



Live Supply Chain Games

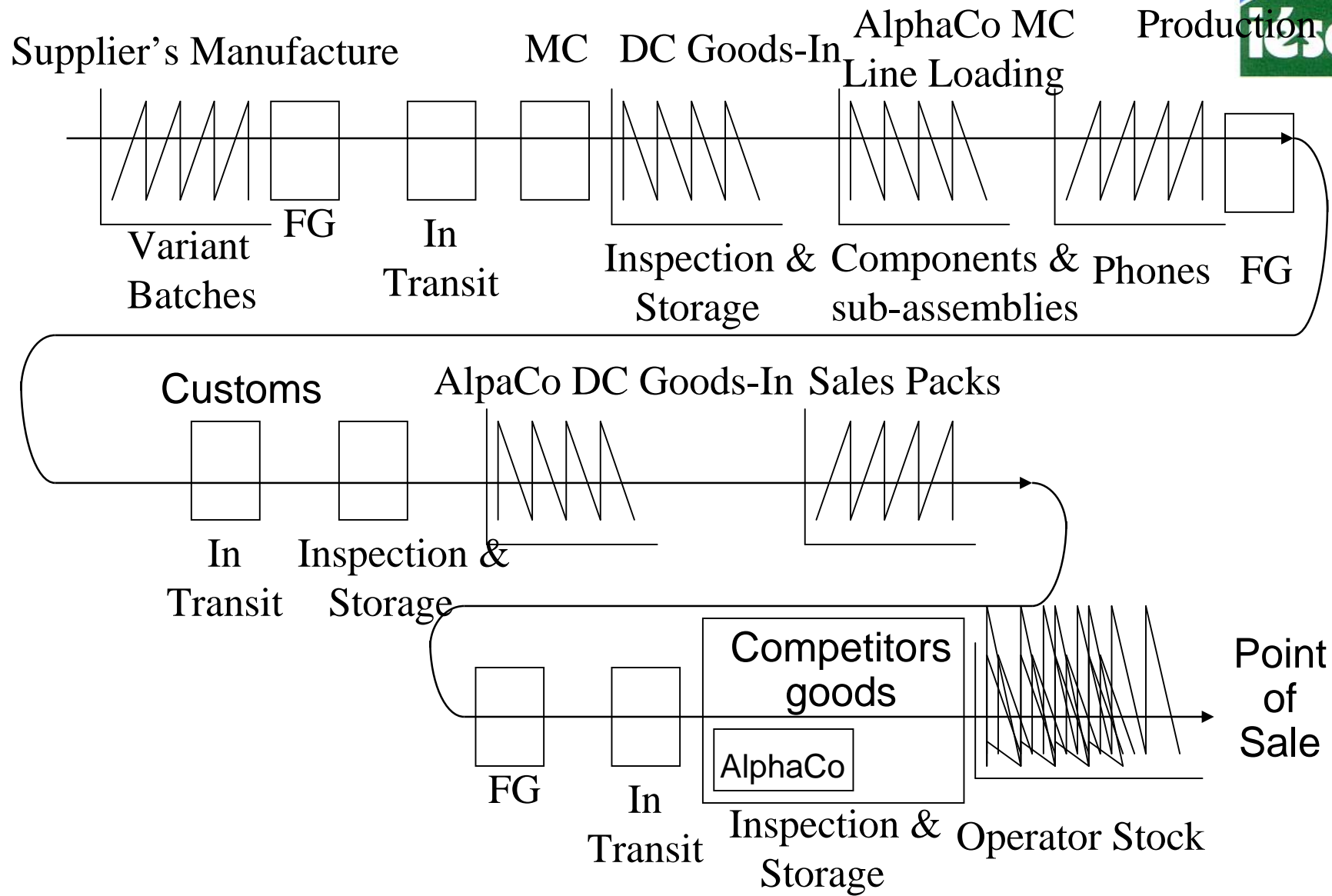
ICIL 2005, NH Hotel, Montevideo, Uruguay

Dr David J. Newlands

IESEG School of Management

Sydney Business School

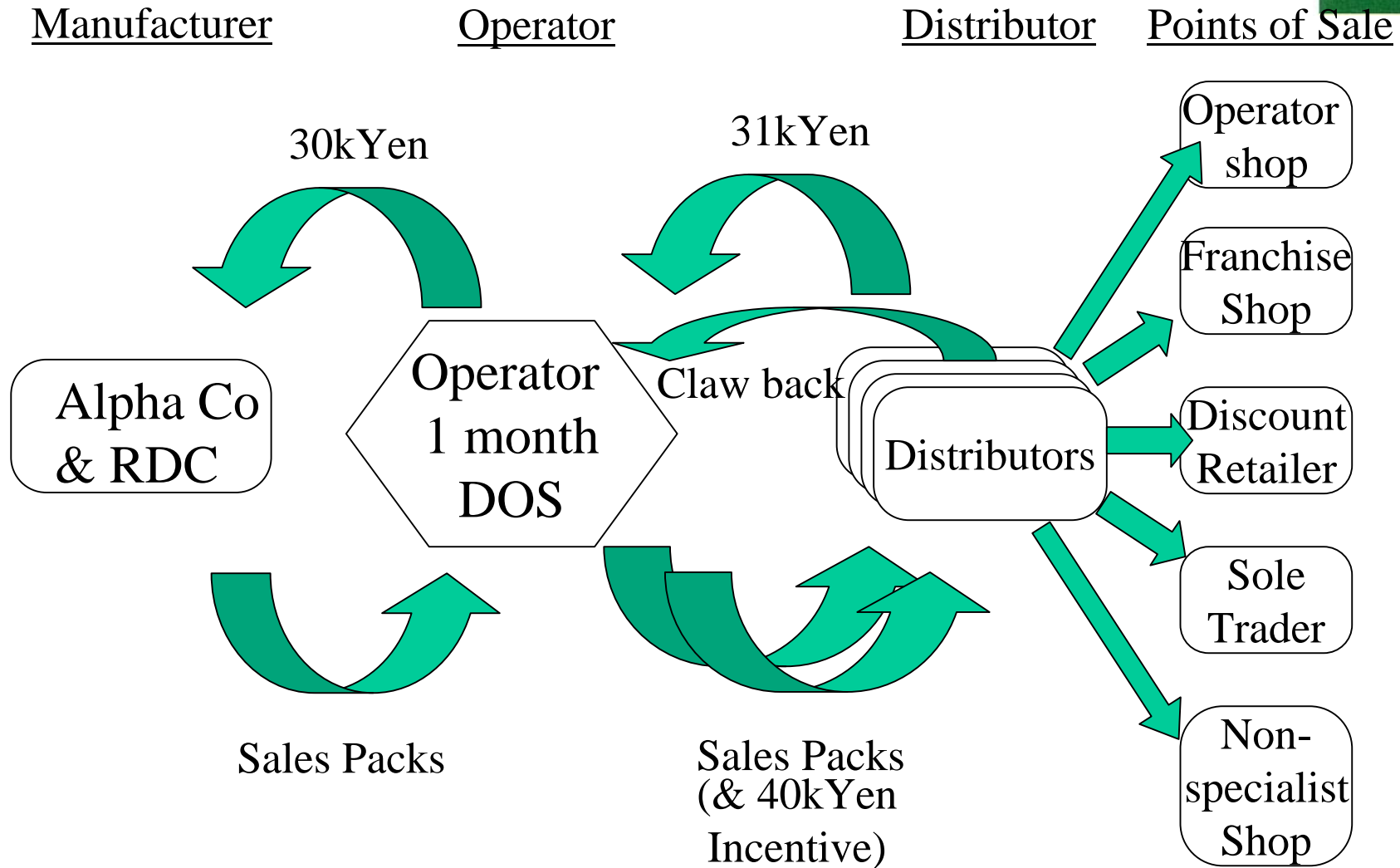
Days of Supply



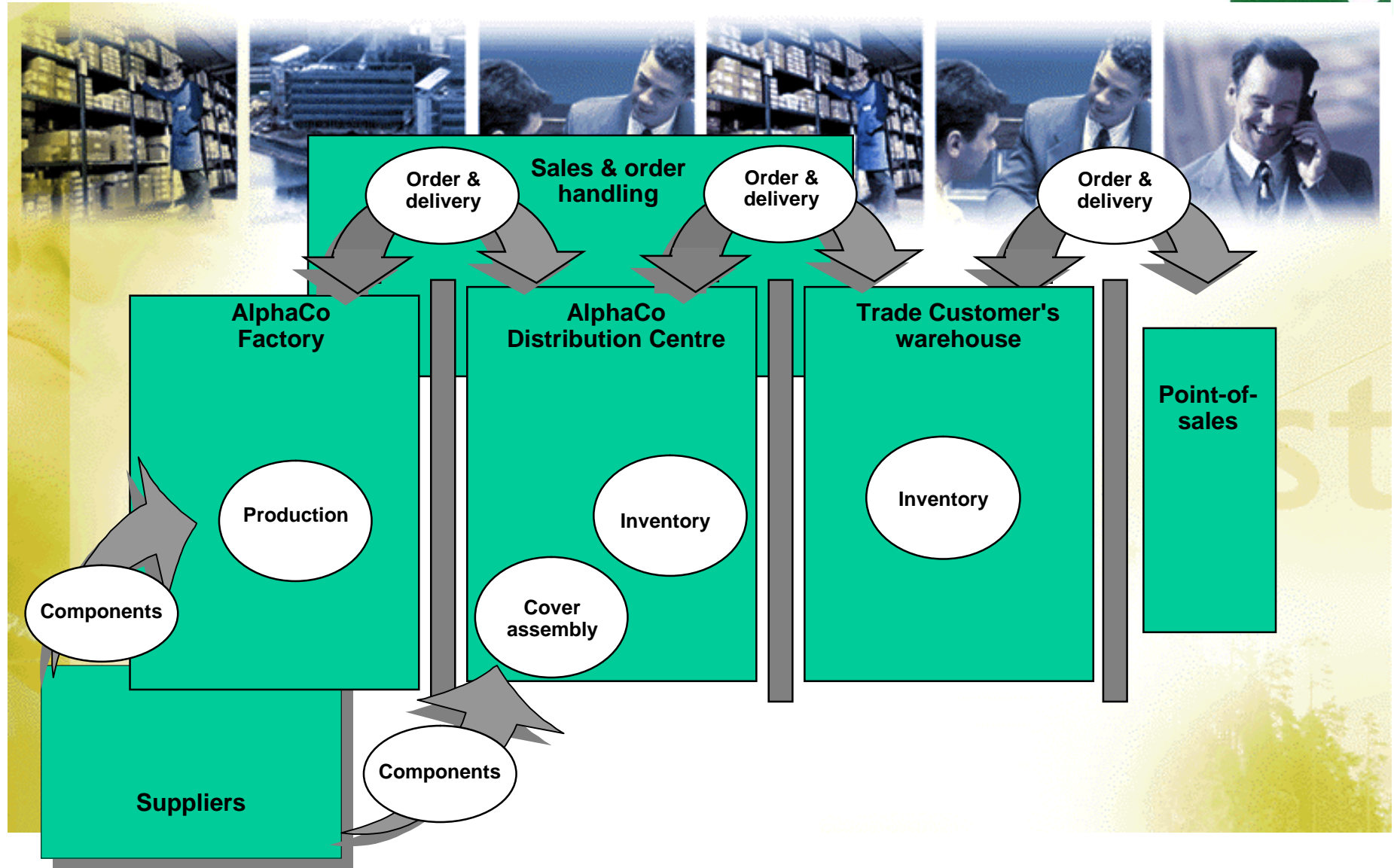
Key Aspects

- MRP, MRP, MRP, MRP.... Forrester Effects
- Quality – Batch Returns from the Trade Customer
- Business Process Reengineering & Lean
 - Head count reduction
 - Space reduction
 - Profit Improvement
- Challenges – Change Management, Conflict Management, Total Involvement
- Product Design

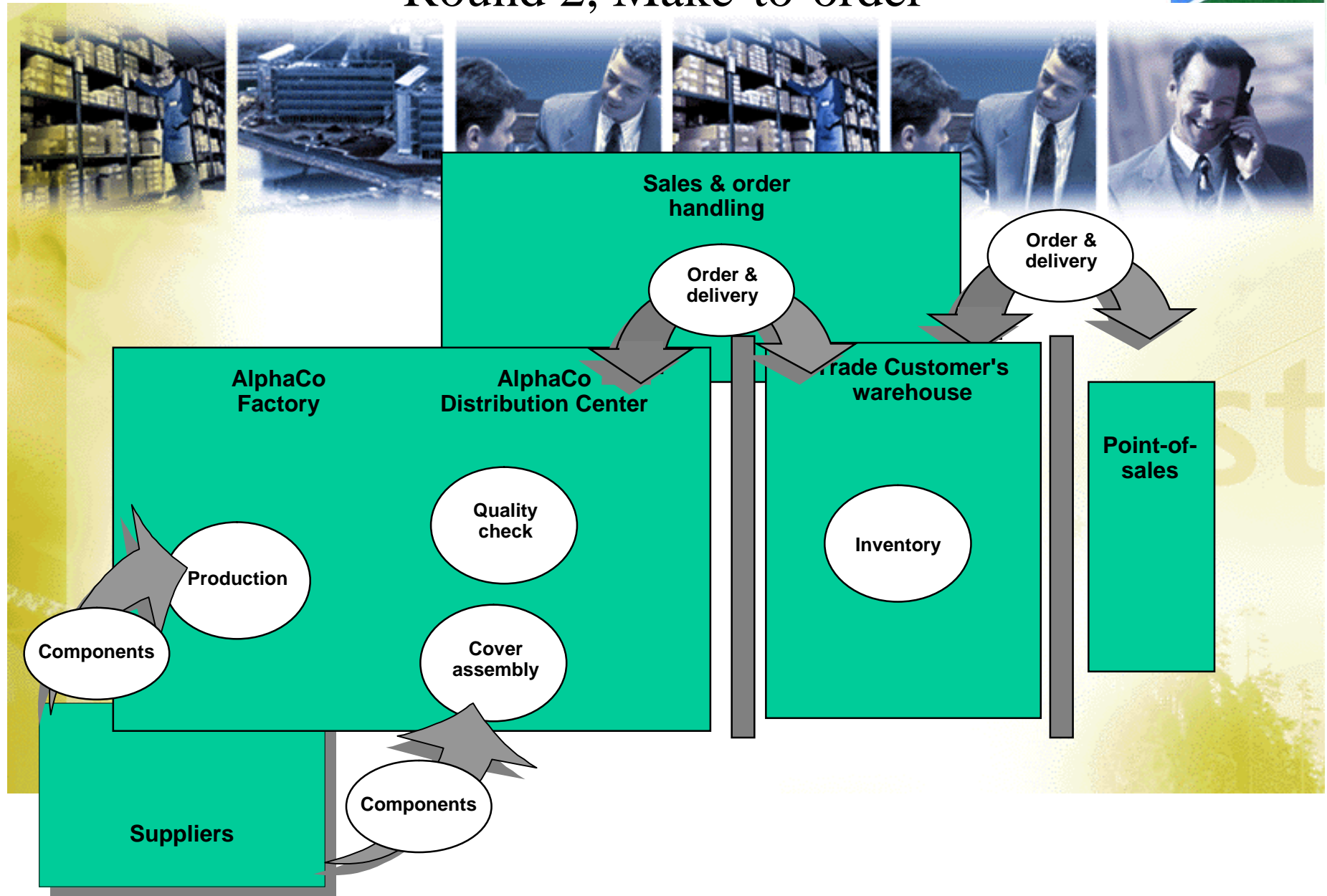
Transciever Distribution Market



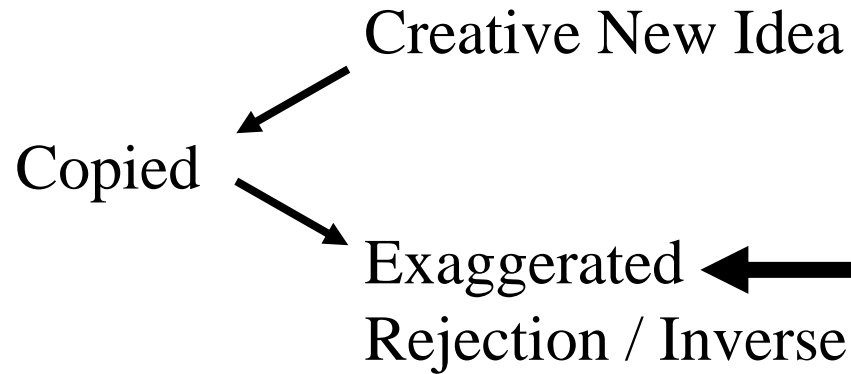
Round 1, Management driven production planning



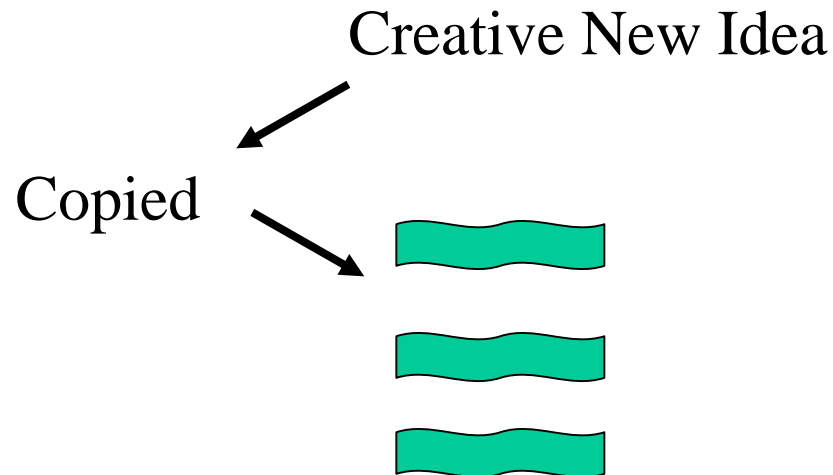
Round 2, Make-to-order



Copying Designs?



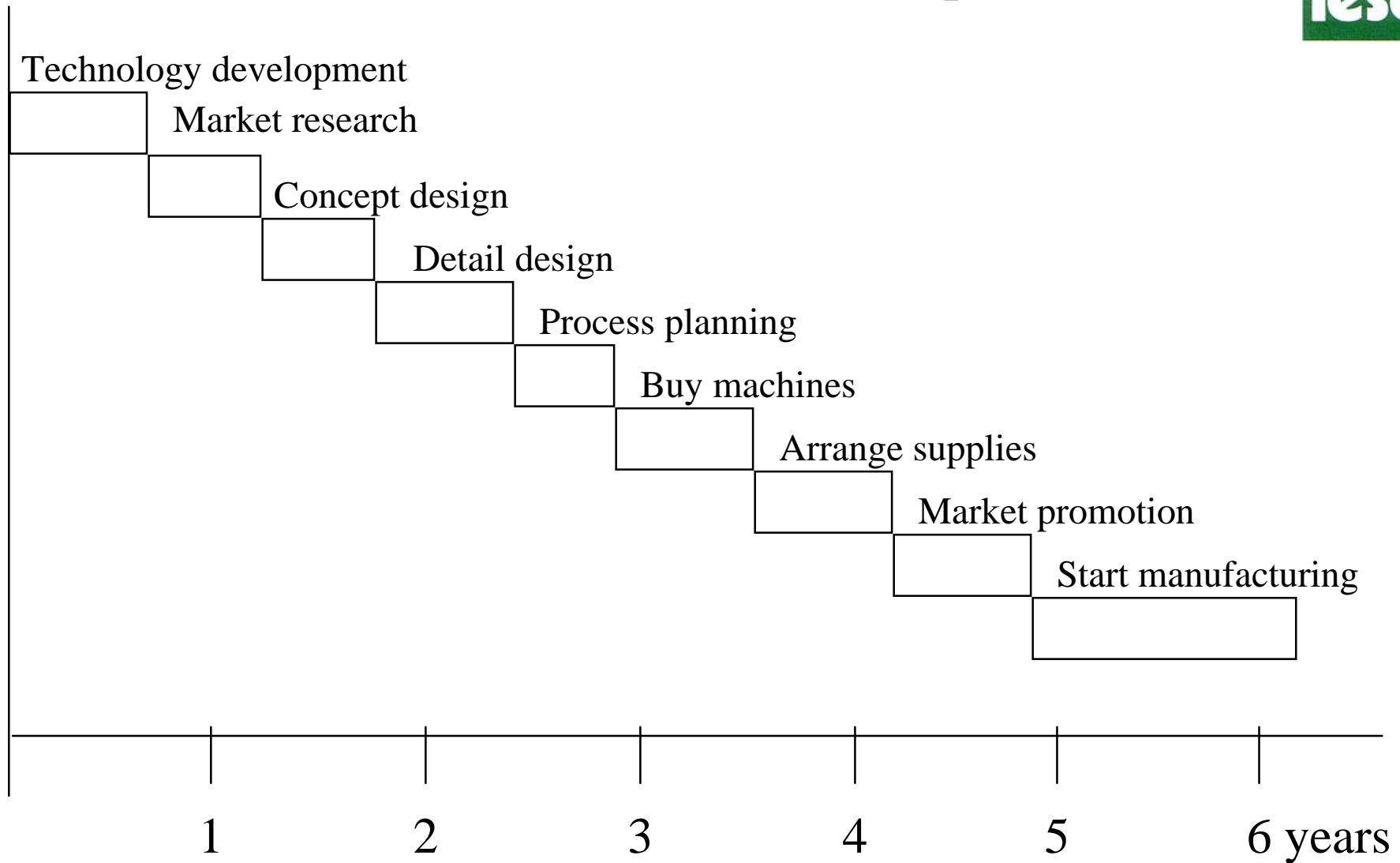
Exaggerated
Abandon



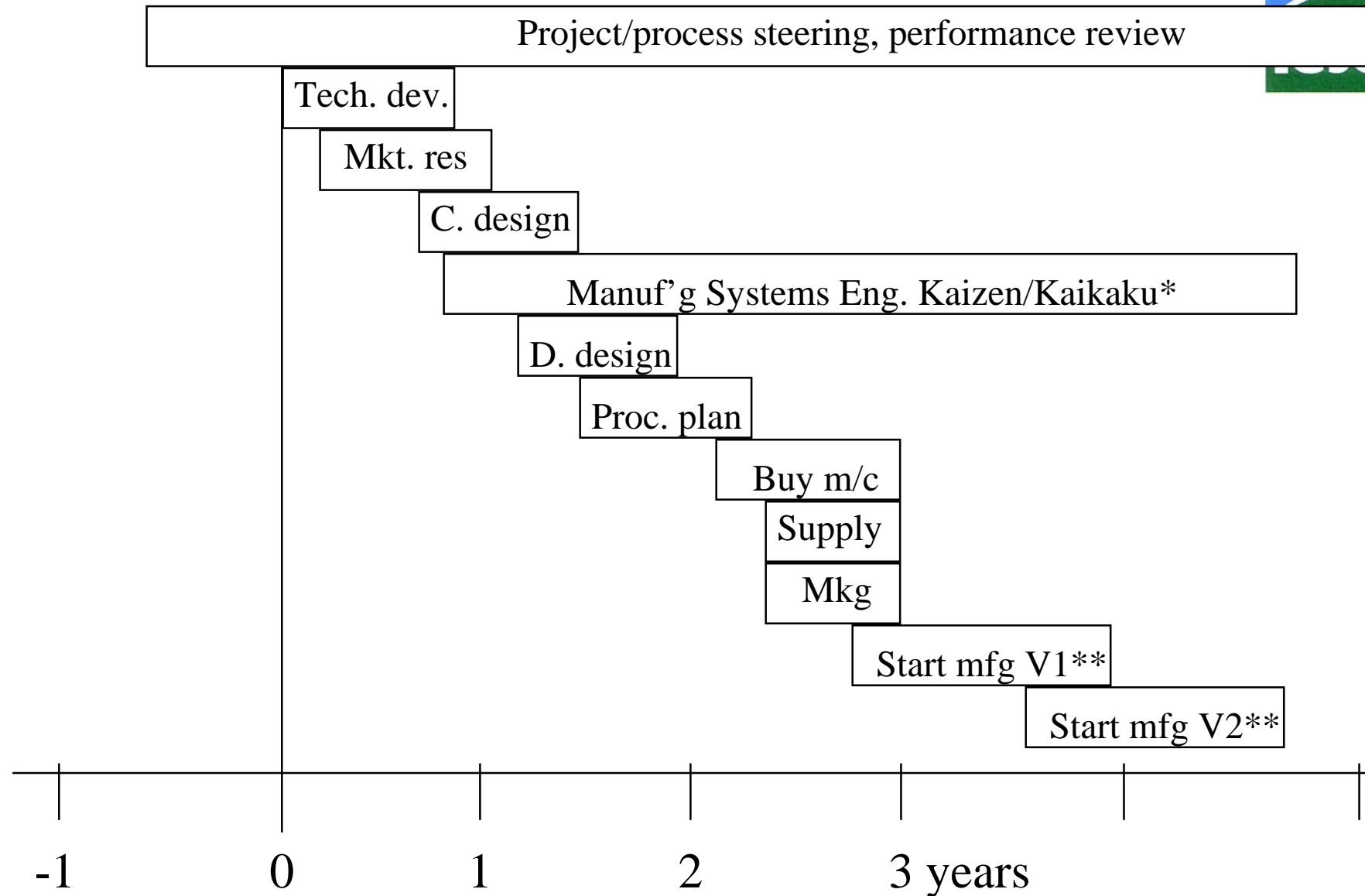
OSBORN'S GENERALISED CHECKLIST

- **PUT TO OTHER USES?**
- **ADAPT?**
- **MODIFY?**
- **MAGNIFY?**
- **MINIFY?**
- **SUBSTITUTE?**
- **REARRANGE?**
- **REVERSE?**
- **COMBINE?**

Traditional Product Development



Project Based Organisations Concurrent Engineering



*Kaizen - continuous incremental improvement

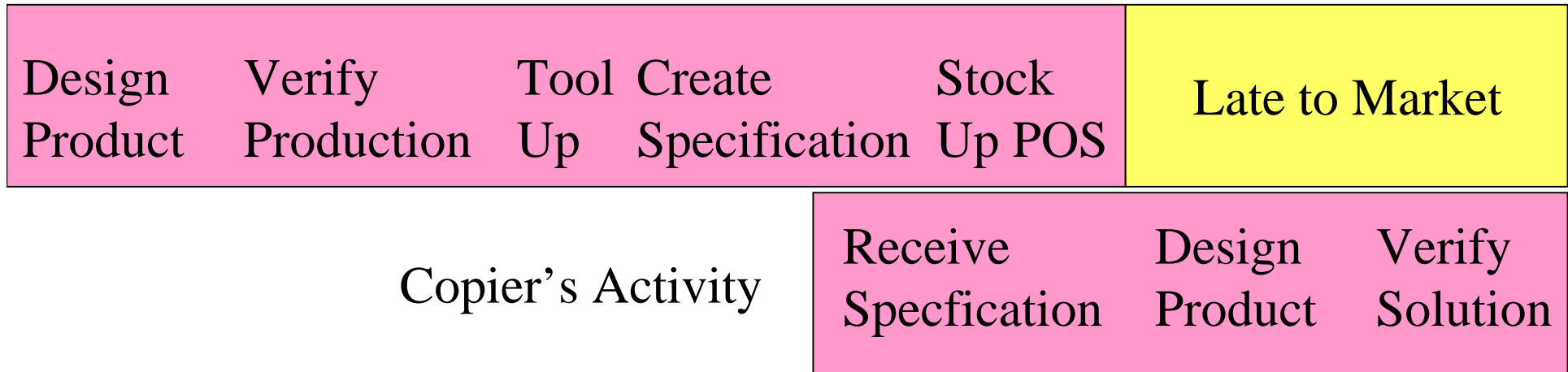
Kaikaku - radical improvement and development

** V1 and V2 - product release Version 1 and Version 2.....

Design Leadership



Creative Leader Product Team 1



Creative Leader Product Team 2



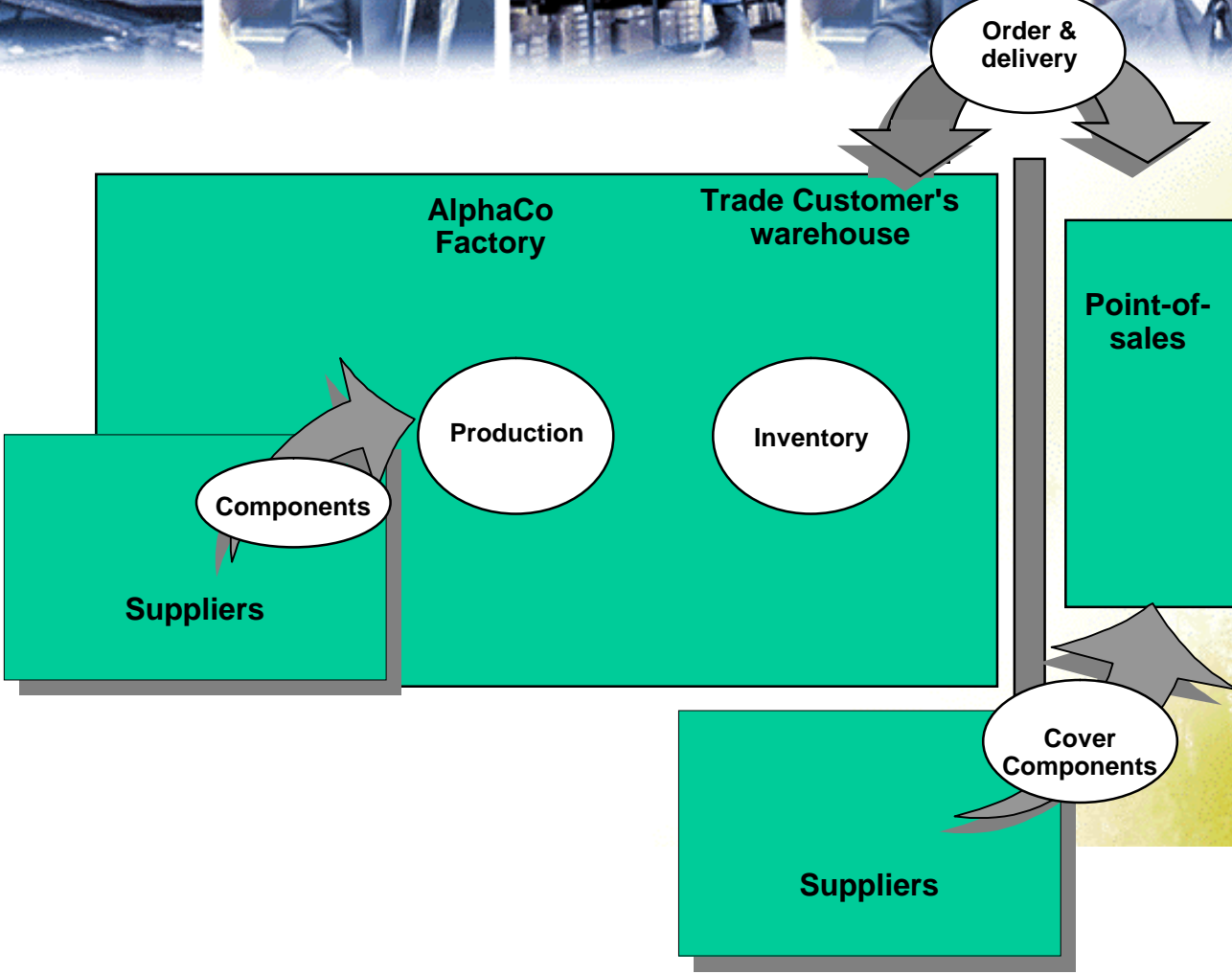
Creative Leader Product Team 3



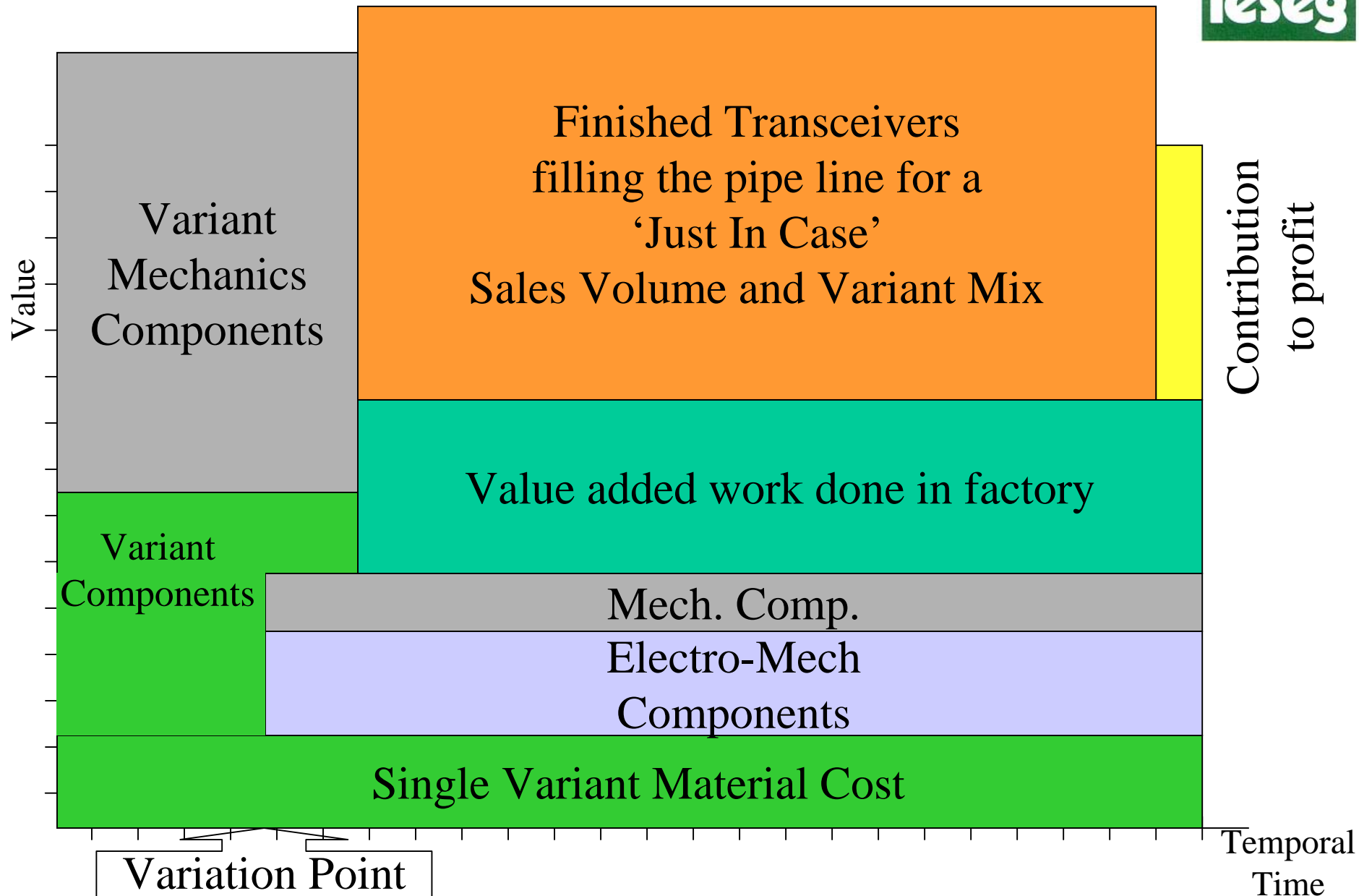
Key Design Requirements

- Design for the supply chain – manufacture, assembly, X
 - Commonality
 - Carry-over
 - Compatibility
 - Late Configurability
-
- Minimum number of stock keeping units
 - Minimum number of parts – reduce hand time to increase productivity – number of products made per person per year

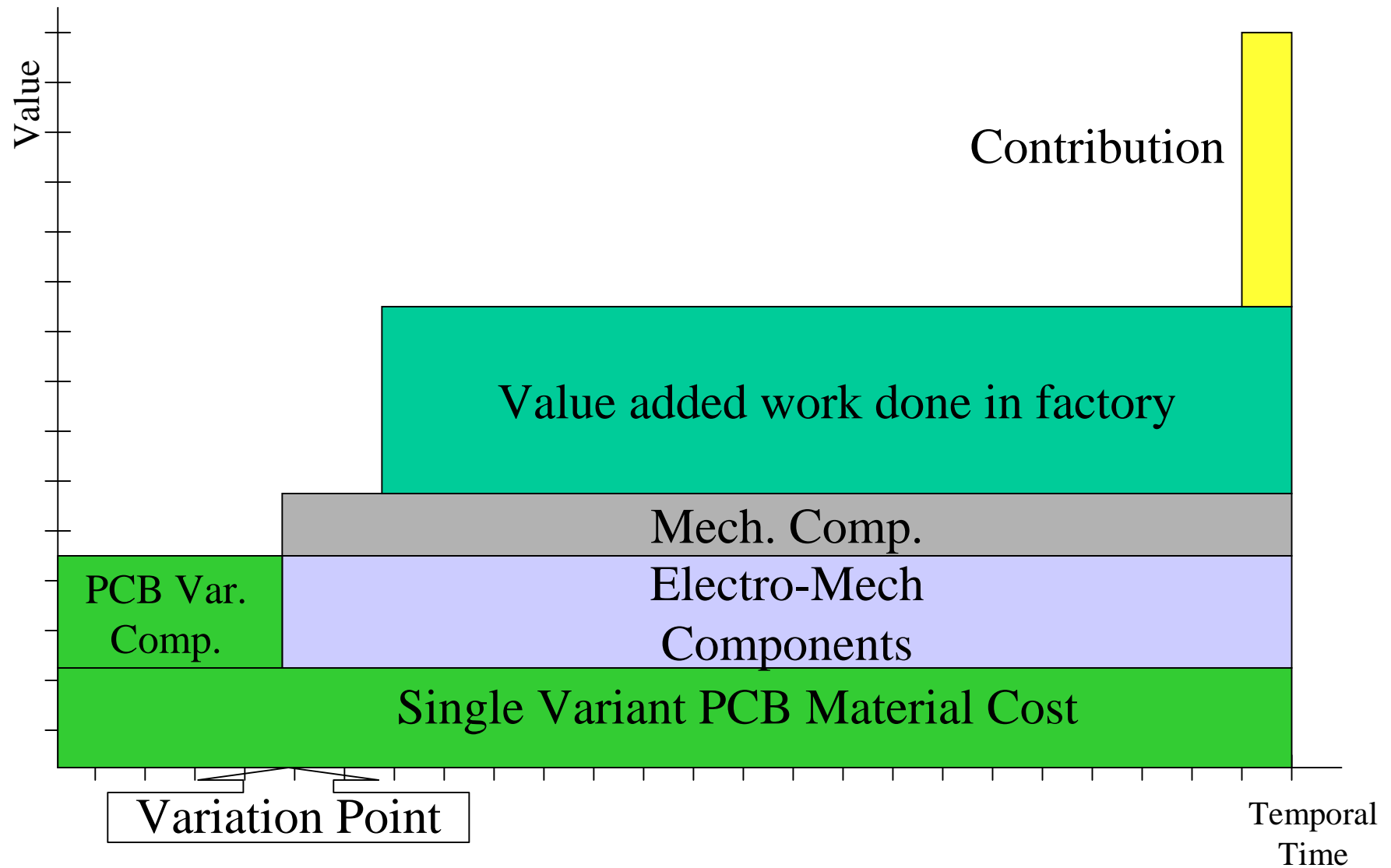
Round 3, Replenish Sales, Late Configure Mass Customisation



'Full service' supply chain option Material Cost Profile

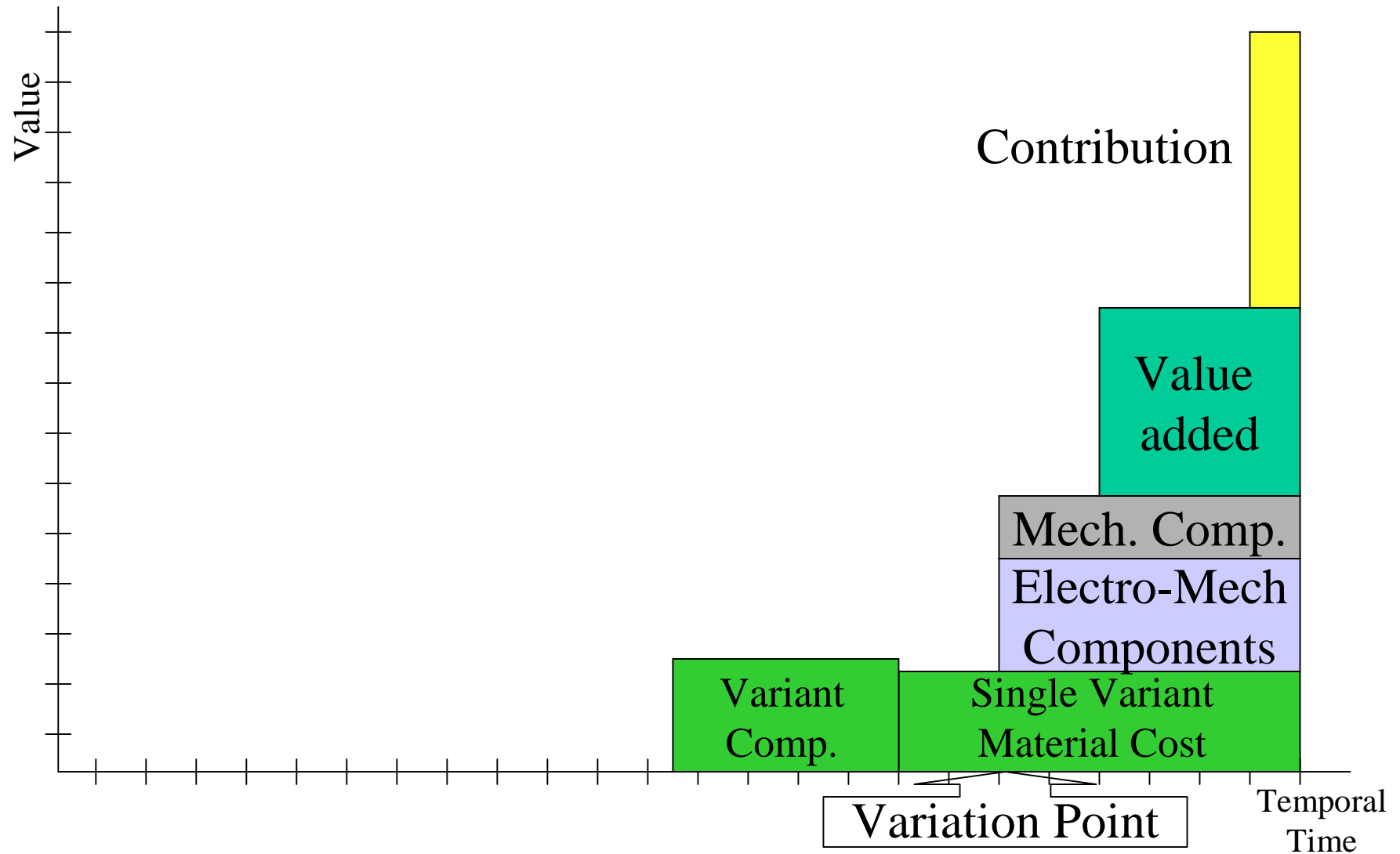


'Made in Finland' Few Variants Material Cost Profile



Full Transceiver Made in Japan

Material Cost Profile

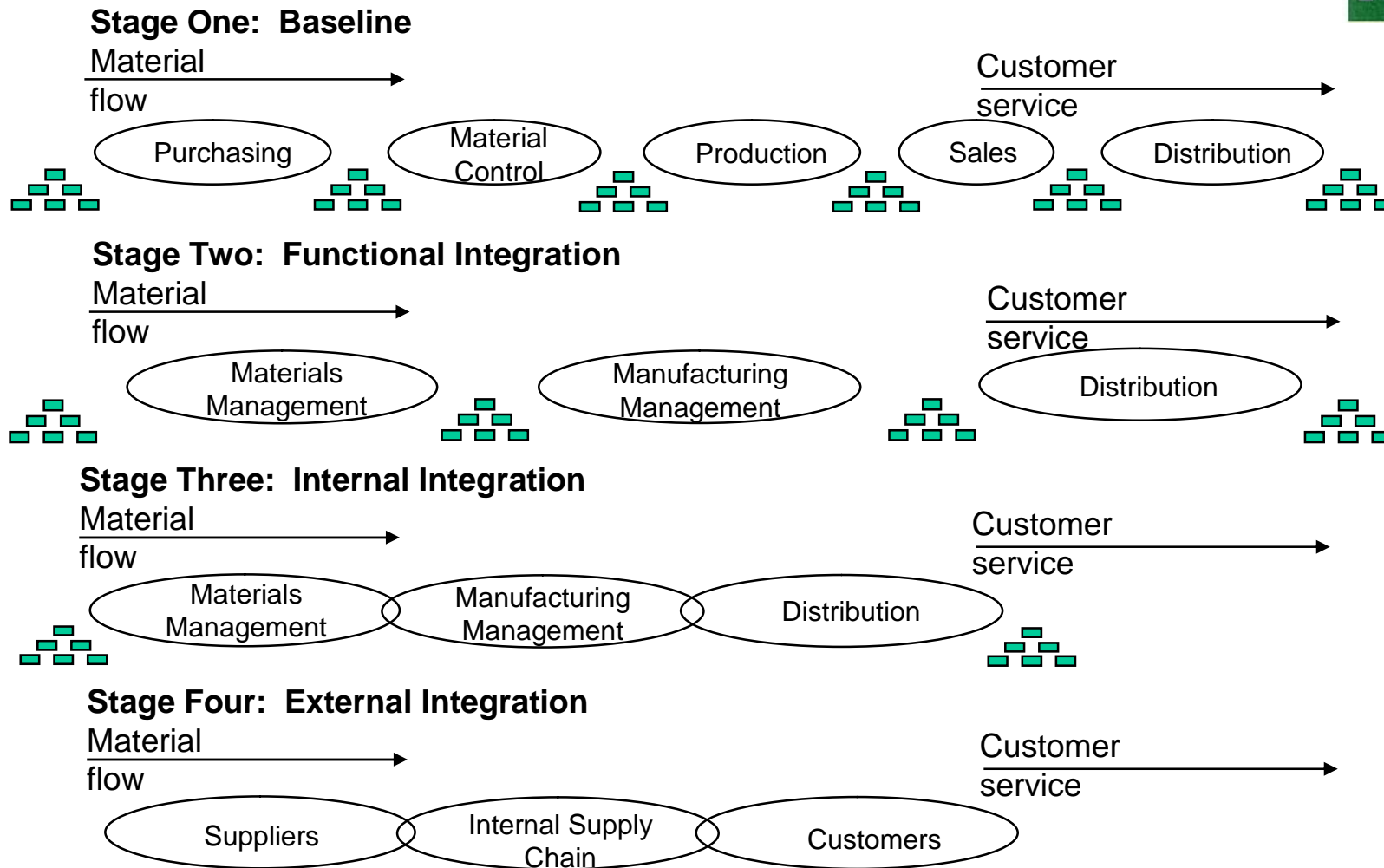


Material Reduction



Worst Case Lead Time	Weeks	3	3	1	1
	Days	18	18	6	6
Stock Turns per year		19	22	36	108
Transceiver Cost for Lead Time Stock		£158 348 222	£255 843 870	£33 612 121	£18 727 273
Mechanics Cost for Lead Time Stock		£6 523 212	£11 754 540	£1 128 030	£883 182
	Mean	£126 142 173			
	Max	£255 843 870			
	Min	£18 727 273			
	Min/Max %	7,32%	Total Saving =	-£237 116 597	Favourable
% of Business Exposure = Transport		0,1699%	0,2132%	0,3026%	46,8408%

Achieving an integrated supply chain



Source: Christopher, (1997)

People Involvement

- Overcoming Initial Fear
- Interaction
- Dependence, Independence, Interdependence
- Identifying Opportunities
- Planning Potential Changes
- Implementing Changes
- Reviewing New Current State
- Mental Simulation of new situation
- Selecting Replacement, Training,
- Delegation

Group Formation



Patterns of behaviour differ at different stages of the 'life cycle' of a group.

Forming hesitancy, uncertainty

Storming conflicts rise with confidence

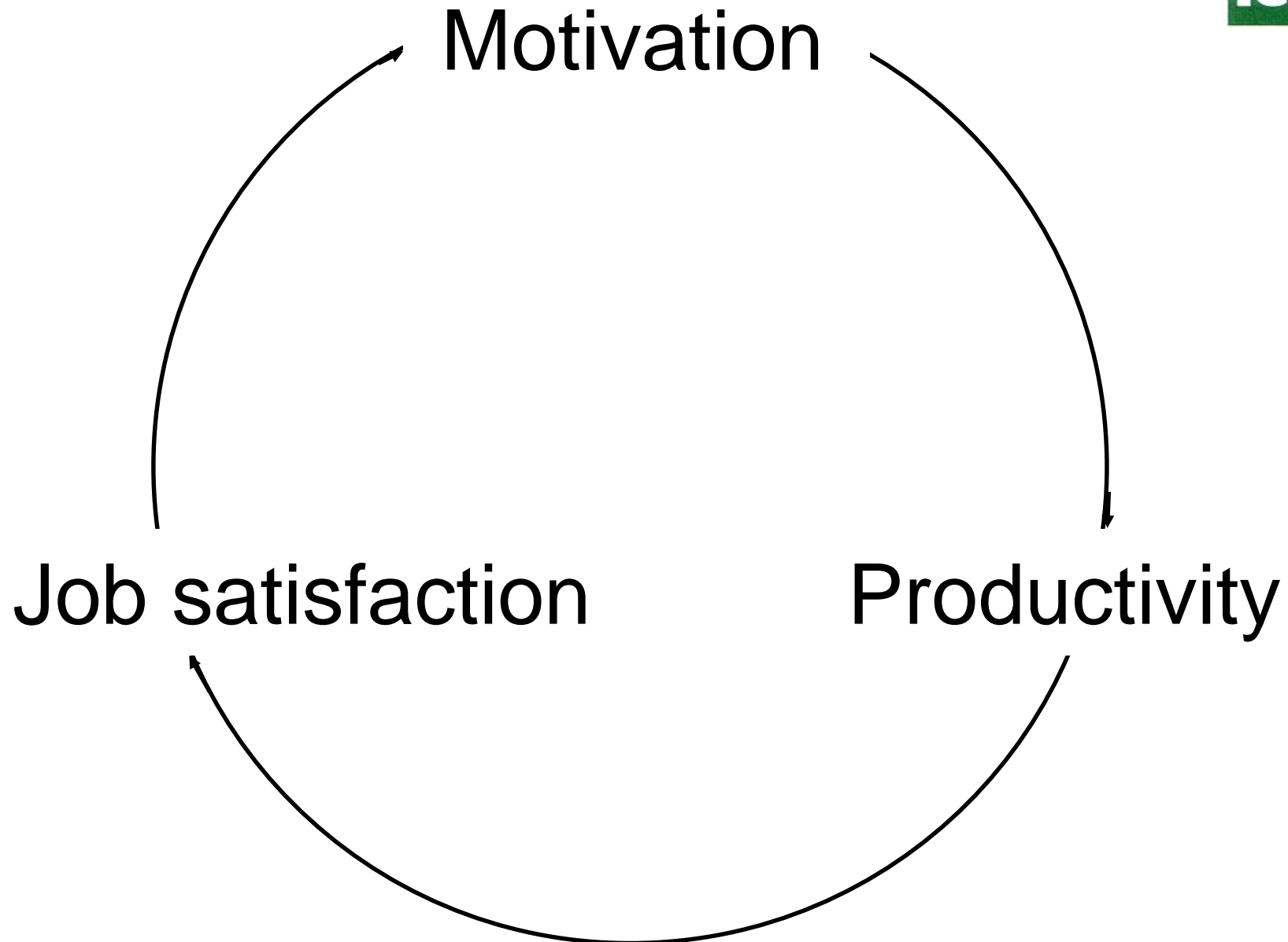
Norming shared views and expectations

Performing begins to perform effectively

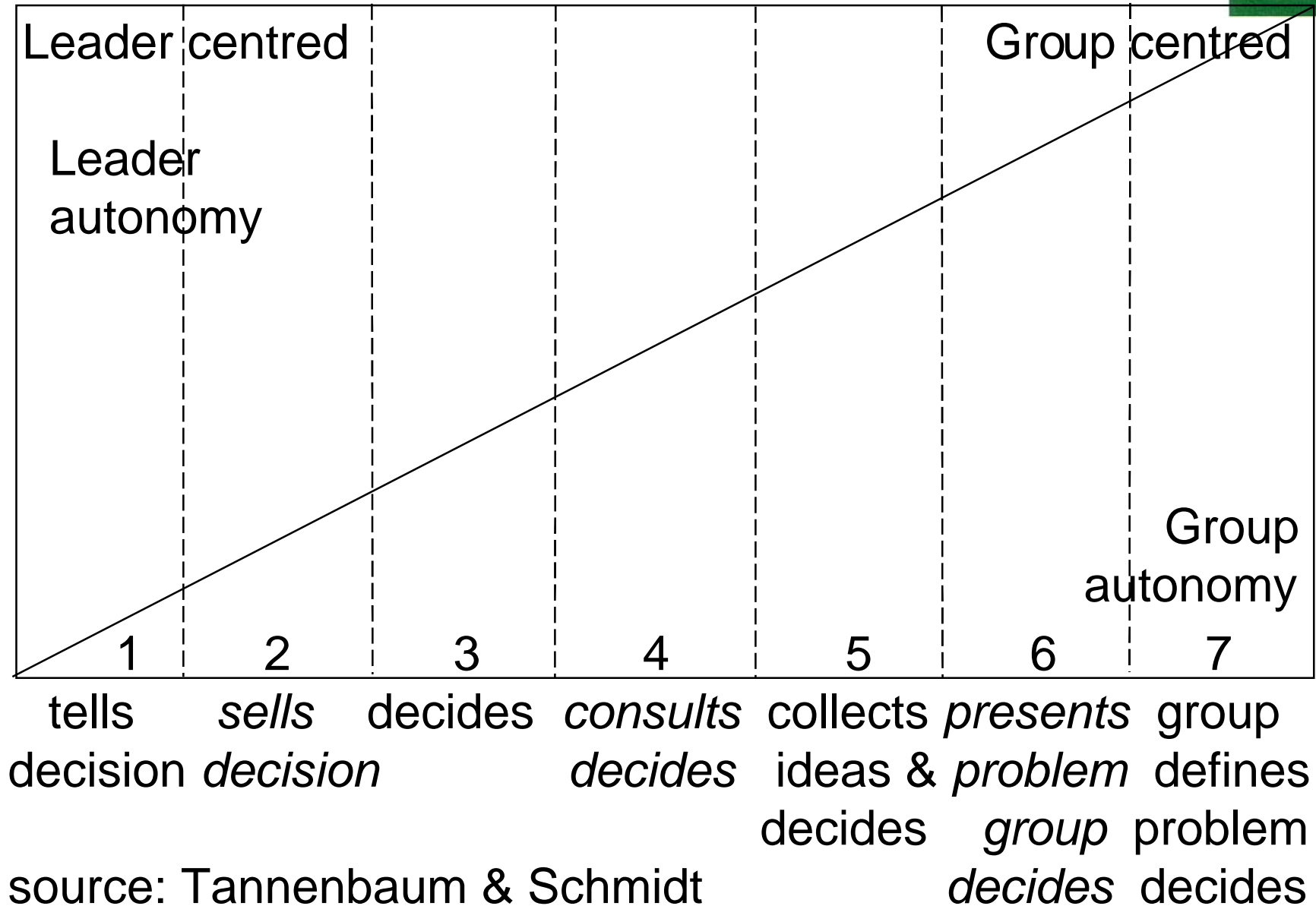
Dorming complacency or 'falling asleep'

Mourning grief on closure of group

Circular model of motivation



Continuum of leader behaviour



Conclusions

Live Supply Chain Game includes

- Intuitive Structure
- Feedback and exchange of ideas based on experience
- Actual performance feedback is given – Profit/Loss
- Route Causes Identified, Change Managed, Conflict Managed
- Walking the Talk – participant's behaviour
- Reengineering – First principles and using accepted theory
- *Leadership and working together*



Thank You!

Any Questions?



Support Materials

Platform Management



<http://www.sounddomain.com/id/audiigreecetyp89>



<http://www.geocities.com/MotorCity/1108/passtown.html>



VW Passat 1995-7



Seat Cordoba



<http://www.cardomain.com/memberpage/640544>



Skoda Octavia c2003

