# Questions and Answers from the APQP4Wind Webinar – A Closer Look at FMEA, the tool for Risk Management

**June 2nd, 2020**

## Afternoon Webinar (15:00-16:00 CEST)

**Question 1 (Q1): At what basis fix the RPN limits which is acceptable and beyond the fix RPN needs to act for improvement. Also, could you please explain about RPN table which you have in APQP4 wind manual. What are the analysis is required to fix the RPN as acceptable limits?**
*Answer 1 (A1): This question was answered in the webinar, please find the recordings here: www.apqp4wind.org/webinars or go to: https://youtu.be/X4YB9XoRlz8*

**Q2: How to take value of a FMEA analysis during process development phase? At this stage there is no real process running, hard to raise real data".**
*A2: This question was answered in the webinar, please find the recordings here: www.apqp4wind.org/webinars or go to: https://youtu.be/X4YB9XoRlz8*
You will base the PFMEA on your previous knowledge present in your system and in the cross-functional group to (during the process design) to prevent known failures to reoccur. If you are designing a new process again use the knowledge to put in reasonable assumptions and involve technology suppliers in case.

**Q3: Is there an Occurrences chart specifically for APQP4Wind?**
*A3: This question was answered in the webinar, please find the recordings here: www.apqp4wind.org/webinars or go to: https://youtu.be/X4YB9XoRlz8*

**Q4: Will it be mandatory to change existing FMEA's or just for new developments?**
*A4: This question was answered in the webinar, please find the recordings here: www.apqp4wind.org/webinars or go to: https://youtu.be/X4YB9XoRlz8*

**Q5: Should we use an external point of view or internal when addressing the severity? hence, using the customer pow or the one of our internal processes?**
A5: Practice is that severity should reflect the worst (highest) realistic severity.

**Q6: Can you explain each control plan columns and how to fill them? Is there any exemplary fulfilled control plan document for you to share? Document existence?**
A6: To explain all columns in the control plan is beyond this webinar. You will find advise in the AIAG Control plan manual that can be bought from AIAG or BV. We cannot share any examples as they are intellectual property of our customers.

Mail: contact@apqp4wind.org
Website: www.apqp4wind.org
LinkedIn: APQP4Wind

Lysbrohøjen 24
8600 Silkeborg
Denmark

**Q7: Will future AIAG changes in APQP (automotive) be rolled into APQP4Wind?**
A7: Not our decision, but we expect not as default. It has not been the APQP4Wind target, so far, to follow AIAG and VDA or to cover all advanced methodology.

**Q8: When we are going to score the severity, occurrence, detection, should we evaluate thinking about the occurrence in the field or on the factory floor? what is correct? Or does it depend on whether it is DFMEA or PFMEA?**
A8: The last sentence hits the point. We are talking in DFMEA - **occurrence of design weaknesses or failures happening because of your design decisions** - and impacting any factor in the supply chain including the field operators and users. For PFMEA the occurrence is in the (manufacturing)-process you are looking at which is mostly "shop floor". Think also transport as process here.

**Q9: I have two questions out of the webinar scope: How can I be confident to have access to the last version of APQP4Wind Manual (as well as to the workbook)? Is there any work from your side to maintain the hardcopies updated?**
A9: You need to check the APQP4Wind website: www.apqp4wind.org under "Manual & Toolbox", since they do not offer a subscription on updates.

**Q10: What is the minimum RPN Value that to be captured in control plan?**
A10: All inspections identified and documented in the PFMEA as a process inspection shall be referenced in the control plan independent on the RPN. If a potential risk is so unlikely that it is not in the PFMEA you do not need it in the control plan either.

**Q11: I would like to see more examples of success using of FMEA daily after APQP phase, how can I manage a FMEA Project effectively in a serial production?**
A11: To explain examples, train and discus usage of FMEA in a APQP project is beyond the scope of this webinar. Please go to www.apqp4wind.org/training for the available Training Schedule of upcoming Training Courses provided by either DNV GL or BV.

**Q12: When we'll have this training apply in Brazil but in Portuguese, because here a lot professionals have difficulty with English language and is a requirement to them to supply for wind market.**
A12: The APQP4Wind Manual is currently only available in English and Chinese. With respect to APQP4Wind training in Portuguese language you must check with the two training providers DNV GL and BV if they can provide training in Portuguese.

**Q13: Do you consider H&S implications on the FMEA? Or would you cover this in a risk assessment?**
A13: In the Introduction in the APQP4Wind Manual, page 7 page is the scope with respect to H&S explained in detail.

**Q14: In a PFMEA, do you consider the effects from a customer's failure perspective or from an internal business failure perspective**
Q14: Inter failures only, if there from the customer is a failure in the design and or product specification is not the suppliers responsibility. But of cause, if you as a supplier identify failures or suspect failures you shall make the customer aware about this.

**Q15: Who does the DFMEA?**
A15: The cross functional team lead by a competent engineer or FMEA facilitator.

**Q16: Do you have any examples of successful implementations of an FMEA? What were the improvements for the business?**
Q16: In you network you will most likely be able to find many examples. We cannot share any examples as they are beyond the scope of this event and further would they be the intellectual property of our customers. In the APQP4Wind Trainings done by the training providers for APQP4Wind, DNV GL and BV are examples used.

**Q17: When a new project is on developing phase, how can we assign accurate RPN numbers and go through severity, occurrence and detection if we have not gathered any data since the process has not started yet?**
A17: *This question was answered in the webinar, please find the recordings here: www.apqp4wind.org/webinars or go to: https://youtu.be/X4YB9XoRlz8*
You will base the FMEA on your previous knowledge present in your system and in the cross-functional group to (during the process design) to prevent known failures to reoccur. If you are designing a new design or process again, use the knowledge to put in reasonable assumptions and involve technology suppliers in case. Be aware that the first scoring should be updated as knowledge is gained with verification and validation activities.

**Q18: Could you clarify about the "function analysis"?**
A18: A detailed explanation of the functional analysis are beyond the scope of this event, but you need to do the analysis to be effective and efficient when the FMEA is being done. Both training providers for APQP4Wind, DNV GL and BV are training this as part of the APQP4Wind Specialist training.

**Q19: If you are a supplier to a wind turbine manufacturer can or should you expect some valuable information regarding the FMEA (Design and Process) from the wind turbine manufacturer?**
A19: Yes, your Customer should provide not only the relevant and needed information to execute a FMEA of high quality but also, if needed, attend joint FMEA sessions to ensure that complex topics are assessed and handled in the best way. There is a request, in phase 1 of the APQP4Wind manual, from the customer to the supplier to ask for help and clarification if needed.

**Q20: As products mature and actions have been applied to reduce / remove failure risks, is it good practice to remove them from the FMEA and archive the history elsewhere? Or would you archive within the FMEA doc?**
A20: We would recommend keeping a history record with link to at least revision of the FMEA and product revision but potentially more meta data. This can oppose some problems depending on what tool or application you using and practical limitations can be a limiting factor.

**Q21: The FMEA for new materials options, in order to evaluate its risk when in usage in the product, does it is more suitable to do through DFMEA or PFMEA, considering that the product is already in serial production?**
A21: New material will be a design change and shall be followed by update of both D- as

PFMEA. Please be also aware about the requirement to re-submit the PPAP for this type of changes prior to serial production.

**Q22: Please tell us more about the new PFMEA. Is this linked to the control plan?**
A22: The PFMEA is linked to the control plan in the same way as the current version and the FMEA process.

Mail: contact@apqp4wind.org
Website: www.apqp4wind.org
LinkedIn: APQP4Wind

Lysbrohøjen 24
8600 Silkeborg
Denmark