MANAGING BUSINESS COMPLEXITY THROUGH CROSS-FUNCTIONAL MATERIAL RATIONALISATION

Archamps, 7 & 8.12.2006

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Magneti Marelli is a €5bn international group leader in developing and manufacturing high-tech automotive systems and components. With 53 plants, 31 R&D centers in 15 countries and a workforce of 24,600, Magneti Marelli is a world class global automotive supplier.

**LIGHTING**
- Halogen / HID / LED Front / Rear Lamps
- AFS Modules

**ELECTRONIC SYSTEMS**
- Instrument Clusters & Displays
- Telematics
- Body Computer / Electronic Modules

**POWERTRAIN**
- Engine Control Systems
- Gasoline, Diesel and Multi Fuel Systems / Components
- AMT

**SUSPENSION SYSTEMS**
- Complete Systems
- Sub Modules
- Mono / Bitube Shock Absorbers

**EXHAUST SYSTEMS**
- Complete Exhaust Lines / Components
- Emission Control Solution (DPF)

**MOTORSPORT**
- Engine / Vehicle Electronic Control Units
- Telemetry / Data Systems
- Engine Components
  - F1
  - Rally
  - Moto GP
AL – Worldwide 2006

HQ = Headquarter, R&D = Research & Development, HL = Headlamps, RL = Rearlamps
AL is among the 3 world leading companies!
Products

HEADLAMPS

REARLAMPS

AUXILIARY LAMPS, OTHER PRODUCTS AND ELECTRONICS
A simplified view on Head lamp:

- **Plastic parts**
  - efficient design to manufacture
  - low cost tooling (China & Eastern Europe sourcing)
  - short tooling lead time
  - standard resin material
  - efficient molding suppliers

- **Electronic & Mechatronic**
  - reliable and low cost standard Balast + standard stepper/ECU
  - Electronic Control Unit

- **Bulb**
Actual Projects – Headlamps

Audi A4

Citroen C6

BMW Mini

DC S-Class
Actual Projects – Rear Lamps

- Peugeot 307
- MB B-Class
- Volvo C70 Cabriolet
- Alfa 159
- Audi Q7
The Vision

We aim to be global leader in exterior automotive lighting and the preferred partner of the car manufacturers.
THE EXAMPLE OF PLASTIC RAW MATERIAL
Raw Material Complexity - Plastic

- wide range of products and components

- different technical requirements
  - temperature resistance
  - structure of surface
  - mechanical resistance
  - transparency

- 700 different plastic materials – goal: 300
  - equals 30% of purchasing turnover (direct + indirect)
  - cost improvement potential: 10%

HL+RL-Housings
Product Complexity

Complexity of projects and time

- **requirements of the car manufacturer**
  - transparency of actions
  - information in advance
  - actions to be released by customer

- **headlamp / rear lamp business**
  - 18 months development time
  - 3 years mass-production
  - 15 years after end of production, availability of parts
- through different and changing requirements continuously new challenges
  - solutions with new plastic materials
    - technically ok but commercially critical
Structural/Organisational Complexity

**Objektive**
- Cost reduction, Supplier Quality
- New product development
- New product component testing
- Stable process - no changes
- Stable process - no changes

ONE GOAL!
Why Look for a new Approach?

Current and ongoing approach:

from

- negotiations

  to

- definition of specifications in early phase

But we have to be innovative to remain a high performer

Support the company result by crossfunctional activities contributing to P&L.

- value engineering / value analysis
- material rationalisation
Areas of Impact

1. rationalisation of plastic raw material for components in production
   - setting priorities
   - define resources

2. harmonise via an approved material list in new project development
   - define approved raw material list (plastic)
   - reshape of the main products in production within 5 years
Organisational Approach / Process Level 1

CEO, VPs of Purchasing, R&D, Ind. Development, Quality

Plant 1

Plant 2

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Plant n
Organisational Approach / Process Level 2

Plant Manager + first levels

Department 1

Department 2

Department n
Rationalisation Process

Purchasing, R&D → identify products and saving potential
R&D, Testing, Quality → test and approve internally
Sales → involve customer – customer approval
Production → implement

new cost basis
Getting Operational 1

Who - When - How

- **Top down approach**
  - to be initiated and kicked off by top management towards the plants
  - plant managers towards their teams

- **Regular review with top management**
  - 1 x month
    - feedback of plants
    - actions planned
    - progress
    - decision making
    - allocate resources
    - give priorities
Getting Operational 2

Who - When - How

- Systematic and transparent approach in the plants
  - 2 x month working meeting
  - 1 x month progress + result reporting
  - 1 x month ev. supplier involvement

- Information sharing between the plants through transparent activities
  - use common accessible database

- Collect commercial and technical savings

- Continuous improvement of application
Needs and How to Support the Activities

Deployment

- Finance to be involved to track, report and consolidate savings from each area
- Breakdown of target to all areas and all members
- Cross functional and cross location info sharing
- Decision making meetings
- Project managers necessary to remain focused
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<th>KPI</th>
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<td>Kick of by Top Management and break down by plant</td>
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<td>Bi-monthly meetings</td>
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<td>Supplier involvement program</td>
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<td>Saving potential</td>
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<td>Year 1 / year 2</td>
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<td>realisation project 1</td>
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Problems and Risks of Deployment

- Long term activity – risk of loosing momentum
- Lack of cross-functional communication – blocking points
- Decision making
- Dedicate needed resources
- Purchasing is the driver but contribution of all departments essential
Conclusion

Purchasing contributing to company excellence

- Define and discover potential
- Drive the process
- Get people involved
Conclusion

Key success factors:

- Top management attention
- Cross-functional communication and allocated resources
- Break down of targets
THANK YOU FOR YOUR ATTENTION.