

# CIMA MCS EXAM August 2017, Variant 1

## Section 1

**You have received the following email:**

**From:** Jens Sneider, Senior Financial Manager

**To:** Financial Manager

**Subject:** automation project

Hi

The board has decided to upgrade our automated production lines to take advantage of improvements such as cobots (collaborative robots). I have been put in charge of the implementation of this upgrade.

Most of our factories are already equipped with advanced robots and so the upgrades are generally replacements of electronics and sensors rather than the total replacement of whole production lines. The board has budgeted W\$1,500m for the upgrades.

I had planned to leave one of our assembly plants unchanged. The plant is located in Essland, a low-wage country. It assembles our Dateline van for sale around the world. The plant's production line is very basic, it does little more than move van bodies between work stations. Almost all of the actual assembly, paint and trim work are done by hand. Upgrading the plant to the latest technology would be expensive. The plant produces vans to a good standard and at an acceptable cost, and I saw little point in upgrading it.

I discussed my plans with Nilesh Loharit, the manager of the Dateline plant. He wishes to upgrade his factory in line with the rest of the company and has submitted the attached analysis in support of his argument.

I need you to review Nilesh's project appraisal and evaluate his conclusion that his financial analysis indicates that we should proceed with the upgrade to the plant. You need not concern yourself with his arithmetic because I have already checked that.

I also need you to evaluate the political risks of making so many people redundant at the Dateline plant as a result of Nilesh's proposal. You should consider three areas: our continuing operations in Essland, our national activities here in Westland and the global level.

Thanks

Jens

Reference Material:

## **Project appraisal for Dateline van plant by Nilesh Loharit**

### **Executive summary**

Our plant is located in a country where wages have traditionally been low, but growing prosperity is putting upward pressure on wage rates. We have a large workforce and even a small percentage increase in wages is expensive.

It will cost W\$50m to upgrade the plant, with the new equipment expected to have a ten-year useful life.

A professor of economics from our local business school has modelled our economy and has estimated the probability of each of the three scenarios that are likely to arise over the next ten years.

	Average annual savings from automating the production line (W\$m)
Significant increase in prosperity: 20%	21.0
Moderate increase in prosperity: 50%	9.0
Small increase in prosperity: 30%	2.0
Expected average annual saving	9.3

If we automate our plant then we will be able to make 2,000 production staff redundant. There is no legal requirement to make redundancy payments, so the only cost would be the cost of equipment.

Our local cost of debt is 12%. I am assuming that we would borrow locally and not at Aurora's weighted average cost of capital of 18%.

The following discounted cash flow model suggests that the project will be a success:

<b>Time</b>	<b>0</b>	<b>1-10</b>	<b>Total</b>
	<b>W\$m</b>	<b>W\$m</b>	<b>W\$m</b>
Cost of upgrade	(50.0)		
Average annual savings		9.3	
Net cash flow	(50.0)	9.3	
Discount factor at 12%	1.000	5.650	
Discounted cash flow	(50.0)	52.5	2.5

The investment has a positive net present value and so it should proceed.

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## Section 2

**Jens Sneider invites you to join him for coffee, where he says the following:**

“Aurora’s press office has issued a press release to announce our intention to upgrade the production lines in our assembly plants. We thought that would encourage the shareholders and other stakeholders. We were a little surprised when our investor relations department received this email as we have been very pleased with our just-in-time implementation over the last few years.

First of all, please recommend the points that we should make in response to Mr Gregory’s email. You should cover the suitability of the published financial statements to calculate a meaningful inventory turnover ratio.

Secondly, I will need to brief the board in anticipation of Mr Gregory’s threat to raise his complaint about inventory holdings at the annual general meeting. Please draft a briefing on why Aurora’s financial statements do not reflect our successful operation of just-in-time purchasing and production.”

Reference Material:

From: Hong Lim, Head of Investor Relations

To: Jens Sneider, Senior Financial Manager

Subject: FW: factory upgrades

Hi Jens,

I am forwarding an email from an unhappy shareholder. Could you recommend a suitable response?

Hong Lim,

Head of Investor Relations, Aurora

“Dear Sirs,

I read with interest that Aurora plans to spend in excess of W\$1,500m on the very latest production technology. We are promised that this will increase efficiency through enhancement of the current just-in-time manufacturing environment and will ensure that Aurora remains responsive to customer needs’.

I used my pocket calculator to calculate Aurora’s inventory turnover ratios using the figures provided in the annual report. The results are as follows:

31 December 2016 = inventory/ cost of sales x 366 = 3,939/ 33,996 x 366 = 42 days

31 December 2015 =  $3,674 / 30,969 \times 365 = 43$  days

I find it difficult to understand how holding more than 40 days' worth of inventory equates to "just-in-time" and I am concerned that the anticipated benefits from the new technology will be equally difficult to identify. I fully intend to raise this matter at the next annual general meeting.

Martin Gregory"