



# Production Management and IT Experts in a traditional company

Some Observations

- Engineering degree aerospace technology, University of Stuttgart
  - PhD in the area "CAD/CAM and Expert Systems"
  - 33 Years with Bosch Company:
    - Design Engineer resp. for CIM (Computer Integrated Manufacturing)
    - Director Design Power Tools
    - Director Production Power Tools
    - Plant Manager Power Tools, NC, USA
    - VP manufacturing in JV and under lead of US company, KY, USA
    - Back to Germany: Responsible for Bosch Production Systems, Bosch Corporate
    - Plant Manager for Automotive plant in Stuttgart, Germany
    - Last 3 Years: responsible for I4.0 operations and strategy in automotive division
  - CO- leader and deputy professor of IPS, University of Dortmund, working together with Professor Deuse
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- In the next few slides I would like to share my experience with digitization in the “tension area” between management and IT- personnel in a traditional production company
  - This are just some observations, not a scientific study !

## Generation X (and baby boomers):

- High importance of Work
- Career oriented (management)
- Self depending
- Working in structured teams
- Technical expertise
- Systematic and forward planning

## Generation Y/Z:

- Work life balance
- More interested in “task” than management
- Networked among people with same interest (collaboration)
- IT-natives
- Multi-tasking, less planning

“X” are today majority of managers over all levels



“Y/Z”: Employees joining the company now and in previous years

.....Could be good !!!!

## Old situation

Management and peers define structures and processes in the business

IT is of vital importance but is supporting peoples work in defined processes, like CAD/CAM, SAP, Excel,...

- IT could be kept out of the daily business of managers

## New situation

IT is more and more dominating the business. processes and tasks have to be redefined

..machine learning, business intelligence, Data is the new oil...

- Management (..knows the Business) and IT (..knows the tools and their capabilities) have to redefine the business and develop/apply sw systems

## Current Management

- Excellence in industrialization
- Build up knowledge in many areas over time
- Precise, come to the point,...
- Decisions well prepared or/and based on experience (...out of the stomach)
- Often slow

## IT- personnel (Y/Z)I

- Excellence in rapid prototyping  
Spontaneous meetings, Hackathons...
- Little understanding (...interest) of the challenges of business processes and industrialization
- Tasks become more and more specialized, want to stay within their tasks
- Extensive use of IT-terms and buzz words

- Biggest challenge is to develop effective specifications for IT projects
- *Managers* don't understand capabilities and potentials and don't understand IT-Experts. They cannot decide by facts nor "out of stomach", becoming insecure (but don't let anybody know !!), less and less confidence, sometimes anger, often ignorance
- *IT*: feel not understood, mistreated, "cannot do what they expect from the job", frustration

- ....managers postpone decisions, one more planning loop, close and closer “guidance”, or
- ....managers agree to proposals without real understanding
- .... IT personal is designing and coding without clear (agreed) specs, inefficient reviews, solutions don't stand ground in application
- .... IT experts get frustrated, often resign
- ....little progress in digitization, big waste of resources

Situation is improving slowly, “old” management drops out over time and we learn as we go, but this still take a lot of time and is a waste of resources !

What else to do ?

- Understand the situation and where the others come from and “why they act as they act”
- Try to build up Project managers, which understand both sides. They are currently very rare, good start is hiring production engineers with strong IT background (f.e. from IPS, Dortmund 😊 )
- Some more ideas.....

### For managers....

- Utilize knowledge in social medias to learn quickly about terms of new technology
- Utilize reverse mentoring with one “Y-IT”
- Participate in training sessions “new technology”, f.e. Bosch is now setting up extensive training programs for managers and employees

### For Y-IT...

- Work close with IT-affine experienced domain engineers or experienced IT - Personnel, utilize them as mentors
- Some patience may be ....

.... to support the future of our companies