

Experiences with Chemical Leasing in Metal Degreasing Plants

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Pero

The Company and its background

Pero AG is

- a medium sized company with ~ 150 employees
- based in Germany and present in the world market with high performance cleaning machines
- active in research and development on the optimisation of technical and emission parameters on metal cleaning



Pero

Pero's visions towards chemical leasing

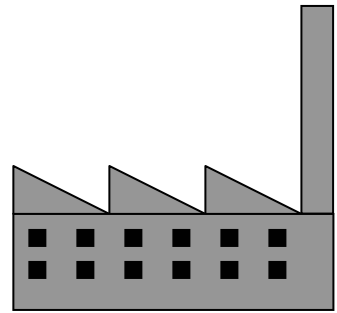
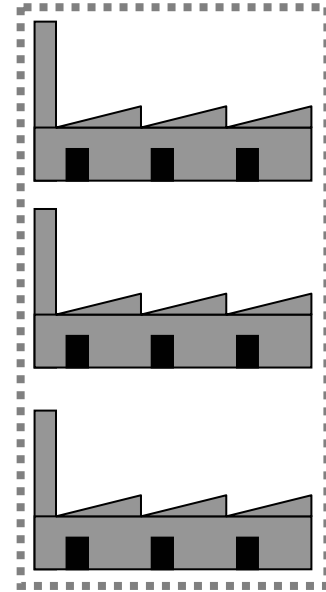


MACHINERY PRODUCER:

- holds share in the joint venture
- gets its money not for the machine but for the benefit of the machines
- is involved in R&D

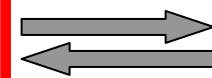


**Local Centre of Excellence
for metal cleaning
(joint venture)**



CHEMICAL PRODUCER:

- holds share in the joint venture
- gets its money not for the chemical but for the benefit of the chemical
- is involved in R&D

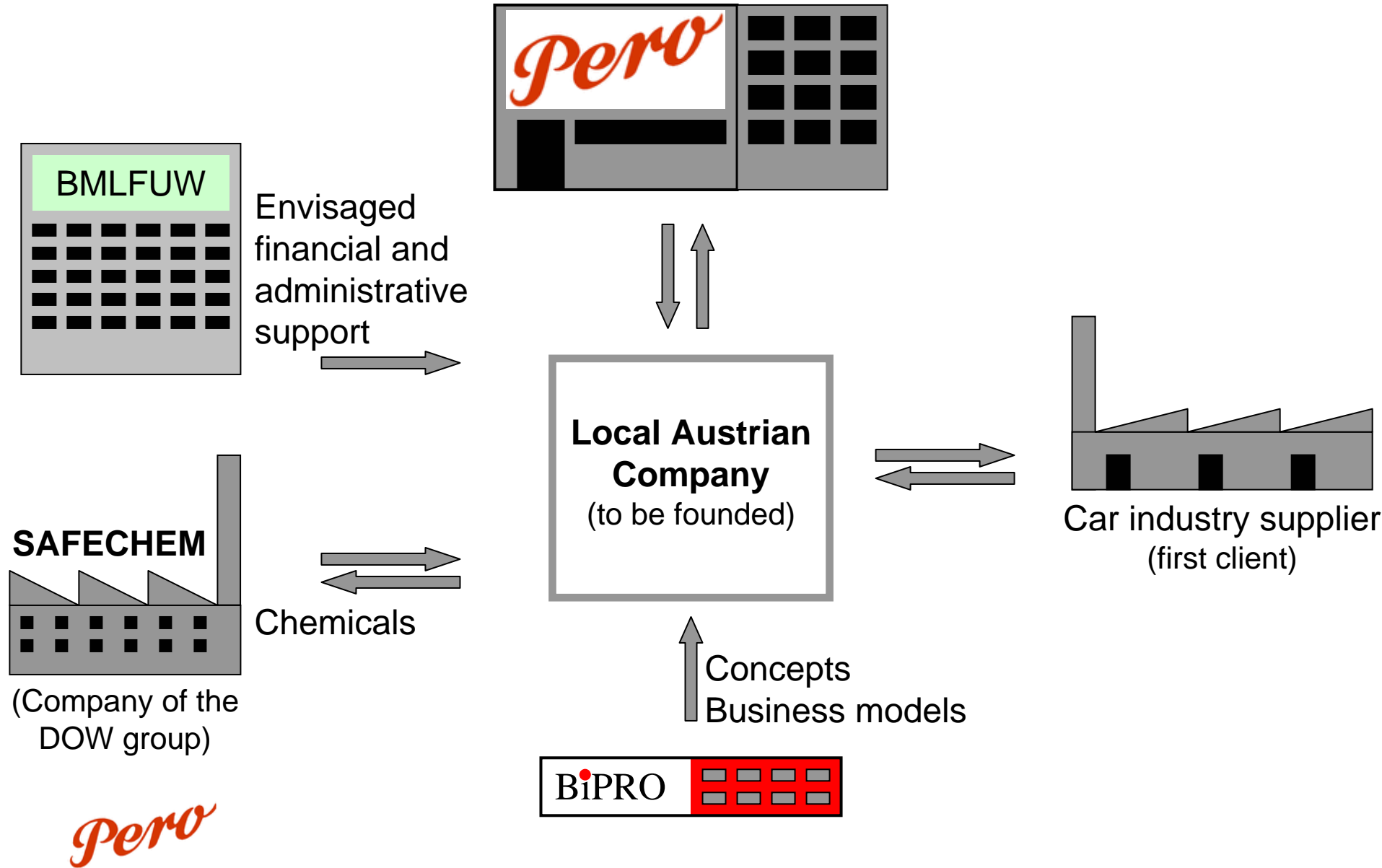


CLIENTS:

- cleaning at the client or at the centre of excellence
- do not pay for chemicals
- do not pay for machinery
- payment for the benefit: cleaned work pieces



Partners of Pero in current projects

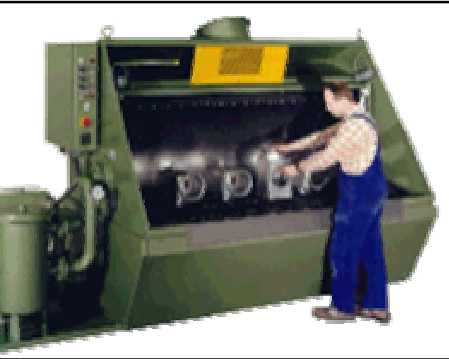




Cleaning machines based on hydrocarbons



Cleaning machines based on chlorinated solvents



Cleaning machines based on water

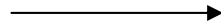
Realisation of the concept

Phase I:

- ⇒ development and elaboration of the concept
- ⇒ contact with the first client
- ⇒ foundation of the Austrian company;
establishment of contracts with partners
- ⇒ start with operational business on the basis of a solvent cleaning machine
- ⇒ start with research and development
work to minimise emissions and optimise technical parameters

Technical aspects of phase I

about 11 mio pieces
to be cleaned

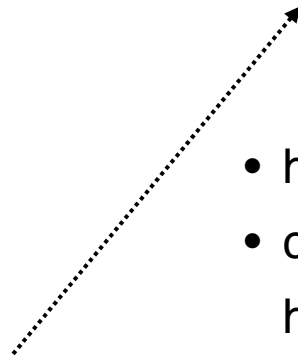


about 800t
stainless steel



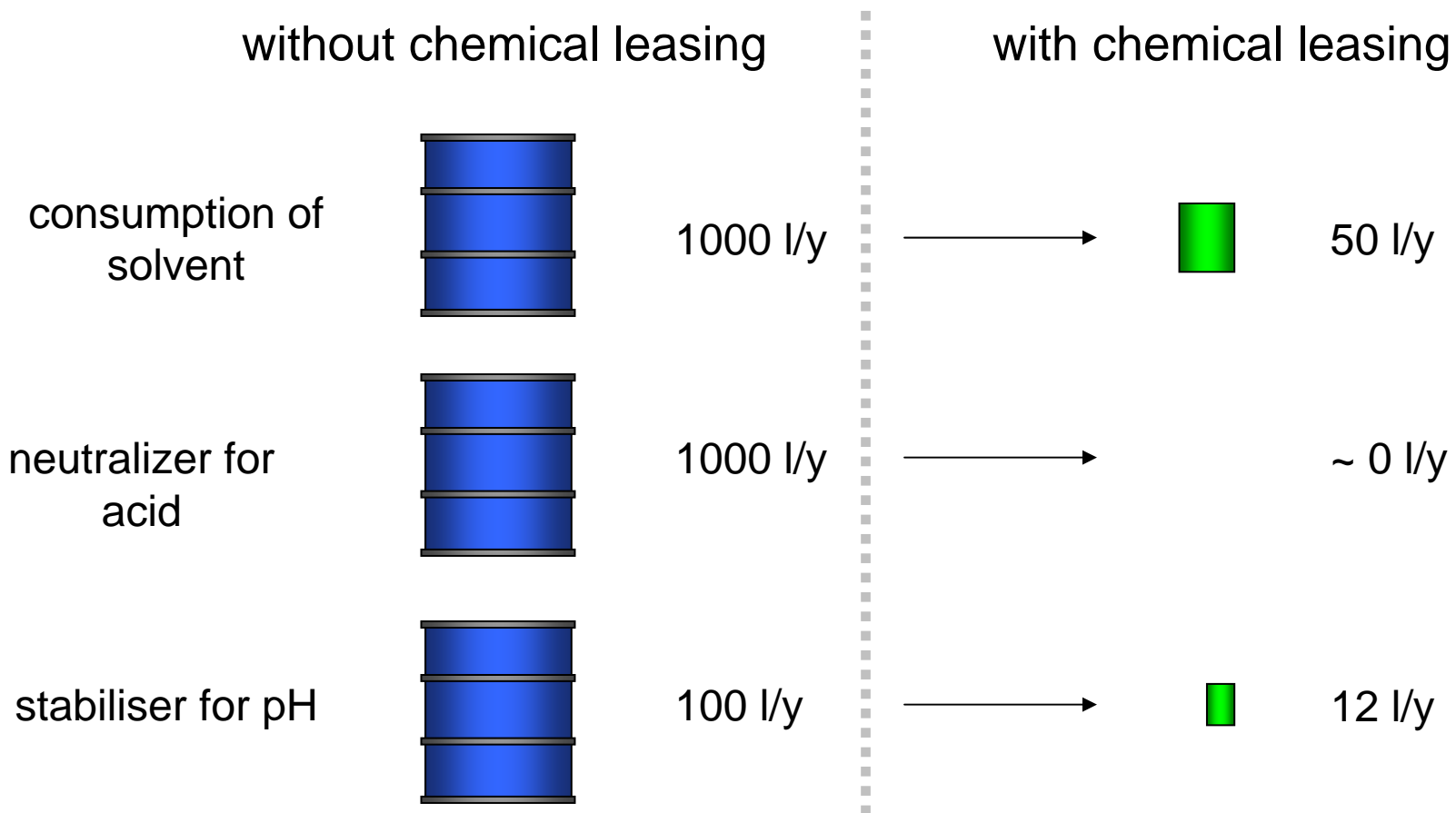
cleaning machine

cleaning elements of
other clients



- highest standard, not available at the market
- cleaning is possible with chlorinated solvents and hydrocarbons
- further development of clearing machines is foreseen with respect to various demands of further clients

Ecological advantages



⇒ concept generates ecological advantages

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Economic balance

- + additional costs for high performance cleaning machine
- + additional costs for high performance chemicals
- + additional costs for further research and development
- + additional costs for foundation of joint venture
- saving of costs due to less consumption of chemicals
- saving of costs due to higher efficiency (if additional clients can be found)

⇒ concept might generate economic advantages, depending on additional clients

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Major open questions and research demands

- ? How can various types of dirt be managed if they will be brought into the system by various clients (requirements for the chemical and the machine)
- ? logistic concept is necessary if various clients need the capacity of the cleaning machine
- ? How can the ecological benefits be communicated to further clients to convince them to join the concept

Realisation of the concept in phase II



solvent
based

water
based

extended capacity
at the location of the joint venture

other
cleaning
media

extended capacity
at the location of further clients

Conclusions

- Pero is on the way to have an advanced chemical leasing business model running with phase I starting at the beginning of 2004
- Appropriate partners are essential for a successful realisation of the concept
- Key factors for success are high tech cleaning machines that enable together with the provider of chemicals significant reduction of chemical's consumption and have potential for further development
- Chemical leasing will be further developed in phase II, thereafter the concept shall be expanded on the basis of the Austrian experiences