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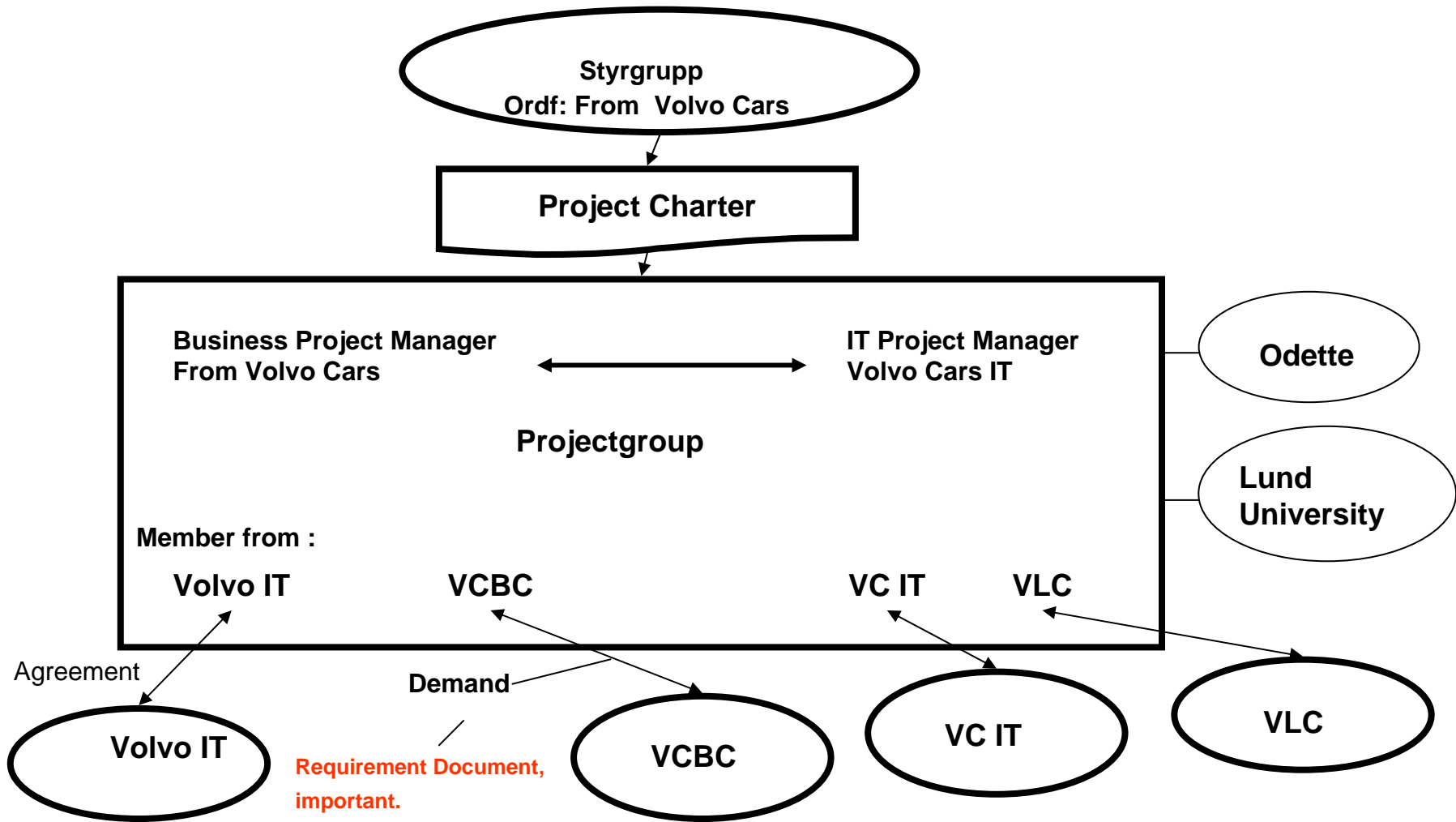


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# Projektorganisation



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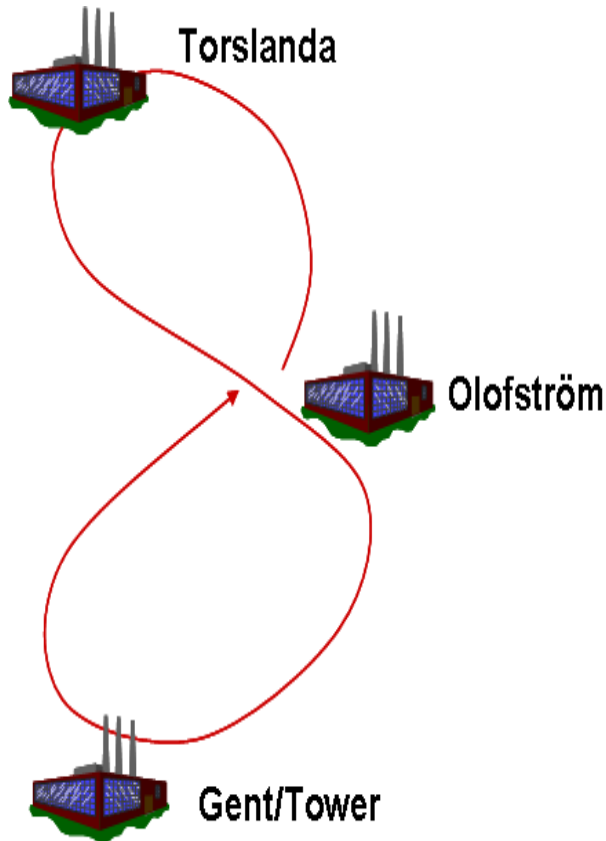


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# The train solution



- The train solution that provides VCT, VCG and Tower with parts is the well known “tåg åttan”. Here we will focus on Olofström, and go through the steps from the train arriving to train leaving.
  - Reporting the arriving train
  - Storing rack in container on the yard
  - Ordering of rack to production
  - Emptying/filling containers
  - Loading container on train reporting
  - Creating transport document
- We also look at possibilities in VCT VCG and Tower

Container in a Closed Loop.



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# The Arrival of a train

- All arrived containers are reported
  - System connected to “emballage flödes systemet”, exception tower. (reg 1)



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# Storage facility

- The containers with empty and full racks are stored in the yard.
  - The production call for the rack that is needed, limiting the number for rack in production. With the emabllage flödes system tracking the container implies tracking the rack. VCT and VCG uses the container in a similar way. Normal storage 500 container VV and 150 vs



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# Ordering racks

- Production order racks and “rack flödes systemet” is shown

The screenshot shows a web browser window titled "Söka emballage - PEO2010 - Microsoft Internet Explorer". The page header includes the Volvo logo and navigation links: "Söka", "Rapportering", "Systemadministration", and "Hjälp". The main content area is titled "Söka emballage" and contains a search form with "Emballagetyyp" (3447) and "Artikelnummer" (3447) fields, and a "Sök" button. To the right, it shows "Summa i flöde" as 123. Below the search form, it states "Antal träffar 12". A table displays the search results:

| Mätpunkt/Transport                  | Emballagetyyp | Antal | Destination | Ankomsttid          |
|-------------------------------------|---------------|-------|-------------|---------------------|
| Full package in container VV        | 3447          | 7     |             |                     |
| Full package in production VV       | 3447          | 2     |             |                     |
| 071009003                           | 3447          | 1     | BP2TD       | 2007-10-09 kl.22:14 |
| 071011003                           | 3447          | 1     | BP2TD       | 2007-10-11 kl.22:38 |
| 071030001                           | 3447          | 4     | BP2TD       | 2007-10-30 kl.16:47 |
| 071031002                           | 3447          | 5     | BP2TD       | 2007-11-01 kl.06:40 |
| Full package out of container BP2TD | 3447          | 4     |             |                     |
| Empty package in container BP2TD    | 3447          | 10    |             |                     |
| Empty package in production BP2TD   | 3447          | 2     |             |                     |
| Empty package received at HF        | 3447          | 10    |             |                     |
| Empty package received at VV        | 3447          | 38    |             |                     |
| Empty package out of container VV   | 3447          | 39    |             |                     |

At the bottom of the page, it says "PEO2010" and "Vid problem kontakta Team leader VCBC". The Windows taskbar at the bottom shows the Start button, several application icons, and the system tray with the time 06:33.



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# Emptying/filling containers

Emptying containers are done either on the yard or in a container gate. All container numbers are reported

Emptying on yard requires manual reporting in (rack flödes systemet)

Emptying/filling in container gate (3VV, 4VS, 2 G) and one loader, (Reg. 2)



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# Loading the train

- When all containers are loaded on to the train, the container drivers pass the train writing down wagon and container number (Reg 3)
- On a daily basis are 300 containers loaded and 300 are unloaded in Olofström



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# Creating transport documents

- The finished list is given to the personnel that creates transport documents. Who registers the container number. (Reg 4)

LASTLISTA TÅG TILL GOTHENBURG

| VAGNSNR        | CANR                         | VAGNSNR        | CANR                         |
|----------------|------------------------------|----------------|------------------------------|
| 3174455 2107-7 | 7312<br>8110<br>7030<br>7162 | 3174455 2122-0 | 8461<br>7087<br>7329<br>8483 |
| 3174455 2328-3 | 8050<br>8478<br>7301         | 3174455 2000-8 | 8001<br>7179<br>7090         |
| 3174455 2166-7 | 7933<br>7277<br>7550         | 3174455 2168-3 | 7455<br>7253<br>7197         |
| 3174455 2155-0 | 7219<br>7128<br>7654         | 3174455 2103-0 | 8351<br>8327<br>8496         |
| 3174455 2218-6 | 8092<br>7527<br>7989         | 3174455 2154-3 | 8355<br>7161<br>8392         |
| 3174455 2008-1 | 7408<br>7107<br>8051         | 3174455 2147-7 | 7807<br>7800                 |
| 3174455 2183-2 | 7341<br>7715<br>7441         | 3174455        |                              |
| 3174455 2209-3 | 7435<br>8796<br>7955         | 3174455        |                              |
| 3174455 2084-2 | 6058<br>6036<br>8353         | 3174455        |                              |
| 3174455 2110-5 | 6049<br>7234                 | 3174455        |                              |



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# RFID on containers

The goal is to

~2500 correct container a day

a possibility to follow the flow of racks

a rational and quality assured process



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# Facts 1

300 containers is arriving and 300 are leaving Olofström on a daily basis,

One loop is four readings, 1200 registrations in Olofström alone.

The RFID tag will follow the Odette standard.



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# Opportunities 1 /Facts 2

Once the Technique is in, it is scaleable,

Rack

Train wagons

VCT, VCG and Tower



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# Opportunities 2

In addition to the shown gains in Olofström “20 feet containers” will start rationalization work in VCT, VCG, Tower and VLE.

Ex. train arriving in Gent is first received as a whole train. Then each container is manually reported.

Ex. VCT is currently registering the container five times in each loop.



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# Conclusions

Adding RFID on the Containers is the correct manner to start working with a “new” technology, in a small, secure and scalable way

Large effects,

Relatively small investment

A complete flow, gives instant payback



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If you want to see an example how to use  
RFid technology to keep track of logistic  
movements and get measurements.

Please send a mail to

[lakesso2@volvocars.com](mailto:lakesso2@volvocars.com)



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