

CHAPTER 5

R&M PROCESSES

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1. INTRODUCTION

Reliability and Maintainability (R&M) are vital characteristics of defence equipment that affect the sustained delivery of the required performance in service and are major drivers of the cost of ownership through life. If equipment is unreliable or difficult to maintain it will reduce the fighting capability, put lives at risk, lower morale, increase the logistic footprint and the through life cost and creates adverse publicity.

2. BACKGROUND

The traditional approach of simply testing delivered equipment to demonstrate a level of reliability is rarely practical with modern complex systems where ‘going back to the drawing board’ would be impractical, cause delays and would be very expensive. By using the principles of Progressive Assurance supported by the Reliability Case in conjunction with a sequence of logical processes, equipment which is more reliable and more easily maintained can be brought into and be more easily supported in service.

3. PROCESSES

Reliability and Maintainability Process Maps provide a comprehensive step by step guide to managing the R&M aspects of specifying, acquiring, fielding and maintaining equipment throughout the CADMID cycle. The maps do not specify how individual equipment should be managed but enable informed decisions and programmes to be developed to optimise the acquisition and through life management process.

4. LIST OF PROCESSES

Overview

		Current Version
Process 101	Ministry of Defence Through life Reliability and Maintainability Process	2.0
Process 201	Capture and Record R&M Requirement	2.0
Process 202	Expand and Develop Understanding of R&M Requirement	2.0
Process 203	Ensure that R&M Influences Design and Development Activities and is Appropriately Demonstrated	2.0
Process 204	Maintain R&M	2.0
Process 205	Complete and Publish R&M Case	2.0

Concept Phase

		Current Version
Process 301	Understand Capability Requirements and Generate/Review R&M Options	2.0
Process 302	Evaluate Risk, Initiate R&M Case and Create Evidence Framework	2.0
Process 303	Develop R&M Strategy	2.0
Process 304	Deliver (Initial Gate) R&M Assessment	2.0

Assessment Phase

		Current Version
Process 305	Understand R&M Aspect of Solution Options and Evaluate R&M Achievability	2.0
Process 306	Evaluate Risk, Develop Mitigation Strategies and Select Optimum R&M Solution	2.0
Process 307	Trade-Off R&M Performance / Cost / Timescale / Risk	2.0
Process 308	Refine R&M Strategy and Develop ‘Through Life’ R&M Plan	2.0
Process 309	Deliver (Main Gate) R&M Assessment	2.0

Demonstration/Manufacture Phases

		Current Version
Process 310	Contract for R&M Against Agreed Plan	2.0
Process 311	Deliver and Monitor R&M Activities	2.0
Process 312	Carry Out Planned R&M Trials and Demonstrations	2.0
Process 313	Evaluate R&M Achievement	2.0
Process 314	Carry out Planned Production Testing	2.0
Process 315	Deliver (In-Service) R&M Assessment	2.0

In-Service Phase

		Current Version
Process 316	Monitor R&M Performance	2.0
Process 317	Publish In-Service R&M Case Report at Specified Intervals	2.0
Process 318	Evaluate R&M Achievement	2.0
Process 319	Assess Requirement for R&M Modification Action	2.0

Disposal

		Current Version
Process 320	Complete Publication of R&M Case	2.0
Process 321	Archive R&M Case for Future Reference	2.0

Note: Where available this document is electrically linked to the current versions of the R&M Processes. The R&M Processes can also be accessed via the Acquisition Operating Framework at <http://www.aof.mod.uk> or by contacting the Help Desk details of which can be found in PtACh1.

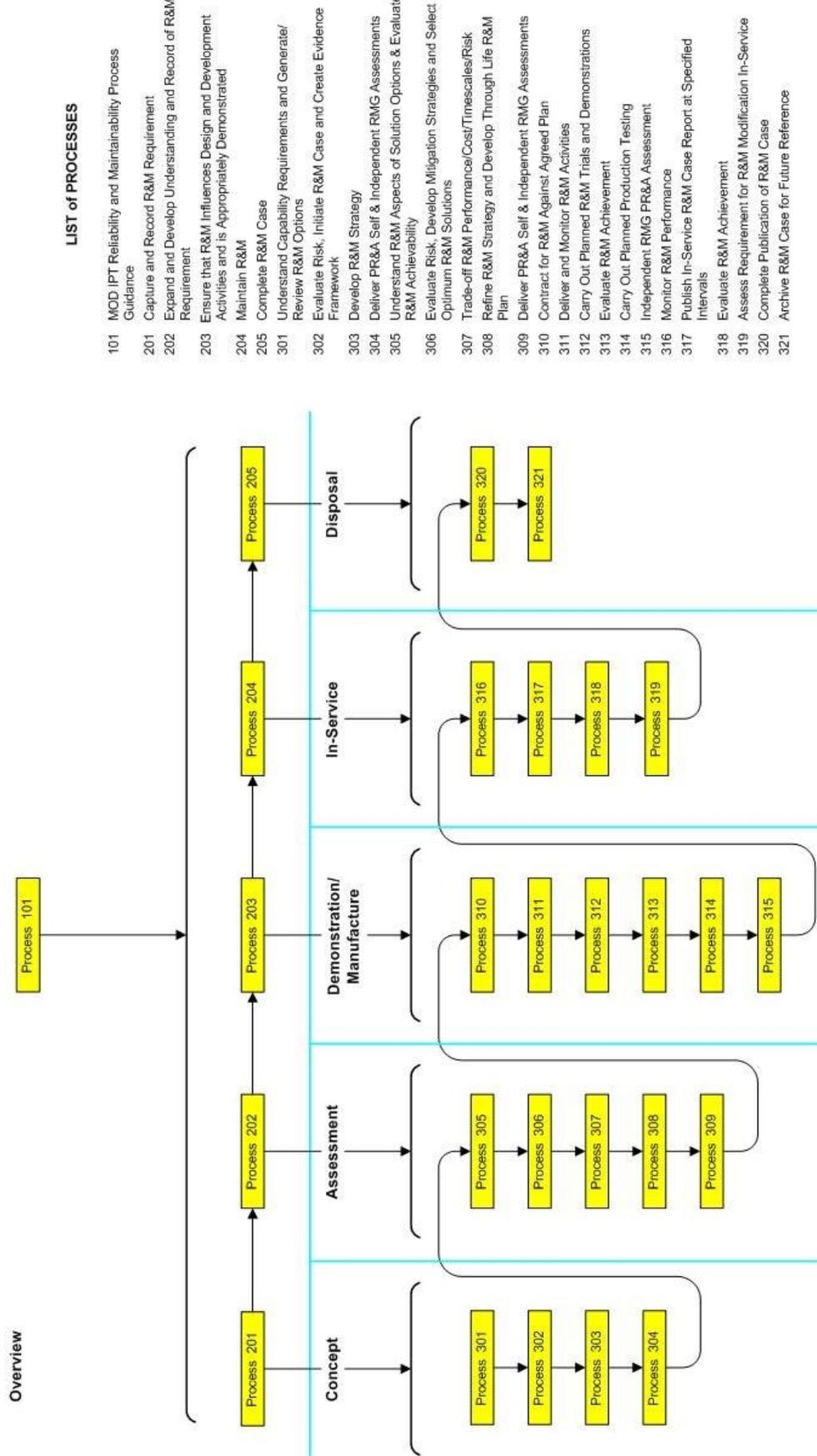


Figure 1 – R&M Processes

