

Part A. Low End: compete on cost

MANAGMNT 494BI | Week 2 | Individual exercise | September 16, 2026

You are on a Team called Baldwin and are preparing Round 2 decisions after reviewing Round 1 results. Your team sells a Low End sensor called Base. Rivals are cutting prices, adding capacity and investing in automation. Your task is to defend a cost-leadership position without starting a price war you cannot afford.

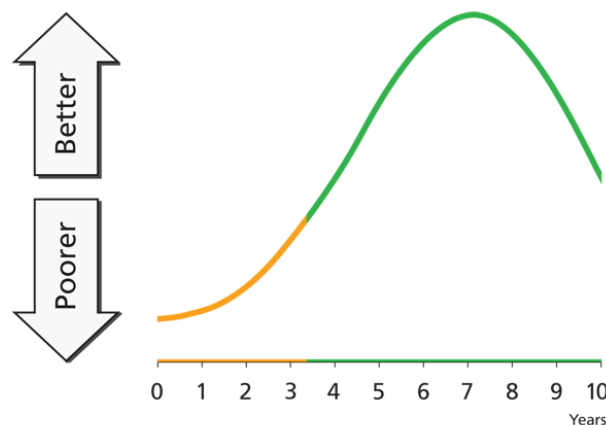
This is a constructed teaching case, not a historical team's actual Round 2. All company, price, demand, cost and forecast figures below are hypothetical. Buying-criteria weights mirror an archived class Courier and what is typical. Use these assumptions for the exercise; your live simulation's Industry Conditions Report and Courier govern actual decisions.

What Low End customers value

Buying criterion	Weight and case interpretation
Price	53% — lower prices within the acceptable range improve appeal.
Age	24% — customers prefer a mature product, around 7 years old.
Positioning	16% — performance and size must fit the segment.
Reliability (MTBF)	7% — acceptable range: 12,000–17,000 hours.

Think of buying criteria and the % weight given to each criteria as elements of a demand algorithm. For this product, price is 53%, that is roughly half of the buyer's decision making criteria. But notice that age is 24%, roughly one quarter. **There is a trap if you don't understand the Industry Conditions Report for Low End products.** This buyer group does not want newer sensors. Normally R & D means updating a product each year by changing the speed and size. But with the Low End buyer, they don't want a newer improved product because that will mean they have to spend money renewing their production process and for their product (Billy Big Mouth Bass) they don't want to add any cost to the process. So, if we look at the Industry Conditions Report, we see a graph that looks like a mountain or a hill. For this product, the ideal age is 7 years. How old is your product now? Changing any element, speed or size, cuts your age in half. **You want your product to get older.** So to do this, **you should not make changes to the product's size or speed.** So for this product, R & D means doing nothing! That includes for Round 1. Leave them where they are and in one year, the product will get closer to the ideal age.

Low End: ideal perceived age = 7 years



Low End customers give higher age scores to sensors near 7 years old. This curve shows age preference, not total demand. Source: Capsim Capstone 2.0 Industry Conditions Report, p. 9.

Round 1 result / Round 2 assumption	Base
Round 1 price / units sold	\$20 / 1,000 thousand units
Round 2 material / first-shift labor cost	\$8 / \$4 per unit
Starting inventory / first-shift capacity	100 / 1,200 thousand units
Automation available in Round 2	4.0
Age at start / reliability	3 years / 14,000 hours
Awareness / accessibility	60% / 55% at end of Round 1

Assume Base stays within the segment's acceptable positioning area throughout Round 2 without revision. Its age would reach 4 at year-end if unchanged. In what round will the product get to 7 years of age?

Round 1 segment demand was 6,000 thousand units; assumed Round 2 growth is 10%. Rivals' combined first-shift capacity rises from 5,400 to 6,000 thousand units in Round 2, following investments made in Round 1. Their available automation also rises. Planning intelligence suggests rival prices of \$18–\$19, versus \$20–\$21 last round. These expected prices are uncertain, not decisions visible in advance.

Exercise A. Respond without chasing volume

Work individually | Approximately 15–20 minutes | Calculator or spreadsheet

Marketing offers three scenarios. Sales volumes are assumptions to challenge, not outputs from a Capstone demand formula. Keep the same \$8 material and \$4 first-shift labor costs in all three. For this short exercise, assume opening inventory has the same \$12 unit cost. Omit inventory carrying costs, taxes, interest and other overhead.

Round 2 option	Price / assumed sales (thousand units)
A1. Hold some price discipline	\$19 / 1,050
A2. Match the expected lowest rival	\$18 / 1,200
A3. Undercut the expected market	\$17 / 1,300

1. Diagnose the challenge

Try to estimate Round 2 segment demand. It is challenging but there are two methods presented in the Capstone Users Guide. One is a simple method based on industry growth. One is a method that uses the Courier Report and a metric called Customer Satisfaction. Learn to use both methods because estimating demand correctly for forecasting, is one of the most crucial elements of the simulation. It is where most teams make mistakes and other teams succeed. Compare the forecast for 2027 with total first-shift capacity. Ideally, you will have a forecast that is between 120 and 130% of your first shift capacity. (There are exceptions to this). The reason you want to produce at 120% of first shift capacity is due to having two shifts available and the benefits of using some overtime but not too much. It is economically better to use some overtime that buying too much capacity. It is a delicate balance.

Assume other teams will understand that price is very crucial to drive demand in the segment. What if they lower their price to \$17 and we are at \$18? All things being equal, they are going to get more market share.

2. Test the economics

To do well in the simulation, you need to try to get contribution margin above 30% for each product. But this is not easy to do and gain market share.

For each option, you should be able to calculate: (a) unit contribution = price – material cost – labor cost; (b) total contribution = unit contribution × sales; (c) contribution margin percentage = unit contribution ÷ price; and (d) production required = forecast sales – opening inventory, assuming zero desired ending inventory. Quantities are in thousands, so dollar contribution totals are in \$ thousands.

OR you can work within Capstone and view contribution margin within the Marketing Page in the simulation. It is dynamic and will change when you change other factors such as price.

The idea is to make profits, but the game is 8 years long during the main Tournament. It is 4 years during our Footrace for training and for the final exam. So sometimes, a good strategy involves gaining market share before making profits. There are trade-offs and you should figure out how you want your company to compete.

3. Make the decisions fit together

Choose A1, A2 or A3, or defend a different price with an explicit sales assumption. Write a 100–150 word recommendation covering price, production, R&D, marketing and automation. State one decision you would deliberately avoid. Should you reposition Base just to make it “newer”? Should you eliminate promotion and sales spending simply because you are pursuing low cost?

Capacity and automation bought during Round 2 become available in Round 3, not immediately. Higher automation reduces labor requirements but uses cash and can lengthen subsequent R&D repositioning projects. Do not use next round’s savings in this round’s price calculations. You may recommend a direction for future automation; you are not required to calculate an investment budget.

In Capstone, promotion builds awareness; the sales budget supports accessibility. Neither means unlimited spending is worthwhile. Repositioning halves perceived age at completion; changing MTBF alone does not. More reliability also costs more. Low cost means coordinating necessary activities efficiently, not removing every activity that costs money.

Part B. High End: earn a premium

A separate team and product | Same Round 2 decision point

Now you are on a team that wants to focus on differentiation in the High End segment. Your sensor, Nova, must justify its premium through characteristics customers value. This is not a low cost segment, not a segment that cares about price very much. Look at the criteria below.

What High End customers value

Buying criterion	Weight and case interpretation
Positioning	43% — performance and size close to the moving ideal point.
Age	29% — a preference for very new products, around 0 years.
Reliability (MTBF)	19% — acceptable range: 20,000–25,000 hours.
Price	9% — case acceptable range: \$30–\$40.

High End customers place much more weight on positioning, freshness and reliability than Low End customers do. It is almost the antithesis of the Low End. Price hardly matters. This segment was product as close to the ideal position as possible. This is hard to get done within 12 months which presents a dilemma. R & D changes need to lead to a product that comes out within the year, otherwise, you won't have a Customer Satisfaction score and therefore won't be able to predict demand very well. **Products need to get launched (Revision Date) by the end of November in the current year.** Age is important, 29% of buying criteria. How to get a product that is 0 years of age? That is a brand new product that just launched. And due to the physics of time, a product that is 0 years of age, only stays 0 years of age for an instant before it starts aging. Zero years of age on January 1 would lead to a product that is 1 years old at year end. MTBF (Mean Time Between Failure) is 19% of the decision for these buyers. Price is only 9%. So don't discount this product to make it sell better. Try to maximize profit through gaining market share.

Nova and a rival: the decision context

Planning information	Hypothetical case facts
Nova's age / MTBF at Round 2 start	1.5 years / 22,000 hours
Nova without an R&D revision	Drifts behind the ideal, but stays acceptable; age reaches 2.5.
Rival's expected offer	\$36; near ideal after an early revision; 24,000-hour MTBF.
Nova's awareness / accessibility	55% / 45% at end of Round 1
Starting inventory / first-shift capacity	50 / 800 thousand units
Round 1 segment demand / Round 2 growth	2,000 thousand units / 15%
Available automation	3.0; financing of existing operations is assumed sufficient.

R&D offers a focused revision that completes July 1, improving positioning toward the moving ideal and raising reliability to 24,000 hours. Assume the old version stays acceptable until then. Before completion, the old specifications remain in effect. A more ambitious redesign would not finish until March of Round 3. "Better specifications eventually" therefore need not mean better competitiveness during Round 2.

For a simplified age calculation, treat July 1 as half a year after January 1. Nova ages normally until revision; repositioning then halves its age, after which normal aging resumes. No exact perceptual-map coordinates are required in this introductory case. In the live simulation, check the moving ideal, revision date and projected age in R&D.

Exercise B. Build a differentiated offer

Work individually | Approximately 15–20 minutes | Use evidence, not labels

Compare these two plans. Full-year sales and average variable unit costs are teaching assumptions, not guaranteed forecasts. The revised plan's unit cost is a blended full-year figure covering sales before and after July 1, including opening inventory. Marketing outlays are full-year; do not add them twice.

Hypothetical full-year plan	B1. Maintain	B2. Differentiate
Price / assumed sales (thousand)	\$34 / 600	\$38 / 650
Average variable unit cost	\$20	\$22
R&D expense	\$0	\$1.0m
Promotion / sales budget	\$1.0m / \$1.0m	\$1.5m / \$1.5m
Product action	No revision	July 1 focused revision

1. Explain the customer logic

Calculate Round 2 segment demand if you can. Explain why a \$38 product might outsell a \$34 product, and identify two conditions under which it would not. Distinguish stronger customer value from simply adding features. Why is maximizing MTBF or automation not automatically the right differentiation strategy?

2. Test whether the premium pays

For each plan you should be able to calculate unit contribution, total contribution, and contribution less the listed R&D, promotion and sales expenses. (Or, within the simulation, you can adjust pricing and volume and get the simulation to do the calculations for you).

This last figure is a partial comparison, it is not net profit: depreciation, administration, interest, taxes and other costs are omitted. Calculate required production after using the 50 thousand units of opening inventory. Does either plan require a second shift?

Do you have too much capacity? If so, you might want to sell some capacity.

At \$38 and \$22 variable unit cost, how many units must B2 sell to match B1's contribution after the listed expenses? Compare that threshold with B2's assumed sales. Would you accept B2's forecast without additional evidence?

3. Evaluate timing and choose a coherent plan

Calculate Nova's age immediately before and after the July 1 revision and at year-end. Compare with no revision. Explain the disadvantage of waiting until March of Round 3 for the ambitious redesign. Identify what you would check in R&D before committing.

Write a 100–150 word recommendation: choose or modify B1/B2, justify the price using customer criteria, specify R&D timing and marketing priorities, and give a production forecast plus its main risk. Explain why immediately maximizing automation could conflict with frequent repositioning. Name one Low End decision from Part A that you would not transfer unchanged to this product.

Final comparison and sources

Complete: “Our Low End advantage depends on ____, whereas our High End advantage depends on ____.” These are segment-level illustrations, not proof that a whole company must compete in only one segment. Submit your calculations and both recommendations as one individual response; your instructor will specify the submission method and deadline.

Sources: archived class Round 6 Courier, Low End and High End buying criteria (weights and preferences only); Capsim Capstone 2.0 Team Member Guide (https://ww3.capsim.com/modules/GIA/files/1_o/o/CapsimPlatform/EN/PDF/Capstone_User_Guide_v4.pdf), sections on R&D, Marketing and Production. All operating figures and rival moves are invented for teaching; no former students’ results are reproduced. Prepared September 15, 2026.