

Supply Chain Management Scenario

Routes to a greener future

Towards more sustainable freight transport



Main menu

**The freight industry in the
21st century - Impacts and Risks**

10 mins

Responses

10 mins per case

Conclusion

5 mins

Links

Relevant legislation
Sources of loans and grants
Accreditation bodies
Other useful links
Glossary`



Supply Chain Management Scenario

The screenshot shows a web application interface. At the top, a green header contains the text "Routes to a greener future" and "Towards more sustainable freight transport", alongside the European Union flag. The main content area is divided into two columns. The left column, titled "Main menu", lists "The freight industry in the 21st century - Impacts and Risks" (10 mins), "Responses" (10 mins per case), and "Conclusions" (5 mins). The right column, titled "Responses - case studies", lists "Implement new technologies", "Think about modal shifts", "Optimise utilisation", "Consider supply chains", "Cooperate/collaborate", "Metrics", and "Make a start". A "Links" box at the bottom left lists "Relevant legislation", "Sources of loans and grants", "Accreditation bodies", "Other useful links", and "Glossary". Navigation arrows are at the bottom right. Annotations with arrows point from external text to the "Responses" and "Links" sections.

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Main menu

The freight industry in the 21st century - Impacts and Risks
10 mins

Responses
10 mins per case

Conclusions
5 mins

Links
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Responses - case studies

- Implement new technologies
- Think about modal shifts
- Optimise utilisation
- Consider supply chains**
- Cooperate/collaborate
- Metrics
- Make a start

The learner clicks on "Responses" to see a list of the scenarios they can work through.

In the final application the developer will source as comprehensive set of links and provide urls.

Supply Chain Management Scenario

The learner clicks on each issue for more information. Other popups would make comments such as:

- Design for distribution: The design of products can greatly influence how transportable they are. Poor design of packaging can significantly affect the costs and impacts of transport.
- Replace inventory with information: Better understanding of demand patterns can improve Sales and Operational Processes for example by reducing inventory and the need for unscheduled deliveries.

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Supply chain management

This case study sets transport in the context of the overall supply chain. The role of transport in moving goods from their source or point of production to their final destination is highly complex. There are trade-offs between inventory levels and delivery scheduling for example, and transport cannot be considered in isolation from issues such as global labour markets. At a time when fuel costs are rising sharply, companies will continually be re-evaluating the balance between all of these. There are no simple solutions, but these are some of the issues that need to be considered.

Click on each issue to find out more.

- [Share information](#)
- [Use contracts to encourage sustainable practice](#)
- [Consider the entire supply chain](#)
- [Design for distribution](#)
- [Replace inventory with information](#)

When tackling sustainability issues, it is important to consider and influence as much of the supply chain as possible. Positive actions to reduce emissions in one part of the chain may adversely affect other parts of the chain.

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Supply chain management

In this case study you will see a series of episodes relating to a particular product – a low voltage track light. Throughout the story, you will be rating how well the characters are managing the issues covered in the previous screen.



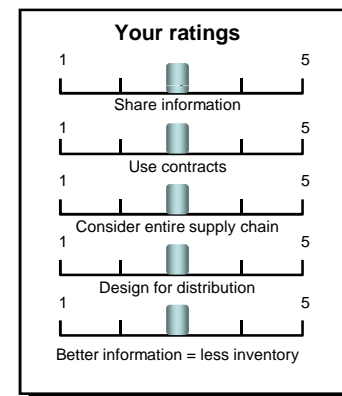
The rating scale on the right is for you to indicate how well you think the company is performing on each issue.

Move the relevant bars to indicate your rating:

5=very well, 4=quite well, 3=not known,

2=somewhat badly, 1=very badly.

Click here to start.




Supply Chain Management Scenario

The learner clicks on each message to hear it, then adjusts the rating scales on the right.

Routes to a greener future

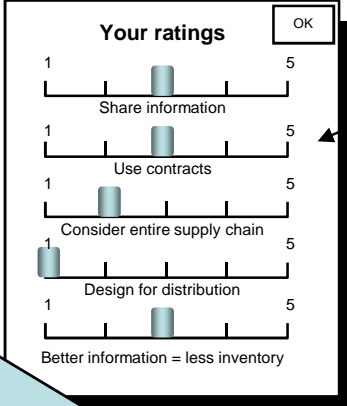

Towards more sustainable freight transport



Contradictory opinions

Lights R Us have just launched some new low voltage track lights: the *LV 800 range*. Initial sales are going well. The product manager, John McTavish, comes back after a short holiday to find 3 voicemails:

Click each message on the phone...



OK

Having heard the three messages, the learner is prompted to rate what is happening. When he has done this, he presses OK to get feedback.


[spoken audio] Hi John – it's Mike from Logistics here. I've been looking at the management information data for the LV 800 range – mainly the transportation data. We don't seem to be cubing out the vehicles as well as with the LV 700 series. The track heads used to be boxed individually - now that they are packed in these reinforced cartons, we are wasting some space.

[spoken audio] Hello – I've been told you might be able to help with the new LV800s. My staff in regional distribution are having trouble stacking the reinforced cartons in the totes; they're just slightly the wrong dimensions. We can't cube out the totes, so we use too many of them in both directions. They are taking up space in vans and at the depots. Is anyone else in the network having this problem or is it only us? Can you help at all?

[spoken audio] Hi John – here in Product Engineering we're absolutely delighted with the LV800s. The new re-enforced packaging we produced is cutting down returns due to damage by 25% more than we'd planned; we'll have the lowest returns rate in our history if we keep this up!

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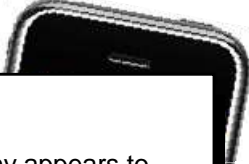
Click each message on the phone...

Feedback

The company appears to have prioritised reducing damage at the expense of logistics efficiency. They probably need to re-design the packaging to maintain its strength while taking into account the dimensions of the totes.

Your ratings

1	2	3	4	5
Share information				
1	2	3	4	5
Use contracts				
1	2	3	4	5
Consider entire supply chain				
1	2	3	4	5
Design for distribution				
Better information = less inventory				



The learner has clicked "OK" and receives feedback.

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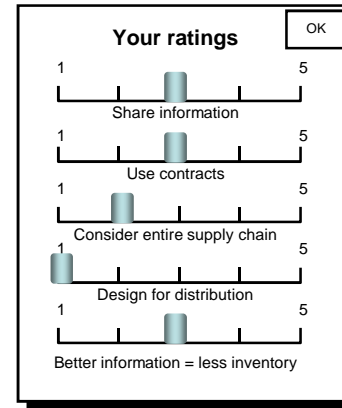


A letter arrives...

It's four months later. The LV800 has continued to sell well. John is about to extend the contracts with one of the company's component suppliers. Given the greatly increased quantities involved, and potential economies of scale, he's expecting to put pressure on his suppliers to reduce their prices.


He receives a letter from the supplier's lawyer.

Click the letter.



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A letter arrived

It's four months ago that Lights R Us was contacted by potential European suppliers. It's about to expand its operations to new potential European suppliers to reduce costs.

He received a letter from the supplier.

Click the letter to expand it.

Dear Mr McTavish


We acknowledge receipt of your revisions to the draft contract.

We note the additional clauses concerning the use of logistics software. Our client confirms that, within Europe, the track and trace software referred to in clause 4 (ii) is used in all vehicles. Transports outside Europe are not covered and we have amended the clause to cover this.

I am advised that you have been informed that the route planning software you refer to in clause 4 (iii) requires your detailed delivery schedules to be provided 2 weeks in advance. This is necessary in order for our client to be able to make use of the scheduling algorithms. The cost and discount schedule in Appendix B assumes that this information would be available. We have modified clause 4 (iii) accordingly.

I look forward to your confirmation that these amendments are acceptable.

Yours truly

 leton and Twigge

OK

5

5


5

5

5

5

ory



The learner has clicked on the letter, which expands....

Having read the letter, the learners sees this text:

“Currently Lights R Us does not have any plans to extend its operations outside Europe. And as sales have now settled into a regular pattern, John feels confident that his sales departments can produce reliable forecasts. The contract is therefore agreed, although John reserves the right to have 5% of deliveries at shorter notice.”

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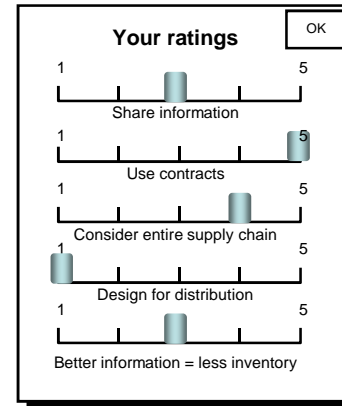
The learner has clicked "OK" and receives feedback.

He r

Feedback

John has done well here. Contracts can be used as a way of improving logistics efficiencies. They often require the cooperation of a number of different parties – in this case the company's sales department, the supplier and the haulage company. Insisting that the logistics company uses route planning and track and trace software is one way that John can improve overall environmental performance.

Click



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An unwelcome email...

A few weeks later, John receives an email from a colleague, Maria Tevez, the marketing manager.

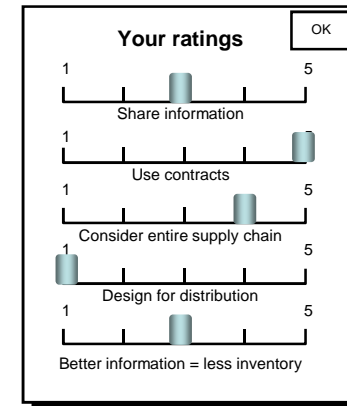
Click the email.



John


I'm extremely disturbed about what I think may be a leak of confidential commercial data. I've heard from one of my people at the distribution centre that the hauliers are openly discussing our deliveries with other companies, in other words with our competitors!! I know we want them to optimise loadings – but we don't want competitors knowing how much product we're shifting. We need to ban this straight away...let's talk about it as soon as possible...

Maria



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Unwelcome emails...

A few weeks later, John receives an unwelcome email from a colleague, Maria Tevez, the marketing manager.

Click the email.



John

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Maria

Your ratings

1	5
Share information	
1	5
Use contracts	
1	5
Consider entire supply chain	
1	5
Design for distribution	
Better information = less inventory	

Maria

I think you are worrying unnecessarily. We have asked the haulage company to improve loading efficiency. That means they need to use the right vehicles – articulated trucks for regional distribution and fixed body vehicles for the local runs. And for the deliveries to remote centres such as Cornwall and the South West, it's essential that they optimise on the backhaul. The only data we give them are the load data – volumes and weights – so I don't think there is too much risk there. But let's have a chat if you are concerned.

John


Having read Maria's email, the learner sees John's reply:



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Unwelcome emails...

A few weeks later, John receives an unwelcome email from a colleague, Maria Tevez, the marketing manager.

Click the email.

Feedback

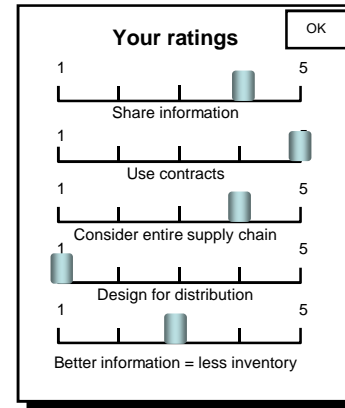

Hauliers will generally need to know only the size and weight of the totes so the risk of commercially confidential information is relatively small. Studies have shown that information sharing can lead to improved loading and this kind of option is likely to become increasingly attractive as fuel costs continue to rise, so John is probably right to carry on with his plan to share information.

Your ratings

1	5
Share information	
1	5
Use contracts	
1	5
Consider entire supply chain	
1	5
Design for distribution	
1	5
Better information = less inventory	

Having adjusted his ratings in the light of the preceding email exchange, the learner has clicked "OK" and receives feedback.

Click



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Diverse opinions

A year passes. Lights R Us is delighted with LV800 sales. In fact the range is selling so well in the UK that they have started marketing overseas, with some success already in France and Spain. Although locating most of the workforce in a regeneration region in Scotland has helped to keep costs down, John is considering whether it would be better to have an assembly operation outside the UK to serve continental Europe. He calls a meeting to discuss the options.

Click each person.



HR Manager



Logistics Manager



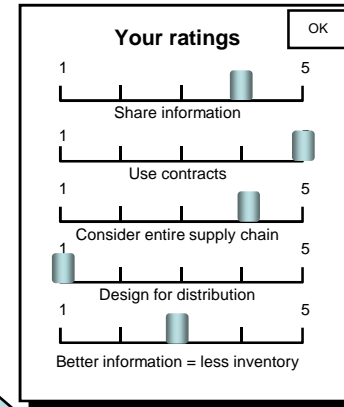
Finance Manager



Operations Manager



Product Manager



[spoken audio] This will increase costs – labour costs are going to be higher. And there is a really good pool of flexible migrant labour in Scotland.

[spoken audio] There is a supplier south of Birmingham who could produce the continental models. And we have some unused assembly capacity in Norfolk. That is less than 100 miles. We could ship by sea from Ipswich and set up a small distribution centre in France.

[spoken audio] I'm sure we will have our environment people on our backs if we use air freight for routine shipments. And I agree. We have got to start taking emissions into account as we grow. My guess is that we are soon going to be asked to provide this data anyway.

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Diverse opinions

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What does John do?

John concludes that they do not have enough data to make a decision at the moment. He asks the Operations manager and the Logistics manager to prepare detailed costings for each of the options that has been proposed, including as far as possible comparative data on emissions.

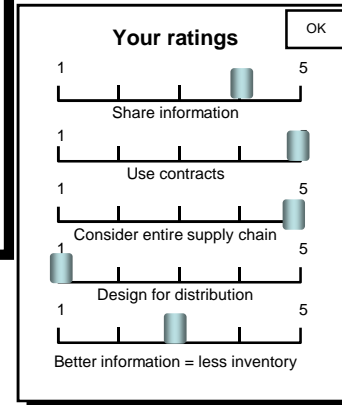


Finance Manager

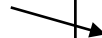


Operations Manager

Product Manager



Having heard from each character, the user reads what John decides to do and adjusts his rating accordingly...



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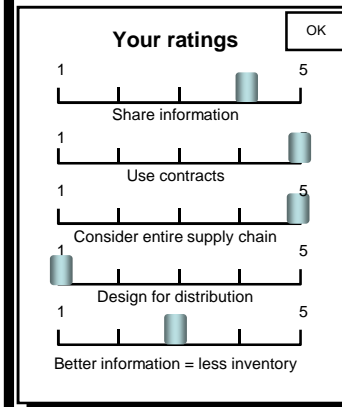
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The learner has clicked "OK" and receives feedback.

Feedback

John is again doing well here. He's not making decisions based on the short term or on too narrow a view of the supply chain. Keep in mind that logistics is just one aspect of what can be an extremely complex set of factors governing the efficiency of a supply chain. There are consequently no simple answers, since there are trade-offs between production costs and transport costs at every stage. But with the impact of factors such as increasing congestion and rising fuel costs, the pressure to improve logistics processes is likely to grow. Of course, John will need to review and assess his view of the supply chain regularly.



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Conclusion and further information

That's the end of this case study. Throughout this scenario, Lights R Us have done most things well, but some less well. Their main shortcoming was not designing effectively for distribution, whilst they generally handled contracts and information sharing well. John was effective in considering the whole supply chain when planning for a new assembly operation. The issue not covered was the final issue of the five highlighted at the start of the case: replacing inventory with information. It is likely that Lights R Us would have to implement some form of demand management system in order to improve production flexibility, reduce lead times and prevent inventory building up.



You can access various resources from the main menu or from here:

A [pdf summary](#) of this case study

A [powerpoint presentation](#) of the main points made in this case study

A set of [web links](#)

