



CEFIC WORKSHOP

Safe and Sustainable Chemical Transport and Logistics

Safe Tank Storage in Europe



Content

- FETSA : Basic Facts
- Stakeholders in Supply Chain
- Safety in Tank Storage
- Safety in Loading/Unloading Operations
- Sustainability
- Challenges





FETSA : Basic Facts

- Federation of European Tank Storage Associations
- Established in 1993 with HQ in Brussels
- Non Profit Association under Belgian law
- An umbrella association at European level
- Member states and associated members of 11 countries - expansion in political and geographical Europe
- **Europe : 134 members with 300 + terminals**
= 83.845.900 cbm

(147.700.000 cbm. independent in Europe – 866 terminals
500.000.000 cbm. independent (20 % world capacity)





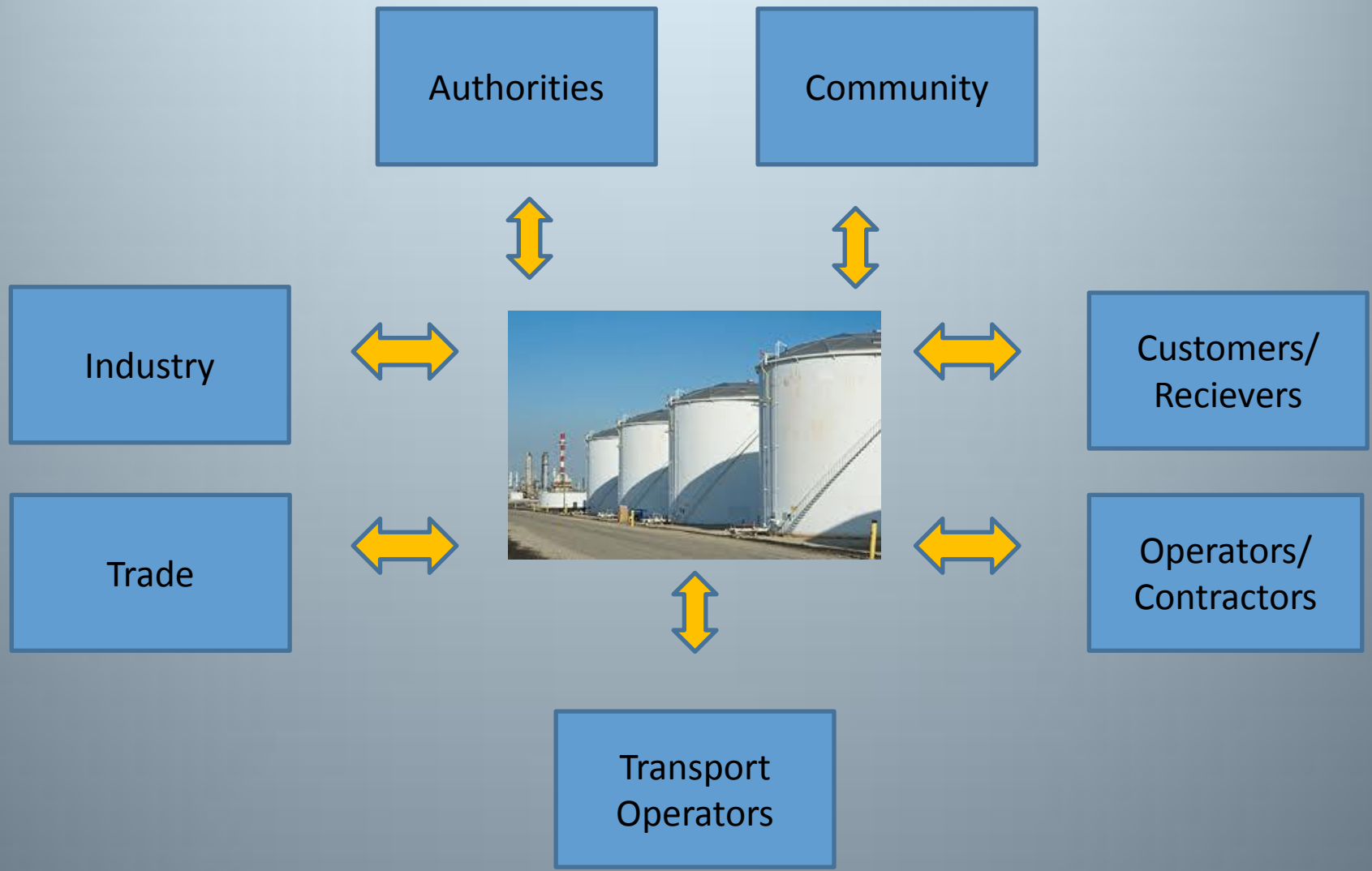
FETSA : Basic Facts

- Tank storage
 - = Intermediate accomodation for conservation of liquid products, i.e. products in large definite volumes but no fixed shape
 - = Interface between production and distribution
 - = Mainly located in sea-ports and strategic logistic platforms (inland waterways, airports, etc.)
 - = Independent logistic companies
 - = Not owner of products





Stakeholders in Supply Chain





Stakeholders in Supply Chain

Commercial market conditions : Need for tank capacity

- Producers : for logistic purposes and for discrepancy between production and sales volumes
- Traders : for positioning purposes on the volatile market
- Im-/Exporters : for direct supply purposes

Administrative market conditions : Need for information

- ADN, IMO, ADR, ISGINTT,.. : Hazardous goods
- Customs : Bonded storage, Excise goods, etc.
- Strategic : Compulsory stocks
- Commercial / Financial : Stock keeping

Technical market conditions : Need for continuous improvement

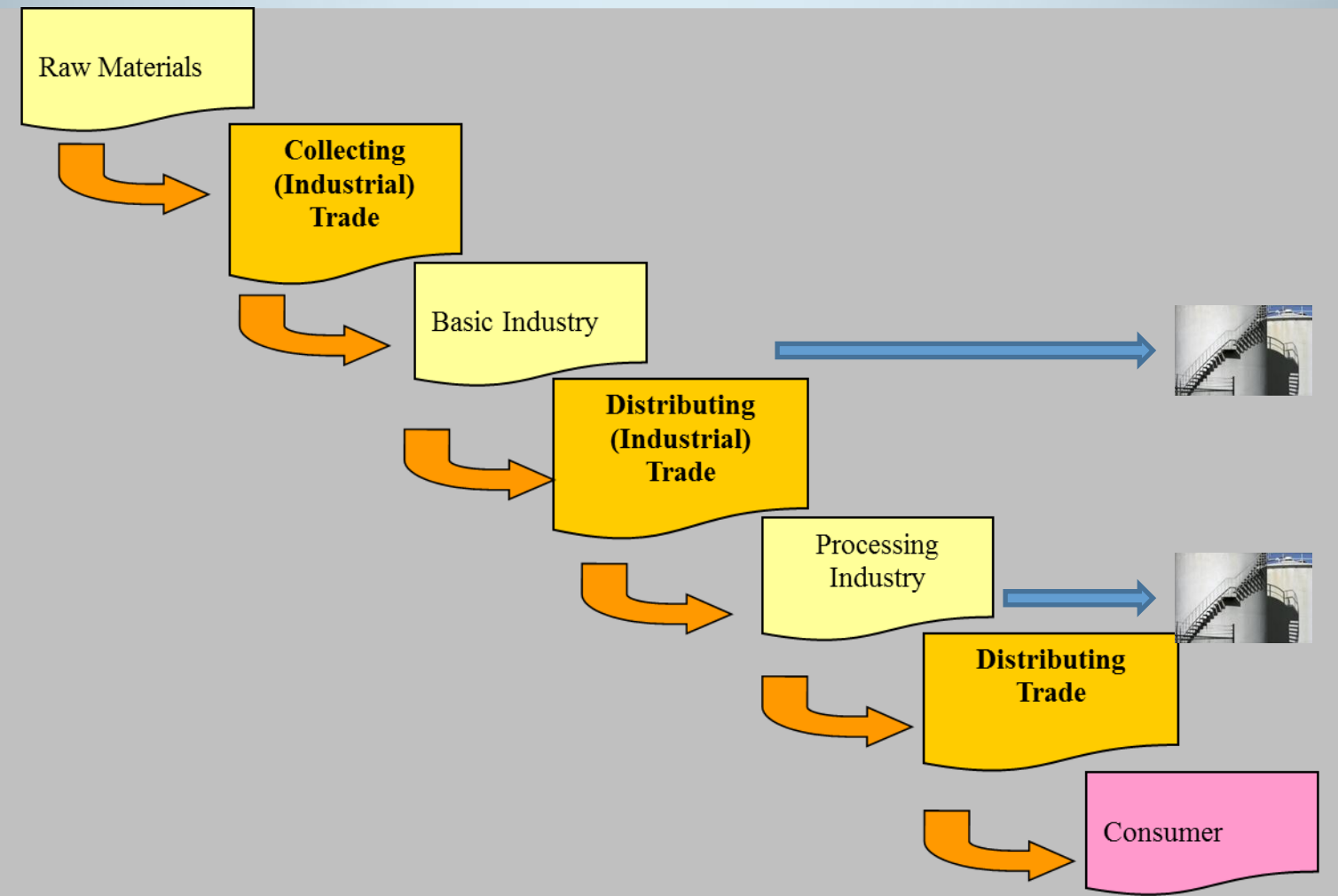
- Safety : Working conditions, etc.
- Security : International & national

Social market conditions : People – Planet – Profit

- Environment : Sustainable policy & strategy
- Job provider : Continuity – Logistic services
- Safety & Health : Partner for local population



Stakeholders in Supply Chain



Intermediate accomodation



Stakeholders in Supply Chain

Different approaches :

- a) Sea port terminals : focus on
International related business : Big volumes
- b) Inland terminals : focus on
Regional trade : Small volumes
dedicated business - finished products

Different approaches :

- a) Producers : structured professional information
pre-inspection of installations
procedures, etc,
- b) Traders : limited information
fast business
less procedures, etc.

Tank storage approach : + always : technical aspects, CEFIC Best Practice Guidelines, legislation(s), environmental certificates, etc.



Stakeholders in Supply Chain



Interface function



Stakeholders in Supply Chain

All activities, including loading and unloading operations are subject to surveys/audits/inspections /reporting systems :

- Principal(s)
- External neutral
- Internal (Operations management / HSEQ officer, etc.)
- Daily
- At random check
- Inter-terminal
- Benchmarking



Safety in Tank Storage

Oils

- Loading activities by transporters (personal badge)
- Working clothes : variety and options (safety first)
- Standard procedures
- Best technology (Safety)
- Inspections & audits
- Reporting and improvement

Chemicals

- Loading activities by own operators
- (Personal) Safety working clothes : higher safety requirements than industry
- Specific and dedicated procedures
- Best technology (Safety, Legislation, Environment)
- High level of inspections
- Continuous sensibilisation

Most terminals tend to “chemical level”

Hardware - Software – Mindware

From which stage of product you are in chemicals ?



Safety in Tank Storage

HISTORY : BUNCEFIELD (UK) 2005 - ODFJELL (NL) 2012

Odfjell : No explosion
No fire
No outside damage
No accidents
No killed people

Reaction 1 : due to lack of control by government = more negligence
now : pressure by population and consequently
close control by government

Reaction 2 : Safety Maturity Tool (Toolkit) : Soft-, Hard- and Mindware
created by Dutch Tank Storage Association (Votob)

Reaction 3 : study and discussion with other FETSA members



Safety in Tank Storage

- Risk analysis
- prevention and pro-active measures
 - control measures according to assessed risks

“ Every pro-active step is one step closer to a non-incident business”

Inspections – audits (internal – external) : not seen as extra burden
= not similar in all countries
= principals, authorities, insurance, land lord, fire brigade

Best available technology

Regular safety patrol : checking daily operations at random
operators – contractors (full reporting system)

Local and company related higher measures versus
international and European legislation and rules

Flexibility till certain level : responsibility – cost level

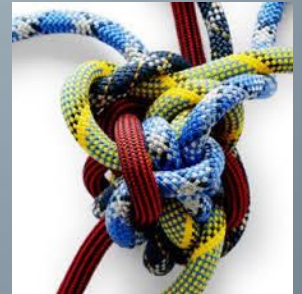




Safety in Loading/Unloading Operations

COMPLEXITY :

- Different transport modes
- Different transport suppliers
- Different customer's requirements
& instructions (incl. documentation)
- Different legislations
- Different interpretations by local authorities
- Different installations and loading equipment
- Different market conditions
- Different supporting procedures
(Responsible Care - CDIT - HSSE - SQAS)





Safety in Loading/Unloading Operations

MAIN SITUATION :

Operators : central function

All transport modes : Access control & identification :

no impact on presented equipment by receivers
versus transport booked by industry

Road transport : information and documentation

Procedures according to :

Company - Product - Customer - Transport Mode

Checklist (various products per shift)

Automatisation of installations

Manual final action by terminal operators

Audits & training

Continuous improvement





Safety in Loading/Unloading Operations

Vessel operations : no impact - daily solutions 24/24

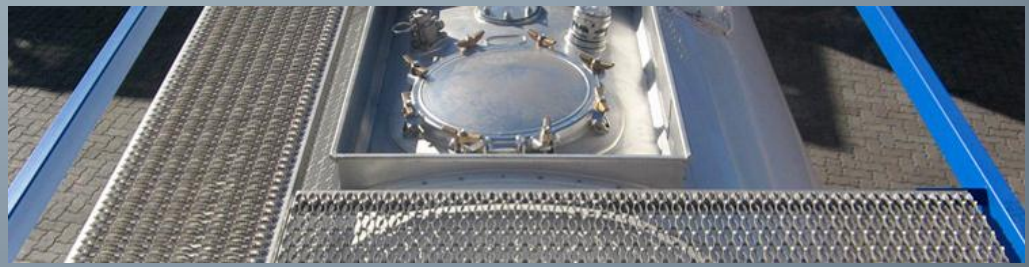
Barge operations : no impact - daily solutions - - - - -

Railcar operations : reasonable regulated and standardized equipment and organisations - - - - -

Truck operations : lack of standardization 8 am – 4 pm
size, shape, equipment, construction (sarge plates),
(sub)chartering

Container operations : same as truck

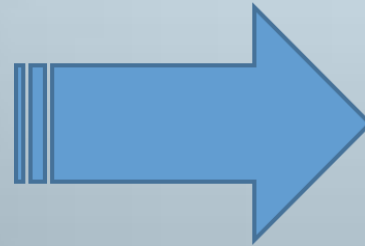
BUT : Operator always involved, otherwise deferral of responsibility



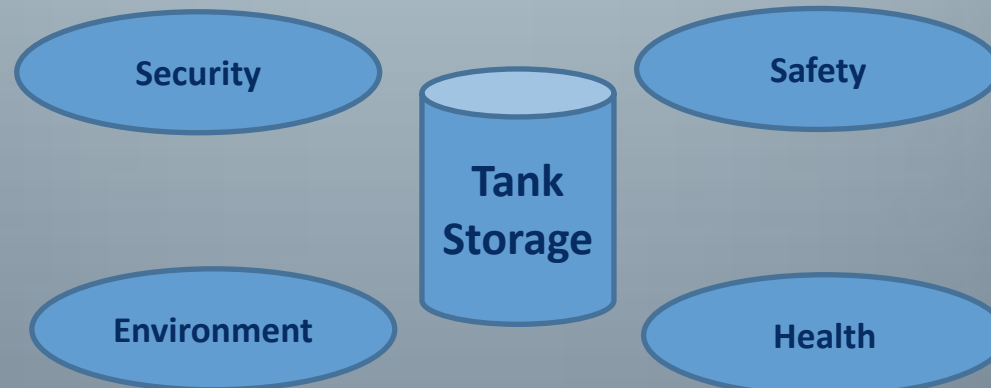


Sustainability

- Continuous process
- Investment in infrastructure
- Benchmarking and mutual support
- Training and sensibilisation



A range of products
A range of commitments
A range of rules
A range of responsibilities





Challenges

- Zero failure – error – emission : as good as the customer
- Security as far as safety is guaranteed (workable)
- Cyber security
- Exchange of logistic information between industry and tank operators : process safety versus storage safety (less technical)
- Higher requirements on total supply chain : equipment, documentation, drivers, etc,
- Justified approach of Environment & Safety leads to Sustainability
- Trader on same structured level as industry
- Understand tank storage sector :
 - one step behind is not one step too late
- Investment in infrastructure
- Follow the increasing chemical market : safety culture program



SAFETY TARGETS ARE NEVER FINISHED

T(h)ank you