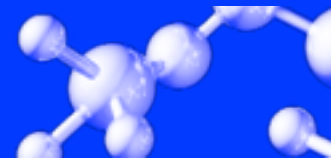


# eCollaboration im internationalen Großanlagenbau

Dr. W. Lyhs

November 2007

# Agenda



## (1) Introduction

- eCollaboration and Internet change economics into „Wikinomics“

## (2) What XXX is and does

## (3) What XXX learns from Wikinomics<sup>(x)</sup>

## (4) What XXX-IT does to improve eCollaboration

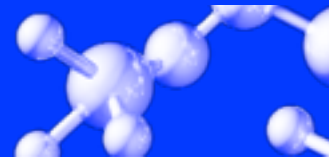
- Peopleware<sup>(xx)</sup>
- Netware
- Software
- Vision

## (5) Summary

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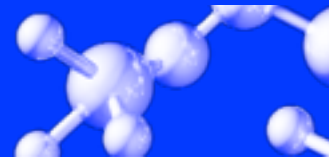
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## (1) What is Collaboration?



**Eric Schmidt** (CEO Google):

"when you say 'collaboration' the average 45-old thinks they know what you're talking about: teams sitting down, having nice conversation with nice objectives and a nice attitude. That's what collaboration means to most people.

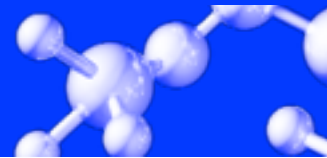
We're talking about something dramatically different. The new promise of collaboration is that with *peer production* we will harness human skill, ingenuity, and intelligence more efficiently than anything we have witnessed previously ....

... the ability to integrate the talents of dispersed individuals and organizations is becoming the defining competency for managers and firms."

Interim definition of eCollaboration:

**Working** together in partnership, **supporting** the team, **communicating** without resentments, sharing knowledge, ...  
... supported by IT and telecommunication.

# (1) eCollaboration is the basis of „Wikinomics“ (1)

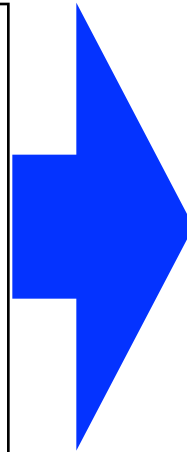


**Coase's Law** (Ronald Coase 1937 “The Nature of a Firm”, Nobel price 1991):

A firm will tend to expand until the costs of organizing an extra transaction (i.e. search costs, contracting costs, coordination costs) within the firm become equal to the costs of carrying out the same transaction on the open market.



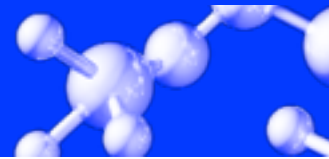
→ The internet has caused „**transaction costs**“ to plunge so steeply that nowadays firms should shrink until the cost of performing a transaction internally no longer exceeds the cost of performing it externally.



→ Well known consequence:  
„**outsourcing**“ especially if labour costs are lower on the global market

→ Next consequence: **global sourcing of specialists** to overcome short time staff shortages or long term lack of engineers in Germany

# (1) eCollaboration is the basis of „Wikinomics“ (2)



**Wikinomics:** internet infrastructure enables new quality of collaboration

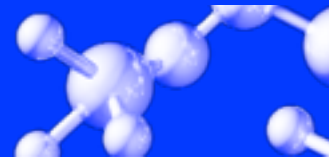
- Peer Production: e.g. Wikipedia, Linux Groups, Human Genome Project
- Mass Collaboration: e.g. the „Goldcorp Challenge“

Tapscott’s prophesy: internet will change economics

- we enter the „Age of Participation“
- „Mass Collaboration“ of loosely organized collaborators will change structure of companies
- „Collaborate or perish!“

Is XXX able to take advantage of eCollaboration and Wikinomics?  
Can XXX tap the “Wisdom of Crouds”?

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## (2) What XXX is and does XXX's History

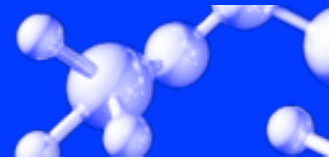


- 1897 founded under name "MetalXXXsche Gesellschaft"
- 1919 'XXX' as company name taken from cable address
- 1987 different companies unified under 'XXX GmbH' in new site XXXallee 5
- 1990 conversion to AG, concentration to core business starts
- 1991 transfer 'fiber production' to Zimmer AG
- 2000 transfer 'coal combustion' and 'flue gas cleaning' to Lentjes
- 2001 transfer metalXXXcal business to Outokumpu (Finland)
- 2007 XXX is sold to Air Liquide

Today: Conversion of different feedstocks (traditional, alternative, renewable) to consumer products in the petrochemical and fuel industry



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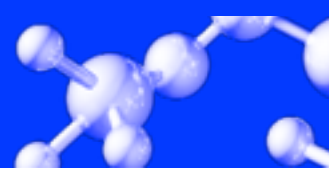
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### (3) What XXX learns from Wikinomics Fitness Test (1)



#### Preconditions for Wikinomics:

1. **Peering:**
  - free collaboration of equal persons
  - self organization / flat hierarchy
2. **Openness:** transparent organizations have lower transaction costs, better innovations and loyalty, have structured and well documented business processes
3. **Sharing:** involvement of external staff  
“There are always more smart people outside your enterprise boundaries than there are inside” (Tapscott)
4. **Global acting:**  
Ralph Szygenda (CIO of GM, Chief of the Year 2002): “Most big companies are multinational, not global, and increasingly that's a big problem for all of us.”

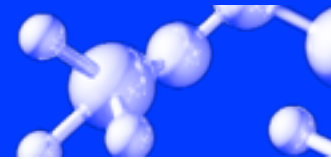


#### Situation in XXX:

- “Command Modus Operandi”, deep hierarchy
- little self organization
- well defined project execution procedures (PEP) (comparable to CMMI Level 2: managed processes)
- contracts with freelancers (37% of staff in FFM) and vendors of equipment and parts
- poor Knowledge Management
- subsidiaries are own legal entities → “multinational”

→ XXX is partially prepared for Wikinomics

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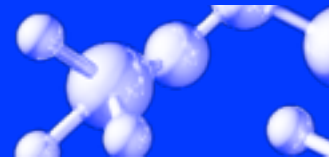
- **Peopeware<sup>(xx)</sup>**
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## (4.1) Peopeware: Current Status



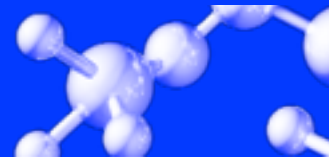
<b>Staff in FFM:</b>	679, age Ø 45,2	highly specialized
male	77%, age Ø 46,7	
female	23%, age Ø 40,1	
<b>MvD (freelancers)</b>	250	

- high average age: education as „lone fighter“, not as team player  
→ „limited-collaborative“ working style
- highly individualized staff: - IT-security measures are felt as annoying  
- high percentage of users with admin rights  
- hard to achieve standardization of IT
- frequent travelling: - a lot data on local hard disks  
- no interest in sharing of data
- company culture: wounded by restructuring in 90s

**Collaboration is prior a „state of mind“ than a matter of IT and tools!**

**Basic Collaboration must be defined in binding processes**

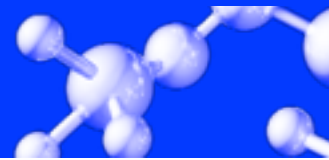
## (4.1) Peopleware: Improvements (1)



### How can this „state of mind“ be changed?

1. Improvement of **Company Culture** by XXX Management:  
Board: improve „Open Culture of Trust and Respect“  
introduce worldwide CID „*One XXX*“  
IT-Dept: introduce CID „*One XXX-IT*“
2. XXX has to answer „**WIIFM**“: What's In It For Me?  
What are everybody's advantages of collaboration?  
e.g. - faster and more efficient problem solving  
→ reduced deadline pressure, reduced project risks  
- better quality of results  
→ higher incentive
3. XXX-IT has to offer **tools** supporting worldwide collaboration  
e.g. project portals, Wikis, „NetMeeting“ or similar
4. **Knowledge Management**

## (4.1) Peopeware: Improvements (2)



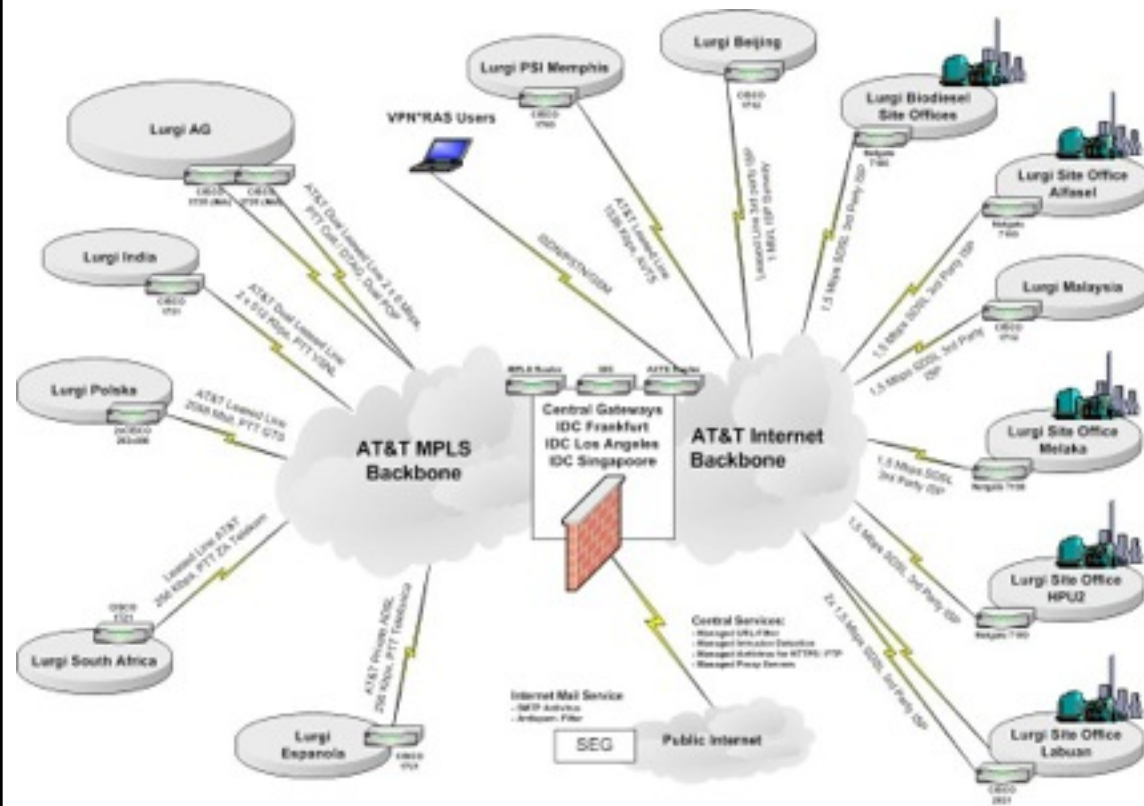
### Current Measures driven by XXX-IT:

- **Creation of a Questionnaire** for the project staff in order to measure the status of the teamwork  
Covering: people in a team, conflict and trust, Roles in the team, quality of communication, quality of operations, communication and collaboration technology  
Result: *evaluation not finished*
- **Modelling of IT-business processes** with ARIS  
Covering: introduction of ITIL-based processes  
definition of roles and rules for collaboration  
Result: ongoing

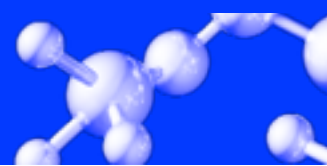
## (4.2) Network: Current Status

### IT-Strategy:

- ensure **connectivity** of all sites within XXX-WAN (any to any)
- ensure **mobile computing** via various channels
  - LAN of sites to file & apps servers in FFM
  - VPN over DSL or GSM/ GPRS/ UMTS file & apps servers
  - to Citrix-farm to different applications e.g. SAP
- access via Blackberry to mail and schedules



## (4.2) Netware: Improvements

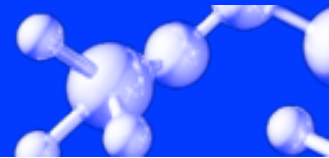


### Improve Connectivity and Mobile Computing

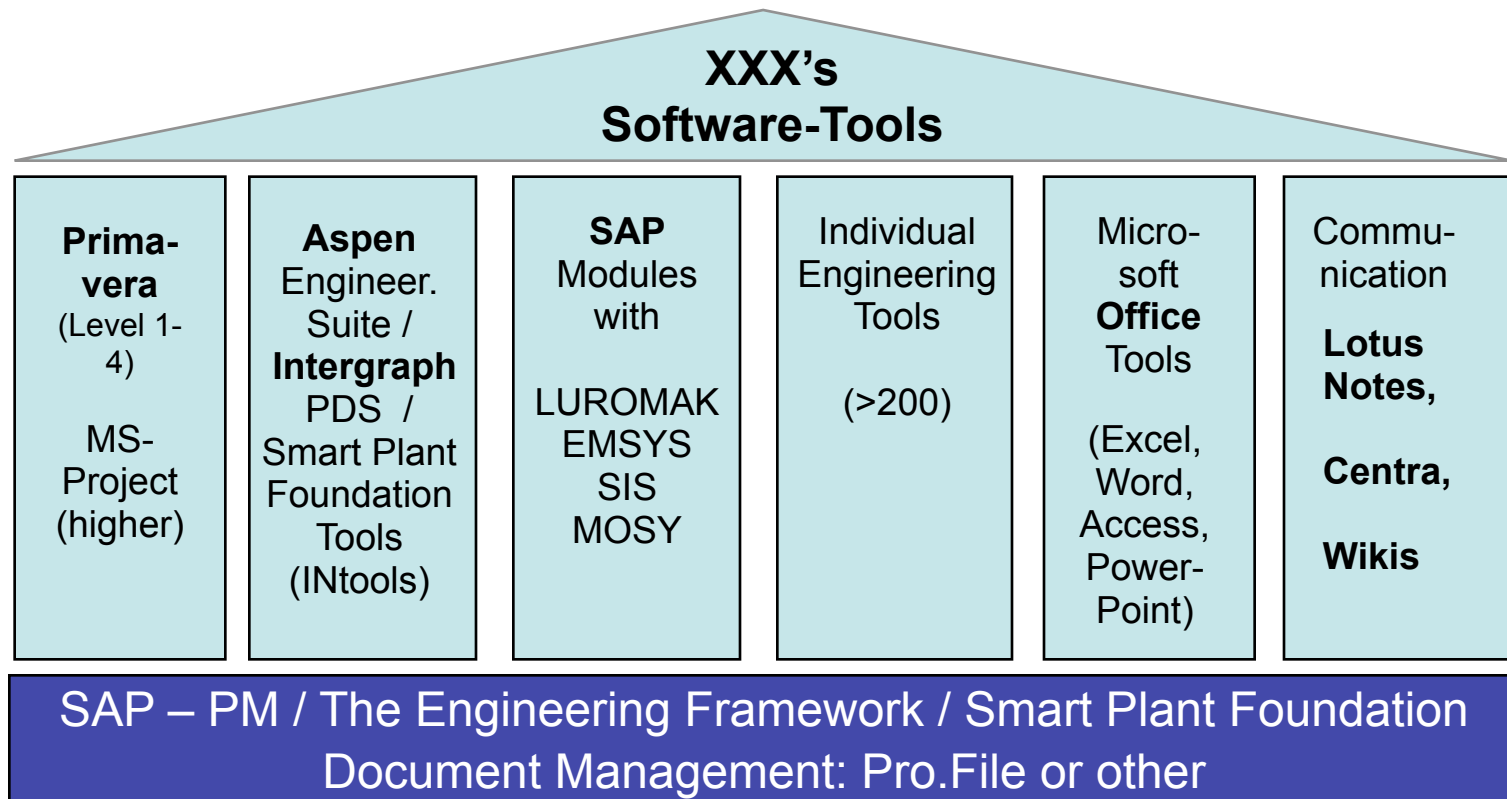
- increase bandwidth of internet breakout and of connection between MPLS- and DSL-part of XXX's WAN [4Q 2007]
- enable secure WLAN connections [4Q 2007]
- introduce VoIP between sites worldwide and headquarter [3Q 2007]
- plan introduction of CTI (Computer Telephony Integration) and UCS (Unified Communication Services) [> 2008]



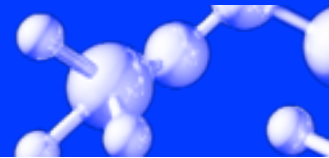
## (4.3) Software: Current Status (1)



### Main Pillars of XXX's Software World



## (4.3) Software: Current Status (2)



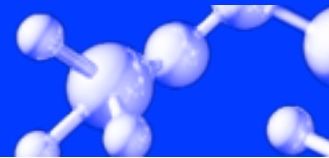
### **Classical Working Software, Server placed in global XXX-WAN:**

- MS-Office 2000/2003
- Mech. Engineering: Intergraph Suite: PDS 2D+3D, Intools, ...
- Process Engineering: Aspen, Zygad, Icarus
- Project Mngmt: Primavera
- ERP: SAP with highly individual engineering applications
- Document Mngmt: Pro.File

### **Communication:**

- Mailing: Lotus Notes
- Global Intranet: Typo3
- Collaboration: Centra with VoIP, application sharing, whiteboard ...
- Working Groups: Confluence (Wiki), currently only for IT-Dept.  
Jira (Issue Tracker, web-based)

## (4.3) Software: Improvements in 2008



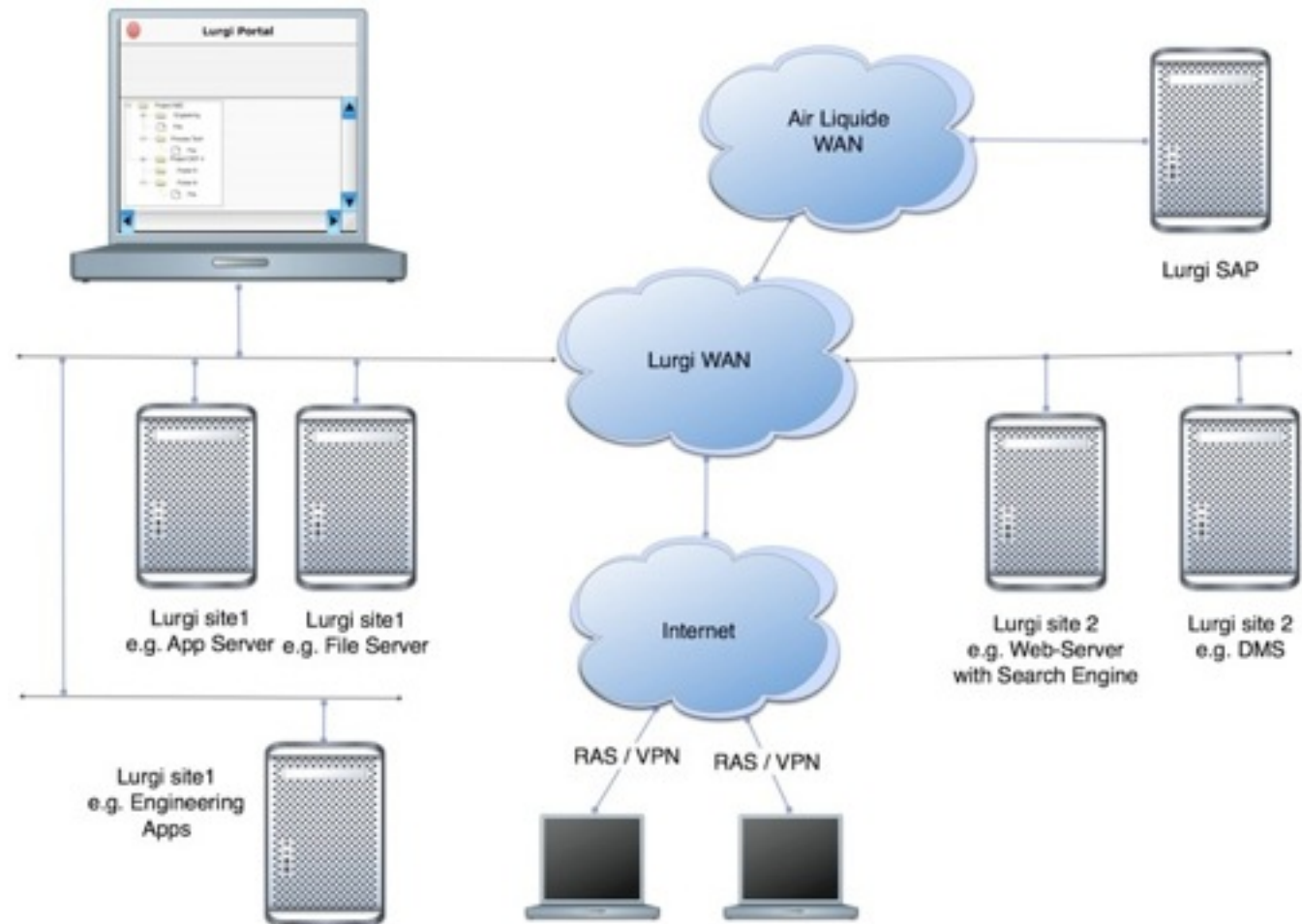
Mech. Engineering:	introduction of next generation software worldwide <ul style="list-style-type: none"><li>- better integration of all tools of the suite</li><li>- better integration into SAP</li><li>- shorter revision cycles and project duration</li></ul> → higher demand of collaboration between staff, <b>definition of new business processes</b>
Document Mngmt:	introduction of a new DMS company wide <ul style="list-style-type: none"><li>- better control of the workflow</li><li>- world wide access to revision safe documents</li><li>- less local documents</li><li>- autom. notifications during life cycle of docs</li><li>- reduction of unstructured data</li></ul> → <b>definition of new business processes</b>
ERP:	integration of all major affiliates into SAP
new intranet (typo3):	departments are now responsible for content

## (4.4) Vision: Network & User View

- User starts „his“ applications from a **portal** wherever he is located
- Access rights are administered via user's role in AD

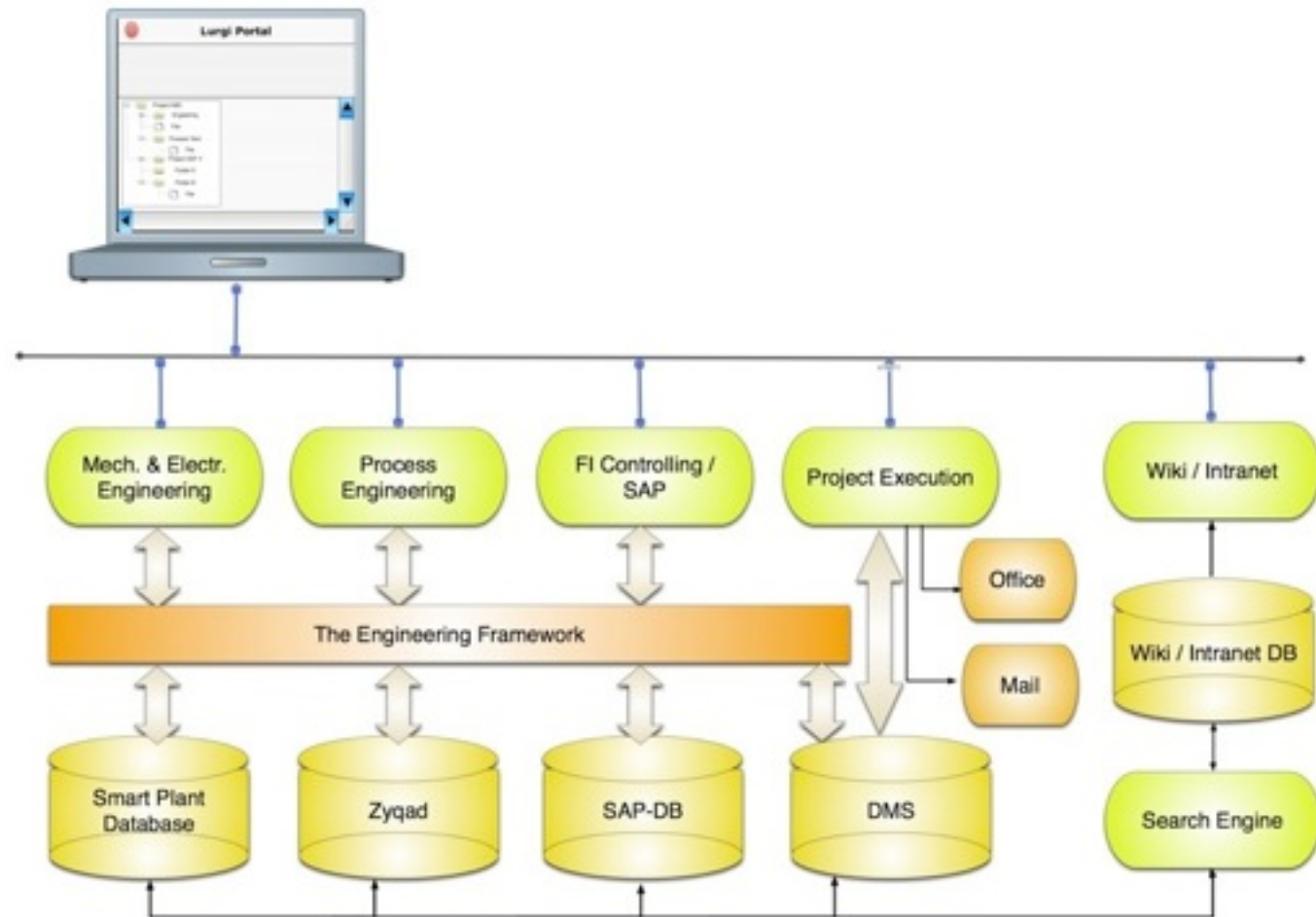
### What's in it for me?

- all in one place
- no trouble with access rights
- reduction of content send via mail
- .....



## (4.4) Vision: Database View

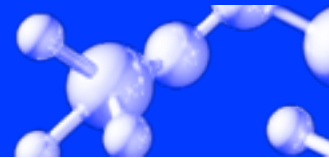
- all data are stored in linked databases
- the User cannot influence data storage location
- the User finds „his“ data by usage of metadata and/or by means of a search engine
- data storage is mainly in RDBs and not in unstructured flat files



### What's in it for me?

How can users be motivated to fill data in which are not directly for their own use?

## (4.4) Vision: Unified Communication

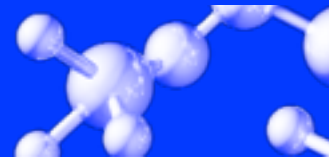


- convergency of TK and IT:
  - telephone calls via VoIP out of Lotus Notes / Outlook
  - single telephone number per user („hunting“)
  - integration of voice- and mail-boxes
- reduction of „mail plague“ by
  - usage of chat-tool for asynchronous communication
  - indication of availability for calls in mail or chat tool (extension of scheduler functionality)
  - reduction of attachments by
    - sending links to BLOBs in central RDBs
    - automatic notification in portal about changed documents in RDB

### What's in it for me?

How can user be encouraged to communicate more and better?

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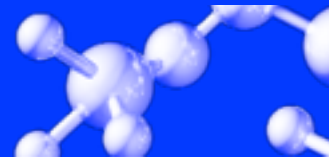
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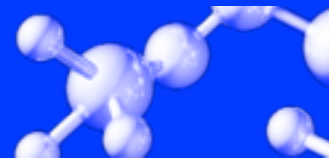
## (5) Summary



### eCollaboration ...

- ... is of essential importance for a multinational company like XXX. Competitiveness depends on enhanced collaboration. Tapscott: "collaborate or perish"
- ... can only be enhanced if people's state of mind is changed. Provoke open communication and company culture of trust and respect. This is an ambitious management task.
- ... must be accompanied with change of processes. New collaborative tools require modified processes.
- ... needs enhanced technical preconditions such as connectivity and new software tools.





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Thank you for your attention.

Any questions?