

Quality management of aviation companies



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The system of an aviation company is based on what is considered quality. This means that there is a set of procedures that are adopted by certain airline companies in an effort to describe their operations. It is a requirement by law that all aviation companies come up with a set of procedures to ensure safety. These procedures are not only written from the preference of the management. The procedures comply with the regulations and reflect the specific ways in which the company intends on fulfilling every one of the regulations that are listed. This set of procedures is what the institution may refer to as the *operations manual*. This is not what the company is limited to however. The manuals are what make up the basis of the organisation and are meant to detail all the aspects of the organisation. They do not, however, most of the time, stand by themselves (Liao et al., 2016). The manuals may reference other manuals in order to stand completely independent of other regulatory limits. The procedures that are always listed comply fully with the aviation regulations as they are updated and choosing only those that are applicable and relevant altogether without compromise. For the airline to be effective in terms of performance and competitiveness, it requires a set of organised compliance and maintenance rules that allow the competitive nature of the organisation to be brought out (Taggart, 2017). This, however, only focuses on selfless considerations meant to ensure a bigger picture for the airline and all the associates within the plan and organisation.

Airline Flight Operations

The airline flight operations department falls under the aviation safety operations division. There are several compliance and maintenance issues to be considered within this sector. There are aircraft categories that form the

main segments for this department, with each and every segment having a number of specialists that function on behalf of the operations in their various diverse duties. The priority in this case when it comes to all operations and the activities relative is safety. Safety is of the most importance in the flight operations sector. The members of each team selected for the operation system play a very vital role in ensuring that all regulations and safety processes are conducted and overseen within the industry. The aspects of most flight operations fall under the functions of each team member.

There are audits relative to the aircraft operation certificate that are specifically meant to be conducted by the trained mechanics within the system (Pantakar & Taylor, 2017). The audits are not necessarily meant to be carried out by multiple inspectors since they depend on how big or small they present or even the complexity of the whole operation. This means that, as the audits take place, there has to be an inspection for the whole operation and an assurance of safety from the same. This goes hand in hand with compliance and the necessary regulatory procedures. The audits are supposed to be done on a minimum of an annual basis. This keeps the maintenance of uniformity alive during each inspection and progress made in the process.

The flight operations personnel must be well equipped through training in the process of approving the manuals on operations. The manuals contain a detailed explanation of laws and regulations that need to be complied to. The inspector needs to approve the content and presentation of the manual. It is what the flight operations departments use as a guideline towards

ensuring that all factors are in place and to ensure that the duties are well separated. The surveillance that is often done is conducted to ensure that none of the operators are involved in illegal activities and operations (Sharpanykh & Haest, 2016). The SACAA must be aware of all the operations prior to initiation.

Legal Considerations

All the legal considerations fall under the regulative systems set by aviation law. The branch governs all matters that are legal and involve business in line with flight and air transport. The new airline should put into consideration the air traffic rights and, also, safety and security as described by the aviation sector. There are a number of factors that the airline should put into consideration such as the complexity of this branch of law (Langer & Braithwaite, 2016). The globalisation of aviation has increased the number of legalities that are to be prioritised by various departments in flight operations. There are overlapping requirements based on each one of the countries involved. The airline has to comply with the diversity that results from all the legal considerations based on the countries' interests. The airline has to fall in line with the requirements that allow for the provision of a framework that keeps the aviation industry safe, fair and also efficient.

There are national and international laws that the airline has to comply with. These laws were established in the late 1940s by the United Nations but are currently governed by the International Civil Aviation Organisation (Langer & Braithwaite, 2016). The compliance standards are therefore set based in international variabilities of law and the expectations of each aviation

department. The mediation of air navigation is solely done by these sectors, and, without the necessary legal aspects put in place, the airline may fail in its ability to withstand legal issues. The airline has to be recognised by the Federal Aviation Administration (Reason U & Hobbs, 2017). This is for all the airlines within the United States and those that connect to the country in one way or another.

There are compliance strategies that ensure that the airline is not swayed by any form of legal mishap (Lim et al., 2017). The safe designs provided for the aircrafts are a number one consideration, along with the engines and the components that are found within the aircraft. This is a maintenance issue solved for the organisation. The other is to ensure that navigation aids are present at all times to ensure that the airline is not working independent of safety procedures when required. The maintenance of the aircrafts and the equipment are also basics.

Aircraft Maintenance Management

Management, as defined in several aspects, is the process that ensures all activities are completed both effectively and efficiently. This may be through other people or with other people. Maintaining aircrafts, therefore, requires this process to ensure excellence and safety. This goes hand in hand with risk management where the focus is now on the events that are a result of the aircraft existing (Lee et al., 2017). The airline must consider quality-engineered approaches to getting to the root of the issue that they are presented with. This means that the approach will be rigorous in its analysis of the possible hazards that may result from poor maintenance. The

engineers put in charge ought to express an earnest understanding of the interactions that take place between the hazards and the detection systems set up by the engineering teams.

The maintenance management process assures that the systems incorporated fall in line with the required results. These systems range between parallel and redundant systems and express a wide range of cautionary regulations needed (Sachon & Pate, 2010). The risk management strategies all have their special characteristics as noted by various incorporative strategies. The strategies are not always exclusive on a mutual stand, which means that the choices made are not always a guarantee of lowering the risk. The strategies have to be mixed and some merged to various degrees in an effort to ensure that the proposals and management strategies work in an instant as expected (Mills, Koliba & Reiss, 2018). The strategies do not have to always be complete to be deployed. This slows down the work of the airline operations whilst trying to balance other factors.

There is a list of issues to be considered by the airline in order to have complete management over its organisation. The maintenance team must ensure that hazards are identified in time and documented for the sake of controlling them. This puts up a directive concerning the procedures and steps that are appropriate. The other is causal analysis, which means that the operators come up with means to reduce risks by getting to the root cause and ensuring that the levels are not destructive when it comes to managing aircraft maintenance processes altogether

Conclusion

The domestic airline is meant to serve in a wide ration that it is anticipated. There are various other compliance principles that fall in line with what is expected of the airline as an excellent new entrant. The customer-focussed capabilities make it unique and trustworthy of knowing and minding about the customers' needs whilst focusing on their own success as well in the long run. The other is the principle of leadership where an environment must be maintained and promote complete dedication to the organisation through the leaders. To achieve more desired results in an efficient manner means that activities and resources are managed. All the compliance and maintenance considerations above are bound to give solutions to mere issues that are relative to the airline and its need to progress and be competitive at the same time.

References

- Bazargan, M. (2016). Airline maintenance strategies-in-house vs. outsourced-an optimization approach. *Journal of Quality in Maintenance Engineering* , 22 (2), 114-129. <https://www.emeraldinsight.com/doi/abs/10.1108/JQME-08-2015-0038>
- Langer, M., & Braithwaite, G. R. (2016). The development and deployment of a maintenance operations safety survey. *Human factors* , 58 (7), 986-1006. <http://journals.sagepub.com/doi/abs/10.1177/0018720816656085>
- Lee, C. H., Shin, H. S., Tsourdos, A., & Skaf, Z. (2017, November). Data analytics development of FDR (Flight Data Recorder) data for airline maintenance operations. In *Multisensor Fusion and Integration for Intelligent Systems (MFI), 2017 IEEE International Conference on* (pp.

289-294). IEEE. <https://ieeexplore.ieee.org/abstract/document/8170443/>

- Liao, H., Chan, D. S. K., Aragones, J. K., & Harrington, M. T. (2016). *U. S. Patent Application No. 14/582, 602* . <https://patents.google.com/patent/US20160189066A1/en>
- Lim, Y., Bassien-Capsa, V., Ramasamy, S., Liu, J., & Sabatini, R. (2017). Commercial airline single-pilot operations: System design and pathways to certification. *IEEE Aerospace and Electronic Systems Magazine* , 32 (7), 4-21. <https://ieeexplore.ieee.org/abstract/document/8039185/>
- Mills, R. W., Koliba, C. J., & Reiss, D. R. (2018). Ensuring compliance from 35, 000 feet: Accountability and trade-offs in aviation safety regulatory networks. *Administration & Society* , 50 (10), 1478-1507. <http://journals.sagepub.com/doi/abs/10.1177/0095399716656223>
- Patankar, M. S., & Taylor, J. C. (2017). *Applied human factors in aviation maintenance* . Routledge. <https://www.taylorfrancis.com/books/9781315262314>
- Reason, J., & Hobbs, A. (2017). *Managing maintenance error: a practical guide* . CRC Press. <https://www.taylorfrancis.com/books/9781351920513>
- Sachon, M., & Paté-Cornell, E. (2000). Delays and safety in airline maintenance. *Reliability Engineering & System Safety* , 67 (3), 301-309. <https://www.sciencedirect.com/science/article/pii/S0951832099000629>
- Sahin, M. A., & Tuzkaya, G. (2018). Operations Research Problems for Airline Industry: A Literature Survey for Maintenance Routing Problem.

In *Handbook of Research on Emergent Applications of Optimization*

Algorithms (pp. 163-176). IGI Global. <https://www.igi-global.com/chapter/operations-research-problems-for-airline-industry/190159>

- Sharpanskykh, A., & Haest, R. (2016). An agent-based model to study compliance with safety regulations at an airline ground service organization. *Applied Intelligence*, 45 (3), 881-903. <https://link.springer.com/article/10.1007/s10489-016-0795-x>
- Taggart, W. R. (2017). Achieving enhanced flight operations. *Aviation psychology in practice*, 309. <https://trid.trb.org/view/720408>