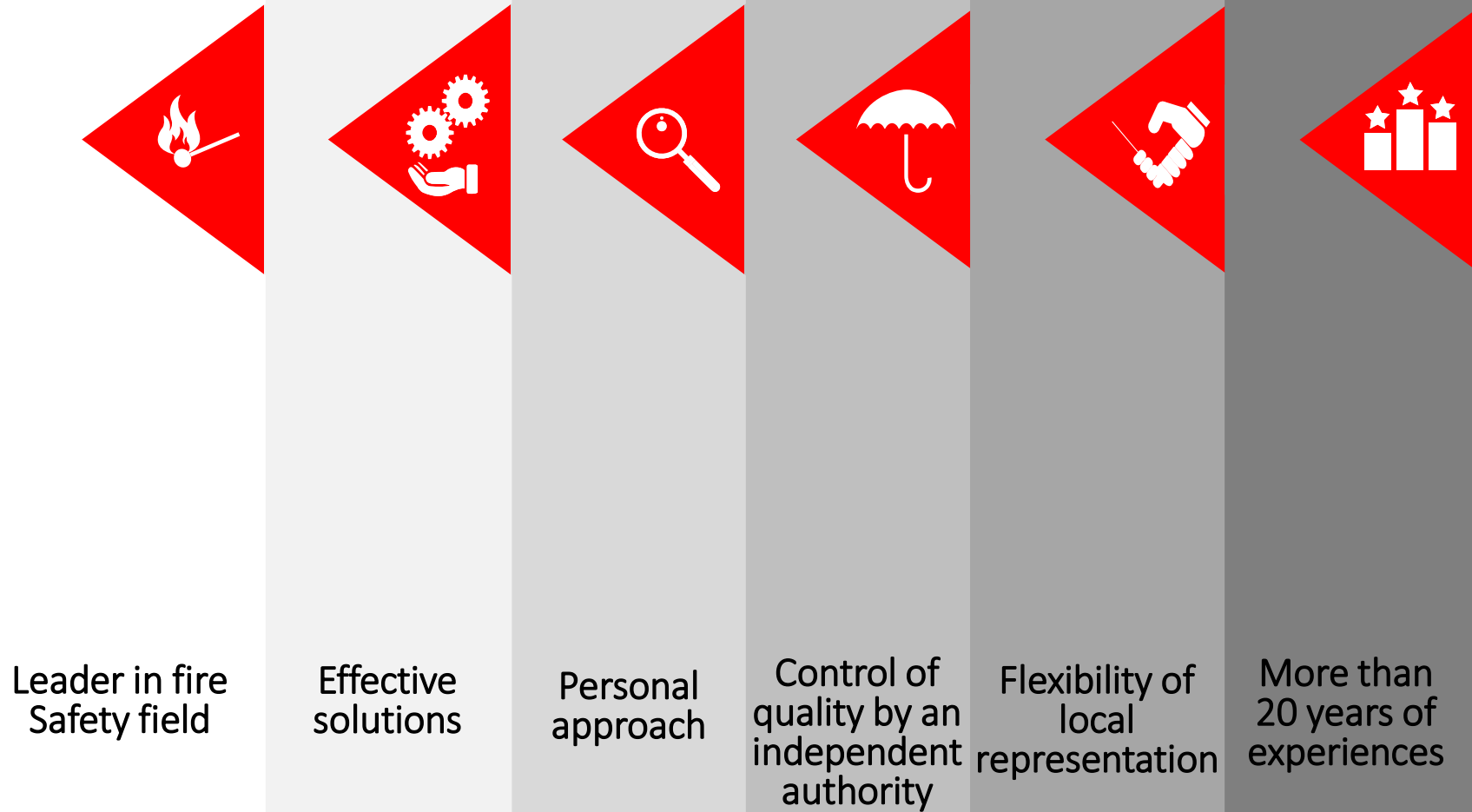




pyronova
passion for protection

2 About us

PYRONOVA, specializing in fire protection, brings practical solutions since 1992. In early days many targets were already set, one of them was to become the leading supplier of comprehensive solutions of fire safety in Europe. To achieve this, we rely on strategic pillars that allow us to transform our objectives into reality year after year.



Group structure

1. Pyronova Poland / **Warsaw**

2. Pyronova Czech republic / **Brno / Prague**

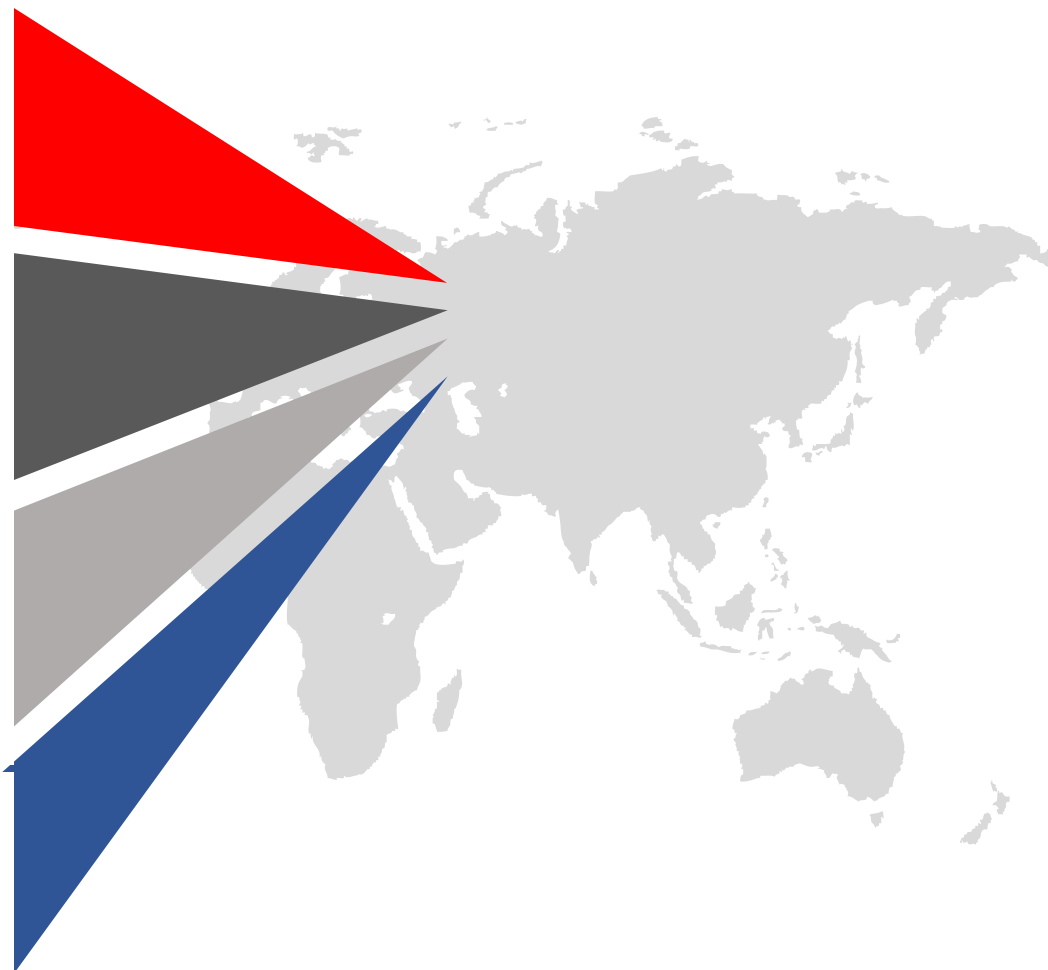
3. Pyronova Slovakia / **Trnava / Zvolen**

4. Pyronova Romania / **Cluj – Napoca / Bucharest**

5. Pyronova Hungaria / **Budapest**

6. Pyronova Bulgaria / **Sofia**

7. Pyronova Ukraine / **Velyka Bakta**



7

COUNTRIES

150

EMPLOYEES

9

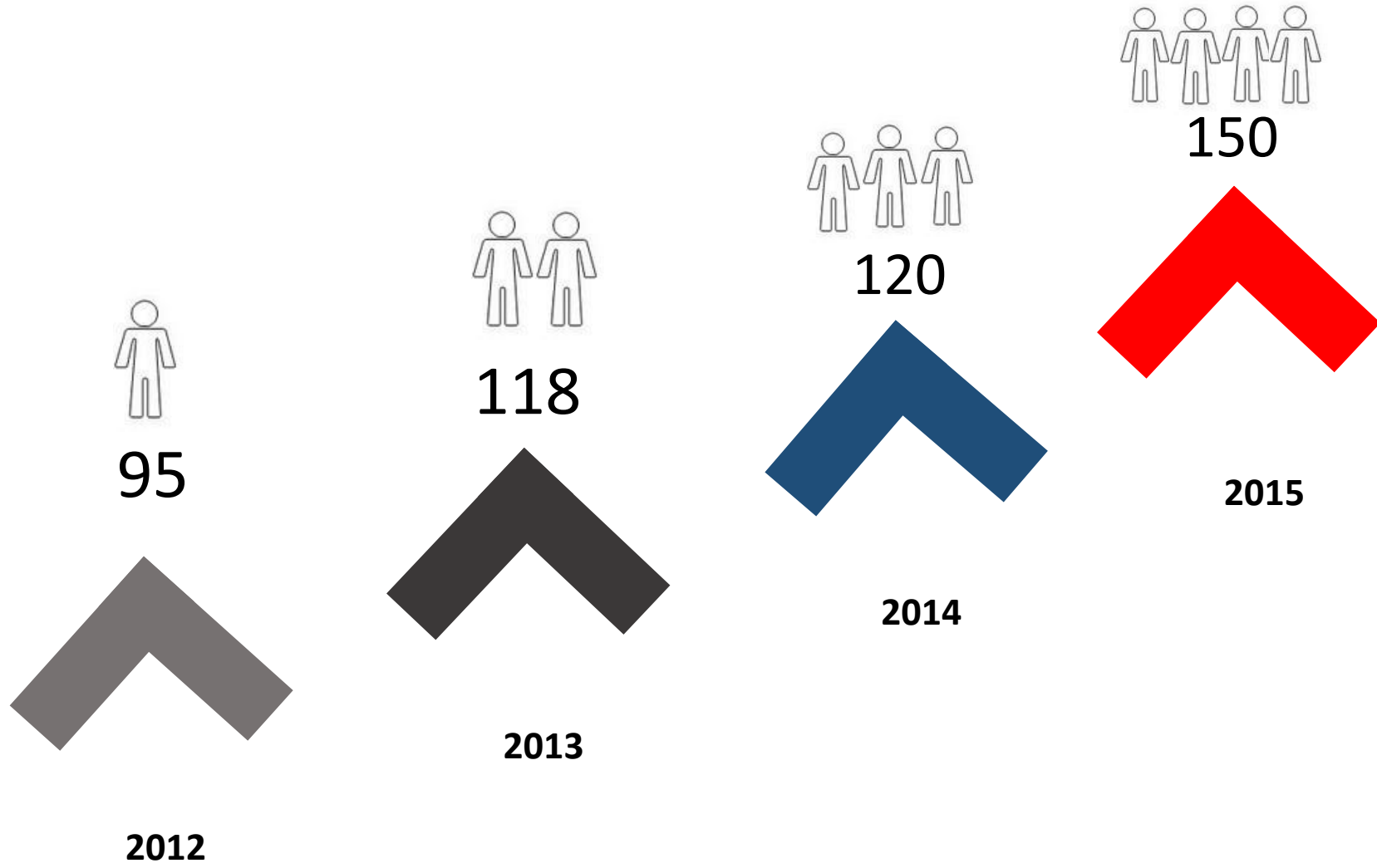
BRANCH OFFICES

1

MULTINATIONAL
COMPANY

pyronova
passion for protection

Satisfied employees



Constant renewal portfolio of our products



OxyReduct

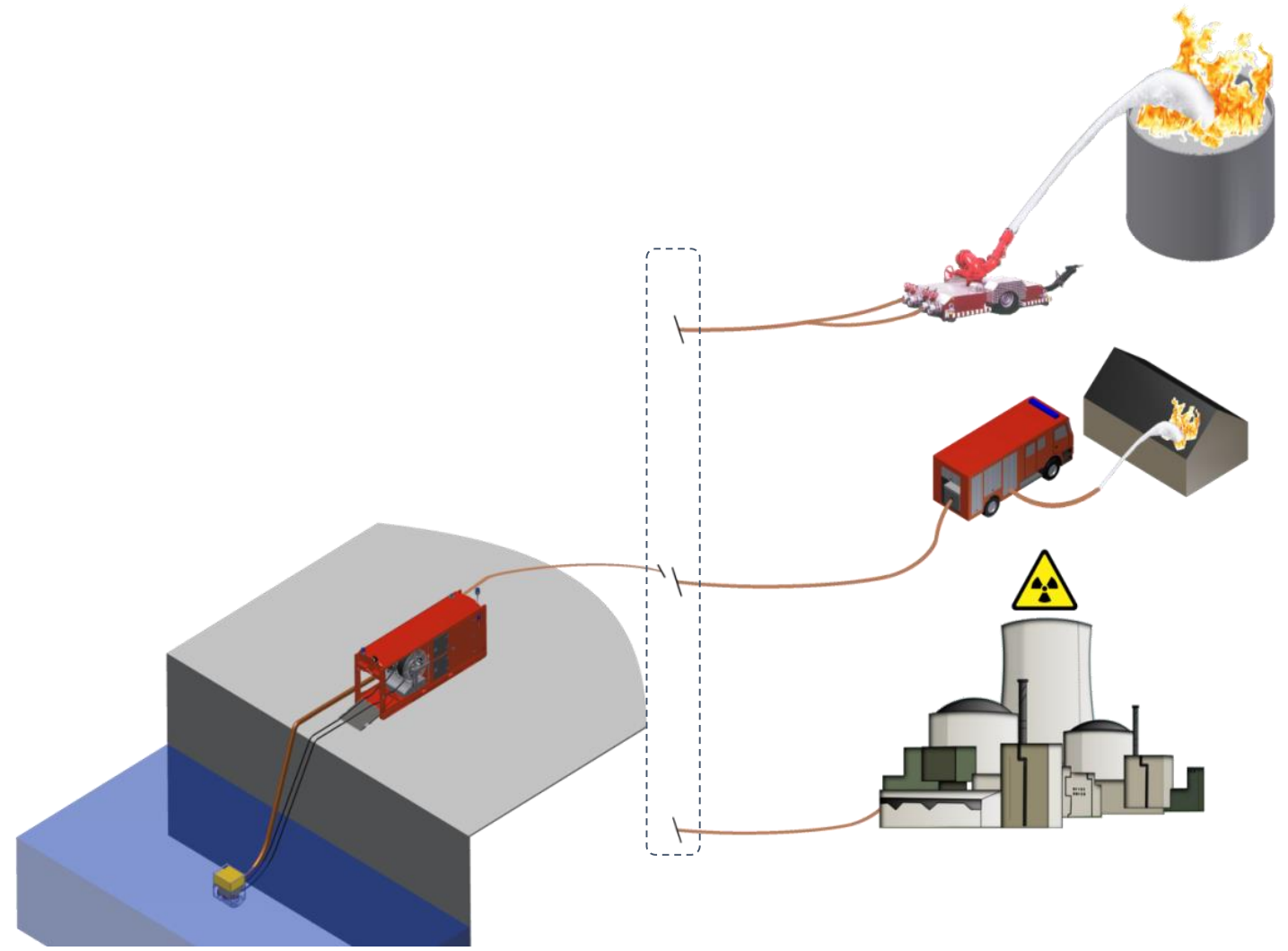


CAFS

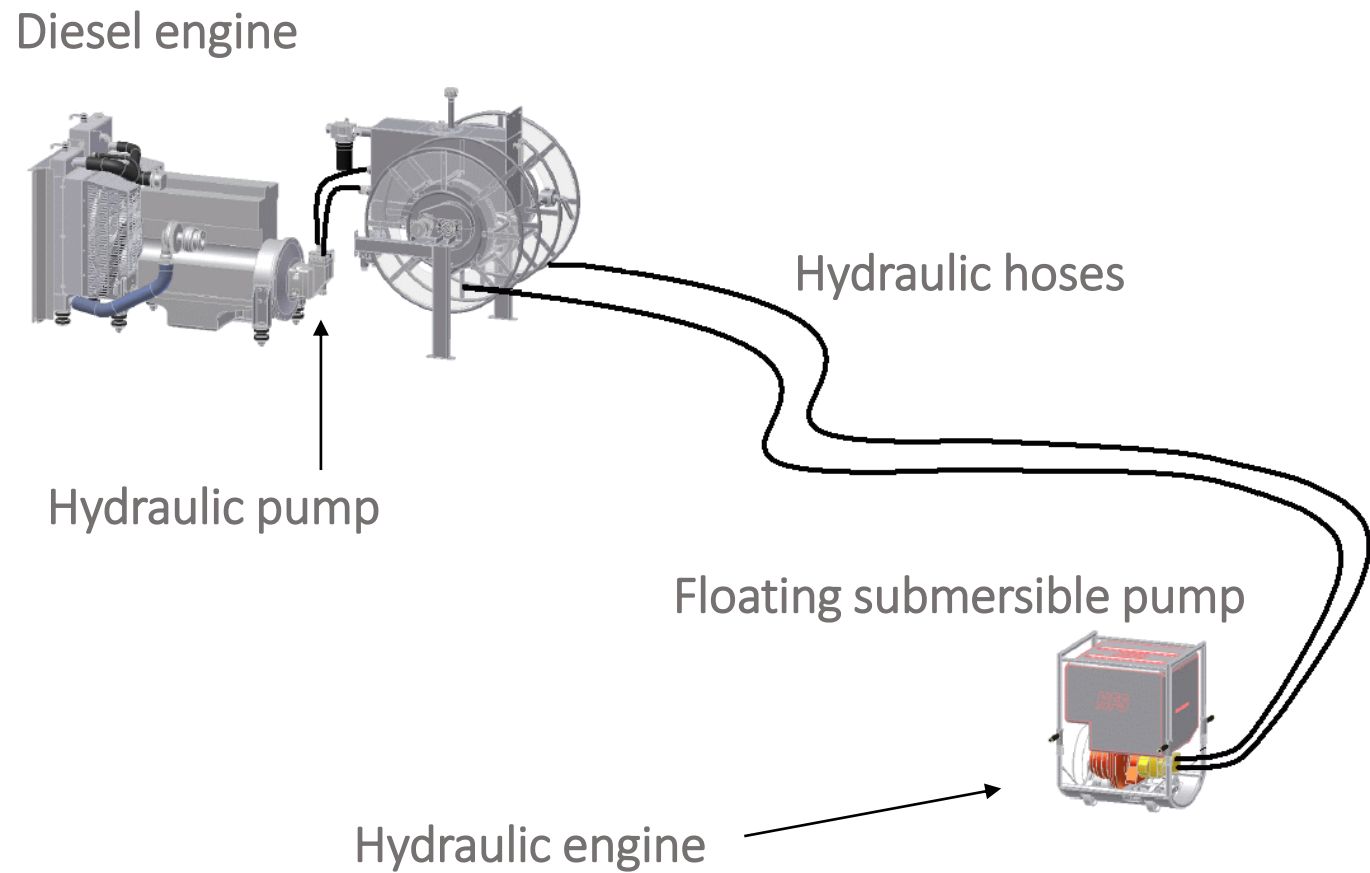


FOGTEC

Hytrans Fire System – use



Hytrans Fire System – pumping principle



Hytrans Fire System – pump units



HS 60
1.500 l/min at 10 bar
4.500 l/min at 2,5 bar



HS 150
3.000 l/min at 11 bar
8.000 l/min at 2,5 bar



HS 450
15.000 l/min at 12 bar



HS 900 NG
24.000 l/min at 12 bar



HS 1200
30.000 l/min at 12 bar

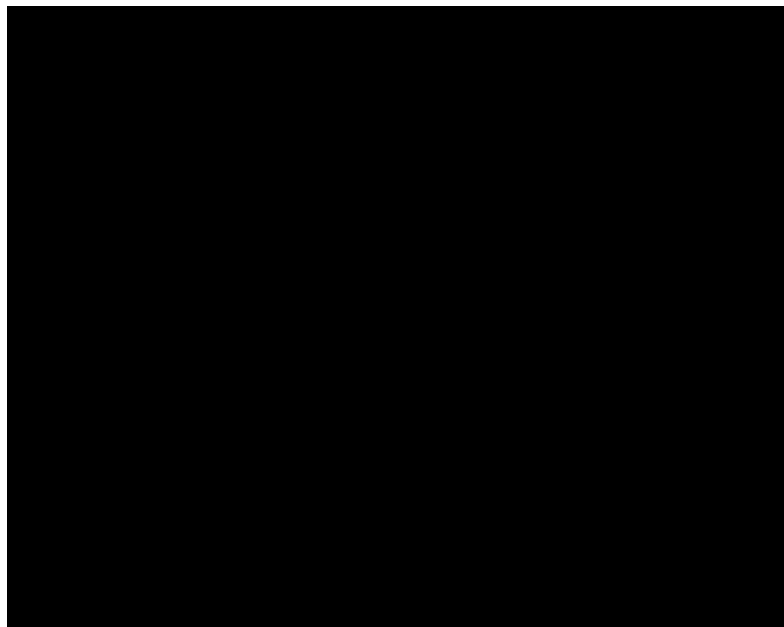


Autoboot
from 5.000 l/min at 5 bar
up to 45.000 l/min at 12 bar



Powerfoam
6% up to 24.000 l/min
3% up to 48.000 l/min

Hytrans Fire System – hoses manipulation



Hoses laying

Up to 40 km/hod
1 person



Hose recovering

Up to 4 km/hod
3-4 persons

Example 1

Situation:

Fire at Buncefield in 2005

After explosion 22 tanks in fire,
fixed water supply system damaged by explosion.

HFS system was used:

6x HS150 at the normally inaccessible water source,
3x HS150 as booster pumps,
4x HS150 to run off water,
33.000 m of 6" hoses deployed within 1 hour !
32.000 l/min the constant water flow over 2 km!

Water source – balanced tank – 35.000 m³.



Example 1

Situation:

Fire at Buncefield in 2005 – standard water transport system ?

$$N_C = \frac{T_1 + T_2 + T_3}{T_4} + 1 \quad T_1 = \frac{60 \times L}{V_j} = (60 \times 2) / 40 = 3 \text{ min}$$

$$T_2 = \frac{V_N}{Q_c} = 8.000 / 4.000 = 2 \text{ min}$$

$$T_3 = \frac{60 \times L}{V_n} = (60 \times 2) / 35 = 3,43 \text{ min}$$

$$T_4 = \frac{V_N}{Q_H} = 8.000 / 32.000 = 0,25 \text{ min}$$



Example 1

Situation:

Fire at Buncefield in 2005

$$N_C = \frac{3 + 2 + 3,43}{0,25} + 1 = 35$$

35 fire trucks only to transport the water !

Other fire trucks needed to boost the pressure,
Other fire trucks or monitors needed for fire fighting!

HFS system performed the task which normally
would take 160 fire fighting vehicles !



Example 2

Situation:

Fire at Chemopetrol in 1996

Petrol station and tanks in fire:

11.000 m³ gasoline

5.000 m³ gasoline

Hydrant system insufficient.

More than 350 firemen deployed at fire fighting at once,
Almost 1.100 firemen participated in total,
FDPT from 35 districts participated.

Extinguishing took 7 days and nights in total,
Used 43.680 m³ of water, 450 t of foam concentrates, 18 t of CO₂,
more than 18 t of powder and other agents.



Hydrant system insufficient !

Risks in petrochemical industry

Explosion damages the fixed fire extinguishing system

Explosion damages the hydrant system pipeline

Insufficient water supply

SOLUTION FOR EFFICIENT FIRE FIGHTING: HYTRANS FIRE SYSTEM AS A MOBILE WATER TRANSPORT SYSTEM

Various use

Direct firefighting - monitors



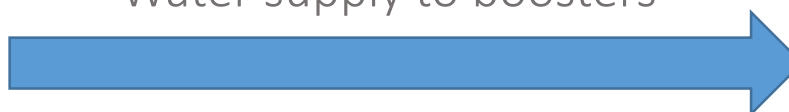
Water supply to fire trucks



Water supply to hydrants



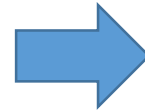
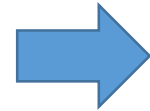
Water supply to boosters



Water supply for „Big Wind“



Hydrosub HS1200
30.000 l/min at 12 bar



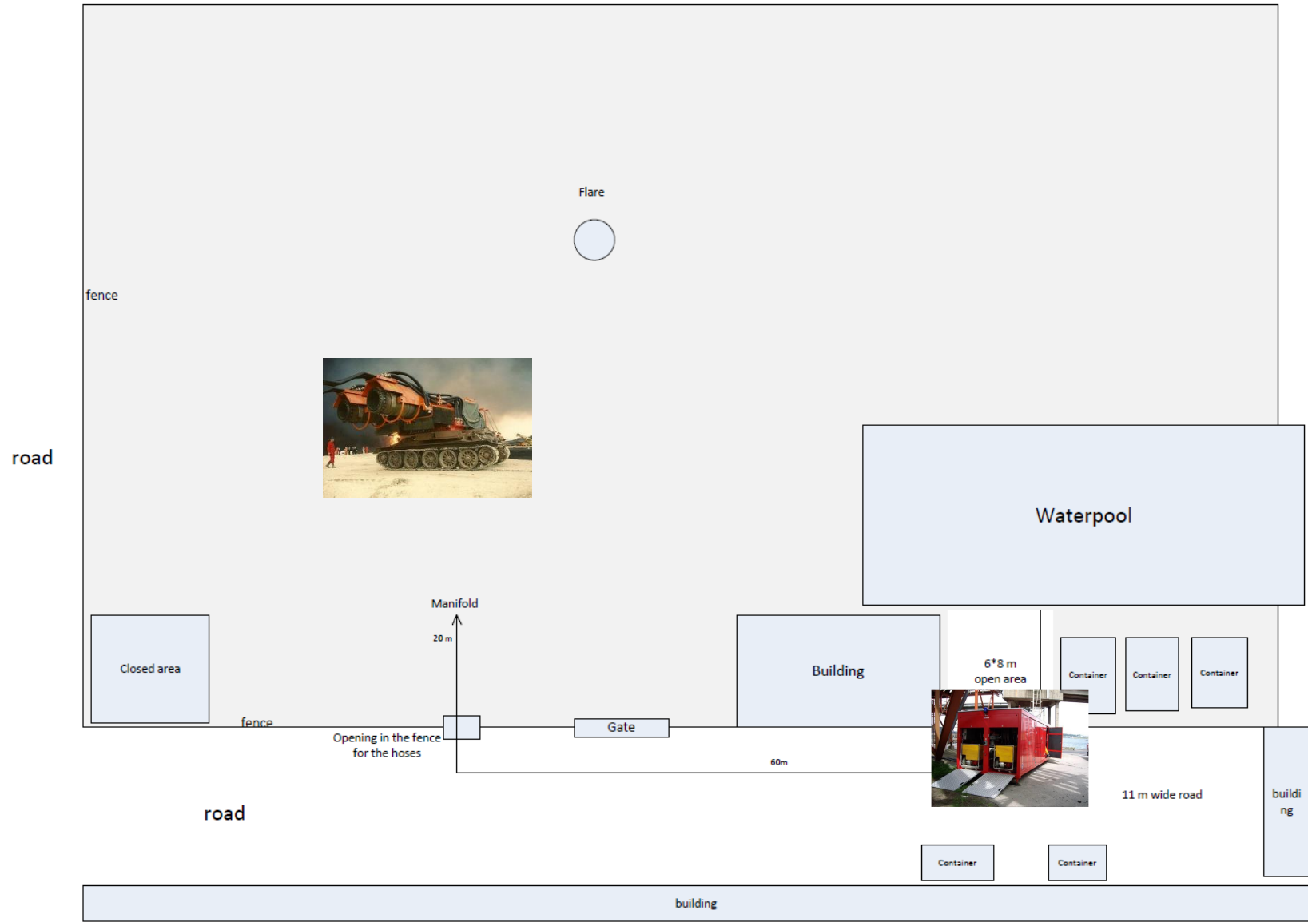
2 lines 12" hoses reduced to 4 lines of 6" hoses connected to hydrant pipeline



Big Wind
Required input:
30.000 l/min at 6 bar

WELCOME TO THE LIVE DEMO THIS AFTERNOON

Water supply for „Big Wind“



Satisfied customers

Hella	Zipp	Chemart	Furni Finish
Continental	Lufkin Industries	Farmol	Habau
Emerson	Timken	Mercedes	Meopta
Faurecia	Cameron	Protocom	Lifestyle Logistic
FM Logistic	Kronospan	Nafta Gbely	Transpetrol
Gas & Oil	Facebook	Hopi	Visteon
IAC	Diehl Aircabin	On Semiconductor	Würth
Iron Mountain	Procter & Gamble	Skanska	Aldi
JCI	Delphi	Metrostav	Arcadom
J&T Group	Arvin Meritor	Brose	Duslo
Lego	Audi	Eset	Ecco
PSA	Schweighofer	Takenaka	Getrag Ford Transmission
Strabag	Pannonia Bioethanol Europe	Kia	NCHZ
U.S. Steel	Macromex	Radel & Hahn	Prologis
Volkswagen	Plastimat	Slovnaft	Trigranit

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