

Emergency Preparedness in complex industrial plants

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**Industrial Fire Protection Association
Association of German industrial Fire brigades**



Industry - what is it today?

What requirements are then obtained for emergency preparedness and fire protection?



Steel Production ... again booming?



Automotive industry ... a profitable industrial sector ...

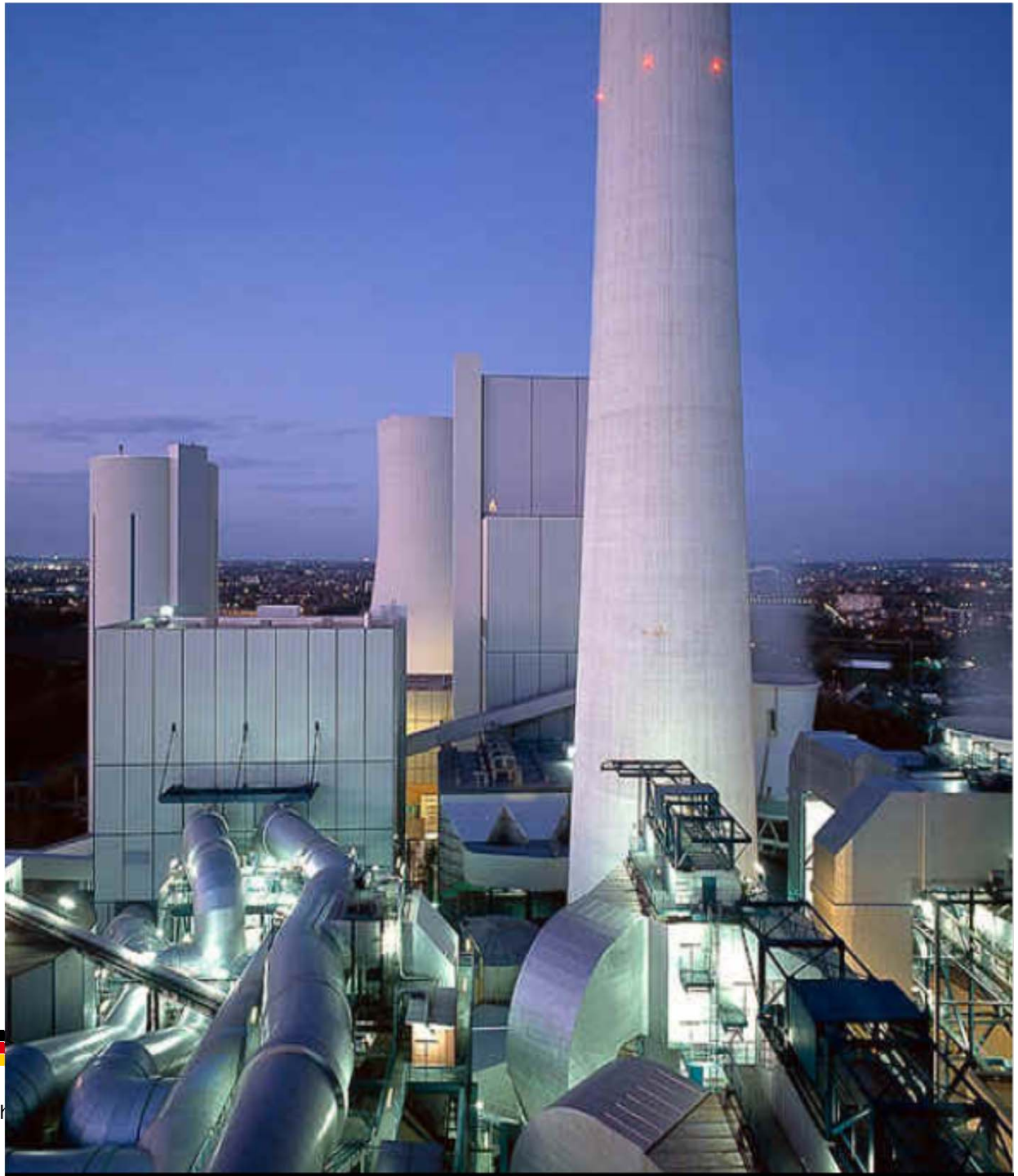


Chemistry ... very special, large investments, often outside Germany



Energy prod., Mining

important for the entire
industry and a part of it

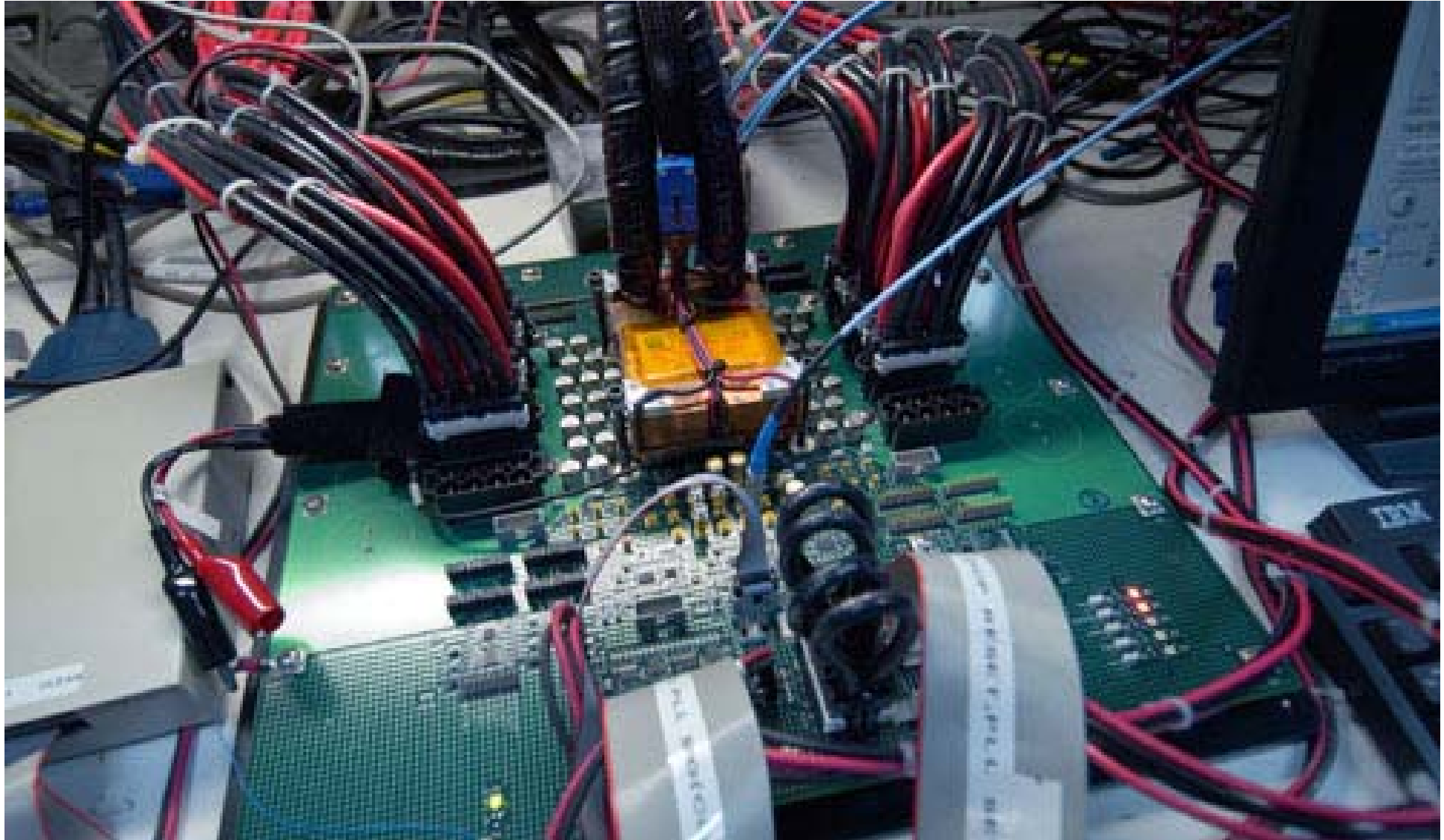


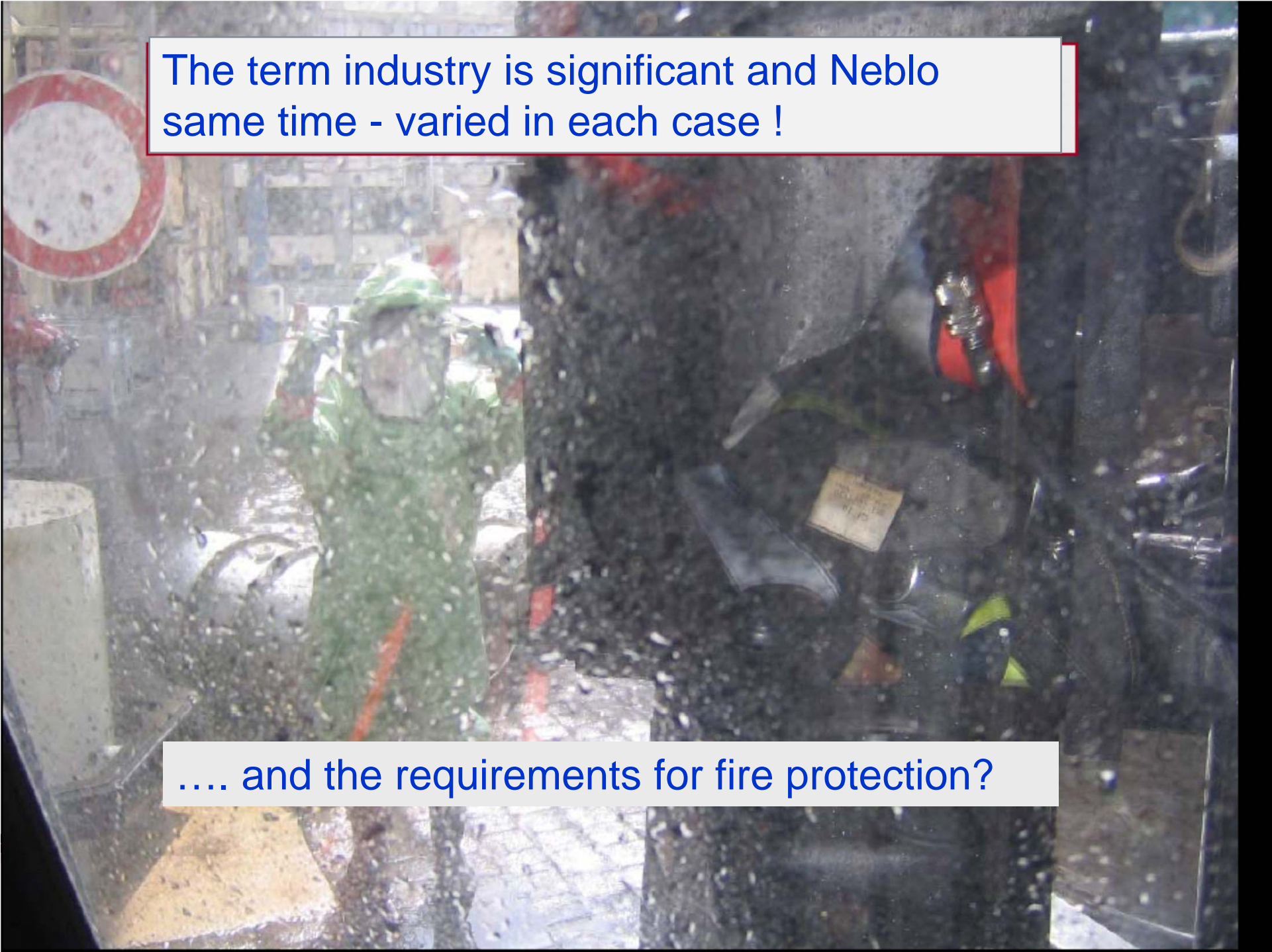
Mechanical productions...

vital export hit for Germany
with special needs



Electric Industry ... With great share of industrial production, fire protection comparable to?





The term industry is significant and Neblo
same time - varied in each case !

.... and the requirements for fire protection?

Tasks of industrial fire protection



Business Continuity

Reliability of processes

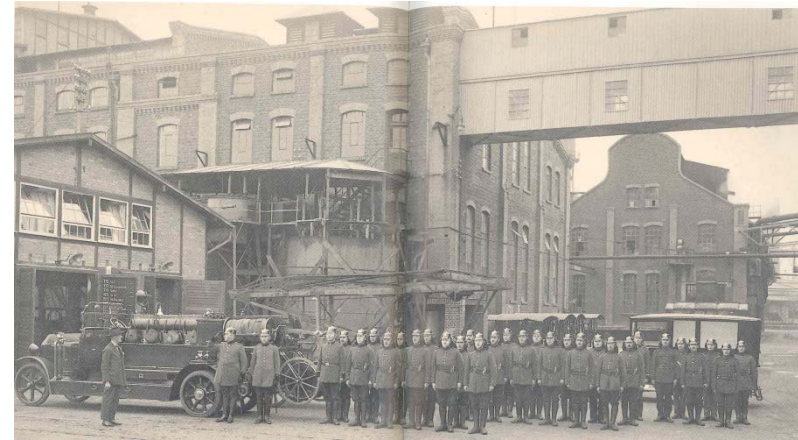
A fire

- disturbs the flow (up to a total loss!)
- charged persons, environment, etc.
- tarnish the image

but also

Reliability of Supply-Chain

Plant Fire Brigades - where?



- early as 1880 first-ups of fire departments
- Initiative has typically made from plants -> protection of property and production capacity

Fire departments for danger defense



1930

www.bilderbuch-koeln.de

Fire departments for danger defense



Industrial Fire Brigades today



Goal-oriented design for protection units of the company depends on the security hazards and dependent on the availability of public danger defense (risk analysis)

Evaluation of the hazard potential and of the public protection needs

Basic evaluation

Structural fire protection

Public Requirement

Special dangers

Danger defense

Dangerous goods

Response time public FB

Type of FB.

Other dangerous goods

Facilities public FB

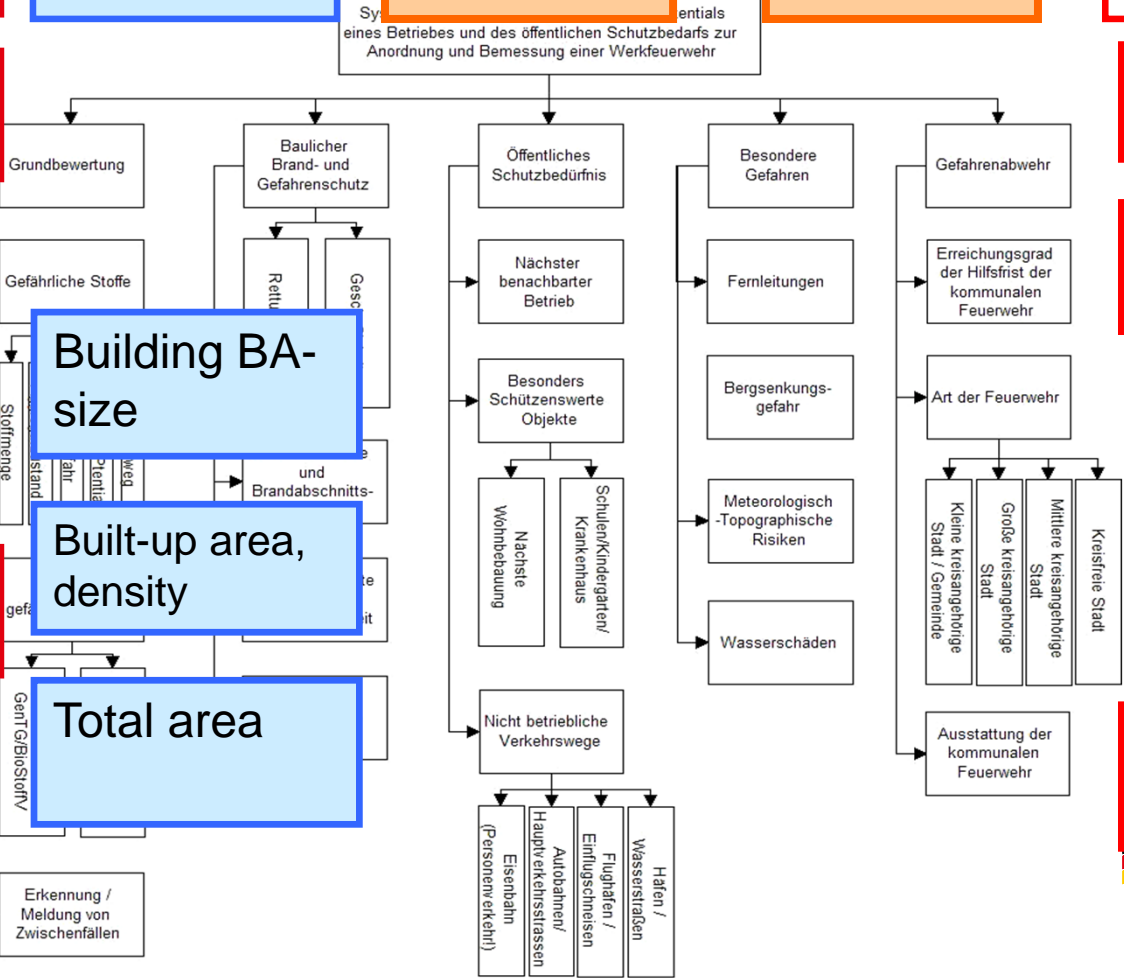


Chart 0.1



Clarification of the need to order a fire department

Authorities (Bezirksregierung / Landesmittelbehörde bzw. Kreis oder Kreisfreie Stadt) control f.e.:

- the **functional strength of forces**, the management training,
- the **composition of staff** of full-time and / or part-time members
- the auxiliary terms, etc.

Result of the developed risk analysis .





Industrial fire departments can do **more than firefighting**.
They **know the risks** specific to their company, they **engagers**
in danger prevention,
after all, any well-controlled fire is one too much!

Plant Fire brigades – more than fire fighting?!

next to the danger defense

Preventive fire protection (fire protection audits, fire protection plans, construction management Fire safety)

fire protection engineering (planners and operators of fire suppression systems and fire alarm systems)

Training (employees, firemen, first aid)

Crisis management (security headquarters, BAGAPs)

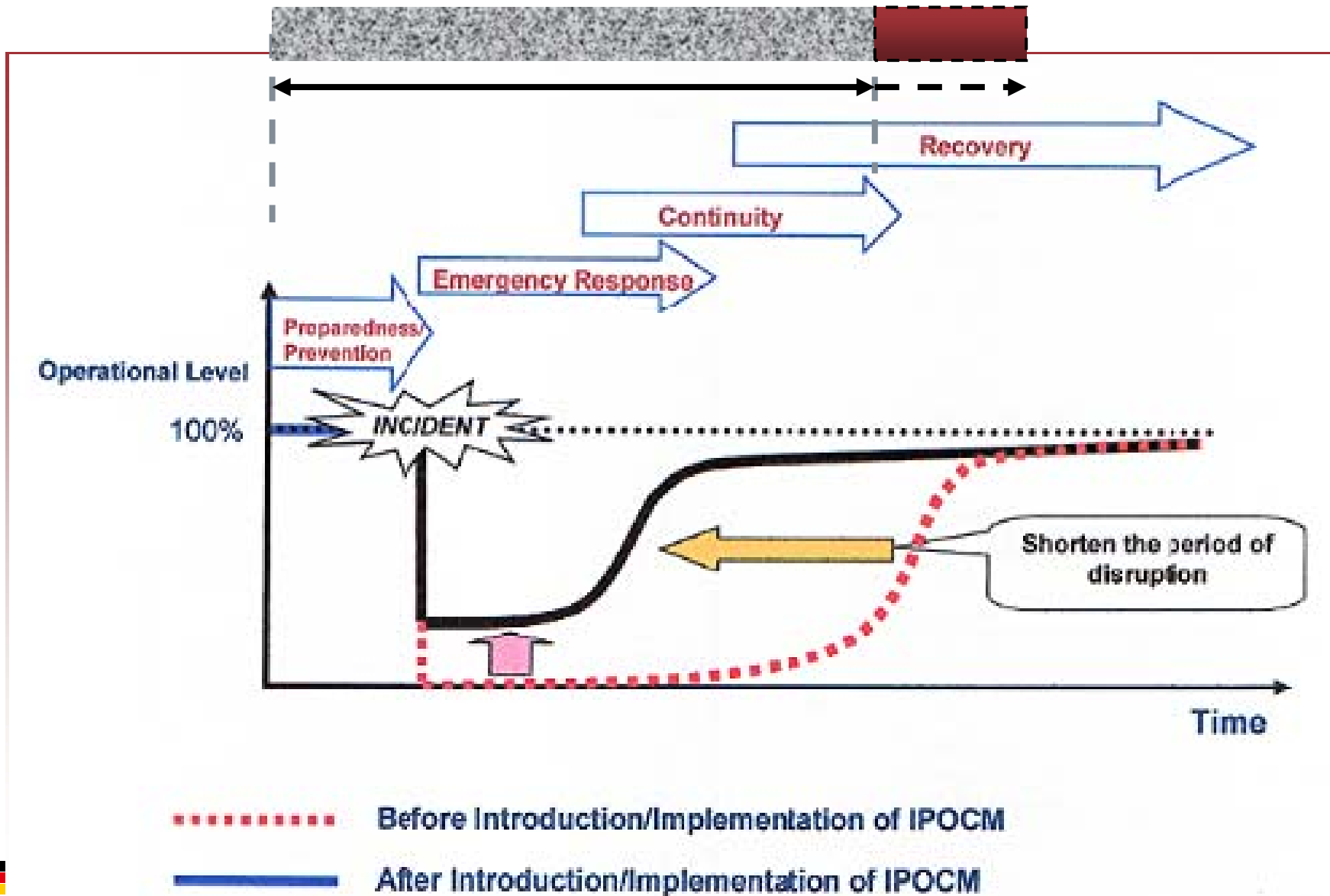
Plant security, etc.

Fire departments in tension of the production

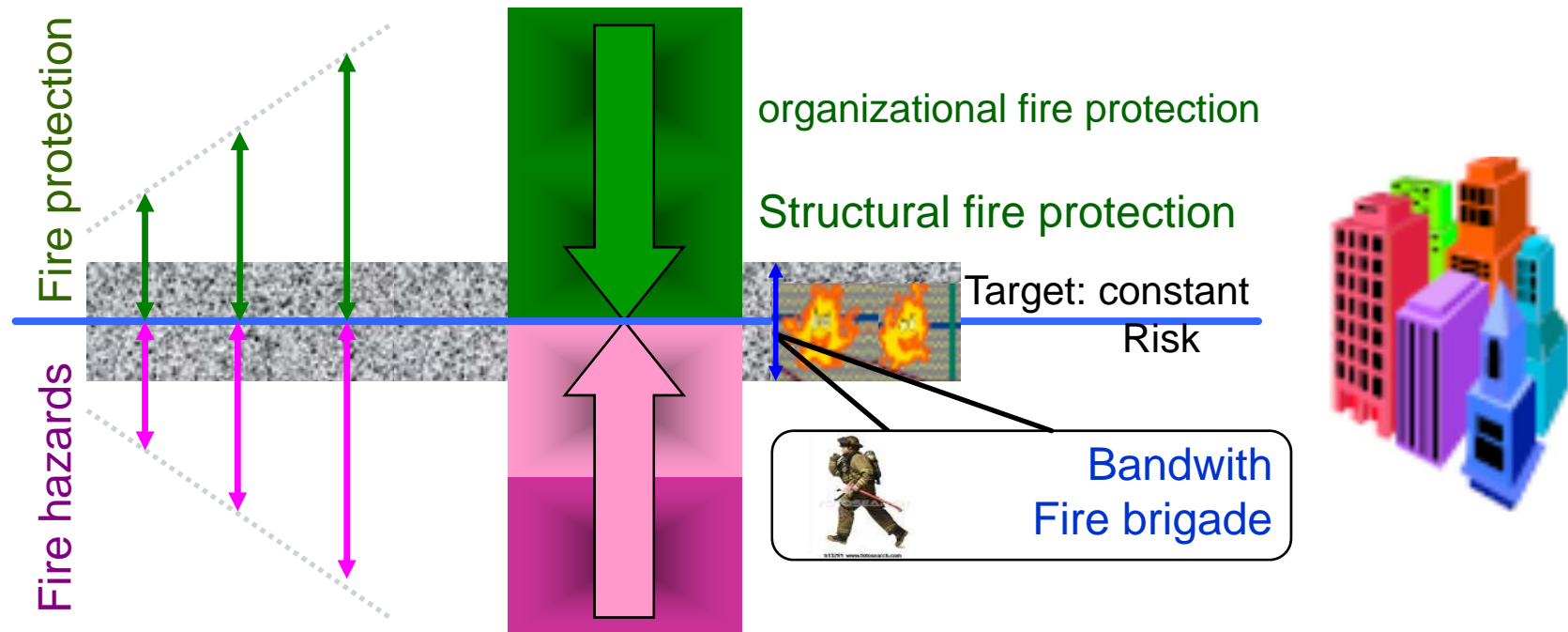
- **Factor of costs:** fire department (personnel costs > 80%)
- **Insurance discounts** are playing a diminishing role (Global contracts)
Insurance (American in particular) see as a "cure" the sprinkler system

-> Pressure on costs and recoveries, especially for smaller fire departments -> Therefore, transparency of costs (value added)

Fire brigade activities



View of the **interaction between fire hazards and fire safety** in buildings and structures



Acceptable risk by adjusting the measures for fire protection at growing risk → comparable baseline risk in all facilities, installations, uses

The industry needs an **efficient, effective
fire protection, taking into account the
different operator's requirements**

Fire protection is in the interest of the industry

but

- Fire protection measures must correspond with equipment and facilities - to **ensure property value protection**
- **No obstruction** of work processes
- **Low costs** of investment and maintenance



But fire protection must make sense

Z

Zweigeschossiges Gebäude, Decke F30 :

.... die Trennwände im Obergeschoss sind in der Qualität feuerbeständig (F90 nach DIN 4102) zu errichten....

Conventional sprinkler system

....for the sprinkler system a manual trigger has to be installed....

,,,,,and who is looking for that?

Requirements for installations

Where are still rule-compliant installations?

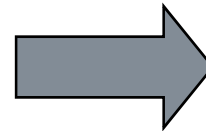
... And who can judge them?



Fire protections basics also in industrial plants

Protection goal

Prevent the occurrence of a fire
Stop the spread of fire and smoke
ensure escaping, rescue and firefighting work permit support subsistence



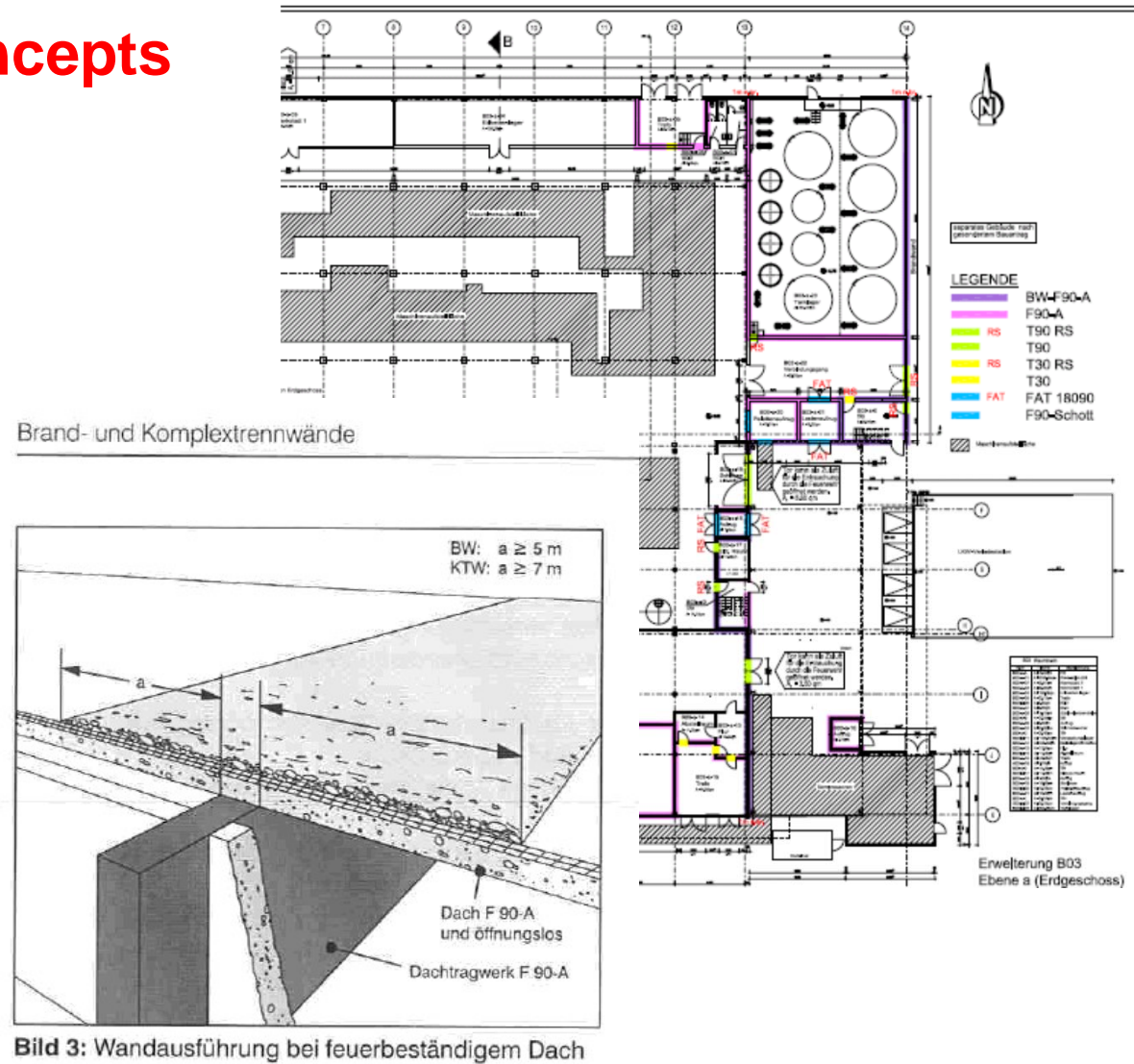
Requirements

Risk reduction in all buildings and structures on threshold set

Fire protection concepts

Needs?

- professionally?
- latter system?
- economically ?



Fire protection engineering

- professionally?

Semi-stationary powder extinguishing system for waste disposal services (combined with powder plant fire truck)

- latter system?

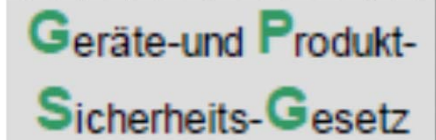
Semi-stationary fire extinguishing system for production operation in combination. with PCS, "we come before it starts burning!"

- economically?

Fire detection along the standards vs
Fire detection to protect the production?
Investment and maintenance (VDE 0833)

Spezialisten in planning and operating

Innovation and Fire Protection



- suddenly sacrificed to environmental protection (Clophen, Halon, Perfluorooctansulfate ...), certain credulity shown in fire protection ...
- Water-filled hollow profiles ...
- Lifespan of fire extinguishers...

... and who shall examine the consequences?

Reliability of Supply-Chain...

example TUIS (ICE)





Bundesverband Betrieblicher Brandschutz
Werkfeuerwehrverband Deutschland e.V.

**Industrial Fire Protection Assoziation
Assoziation of German industrial Fire brigades**

Objectives WFVD

Specialists in all aspects of industrial fire protection represents the interests of all operational fire protection organizations. We want

- **scientific and technical development** of fire safety support for the industry to make security measures in the industry active and innovative and make known over a wide area.
- Study **innovative methods** of damage control on their applicability and **cost / benefit analysis** study
- The **management of security, loss exclusion** and constantly optimize information and further promote the **exchange of experience and information** of fire protection topics.



Public affairs



SET
VDS 2034



Education
and training



AFFF
Foam



Standards
Policies



Associations



Working time



Symposia



Fire
extinguishers

Industrial Fire Protection Association



Strong Organization

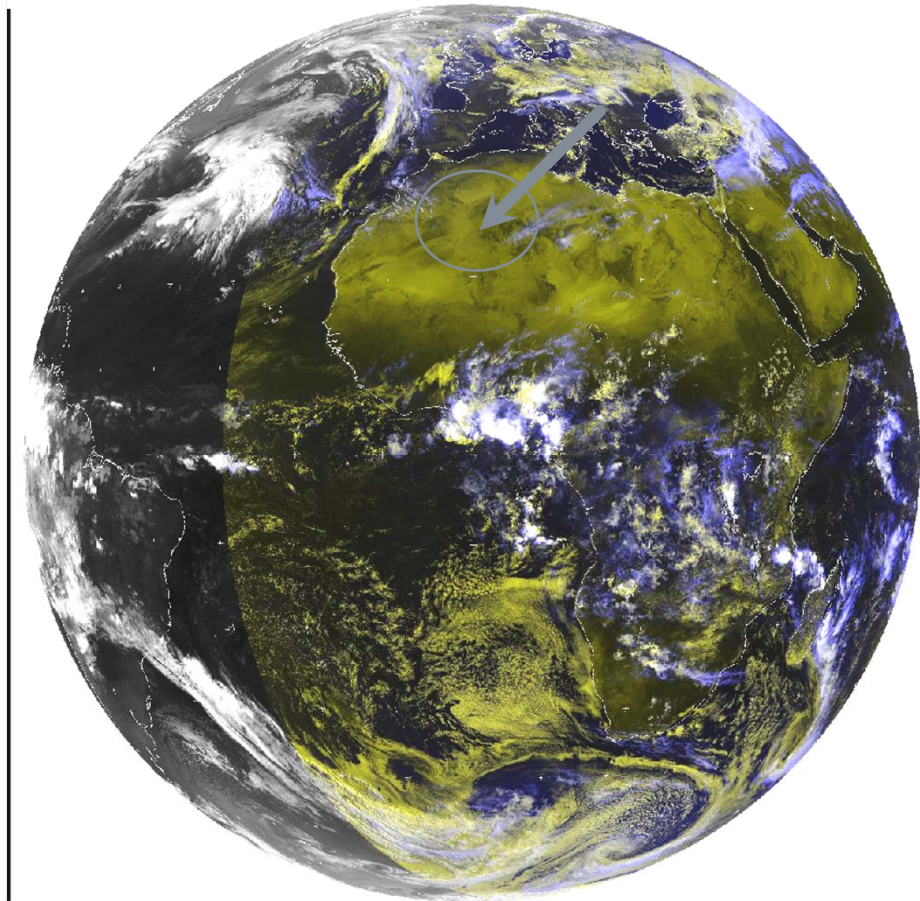


Strong Team



Strong Topics – industry-relevant

WFVD: Network of specialists – winning together



- Network is essential for achieving our goals
- Common goals, but individual responsibilities
- Right supporters at the right place

Industrial Fire Brigade Where – where?

