Question	Answer
Is it recommended to perform a DFMEA if your company is not the design authority (build-to-print projects)?	Typically, if you are not a design authority, you will not perform a DFMEA. Ideally the design authority will invite the production supplier as part of the DFMEA, or at least consider the production capabilities.
When would you use FFMEA rather than DFMEA?	There are many different types of FMEAs, which can be confusing. Make sure you understand which are applicable to your situation. Functional FMEA is different from DFMEA as it only concerns requirements, functions and architectural choices. Where you have a concept available or proposed, DFMEA is the best approach.
If a cross-functional team is used, how do you keep the DFMEA from turning into a PFMEA?	The key here is to make sure of what's going in the cause column. For a DFMEA, this should be something in the design, and the DFMEA should address issues in the design. For a PFMEA, this should be the manufacturing/assembly process, and the PFMEA should address issues in the process.
Our Customers are OE, and do not share their design FMEA data, or request input from suppliers into their DFMEA.	This can be a real problem for developing a good DFMEA. The customer will need to give you enough information to perform your DFMEA. This can be provided under cover of an Non-Disclosure Agreement. E.g. it is good practice to include in the DFMEA the effects at the customer level, which may drive the need to ask for information from the customer.
Could you provide info about FMECA vs. FMEA?	FMECA is an evaluation/analysis which provides a measure of the likelihood and impact of a physical failure in the finished product. FMEA is a toolset that actively looks for problems in the design or process as they are being developed and creates actions to avoid the problem.
Is there a benefit to doing a DFMEA retrospectively if doing a modification of a part?	Yes, if doing a modification to a product. The DFMEA could be scoped around the changed features or the new functional requirements. Doing a DFMEA after the design is finished and if there is no plan to change the part is generally not the right thing to do. The only exception is where an existing design is being put to a new function or change of duty, then it might suggest changes that could be proposed to the design.
Would there be a benefit to Pareto the individual OSD scores separately vs. Pareto of the final RPN score?	Generally, we prioritise high S first, then high SxO and finally High SxOxD (i.e. RPN). A Probability Impact Diagram is a tool which separately plots S against O and S against D and has traffic light zones to represent which risks might need addressing. This can sometimes help with prioritisation as well.

Can you comment on different teams scoring an FMEA differently? How do you compare?	It is difficult to compare FMEA scores from different teams, and it is not necessarily useful. The primary focus of any DFMEA is on improving that particular design and it is primarily for the use of that design team.
How do you best communicate to a customer when your part fits in their system and your part has a high severity that you can't do anything about?	Communicate to them the level of the risk and the severity of the impact at their product level. They should be able to decide whether design action is required on their part. I would recommend formalising this communication with them and requesting that they formalise their response.
Can you comment on some favourable software options?	Lots of advantages and disadvantages to different SW packages. Best to perform your own assessment in relation to your company's practices.
Are environmental conditions causes in a DFMEA?	Remember the causes should be design specifications of some kind. External conditions usually relate to mechanisms i.e. physical phenomena that the design must be robust to.
There seems to be a fine line between requirement and function.	I tend to keep the functions a fairly simple verb noun description, whereas the requirement adds criteria and constraints to the function, so transmit load of XX at max deflection YY is more a requirement than just a function - has a quantifiable measure.
If the function is to transmit torque, for example, the value of the torque would be determined by design and interface with other components. What would be the requirement?	This question touches on the need for the DFMEA to develop along with the design. The initial torque requirement may be based on an assumption of load. As the design matures that load may change, and it may be necessary to re-evaluate the DFMEA line item for that torque item.
Should effects all go into the same line then rather than one line per effect?	The DFMEA Severity Ranking should enter the rating for the most serious product-level Effect in each line item (there should be one Severity column entry for each Failure Mode).
If Product effect is leading to Engine fire, but we have a good detection system in place to prevent that failure stage (After consulting to Service Engineering); how do we rate that effect please; i.e. do we have to be pessimistic in rating our severity?	If a system is known to be present, you can score the DFMEA assuming that it is operational. Let the detection system FMEA worry about whether that system might fail.
When a DFMEA performed for a system, then what would be the causes of failures? Are they the individual component requirements/ functions?	The causes are the specifications that the system design team pass on to the lower level system i.e. the system level design should be concerned with getting the specification it hands down correct.
Are detection controls the same as verification activities (tests that prove the design 'works').	Prevention controls prevent the design error from occurring, detection tells you if it has

Can you count the same analysis in the prevention and detection controls column? or should it be something completely independent, (verification).	occurred. Whether something is listed as prevention or detection is often, therefore, as much to do with phasing as with anything else. Prevention controls need to be executed before the design is frozen to be able to influence the design. Detection could occur at any time, but the best detections occur early. In some cases, e.g. early verification by analysis, the same action prevents the design error from occurring and provides the verification that the error has not occurred i.e. can be listed as both prevention and detection.
Is detection linked with the cause or with the failure mode?	Often you will look for the failure mode in order to determine that the cause is there. In other words a detection can find either the cause or the failure mode. Just be careful that you know what the verification/test is specifically telling you.
Do you have chance to change score of severity? if yes, in which situation?	Generally, Severity can only be addressed by higher system level design action e.g. by introducing redundancy or protection systems.
Would you link potential missassembly for example, to a failure mode in the DFMEA or conduct DfM/A separately? Same with Df Maintenance and o/haul?	Though missassembly might come up in a DFMEA discussion, it is more likely to be flushed out by DfA, DfMRO. These are generally better tools than DFMEA for this sort of thing. DFMEA is concerned with the functional performance of the design and will assume that the design is made and assembled correctly.
I have heard of reference pfmeas... is it a normal practice or sense to have reference dfmeas?	There is no theoretical reason why reference DFMEAs would not work just as they do with PFMEAs. We have not really explored or exploited these as yet, but it would be worth exploring in the future.
When do you move the new lower score to the original scoring side of the DFMEA - after control/detection improvement actions are complete or after the improvements are actually validated on a product?	It is not good practice to alter the original scoring on the left hand side of the DFMEA, but to record the improved score on the right hand side with the improvement action.
We perform a service (special process - shot peening). We are part of the overall design of engine parts. Since the functions and causes are the same for all components (with slight changes due to component requirements) how would a DFMEA apply to the special process that we provide (shot peening)?	You would really cover the development of the shot peening process through a PFMEA. The specification of the shot peening i.e. picking the right specification for the application, which might appear on the drawing, could be covered by DFMEA.