

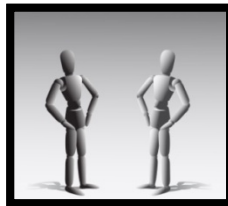
Think Ink (TI)

*Think Ink's profit has begun to leak.
Can you clean up the mess?*

Difficulty Rating: Average (3/5 stars)



I'm a Twin Case!



Register for our online learning system,
the Virtual Training Camp (VTC) at
mbacase.com to find my twin case.
Reinforce what you learned here on a
case just like this one, but with a different
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consistent, strong case skills.

Twin Case: Maxson's Mattresses

MBACASE
serious case interview prep

Interviewer Fact Sheet

Case Question

Think Ink is a \$700 million (revenue) manufacturer of ink and related products. Their product offering consists of over 22 different products lines, grouped into six broad categories: laser cartridges, cleaning kits, laser ink, ink jet ink, ink jet cartridges and laser drums. Through consistent quality and good relationships with printers, ink cartridge manufacturers and printer manufacturers, their profit has been growing until last year. Year-end estimates indicate that gross profit could be down by as much as 40%. Naturally, Think Ink (Think) wants to get to the bottom of this profit problem as soon as possible. How would you determine what is the cause of the profit loss, and how would you resolve it?

Intro Facts

(Tell the Candidate if Asked)

- **Product Lines** – Each category has at least two grades (product lines). In total the company has hundreds of SKUs (stock keeping units = single products).
- **Revenue History** – Think has had stable revenue over the years. There's no more data on this topic.
- **Revenue by Product Line** – There is no specific information by product line. Before the drop their revenue was \$700M per year.
- **Overall Profit Margin** – Typical profit margin is 40% for the all revenue. Profit margin varies by product line.
- **Recent Trends** – ****WARNING:** Give this trend data in the middle of the case and only after the candidate has done the profit analysis and recognizes the drop in laser ink volume.**
 - *"Recently, a large competitor has introduced a new kind of ink jet ink. More affordable, compact and capable of producing the same quality output as laser jet ink, its sales have taken off. Customers are switching to printers that use this new technology. Many customers are abandoning laser ink products as they are too expensive."*

Key Insights

(Do Not Tell the Candidate)

Get Your Financial Perspective First

This case gives you most of the data in the beginning to quickly determine the full dollar value of the profit problem. After asking for the profit margin, calculate the annual profit at \$210M. A 40% drop in this number is \$84M.

Break Down the Problem Systematically

The \$84M profit loss may be caused by several factors, so you need to use a formula to be thorough. Profit = Revenue minus Costs. Break down revenue into price and volume to find out if either has gone down. Look into costs to understand if there have been increases.

Work Toward a Practical Solution

Once you uncover that the volume is down in the laser ink category, you need to work toward a solution. Shifting to new product lines takes time and developing cost effective approaches is difficult. Think through what levers are under your control and how you can best use them.

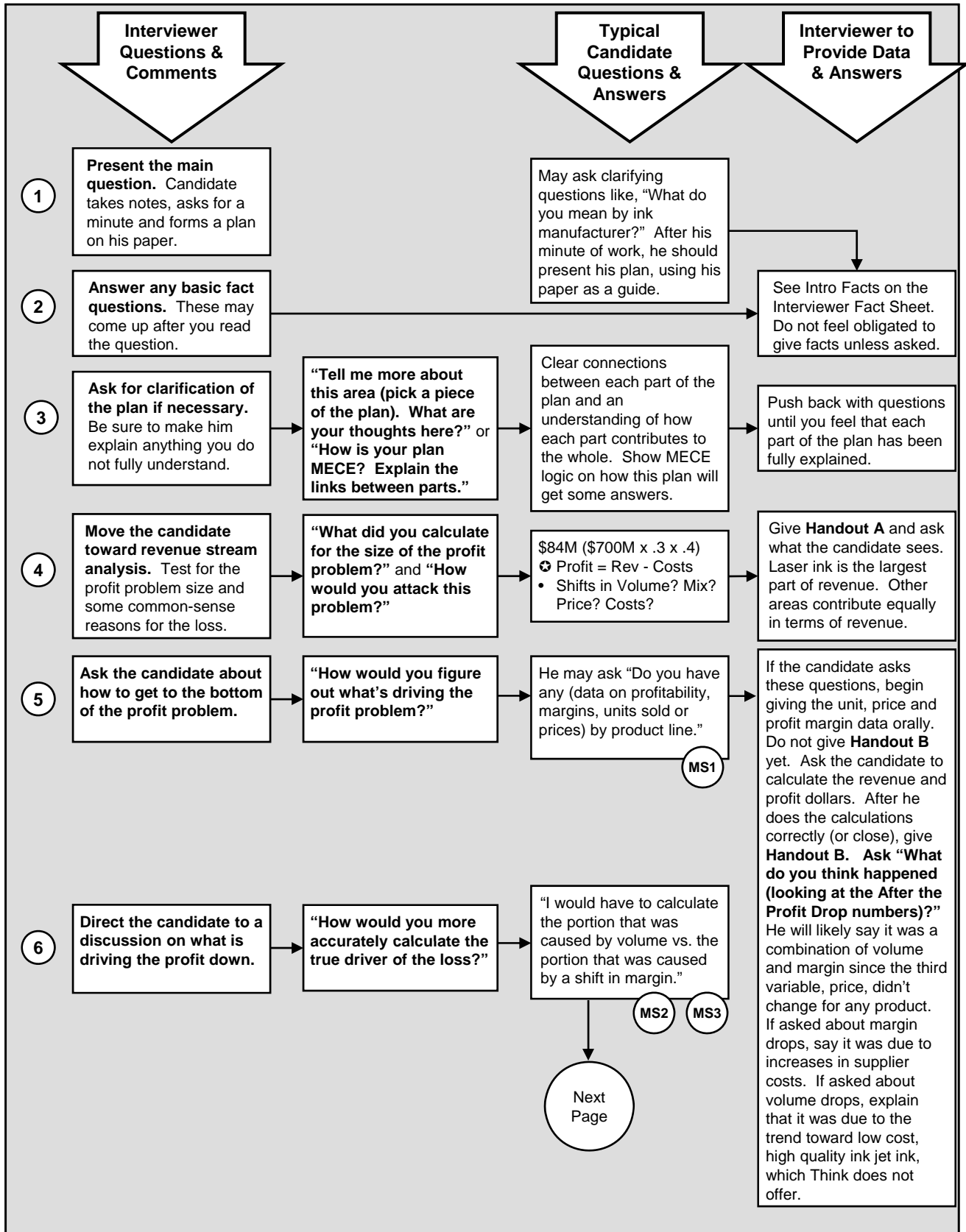
On-Track Indicators

- ✓ **Structures the discussion** – directs the conversation into relevant areas
- ✓ **Peels the onion** – does not assume that simple volume reductions are the problem but tries to understand shifts in mix, price and costs
- ✓ **Feels the urgency** – understands that a 40% profit drop needs to be resolved quickly

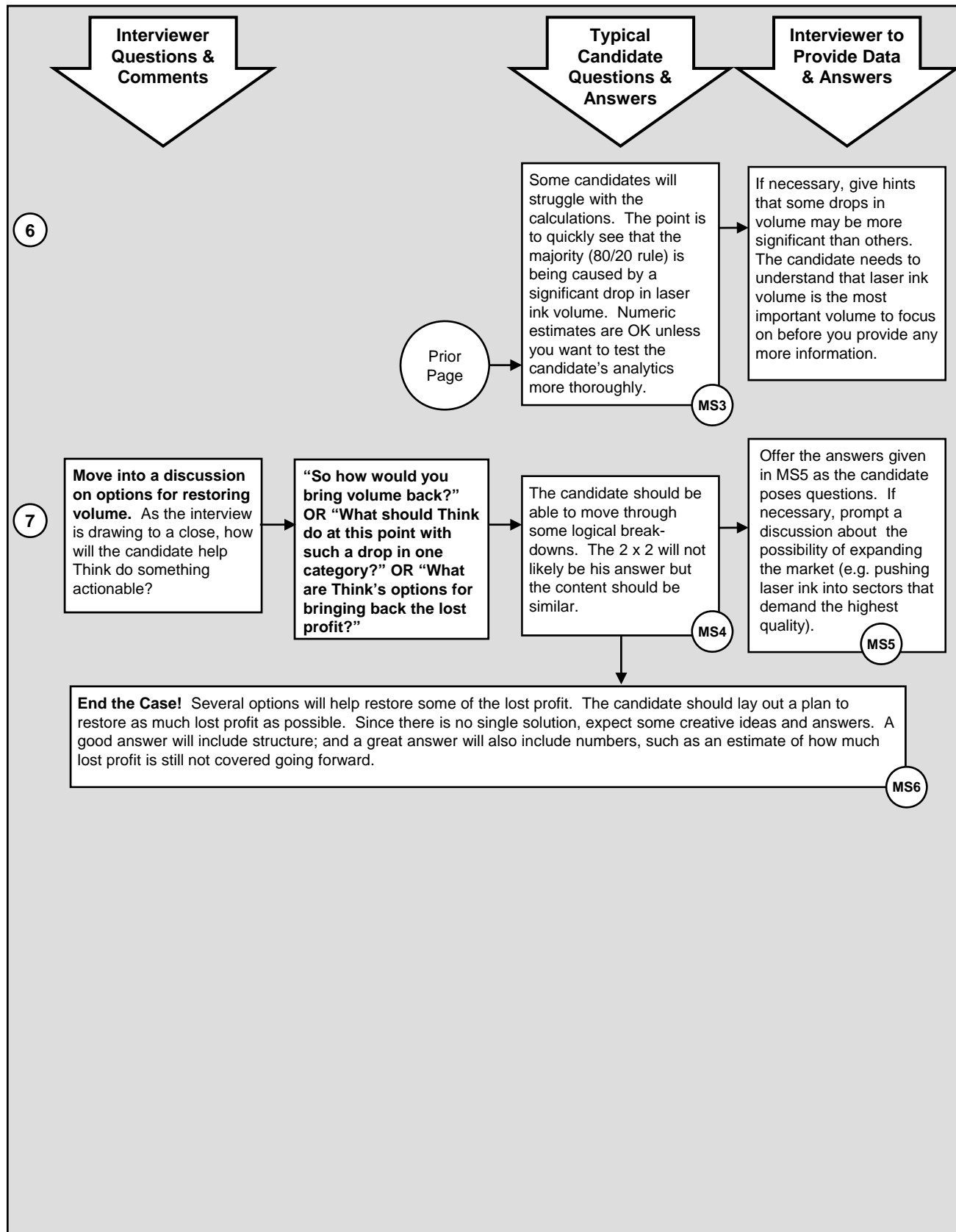
Off-Track Indicators

- ✗ **Jumps to volume as a solution** – skips over other probable causes of the loss like raw material price increases
- ✗ **Does not talk in dollars** – forgets to take the initial data and turn it into something tangible, e.g. "a \$84M problem"
- ✗ **Avoids the practical** – thinks that introducing new products is a quick process

Case Flow at a Glance



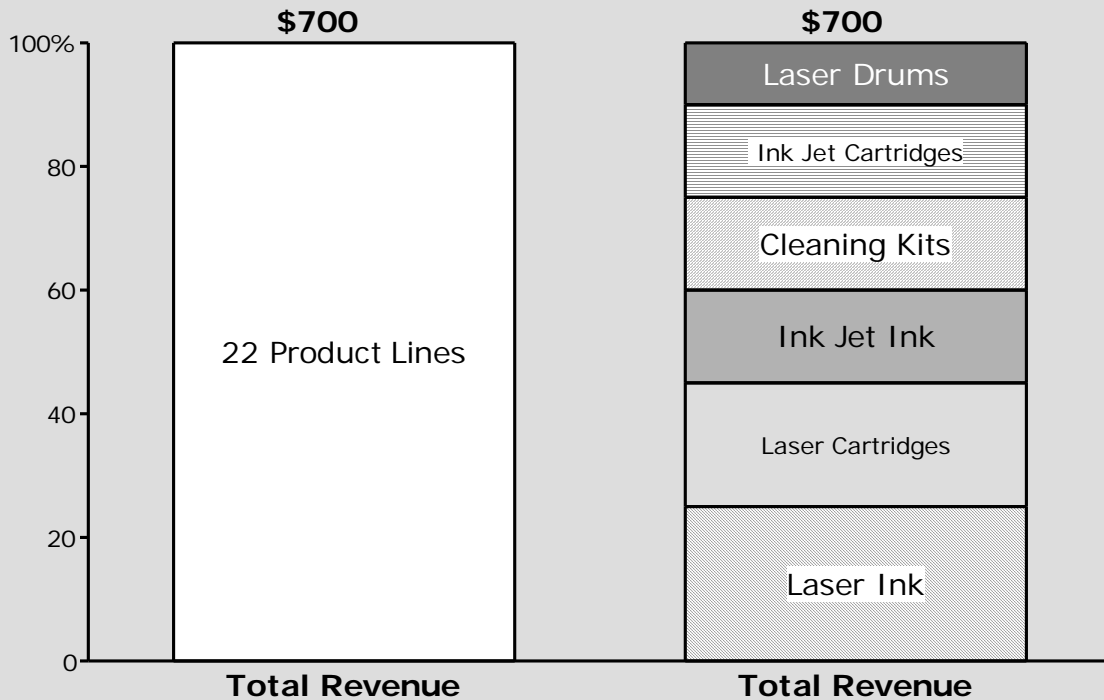
Case Flow at a Glance



Data Distribution

Handout A

Revenue by Percent (millions of USD)



Handout B (Read some data out loud and have the candidate do some calculations first before showing it.)

Category	Percent	Revenue	Units	Price Per Package	Unit Profit Margin	Profit Dollars
Laser Ink	25%	\$ 175,000,000	87500	\$ 2,000	45%	\$ 78,750,000.00
Ink Jet Ink	15%	\$ 105,000,000	700000	\$ 150	25%	\$ 26,250,000
Cleaning Kits	15%	\$ 105,000,000	350000	\$ 300	15%	\$ 15,750,000
Laser Drums	10%	\$ 70,000,000	933333	\$ 75	30%	\$ 21,000,000
Ink Jet Cartridges	15%	\$ 105,000,000	140000	\$ 750	45%	\$ 47,250,000
Laser Cartridges	20%	\$ 140,000,000	400000	\$ 350	15%	\$ 21,000,000
Total (in millions)	100%	\$ 700,000,000				\$ 210,000,000

After Profit Drop

Category	Percent	Revenue	Units	Price Per Package	Unit Profit Margin	Profit Dollars
Laser Ink	9%	\$ 46,400,000	23200	\$ 2,000	45%	\$ 20,880,000.00
Ink Jet Ink	19%	\$ 94,948,050	632987	\$ 150	25%	\$ 23,737,012.50
Cleaning Kits	21%	\$ 102,900,000	343000	\$ 300	10%	\$ 10,290,000.00
Laser Drums	10%	\$ 51,682,350	689098	\$ 75	30%	\$ 15,504,705.00
Ink Jet Cartridges	20%	\$ 101,115,000	134820	\$ 750	45%	\$ 45,501,750.00
Laser Cartridges	21%	\$ 104,567,750	298765	\$ 350	10%	\$ 10,456,775.00
Total (in millions)	100%	\$ 501,613,150.00				\$ 126,370,242.50

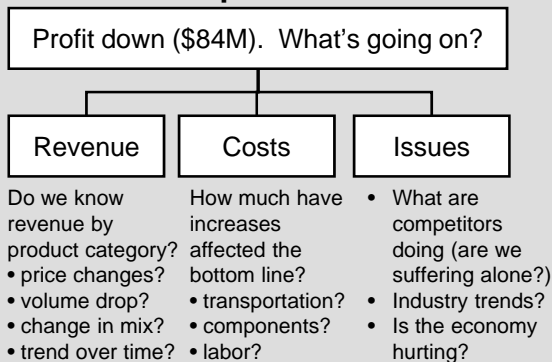
FRAME and mini-structures (MS)

Most cases follow a similar pattern; using the FRAME method will help you stay on track. Throughout the case you'll want to keep the momentum up with simple mini-structures and good use of your notes. Remember to think of your notes as a small white board where you can share your thoughts with the interviewer. Using small charts, tables and mini-structures will not undermine your initial plan, but instead will support it. Look through these notes and think about how you can begin to use FRAME and mini-structures to improve your consistency.

F - Form a Plan

These two options will both work to get your case started. Both are relatively MECE (mutually exclusive and collectively exhaustive) and get to the point quickly. Expect your interviewer to push back on your plan initially. Stay calm and explain your logic. She just wants to understand how you think.

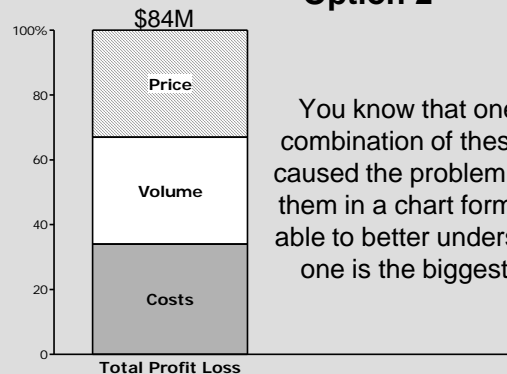
Option 1



"In order to best understand Think's priorities I would like to break them down into revenue and cost issues. I have several questions for each area. Also, there are several other issues that could be affecting the situation that I would like to explore . . ."

Your interviewer may keep you off guard by continuing to ask, "What else?" Explain any overlaps and stay MECE.

Option 2



You know that one or some combination of these variables caused the problem. By putting them in a chart format you'll be able to better understand which one is the biggest problem.

"According to my calculations, Think Ink had a \$84M profit loss this last year. Is that correct? (yes) Since we don't know which one of the issues is the main driver of the problem, I would like to explore each one, breaking them into revenue (price and volume) and cost groups. Let's begin with product categories. Do you have data that shows revenue by product line over the last year?"

R - Read Your Audience

How is your interviewer treating you? Does the conversation feel casual or very data-driven? Be sure to stick to the facts and try to match the conversational pace that he sets. If the interviewer is driving with very specific questions, follow his lead. But be ready to take over and drive the conversation at any point.

A - Anchor Your Hypothesis

What's going through your mind early in the case? Where do you think the answer lies? Be sure to anchor thoughts on a hypothesis even if you don't say "here's my hypothesis." Not every interviewer will ask for it. Instead, use it to organize your questions. Here are two popular hypotheses:

- 1. Single Event:** Something has shifted in the business. Since they went from profitable to unprofitable quickly, there may be some kind of dramatic event, like a new competitor product or a shift in customer preferences.
- 2. Multiple Variables:** Several issues are the driving force. It would be unusual for one trend to be the main problem. This profit loss must be driven by volume drops, price drops and cost increases.

FRAME and mini-structures (MS)

M - Mine for Data

Below are a variety of mini-structures that would have helped you throughout this case. Use them as is or as a platform for your own ideas. Structuring your thinking with diagrams that the interviewer can see keeps the pace high and the interviewer interested.

MS1

Use a Formula

Formulas are perfect for breaking down a topic concisely. Since this is a profit problem, it's easy to work through each variable.

$$\text{Profit} = \text{Revenue} \text{ minus } \text{Costs}$$

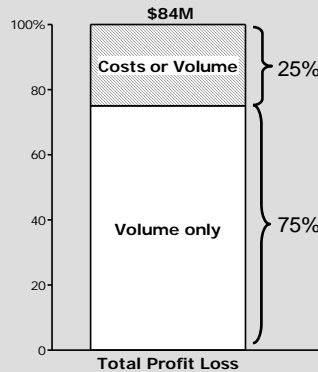


- gone down?
- different product mix?
- gone down?
- competitor pressure?
- raw materials up?
- labor up?
- transportation up?

MS2

Chart

By taking these three variables and putting them into a chart, we can better understand where the problem lies.



When you look at Handout B you see that price has not changed for any product. Thus we know that price did not affect the profit loss. Look at the data to determine if one variable is causing more of the problem. After some quick calculations (see MS5) it's clear that a volume drop is the biggest problem.

MS3

80/20

Using a "good enough" approach will help you get through analytical questions quickly. There is not enough time to solve for every element.

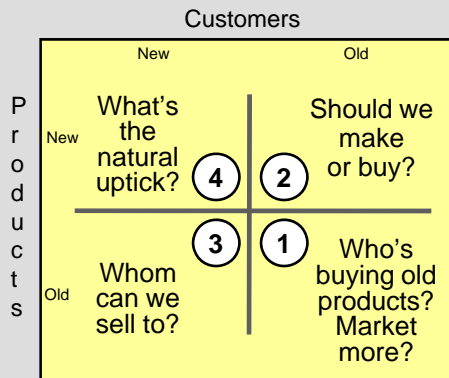
Significant Volume Drops That Don't Involve Price or Margin

According to Handout B, there the laser ink drop is significant: Before profit \$78.750M minus the After Profit \$20.880M = \$58M. Since the total drop is \$84M in profit, we've found about 70% (58/84) of it.

MS4

Logical Trade-offs 2x2

To keep your cases on track, consider using a mini structure like a graph, sketch or formula. For this case a 2x2 grid works well.



1. Problem area today. "Old customers" don't want the "old products".
2. Make (new products, changes) or Buy (JV, partnership, acquisition) decision.
3. High quality printers and non-US customers might be a good option.
4. New customers will naturally appear once the new product line is developed.

FRAME and mini-structures (MS)

MS5

Work Through Your Options

Since you have a clear set of options to pump up volume, ask questions to find out which ones are viable.

- 1 "Do we understand why customers are not buying laser ink?"
Yes, they are buying new, low cost ink jet ink.
- 2 "Can we make this new ink?" or "Are there acquisitions to be had?"
Think does not have the secret technology for the new ink jet ink. But there's a small player that has the technology and wants to be acquired. Estimates are \$7M for one year after the acquisition and \$15M for the second year of sales.
- 3 "Can we sell to other demographics or geographies?"
Professional printers demand high quality. It is a growing segment and could be developed quickly. Year one profits could be \$15M.
- 4 "Will we attract new customers with new products?" This growing market is difficult to estimate. Some experts put its size at about \$3M one year after the acquisition and \$10M 2 years after. This new market is on top of profit from bringing back lost customers.

E - End the Case!

Be sure to end with data and facts. Even if you don't have time to draw something cool for your case ending, you could verbalize the key points below. Most interviews end in a hurry with the interviewer saying, "Let's wrap up!", so be prepared to hit your most important points quickly. Try to group your thoughts and make reasonable estimates.

MS6

"Since Think Ink is faced with a recurring \$84M problem as the analysis showed, I would focus most of management's attention on the following to resolve it."

Short Term Actions (3-6 months)	Year One	Year Two	Year Three
1. Find new markets for present and modified products.	\$15M	\$15M+	\$15M+
Mid Term Actions (7-18 months)			
1. Do the acquisition.	Launch	\$ 7M	\$15M
2. New customer growth.	Launch	\$ 3M	\$10M
Total	\$15M	\$25M	\$40M

Next Steps

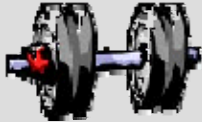
- Look into raising prices on current products to stem the loss
- Consider reviewing costs to look for savings opportunities
- Review supplier costs for some products. Margins are falling due to increasing costs.

Re-routers and Heavy Lifting



Re-routers ***Questions To Keep Things On Track***

- ❖ **How big is the problem you are trying to solve?**
 - \$84M profit annually. This problem will continue unless something is done soon.
- ❖ **Is a drop in revenue the only cause of the problem?**
 - Use this question to push the candidate to talk about costs.
 - Inform the candidate that margin increases are due mainly to supplier costs.
- ❖ **Is a single action going to resolve the situation?**
 - No, but over half of the problem can be resolved with several ideas.



Heavy Lifting ***Questions To Make the Case More Difficult***

- ❖ **How would you speed up the development of a new ink jet ink line?**
 - Make slight modifications to previously successful products. Can you make the current ink jet ink better?
 - Look into partnerships or acquisitions.
- ❖ **How should management have prevented this kind of problem?**
 - Stay more on top of trends through market watching and focus groups.
 - Monitor the financial numbers more closely.
- ❖ **How flexible will the company be if the ink jet ink trend turns out to be short lived?**
 - By continuing to make a full line of laser ink, Think should be well positioned to return to making more laser ink if that is what is required.

Interviewer Feedback

	<i>Excellent</i> → <i>Poor</i>					
Planning & Logic						
1. I understood your plan to solve this case.	1	2	3	4	5	6
	Very clear		Fuzzy		Not clear at all	
2. Your plan was MECE. (Mutually exclusive, collectively exhaustive)	1	2	3	4	5	6
	No overlaps and gaps				Several overlaps and full of gaps	
3. You trusted your plan and referred to it often.	1	2	3	4	5	6
	Used it, referred to it often				You basically forgot about it	

CoThinkunication & Composure

4. You were calm and collected.	1	2	3	4	5	6
	Calm, confident and client-ready		Off-and-on nervousness		Sweaty, shaky mess	
5. You carried the discussion well.	1	2	3	4	5	6
	Just the right amount of back and forth		Occasionally awkward		I'd avoid you at cocktail parties	
6. You drove the case.	1	2	3	4	5	6
	Clearly in control, you took the case to a conclusion		You took control sometimes, but then let me drive		Adrift at sea	

Analytics

7. You analyzed the data well on a piece-by-piece basis.	1	2	3	4	5	6
	Quick to insights, no math errors		Slow on the uptake, some math mistakes		Lots of mistakes, you didn't get the insights	
8. You integrated data well and reached insights (saw the big picture).	1	2	3	4	5	6
	Quick to "connect the dots" and see how it all ties		You missed some connections		You missed all the linkages between the data	

RecoThinkendation

9. Your final recoThinkendation was to the point and data-driven.	1	2	3	4	5	6
	Used facts and data to back up your thoughts				You seemed to solve the case from your gut	
10. You were persuasive in making your final points.	1	2	3	4	5	6
	Persuasive points, passion and a bottom-line tone				You couldn't even convince yourself, zero passion	

Total Score:
(10-60)

Before giving your score, ask the candidate to do a self assessment on these same questions. What can you tell the candidate that will help him or her prioritize prep going forward?