

EMIT Consortium

Product Vision



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Outline

- System Architecture Overview

- Overview of key User Groups

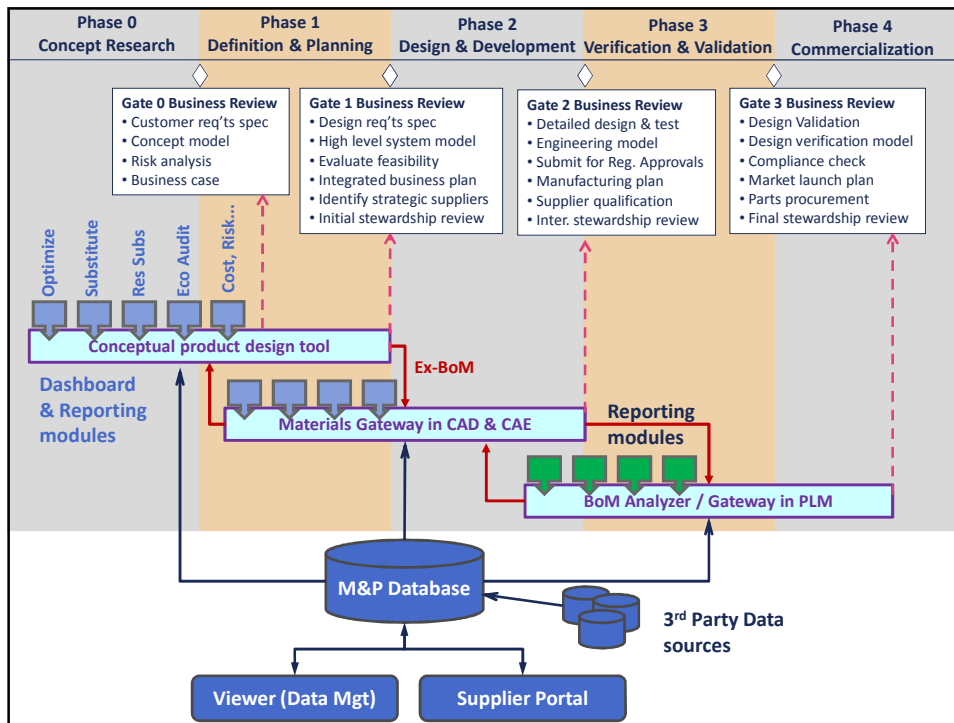
- Product Stewards
- REACH Managers
- Design Team
- Material & Process Department
- Quality & Engineering
- MI Admin

Open Discussion to Review:

- Key Roles in System
- High level SW Requirements to facilitate role
- Mapping to Architecture vision

- Grouping of software features

- Logical order of SW and architecture features to deliver vision



Product Stewards

Role:

- Set overall strategy:

1. Define Scope and Objectives:

- Eco design / RS (Aspects Register) / Critical Materials / Customer requirements / Corporate initiatives
- Increase envt performance, decrease risk, design for compliance

- Assess Risks

1. Exposure to REACH risks, substance bans, geo-political risk factors
2. Quantitative and qualitative assessment of risk to enterprise (Where used in enterprise? How many materials, parts, specs? Business critical? Substitutes available?)

- Deliver Compliance

1. Ensure compliant materials & specs used in new design
2. Check compliance at SOP

Product Stewards (Continued)

•Mitigate Risks

1. Control M&P selection for low risk / compliance
2. Design Gate assessments and reviews
3. Target resource on risk 'hot spots'
4. Work proactively with high risk suppliers to avoid discontinuity of supply
5. Identify substances needing substitution programs → feed requirements to
 - ▶ M&P for R&D of alternatives;
 - ▶ Q&E to effect phase outs in step with production lifecycle
6. Lobby for business critical substances
7. Stockpile

•Troubleshoot

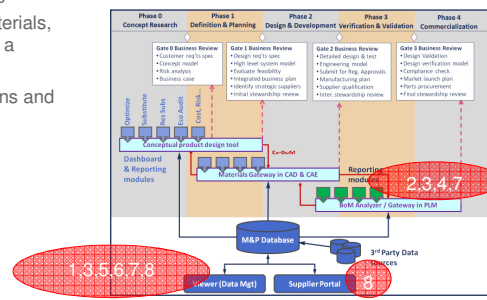
1. Investigate compliance issues



Product Stewards (Continued)

SW requirements:

1. Specify mix of Data Modules provided by Granta supplemented by in-house data as necessary; specify legislation in Aspects Register
2. Reports to support enterprise wide quantitative & qualitative analysis / envt performance against corporate objectives
3. Run ad hoc queries on database (e.g. Cathy Phillips indicator) to find high risk / impacted materials, specs, parts → Enable effective targeting of resource on risk hot spots
4. UI to perform analysis on BoMs,
5. UI to perform analysis on Materials, Specifications
6. Place compliance status / obsolescence risk on materials, specs, and control selection by design teams
7. Enable review of regulatory status of BoM, materials, specs at some point in past (e.g. to investigate a regulatory concern)
8. Workflow tracking (e.g. To store communications and collect data from high risk suppliers)



REACH Managers

Role:

•Day to day maintenance of database:

1. Add and maintain lists / substances (in house data)
2. Maintain MSDS data
3. Link materials & coatings to specs

•Respond to customer requests to report on BoMs:

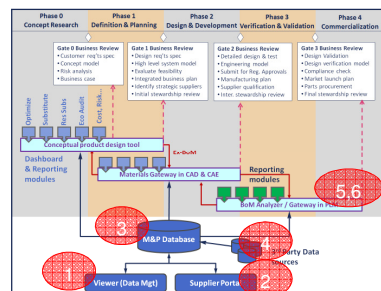
1. RS / Eco declarations
2. Obtain and approve declaration data from suppliers
3. Obtain declaration data readily available from third party sources (e.g. IHS; BoMCheck; IMDS,CDX)



REACH Managers (Continued)

SW requirements:

1. Tools for database maintenance:
 - ▶ Handling duplicate CAS / legislation,
 - ▶ Maintaining data (e.g. Changes to MSDS compositions)
 - ▶ ...
2. Supplier Portal to capture data efficiently from suppliers
3. Database schema can handle all types of Spec (e.g. Standard Industry Components, Surface Treatment Specs, Material Specs)
4. Data from third party sources can be transposed and accessed live by GRANTA MI
5. Gateway in PLM to support analysis on production BoMs
6. Tools to analyse BoMs where no Gateway exists



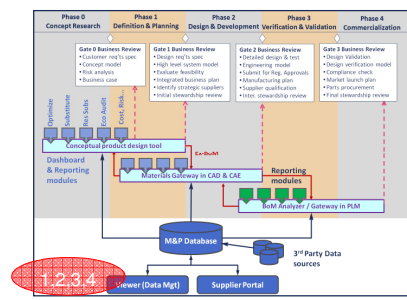
Material & Process Department

Role:

1. Support substance phase outs driven by Product Stewards strategy:
 - Find alternatives (if alternatives exist)
 - Qualify and document alternatives
 - Interface with R&D process

SW Requirements:

1. Material substitution tools
2. UI to find specs impacted by particular substances / materials
3. UI to track progress in finding and qualifying alternatives
4. Searchable specialist datasets (e.g. Coatings database)



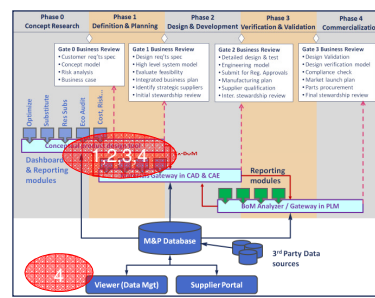
Design Team

Role:

1. Deliver Product Steward strategy in everyday engineering workflows

SW requirements:

1. Gateway in CAD to support design for compliance use cases
2. M&P selection can be influenced / controlled in line with Product Stewardship strategy
3. Reports / analysis to support Gate Assessments
4. Simple interfaces for searching for approved specs and materials for new design / information on alternatives for banned / obsolete specifications



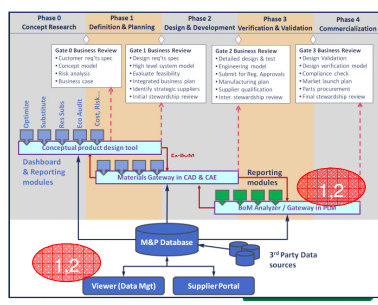
Quality / Engineering

Role:

1. Manage substance phase outs on production parts (e.g. work with suppliers to effect change to compliant / low risk alternatives (e.g. Phase out of deca BDE; Cr6+ coatings)
2. Assessment of new parts prior to start of production (compliance and risk check based on material & substance composition)
3. Qualify modified parts

SW requirements:

1. UI to check compliance / risk assessment of production parts;
2. UI to determine status of substitution projects
3. Access to data on new parts that have been approved by REACH Manager



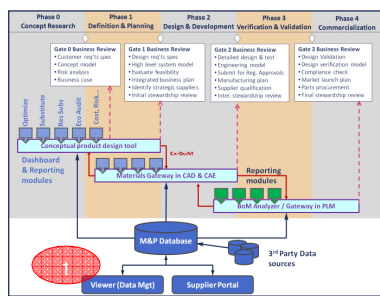
MI Admin

Role:

1. Setup database schema configured to individual requirements:
 - Folder structure
 - Attributes
 - Data modules
 - ...
2. Apply data updates

SW Requirements

1. Standard MI Admin Tools



Grouping of Functionality

1. Enhance underlying data model to:
 1. Support 'Plug and Play' of Data Modules
 2. Support specify legislations in Aspects Register
 3. Enable easier ad hoc searches
 4. Enhance linking between specs, materials, substance, legislation
 5. Enable compliance and risk status to be defined and applied to materials & specs
 6. Ensure scalability
 7. Store & search BoMs in MI
 8. Store mappings between PLM and MI BoM objects
 9. Extend BoM schema (All specs, SICs, Industry XML Standards etc)
2. Tools for database creation & maintenance:
 1. DU enhancements (easier to make and apply DU Files)
 2. Maintenance tools for:
 - Duplicate CAS / legislation
 - MSDS maintenance



Grouping of Functionality

3. UI for BoM analysis (in non Gateway environment)
 - Plug and play with Data Modules
 - Dashboard to display metrics on BoMs / across enterprise
 - Administration of mappings between PLM and MI
4. Supplier Portal
 - Obtain declarations
 - Collect additional data from suppliers (e.g. High risk suppliers)
5. Workflow tracking UI:
 - To store communications and collect data from high risk suppliers
 - To support obsolescence programs carried out by M&P initiated by Product Stewards
 - To support Q&E re-qualifying production parts / approving new parts for production

