LEGO’s production challenge:
maintaining process
capability and product
quality while increasing
production volume and
bringing new products to the
market.
Agenda

• Key Figures
• History
• What is trigging variation?
• Outsourcing – What did we learn?
• Focus areas – to deliver the desired quality
• Guiding principle
At a Glance

Danish family owned

25,382 million DKK turnover 2013

33% operating margin

13,869 employees End 2013

9 years of consecutive growth

Sold in more than 130 countries

More than 60% of this year’s sales are novelties

Figures per ultimo March 2014.
Production & Distribution Facilities

- **Denmark Billund**
  Mostly moulding. High volume packing for more complex products

- **Mexico Monterrey**
  Moulding, processing and packing high-volume products for NA

- **US Dallas**
  Distributions Center

- **Hungary Nyíregyháza**
  Moulding, processing and packing of LEGO® DUPLO®

- **Czech Republic Kladno**
  LEGO® System product processing and high volume packing

- **Czech Republic Jirny**
  Distributions Center

The LEGO Group
Consumer Services

200-350 Employees

TOP 3 complaints:
• Missing parts
• Lost or delayed orders from Shop at Home
• Lost & Replacement parts

Answer 1.6 million phone calls, emails, faxes and letters per year

Extremely high consumer satisfaction

16 languages

3 CONTACT CENTRES + some small local teams

Figures per ultimo March 2014.

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Turnover

- Turnaround and outsourcing attempt
- Flextronics

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Finance Performance • 8
Examples of triggers of variation on moulded elements in connection with growth

**Triggers of variation:**

- New products (elements)
- New machines
- New technologies
- Process optimization projects
- New colleagues
- Changes in the organization
- New production sites
- Commercial press from sales

**Examples of potential problems:**

- Changes in the dimensions
- Safety issues (small parts)
- Visual problems (colour, burn marks)
- Processing problems (deform parts)

**Potential consequences:**

- Decrease of the quality level
- Low customer satisfaction
- Product recall

Increased risk of losing the overview
Moving a mould and getting the desired quality is hard

Growth can be compared with outsourcing because the culture can’t adapt so fast
Moving a mould and getting the desired quality is hard

Learning:
• Moulding is a core competence
• The impact from the LEGO culture on the quality
• Need of more specific quality standards, dimensions and look & feel

Initiatives:
• Definition of key competences
• Improvement of specifications for approval and quality control (alignment, involvement)
• Improvement of measurement methods (internal, external)
• Improve the quality of function test (development of reference elements)
• Assessment of look and feel
Deliver the desired quality: Focus areas

- Simplicity
- Collaboration and knowledge sharing
- Risk avoidance
- Visualization
Simplicity

Learning from the past:
• Many small factories in the factory -> difficult overview of daily operation
• Complex material and supplier platform
• Cost of complexity

Focus area:
• Standardize production set-up
• Not only focus on adding new technologies, but also out phasing of old technologies
• Keeping a lean material platform
• Creativity within existing boundaries
Visualization

Learning from the past:
• Need for more overview
  • Materials
  • Suppliers
  • Production planning
• Firefighting is a bad foundation for improvements

Focus area:
• Physical overview of the technologies: “Simplicity room”
• Visual factory – follow up on the daily production
• Strong Lean-culture
Risk avoidance

- Simplicity
- Collaboration and knowledge sharing
- Risk avoidance
- Visualization

Simplicity

- Empty shelves
- Outsourcing / transfer of processes

Focus area:

- Redundancy
- Assessing capability

Collaboration and knowledge sharing

- Test and get the knowledge (use data)
- Challenge the existing methods and assumptions
- Documentation of the capability from suppliers of equipment
- Think risk reduction in the whole value chain
Collaboration and knowledge sharing / transfer

Learning from the past:
• The challenge to transfer tacit knowledge
• Culture is the key

Focus areas:
• High level of involvement in decision making
• Work processes support collaboration
• High degree of shared KPIs -> motivate to help
• No blame culture - Focus on the problem
• Problem solving process is important – not only the solution
Guiding principle

“Only the best is good enough”