

Future-proofing a material master data project

14<sup>th</sup> October 2010





# sparesFinder overview



The data-cleaning project



Data-governance



## Company profile



Operating globally ex UK since 1998

LONDON BUSINESS AWARDS 2004

Users in >90 countries



Material master experts

Leading dictionary



Cloud computing



Partnerships with leading firms









## sparesFinder overview



### Software tools

• sparesFinder offer a comprehensive suite of fully hosted software tools that are used by leading multinational companies in over 90 countries to <a href="mailto:create">create</a>, <a href="mailto:manage">manage</a>, <a href="mailto:distribute">distribute</a>, <a href="mailto:search">search</a> and <a href="mailto:leverage">leverage</a> spare parts and other material information.

### Content

• Our data management tools are pre-configured with over 2,500 detailed dictionary templates for MRO items, that can be translated to most languages.

### Services

- sparesFinder provide specific knowledge around the building of technical material master dictionaries
- sparesFinder has extensive experience in the management and delivery of large multi-site materials data cleaning projects.



## sparesFinder customers



















HEINZ









### The foundations





The data-cleaning project



## "Beyond data cleaning"



#### Provide the material master data foundation

- Establish a single master record for each unique spare across a company "a single version of the truth"
- Implement the software and data governance organisation to manage spares master data to prevent duplication, manage part supersession and obsolescence, and provide quick, accurate data to multiple client systems

### Establish inventory visibility

• Deliver visibility of all inventory options (own, corporate, VMI, VOI, vendor catalogues) in one place and establish processes for intra-company trading of spares

#### Leverage the information

- Improve search functionality from better structured and accessible data
- Provide reports to drive inventory reduction and support procurement initiatives
- Enable better, cheaper compliance with 3<sup>rd</sup> party requirements (e.g. ISO standards, Tax codes, UNSPSC, ECCMA)



## Before you start...



#### Is your company ready for clean data?

• Many inefficiencies will be uncovered, and some organisations are not ready for change. Information is power and central control of the data creation process is not always easy to attain.

#### Do you have a robust business case?

- Data cleaning projects are complex, difficult, can take up a lot of resource and force change. Without a strong business case and senior level support, they become an easy target for cuts.
- How will you judge and monitor the success of the project?

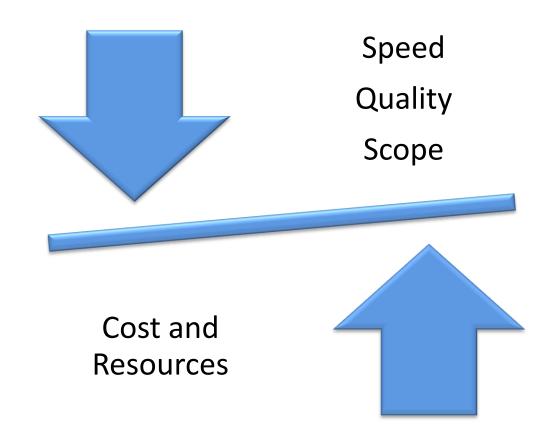
#### Do you have the right team?

- Do you have IT support for export / import of data, & sustainment system integration?
- Do you have the resources to do the cleansing internally, or will you outsource?
- Who will answer the specialist questions and quality approve results?
- Is there a strong, knowledgeable project manager?



# Budget, time, resources







## Scoping decisions



#### **Depth of Cleansing**

Classify (Noun Modifier)

Cleanse (Normalised legacy data)

• Enhance (Research from 3<sup>rd</sup> party source)

Verify (Physical inspection at warehouse)

#### Width of cleansing

- Basic Procurement (spend classification, correct part manufacturers and accurate part numbers)
- Sourcing / Engineering (detailed functional data for structured search and competitive sourcing)
- Suppliers and manufacturers catalogues
- Bill of Materials (relating spares to assets)
- Logistics (Export codes and logistics data)
- IT (how many ERP systems need integration)



## What you need to do



### Appoint a data-steward

- Knowledge of industry standards and dictionary structures
- Technical and engineering background, not IT

#### People resources

- Understand what is required of you during the data-cleaning project
- How many man-hours are to be allocated to the project
- Who is going to approve the results

### **Expectations**

- Expectation on software automation need to be managed
- Some lines cannot be improved
- No alchemy is available!



## Select data quality software



 80% of companies were not confident in their material data

 73% found it difficult or impract to standardise it

66% had tried to manually clear

 75% of those who did manually clean data were not happy with the result



## Software building blocks



#### Dictionary

- Open standard
- Multiple classification schemas (UNSPSC, eOTD, FPAL, in-house schema)
- Dictionary build workflow
- Edit dictionary during the cleaning
- Customised for your business needs

#### **Data-cleaning**

- Project management workflow
- Centralised control, decentralised working environment
- Scaleable
- Dealing with exceptions
- Multiple languages
- Reference supplier and manufacturer catalogues

#### Output

- Clean catalogue
- De-duplicated
- · Ability to edit the clean catalogue
- Clean manufacturers list
- Dynamic description build
- Output to multiple ERPs



### **Foundations**



# Dictionary

### **Taxonomy**

- Existing content
- Ownership by customer
- Value control and management
- Attribute range control
- Pictures and help
- Definitions of terms
- ISO 8000 compliant

### Classification

- Mapped to taxonomy
- Multiple schemas
- Multiple levels
- Rule construction for specials – automate everything!

### Multi Language

- Unlimited
- Double-byte sets
- Synonyms
- Common usage
- Translation context



## Standard dictionary



#### Structured templates

• Nouns The main name of the item

Modifiers
 A word or phrase that modifies the Noun

• Attributes The required characteristic detail (set by Noun Modifier, with order and priority)

• Attribute Values Pre-loaded lists of valid values / numeric ranges

#### Full range of templates

• PVF - Pipe, Valves and Fittings

• BBS - Bearings, Belts and Seals

• HVAC - Heating, Venting and Air Conditioning

• Electrical - Switches, Lamps, Fuses, Cable and Conduit

- Electronic PCB (Printed Circuit Boards) and Modules, Diodes, Capacitors
- Motors, Gears, Fasteners, Filters, Compressors, Pumps, Gaskets, Pneumatic
- Instrumentation Pressure Transmitters and Transducers, Gauges, Meters, Relays
- General Maintenance Abrasives, Tools, Lubricants and Sealants, Welding Supplies and Gases
- Industry specific templates e.g. OCTG, Pup Joints for Oil & Gas
- Miscellaneous Consumables, Office Supplies, Chemicals, Lab Equipment

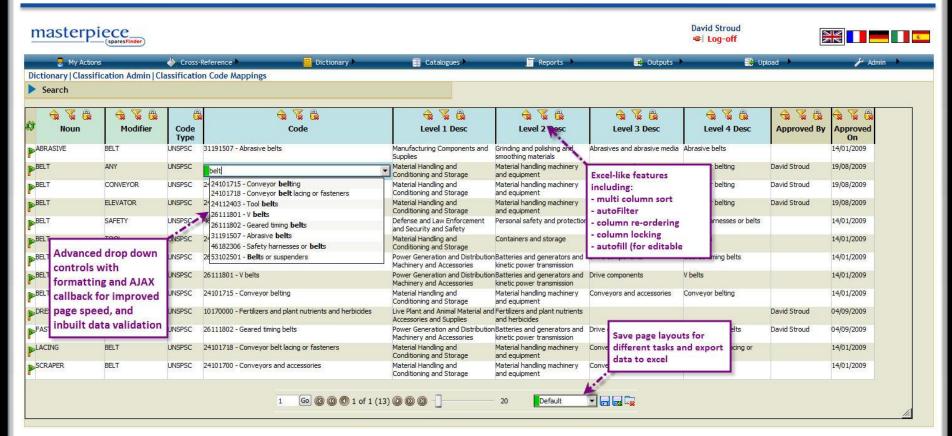
### Multiple Language Support

• Integrated multi language capability for automated translations and operations



## Classification mapping

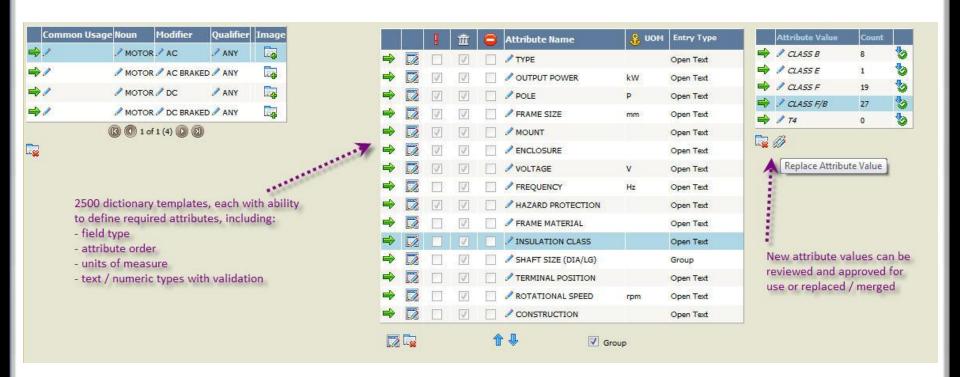






## The dictionary

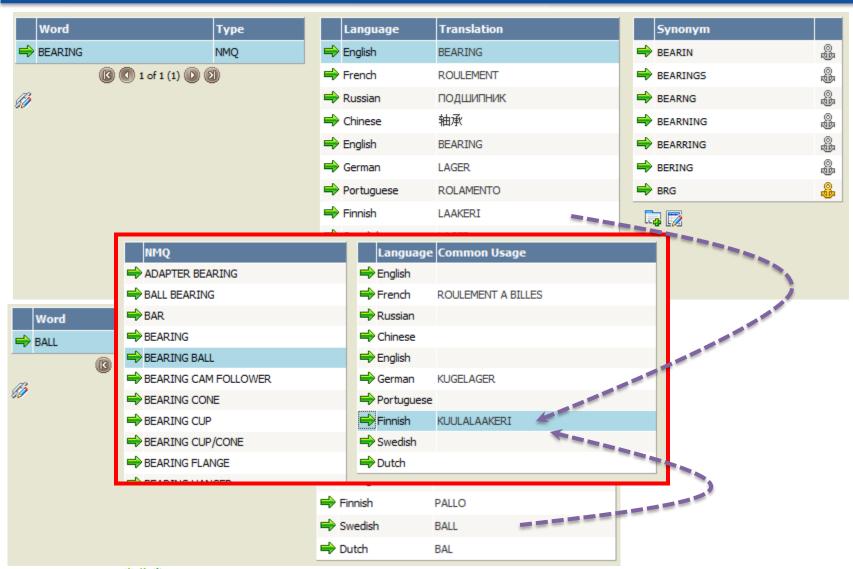






# Multi-language

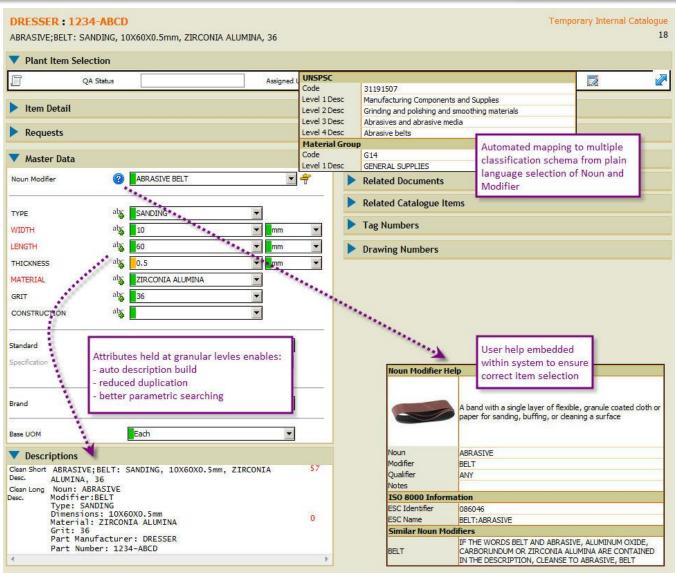






## Detail, help and classification







# Control your attribute values



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## Leveraging catalogues



# Catalogue

### **External**

Direct import of data from manufacturer or other trusted source

Supersession management

### **Internal**

Grouping of cleansed data by part numbers with each matching legacy line inheriting functional data

### **Functional**

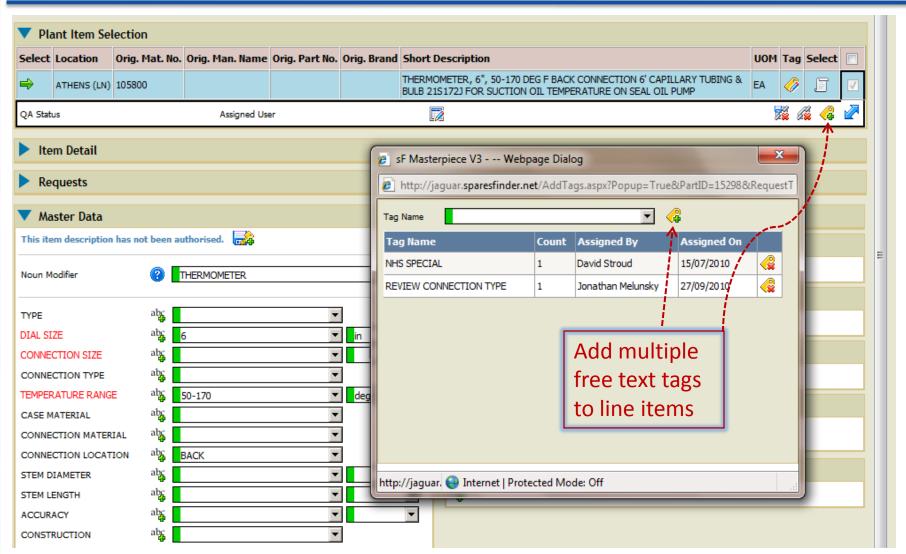
Grouping of cleansed data by functional attributes

(no Manufacturer / Part Number combination)



## Tags







## Audit trail



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# Excel usability with control

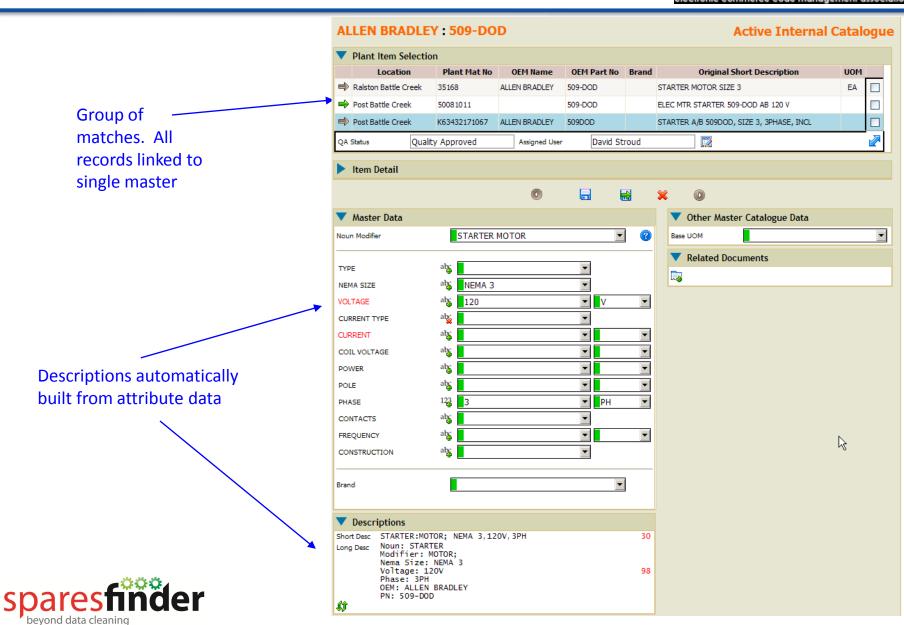


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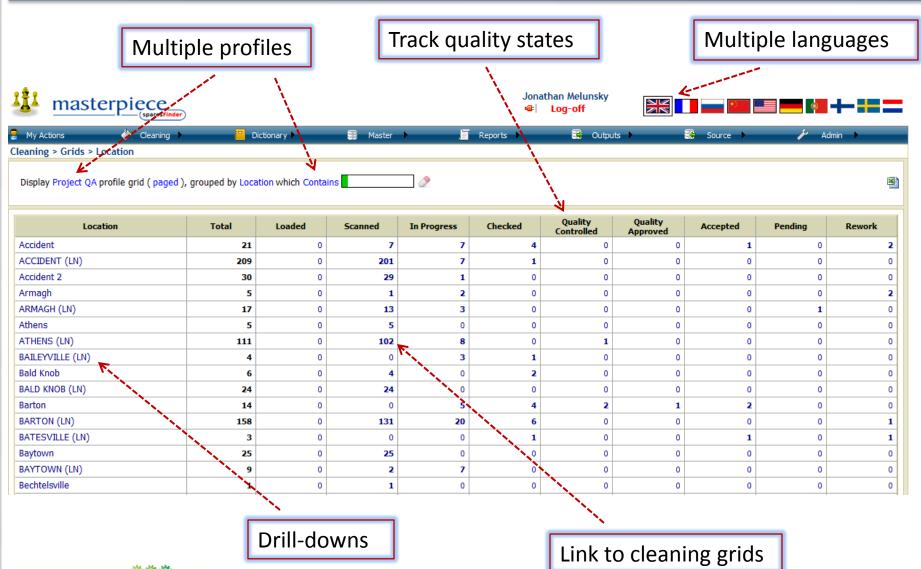
### Data entry





## Project overview







## Cloud-computing





ASP, On-demand, Software as a Service, Cloud-computing



Centralised control & management



Decentralised execution (production, QA, suppliers)



Dictionary updates automatically applied to entire data-set



Catalogue data constantly updated and always live



## Data cleansing process



Scan

Match

**Process** 

Review

- Legacy data is automatically scanned for dictionary key words and nouns, modifiers and attribute values assigned
- High count missing words provided for tuning
- Part numbers are extracted from descriptive text and automatically matched with each other / catalogue using sophisticated algorithms
- Continuous process as data is saved during cleansing

- Assignment of work to users
- Audit trail of activities
- Real time view of project progress with drill down to individual items
- "Excel-like" screens and integration

- Automated routines for bulk QA checks
- Screens designed for rapid review and correction of errors
- Web links to 3<sup>rd</sup>
   party research
   information when
   used



## Output



### Description settings

- All output data is automatically built from detailed underlying data
- Flexible settings to allow for multiple formats including
  - Field size length and multiple lines
  - Description component inclusion and order
  - Capitalization and delimiters
- Specific attributes can be grouped to reflect industry conventions
  - E.g. Dimension = "12x14x8mm" not "12mm, 14mm, 8mm"

### Output data management

- Specific files formats created for every customer
- Tracking of data delivery for later modification / update management
- Integration options
  - ERP protocols e.g. SAP PI
  - W3C web services using XML / SOAP
  - Txt file to secure FTP



# The data-cleaning project



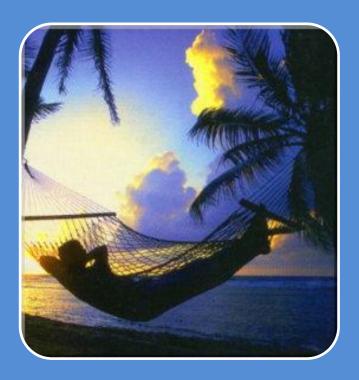


The scary bit is over.



## The foundations





Data-governance



# The legacy project is over



Insert New Line



Catalogue



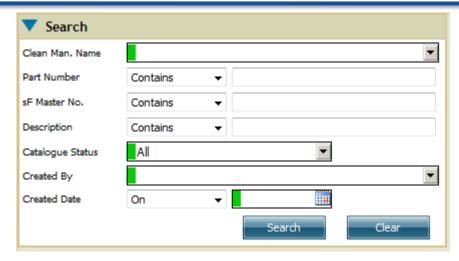
Dictionary



### Search



General Search

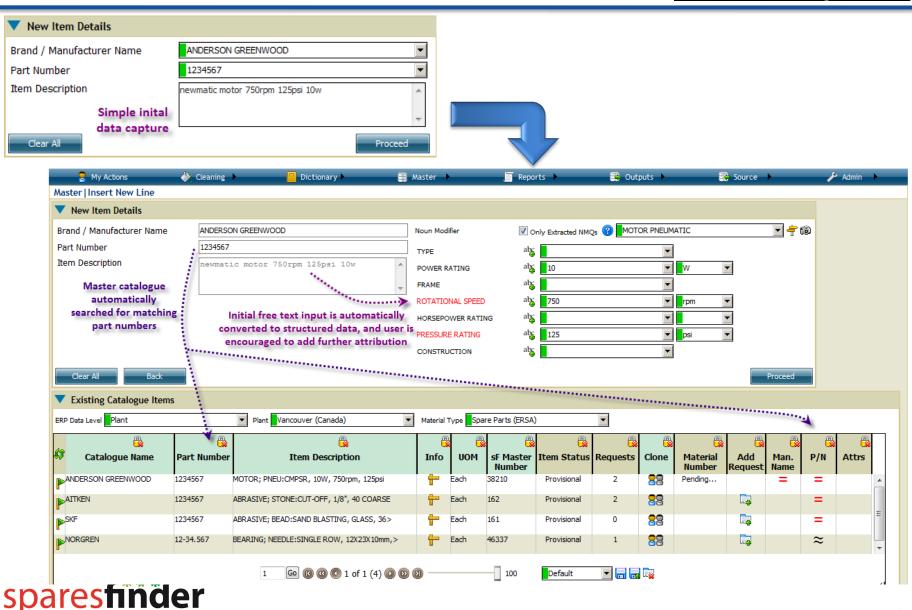


- Free Text
  - Single search string entry box
  - Searches index of:
    - Manufacturer name
    - Part number
    - All descriptive words and their abbreviations & synonyms, and all translations
      - Noun, modifier, attribute value
  - Can be deployed within Intranet



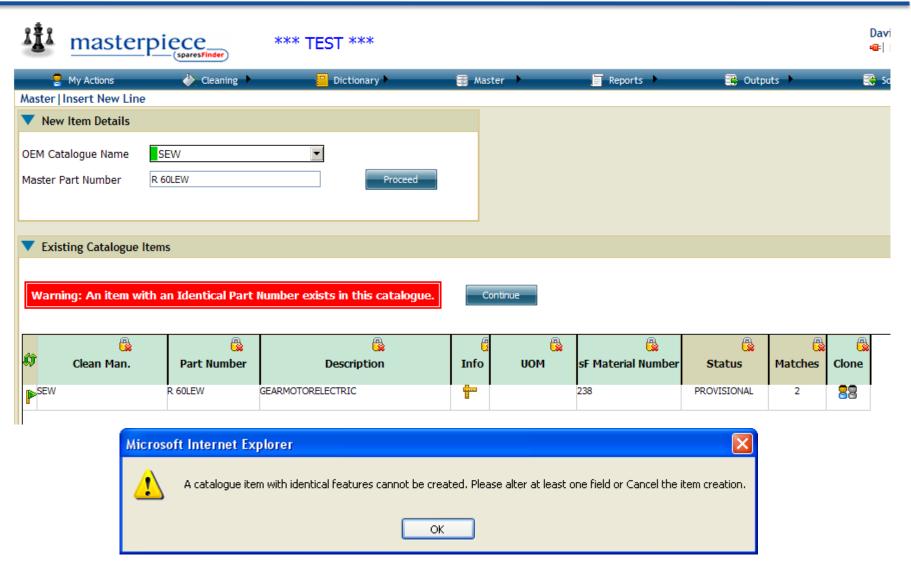
## Adding a new item





# **Duplicate prevention**







# Checking functional matches

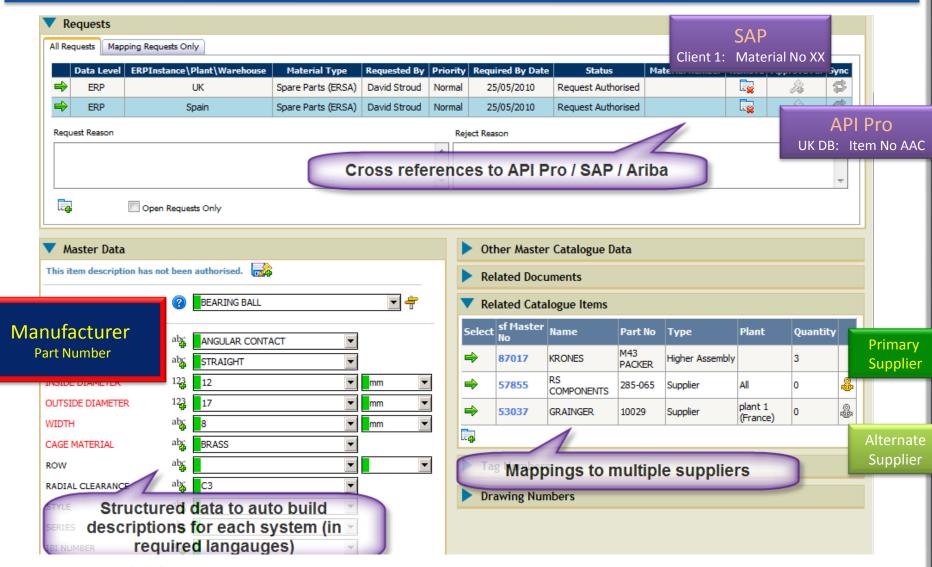


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### Part Screen







## Add / Update



### **Descriptive Data**

- Global
  - Manufacturer name, part number
  - Functional descriptions
  - Documents, Bills of materials
  - Part supersession and obsolescence management
- Local
  - Supplier information

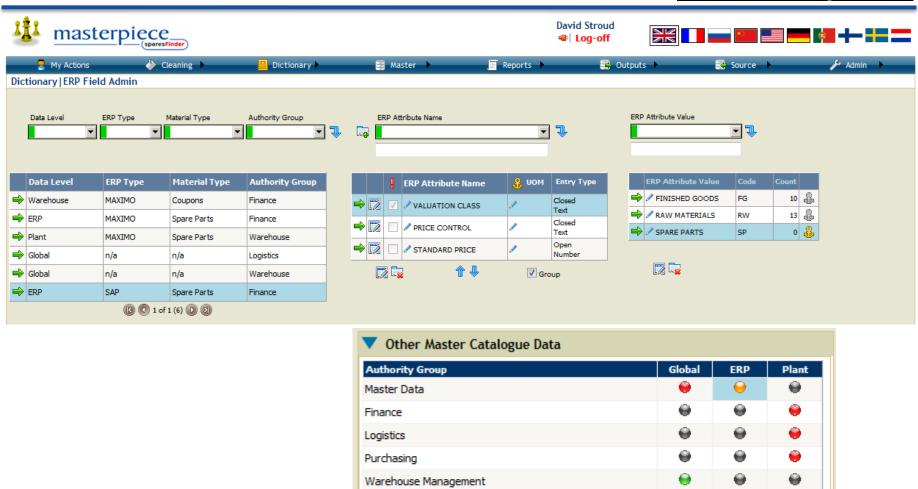
#### **ERP** data

- Specific non- descriptive fields with values set by:
  - ERP Type e.g. SAP, JDE
  - ERP Instance e.g. North America, Europe
  - Data Type e.g. Spares parts, direct materials, office supplies
  - Level of data
    - Global e.g. Hazardous transport codes
    - ERP e.g. Specific accounting codes
    - Plant e.g. Min stock level, Re-order point, lead time
    - Warehouse e.g. Bin location



## **ERP Attribute Management**





INDUSTRY SECTOR

OLD MATERIAL NUMBER
AUTHORIZATION GROUP

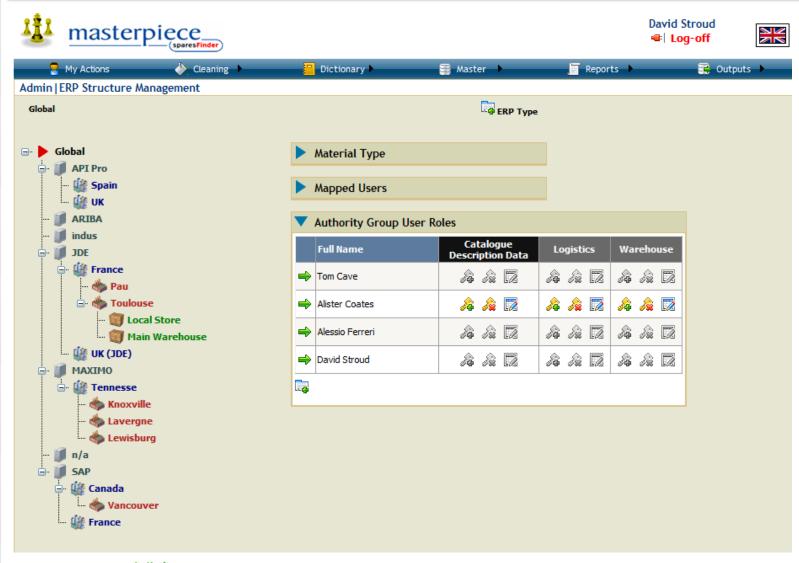
CHEMICAL INDUSTRY

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## Corporate ERP Structures

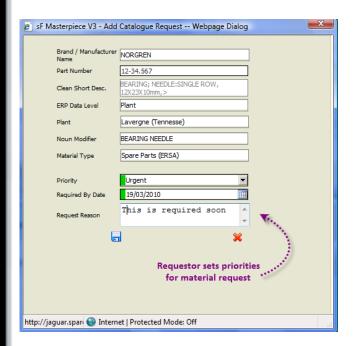


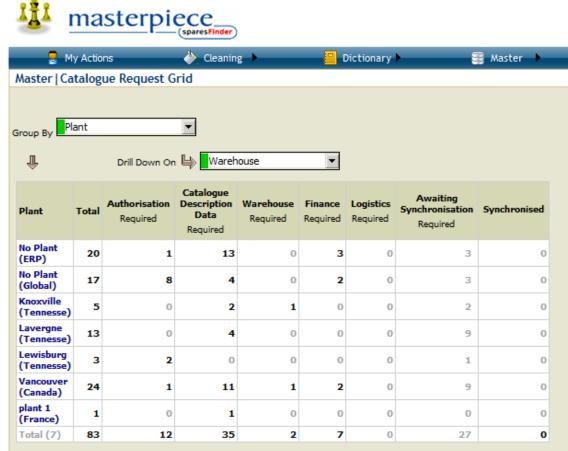




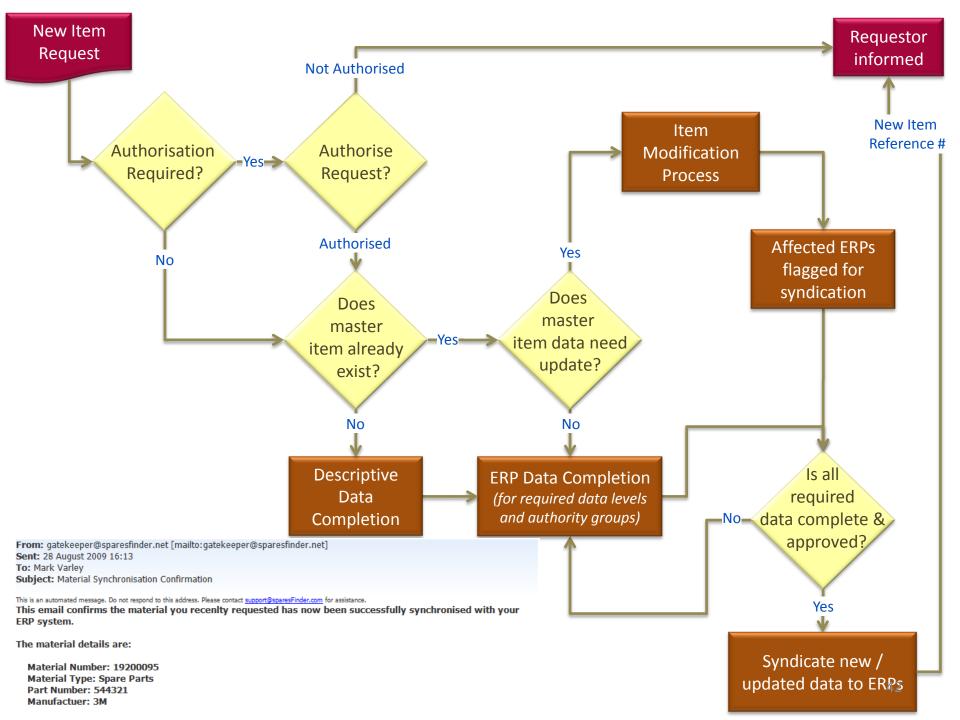
## Prioritise and track requests





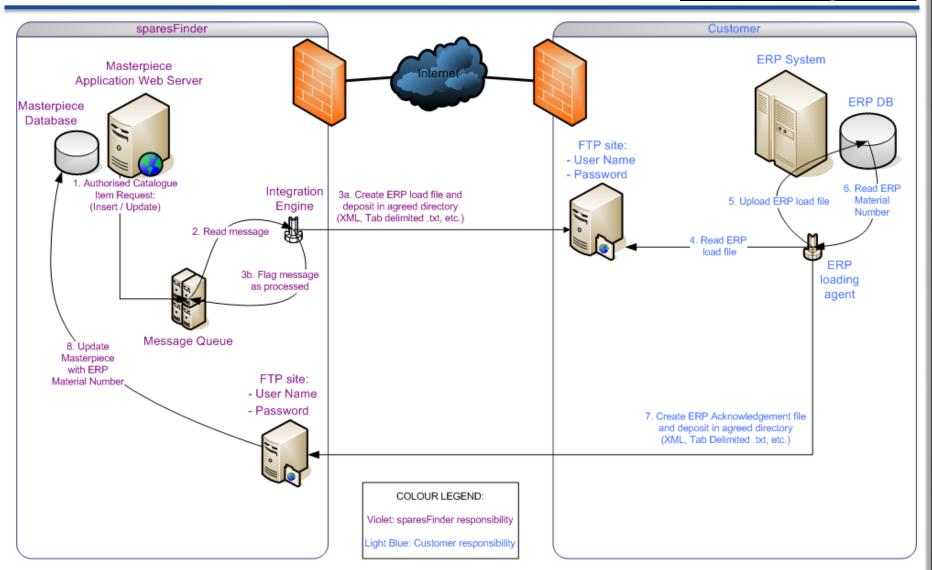






# Integration (FTP)

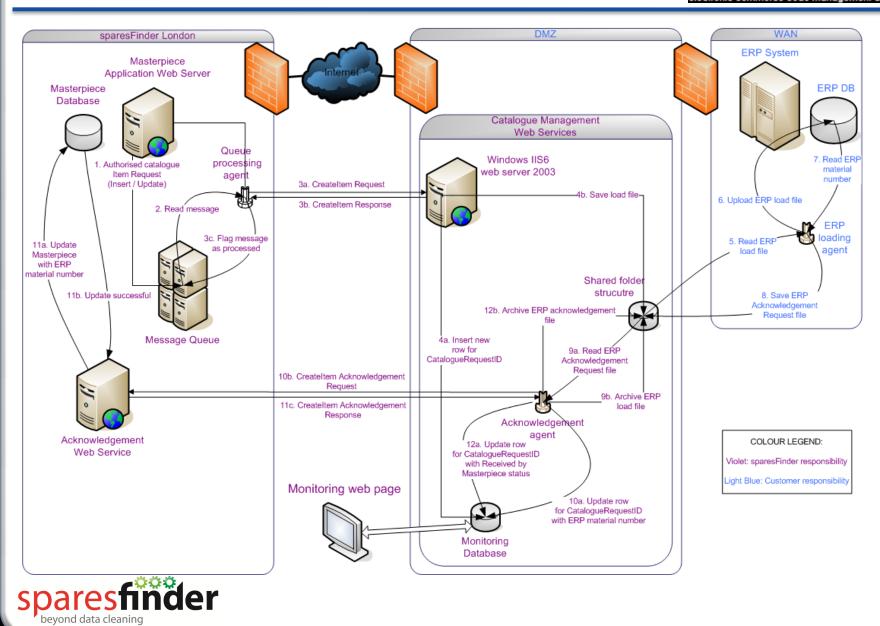






## Integration: web services





# MDM functionality

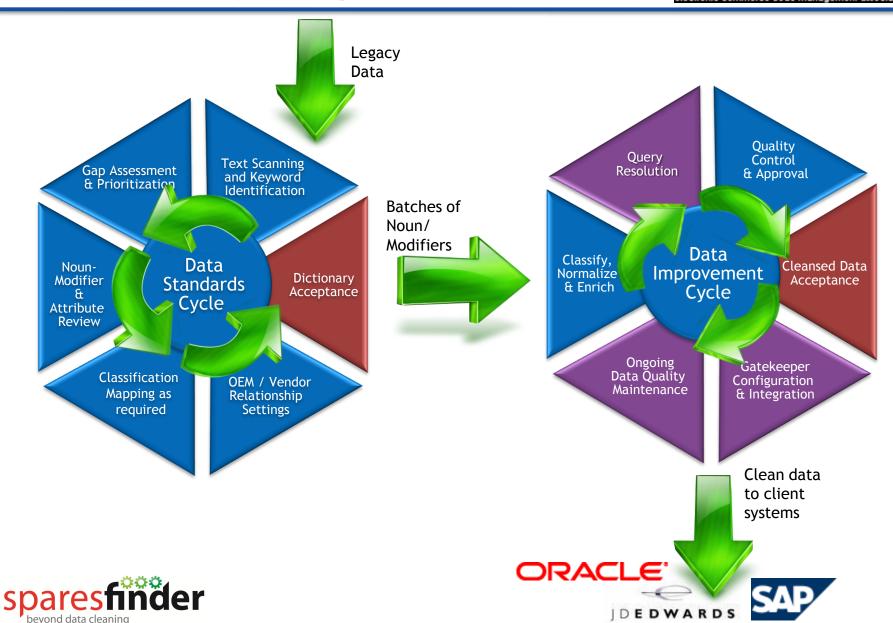






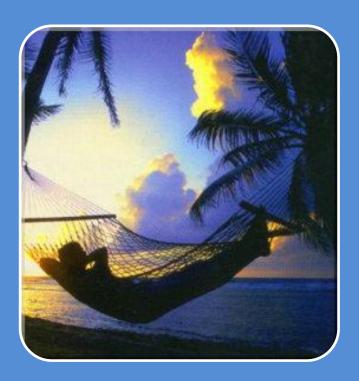
## Data life cycle process





## The end





A future-proofed project.

Easy, isn't it?

