

考試科目：工業管理實務

考試時間：90 分鐘

共 1 頁 第 1 頁

本試卷共有兩題，他們均需要您提出一些解決方法，請儘量發揮。**Good Luck!**

1. (50%) Henry 是一家大型超級市場的經營者，一個星期前他決定要重新佈置其超級市場，並尋求您的幫忙，**請問您會如何進行此佈置專案**。註：(1) 其他問題環境假設（例如：Henry 的超級市場所遇到的佈置問題，或其超級市場的特性）可自行增加，**但不能因此而偏離其佈置的主題**，而且必須先將假設列出，然後在您的問題環境下，提出解題方法。(2) 請將所欲提出的方法之目的（或目標）加以說明。(3) 也請將您將所欲提出的方法（或各種方法）之步驟，加以清楚說明，例如：您可繪製方法的流程圖，來幫助他人了解。
2. (50%) Mary 是一家成衣生產工廠的老闆，最近工廠所生產的成品因品質問題，而受到顧客不少的抱怨。Mary 請您幫忙解決此問題，**請問您會如何進行此品質改善專案**。註：(1) 其他問題環境假設（例如：Mary 的工廠所遇到的品質問題，或其工廠與產品的特性）可自行增加，**但不能因此而偏離其品質改善的主題**，而且必須先將假設列出，然後在您的問題環境下，提出解題方法。(2) 請將所欲提出的方法之目的（或目標）加以說明。(3) 也請將您將所欲提出的方法（或各種方法）之步驟，加以清楚說明，例如：您可繪製方法的流程圖，來幫助他人了解。

國立中央大學工業管理研究所九十二學年度碩士在職進修專班入學考試試題卷

考試科目：經營管理個案分析

共 1 頁，第 1 頁

考試時間：90 分鐘

個案：Please refer to the attached paper, entitled: A pain in the (supply) chain, Pages 4-7.

請以中文或英文簡短回答以下問題（注意字數限制）。

- Q1. (20%) Why Alice Dias committed to 3,000 cases for the four-packed ClickZipPlus which is more than what she needs? What is her plan to do so? (up to 30 words)
- Q2. (20%) Why Andrea Valdini can not find any eight-packed ClickZipPlus in the display shelf in Flemings ValuMart, near Mckenna, Palash & Zweig Securities? (up to 30 words)
- Q3. (60%) Should Exceso maintain its aggressive promotion strategy? (up to 300 words)

# A Pain *in the (Supply)* Chain

It's that time again, the end of the quarter, and Exceso is scrambling to meet wildly ambitious sales goals. The company's aggressive promotions are pulling in retailers, but does disaster loom?

by John Butman

MONDAY, 10:42 AM  
**Manufacturing Facility 14,  
Exceso Corporation**

R. Foley Vinton, CEO of Exceso, shoves through the heavy plastic strips onto the factory floor, already wearing his hard hat and goggles, earplugs draped around his neck, and is relieved to hear the din of manufacturing. He turns and holds back the strips so his visitor, analyst Andrea Valdini—similarly prepared for the tour—can step through.

“How many shifts are you running?” she shouts above the noise.

“Three,” replies Foley, not smiling, all business. “We’re essentially running at full capacity.”

Andrea makes a note on a folded index card with a tiny pen. “How long have you been doing that?”

Foley grimaces and decides to distract her with a partial truth. “Well, we actually were down last week,” he reveals, pointing at a passing automated material-delivery vehicle. “Installing some new robotics.”

This is, in fact, what took place, but Foley’s description leaves out the cause. A massive, yet finicky, injection molder had once again developed a mysterious inability to create the key piece of Exceso’s flagship product, the ClickZipPlus. An image of a line of hiking Cub Scouts, backed up behind the den’s slowest member, flashes through Foley’s head; it is the metaphor that illustrates the effects of manufacturing bottlenecks, remembered from Eli Goldratt’s book *The Goal*.

“So now we’re running flat out to fill orders.” Foley pauses before the molding machine, whose jaws open as if on cue, revealing 148 perfect plastic parts in the distinctive nickel and cobalt colors of the ClickZipPlus. He decides not to mention that the machine is producing a yield of 98%, because further questioning might lead to the admission that it is running at only 60% of its optimal

speed. "It all depends on how you define 'essentially full capacity,'" Foley thinks.

"Are you going to meet your sales forecast for the quarter?"

"Our guideline is 9% sales growth. That's what I told you analysts, and that's what I've said to my organization." Foley smiles. "And they generally take my sales guidelines to heart."

"How can Exceso achieve such growth in this economic climate? And with the kind of price pressure you're getting from retailers?"

R. Foley Vinton, who considers himself a collaborative and progressive CEO, ponders Andrea's question and can think of only one thing: the essential, and exasperating, difference between customer orders and consumer sales.

**TUESDAY, 1:38 PM**  
**Midwest Regional Headquarters,**  
**Flemings ValuMart**

Alice Dias chuckles to herself as she swipes her employee ID through the card reader at the end of the fajita line. She is late for lunch and hungry because she's been on the phone with the Exceso district sales manager for more than an hour, haggling over purchase terms for the ClickZipPlus. Alice is delighted to see that Wendell, her brainy intern from business school, is still there, engrossed in a worn copy of *Competitive Strategy*.

"You want to know how to work the supply chain?" she says. "You should talk to me."

"Get a good deal?" Wendell asks.

"I committed to 3,000 cases of the four-pack."

"What?" Wendell is aghast. "Correct me if I'm wrong, O great mentor, but I seem to recall that we sold only 1,800 cases in the last two quarters combined."

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Alice nods. "Correct. But we're buying at a 6% discount to our standing price." She sinks her teeth into the fajita.

"Exceso must be a little desperate."

"They're also committing to an increase in co-op dollars for an FSI. And that's not all." She looks at Wendell as if challenging him to guess what other concessions she might have wrangled.

Wendell tries to imagine the most posterous possibility. "They've agreed to deliver on Sunday?"

"As a matter of fact, they have," says Alice coolly, as if this buying coup were nothing unusual.

Wendell now turns critical. "Wait a minute. We don't have warehouse space for 3,000 cases, so we'll have to pay to park them somewhere else. Plus, we'll get whipped for tying up so much capital. That discount could end up costing us more than it saves."

"That would be true," Alice nods, "if I planned to keep the whole shipment. But I don't." She leans forward. "The Exceso rep for the southern region is only offering a 4% discount, and, because of their lower volume, the cost of southern's four-pack is already about six cents higher than ours in the Midwest. I'm going to ship half of this order straight through to them, so they can take advantage of the discount. Then I'm going to unload another 500 cases on our diverter friends at VXT, at our cost but with a first option to buy back at a 3% premium within 60 days."

Wendell gasps at the beauty of Alice's plan. "So we have a handy source of inventory but with no carrying costs. If we buy back, the price will still be lower than Exceso's standing price."

"Leaving us with 1,000 cases for the quarter, which we can run at a special promotion. If that doesn't increase volume by 10%, I would be extremely surprised," Alice says.

Wendell smacks *Competitive Strategy* shut. "Do you think Mr. Foley Vinton knows how his people meet his sales targets?"

"He knows only too well," Alice says and then remembers, "Did I mention that they also gave me two tickets to the U.S. Open?"

**WEDNESDAY, 7:49 AM**  
**Underground Parking Garage,**  
**Exceso Tower**

Martin Wu pulls into the garage, driving a little too fast, considering that he's running early for his breakfast meeting with a customer. But as Exceso's head of sales, his driving seems to reflect his keen awareness that the pace of everything has accelerated, including the speed at which sales can turn sluggish.

Martin runs up behind a shiny, new pickup truck with a tidy tonneau cover and stainless steel step-bars and realizes, too late, that Foley Vinton is the driver. Martin considers driving right on through the garage so he can avoid the inevitable question that Foley will ask as soon as they park but decides instead to face the issue.

"So, Martin!" Foley calls, waiting for Martin to lock his car and join him for the walk to the elevators. "How are we doing? Are we making our number?"

Martin looks Foley in the eye. "No, Foley. We're not."

Foley returns Martin's keen gaze. "But we set the target based on your forecast data. We all agreed to the plan."

"Yes. But that was raw data. It contained anomalies."

"How far off are we?"

"We'll do well to grow sales by 3%."

Foley says nothing, but his face hardens slightly. "I hear this every quarter," he thinks. "And every quarter we make the number. What I need to do is acknowledge Martin's concerns, express my appreciation for his hard work, appeal to his competitive spirit, challenge him to excel!"

Martin anticipates Foley's thoughts. "We're doing everything we can. We're offering discounts and flexible terms. We've got some good display ideas. We're trying to crack some new accounts. We even agreed to Sunday delivery for Flemings."

Foley nods. "Great. And we've still got a few weeks."

"But, look, Foley," says Martin, almost plaintively. "There's really only one way to make the number. And I thought we had agreed to stop loading."

"We have agreed—in principle. And we will, when the timing is right."

"The timing will never be right."

"Yes it will," says Foley, mustering all his well-known calm and rationality. "Any one of a number of factors will make the timing better than it is now. The new-product launch could give us the window. The share buyback could. The economy could turn around." He puts a heavy hand on Martin's shoulder. "What we need right now is a lift in the share price. To get that, we need some good news. And the best news is strong sales."

Martin says nothing, but he looks doubtful.

"You'll find a way, Martin. You and your people always do," Foley says. "You're masters at the game."

Martin hits the up button, knowing the discussion is over. As they wait for the elevator, he gazes blankly at Foley's distant pickup, gleaming in the bluish light of the luminaire. "Quite the vehicle you've got there, Foley," he says. "Cobalt blue."

Foley squeezes Martin's shoulder. "Once we have good news, then we can take the hit and clean things up."

WEDNESDAY, 9:27 AM

**Flemings ValuMart, Near McKenna, Palash & Zweig Securities**

Andrea Valdini – AA batteries and a tin of mints already in hand – wanders down the aisle in search of a pack of tissues. Although she's on a personal errand, she's always in analyst-data-collection mode and can't help but be diverted from her mission by a glint of nickel, accented by cobalt. A single four-pack of ClickZipPlus hangs forlornly from its peg, surrounded by a grove of empty pegs where other four-packs and eight-packs should have been proudly displayed. A few of the pegs normally reserved for Exceso products have been claimed by competing manufacturers, and the single ClickZipPlus pack looks besieged.

Andrea finds a manager at the back of the store. "I'm looking for an eight-pack

of ClickZipPlus," she says. "There are none on display."

"I know," replies the manager. "We have none at all."

"When will you have them?"

"We'll have plenty of four-packs Monday," the manager says helpfully. "Special price."

"No eight-packs?"

"They're having problems with the eights," he reveals. "I'll discount a double four-pack if you want."

"You only have one of them."

The manager takes on a consultative tone. "Well, we've got other brands to

"If we go with deeper discounts, we'll move more product. Duh! But it's not going to sell through. It'll end up in their warehouse. We know that."

choose from. The Carlex eight-pack is a little cheaper, anyway."

"What about the quality?"

"It's just as good."

"I'll try it," says Andrea.

The manager nods, understandingly. "Exceso's a great company, but I don't think they can keep this up much longer."

"Can't keep what up much longer?" Andrea asks, a little annoyed, but not quite sure why.

The manager wags his hands back and forth, as if to suggest some kind of less than desirable behavior.

Is it possible that this store manager knows more about Exceso than I do, Andrea wonders, more than Foley Vinton has told me? "How do you feel about their stock?" she asks, half seriously.

The manager opens his hands in a gesture that says, "Who knows?"

THURSDAY, 6:52 PM

**Sales Conference Room, Exceso Headquarters**

Martin Wu is presiding over a boisterous meeting of his extended sales team,

which includes reps from every region; staffers from promotion, display, forecasting, and key accounts; and assorted others who've wandered in to offer their two cents.

"If we go with deeper discounts," says a veteran sales manager, "we'll move more product. Duh! But it's not going to sell through. It'll end up in their warehouse. We know that. And then we'll be selling refills and dead SKUs and two-packs and eights for the next two months."

"Could I just ask a question? Do we still need to make a profit?" asks Fred,

another manager, with a fine tinge of sarcasm. "We used to have this neat thing called margin. It was really nice. I'd like to have that again."

Martin almost laughs. "We still make a margin at the deeper discount."

"Even after you figure in the cost of display and sampling?" asks a younger manager, with a frown.

"Not sure," Martin admits. "But we do before the cost of sales."

"What about manufacturing overruns?" asks the veteran. "Number 14 was shut down all last week, and now they're running three shifts."

"Why are they making so much product?" The young salesperson is genuinely concerned.

"They must have believed our forecast," cracks Fred.

"I think we should just leave the price where it is, sell what we can, take our hit, and clean out the shelves," says the veteran. "It's time to send Foley a message."

"Then Foley will send a little message to us," Fred replies. "Dear Fred. Thanks for your many years of valued service. Now clean out your desk."

"Alright, listen," says Martin. "Foley has made a promise to the analysts. The

analysts have made a promise to the shareholders. I've made a promise to Foley. We have to do whatever it takes to make plan."

At that moment, Vikas, a key account manager, saunters casually into the room. "Would an order for 40,000 new-account cases help?"

All eyes turn to Vikas.

"Who's the account?" Martin asks.

"Regency Brands. It's an overseas trading company. They sell into Eastern Europe, Jiangsu province in China, and other markets where we have no organization or trading reps."

"Weird combination of territories," says the veteran.

The word "diverter" burns into Martin's mind. "What price did you quote?" he asks, half hoping it will be an offer he can refuse.

"Deep discount: 9%. If we receive payment within five days."

Martin doesn't argue.

"What do we know about this company?" asks the young manager.

Vikas inclines his head as if the question were tiresome and possibly irrelevant. "We know they're willing to sign the deal in time for it to count for this quarter."

Silence befalls the room.

"Well," says Martin, at last. "Let's do our due diligence on them."

"The offer is only good until eight tonight," Vikas replies. "I suppose I can make a few calls about them, but they smell okay to me."

"How are they going to pay?" asks the veteran.

"Letter of credit. London bank," says Vikas. "That I've already checked out."

Martin Wu looks at the faces of his team members. Forty thousand cases would not make the quarter, but it certainly would help. It would buy time. Take some pressure off.

"We have to decide," says Vikas.

"I can hear that old injection molder running right now," says the veteran.

"I think the folks in Jiangsu province are going to love the ClickZipPlus," comments Fred.

Martin nods almost imperceptibly. Vikas scurries out of the room. Martin

doesn't adjourn the meeting, but everyone knows it's over.

FRIDAY, 10:42 AM

**Midwest Regional Headquarters,  
Flemings ValuMart**

The phone rings. Alice Dias doesn't recognize the number displayed; it's from somewhere out of state.

"Alice Dias."

"Hello, Ms. Dias," says an unfamiliar voice. "I represent Regency Brands."

"Yes?" she replies politely. "How may I help you?"

"I am hoping that I can help you," says the voice. "We're in a position to offer an attractive case discount on the Exceso ClickZipPlus."

"I believe I already have the lowest discount available, direct from the manufacturer."

"I think I can beat it."

"Well," says Alice, "I'm listening."

FRIDAY, 11:10 AM

**Small Conference Room,  
McKenna, Palash & Zweig Securities**

Andrea Valdini reviews her notes before a meeting with her colleagues at which they plan to discuss Exceso and other current holdings.

"Exceso is a fundamentally sound company," she thinks. "They're just caught in a little whirlpool created by slow retail sales, the lull before a new-product launch, and a sluggish economy. Foley Vinton has an admirable track record. ClickZipPlus is still the market leader, even if the competition is catching up. Exceso has a strong balance sheet.

"So why does that empty product display unnerve me so? It's not like I did an inventory of every retail outlet in the country. My evidence is anecdotal, at best. If Exceso is loading to make their numbers, why wouldn't the displays be full? And if sales are off, why would they be running three shifts to manufacture product? Their share price hasn't moved at all in the last six months, but they're

not alone in that. They're due for a rally. And if they get one, they should be able to reduce their reliance on loading, if that's what they're doing. I can't tell if this is a pivotal moment or just a bit of a bad patch."

FRIDAY, 11:59 PM

**Bedroom,  
Residence of R. Foley Vinton**

Foley Vinton, having turned in early so as to be fresh for his 7:00 AM tee off, lies in bed but can't sleep.

"Every business has its tight spots and difficult moments," he muses. "It's always a race to close the quarter in this industry. A leader cannot capitulate to the concerns, however understandable, of his people. He must paint a positive picture for them. Exhort them to seek innovative solutions.

"And yet, I didn't like the way my conversation with Martin ended. Normally, we can disagree and finish up with a laugh. This time seemed different. If I lose Martin, which is possible, we will certainly not make our number. He's right that we agreed to end the trade loading. But he knows we can't change just like that. It's almost impossible for one manufacturer to buck a chronic industry practice. We can try, but we have to try at the right time and in the right way.

"Besides, there are factors that Martin's not aware of. We'll certainly get board approval for the capital improvements to manufacturing. That will help with productivity and, eventually, costs. We're ready to push the on-line sales channel next quarter. That should boost sales. And, of course, there's the acquisition. We're very close on that."

Foley, drowsy at last, lulls himself into a light sleep, thinking, "If we can just get over this hump, we'll have a little breathing room. Then we can solve this once and for all."

**Should Exceso maintain its aggressive promotion strategy?**

Four commentators offer expert advice beginning on the next page.