheduling are imperative for increasing productivity. Not having materials on hand for production, adequate labor to fill a large order, or an audience for a training course slows output and incoming cash. Scheduling prevents bottlenecks from occurring and keeps operations running smoothly during cyclical swings. This is especially true for businesses prone to seasonality, regardless of whether the upturn or decline is in material supply or sales. Save the Children's experience has shown that a lack of advance planning is one of the primary reasons for low social enterprise productivity and weak revenues. Thus, an entire section on scheduling is provided in section 8 of this chapter.

**Financial incentives.** Money talks, and it also motivates productivity. Financial incentives such as bonuses for producing over quota, piece rates, profit sharing, etc. are all possible enticements to spur productivity. (Incentive programs are discussed further in Chapter 7, Human Resources.)

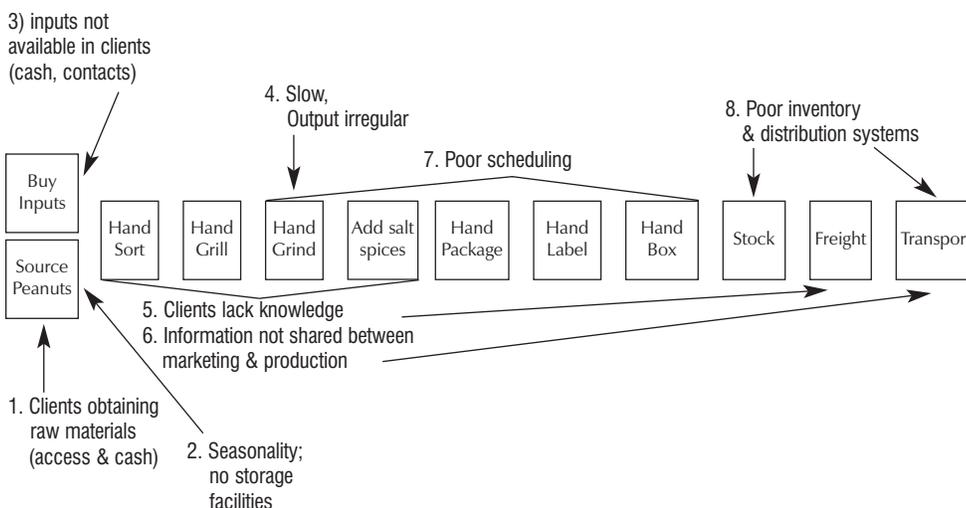


**Business manager, production manager, supervisors, PO business advisor, delegate clients, inventory manager**

### Determining Productivity

- ▲ Answer the following questions; your responses will be used later to shape the strategies in your social enterprise production plan. Examples of bottlenecks in Mamba production and counterstrategies to improve productivity are given in exhibit 6G.
- ▲ If you have historical experience with your social enterprise to draw from, where do bottlenecks occur?
- ▲ Using the flow diagram you created, indicate which constraints limit your ability to run operations smoothly and where in the process they occur. (See example 6F for Mamba.) Ask yourself if production is delayed, slowed, or piling up at any stage because of a constraint (e.g., the process itself is inefficient, labor is inadequate, there is an inability to access a key supply, transportation is not available, markets are not developed to sell the product or service, no inventory is ready for sales, etc.).
- ▲ Now analyze the flow diagram again. Are there extraneous steps in the operations or production processes that you can eliminate to reduce the amount of time or number of people it takes to produce a good or render a service? Are tasks duplicated that could be consolidated?
- ▲ How can you reduce or alleviate these bottlenecks in your production process to increase productivity? What are the costs associated with changing your process? 
- ▲ For each product or service, specify how much time it takes to produce one unit (minutes, hours, days, months)?
- ▲ How many units can each worker produce per shift (if less than one, use fraction)?

### EXHIBIT 6F: BOTTLENECKS IN MAMBA PRODUCTION (PRIOR TO RE-ENGINEERING)



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## EXHIBIT 6G: CONSTRAINTS ON PRODUCTIVITY FOR TARTINA'S MAMBA

### Bottleneck

1. Clients' difficulty obtaining raw materials (cash and access)
2. Seasonality of raw materials
3. Key inputs are not easily accessible to clients (containers and labels)
4. Hand grinding
5. Clients and production staff lacked transformation knowledge
6. Poor scheduling by production agents
7. Lack of information sharing between sales/marketing and production
8. Inadequate inventory management and distribution systems

### Result

1. Variability of production output and low capacity utilization
2. Same as above
3. Same as above
4. Same as above
5. Same as above
6. Same as above
7. Production unaware of customer "wants" and unable to realize production targets
8. Inventory stagnation, theft and spoilage

### Counterstrategies to Unblock Bottlenecks

1. Invested in peanut storage silos to produce peanut butter during seasonal downturns.
2. Centralized purchasing of raw materials (peanuts). Clients buy from TARTINA.
3. Centralized purchasing of containers and labels. Clients buy from TARTINA.
4. Purchased basic grinding machines.
5. Provided food transformation training for clients and production staff.
6. Introduced monthly scheduling into production planning to address variability of output and seasonality.
7. Instituted weekly meetings between marketing and production managers.
8. Upgraded inventory management by installing an automated system (Peachtree); trained staff on its use.

## Assessing Capacity

**Capacity** measures the volume of output your employees, or "labor force," facilities, and equipment can achieve during a given period of time. The capacity of your enterprise determines to what extent it will be able to meet its production objectives and profit potential. If your social enterprise is operating at full capacity, you may want to think about expansion, assuming that growth potential exists for your products or services in the target markets. If your social enterprise has excess capacity, then it has the ability to produce or sell more than it is at current levels of people, space, and equipment. Excess capacity is wastage because it represents unutilized paid earning potential (fixed costs). In other words, the more you produce, the farther you will be able to spread your fixed costs (see break-even analysis in chapter 5, Marketing).

Assessing capacity also relates to staff training and development. Bear in mind these human resource needs as you assess your current capacity and develop a strategy to build your future capacity.

Calculating capacity requires weighing several variables, but exactly how a social enterprise measures its capacity frequently depends on the industry. For example, a public health clinic might determine its capacity by number of beds; a factory, by unit costs and volume of units manufactured. A training institute might assess capacity using amount of training per day, number of people trained, classroom space utilized, number of trainers teaching, or a combinations of these. In this section, several determinants of capacity are reviewed. How you use this information depends on your particular industry and on whether your social enterprise is a manufacturing or a service business.

### CAPACITY ANALYSIS

#### **Rationale:**

Knowing the limits of capacity guides realistic planning to attain production targets and future growth. Also, understanding capacity variables and their interconnectivity may lead you to make minor adjustments or changes to your process that free up capacity or improve utilization without adding substantial cost.



**Business manager, production manager, PO business advisor, production supervisors (Same for all capacity exercises)**



#### **Analyzing Capacity**

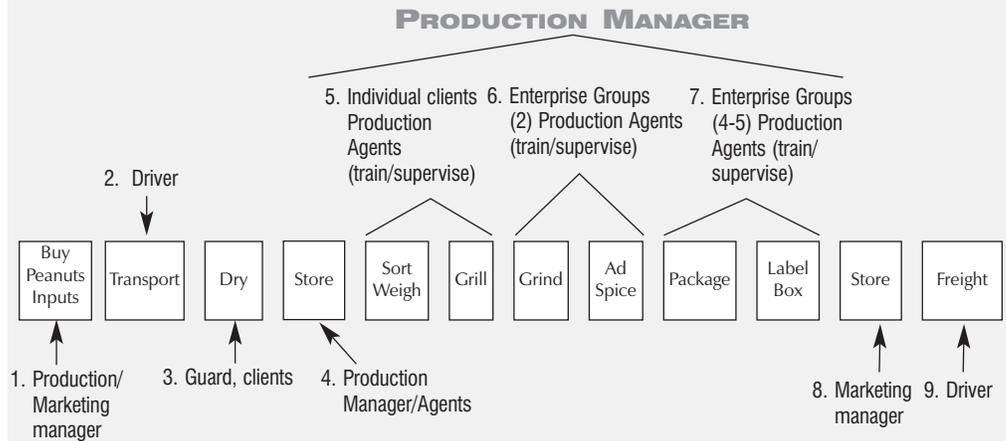
- ▲ Return to the process map, and next to each stage indicate the amount of labor employed in each production step, the person responsible for ensuring that each step is executed, and the overall manager accountable for realizing the process. Also label where you use machinery in your process. An example for TARTINA Enterprise's production steps is provided in exhibit 6H. The same exercise can be done for operations stages in service industries.
- ▲ Develop a narrative table to explain the diagram (see exhibit 6I, which corresponds to 6H).
- ▲ Respond to questions in the following sections concerning **facilities, skills, labor, time, and equipment.**

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**Capacity**—a measure of an organization's or company's facility or power to produce, perform, or deploy an output.

- ▲ Note where icons indicate costs and personnel needs. This information will be used in the financial and human resource sections of the business plan.
- ▲ Calculate the maximum capacity utilization (exhibit 6J) to understand how capacity is derived).

**EXHIBIT 6H: CAPACITY FLOW DIAGRAM FOR MAMBA (AFTER RE-ENGINEERING)**



**EXHIBIT 6I**

#	Production Step	Responsible Party	Equipment
1	Purchase peanuts and labels, containers, etc.	Production, Marketing Manager	Vehicle
2	Transport (freight) to sales locations	Driver	Vehicle
3	Shelled peanuts are dried in the sun	Guard	None
4	Store in unfinished goods inventory	Production Manager	Storage silos
5	Select and weigh high-quality peanuts	Production agents	Scale
5	Record quantity of peanuts; distribute	Production agents	Measuring cup
5	Grill peanuts	Individual client <sup>1</sup>	Home stove/fire
6	Grind peanuts	Client groups	Grinder
6	Add spices/salt	Client groups	Measuring spoons
7	Fill containers; glue labels	Client groups	Spoons
7	Box containers for shipping	Client groups	None
8	Store in finished goods inventory	Inventory Manager	Storage room
9	Transport (freight) to sales locations	Driver	Vehicle

<sup>1</sup>Peanut grilling is done by individual entrepreneurs in their homes.



### Facilities (Space)

- ▲ Describe your principal location. What are the main uses of this site (manufacturing, mathematical, training, conference, administration, storage, etc.)?
- ▲ How is the space organized? Are you using all available space for productive purposes? Do you have the room to expand your operations if need be?

### Labor

- ▲ What is the total number of employees working in the production/operations process? 💰
- ▲ Is variable labor used to meet seasonal demands or during other periods when production levels are high? 💰
- ▲ How are employees organized?  
Team approach? Line approach?
- ▲ Who supervises employees?
- ▲ What basic qualifications are required of employees?
- ▲ What training is needed? 🧑

### Skills

- ▲ What professional skills are needed to run your operations (technical, mechanical, managerial, etc.)? 🧑
- ▲ What operation functions (or positions) require professionals? What kind of professionals (engineers, operations or inventory managers, advisors, service technicians, trainers)? 🧑

### Using Variable Labor Keeps Operating Costs Down

Increasingly businesses use variable labor—temporary contracted labor—to perform a specific task as needed, rather than hiring new permanent employees. The logic behind this trend is that they can augment their labor force during seasonal or other upswings without incurring the fixed costs associated with permanent staff.

Consultants play the same function when special expertise is needed. TARTINA contracted with a market research firm to conduct a product test in its target market and an agricultural specialist to improve peanut storage techniques.

Managing variable labor can be challenging. Temporary workers generally do not have a stake in the enterprise and therefore may lack the motivation to produce. In addition to controlling expenses, however, using variable labor can increase your social enterprise's outreach by rendering economic opportunities to more clients. Outsourcing certain business functions is another method of controlling costs.

*The most critical question to ask when deciding on the use of variable labor is whether this tactic serves the enterprise's social mission and vision.*



### **Time**

- ▲ How many shifts do you operate in one day? How long are these shifts?
- ▲ What are the hours of operation?
- ▲ How many days a month on average is your facility operational?
- ▲ What are the constraints on operating more shifts? Is operations/production time limited by seasonal fluctuations? Infrastructure, such as no electricity or water during certain times of the day or week? Observation of religious tenets? Security issues, such as safe passage for workers or theft? Service business are usually constrained by the need to operate during hours convenient to their customers. Are there cultural mores that prevent labor from working at night, on weekends, or on holidays?
- ▲ Are there options to extend the hours of operations? What are the costs associated with this (new machinery, like a generator, or lights, additional fuel); providing transportation or posting guards to accommodate safety needs, etc.)? 💰

### **Equipment**

- ▲ What equipment is needed for the operation of your social enterprise?
- ▲ What equipment do you already own?



### **Capacity Utilization**

Calculating capacity should be done after bottlenecks are worked out (as much as possible) and once the production process is streamlined.

- ▲ How variable is the production level? What is the average volume of output on the “best” production days? On the “worst” production days? What is the base average output? (See exhibit 6J, Easy Estimations for Capacity.)
- ▲ How many units of goods or services can be produced in your current facility per day? Per week? Per month?
- ▲ At what percentage of capacity is your social enterprise operating now?
- ▲ What is the maximum capacity possible? Follow instructions for calculating maximum capacity in exhibit 6J-2.

*Chadèque jam  
under production  
by TARTINA  
microentrepreneurs*



**EXHIBIT 6J: EASY ESTIMATIONS FOR CAPACITY**

Average best production days for each product over a given period (three-plus months). Assume this can be reproduced every working day throughout the year. This results in a theoretical capacity based on 100 percent utilization at average best per day.

**Formula** (see below): Calculate average, best, and worst production days for each product (column 2); then find overall average (column 3). Include labor (column 4) and average production per worker (column 5).

1 Product <sup>3</sup>	2 Criteria	3 Daily Production (lbs.)	4 # of Clients per Day	5 Avg. Production
<b>Mamba</b> <sup>4</sup> 26 production days	Overall average	140	7.3	19.0
	<i>Average best</i> 5 days	258	14.4	26.6
	Average worst 5 days	34	2.4	14.2
<b>Karapinia</b> 14 production days	Overall average	167	11.2	15.8
	<i>Average best</i> 3 days	221	20.3	26.0
	Average worst 3 days	67	4	11.8

<sup>2</sup>Out of 80 working days between January and May 1998, 26 were used to produce peanut butter and 14 were used to produce Karapinia.

<sup>3</sup>The new peanut butter grinder was installed in May 1998; output jumped significantly, and the top days all occurred since the grinder was put into use.

## EXHIBIT 6J-2: MAXIMUM CAPACITY FOR MAMBA AND KARAPINIA<sup>5</sup>

**Step 1:** Fill in (col. 1) available annual production days; list results from above for overall average production per day (col. 2) and average production for best days (col. 4)

**Step 2:** Calculate potential annual rate (col. 3): available annual production days (col. 1) times average production (col. 2).

**Step 3:** Calculate maximum annual capacity (col. 5): annual production days (col. 1) times average production for best days (col. 4).

**Step 4:** Calculate projected utilization (col.8): sales targets (col. 7) ÷ average production for best days (col. 4).

1	2	3	4	5	6	7	8
Product	Available Annual Production Days	Overall Average Production per day	Potential Annual Production if produced @average rate (A)	Average Production for best days (B)	Maximum capacity if produced as best days every day (C)	Sales targets for year (D)	Projected Utilization based on potential production (E)
<b>Mamba</b>	200	140	28,000	258	51,600	4,450	16%
<b>Karapinia</b>	200	167	33,400	221	44,200	1,500	4.5%

### Assumptions:

- Potential production rate at average rate = 200 working days per year x average production day for both products.
- Average of the best five days for Mamba and Karapinia.
- Maximum capacity = 200 working days per year x best rate.
- Sales projections from marketing plan.
- Utilization = sales targets ÷ potential production if produced at best-day rate every day (column 6).

<sup>5</sup>The information in this table was produced prior to the re-engineering of TARTINA Enterprise; its purpose here is to demonstrate how to calculate capacity, not for analysis.

## Operations Objectives

### ESTABLISH OPERATIONS/PRODUCTION OBJECTIVES

Operations objectives are expressed in terms of (1) the number of units to be produced; (2) production costs; (3) product or service enhancements; (4) capacity; and (5) changes to the process, such as tightening quality control or streamlining stages. Operations objectives are in part set using marketing and sales objectives established in the marketing plan. Likewise, they are determined by the product and price strategy (chapter 5) and seasonality (this chapter.)

#### **Rationale:**

Operations or production objectives **direct** the operations and ensure that it is moving toward the achievement of the overall business and social goals of the enterprise.



*Business manager, production manager, PO business advisor, marketing manager, partner program manager, production staff, finance manager*



#### **Setting Operations Objectives**

- ▲ Set "SMART" operations objectives (refer to Chapter 2).
- ▲ At least one production/operations target should be a numeric target projecting units to be produced or rendered, corresponding to the marketing plan, and costs associated with it.
- ▲ Refer to the TARTINA example (exhibit 6K) for assistance or inspiration.



**Production/operations objectives are included in the Business Plan.**

#### EXHIBIT 6K: PRODUCTION PLAN OBJECTIVES FOR TARTINA ENTERPRISE

- \* Standardize product
- \* Improve quality control
- \* Make necessary changes to respond in a timely manner to consumers' changing demands
- \* Reduce transformation costs to meet profit margin objectives noted in marketing plan
- \* Build clients' capacity to manage and implement transformation process
- \* **Produce 62,500 units for a total cost of U.S. \$45,974**

## Linking Strategies to Objectives

Most strategies do not independently satisfy an objective but contribute toward achieving it. It is the combination of all strategies working concurrently in a plan that accomplishes its ends.

## Operations/Production Process Strategy

Based on your assessment of (or projections for) your operating process, the process strategy articulates how you plan to use and build capacity to achieve maximum productivity.



**Business manager, production manager, inventory manager, production staff, PO business advisor, external consultant (if desired)**

### Formulating a Process Strategy

- ▲ Use the operations/production objectives as a starting point for your strategy.
- ▲ The process strategy should focus on how you plan to accomplish (or contribute to the achievement of) operations/production objectives.

#### Step 1: Capacity Strategy

- ▲ Based on the conclusions drawn from the **capacity analysis exercise**, formulate a strategy to use excess capacity or expand the existing capacity of your social enterprise. Here are some additional questions to guide your strategy development.
  - How will excess capacity be utilized?
  - What options exist to use excess capacity?
  - How can you provide for extra capacity if needed for growth?
  - What training will be needed to build capacity among your production staff?
  - What are the cost implications of these changes?

#### Step 2: Productivity Strategy

- ▲ Use the conclusions drawn from the **determining productivity exercise** to conceive your strategy. New social enterprises should use process projections.
- ▲ Refer to the TARTINA example in exhibit 6L for assistance or inspiration.



**Process strategy is included in the Business Plan.**

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## EXHIBIT 6L: STRATEGIES FOR INCREASING PROCESS PRODUCTIVITY AND CAPACITY

### Objectives:

- \* *Improve product standardization*
- \* *Build clients' capacity to manage and implement transformation process*
- \* *Realize production target of 62,500 units for a total cost of U.S. \$45,974*
- \* *Reduce transformation costs to meet profit margin objectives noted in marketing plan*

### **Productivity: Specialization Strategy**

- \* Production groups will specialize in one principal type of transformation. The specializations will be three: peanut butter, Karapinia, and jams/jelly.
- \* Production agents will also follow product specializations with one "understudy" to ensure continuity in case of absence of the primary production agent specialist.
- \* Specialist clients will be developed within the production group. Specialists will be selected and trained to "champion" certain tasks of the production process. Again, "understudies" should be assigned to ensure continuity in the case of absence of the primary specialist.
- \* Financial incentives: Base payment to clients will be based on quality and quantity of output.

*Note:* Prior to developing this business plan, TARTINA Enterprise consolidated raw materials purchasing to ease bottlenecks clients faced in raw materials acquisition and to increase productivity. TARTINA also added basic machinery to stabilize product variability and augment output.

### **Capacity**

- \* This will largely fall on the shoulders of the production agents. They will require training of trainers (TOT) to achieve this objective.

*Note:* During re-engineering, excess capacity in plant facilities was considerably reduced through shift scheduling.

## Quality Control

### **Rationale:**

Quality control is the key to product standardization and repeat patronage. It should not be confused with "high quality," although this does have merits. Perhaps the aim of your marketing strategy is to position your enterprise as the "economic solution," offering low-cost goods or services, rather than vying for "high quality." Quality control simply means that you are able to provide consistent products and services to your customers. Consistency is an important product attribute for retaining customers because it gives them the comfort of knowing exactly what they will get with every purchase.



**PO business advisor, production manager, inventory manager, production staff, delegate clients, external consultant (if desired)**

### **Devising a Quality Strategy**

- ▲ As you did in the previous exercise, begin with operations/production objectives.
- ▲ An illustrative example for TARTINA is given in exhibit 6M.

## **Fable of Quality Control**

Once upon a time, in a land far, far away, there lived a benevolent king. Philanthropy and random acts of kindness were the king's favorite pastime. Each day, as he executed public-spirited good works, he mulled over possibilities for new humanitarian deeds. There was still poverty in his kingdom, and the inequities he noticed among his subjects nagged him. Then he was struck by an idea.

In this kingdom milk was considered a precious commodity, as it was thought to have mystical powers and special health benefits. Milk was used as a mainstay in households for nutrients and restorative cures, yet many people could not afford the magical elixir. Hence, the king decided that milk should be redistributed from the wealthy to the poor on occasion. The very next day, the king called on his subjects who raised milk-producing animals to each contribute a jug of milk to his cause. They were instructed to pour it into the supply pool on the castle grounds, where indigent community members would come and collect the milk.

Most of these "wealthy" residents were small farmers who were unhappy with the king's Robin Hood-like decision, since milk was vital to their livelihood. So as they filled their jugs they grumbled, "We pay our taxes and now he wants our goods equal to one day's wages."

As night fell one resident shared these thoughts with her husband: "If I fill my jug with water, no one will notice once it has mixed with all the other jugs of milk in the pool; then I will lose no money."

By morning a small crowd had gathered outside the castle gates eager to fill their containers with the cherished substance. The king awoke enthusiastically to witness the milky pool that symbolized his altruism. Gleefully, he looked out the window and was astonished at what he saw: an ordinary pond filled with water.

**Moral:** Even in the most benevolent of ventures, one must have systems to control quality.

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Inspired by a Nepali legend.

## EXHIBIT 6M: STRATEGIES FOR INCREASING QUALITY CONTROL

*Objective: Improvement of quality control*

- ✱ Development of a quality control program: Step-by-step quality control improvements have already been identified by production agents for peanut butter and jam products. The same will also be done for Karapinia. Quality control "specialists" will be developed in each group.
- ✱ Training of clients in product standardization and quality control will be required.
- ✱ Base payment to clients will be based on quality and quantity of output.

### Market Response/Product Development Strategy

The operations/production strategy has a direct relationship to the product strategy in the marketing plan. Product development is market led because it responds to the features and benefits customers in your target market seek from the products and services they purchase (chapter 3). The product strategy attempts to meet customer wants through product development.

Thus, marketers and operations/production staff must work closely together to come up with new products and services or enhance existing ones that fit both market demand and production capabilities. A common error of many businesses occurs when marketing or sales personnel promise customers product specifications that production is unable to meet because it does not have the capacity, equipment, technology, expertise, or a combination of these to produce to specifications. In addition, some customer demands may not be cost-effective for a social enterprise to meet.

#### **Rationale:**

The next exercise is intended to help you coordinate the marketing and operations/production functions of product development, as well as to consider the cost implications. This exercise should be completed jointly by operations and marketing staff.



**Production manager, marketing manager, production staff, PO business advisor, R&D, external consultant (if desired)**



#### **Conceiving a Product Development Strategy**

- ▲ Begin with operations/production objectives (see exhibit 6N for an example from TARTINA). Then review your product strategy (chapter 5, Marketing Plan).
- ▲ Create a **Production-Market Response Matrix**. An example for TARTINA Enterprise's Mamba peanut butter is given in Exhibit 6P.
- ▲ For each product, list the stated customer "wants" one by one.
- ▲ Indicate how your social enterprise plans to respond to customer "wants" through its production or operations.
- ▲ Last, note the cost implications of incorporating the proposed changes.

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## EXHIBIT 6N: STRATEGIES FOR MARKET RESPONSE/PRODUCT DEVELOPMENT

*Objective: Commitment to make necessary changes to respond in a timely manner to consumers' changing demands*

- \*Production and marketing managers will meet weekly to discuss customer feedback on products.
- \*Clients will continue both to produce the Karapinia product and sell it to the artisan market in the locality surrounding the production center. This offers an excellent opportunity for direct feedback from customers to food processors.

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## EXHIBIT 6P: PRODUCTION-MARKET RESPONSE MATRIX FOR TARTINA ENTERPRISE

### PRODUCT 1: REGULAR AND SPICY PEANUT BUTTER

**Customer "Want"**

1. Greater consistency in taste and color.

**Production Response**

Improved standardization and quality control of peanut roasting through client training, specialization, and adherence to higher quality control standards.

**Customer "Want"**

2. Reduction in amount of oil that rises to the top of peanut butter. Three weeks after production, excessive amounts of oil are present.

**Production Response**

Short term

- Closer coordination between sales and production units to reduce inventory storage time. Monthly sales targets and a production schedule have been prepared, which will aid this coordination.
- The use of a fixative is not desirable because of overwhelming customer preference for an all-natural product, the need for an international food scientist to experiment with the addition of the fixative, and the increase in unit production costs.

Medium to long term

- Research into improved peanut varieties.

**Customer "Want"**

3. Continued competitive pricing.

**Production Response**

Short term

- During their off-season, peanuts will be stockpiled. Cash flow projections have been prepared to forecast needed bulk peanut purchases to take advantage of harvest peanut prices.
- Cost reductions in production and sales will be pursued.

Medium to long term

- Availability of peanuts will soon pose a problem for the project. Increasing local peanut supply will be required to meet growing peanut butter demand. This will also help reduce pressure on prices. International assistance has been identified that can help peanut farmers increase their yields.
- Marketing Manager's salary has been increased to attract qualified candidates for this position.
- Technical assistance in proper peanut storage and improvement of peanut varieties will be provided by specialists, whose fees will be covered by the Partners of the Americas organization. Peanut storage instruments and insecticide have been included in the budget for the storage component. Cost of materials for local testing of new peanut varieties has also been included.

**Budget Implications**

**PRODUCT 2: SWEETENED PEANUT BUTTER**

**Customer "Want"**

1. Potential market niche of children may have a preference for sweetened peanut butter.

Production Response

- Production team has already successfully produced a recipe for sweetened peanut butter. The grinder currently used for regular and spicy peanut butter, however, is not appropriate for the new type. Local technical assistance will provide information on appropriate equipment and its cost, installation, and use.
- Prior to making the final decision on adding the sweetened peanut butter to the product line, the increase in the unit production cost should be carefully calculated to ensure that the sales price will cover this increase.
- The above activities will be covered in the following budget line items:
  - Grinder
  - Technical Assistance: Consultants in production technique (2-3 days)
  - Research and development

**Budget Implications**

## Research and Development

### **Rationale:**

Research and development is an invaluable part of your operations strategy because it allows for continual product improvement and responsiveness to the changing wants of your customers. R&D is often overlooked in social enterprise operations planning and, consequently, so are the expenses associated with it. Depending on the type of enterprise, industry, and research needs, R&D costs can be considerable. When developing your operations plan, therefore, it is prudent to factor in anticipated R&D and its projected costs, including technical assistance, development of prototypes, studies, product tests, etc.



**Same as previous exercise**

### **Crafting a R&D Strategy**

- ▲ Return to your **Production-Market Response Matrix**, and add in R&D requirements opposite “production response.” An example is given for Grenadia, a passion fruit jam, and Karapinia, both new TARTINA products, in Exhibit 6Q.
- ▲ Be sure that your R&D plans respond to stated customer wants. 
  - Rule of thumb: R&D is particularly important for new-product development or retooling of mature products; refer back to the product life cycle exercise in Chapter 5, Marketing.
- ▲ Last, note the cost implications (as opposed to projected dollar value) of incorporating the proposed R&D. 



**R&D specification is included in the Market Response/Product Development Section of the Business Plan.**

## EXHIBIT 6Q: R&D STRATEGY

### GRENADIA (PASSION FRUIT JAM)

#### Customer “Wants”

- Taste—will further bring out the taste of the passion fruit.

#### Production Response

- The jam production agent will add juice to the passion fruit jam that normally is put into passion fruit jelly.
- Experimentation will be coordinated with the R&D agent.

#### R&D Budget Implications

- R&D agent will split his responsibilities with his production responsibilities. Line item is “ADE Prod/R&D Agent.”
- Products used in recipe experimentation will be charged to the R&D line item.

### KARAPINIA

#### Customer “Wants”

- Presentation—reduce powder found at the bottom of the plastic bag.

#### Production Response

- The R&D agent, together with the production agent responsible for Karapinia, will experiment with reducing the powder.

#### R&D Budget Implications

- R&D agent will split his responsibilities with his production responsibilities. Line item is “ADE Prod/R&D Agent.”
- Products used in recipe experimentation will be charged to the R&D line item.

## Information Sharing and Systems

Sharing information throughout the operations stages and production steps, as well as with other departments in the enterprise, such as finance and marketing, is critical for creating efficient operations. It is often in the sharing of information that social enterprise and development programs blunder. Exhibit 6R demonstrates problems that affect output when pertinent information is not shared with other links in the operations/production chain or related areas of the enterprise. These problems can be remedied through meetings, management information systems that track and disseminate details of enterprise activities, and other mechanisms that foster open communications.

### EXHIBIT 6R: ENTERPRISE INFORMATION FLOWS

Communication Flow	Information Not Communicated	Result
Procurement → Production	Late delivery of raw materials	Production stagnates/slows Cannot meet targets
Production → Procurement	Production input out of stock	Production stagnates/slows Cannot meet targets
Production → Purchasing	Need new equipment	Production stagnates/slows
Production → Marketing	Capacity to produce	Unable to produce to customer specifications
Production → Marketing	Costs to produce good/service	Products underpriced, losing \$
Production → Finance	Need new equipment	Production slowed; awaiting purchase authorization
Inventory → Production	High inventory	Overproduction—spoilage, capital tied up in unsold goods
Inventory → Sales	Inventory spoilage	Damage to reputation, lose time, \$, customer
Inventory → Sales	Product out of stock	Can't deliver customer order
Inventory → Distribution	Number of units delivered	Oversell/undersell inventory No controls—shrinkage
Sales → Inventory	Number of units sold	No accountability for sales No controls—shrinkage
Sales → Production	Sales targets	Over- or underproduce
Marketing → Production	Customer wants	Lose market share, sales decline
Finance → Marketing	Cash tied up in stock	Shortages of cash to pay salespeople, promotion, sales fall

## ENTERPRISE INFORMATION FLOWS

### **Rationale:**

This exercise identifies critical information links within your operations and production processes and to other areas of your business. It will help you think through strategies to improve communications.



**Partner program manager, production manager, business manager, MIS specialist, PO business advisor, inventory manager, production staff, accountant, external consultant (if desired)**



### **Streamlining Information Flows**

- ▲ Look back over the process maps and narrative tables you developed for the **process, productivity, and capacity** exercises. What do these diagrams tell you about information requirements in one stage or step needed to complete other stages or steps?
- ▲ Use the productivity map to analyze which constraints resulted from a lack of information.
- ▲ Reflect on exhibit 6R, **Enterprise Information Flows**, for possible scenarios.
- ▲ Review exhibit 6A, **Information Flows for the Operations Plan**. Consider where critical information must be shared between functions. For example, there is an interdependency between production cost and price. 
- ▲ Brainstorm ideas to improve information flows. For example, TARTINA has included weekly meetings between production and marketing managers as a means to improve market response in product development (exhibit 6N). 
- ▲ Incorporate information-sharing techniques into pertinent parts of your operations plan.

## INFORMATION TRACKING OR MANAGEMENT INFORMATION SYSTEMS

### **Rationale:**

A good management information system (MIS) is vital not only for efficiency but also for instilling internal controls in production and operations and providing managers with important data. Information obtained in operations stages is fed into reports that give a macro view of business activities.

Management Information Systems can be either manual or automated, yet either way they must yield accurate and up-to-date information that informs management decision making on a daily basis. Operations managers can not rely solely on monthly reports that come from the finance department; however, data retrieval capabilities should be linked to the enterprise's accounting system.

 A comprehensive "how to" for developing a strong MIS is a vast subject beyond the scope of this manual. Additionally, such a system must be tailored to the specific operations or production processes of the individual enterprise. Consult other sources or hire a professional to help you develop a MIS, either manual or automated, that will meet the particular needs of your enterprise. An example of information tracking (MIS) for TARTINA is given in exhibit 6S.

**EXHIBIT 6S: INFORMATION TRACKING (MIS)**

<b>OPERATIONS STAGE</b>	<b>FORM/REPORT</b>	<b>RESPONSIBLE PARTY</b>
1. <u>Purchase raw materials and inputs</u> 1.1 Fruit (for jam production)	1.1 None	1.1 Clients; verified by Production Manager or agents
1.2 Peanuts (Mamba) and labels, containers, other nonmarketing—related assets	1.2 <b>Sales Receipt</b> —records cost per marmite for peanuts + quantity purchase; cost per 100 containers + quantity; labels per 1,000, etc.	1.2 Approval: Business Manager; execution: Production or Marketing Manager (depending on item in question). Submitted to Accountant
2. Transport from purchase point to Colline	2. <b>Transportation Record</b> —registers mileage from purchase point	2. Driver; reviewed by Production Manager
3. Unfinished goods stored in inventory (peanuts and production inputs)	3. <b>Unfinished Goods Inventory Record</b> —registers the quantity of new raw materials and inputs placed in stock (silo: peanuts; storage room: inputs)	3. Inventory Manager; verified by Production Agent, submitted to Accountant
4. <u>Production</u> 4.1 Client payment	4.1 <b>Production Sales Record</b> —piece rate payment to clients	4.1 Prepared by production agents, verified by Production Manager, submitted to Accountant
4.2 Inputs and raw materials used	4.2 <b>Unfinished Goods Inventory Record</b> —records quantity of raw materials and inputs withdrawn for production	4.2 Inventory Manager; verified by Production Agent, submitted to Accountant
5. Finished products placed in finished goods inventory	5.1 <b>Finished Goods Inventory Record</b> —registers new inventory in stock 5.2 <b>Bin Card</b> —indicates date, batch number on product itself 5.3 <b>Physical Count</b> of inventory	5.1 Accountant 5.2 Inventory Manager 5.3 Inventory Manager, Production Agent

6. Transport to sales outlets/force in PAP	<p>6.1 <b>Transportation Record</b>—mileage report</p> <p>6.2 <b>Finished Goods Inventory Record</b>—records adjustment to inventory withdrawn for sales</p> <p>6.3 <b>Bin Card</b>—removal of inventory, based on time in stock</p>	<p>6.1 Driver; verified by Production Manager</p> <p>6.2 Marketing Manager; submitted to Accountant</p> <p>6.3 Marketing Manager; submitted to Accountant</p>
7. Sales in PAP	<p>7.1 <b>Sales Record</b>—registers cash or consignment sales</p> <p>7.2 <b>Weekly Summary Reports</b> of sales and terms of sale</p>	<p>7.1 Marketing Manager and sales force</p> <p>7.2 Prepared by Marketing Manager; submitted to Accountant and Inventory Manager</p>
8. Billing and collection	<p>8.1 <b>Customer Invoice</b>—bills retail customers on accounts receivable for products.</p> <p>8.2 <b>General Ledger (receivables)</b>—records customer payments on invoices</p>	<p>8.1 Accountant (billing department); submitted to Financial Manager</p> <p>8.2 Accountant; submitted to Financial Manager</p>



**Enterprise business manager, accountants and finance professionals, MIS professional and PO business advisor**

**This section is related to developing systems.** 



### **Drafting an Information Tracking System**

- ▲ With the assistance of a contracted professional or in-house MIS expert, develop forms and reports that correspond to the information-sharing needs of your operations and production process. A plan stating clear objectives in addition to who will be responsible is a recommended starting point (exhibit 6T).
- ▲ Records should be directed to pertinent areas of the enterprise, but foremost to marketing, finance, and senior management   
- ▲ As in the previous section, much of the necessary information for developing a MIS can be obtained from earlier mapping exercises.
- ▲ Indicate individuals responsible for completing forms, verifying their completion, and managing the information. 
- ▲ All information that has financial implications for the enterprise must be shared with accounting or finance. 
- ▲ A good MIS can be expensive to develop. What are the cost implications of developing an MIS (see exhibit 6T)? 



**MIS details are included in the Business Plan.**

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## EXHIBIT 6T: DEVELOPMENT OF MANAGEMENT INFORMATION SYSTEM FOR TARTINA

The technical assistance (TA) requirements for an MIS include the following:

- \* First, technical assistance is needed for a better organization of the flow of information required for decision-making and tracking performance indicators, including necessary reports and division of tasks.
- \* Second, those responsible will require training in the computerization of the forms and reports. Staff should be able to computerize and modify the MIS tools to best serve the decision-making needs of the enterprise.

The first component of the MIS TA is best accomplished through the collaborative efforts of ADE and SC/Haiti, which are most familiar with TARTINA Enterprise and its information and decision-making requirements. The second training requirement, however, is most efficiently met through the use of external expertise. An initial group training is planned, with a period of on-site support to follow.

*Cost Implications:* U.S. \$5,400

### Internal Financial Controls

#### **Rationale:**

Internal financial controls are an inherent aspect of financial management and should be incorporated into the social enterprise's MIS and accounting systems. It is important that systems are transparent so that multiple users can readily see which financial transactions have taken place: how much money is owed, how much is incoming, and how much is outgoing in the business. Financial controls dictate the treatment of cash, collection of receivables, handling of payments to creditors and employees, and flag late receivables before accounts become delinquent. Most important, they serve as a system of checks and balances, preventing embezzlement and theft. Relying on monthly reconciliation of bank statements with financial statements is an inadequate form of financial control, because it allows far too much time to pass before a problem or a perpetrator can be identified. The key to developing strong systems is to separate duties related to handling financial transactions from record-keeping.



**Enterprise business manager, accountants and finance professionals, MIS professional and PO business advisor**



#### **Establishing Internal Controls**

In summary form respond to the following questions that apply to your enterprise:

- ▲ Who within the enterprise is responsible for financial oversight? Who does that person report to? 

- ▲ What are the policies regarding the treatment and handling of cash? Is cash used to make purchases or pay bills on behalf of the enterprise? How are cash receipts recorded?  Who within the enterprise is authorized to use cash? 
- ▲ What security measures are taken concerning cash kept in the social enterprise for petty cash or retail use?
- ▲ What is the normal method for paying bills and receiving payments from customers (cash, checks, credit cards, money orders, etc.)? How are receipts and payments recorded?  Who is responsible for handling these transactions? 
- ▲ What are the policies for extending credit to customers? 
- ▲ How are financial transactions on the operations side of the business reconciled with finance?  How frequently is this done? By whom? 
- ▲ What are the procedures for handling outstanding bills? When is an invoice considered outstanding? 
- ▲ Are there penalties or finance charges on late payments? 
- ▲ What reports are generated depicting financial status? How frequently are these reports produced? Who prepares them? Who reads them? 
- ▲ What early warning systems have been designed to detect theft and late customer payments? 

### **Internal Controls are included in the Business Plan.**

### **Customer Service and Order Fulfillment**

Customer service is important for every business, yet it is essential for the social enterprise that frequently struggles with problems of public image and operational efficiency due to its target population's limits. Convincing customers that they will receive professional customer service from your social enterprise may be a major challenge to gaining customer confidence. The reputation social enterprises have earned for poor customer-orientation may be unfounded, but it is often a reality in the minds of consumers who may perceive the social enterprise as an inefficient and cumbersome charity when problems occur. At the same time, customer are demanding better service (and are willing to pay for it), which offers social enterprises an opportunity to gain a comparative advantage over competitors if they make customer service a strategic priority.

Rendering excellent customer service is achieved by having clear policies and procedures, professional staff, and solid systems. Additionally, if the enterprise encounters problems with public perception, it may be tasked with creating a stronger customer-orientation image. This is a marketing challenge. (See Chapter 5.)

Customer service revolves around the following:

- \* efficient order fulfillment and processing
- \* ability to track and maintain accurate account information
- \* politeness and attitude of salespeople
- \* clear return policies

- \* maintenance and repair policies
- \* ease of payment (multiple options)
- \* reliability of service (do you do what you say you are going to do?)
- \* on time delivery
- \* the sense that complaints are heard and handled (customer feedback loop and market response)
- \* professional image that tells your customers you are a reliable business, not a charity



**Business manager, accountants and finance professionals, MIS professional, marketing manager, sales staff, customer service manager (if applicable), inventory manager and PO business advisor**



### **Customer Service Plan**

What are your customer service objectives? What is your plan for achieving them (answer the questions that apply below):

- ▲ How are orders processed? Who is responsible? Who has oversight for processing orders? 
- ▲ How is order information passed to relevant departments (inventory, billing-- finance, etc.)? 
- ▲ How is customer account information managed and tracked? How is responsible to recording this information? How has oversight for ensuring customer account information is accurate and up-to-date? 
- ▲ How do customers receive products? Are they shipped? Delivered? Pick up by customers themselves? If shipped, what steps are taken to avoid damage or breakage?
- ▲ What is the expected turnaround time between order and customer receipt? Is there a policy for the maximum time needed to fill customer orders?
- ▲ How are late orders handled? Do customers receive a discounted price, free delivery, a credit on their next purchase? 
- ▲ What are the return policies?
- ▲ What is the average rate of returns? What is the cost of returns? 
- ▲ Are guarantees or warranties extended for purchase of a product or service? What do they cover? 
- ▲ Is there a formal process for grievances? How are customer complaints handled? Who has oversight for managing customer complaints?
- ▲ Is complaint information routed to pertinent departments (finance, marketing, MIS, inventory management, sales, etc. ) so subsequent changes can be made?
- ▲ What type of customer service training and orientation do enterprise staff receive?  
- ▲ How is customer service information gathered in operations and shared with marketing and vice versa? 



**Customer Service Information is included in the Business Plan.**

## Scheduling

In operations it is easy to squander both time and resources as a result of poor planning. Scheduling is an essential tool in the planning process, as it enables social enterprise managers to appropriate human resources, labor, material inputs, space, and time to best meet production targets.

### SEASONAL SCHEDULING

#### **Rationale:**

Scheduling is particularly important if your social enterprise has seasonal fluctuations, driven either by production output for heavy selling periods or seasonal constraints that limit raw material acquisition. This seasonal information is incorporated into production planning to reflect upturns and downswings that will impact your business' production or operations.



**Production manager, production staff, clients, business manager, PO business advisor**



#### **Preparing a Schedule Corresponding with Enterprise Business Cycles**

- ▲ Refer to the industry analysis section in chapter 4. Recall which seasonal factors affect your business cycle. High seasonal demand? Access to inputs? In the industry analysis, how did you plan to respond to seasonal business cycles?
- ▲ Develop a timetable or matrix for the calendar year, with months or weeks on the horizontal row and products/services down the vertical column.
- ▲ The table should be labeled according to seasonal information it encompasses. Exhibit 6U shows an example of "harvest season" for raw material inputs for TARTINA products.
- ▲ Once you have mapped seasonal activity, schedule production/operations to respond to seasonality. The schedule plans what and how much the enterprise will produce during certain times of the year (see exhibit 6V, **Seasonal Production Response for TARTINA**) or what other support activities will be conducted during slow periods (see exhibit 6W).

**Key to levels of seasonal activity:**



**EXHIBIT 6U: HARVEST SEASON BY PRODUCT**

Input	Jan	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Peanuts	High	High	High	None	None	None	None	Low	Low	Medium	Medium	Medium
Mamba	High	High	High	None	None	None	None	Low	Low	Medium	Medium	Medium
Grapefruit	High	High	Low	None	None	None	None	None	Low	Low	Low	Low
Chadèque	High	High	Low	None	None	None	None	None	Low	Low	Low	Low
Passion Fruit	High	None	None	None	None	None	Low	Medium	Medium	Medium	Medium	Medium

**EXHIBIT 6V: SEASONAL PRODUCTION RESPONSE FOR TARTINA  
(# of products/quality produced)**

Input	Jan	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Peanuts*	1,797	1,797	1,797	1,320	1,320	1,173	1,173	1,393	1,393	1,393	1,393	1,797
Mamba	1,000	1,000	600						600	600	600	600
Grapefruit	1,000	1,000	600						600	600	600	600
Chadèque	1,000	1,000	600						600	600	600	600
Passion Fruit	980						400	700	1,080	1,180	1,080	980

\* Production for Mamba has been year-round since the investment in storage silos, although production does dip moderately during periods when peanuts cannot be purchased on the market.

The following exhibit (6W) shows two services, provided by an eco-tourism enterprise, with distinct seasonal operations. Since the enterprise is located in the Southern Hemisphere, rafting season begins in October and ends in March; the busiest time is November through January because that coincides with vacation schedules. Before October the weather is too cold and the water too high to raft; after March the opposite occurs. During the winter season, this enterprise offers rain forest trekking services. Both services require support activities to prepare for the high season, that is, marketing, training and orientation of seasonal staff (trekking and rafting guides), and logistics planning.

**EXHIBIT 6W: SEASONAL PRODUCTION RESPONSE FOR ECO-TOURING COMPANY IN BRAZIL**

Service	Jan	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
River Rafting	High	Medium	Low	None	None	None	None	None	None	Low	High	High
Staff Training	None	None	None	None	None	None	None	None	High	High	None	None
Logistics	High	High	None	None	None	None	None	None	Low	Low	None	High
Marketing	None	None	None	None	High	High	High	High	High	High	High	High
Trekking	None	None	None	None	Low	High	High	High	Low	Low	None	None
Staff Training	None	None	None	High	High	None	None	None	None	None	None	None
Logistics	None	None	None	Low	Low	High	High	High	Low	Low	None	None
Marketing	High	High	High	High	High	High	High	None	None	None	None	None

None =      Low =      Medium =      High =

**SCHEDULING LABOR**

**Rationale:**

Labor needs also frequently fluctuate with seasons or business cycles. Scheduling labor must therefore be incorporated into planning to reflect upturns and downswings that impact your business production or operations.



*Production manager, production, staff, clients, business manager*



**Planning for Needed Labor**

Prepare a labor schedule that corresponds to your production targets and seasonality of the business cycle. Break down the schedule into a manageable time frame; TARTINA chooses to schedule production in one-week intervals.

- ▲ Include relative information in your schedule, such as the supervisor in charge, output per day, and tasks to be conducted (not used for TARTINA because enterprise groups are responsible for all steps related to producing one type of good). A column that tracks actual production levels against projected levels is advantageous for purposes of analysis and setting future targets.
- ▲ Exhibit 6X shows an example for TARTINA Enterprise.
- ▲ This information will be used in the human resource plan.

## EXHIBIT 6X: LABOR SCHEDULE EXAMPLE

Month	Wk	Products to Produce	Quantity (units) Targets	Output per Shift*	# of Labor	Group Leader	Prod. Agent	Realized	+/-
Jan-00	1	Mamba Karapinia	450	90	6	VV	Marcel	465	+15
			500	100	4		Denise	315	-185
	2	Mamba Karapinia	450	90	6	PL	Marcel	448	+2
			500	100	5		Denise	550	-50
3	Mamba Karapinia	450	90	6	PL	Marcel	470	+20	
		500	100	5		Denise	506	-6	
4	Mamba Karapinia	447	90	6	VV	Marcel	432	+15	
		500	100	5		Denise	470	-30	
Total		Mamba Karapinia	1,797	360				1815	+18
			2,000	400				1841	-159

\*One shift per day, five shifts per week.

TARTINA work groups are comprised of 5-6 clients. On days when fewer than 6 clients were scheduled for each product, production targets were not met. TARTINA production staff may want to revisit its current labor schedule so that output realized is more in line with targets projected.

### Scheduling for a Service Business

**Timebound:** Service businesses are extremely time-bound, limited by the number of hours available when a service can be rendered. Time is thus extremely "perishable," meaning that it can easily be lost or wasted if mismanaged. In a service enterprise the major cost is expertise, that is, the people providing the service; if they are idle, the business will lose money.

**Strategy:** Scheduling is an important part of time management in service businesses. Use Gantt charts or calendars to project the number of service offerings, the times when they will be rendered, and corresponding staff needs. Cross-training service staff so they can do other things to fill excess capacity when rendering services is low—such as help with R&D, marketing, or administrative details—improves productivity and reduces wastage. Contracting for professional expertise during busy seasons is another time management option for service businesses. Finally, developing standard service packages helps increase efficiency and drive down costs.

### GANTT CHART

A Gantt chart (exhibit 6Y) is a good tool for planning service delivery and administrative processes. There are no exercises in this chapter requiring a Gantt chart; it is presented only for demonstrative purposes. Gantt chart lines can easily be added to reflect individual staff linked to operations or production outputs, providing a way to track and evaluate productivity of human resources (see chapter 7). Gantt charts are easy to make, and software to create them is inexpensive.

**EXHIBIT 6Y: GANTT CHART FOR TRAINING INSTITUTION**

Project: New-Product Development "Business Plan Training Series"			Project Schedule Period: First two quarters of Year 1999					
Phase	Activity	Hours	Jan.	Feb.	Mar.	April	May	June
1	Survey training needs/ wants of target market		█					
	Develop new training module concept based on needs			█				
	Contact for consultant to provide TA to develop				█			
	Develop curriculum			█	█			
	Logistics planning			█	█			
	Marketing			█	█			
	Hold introductory or test training					█		
	Customer satisfaction/ evaluation					█		
2	Retool training based on evaluation feedback					█		
	Market new product						█	
	Logistics planning						█	
	Train staff on new product delivery						█	
	Launch new training product							█
	Customer satisfaction/ evaluation							█
3	Standardize training product							█
	Develop accompanying materials							█
	Train staff on final product delivery							█
	Market aggressively							█
	Hire contract staff							█
	Begin regular multiple training series							█

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## Inventory Management

**Inventory**—product that is either completed or in some stage of production and is to be sold in the normal course of the enterprise's business.

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**Shelf life**—length of time before a good spoils or becomes obsolete.

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**Shrinkage**—theft.

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**Unfinished goods inventory**—also called *work in progress*,—the portion of inventory that is in the production process but is not yet a finished good.

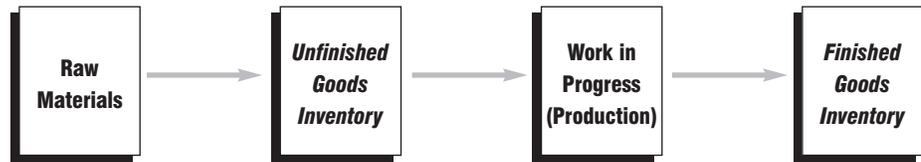
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**Finished goods inventory**—completed products stored in inventory and ready for sale.

**Inventory** management is an important aspect of enterprise management. The type of product your social enterprise sells will determine how you stock and distribute your inventory. Some businesses must keep surplus stocks on hand to minimize production delays and avoid shortages, particularly during high-volume sales periods like holidays. Those that sell perishable products must turn over inventory rapidly and keep precise records of how long each product has been stored to avoid spoilage. Natural peanut butter is such a product and because its oil separates within a few weeks of manufacturing, it cannot sit in a stockroom for long periods of time. Jam, on the other hand, has a **shelf life** of two years, so Chadèque and Grenadia can be stored and distributed when the raw material is no longer in season, which prevents disruptions in sales (and keeps customers happy). Another important factor is that holding inventory costs money. Unsold stock means that capital that could be used elsewhere in the business is tied up in inventory, which has repercussions for cash flow. Managing inventory in a social enterprise requires a delicate balance because finance usually wants inventory levels low while marketing wants ample sales stock on hand. Finally, good inventory management acts as a control system that prevents **shrinkage**, or loss due to theft.

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### INVENTORY FLOW DIAGRAM



#### Bin Cards

To the manager of a modern business, bin cards probably seem archaic, but for a social enterprise that are not automated, they are a reliable and simple method of inventory management. Simply attach a card to the product indicating the batch or lot number and date the product is placed in the finished goods inventory. When marketing managers remove inventory for sale, they select it by date. Bin cards are particularly useful when managing perishable items or seasonal products. They also serve to isolate lots or batches that have defects or have suffered damage. Bin cards are also used in accounting to record inventory valuation.

Tying inventory to sales and production is one method of projecting necessary inventory levels. Exhibit 6Z show an example of such a system. Sales and inventory plans are reconciled with actual figures and built into the MIS. This information is used as well for scheduling production. Ending inventory is subtracted from sales projections to determine the amount that must be produced the following month (see production schedule, end of this chapter).

**EXHIBIT 6Z: MONTHLY SALES AND INVENTORY PLAN**

<i>Month: December</i>		<i>Prepared by: Marketing Manager Submitted to: Accountant and Inventory Manager</i>				
<b>Sales Agent</b>	<b>Product</b>	<b>1. Monthly Sales Objective (Units)</b>	<b>2. Beginning Month Inventory</b>	<b>3. Planned Production</b>	<b>4. Total Product Available for Sale</b>	<b>5. Expected Ending Inventory at Month's End</b>
Martine Du Pré	Mamba	320				
	Chadèque	110				
	Grenadia	150				
	Karapinia	400				
Luc Dominique	Mamba	280				
	Chadèque	80				
	Grenadia	100				
	Karapinia	400				
Catherine Gillet	Mamba	400				
	Chadèque	150				
	Grenadia	150				
	Karapinia	400				
Isabelle Benoit	Mamba	300				
	Chadèque	100				
	Grenadia	200				
	Karapinia	400				
Patrice Michaux	Mamba	300				
	Chadèque	160				
	Grenadia	150				
	Karapinia	400				
<b>Total for Month</b>		<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(2) + (3)</b>	<b>(4) - (1)</b>
	<b>Mamba</b>	<b>1600</b>	<b>39</b>	<b>1,797</b>	<b>1836</b>	<b>236</b>
	<b>Chadèque</b>	<b>600</b>	<b>87</b>	<b>600</b>	<b>687</b>	<b>87</b>
	<b>Grenadia</b>	<b>700</b>	<b>123</b>	<b>1,080</b>	<b>1,203</b>	<b>503</b>
	<b>Karapinia</b>	<b>2000</b>	<b>346</b>	<b>2,000</b>	<b>2,346</b>	<b>346</b>

**Column 1:** *Sales objective*—taken from monthly sales plan for each sales agent.  
**Column 2:** *Beginning month inventory*—Finished Goods Inventory Record (exhibit 6S) verified with physical count.  
**Column 3:** *Planned production*—taken from the Monthly Production Plan for each product (exhibit 6V)  
**Column 4:** *Total product available for sale*—Column 2 + Column 3.  
**Column 5:** *Expected ending inventory at month's end*—Column 4 - Column 1.

*Keeping Mamba inventory low is important to prevent the product from spoiling. Grenadia, on the other hand, can be stockpiled to sell during seasons when it is not produced.*



**Production manager, inventory manager, production staff, clients, PO business advisor, marketing manager**

**Plotting An Inventory Management System for Your Enterprise**

Answer the following inventory management questions:

- ▲ Who is responsible for managing inventory?
- ▲ What is the minimum level of inventory to be maintained at any one time?
- ▲ What is the minimum time needed to get raw materials from suppliers?
- ▲ What is the minimum amount of time necessary to produce goods ordered?
- ▲ What is the minimum time needed to distribute products to customers?
- ▲ What are the reasons for holding inventory (minimize production delays, maximize sales efficiency, avoid shortages, strategically place product on market during certain times of the year, respond to known demand, etc.)?
- ▲ What management information system does your social enterprise use? Manual or automated? How is inventory information linked to the MIS (see exhibit 6S, Information Tracking)?
- ▲ How is inventory management integrated with finance/accounting?
- ▲ How do you track inventory to avoid spoilage or overage?
- ▲ What steps do you take to reduce theft of inventory?
- ▲ What inventory control steps does your social enterprise use (such as MIS coupled with routine physical counts)?



**Inventory Management System included in the Business Plan.**

**Production/Operations Financials**

**DEDUCING COSTS** 

**Rationale:**

Operations and production costs are a major part of social enterprise expenses. Thus, delineating costs helps the social enterprise manager control them and set production targets that cover these costs.



**Partner program manager, PO business advisor, production manager, financial manager, business manager**

**Figuring Out Your Costs**

- ▲ Respond to questions in the following sections on: **Facilities, Labor, and Materials and Supplies.**
- ▲ Complete the equipment schedule in sections entitled **Equipment**; an example is provided for TARTINA in Exhibit AA.

**Facilities (Space)**

- ▲ What is the condition of the facilities? Is there a need for major improvements? What type of improvements?
- ▲ Do you rent or own your building and/or plant? What are the costs associated with this?

- ▲ Are maintenance costs regular costs, or do they vary between high and low production periods?
- ▲ What are your average monthly utility costs for electricity, water, gas, etc.; do these costs vary according to production levels?

### **Labor**

- ▲ Do you use variable (contracted or wage) labor?
- ▲ What are your total labor costs? What percentage is variable labor costs and what percentage is fixed labor costs?
- ▲ What training for labor is needed?  How much does training cost?
- ▲ How many salaried professionals do you have working in the operations of your social enterprise? What are their total costs?
- ▲ What training is included for professional staff?  What are the costs associated with this?

### **Raw Materials and Supplies**

- ▲ What quantity of raw materials do you need to produce the desired amount of output?
- ▲ What is the cost of your raw materials?
- ▲ Are raw material inputs available year-round? If not, are there additional costs related to seasonal raw material acquisition, such as storage or stockpiling, off-season purchase, or advance purchase?

### **Equipment**

- ▲ When will your equipment need to be replaced?
- ▲ What type of equipment will you purchase? When?
- ▲ Use the Inventory Valuation Schedule, in the box entitled “**Useful Life of an Asset.**” This information will also be used in your financial plan (chapter 8) to calculate depreciation.

#### **EXHIBIT AA: TARTINA PRODUCTION EQUIPMENT (PARTIAL LIST)**

Type of Equipment	Condition	Number	Owned Leased	Date Purchased	Total Cost	Monthly Payments	Anticipated Replacement Date
Grinder	Good	2	Owned	May 1998	\$1,212	None	May 2002
Electric Generator	Excellent	1	Owned	Jan 1998	\$2,277	None	Jan. 2008
Blender	Good	3	Owned	May 1998	\$88	None	May 2008
Mixer	Good	3	Owned	Jan. 1998	\$310	None	Jan. 2008
Moped (used)	Fair	2	Owned	March 1999	\$5,150	None	Jan. 2001
Furniture	Good	8 pieces	Owned	April 1997	\$394	None	April 2002
Gas Burners	Good	4	Owned	Nov. 1997	\$150	None	Nov. 2007

### Useful Life of an Asset

In order to calculate annual depreciation for plant and equipment, it is necessary to determine "their useful life" or years of productive use the asset will provide. The equation begins with the "scrap value" of the asset, the approximate worth if resold as waste at the end of its expected life. Scrap value depends on to what extent original materials or components retain value after the asset can no longer be employed for its intended use. For example, the scrap value for a computer is zero, since none of its materials or components can be reused, whereas for a car, steel and spare parts have resale scrap value.

$$\text{Formula: } \frac{(\text{Price of Asset} - \text{Scrap Value})}{\text{Years of Productive life}}$$

Check with local government tax offices or commerce departments in the country where you work to confirm if an official depreciation schedule exists. In many countries, the generally practiced asset depreciation schedule follows:

Fixed Asset	Life	Annual Depreciation
Machinery	10 Years	10%
Building	20 Years	5%
Furniture	5 Year	20%
Vehicle	7 Years	15%

Depreciation Schedules also estimate when you will need to replace equipment.

## PRODUCTION/OPERATIONS BUDGET

Once you have estimated all your operations/production costs, you are ready to prepare an operations budget.

### **Rationale:**

The operations/production budget gives you important expense-side information to project social enterprise operations costs. Operations budget information is filtered into **financial statements** (chapter 8) and used to project enterprise profit or loss. Actual production costs (or budget actuals) equal **costs of goods sold**, which appear in the **income statement (profit and loss statement)** and are used to determine the gross profit margins. Most social entrepreneurs are experienced in budget forecasting and know that a budget is a working document. If estimates are too high when measured against projected sales revenue (chapter 5), probe budget line items to determine which ones can be pared down, or make adjustments to price or sales volume (see break-even analysis, chapter 5).

## Calculating Overhead

Some social enterprises split **overhead** to distinguish between factory and operating overhead. The former includes only those fixed costs associated with producing a good or delivering a service, whereas the latter includes fixed cost functions, such as accounting, secretarial, marketing, management, etc.

There are several reasons why it is important to distinguish between the two types of overhead. First, factory overhead is included in the calculation for costs of goods sold—all costs to make a product or render a service—used in marketing and finance. Second, tracking unit costs before and after operating overhead is one means to incrementally benchmark advancement toward sustainability (see chapter 8, Financial Plan). Third, apportioning overhead can be beneficial if you have several branch offices or plants and want to compare costs between them. And finally, this method will alert you to programs that have disproportionately high operating costs, not uncommon in businesses run by nonprofits.

**Overhead**—the costs of operating a business—such as utilities, administrative offices, supervision, insurance, and maintenance—that cannot be linked directly to products or services produced and do not vary with any fluctuations in production volume. Overhead can be separated to distinguish between factory overhead, or fixed costs associated with production, and operating overhead, or fixed costs or **general and administrative expenses** for operations other than production.



**Same as previous exercise**



### Preparing an Operations Budget

- ▲ Fill in the operations/production budget template provided in exhibit 6BB. A copy of our template can be found in *The Workbook* or create your own.
- ▲ If your social enterprise already has an operating history, use past cost information. If not, verify that projected expenses are grounded on market prices.
- ▲ Calculate costs for each line in item by month.
- ▲ Total fixed production costs (factory overhead), and variable costs.

**Financial statements**—the balance sheet, income statement, and cash flow statement (and sometimes owner's equity), which together provide a fair portrayal of a company's financial condition at the end of an accounting period and the result of operations for the accounting period.

**Costs of goods (COGs) sold**—Costs of inventory sold during an accounting period by the selling enterprise. COGs include all costs to make a product or render a service: labor, raw materials, operations, factory overhead, etc. It is important for social enterprises to list costs of goods sold in their income statement.

**Profit and loss statement**—a financial statement that summarizes the amount of revenue earned and expenses incurred by a business entity over a period of time; also called an **income statement**. In nonprofit accounting, the profit and loss statement is sometimes referred to as the statement of activity.

**EXHIBIT 6BB: PRODUCTION/OPERATIONS BUDGET**

<b>COSTS PER MONTH</b>	<b>AMOUNT</b>	
	<b>Per Month</b>	<b>Annual</b>
<b>Factory Overhead or "Fixed Costs"</b>		
<b>Facilities</b>		
Monthly rent/mortgage payment		
Improvements		
<b>Utilities</b>		
Average monthly utilities		
<b>Maintenance</b>		
Service and repair		
<b>Equipment</b>		
New or replacement equipment		
Depreciation		
<b>Labor</b>		
Production worker (salaries + benefits)		
Management and staff (salaries + benefits)		
<b>R&amp;D*</b>		
Technical assistance		
Other		
Training		
Other		
<b>Total Factory Overhead</b>		
<b>Variable Production Costs</b>		
<b>Variable labor</b>		
Wage or rate		
Production bonuses		
<b>Production inputs</b>		
Raw materials		
Other inputs		
Variable utilities		
Gas, electricity, water, etc.		
<b>Waste or spoilage</b>		
% of estimated product loss		
<b>Transportation (freight)</b>		
<b>Total Variable Costs</b>		
<b>TOTAL OPERATIONS EXPENSES</b>		

**\*Budgeting for Research and Development**

R&D falls under the fixed-costs category, and budgeting for it depends on the industry. If your social enterprise operates in a technology-driven or trend-based industry (such as fashion), your research and development costs will probably be substantial. The diagram in exhibit 6CC plots various industries by their R&D requirements. The case of the dynamic computer industry is obvious; industries driven by patents, like the pharmaceutical industry, also require ample R&D. On the other hand, the tire industry has remained relatively unchanged for years. It is likely that most social enterprises will have low R&D costs; still, the potential costs are important factors to consider during your budget preparations, especially to avoid shocks down the road.

**EXHIBIT 6CC: R&D REQUIREMENTS**

COMPUTERS	PHARMACEUTICALS	FROZEN FOODS	TIRES
High		Low	

**Planning Production Output****SETTING NUMERIC PRODUCTION TARGETS****Rationale:**

Setting annual targets directs production by establishing quantifiable goals (units to be produced and the cost of production).

**EXHIBIT 6DD: NUMERIC PRODUCTION TARGETS FOR TARTINA**

**Objective:** Production targets of 62,500 units for a total cost of U.S. \$45,974

In exhibit 6EE, four months are shown in addition to totals for the year comparing sales targets against production targets. Here it is clear that production targets correspond to sales targets. Slight discrepancies occur between the two to accommodate seasonal ebbs and flows and inventory management. Variable production costs are inputted from the previous budget exercise or the variable cost break-out exercise conducted in chapter 5.

**EXHIBIT 6EE: SALES AND PRODUCTION TARGETS FOR TARTINA**

ANNUAL SALES TARGETS <sup>9</sup> FOR TARTINA ENTERPRISE				ANNUAL PRODUCTION TARGETS FOR TARTINA ENTERPRISE			
Month	Quantity	Variable Production costs in LC <sup>10</sup>	U.S. \$	Month	Quantity	Variable Production costs in LC	U.S. \$
Apr-99	4,400	54,400	3,297	Apr-99	4,120	35,540	2,154
Aug-99	4,000	57,300	3,473	Aug-99	4,073	45,554	2,761
Dec-99	4,900	83,800	5,079	Dec-99	5,377	75,854	4,597
Apr-00	6,400	99,300	6,018	Apr-00	3,694	22,433	1,360
<b>TOTAL</b>	<b>62,500</b>	<b>973,100</b>	<b>\$58,976</b>	<b>TOTAL</b>	<b>62,500</b>	<b>758,570</b>	<b>\$45,974</b>

<sup>9</sup>For all TARTINA products.

<sup>10</sup>LC = Local Currency



Same as previous exercise

### Setting Production Targets

- ▲ Set targets for the number of units to be produced during the year.
- ▲ Calculate total variable production costs required to achieve annual output targets.

### PRODUCTION SCHEDULE

The production schedule is the center of operations plan; it is the strategy you will employ to meet your annual targets. The production schedule details the amount of each good to be produced, and fixes it to a timeline (see exhibit 6GG). Of equal importance, it gives you valuable information needed to manage your cash flow. A monthly production plan should be prepared by the production manager based on input from the marketing manager.

Devising a production schedule requires taking the sales plan and working backwards to the level of finished goods inventory needed to satisfy sales targets. An example is provided in exhibit 6FF. Production and marketing should work together to ensure that seasonal fluctuations are reflected in both sales plans and production schedules (see seasonal scheduling in this chapter).

#### EXHIBIT 6FF: DETERMINING PRODUCTION FOR MAMBA (FEBRUARY 2000)

PLANNED SALES (FROM SALES TARGETS)	1700
PLUS REQUIRED INVENTORY*	150
LESS BEGINNING INVENTORY	103
<b>EQUALS PLANNED PRODUCTION</b>	<b>1,797</b>

\* Surplus stock to hold over during high sales periods, when raw materials are not available for production, or as a "safety stock" to avoid running out.

#### Rationale:

A production schedule is a tool to ensure that an adequate quantity of goods is being produced to suffice the needs of sales. It also helps anticipate outlays of cash needed for production. Finally, a production schedule benchmarks incremental progress toward achieving final targets, thus measuring whether you're on track.



Same as previous exercise

### Developing a Production Schedule

- ▲ Establish a production plan **for each product** that demonstrates how you will achieve stated production targets.
- ▲ Use the worksheet in *The Workbook* or create your own.
- ▲ Schedule by month for the year (or corresponding to your sales targets timeline). Tracking periods of longer than one month leaves too much margin for errors to

occur and too little time to correct them when they do. Internally, production agents should have daily and weekly production schedules so that they can keep very close tabs on realizing output objectives.

- ▲ List a column for production costs in whatever currency is consistent with other enterprise financial reports and a column for per-unit costs.
- ▲ Follow the TARTINA example in 6GG.

 **Production schedule is included in the Business Plan.**

<b>EXHIBIT 6GG: ANNUAL PRODUCTION SCHEDULE FOR MAMBA PEANUT BUTTER</b>				
<b>Month</b>	<b>Quantity</b>	<b>Variable Unit Costs</b>	<b>Monthly Costs in Local Currency</b>	<b>Monthly Costs in U.S. \$</b>
<b>Apr-99</b>	1,320	19.5	25,740	1,560
<b>May-99</b>	1,320	19.5	25,740	1,560
<b>Jun-99</b>	1,173	19.5	22,874	1,386
<b>Jul-99</b>	1,173	19.5	22,874	1,386
<b>Aug-99</b>	1,173	19.5	22,874	1,386
<b>Sep-99</b>	1,393	19.5	27,164	1,646
<b>Oct-99</b>	1,393	19.5	27,164	1,646
<b>Nov-99</b>	1,393	19.5	27,164	1,646
<b>Dec-99</b>	1,797	19.5	35,042	2,124
<b>Jan-00</b>	1,797	19.5	35,042	2,124
<b>Feb-00</b>	1,797	19.5	35,042	2,124
<b>Mar-00</b>	1,977	19.5	38,552	2,336
<b>Apr-00</b>	594	19.5	11,583	702
<b>TOTAL</b>	<b>18,300</b>		<b>356,850</b>	<b>\$21,627</b>

## **Social Impact Assessment and Monitoring Systems**

### **Rationale:**

Affording economic opportunities to disadvantaged populations through a social enterprise is a means to have a deep positive impact on their lives. Measuring social impact is important for managers to evaluate effectiveness in reaching enterprise social goals. Donor-investors are also interested in seeing increased social impact in the enterprise programs they fund. Unfortunately, quantifying and measuring social value creation is difficult due to its frequently elusive nature. For example, how does one capture results such as peace of mind, increased confidence or self-esteem, which are often realized by social enterprise programs? Although social entrepreneurs may never succeed in quantifying all levels of impact, it is possible to measure certain social indicators with relative accuracy in order to assess the social value created by the enterprise.

Social impact assessment and monitoring flows from social impact objectives set in chapter 2; it is your internal system to track the accomplishment of your stated

social objectives. Many social entrepreneurs will track other indicators as a means to develop and test their systems. Indicators vary widely among social enterprises depending on the type of client the enterprise serves and the impact it is trying to achieve.



This section concerns the need to include a system to monitor and assess social impact in your social enterprise's operations. It does not provide concrete methodological explanations other than some examples, which may or may not apply to your program. Several methodologies have been developed to provide social entrepreneurs with essential tools to measure social value creation.<sup>1</sup> Examples of impact indicators in this section are grossly oversimplified and provided for illustrative purposes only (exhibit 6HH).

## EXHIBIT 6HH: EXAMPLES OF SOCIAL IMPACT INDICATORS FOR THE SOCIAL ENTERPRISE

### DIRECT IMPACT INDICATORS (RESULT OF SOCIAL ENTERPRISE)

INDICATOR	QUANTIFIED BY
Scale	Total number of clients receiving service
Employment creation	Jobs created or work hours created
Work autonomy	Number of clients per supervisor or # of supervisory hours
Net income	Changes in income per client
Income adequacy	1) Unable to meet basic needs; 2) able to meet basic needs; 3) beyond basic needs; 4) beyond basic needs + savings
Skills acquisition	Level of difficulty of skill or number of skills learned
Assumes greater responsibility	Internal promotion
Wealth accumulation	Monetary value of assets accumulated including savings deposits

<sup>1</sup>For additional reading on methodologies to measure social impact, we recommend: the chapter entitled "Social Return on Investment: Exploring Aspects of Value Creation in the Nonprofit Sector," by Jed Emerson, Jay Wachowicz and Suzi Chun, from *Investor Perspectives*, Roberts' Foundation, 2000, SF, CA; and "Learning from Clients: Assessment Tools for Microfinance Practitioners," *Assessing the Impact of Microenterprise Services (AIMES)*, by The SEEP Network, January 2000, Washington, DC.

**INDIRECT IMPACT INDICATORS (RESULT OF INCREASED INCOME, ADJUNCT PROGRAMMING OR EMPLOYMENT BENEFITS)**

*These indicators are often difficult to measure and may require substantial time to see meaningful results.*

<b>INDICATOR</b>	<b>QUANTIFIED BY</b>
Improved housing	Own permanent housing (rented room, apartment), larger house, safer neighborhood, etc.
Quality of diet	# of meals per day, protein eaten per week, quality/nutritional value of food eaten
Increased autonomy	Improved self care, minimal assisted living, own bank account
Access to health care	Health insurance, money for health care, health service provided through program, etc.
Improved health	Fewer sick days, fewer hospitalizations, less medication, etc.
Access to Education	Classes or training offered by enterprise or parent organization, tuition reimbursement or educational incentives offer, time provided for classes
Improved Education	Increased literacy rate, received GED, reading at X grade level, new skills (other than skills related to employment)
Increased functionality	<b>Soft skills</b> —communications, punctuality, ability to work with team, stable mood/frame of mind, concentration

**Soft Skills**—social and interpersonal skills that clients may be lacking due to their disadvantaged circumstances.

**IMPACT INDICATORS FOR ENTERPRISES PROVIDING SERVICES TO SELF-EMPLOYED PERSONS**

Business complexity	Trade, service, production, agriculture, combination
Status of business	Nonregistered, registered
Business space	Ambulatory, stationary-rented, stationary-owned
Seasonality of business operations	Months during the year business operate
Number of employees	Employs owner only, employs # of family members, employs # of externally hired employees
Profitability	Sales growth, net income, gross profit margin

## ***Helpful Hints for Creating an Impact Assessment and Monitoring Systems***

### **\* Begin With a Baseline Study**

The baseline study measures target population before they become beneficiaries of the social enterprise program. Gather baseline on the social impact information you intend to monitor. Questionnaires, survey tools and interviews may be used to triangulate responses and ensure you are getting an accurate picture. Be consistent in the tools you use for "client intake" in your baseline study.

### **\* Well-Defined Indicators**

It is important that indicators are clearly defined and understood by those who collect information as well as by those who use it. The strength of an impact monitoring system is dependent on the depth of understanding on which it is built. If indicators are ambiguous, interpretation of data will not be meaningful. If you cannot set concise parameters to succinctly measure increases in social impact understood by all users, discard the indicator.

### **\* Systematic Gathering of Information Linked to an MIS**

Enterprise staff with regular direct client contact (i.e. production supervisors or loan officers) should be charged with systematically gathering impact information as part of their responsibilities. Data is then entered into a Management Information System (MIS) that can be viewed by different users. This is a sound method of creating a measurement system that can be used regularly by enterprise staff and management.

### **\* Time Savvy**

Monitoring social impact can be time consuming! Limit time dedicated to data collection and data entry to the minimum necessary to track core impact indicators. Running the enterprise and working with the clients should take the majority of the staff time. Significant additional effort in impact monitoring may lead to more quality data being collected, yet detract from the program itself.

### **\* Data Interpretation Supported by Dialogue**

Data alone is often insufficient to interpret social impact. For example, in one of Save the Children's programs, a number of clients reported increases in family food expenditures; however, the data was unable to explain why these increases occurred (i.e. higher disposable income, increased food prices, change in number of dependents, seasonal factors, economic factors outside the country, etc.). Enterprise staff conducted interviews with clients to augment data and improve accuracy of their analysis.

### **\* Appropriate Tools/Sample Size**

Several impact gathering methods and measurement tools have been developed. It is essential to have the right mix of surveys, interviews, questionnaires, data checklists and the appropriate sample size to validate findings. Consistent use of tools is important when conducting longitudinal studies, yet inconclusive data (as in the case above) may indicate methodological gaps necessitating a change in one tool or different combination of tools. Hence flexibility is also important in the course of developing a reliable impact assessment and monitoring system.

### ✱ Case Studies

Case studies personalize the account of your clients; they give clients a public face and create reader empathy and understanding that statistics cannot. They also make the story and challenges of your social enterprise vivid to a larger audience. Case studies serve dual purposes: anecdotal measures of impact for donors, investors and peers, and as marketing and public relations vehicles. Case studies also substantiate statistical data. Save the Children has learned that conducting detailed longitudinal qualitative case studies with a sample of clients strengthens social impact monitoring.

### ✱ Balanced Methods

A balanced approach using both quantitative and qualitative data is necessary to accurately capture changes in social impact. Each method has advantages and disadvantages, and must be evaluated on its merits for gathering the type of information you want to measure. To make your impact assessment and monitoring system effective use a combination of the best quantitative and qualitative methods.

### ✱ Imprecise Science

Until significant methodological inroads have been made, assessing and monitoring social enterprise impact will remain an imprecise science. Therefore, social entrepreneurs are tasked with trail blazing: testing and developing impact measurement systems to satisfy the needs of their donors and enterprise management. Hopefully, social entrepreneurs will share their social impact monitoring lessons and successes through documentation, conferences and other forums in order to develop best practices.



***Business manager, partner or PO social program managers, staff with direct client contact, MIS professional, PO business advisor, external statistician or impact specialist (if desired)***



### ***Developing Impact Assessment and Monitoring Systems***

In summary form respond to the following questions:

- ▲ What kind of baseline information will be gathered from clients entering your social enterprise? How will baseline information be collected? (Attach samples of baseline tools in business plan appendices.) 
- ▲ What social indicators will you routinely track? How will indicators be quantified? How frequently will social impact information be collected? Using which tools? (Samples of interview guidelines, questionnaires, surveys, etc., can be attached in the business plan appendix.) 
- ▲ What does this social impact information tell you about your enterprise?
- ▲ Who will be responsible for gathering impact information? Analyzing it? 

- ▲ What provisions will be taken to ensure impact information is accurate and appropriately interpreted? Is there a system of checks and balances or a means to triangulate information? 📄
- ▲ How will you evaluate your impact assessment and monitoring system?
- ▲ How will social impact information be used by management and staff? What types of programmatic decisions will be based on this information? 💰 👤
- ▲ impact assessment and monitoring be linked to an MIS? If so, how will this work? 📄



**Impact Assessment and Monitoring Information is included in the Business Plan.**

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client-producers*



