

Sustainable supply chains



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The 3 elements of supply chain sustainability?

- social ,
- environmental
- and financial responsibility.



- from product design and development,
- to material selection (including raw material extraction or agricultural production),
- manufacturing,
- packaging,
- transportation,
- warehousing,
- distribution,
- consumption,
- return - the circular economy
- and disposal.



Money and environment can go together !!

- not only the total carbon footprint can be reduced,
- Also by optimizing the end-to-end SC operations ,cost savings and profitability can be improved !!

How to Make Your Supply Chain More Sustainable

1. Map Your entire Supply Chain

Determines risks and waste-drivers

the social, economic and environmental challenges faced by your suppliers.

See how human and natural resources are used in every stage of the operational and production process.

2. Ensure Ethical Sourcing

You must know how your suppliers are producing or extracting raw materials

Are they following sustainability guidelines ? Focus on raw materials and labour

For example, changing your pallet supplier to a local supplier not only will reduce transportation time and cost but also the CO2 emissions related to travel.

- 3. Get everybody on board
- By developing internal and external training and information programs.

- 4. collaborate with other companies
- Spread the message to competitors who operate in similar parts of the supply chain as you do, encourage them to collaborate on efforts to develop sustainable practices to the benefit of all.

Some examples

More and more multinational companies are working only with suppliers that work according to **social and environmental standards**. Not only the first-tier but also the second-tier suppliers , third-tier etc.

The problem, ironically, often starts with the multinationals themselves.

They frequently place orders that **exceed suppliers' capacity**

or impose **unrealistic deadlines**, leading supplier factories to demand heavy overtime from their workers.

“Our customer didn’t give us **enough notice** to hire enough skilled people to do the job.”

“We **didn’t want to tell our customer** that we can’t produce on time, because otherwise it’s going to try to find someone else that can.



NO DRIVER REQUIRED: An autonomous electric tractor moving shipping containers around Gothenburg in Sweden.



SOLAR PANELS

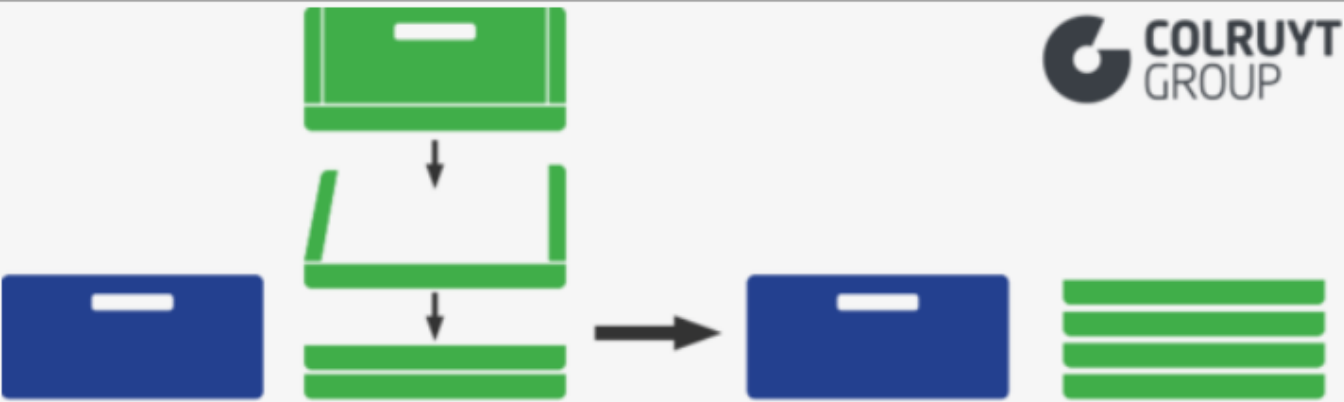
DAF LF Electric for 'zero emission' city distribution

19 ton
280 km action radius



A plan !!

- The Danish Copenhagen Airport has a plan to built a hydrogen parc
- by 2030 to produce hydrogen fuel for aircrafts , ships and trucks



1 bleu crate = 4 foldable green crates



- Adaptable packaging boxes



- **Building the self-driving supply chain**
- The first step : the creation of a **supply chain control tower**,
- The control tower brought all the supply chain division's data together in a single digital dashboard, providing a centralized, real-time view of its end-to-end supply chain operations.
- the second phase focused on **improving the accuracy of its forecasts** through the introduction of machine learning algorithms to automate the demand forecasting process.
- Production and distribution adapt automatically to meet changing demand.

The CORONA impact



- Lessons learned in sustainability

- Less congestion (except sometimes at the border) - work from home ... less CO2
- Suppliers cut on their assortment and deliver the high value products
- Retailers do the same => inventory reduction
- e-commerce the winner !!!
- Digital business meetings from home - much more efficient !
- Digital international meetings instead of traveling
- The bullwhip theory put into practice





Coca-Cola, Mondelez trim SKUs

- "We've seen an increase in demand and we've met it by focusing on the most important SKUs," said Van de Put in late April — calling the reduction "significant"
- Coca-Cola was "prioritizing to deliver on core SKUs" to drive efficiency in its supply chains and streamline operations for retail customers in search of greater simplicity.
- Mattel reached a 30% SKU reduction

Do not forget : 80 % of your turnover is realised with 20 % of the sku's !! More 3D printing !!

"The 'physics' of supply chains means that by adding SKUs, response times, inventories and performance are all adversely affected."

Simon Croom

Professor of supply chain management, University of San Diego

- E-commerce the winner !!!

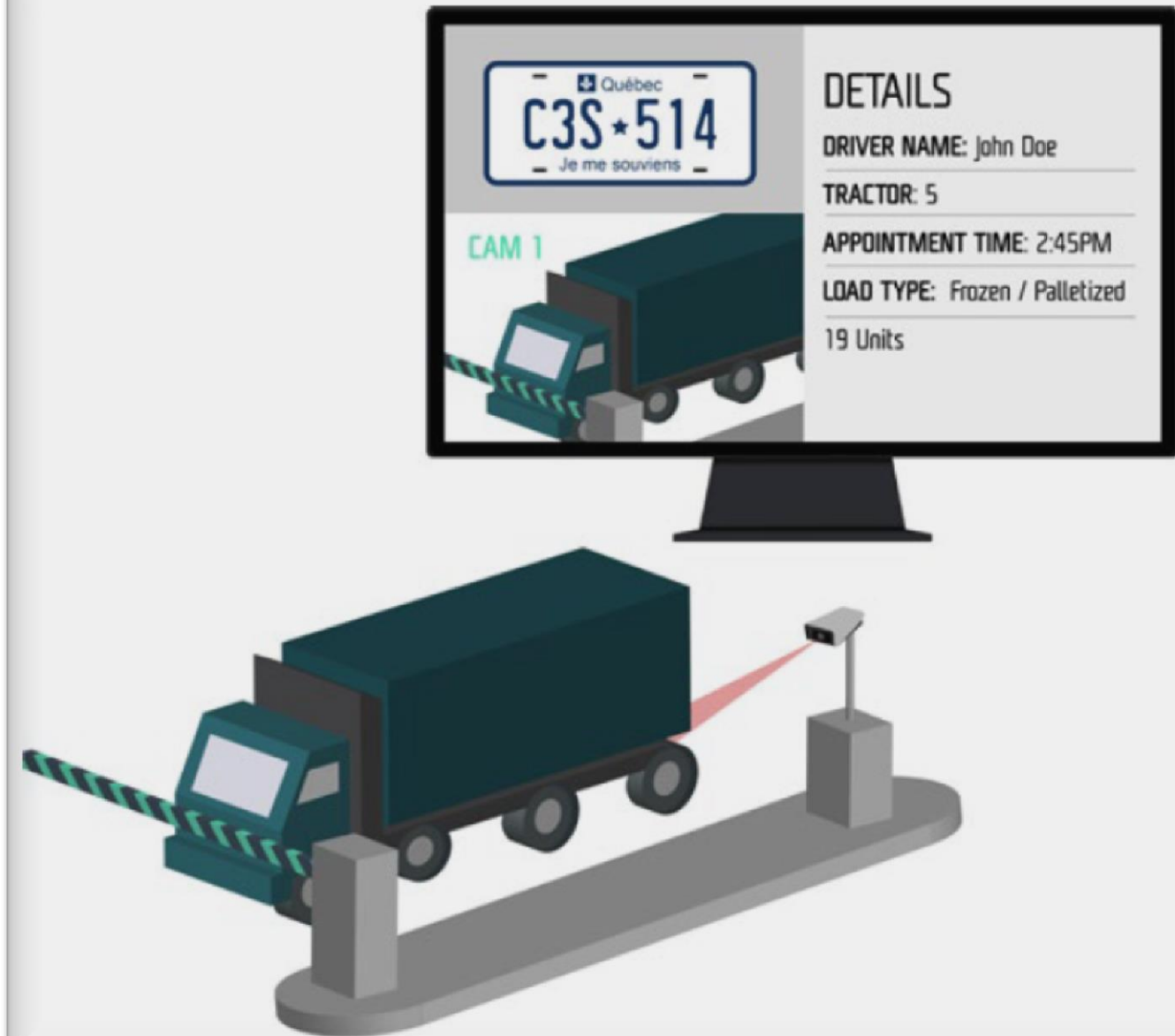
- With consequences : more vans = with bad fill rate
- so Grouping is the answer
- increase delivery time ??



- For the shops : a number of shops will disappear or ...
- become smaller
- still : shopping experience but delivery at home or pickup



PAPERLESS RECEPTION





Voice recognition technology is becoming increasingly sophisticated.

- **Sourcing models** will be revised
- **Risk management** will become very important

In other words : the world will not be the same anymore !!

- We have to re-invent ourselves and our businesses in a sustainable way !!
 - Creative - agile – adapt – flexible
- There will be new winners !



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