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Aras Quality Management System

Quality Planning

Topics

- Solution Introduction
- Objectives
- Key Features
- Benefits
- Demo
- Availability

Aras Quality Management System

- Quality Management System (QMS) is a new application comprising:
  - Quality Planning (QP) - QMS 11R1
    - Replaces previous Aras application
  - Quality Systems (QS) - QMS 11R2
    - Derived from existing Community project
- **Focus for today is Quality Planning (QMS 11R1)**
  - Released Dec ’15, SP5

Quality Planning (Proactive)

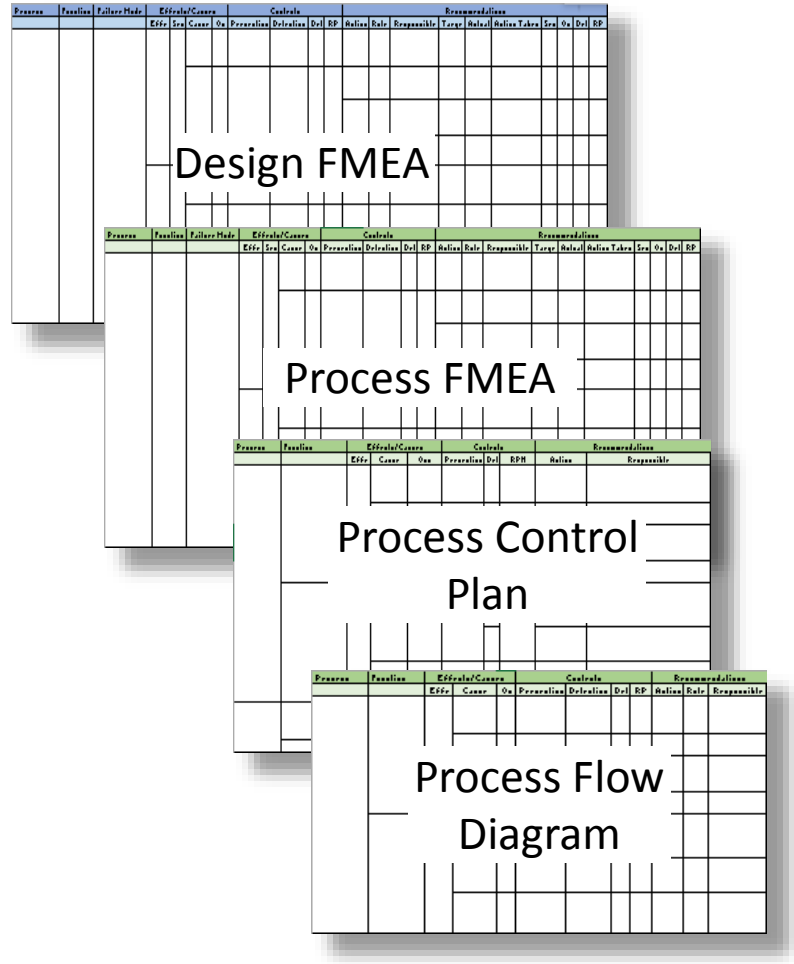
- Design
  - FMEA
- Process
  - PFMEA,
  - Flow Diagrams
  - Control Plan

Quality Systems (Reactive)

- Quality Events
  - Issues, Audits, NCRs..
- Quality Containment
  - Hold Notice, Purge Notice..
- Quality Analysis
  - 5-Whys, FTA, Fishbone
- CAPA

Quality Planning – Goals and Scope

- Ensure a product meets customer's requirements
  - Product / Process design and analysis
  - Risk assessment and mitigation
- Produces/Updates QP Documents (*among others*):
  - Design/Process Failure Modes Effects Analysis (DFMEA/PFMEA)
  - Process Control Plan (PCP)
  - Process Flow Diagram (PFD)
- Based on AIAG standards
  - APQP & Control Plan (2nd Edition)
  - Potential Failure Mode and Effects Analysis (4th Edition)



Quality Planning - Document Content

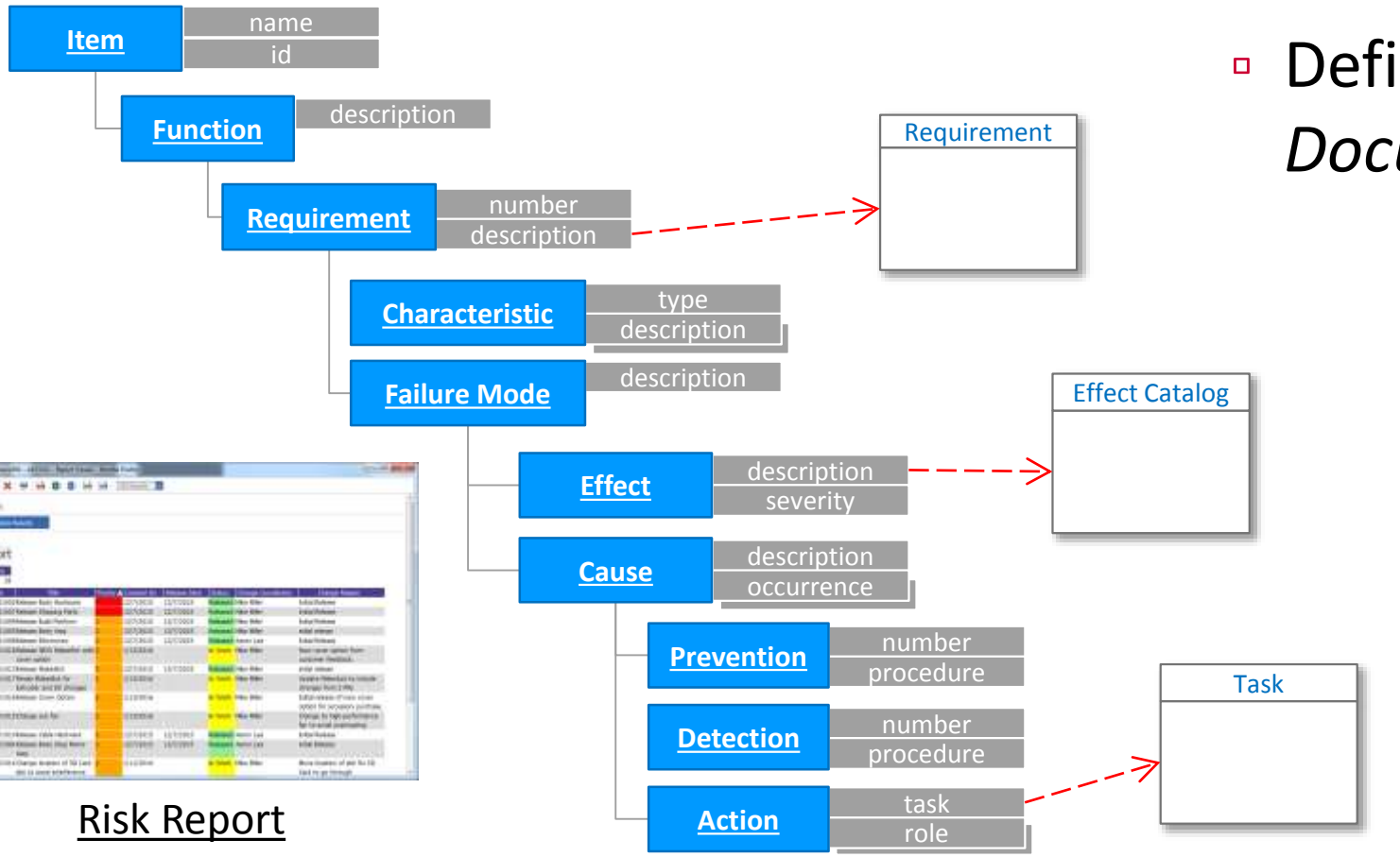
1. Tabular, using a common structure with typical end-user tailoring
2. Use headers to identify columns and column groupings
3. Use cell merging to show association / containment
4. Use algorithms (custom logic) for computed values
5. Typically have extensive horizontal and vertical space requirements
6. Contain/Reuse content from corporate & industry standards/procedures
7. Contain content that references Products / Processes

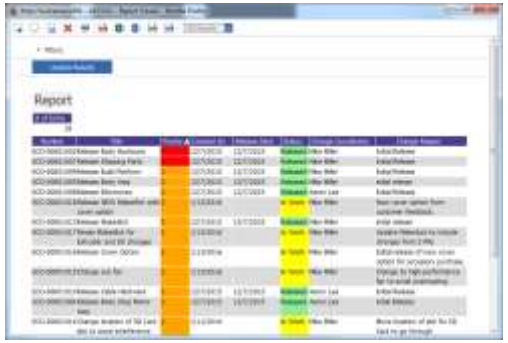
Item	Function	Failure Mode	Effects/Causes				Controls				Recommendations									
			Effect	Sev	Cause	Occ	Prevention	Detection	Det	RPN	Action	Role	Responsible	Target	Actual	Action Taken	Sev	Occ	Det	RPN
Front Door L.H. H8HX-0000-A	Maintain integriy of inner door panel	Integrity breach allows environ. Access of inner door panel	Corroded interior lower door panel	4	Upper edge of protective wax application specified for inner door panels is too low	3	Design requirements (#31268) and best practice (BP 3455)	Vehicle durability test T-118	7	105	Laboratory accelerated corrosion test	Body Engineer	A. Tate	5/25/2015	5/21/2015	Based on test results (test no. 1481) upper edge spec raised 125 0X 09 30	5	2	3	30
					Insufficient wax thickness specified	3	Design requirements (#31268) and best practice (BP 3455)	Vehicle durability test T-118	7	105	Laboratory accelerated corrosion test	Body Engineer	A. Tate	5/25/2015	5/21/2015	Based on test results (test no. 1481) upper edge spec raised 125 0X 09 30	5	2	3	30
											Design of Experiments (DOE) on Wax Thickness	Body Engineer	J. Smythe	5/11/2015	5/11/2015	DOE shows 25% variation in specified thickness is acceptable 0X 10 25	5	2	3	30
					Inapropriate formulation specified	2	Industry standard MS-1893	Physical and chemical lab test - report No. 1265	5	50										
								Vehicle durability test T-118	7											
			Deteriorated life of door leading to unsatisfactory appearance or impaired function of door	5	Corner design prevents spray equipment from reaching all areas	5		Design aid with non-functioning spray head	8	175	Team evaluation using production spray equipment and specified wax	Body Engineer and Assembly Ops	T. Edwards	5/12/2015						
								Vehicle durability test T-118	7											
					Insufficient room between panels for spray head access	4		Drawing evaluation of spray head access	4	80										

Quality Planning – A New Approach

- New Editor/Viewer for Quality Documents
  - Evolution from QP 9.x application
    - Co-Designed with help from our customers
  - Better than Excel - improved usability and efficiency
- New Data Model: Content Modeling Framework (CMF)
  - Defines schema of Document Elements
    - Simplifies Document structure and UI setup
    - Adds customization points to tailor business logic
- Fully integrated with PLM
  - Use and reuse existing PLM business objects (Parts, Processes, Tools, etc.)
  - Integrated with PLM business processes (Access, Lifecycles, Workflows, etc.)

Quality Planning Structured Documents

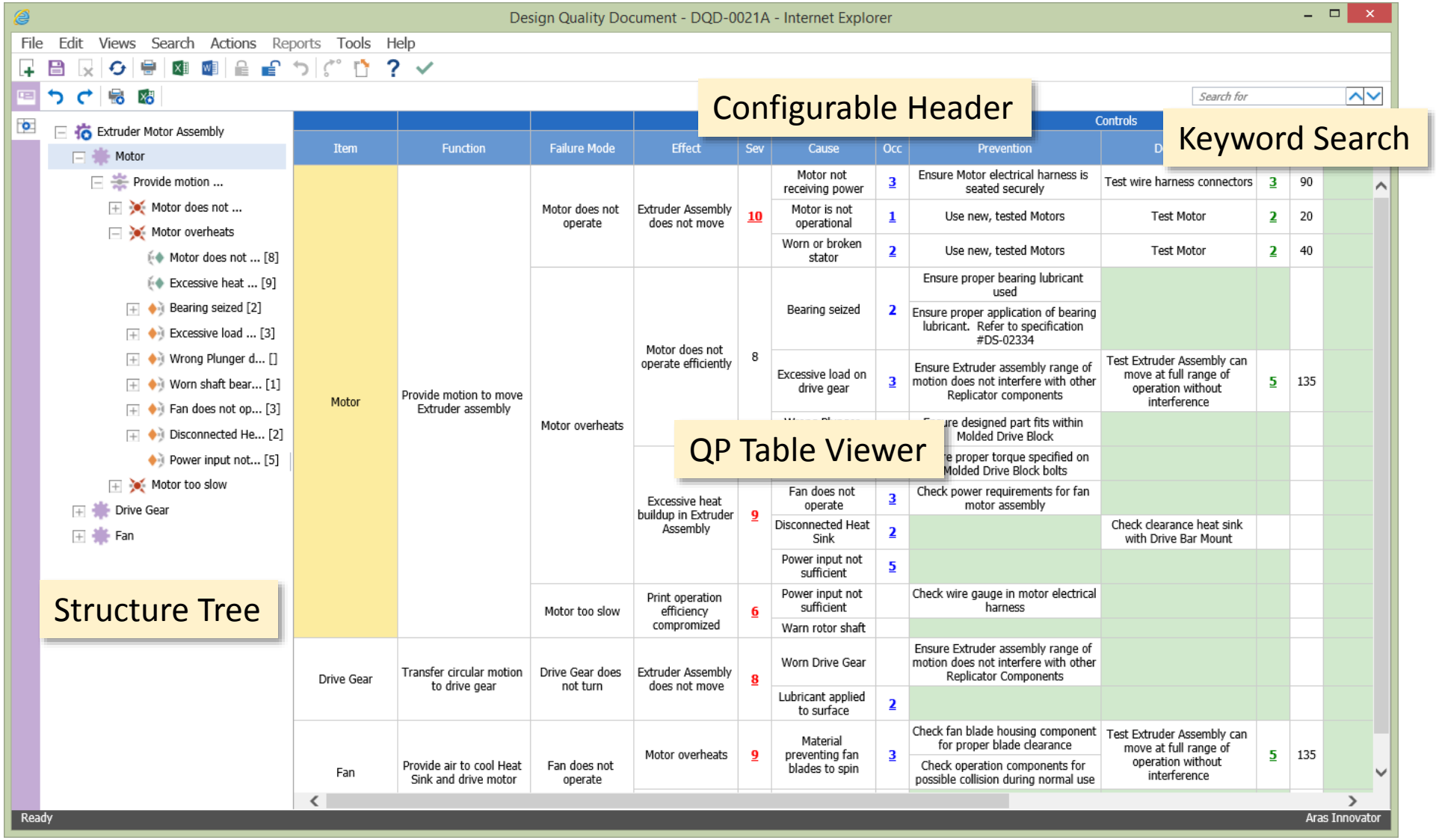




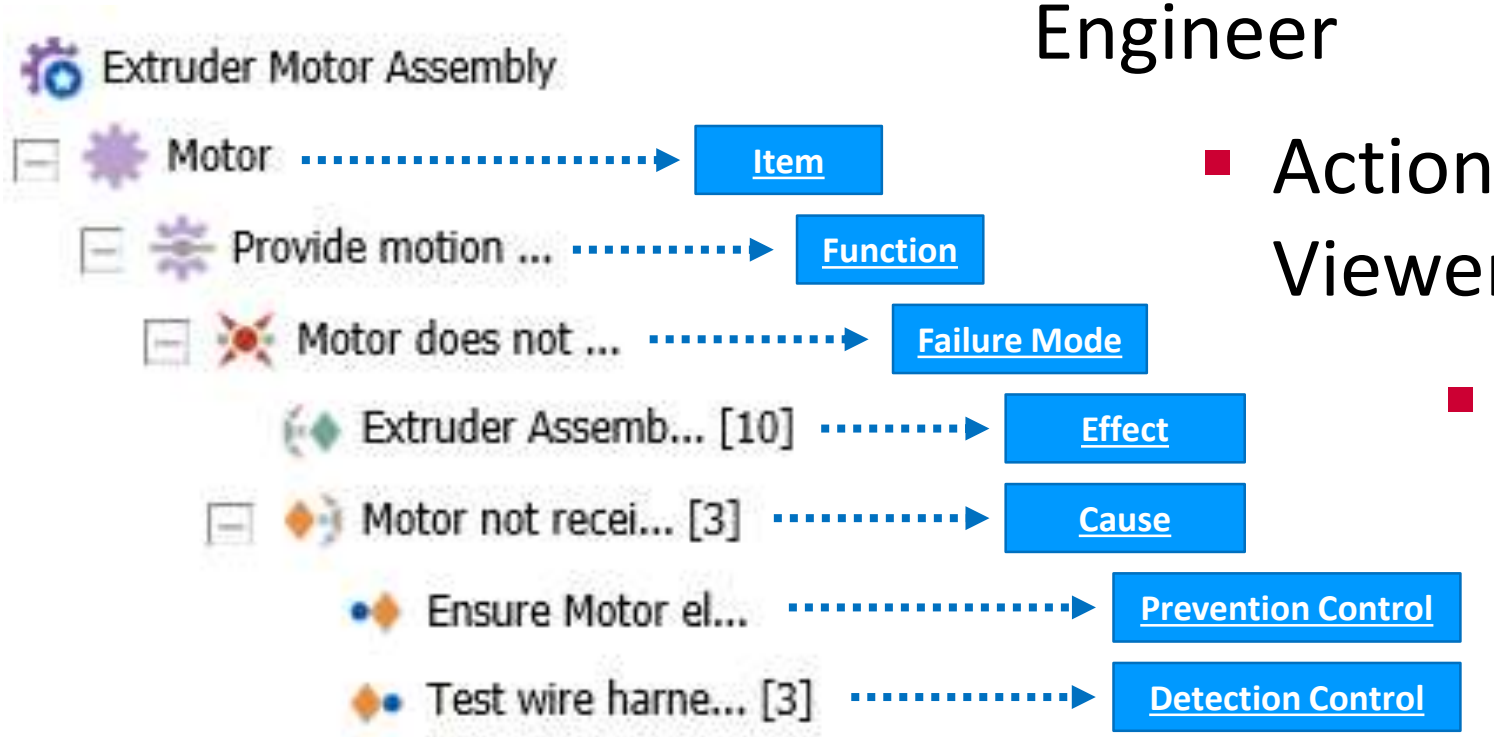
Risk Report

- Structured Documents are:
  - Defined by a schema of discrete *Document Elements* that:
    - Provide semantic markup to improve search and reporting
    - Have user-defined Access Control and Properties with:
      - Independent Type, Style, and Validation settings
    - Can reference, and synchronize with, Items in Innovator

Quality Planning - Key Features

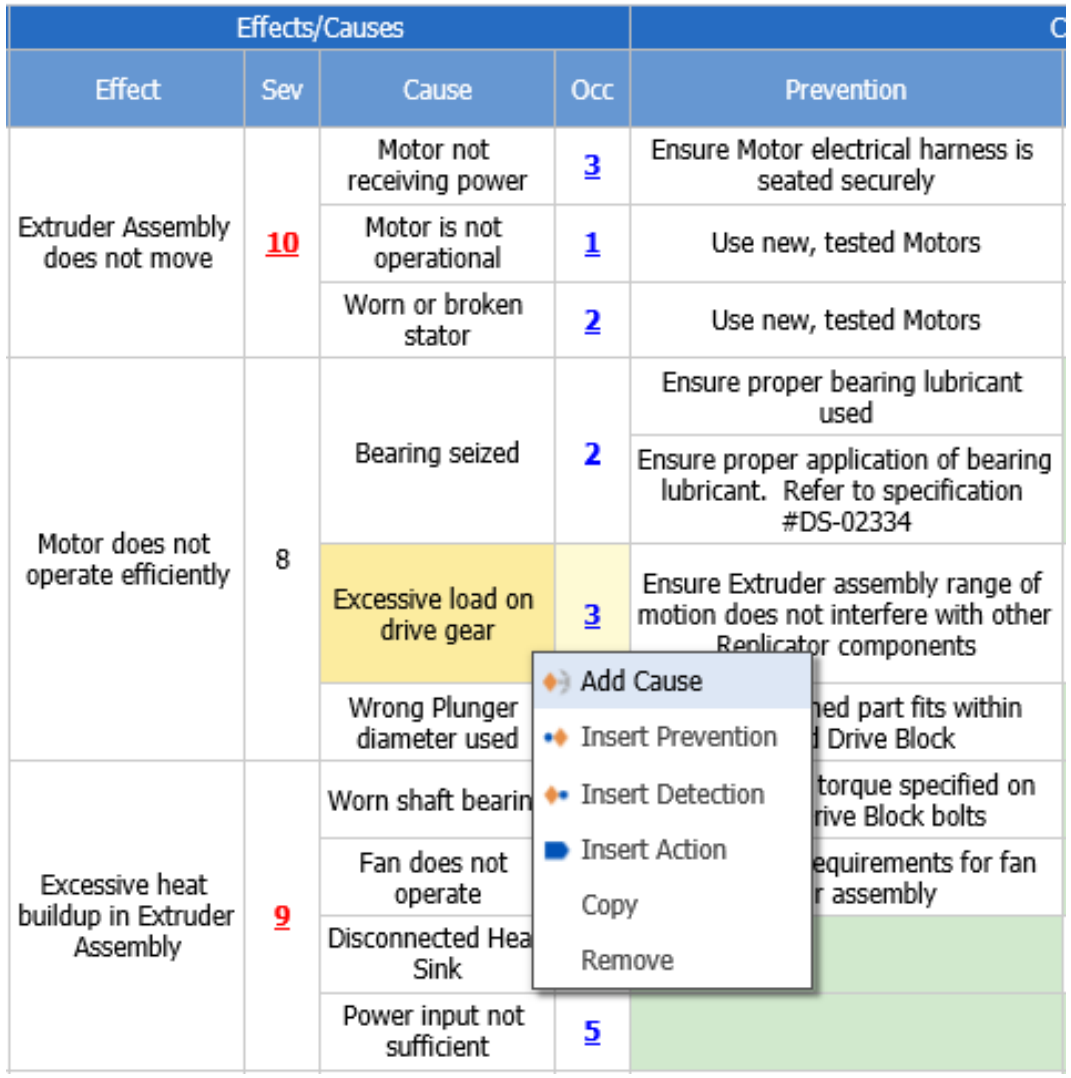


Structure Tree



- Provides a navigation aide to the Quality Engineer
  - Actions synchronized with Table Viewer
    - Illustrates the Document Structure

Table Viewer / Editor



- Layout and Style based on AIAG standard FMEA tables
- Content Position & Row Merging automatically applied
- Content Addition/Modification through Context Menus
- Cell Editing using type/content-specific editors

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Benefits

- Further reduces and mitigates the risk of defects through design or process errors in complex system products
- Maximizes the productivity of quality professionals by
  - Fully integrating quality documents with product definitions, process plans, release and change processes
  - Streamlining the change process from impact assessment to execution
  - Maintaining consistency across products and programs
- Meet the needs of your business
  - Standards based and tailorable to specific company needs

Product Availability

- Quality Planning (QMS 11 R1) Released Dec. ’15
  - Open to Community
    - Subscribers get Excel Export capability
  - Installation via new *Aras Update* Application
    - New for SP5 Applications and Beyond…
    - http://www.aras.com/support/downloads/download.aspx
- Quality Systems (QMS 11R2) Scheduled Q3 ‘16

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