
Chain of Custody for Paper Products

a German-Norwegian Project

A Chain of Custody: WHY?

- Environmental Quality = Quality of Production history
 - overwhelming growth in certified biological food
 - idem for wooden products, cotton clothing, etc.
- Raw material certification is not enough
 - FSC etc. extremely useful, but
 - chain of custody should be guaranteed

A Chain of Custody: Complications

- Chain of custody for forestry products is complicated
 - ▶ lack of transparency in trade logistics
- Chain of custody for paper products is extremely difficult
 - ▶ mixing of many different flows
 - ▶ flow dynamics of modern paper mill
- Modest chain of custody is possible
 - ▶ on the basis of statistical modelling
 - ▶ with small changes in logistics and production process

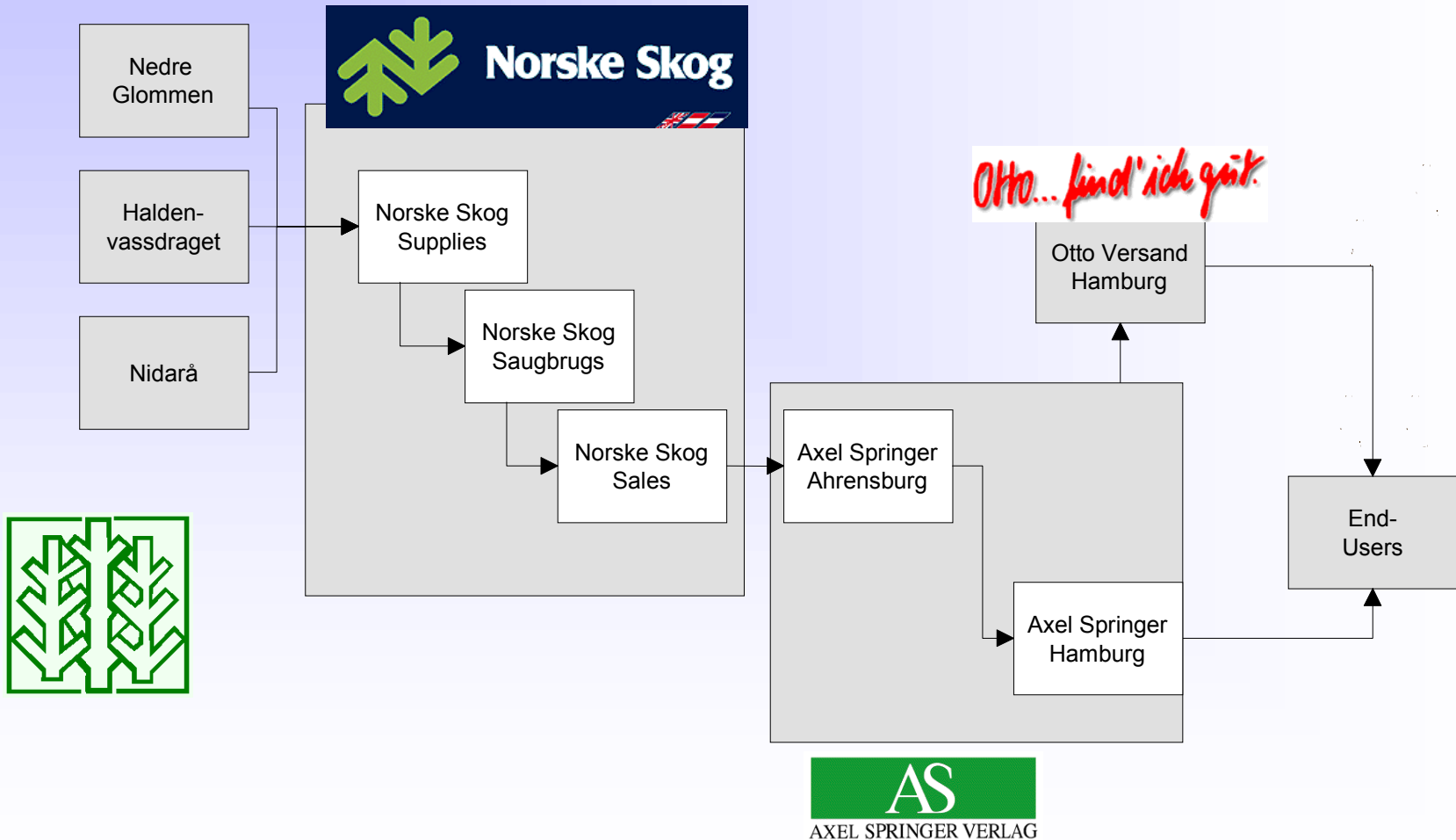
The OPTI Project Co-operation

FORESTRY

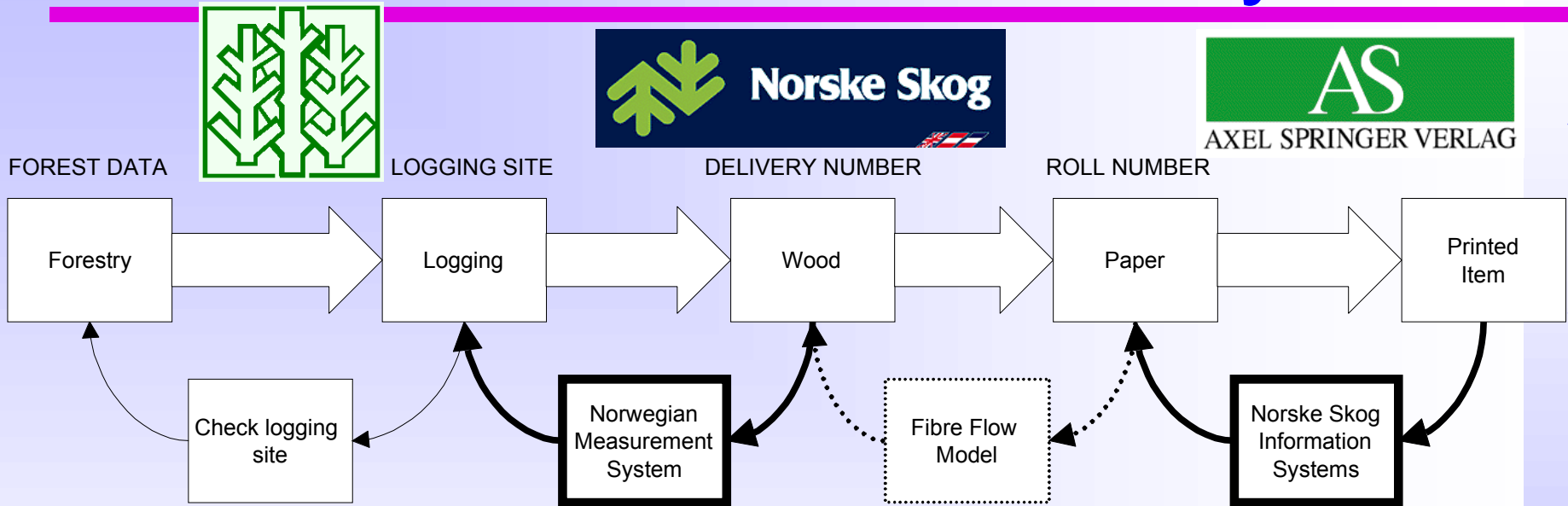
PAPER MAKING

PRINTING

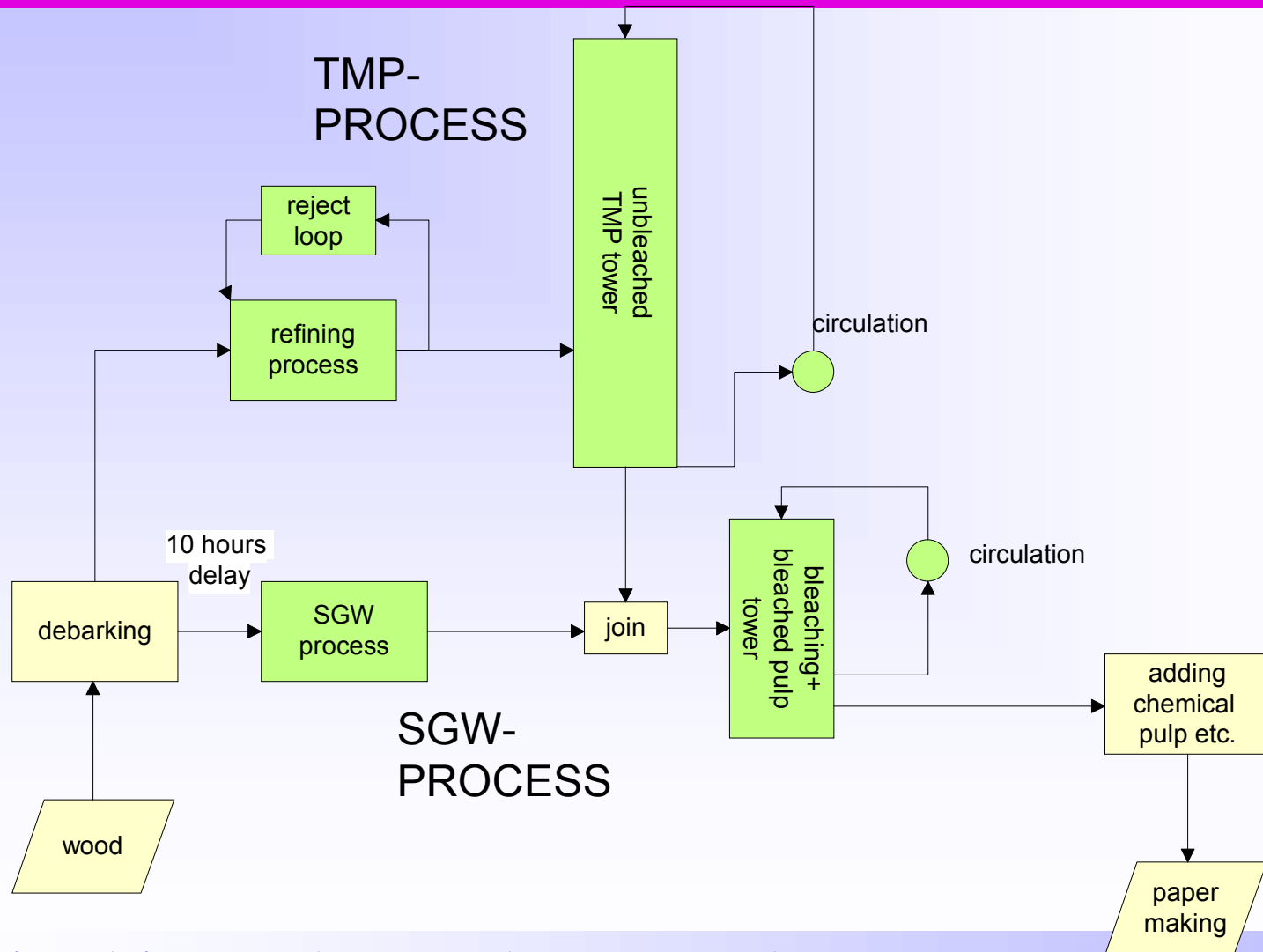
PUBLISHING



A Closed Chain of Custody



Tracing the Fibre through the Paper Mill (1)

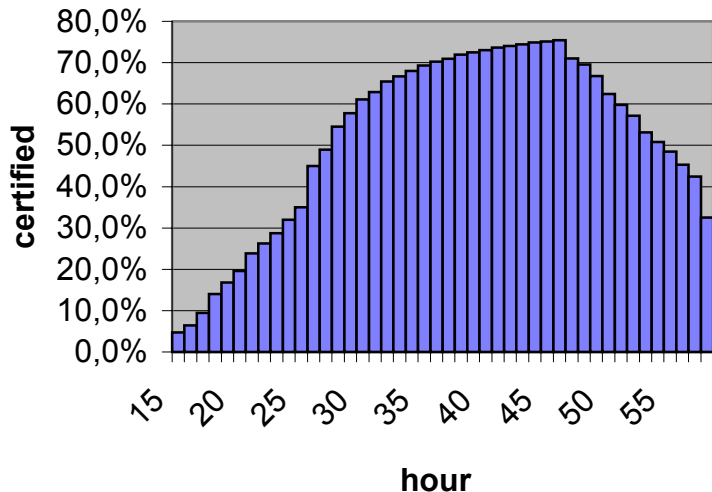


Tracing the Fibre through the Paper Mill (2)

CALCULATED

acceptable hours	13	
from hour	43	2-04-99 19:00
until hour	54	3-04-99 6:00
paper production (tons)	406	
after trimming about	244	

Certified Input to PM



- paper with >70% certified fibre is being separated
- traceability is not 'roll to tree' but for whole batch
- 100% traceability from wood-yard to logging site

The OPTI Project: Results

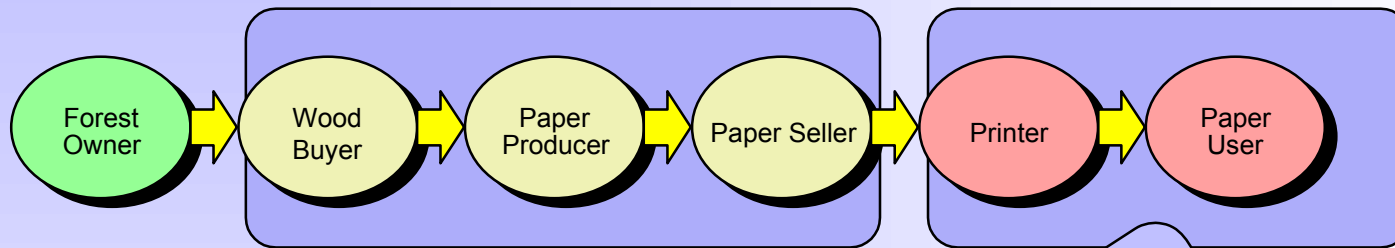
■ The Product

- ▶ paper with > 70% of certified pulpwood
- ▶ 100% traceability to logging sites
- ▶ independent verification procedure
- ▶ additional ecological improvements

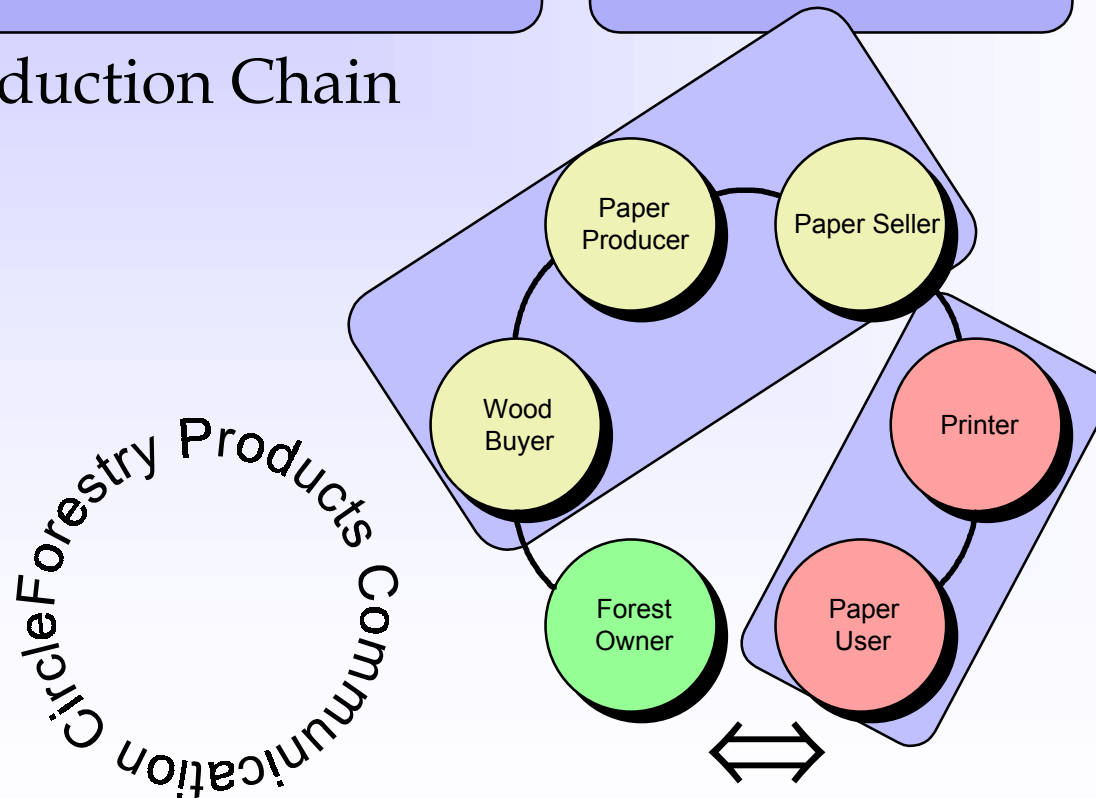
■ The Co-operation

- ▶ unique co-operation from 'family to family'
- ▶ across commercial and cultural barriers

The Paper Production Chain becomes a Forestry Products Communication Circle



Paper Production Chain



Conclusions and Outlook

- The market will ask for more information on the paper's history as a standard quality item
- Co-operations in the entire paper chain are essential for
 - securing the chain of custody
 - transferring real time life cycle data
 - joint optimization of paper products

Organising the transparency

that the market asks for is a great challenge, not only for the industry as a whole but also for the individual paper producer who should take the risk to become better than its competitors by looking for the right alliances in the paper chain from the family forest on the one side to the paper end-users on the other side of the paper chain.

Thank you for your attention