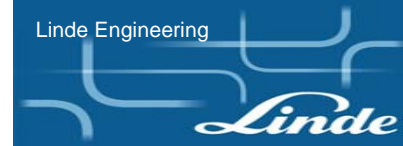


Engineering – durch Standardisierung zum besseren Workflow?  
*Engineering – A better work flow through standardization?*



# Standardization in Engineering

Data Handover  
EPC -> Owner/Operator

# Engineering – durch Standardisierung zum besseren Workflow? *Engineering – A better work flow through standardization?*

Same Plant -> Equal plant  
information to be transferred

Linde Engineering



Contractor Applications
Plant Information
Project Information
Engineering methods
Project execution methods

Owner/Operator Applic.
Plant Information
Operation Information
Maintenance methods
Operation methods

Different Tasks -> Different methods and different overall data

**-> Different Applications**

**➔ Use of the same application infrastructure  
is not the general solution**

# Engineering – durch Standardisierung zum besseren Workflow? *Engineering – A better work flow through standardization?*



## Typical Owner/Operator issues

Condition-based maintenance

Time-based maintenance

Damage-based maintenance

Commercial incident

Hazardous incident

Product liability / documentation issues



# Engineering – durch Standardisierung zum besseren Workflow? *Engineering – A better work flow through standardization?*



## Typical Engineering issues



Minimize Project costs

Minimize Project duration => Parallel workflows

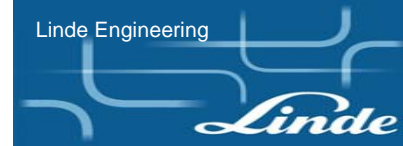
Maximize correctness and consistency of documents and data at the end of the project

Be able to react on different customer requirements

Ensure learning curve from previous experience



# Engineering – durch Standardisierung zum besseren Workflow? *Engineering – A better work flow through standardization?*



Obviously, standardization would help a lot to achieve results in this detailed discussion and therefore to minimize the effort of data handover.

However, Linde as a global Engineering player with approx. 3 billion \$ yearly order intake does need to react on any client requirement in this context. So, we are more full-fillers than drivers.