

BS Project Report
Institute of Aviation Studies
University of Management and Technology

Analysis of Aviation Accidents using 5M model

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Date
6TH July, 2018



DECLARATION STATEMENT

I certify that the work submitted is my own and that any material derived or quoted from the published or unpublished work of other persons has been duly acknowledged.

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ABSTRACT

This report covers the analysis of aviation accidents based on 5M model of aviation safety. The report has discussed Qantas Flight 32, Air France Flight 447 and Air Blue flight 202 in terms of 5M model. Causes, effects and finding of these aviation accidents have been discussed in detail. In order to explore the domestic aviation, survey work has been included in the report, Recommendations and suggestions have been given based on the analysis of case studies and surveys, the report covers a complete analysis of 5M model and contributing elements of human factors towards aviation safety.



ACKNOWLEDGEMENTS

The project was completed with team work, we are thankful to UMT library, Ms. Fatima Najeeb Khan, Hybrid Aviation Walton Airport Lahore and Institute of Aviation Studies, UMT for their help, guidance and contribution during the course of this project.



TABLE OF CONTENTS

DECLARATION STATEMENT	i
ABSTRACT	ii
ACKNOWLEDGEMENTS	iii
TABLE OF CONTENTS	iv
LIST OF FIGURES	vi
GLOSSARY	7
1. Project Description	8
1.1 Methodology of the Project	Error! Bookmark not defined.
1.2 Aims and Objectives	Error! Bookmark not defined.
1.2.1 Project Aim	Error! Bookmark not defined.
1.2.2 Project Objectives	Error! Bookmark not defined.
1.2.3 Project Timeline	Error! Bookmark not defined.
2 A Brief Background of 5M Model	Error! Bookmark not defined.
2.2 Introduction	Error! Bookmark not defined.
2.3 Elements of 5M model	Error! Bookmark not defined.
2.3.1 Man	Error! Bookmark not defined.
2.3.2 Machine	Error! Bookmark not defined.
2.3.3 Medium	Error! Bookmark not defined.
2.3.4 Mission	Error! Bookmark not defined.
2.3.5 Management	Error! Bookmark not defined.
3 Case Studies	Error! Bookmark not defined.
3.1 Qantas Flight 32	Error! Bookmark not defined.
3.1.1 Accident and Sequence of Events	Error! Bookmark not defined.
3.1.2 ECAM Readings	Error! Bookmark not defined.
3.1.3 Landing Procedures	Error! Bookmark not defined.
3.1.4 Approach and Landing	Error! Bookmark not defined.
3.1.5 Aircraft Damage	Error! Bookmark not defined.
3.2 Air France Flight 447	Error! Bookmark not defined.
3.2.1 Computational Laws of AIRBUS fly by wire System	Error! Bookmark not defined.
3.2.1.1 Normal Law	Error! Bookmark not defined.
3.2.1.2 Alternate Law 1 (ALT 1)	Error! Bookmark not defined.
3.2.1.3 Alternate Law 2 (ALT 2)	Error! Bookmark not defined.
3.2.1.4 Direct Law	Error! Bookmark not defined.
3.2.1.5 Mechanical Law	Error! Bookmark not defined.
3.2.2 Sequence of Events during crash of AF447	Error! Bookmark not defined.



Automated Messages	Error! Bookmark not defined.
3.2.3 Aircraft Damage	Error! Bookmark not defined.
3.3 Air Blue Flight 202	Error! Bookmark not defined.
3.3.1 Sequence of Events	Error! Bookmark not defined.
3.3.2 FDR and CVR	Error! Bookmark not defined.
3.3.3 Aircraft Damage	Error! Bookmark not defined.
4 Analysis Using 5M Model of Aviation Safety	Error! Bookmark not defined.
4.1 Man	Error! Bookmark not defined.
4.2 Machine	Error! Bookmark not defined.
4.3 Medium	Error! Bookmark not defined.
4.4 Mission and Management	Error! Bookmark not defined.
5 Literature review	Error! Bookmark not defined.
5.1 The Myth of Zero Accidents	Error! Bookmark not defined.
5.2 THE SYSTEM SAFETY PERSPECTIVE	Error! Bookmark not defined.
5.3 The Human in Flight: From Kinaesthetic Sense to Cognitive Sensibility	Error!
Bookmark not defined.	
Correspondence Errors:	Error! Bookmark not defined.
5.4 Accident site	Error! Bookmark not defined.
5.5 Manufacturer's involvement in Safety Data.....	Error! Bookmark not defined.
6 Surveys	Error! Bookmark not defined.
6.1 Passenger Survey	Error! Bookmark not defined.
6.2 Context of Questions	Error! Bookmark not defined.
6.3 Results and Analysis	Error! Bookmark not defined.
6.4 Airport Staff Survey (Maintenance Staff).....	Error! Bookmark not defined.
6.5 Context of Questions	Error! Bookmark not defined.
6.6 Results and Analysis	Error! Bookmark not defined.
6.7 Pilot's Survey	Error! Bookmark not defined.
6.8 Context of Questions	Error! Bookmark not defined.
6.9 Results and Analysis	Error! Bookmark not defined.
7 Suggestions and Recommendations.....	Error! Bookmark not defined.
8 Future Developments	Error! Bookmark not defined.
9 Conclusion	Error! Bookmark not defined.
10 References	Error! Bookmark not defined.
APPENDICES	Error! Bookmark not defined.



LIST OF FIGURES

Figure 1(Time Line)	Error! Bookmark not defined.
Figure 2 (Wikipedia, 2017)	Error! Bookmark not defined.
Figure 3 (VH-OQA after touch down)	Error! Bookmark not defined.
Figure 4(Flight Info)	Error! Bookmark not defined.
Figure 5 (ECAM controls and Screens)	Error! Bookmark not defined.
Figure 6(Fuel leak)	Error! Bookmark not defined.
Figure 7 (Qantas Flight 32 flight path).....	Error! Bookmark not defined.
Figure 8(Engine Damage)	Error! Bookmark not defined.
Figure 9(Damaged Pylon)	Error! Bookmark not defined.
Figure 10(Skin Rupture)	Error! Bookmark not defined.
Figure 11(Wiring Damage).....	Error! Bookmark not defined.
Figure 12(447 Wreckage)	Error! Bookmark not defined.
Figure 13(Flight Info)	Error! Bookmark not defined.
Figure 14(EFCS Components).....	Error! Bookmark not defined.
Figure 15(Stall Warning)	Error! Bookmark not defined.
Figure 16(Data supply ADIRU)	Error! Bookmark not defined.
Figure 17(Recovered Wreckage)	Error! Bookmark not defined.
Figure 18(Flight Info)	Error! Bookmark not defined.
Figure 19(OPRN Approach).....	Error! Bookmark not defined.
Figure 20(Flight Path) 202)	Error! Bookmark not defined.
Figure 21(Misaligned bore)	Error! Bookmark not defined.
Figure 22(Instrument approach).....	Error! Bookmark not defined.
Figure 23(447 Flight path)	Error! Bookmark not defined.
Figure 24(FSF Data)	Error! Bookmark not defined.
Figure 25(Regional Data)	Error! Bookmark not defined.
Figure 26(Mission Management)	Error! Bookmark not defined.
Figure 27(Frequency of Flight)	Error! Bookmark not defined.
Figure 28(Q2 to Q8)	Error! Bookmark not defined.
Figure 29(Maintenance)	Error! Bookmark not defined.
Figure 30(Pilots Survey).....	Error! Bookmark not defined.
Figure 31(Pilots Survey).....	Error! Bookmark not defined.
Figure 32(Appendix A)	Error! Bookmark not defined.
Figure 33(Appendix B)	Error! Bookmark not defined.
Figure 34(Appendix C)	Error! Bookmark not defined.
Figure 35(Appendix D)	Error! Bookmark not defined.



GLOSSARY

N1	RPM of front engine fan
FDR	Flight Data Recorder
CVR	Cockpit Voice Recorder
AMSL	Above mean sea level
C	Centre
UTC	Coordinated Universal Time
ATHR	Auto thrust
ECAM	Electronic Centralized Aircraft Monitoring
FL	Flight Level
ATC	Air Traffic Control
SD	Systems Display
PFD	Primary Flight Display
ND	Navigational Display
EWD	Engine Warning Display
MSN	Manufacturer serial no
TOGA	Take off go around detent
ISIS	Integrated standby Instrument System
GPWS	Ground Proximity warning System
EGPWS	Enhanced GPWS
D/W	Downwind
EFCS	Electronic Flight Control System
ADIRU	Air Data and Inertial Reference Unit.
FPM	Feet per minute



1. Project Description

This project is aimed towards a better understanding of human behaviour during interaction with complex systems. 5M model is extensively used in the field of aviation safety, 5M model has three basic elements which are man, machine and medium. These three elements make up the mission which is to be done and finally one bigger element covers all four which is management. By application of 5M model, aviation accidents are analysed according to these five factors. The project covers three aviation accidents.

Qantas Flight 32

Air France Flight 447

Air Blue Flight 202