

Lean Order Management

*Modelling Business Processes
using activity chains*

*Professor Hans-Henrik Hvolby
Department of Production,
Aalborg University, Denmark*

Production

Background
Order Management
Modelling
SME case study
Conclusions

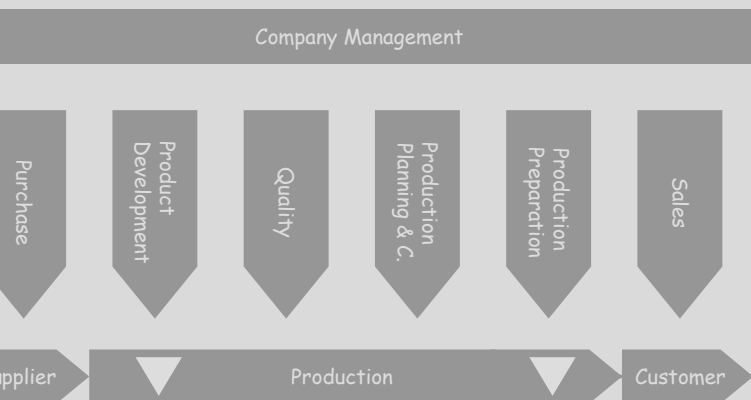
Hans-Henrik Hvolby

www.misg.aau.dk

hhh@i

Previous Manufacturing Framework

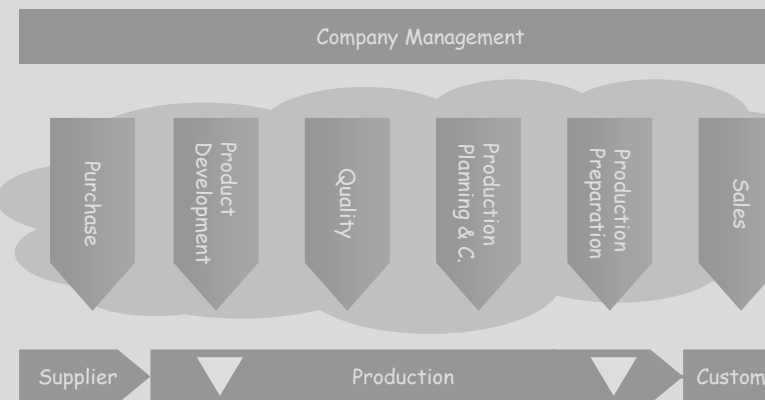
Manufacturing
Information
Systems
Group



(customer) order process was primarily handled by the department. All departments was able to work more or individually due to the stable manufacturing conditions

Present Manufacturing Framework

Department of
Production

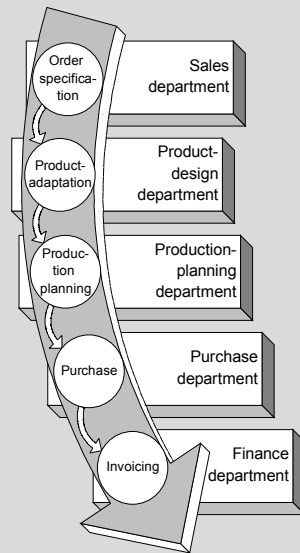


Departments still work individually, but they are all involved in the (customer) order process due to the customer specific production

Managing the order process
 chain of activities through
 individual departments

possible to increase the
 resource utilisation and to
 decrease the leadtime

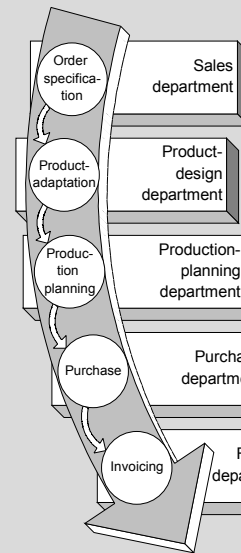
In many companies more
 time (manhours & leadtime)
 are spent in order processing
 than in production !!!



Focus are changed from individual
 tasks to flow.

Order management requires a
 co-ordination of ALL orders with
 consideration for the TOTAL
 costs and ALL available resources.

Who is in charge of the order ?
 Does the overall schedule include both
 production, purchase and customer
 specific design activities ?



Order Management

Who needs Order Management ?

Does the adaptation to customer specific orders
 result in more orders (but of less value) ?

Does the responsibility often change during the
 order processing ?

Is the consumption of man-hours increased
 compared with sales ?

How many orders are delivered on time?

Is it increasing or decreasing ?

How often are drawings or
 materials missing during
 assembly or production ?

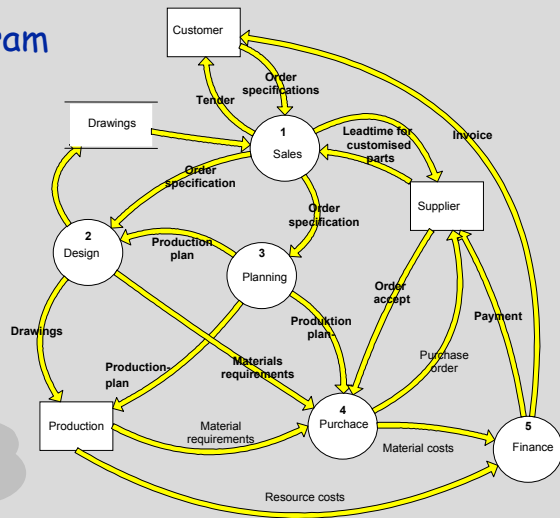
Order Management

Is the information process effective ?

- How much time is spent on seeking information which ought to be available ?
- When was the latest evaluation of the information flow, forms, reports and screens used in the order process ?
- Are the systems used for sales, planning, quality control and design integrated ?

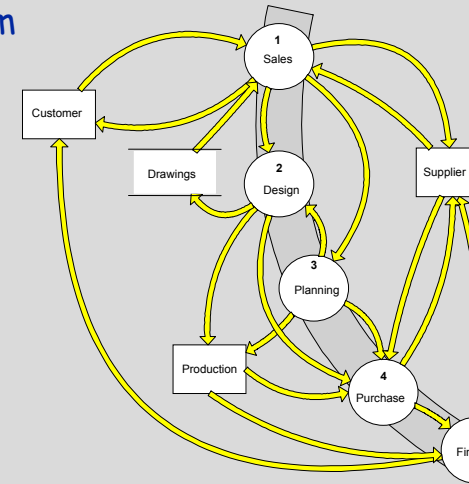
Value Flow Diagram

Information flow
Activities
Data-files



Focus:
Nice view

Data Flow Diagram continued



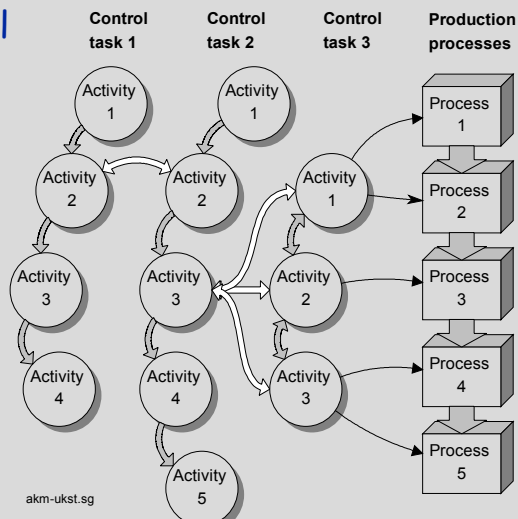
Focus:
Flow

Modelling

Manufacturing
Information
Systems
Group

Activity Chain Model

Focus on:
Forward flows
Major tasks (chains)
How changes of responsibility
Resource utilisation
The administration
Simple to use



Department of
Production

SME Case study

EBK A/S

75 employees

30 in the administration

45 in the production

Turnover: 12 million Euro

150 houses pr. year

Sales offices in Germany and The Netherlands

All facets of manufacturing (production, sales, product development, customer specific adaptations, finance)

BTASKS:	Pur- chase	Plan- ning	Invoi- cing	Sales	Probl. Solv.	Prod.spec Ext.rel.	Total
Existing tasks							
Ordering	61	12	48	11	-	80	212
Value adding	41	8	28	10	-	80	167
	102	20	76	21	-	160	379
Future tasks							
Ordering	59	12	46	11	8	74	210
Value adding	12	0	15	2	0	37	66
	71	12	61	13	8	111	276

consumption was reduced by 23% by reorganising the and adapting the organisation

Activity Chains are helpfull to improve the order pro and adapt the organisation

Activity chains are more manageable for industry thro IDEF and Dataflow diagrams

The four completed case studies showed a high pote of improvements in SMEs

Internal improvements are a necessary step before moving on to Supply Chain improvements