

## **Manufacturing and Operations Plan**

The manufacturing and operations plan needs to include such factors as plant location, the type of facilities needed, space requirements, capital equipment requirements, and labor force (both full- and part-time) requirements. For a manufacturing business, the manufacturing and operations plan needs to include policies on inventory control, purchasing, production control, and which parts of the product will be purchased and which operations will be performed by your workforce (called make-or-buy decisions). A service business may require particular attention to location (proximity to customers is generally a must), minimizing overhead, and obtaining competitive productivity from a labor force.

### *A. Operating cycle.*

- Describe the lead/lag times that characterize the fundamental operating cycle in your business.
- Explain how any seasonal production loads will be handled without severe dislocation (e.g., by building to inventory or using part-time help in peak periods).

### *B. Geographical location.*

- Describe the planned geographical location of the business. Include any location analysis, and so on, that you have done.
- Discuss any advantages or disadvantages of the site location in terms of labor (including labor availability, whether workers are unionized, wage rates, and outsourcing), closeness to customers and/or suppliers, access to transportation, state and local taxes and laws (including zoning and environmental impact regulations), access to utilities (energy use and sustainability), and so forth.

### *C. Facilities and improvements.*

- For a startup, describe how and when the necessary facilities to start production will be acquired.
- Discuss whether equipment and space will be leased or acquired (new or used) and indicate the costs and timing of such actions and how much of the proposed financing will be devoted to plant and equipment.
- Explain future equipment needs in the next three years.
- For startups expecting to outsource manufacturing, indicate the location and size of the firm, and discuss the advantages, risks, and monitoring regime.
- Discuss how and when, in the next three years, plant space and equipment will be expanded and capacities required by future sales projections and any plans to improve or add existing plant space. Discuss any environmental impacts related to those expansion requirements. If there are any plans to move the facility, outsource labor, or move production overseas, discuss the impact on the local community. Indicate the timing and cost of such acquisitions.

### *D. Manufacturing strategy and plans.*

- Describe the manufacturing processes involved in production of your product(s) and any decisions with respect to subcontracting of component parts, rather than complete in-house manufacture.
- Justify your proposed make-or-buy policy in terms of inventory financing, available labor skills, and other nontechnical questions, as well as production, cost, and capability issues.
- Discuss who potential subcontractors and/or suppliers are likely to be and any information about, or any surveys that have been made of, these subcontractors and suppliers.
- Present a production plan that shows cost/volume/ inventory level information at various sales levels of operation with breakdowns of applicable material, labor, purchased components, and factory overhead.
- Describe your approach to quality control, production control, and inventory control; explain what quality control and inspection procedures the company will use to minimize service problems and associated customer dissatisfaction.
- Describe the environmental sustainability of your operations, including the activities of your subcontractors and suppliers.

### *E. Regulatory and legal issues.*

- Discuss any relevant state, federal, or foreign regulatory requirements unique to your product, process, or service such as licenses, zoning permits, health permits, and environmental approvals necessary to begin operation.

- Note any pending regulatory changes that can affect the nature of your opportunity and its timing.
- Discuss any legal or contractual obligations that are pertinent as well.