HARVARD | BUSINESS | SCHOOL

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Kristen's Cookie Company (A1)[1]

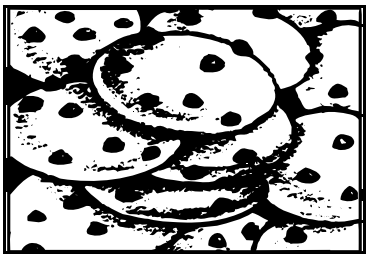

Illustration by Jane Simon

You and your roommate are preparing to launch Kristen's Cookie Company in your on-campus apartment. The company will provide fresh cookies to hungry students late at night. You need to evaluate the preliminary design for the company's production process in order to make key policy decisions, including what prices to charge, what equipment to order and how many orders to accept, and to determine whether the business can be profitable.

Business Concept

Your idea is to bake fresh cookies to order, using any combination of ingredients that the buyer wants. The cookies will be ready for pickup at your apartment within an hour.

Several factors will set you apart from competing products such as store-bought cookies. First, your cookies will be completely fresh. You will not bake any cookies before receiving the order; therefore, the buyer will be getting cookies that are literally hot out of the oven.

Second, like many Boston-based area ice-cream shops, you will have a variety of ingredients available to add to the basic dough, including chocolate chips, M&M's, chopped Heath bars, coconut, walnuts, and raisins. Buyers will telephone in their orders and specify which of these ingredients they want in their cookies. You will guarantee completely fresh cookies. In short, you will have the freshest, most exotic cookies anywhere, available right on campus.

The Production Process

Baking cookies is simple: place all the ingredients in a mixing bowl and mix them; spoon the cookie dough onto a tray; put the cookies into the oven; bake them; take the tray of cookies out of the

[1] This case is intended to be used with "Kristen's Cookie Company (A2)," HBS No. 686-094.

Professor Roger Bohn prepared this case with the assistance of Research Associates K. Somers and G. Greenberg. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

oven; let the cookies cool; and, finally, take the cookies off the tray and carefully pack them in a box. You and your roommate already own all the necessary capital equipment: a high-capacity professional-grade electric mixer, cookie trays, and spoons. Your apartment has a small oven that will hold one tray at a time. Your landlord pays for all the electricity. The variable costs, therefore, are merely the cost of the ingredients (estimated to be $0.60/dozen), the cost of the box in which the cookies are packed ($0.10 per box; each box holds a dozen cookies), and your time (what value do you place on your time?).

A detailed examination of the production process, which specifies how long each of the steps will take, follows. The first step is to take an order, which will be extremely fast and 100% accurate, since your roommate has devised a method using the campus e-mail system to accept orders and to inform customers when their orders will be ready for pickup. Because this runs automatically on your personal computer, it does not take any of your or your roommate's time. Therefore, this step will be ignored in further analysis.

You and your roommate have timed the necessary physical operations. The first physical production step is to wash out the electric mixer's bowl and beaters from the previous batch, add the ingredients to the bowl, and turn on the mixer to mix the ingredients. The electric mixer can hold and mix ingredients for up to three dozen cookies. You then spoon the cookies, one dozen at a time, onto a cookie tray. These activities take 6 minutes for the washing and mixing steps, regardless of how many cookies are being made in the batch. That is, to mix enough dough and ingredients for three dozen cookies takes the same 6 minutes as for one dozen cookies. However, spooning the cookies onto the tray takes 2 minutes per tray.

The next step, performed by your roommate, is to put the cookies in the oven and set the thermostat and timer, which in total takes about 1 minute. The cookies bake for the next 9 minutes. So total baking time is 10 minutes, during the first minute of which your roommate is busy setting the oven. Because the oven only holds one tray, a second dozen takes an additional 10 minutes to bake.

Your roommate also performs the last steps of the process by first removing the cookies from the oven and putting them aside to cool for 5 minutes, then carefully packing them in a box and accepting payment. Removing the cookies from the oven takes a negligible amount of time, but it must be done promptly. It takes 2 minutes to pack each dozen and about 1 minute to accept payment for the order.

This is the process you plan to use to produce cookies by the dozen at Kristen's Cookie Company. As experienced bakers know, a few simplifications were made in describing the actual cookie production process. For example, the first batch of cookies for the night requires preheating the oven. However, such complexities will be put aside for now. Begin your analysis by developing a process flow diagram of the cookie-making process.

Key Questions to Answer Before You Launch the Business

To launch the business, you need to set prices and formulate rules for accepting orders. Some issues will be resolved only after you get started and try out different ways of producing the cookies. Before you start, however, you at least want a preliminary plan, with as much as possible specified, so that you can do a careful calculation of how much time you will have to devote to this business each night, and how much money you can expect to make. For example, when you conduct a market survey to determine the likely demand, you will want to specify exactly what your order policies will be. Therefore, answering the following operational questions should help you:

1. How long will it take you to fill a rush order?

2. How many orders can you fill in a night, assuming you are open four hours each night?

3. How much of your own and your roommate's valuable time will it take to fill each order?

4. Because your baking trays can hold exactly one dozen cookies, you will produce and sell cookies by the dozen. Should you give any discount for people who order two dozen cookies, three dozen cookies, or more? If so, how much? Will it take you any longer to fill a two-dozen cookie order than a one-dozen cookie order?

5. How many electric mixers and baking trays will you need?

6. Are there any changes you can make in your production plans that will allow you to make better cookies or more cookies in less time or at lower cost? For example, is there a bottleneck operation in your production process that you can expand cheaply? What is the effect of adding another oven? How much would you be willing to pay to rent an additional oven?

Problems for Further Thought

1. What happens if you are trying to do this by yourself without your roommate?

2. Should you offer special rates for rush orders? Suppose you have just put a tray of cookies into the oven and someone calls up with a "crash priority" order for a dozen cookies of a different flavor. Can you fill the priority order while still fulfilling the order for the cookies that are already in the oven? If not, how much of a premium should you charge for filling the rush order?

3. When should you promise delivery? How can you look quickly at your order board (list of pending orders) and tell a caller when his or her order will be ready? How much of a safety margin for timing should you allow?

4. What other factors should you consider at this stage of planning your business?

5. Your product must be made to order because each order is potentially unique. If you decide to sell standard cookies instead, how should you change the production system? The order-taking process? Other policies?