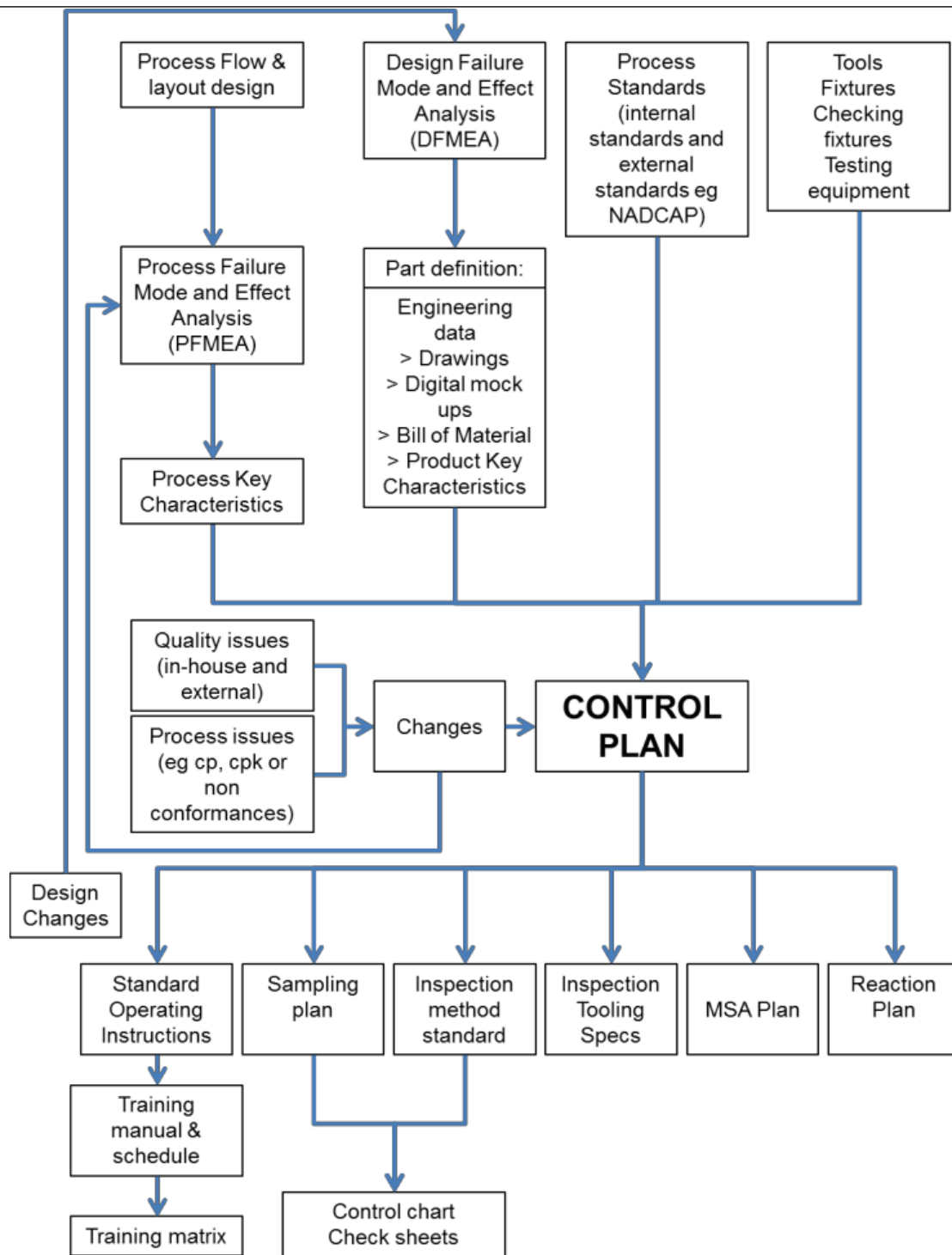


Element 3.17 Make/ 3.18 Buy	Pre-Production Control Plan
Element Owner: Manufacturing Engineer and Quality.	
Element Definition: <p>The purpose of the control plan is to document all quality controls to be imposed on the product including: Features to be monitored, the measurement methods, the sampling size and frequency and the control limits to respect. The control plan covers the product from incoming raw material until dispatch of the finished good to the customer. It may also reach out to shop assist suppliers.</p> <p>The control plan details how quality is, controlled and confirmed at each stage of the manufacturing process, including, when necessary, the actions to be taken when deviations are found (reaction plans). It should be sufficiently detailed in order to clearly define who is responsible for undertaking the quality check at each stage of the process. The control plan must be agreed by the supplier's quality and production departments and by the final customer.</p> <p>The control plan should be prepared and applied from the prototype/preproduction phase onwards. It should be revised and updated throughout the life of the product in response to any new quality issues or changes.</p> <p>During the preproduction phase the number of controls is generally much higher than during series production because the producer has not yet identified and removed all sources of variation. As these variations are removed the number/frequency of controls can be reduced.</p>	
Deliverables: Control plan signed and approved by: Quality and production and the Customer upon request.	
Necessary Inputs: P-FMEA, D-FMEA Product Key Characteristics Process Key Characteristics Process flow chart Inspection standards Drawings Historical quality concerns Process capabilities (similar processes) control plan)	Source of inputs: Manufacturing Engineering & Quality Design Engineering Manufacturing Engineering & Quality Manufacturing Engineering Quality Design Engineering Quality Manufacturing Engineering Change requests (to update the Various sources
Resources: Quality (Accountable for Control Plan) Manufacturing Engineering (Responsible for defining the process characteristics) Design Engineering (Responsible for defining the product characteristics) Additional input as required from: Operations (Support) Supply Chain (Support) Facilities Maintenance (Support)	
Methodology:	



1. Establish a series of cross functional reviews to define the necessary controls in order to guarantee the quality of the finished product.

Reference document: