HELLA GmbH & Co. KGaA - Global Spare Parts Management (HELLA GSPM)
eCl@ss Congress – Cologne, September 18th, 2019
Christoph Schilling, HELLA
Reinhard Pohn, Paradine
As one of the top 40 automotive suppliers worldwide HELLA specializes in innovative lighting systems and vehicle electronics

HELLA at a Glance – Overview

**KEY FACTS**

- Founded 1899 in Lippstadt (Germany)
- Global footprint with around **39,000 employees in some 35 countries**
  - Thereof almost **8,000 working on research and development worldwide**
- Integrated business portfolio in Automotive, Aftermarket, and Special Applications
- Leading market positions in automotive Lighting and Electronics
- One of the top 40 automotive suppliers in the world and one of the 100 largest German industrial companies

**SALES BY BUSINESS SEGMENT**

external sales, fiscal year 2018/19

- **Automotive** €5,723 million (84% of group sales)
- **Aftermarket** €662 million (10% of group sales)
- **Special Applications** €391 million (6% of group sales)

**SALES BY REGION**

by registered office of the HELLA customer, fiscal year 2018/19

<table>
<thead>
<tr>
<th>Region</th>
<th>Sales in million</th>
</tr>
</thead>
<tbody>
<tr>
<td>North &amp; South America</td>
<td>€1,381 million</td>
</tr>
<tr>
<td>Asia, Pacific, RoW</td>
<td>€1,129 million</td>
</tr>
<tr>
<td>Germany</td>
<td>€2,349 million</td>
</tr>
<tr>
<td>Rest of Europe</td>
<td>€2,132 million</td>
</tr>
</tbody>
</table>

**KEY FINANCIALS**

in EUR millions and % of sales

<table>
<thead>
<tr>
<th>FY 2017/18</th>
<th>FY 2018/19</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reported Sales</td>
<td>7,060</td>
<td>6,990</td>
</tr>
<tr>
<td>Adjusted Sales*</td>
<td>6,619</td>
<td>6,968</td>
</tr>
<tr>
<td>Adjusted EBIT</td>
<td>552</td>
<td>585</td>
</tr>
<tr>
<td>Adjusted EBIT margin</td>
<td>8.3%</td>
<td>8.4%</td>
</tr>
<tr>
<td>Adjusted Free Cash Flow</td>
<td>223</td>
<td>284</td>
</tr>
</tbody>
</table>

*Currency and portfolio-adjusted
In the Automotive segment, HELLA develops and produces innovative solutions for automobile manufacturers worldwide

**HELLA at a Glance – Business Segment Automotive**

### BUSINESS OVERVIEW*

**Lighting**
- Headlamps
- Rear Combination Lamps
- Small Lamps
- Interior Lighting
- Lighting Electronics

► #1 market position in LED headlamps Europe
► #3-4 global and #1-2 European market position in OE passenger car lighting

**Electronics**
- Components
- Energy Management
- Driver Assistance Systems
- Body Electronics
- Steering

► #2-3 global and #1-2 European market position in defined automotive electronic segments

### AUTOMOTIVE REGIONAL MARKET COVERAGE BY CUSTOMER

fiscal year 2018/19

- **Germany**: 35%
- **North & South America**: 22%
- **Asia, Pacific, RoW**: 17%
- **Rest of Europe**: 26%

### KEY FINANCIALS

in EUR millions and % of sales

<table>
<thead>
<tr>
<th></th>
<th>FY 2017/18</th>
<th>FY 2018/19</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>External Sales</td>
<td>5,383</td>
<td>5,723</td>
<td>+6.3%</td>
</tr>
<tr>
<td>Adj. EBIT</td>
<td>459</td>
<td>452</td>
<td>-1.5%</td>
</tr>
<tr>
<td>Adj. EBIT margin</td>
<td>8.5%</td>
<td>7.8%</td>
<td>-0.6%</td>
</tr>
</tbody>
</table>

### STRATEGIC FOCUS

- **Strengthen position as component supplier with a complete portfolio in the area of sensing**
  e.g. further roll-out of 24 GHz and 77 GHz radar components and realize camera software potential (focus on Levels 1-3)

- **Focus and strengthen business with components for different powertrain concepts**
  e.g. drive the global product roll-out for ICE and hybrids (DC/DC converters, Intelligent Battery Sensors) and roll out specific solutions for fully electrified vehicles, e.g. battery management systems

- **Roll-out digital product solutions**
  e.g. push the market penetration of HD Matrix LED headlamp technologies
HELLA with a comprehensive offering of automotive parts, diagnostics, and services within Europe

HELLA at a Glance – Business Segment Aftermarket

**BUSINESS OVERVIEW**

**Independent Aftermarket (IAM)**
- Sale of own and third-party spare parts to IAM wholesalers
- Own sales presence in >25 countries
- Strong position of sales network and brand presence in European market (#1-3)

**Workshop Equipment**
- Premium provider of workshop solutions, diagnostic tools and advanced equipment to garages
- Offering of professional services, e.g. technical data/hotline, trainings & financial services
- Market position: #1

**KEY FINANCIALS**

<table>
<thead>
<tr>
<th></th>
<th>FY 2017/18*</th>
<th>FY 2018/19</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>647</td>
<td>665</td>
<td>+2.7%</td>
</tr>
<tr>
<td>Adj. EBIT</td>
<td>52.6</td>
<td>70.1</td>
<td>+33.2%</td>
</tr>
<tr>
<td>Adj. EBIT margin</td>
<td>8.1%</td>
<td>10.5%</td>
<td>+2.4% points</td>
</tr>
</tbody>
</table>

**STRATEGIC FOCUS**

- Further strengthen IAM product portfolio
  e.g. enhance offering of Electronics/Electrics and universal lighting products, expand partner network, push roll-out of 3rd party products to additional markets

- Further enhance workshop products and services
  e.g. set-up new digital offers and software driven business models (remote fleet manager, workshop broker platform), develop calibration solutions for complex cars

*excludes Wholesale business (9 months). Closing September 3, 2018 for FTZ and INTERTEAM
In Special Applications HELLA incorporates the extensive technological expertise in lighting and electronics

HELLA at a Glance – Business Segment Special Applications

BUSINESS OVERVIEW

- Development, production and sale of **lighting and electronics products for special vehicle manufacturers**
- “Fast follower” of technological innovations in automotive **segment** along megatrends LED, energy efficiency and safety
- Application of know-how through **own research and development resources** and dedicated production footprint
- **Strong market position in lighting product** areas based on long-standing experience, in particular in Europe
- Focusing on a **variety of attractive target groups**

TARGET GROUPS

- Off-highway
- Highway & Leisure Vehicles
- Premium & Special Vehicles

KEY FINANCIALS

<table>
<thead>
<tr>
<th></th>
<th>FY 2017/18</th>
<th>FY 2018/19</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>430</td>
<td>399</td>
<td>-7.0%</td>
</tr>
<tr>
<td>Adj. EBIT</td>
<td>47.9</td>
<td>60.6</td>
<td>+26.4%</td>
</tr>
<tr>
<td>Adj. EBIT margin</td>
<td>11.2%</td>
<td>15.2%</td>
<td>+4.0% points</td>
</tr>
</tbody>
</table>

STRATEGIC FOCUS

- **Drive further LEDfication**
e.g. build-up competences in intelligent lighting solutions, push Visiotech technology, broaden innovative roadmap (LED matrix beam, Shapeline), increase number of vehicle specific lighting projects

- **Boost growth of Electrics / Electronics business**
e.g. extend electronics scope (focus on sensors and actuators), foster cooperation and M&A opportunities

- **Penetrate growing customer segments**
e.g. drive growth in segments mining, power sports, and marine, push solutions for e-cars and small cars, explore further growth potential of truck business
Paradine

Let your Master Data become a valuable Company Asset!
Paradine Overview

Paradine GmbH is a global active company providing specialized Consulting, Software Solutions and Master Data Services with core competences in:

- Corporate-wide, multilingual, system-spanning, consistent Product- and Material Master Data Management
- Product-Classifications and -Mappings
- Electronic Catalogs and electronic Product Data Exchange

Company Facts:
- 100+ Material Master Data Experts
- 230+ Customers
- Headquarters in Vienna, Austria
- International Offices in:
  - Sibiu, Romania
  - Kiev, Ukraine
  - Beijing, China (Partner)
Materials Master Data Management

- **Consulting Services**
  Analysis, architecture and definition of processes for the implementation of a corporate wide, system spanning Master Data Strategy and Governance

- **Master Data Services**
  - Classification and Mapping Services
  - Data Cleansing
  - Data Enrichment

- **Software Solutions**
  - eptos™ Corporate Master Data Repository
  - eCl@ss® Reference Application
  - eCatCreator™ and eCl@ss®-API
Paradine - eCl@ss Competence PLATINUM

- Since 2003 Paradine is consulting eCl@ss e.V. regarding data modeling, content-development and –maintenance processes

- Paradine is developer and operator of the eCl@ss Content Development Platform (a Paradine eptos™ Implementation)

- Paradine is official eCl@ss Representation Office for Austria, South- and East-Europe

- Paradine is certified, global acting eCl@ss Preferred Partner PLATINUM
Proudly working for ...
HELLA - Global Spare Parts Management
Project Implementation
HELLA – Status Quo before project

- 40 worldwide production plants using spare parts
- Global SAP installation with different SAP systems clustered according to regions
- SAP PDM Master Data System synchronizing material data with global SAP systems
- HELLA legacy classification structure (standard parts, electronics, pneumatics, etc.)
  - not heavily used (only 3 to 5% parts of German plants)
- local spare parts not directly captured in SAP provided in various languages and data formats
- overall 9 different languages in use (English, German, Spanish, Portuguese, Mandarin, Slovak, Czech, Slovenian, Romanian)
Problem Statement and Challenges for Spare Parts Management

- Inconsistent material master data records in up to 9 different languages
- Duplicate parts exist within sites and also across sites
- Spare parts are not directly captured in SAP
- Most non SAP material data available only in local language
- Inconsistent and poor data quality
HELLEA - Global Spare Parts Management

- Global Consolidation of Spare Parts for Production Sites
- Classification and deduplication of existing SAP managed material master data records
- Capturing, classification and deduplication of non SAP managed material into corporate SAP
- Consolidation, cleansing and enrichment of all material master data
- Creation short texts and procurement texts in up to 9 languages
Project Goals

- Development of an eCl@ss oriented but on HELLA requirements aligned classification system including class specific lists of properties
- Classification and valuation of properties for available legacy material master data records according to provided information
- Enrichment of master data by usage of catalogs, data bases as well as inclusion of manufacturers and suppliers in reasonable effort
- Identification and elimination of duplicates
- Harmonization of spare parts master data across sites
- Handover of cleansed and enriched material master data in German and English language as well as local languages for upload in HELLA SAP
Project initiation

- Pre Project with External Consultant 2015
- Selection of Paradine as Implementation Partner
- eCl@ss was selected as standard for implementation
- Project duration was planned for Q4 2016 – Q2 2018
- Project Team was established at HELLA and Paradine
Content Work in Phases

Phase 1
- SAP + German NON SAP
  - 100,000 materials from SAP System
  - 30,000 materials from German NON-SAP Sources

Phase 2
- International NON SAP
  - 60,000 materials from up to 30 international NON-SAP Sources

DELTA
- Global Delta-Deliveries
  - 30,000 items additional materials which were created during project time or discovered from other sources
Project Implementation Steps

- Paradine eptos™ Corporate Master Data System installed as classification workbench (Golden Record)
- HELLA legacy data delivery to Paradine
- Legacy Data Analysis and Legacy Data Extraction
- Classification, data cleansing, data enrichment including involvement of manufacturers and supplier
- Quality Checks and generation of short texts and long texts
- Deduplication including verification by HELLA master data experts
- Final Export of Data from eptos™ to HELLA for upload in HELLA SAP system
- Upload to HELLA SAP system was processed by HELLA SAP experts
Legacy Data - Different formats and inconsistent content
Classification of Material Master Data

- Classification was processed according to eCl@ss Release 9.1
- For catalog parts verification and classification of products with suppliers and manufactures was included
- Based on classification results relevant eCl@ss classes were consolidated into the HELLA-Cl@ss tree
- eCl@ss Release 9.1 delivers 41,000 classes in 32 segments
- HELLA-Cl@ss includes about 800 classes out of 10 segments
Adapt eCl@ss to HELLA-Cl@ss

**eCl@ss Standard**

- 14 Logistics (Service)
- 15 Maintenance (Service)
- 16 Food, beverages, tobacco
- 17 Machine, device, for special applications
- 18 Equipment: mining, metallurgical plant, rolling mill & foundry
- 19 Information, communication and media technology
- 20 Packing material
- 21 Manufacturing facility, workshop equipment, tool
- 22 Construction technology
- 23 Machining element, fixing, mounting
  - 23-01 Control element
  - 23-02 Shaft, shaft pin
  - 23-03 Coupling (non-sleevd)
  - 23-04 Gasket
  - 23-05 Rolling bearing, plain bearing, spherical plain bearing
  - 23-06 Lubrication, coolant, lubricating device
  - 23-07 Seal
  - 23-08 Spring
  - 23-09 Washer, ring
  - 23-10 Pin, pinch pin, wedge
  - 23-11 Screw, nut
  - 23-11-01 Screw (with head)
  - 23-11-01-01 Hexagon head cap screw, external drive
  - 23-11-01-02 Flattop head screw, internal drive
  - 23-11-01-03 Countersunk screw, internal drive
  - 23-11-01-04 Hammer head bolt
  - 23-11-01-05 Square head screw
  - 23-11-01-10 Special screw
  - 23-11-01-11 Wood screw
  - 23-11-01-12 Tapping screw, drilling screw
  - 23-11-01-13 Screw, multi-flange surface-mounted, washer drive
  - 23-11-01-14 Dowel screw (with head)
  - 23-11-01-15 Reduced shaft bolt with head
  - 23-11-01-16 Knurled head screw
  - 23-11-01-17 Box (self-tapping)
  - 23-11-01-18 Drilling screw

**Company specific adapted**

“HELLA-Cl@ss”

- 25-01 Packing material
- 25-02 Manufacturing facility, workshop equipment, tool
- 25-03 Machine element, fixing, mounting
  - 25-03-00 Rolling bearing, plain bearing, spherical plain bearing
  - 25-03-01 Seal
  - 25-03-02 Washer, ring
  - 25-10 Pin, pinch pin, wedge
  - 25-11 Screw, nut
  - 25-11-01 Screw (with head)
  - 25-11-01-01 Hexagon head cap screw, external drive
  - 25-11-01-02 Flattop head screw, internal drive
  - 25-11-01-03 Countersunk screw, internal drive
  - 25-11-01-04 Hammer head bolt
  - 25-11-01-05 Square head screw
  - 25-11-01-10 Special screw
  - 25-11-01-11 Wood screw
  - 25-11-01-12 Tapping screw, drilling screw
  - 25-11-01-13 Screw, multi-flange surface-mounted, washer drive
  - 25-11-01-14 Dowel screw (with head)
  - 25-11-01-15 Reduced shaft bolt with head
  - 25-11-01-16 Knurled head screw
  - 25-11-01-17 Box (self-tapping)
  - 25-11-01-18 Drilling screw
## Selection of Properties from eCl@ss

<table>
<thead>
<tr>
<th>Property</th>
<th>Data Type</th>
<th>UoM</th>
<th>LoV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article name</td>
<td>STRING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interior diameter</td>
<td>REAL</td>
<td>mm</td>
<td></td>
</tr>
<tr>
<td>Cross section</td>
<td>REAL</td>
<td>mm</td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>STRING</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>STRING</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### eCl@ss Standard

#### Classification
- 23 07 16 01 O-Ring (O7210002)

#### Eurocodes
- EN 13628:2007
- EN 338:2004
- EN 12261:2001
- EN 1152:1998

#### Properties
- Interior diameter
- Cross section
- Material
- Color

### eCl@ss Class:
- 23071601 O-Ring
eCl@ss – Usage of Properties and Valuation

- eCl@ss provides many properties for different usage and applications
- eCl@ss lists of properties were restricted to only those needed by HELLA
- If necessary new (private) properties were added
- For relevant properties lists of values were created
Data Extraction and Data Enrichment

- Data provided in legacy was extracted
- Valuation of properties was done according to defined properties per class
- Valuation was done by:
  - using existing catalogs and data bases
  - including manufacturers and suppliers
  - extracting information from legacy data
- For relevant classes naming catalogs and list of values were created
- Content was provided in up to 9 languages
Challenge: Duplicate Parts

- Challenge for deduplication of huge assortments are:
  - different naming
  - different language
  - different abbreviations
  - missing information
Identification of duplicates – What is a duplicate?

- **Real Duplicate**
  - Mfr. Article No: 574108
  - Product Type: ESBF-BS-80-200-15P

- **Functional Duplicate**
  - Article No: 6208 (Standard)
  - Article No: 6208-2RSR (sealing one side)
  - Article No: S6208-2RSR (sealing both sides, stainless)
Duplicate check / verification

- **Real Duplicates**
  - Manufacturer/Supplier Article No.
  - all valuations of properties identical

- **Functional Duplicate**
  - Reports for verification of relevant property valuations

<table>
<thead>
<tr>
<th>SAP ID</th>
<th>PREFERRED NAME EN</th>
<th>INT. DIAMETER (mm)</th>
<th>THICKNESS (mm)</th>
<th>MATERIAL</th>
<th>eCl@ss CODED NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>981350078</td>
<td>O-Ring 13 x 2 mm FPM75</td>
<td>13.0</td>
<td>2.0</td>
<td>FPM75</td>
<td>23071601</td>
</tr>
<tr>
<td>991170039</td>
<td>O-Ring 13 x 2 mm FPM75</td>
<td>13.0</td>
<td>2.0</td>
<td>FPM75</td>
<td>23071601</td>
</tr>
<tr>
<td>911179832</td>
<td>O-Ring 35 x 4 mm KARLEZ</td>
<td>35.0</td>
<td>4.0</td>
<td>KARLEZ</td>
<td>23071601</td>
</tr>
<tr>
<td>911523412</td>
<td>O-Ring 35 x 4 mm KARLEZ</td>
<td>35.0</td>
<td>4.0</td>
<td>KARLEZ</td>
<td>23071601</td>
</tr>
<tr>
<td>911003232</td>
<td>O-Ring 35 x 4 mm KARLEZ</td>
<td>35.0</td>
<td>4.0</td>
<td>KARLEZ</td>
<td>23071601</td>
</tr>
<tr>
<td>995235623</td>
<td>O-Ring 35 x 4 mm KARLEZ</td>
<td>35.0</td>
<td>4.0</td>
<td>KARLEZ</td>
<td>23071601</td>
</tr>
<tr>
<td>913971643</td>
<td>O-Ring 25 x 3.53 mm PTFE</td>
<td>25.0</td>
<td>3.53</td>
<td>PTFE</td>
<td>23071601</td>
</tr>
<tr>
<td>971170751</td>
<td>O-Ring 25 x 3.53 mm PTFE</td>
<td>25.0</td>
<td>3.53</td>
<td>PTFE</td>
<td>23071601</td>
</tr>
<tr>
<td>911245642</td>
<td>O-Ring 25 x 3.53 mm PTFE</td>
<td>25.0</td>
<td>3.53</td>
<td>PTFE</td>
<td>23071601</td>
</tr>
<tr>
<td>911345634</td>
<td>O-Ring 9.15 x 3.0 mm VITON</td>
<td>9.15</td>
<td>3.0</td>
<td>VITON</td>
<td>23071601</td>
</tr>
<tr>
<td>981309784</td>
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<td>9.15</td>
<td>3.0</td>
<td>VITON</td>
<td>23071601</td>
</tr>
<tr>
<td>992342422</td>
<td>O-Ring 34 x 3.0 mm VITON</td>
<td>34.0</td>
<td>3.0</td>
<td>VITON</td>
<td>23071601</td>
</tr>
<tr>
<td>981245324</td>
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<td>34.0</td>
<td>3.0</td>
<td>VITON</td>
<td>23071601</td>
</tr>
<tr>
<td>911345462</td>
<td>O-Ring 34 x 3.0 mm VITON</td>
<td>34.0</td>
<td>3.0</td>
<td>VITON</td>
<td>23071601</td>
</tr>
</tbody>
</table>
Deduplication Results

- 221.908 material master data records were reduced to 190.318!
- Duplicate Material master data records to be removed (SAP process)
- 31,590 duplicates confirmed
- 14,2 % material master data records are duplicates
Duplicate High-Roller

- FESTO proximity sensor SME-8-S-LED-24
- Was available in 33 material master data records
- 32 duplicates removed !!!
Rule based generation of short and long texts

- Structured texts are generated from valuated properties
- To be used for material short text, purchase order text, etc.
- Multilingual texts are generated automatically according to rules defined per class in different

Example for rule:
[name] [standard] [nominal size] x [length], [mat.], [surface]

EN: Hex-bolt ISO4014 M10 x 50 8.8 black
DE: Sechskantschraube ISO4014 M10 x 50 8.8 schwarz
CN: 六角螺栓 ISO4014 M10x50 8.8 黑色
...
<table>
<thead>
<tr>
<th>Item Name</th>
<th>Item ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-RING, 8.5 X 3.53, 1500 DRYER INOX 18</td>
<td>156017</td>
</tr>
<tr>
<td>0-RING, 50.17X2.62 T.NR. 127, LOWA, HPLC, PUMP 543+179</td>
<td>168033</td>
</tr>
<tr>
<td>0-RING, 50.17X2.62 T.NR. 127, LOWA, HPLC, PUMP 543+179</td>
<td>172446</td>
</tr>
<tr>
<td>0-RING KIT, 72 X 4 VENT, DRAIN, HOUSING, SEALING, PALL</td>
<td>143323</td>
</tr>
<tr>
<td>0-RING, 202.76 X 3.59, KALREZ, DISC FILTER</td>
<td>177162</td>
</tr>
<tr>
<td>0-RING, 250MM X 5MM, EPDM VITON</td>
<td>179320</td>
</tr>
<tr>
<td>0-RING, 250MM X 5MM, EPDM VITON</td>
<td>173208</td>
</tr>
<tr>
<td>0-RING, 325.77MM OD X 6.323 THICKNESS, EPDM ENCAPSULATED SILICONE, 17151</td>
<td></td>
</tr>
<tr>
<td>0-RING, 63 X 4 NIBBER, CR clip</td>
<td>183251</td>
</tr>
<tr>
<td>0-RING, 88.49 X 3.53, MOCH SEALING, BUNWU 231</td>
<td>162445</td>
</tr>
<tr>
<td>0-RING, BASKET, FEP, SIL, MILL SITPER K900C KEMITEC</td>
<td>172704</td>
</tr>
<tr>
<td>0-RING, BASKET, FEP, SIL, MILL KOBELCO M100C KEMITEC</td>
<td>172709</td>
</tr>
<tr>
<td>0-RING, BODY, DURAM, FEP, SIL, MILL SITPER K900C KEMITEC</td>
<td>172702</td>
</tr>
<tr>
<td>0-RING, CP, PUMPER, FEP, SIL, MILL SITPER K900C KEMITEC</td>
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<td>0-RING, CP, PUMPER, FEP, SIL, MILL SITPER K900C KEMITEC</td>
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<tr>
<td>0-RING, DUMPER, DIETRICH, POS 8501-03</td>
<td>173438</td>
</tr>
<tr>
<td>0-RING, DUMPER, DIETRICH, POS 8501-04</td>
<td>173429</td>
</tr>
<tr>
<td>0-RING, DISCHARGE TUBE, FEP, SIL, MILL FEDSCHNEIDER R8100 KEMITEC</td>
<td>172711</td>
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<tr>
<td>0-RING, DISCHARGE VALVE, SHAFT, GEP6201 CHARLES THOMPSON</td>
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<tr>
<td>0-RING, DUMPER SHAFT, EPLEX, MILL SCHNEIDER KEMITEC</td>
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<tr>
<td>0-RING, DUMPER, 315.0 X 4.5 MM</td>
<td>189046</td>
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<table>
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<tr>
<th>Item Name</th>
<th>Item ID</th>
<th>Product type description</th>
<th>Interior diameter (mm)</th>
<th>Thickness (mm)</th>
<th>Material</th>
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Define Rules for Long Texts per Class
Provide Pictures and Data Sheets

- For Catalog parts Paradine also provided Pictures and Datasheets
  - Very helpful for plant maintenance
  - ERP has limited properties – more info in data sheet
Data Delivery and Upload to HELLA-SAP PDM system

- HELLA decided to process Upload to SAP by HELLA internal SAP specialists
- SAP LSMW (Legacy System Migration Workbench) used for data upload
- Data format was aligned in a one day workshop
  - Define upload tables and data format specifications
  - Paradine and HELLA agreed on 7 tables for data upload
- Actual upload was processed in two phases
  - Upload of test-data to HELLA SAP Development system
  - Upload of final data to HELLA SAP Production system
Results

- 221,908 material master data records processed
- 31,590 duplicates (14.2 %) identified and eliminated
- 800 eCl@ss Classes used in HELLA-CI@ss
- Rule based short texts in 9 languages
- Rule based procurement records in 9 languages
- Data sheets and Pictures for catalog parts
Benefits for HELLA

- Classification and product description in 9 languages
  - brings transparency in Spare Parts Management
  - Heavily reduces search time for spare parts and avoids new duplicates
- 31,590 less parts
  - reduces storage area and capital bound on stock
  - increases stock turnover rate for spare parts
- Procurement
  - gets big potential for global bundling of demands
  - reduces purchasing process costs and errors
- High and consistent Master Data Quality
  - shifts „from searching to finding“
  - is „the“ enables for Digitalization
Lessons learned

- Involve experts from all relevant sites
- Plan enough time for internal tasks
  - Legacy data delivery
  - Questions and verifications
  - Verification and feedback for duplicate candidates
- Many duplicates identified
- Regular Jour Fixe meetings helpful for monitoring of project progress
- Maintenance of HELLA-CI@ss and Data Governance for request process of new material master data records need own organization