## BOM and Part Information Management Pain Points[1]

| Major Categories | BOM | Part Information Management |
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| **Data Entry & Manual Processes** | - Data manually typed 3 times (CAD BOM → Excel EBOM → SAP MBOM)<br>- BOMs created manually from drawings and spreadsheets<br>- Manual BOM data entry causing errors<br>- Manual BOM transfer between systems<br>- Manual BOM updates across multiple systems<br>- Manual BOM approval workflows<br>- MBOM line items manually entered | - Attributes manually entered into docs, specs, SAP, Molex.com<br>- 14 SAP screens must be completed before part can be ordered<br>- Manual part structuring process<br>- Days or weeks to create material master<br>- Technical attributes manually entered into specifications<br>- Attributes re-typed into separate database for Molex.com/M2X |

[1] Source - Current vs. Future State Part and BOM Information Management and Commercial Parts Process, Revision 3

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| **Search & Discovery Issues** | - Cannot find existing BOMs for reuse<br>- No visibility into BOMs from other divisions<br>- Limited BOM search functionality<br>- No where-used capability for BOMs<br>- 2D CAD BOM content isn't searchable | - Engineers spend 2+ hours searching for parts<br>- Limited search functionality in existing tools<br>- Parts not grouped into categories<br>- Information scattered across ECTR, SAP, Molex.com, SharePoint<br>- No visibility into parts used by other divisions<br>- 50% of day spent looking for documents<br>- Difficulty finding information; easier to recreate and duplicate |
| **Duplication & Proliferation** | - Multiple conflicting BOMs from different team members<br>- Duplicate BOMs created unknowingly<br>- No BOM standardization across BUs<br>- Individually created BOMs for variants and options<br>- 100k+ SKUs each created as separate line item | - Same part exists 6+ times with different names<br>- Engineers unknowingly create duplicate parts<br>- No validation process before creating new parts<br>- Each BU creating their own versions of similar parts<br>- No global part standardization<br>- No part proliferation controls<br>- Ad hoc approach to Commercial Parts selection |

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| **Data Integrity & Quality** | - Incomplete BOMs due to missing part information<br>- BOM revisions stored in multiple locations<br>- No version control for BOMs<br>- Conflicting BOM data from different sources<br>- Paper BOMs on shop floor no longer valid<br>- Increases risk of errors | - Missing approved drawings<br>- Missing costing information<br>- Incomplete material master data<br>- Missing labeling information<br>- No single source of truth for part information<br>- Work instructions scattered in Excel, SharePoint, or paper<br>- Revisions stored in multiple locations<br>- Secondary attributes often missing in handoff to Molex.com |
| **System Integration Problems** | - No automated BOM transfer to SAP<br>- No integration between CAD and ERP for BOMs<br>- BOM data not synchronized between systems<br>- EBOM to MBOM digital thread is missing<br>- Missing digital thread to EBOM | - 17 different PDPs across business units<br>- No automated interface between design systems and SAP<br>- Part data not synchronized between systems<br>- Digital links missing between inputs<br>- Gaps in document links<br>- Technical documents not digitally linked |

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| **Process & Workflow Issues** | - No standard BOM creation process<br>- Constant firefighting to get BOMs completed<br>- No cross-functional BOM reviews<br>- Manual push required for approvals<br>- No BOM change control process<br>- MBOM creation is a manual process | - No standard process for part structuring across sites<br>- Different roles at different plants for same function<br>- Engineers source parts independently<br>- Finance must be called separately for costing<br>- No automated part creation workflow<br>- Manual coordination between NPI team members |
| **Change Management** | - Changes to EBOMs and MBOMs managed in different systems<br>- No formal workflow for tooling, material master, BOM changes<br>- Material Master and BOM revision control not utilized<br>- Customer frustration with BOM changes | - Changes managed separately in each system/inconsistently<br>- Changes communicated ad hoc<br>- Change requirements communicated via email, phone calls<br>- PCNs are a paper process<br>- No revision control for SAP material masters |
| **Knowledge Management** | - BOM creation knowledge not documented<br>- Previous BOMs not leveraged for new products<br>- BOM best practices not shared<br>- Reliance on tribal knowledge | - Work instructions not standardized<br>- Part selection criteria not documented<br>- Missing quick reference guides<br>- Previous process information not leveraged<br>- Lost customer insight |

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| **Business Impact** | - BOM errors causing production delays<br>- Rework costs due to incorrect BOMs<br>- Lost productivity from manual BOM processes<br>- Production delays due to incomplete BOMs<br>- Quality issues from BOM errors | - Customer orders delayed - parts not structured in SAP<br>- Engineers buying directly from distributors<br>- Overpaying for parts<br>- Not leveraging volume discounts<br>- Inventory costs from duplicate parts<br>- Compliance risks from missing part data<br>- Limits buying power across Molex |