How to do more with less trucks in the automotive supply chain?

Ruud Vossebeld, Groningen, June 2018
Specialty: logistic mathematical optimization

A leading global optimization company

More than 750 employees

- global projects
- focus on automotive logistics

HQ in Germany; revenue in 2017 €75 million

Many automotive customers like

Audi, BMW, Daimler, Continental, Volkswagen, Bosch
INFORM | Leader in Optimizing Automotive Logistics

Industry Logistics | Mathematics | INFORM
Combining Inbound and Outbound in Automotive?
Challenges in logistics today....

Trucks in vehicle logistics are 40-50% empty in many places in the world......

Containers are 40-50% empty in many places in the world........

How can we solve this problem?
20 BILLION KGS OF NEEDLESS CO₂ IS EMITTED INTO THE ATMOSPHERE EVERY YEAR BY THE AUTOMOTIVE SECTOR ALONE
New technologies: convertible trailers
Convertible trailers | Further optimization possibilities
Big Data in Automotive **Outbound flows in Europe**
Big Data in Automotive All OEM imbalances in Europe over all brands
**Big Data in Automotive**

**Inbound flows in Europe (engines and transmissions)**
Big data in Automotive | Where can convertible trailer help to reduce empty driving?
Stop with transporting empty containers:

Use foldable containers
Stop with empty trucks in finished vehicle logistics

Stop with transporting empty containers:

Use foldable containers
Convertible and foldable concept
Convertible Trailer+Folded Container I More than 40% potential?

Trip 1: trailer filled with cars from factory to port
Trip 2: trailer filled with filled container from port to factory
Trip 3: trailer filled with cars from factory to port
Trip 4: trailer filled with filled container from port to factory
Trip 5: trailer filled with cars from factory to port
Trip 6: trailer filled with filled container from port to factory
Trip 7: trailer filled with cars from factory to port
Trip 8: trailer filled with filled container from port to factory
Trip 9: trailer filled with 4 folded empty containers from factory to port

Summary:

Traditional | Convertible trailer+ foldable container
---|---
4 trips with cars+4 times empty back | 4 trips with cars+4 trips back with filled containers
4 full container trips+4 times back with empty container | 1 trip with folded empty containers

16 trips needed versus 9 trips needed

More than 40% saving on kilometres!
THE WHOLE IS GREATER THAN THE SUM OF ITS PARTS.

INBOUND + OUTBOUND + HARDWARE + SOFTWARE + SPECIALIZED CONVERTIBLE PROCESSES + FUTURE CONVERTIBLE SOLUTIONS

=  

CONVERT IT. CONTAIN IT. CONTROL IT.
Thank you!

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