



MAINTENANCE CHAPTERS	PROCESSES														MAINTENANCE SUBJECTS			
	MAN	REALISATION				SUPPORT (definitions below)												
	MAN	COR	PRV	ACT	IMP	BUD	DOC	DTA	HSE	IST	MRQ	OPT	RES	SER		SPP	TOL	
Maintenance management				●														Criticality analysis (RCM, ...)
				●														Maintenance and risk management (RBI, ...)
	●																	Value based maintenance
	●																	Total Productive Maintenance
							●											Replacement investments
											●							Facility management
												●						RAMS management during design
												●						Maintainability studies
												●						Design out maintenance
												●						Integrated Logistic Support
													●					Lean Maintenance
														●				Decision making in maintenance
										●								Performance Indicators & Dashboards
																		Benchmarking
																	Maintenance process diagnosis & audits	
																	Customer satisfaction surveys	
Maintenance within Physical Asset Management	●																Relations between maintenance and other processes	
	●																Maintenance process description – roles & responsibilities	
	●																Life cycle management	
	●																Life cycle extension	
	●																Maintenance, and investment decisions	
	●																Rebuilding & Reinvestment strategies	
	●																Relations with auditing & safety organizations	
	●																Uncertainty in maintenance management	
	●																Maintenance and Sustainability	
	●																Maintenance and industry 4.0	
Maintenance execution				●													Work preparation & scheduling	
				●													Shutdown & turnaround management	
				●													e-maintenance	
				●													Operator Based Maintenance	
				●													Remote maintenance	
				●													Disassembly and reassembly processes	
				●													Reliability & maintainability improvements	
					●												Relations between Operation and Maintenance staff	
															●		Contracting & outsourcing & insourcing	
			●														Qualification of equipment	
									●								Maintenance data collection	
Maintenance engineering techniques	●																FRACAS (Failure Reporting Analysis Corrective Action System)	
		●															Big data for maintenance and asset management	
																	Fault diagnosis	
					●												Condition monitoring techniques (vibration analysis, thermography, tribology, etc.)	
					●												Non Destructive Testing (ultrasonic testing, Eddy current, radiography, etc.)	
					●												Diagnosis & Prognosis and Predictive maintenance	
											●						Maintenance of real estates	
																●	Augmented reality techniques	
																●	Robotics and remote handling	
																	Equipment health analysis	
																	Ageing and degradation mechanism modelling	
																	Remaining useful life assessment	
			●														Root Cause Analysis	
																	Human error analysis	
																Modelling and simulation of maintenance strategies		
																Maintenance tasks modelling and simulation		
Health, safety and environment in maintenance										●							Occupational diseases and accidents	
										●							Risk assessment in maintenance	
										●							Good practices in safety	
										●							Good practices in environment preservation	
Maintenance support						●											Budgetary control	
							●										Maintenance documents	
								●									Maintenance standards	
																	Maintenance knowledge & best practices	
																	Education & training in maintenance, E-learning in maintenance	
																	Competences, qualification and Certification of maintenance personnel	
																	Spare part management	
																	Obsolescence management	
																	Maintenance Information Systems	
																	Instrumentation & Wireless techniques	
																	Visualization for maintenance diagnosis	
																	Traceability	
																	Best practices identification	
																	Tools for expert evaluation	

- MAN - Manage maintenance (strategy and improvement, human resources, continuous improvement, compliance, etc.)
- COR - Restore the items in required state (Diagnose the state of the faulty item) (see ACT process for tasks implementation)
- PRV - Prevent undesirable events by avoiding failures and faults
(Characterize undesirable events and use and update maintenance plans) (see ACT process for tasks implementation)
- ACT - Implement preventive and/or corrective actions on the item
- IMP - Improve the items
- BUD - Budget maintenance of items
- DOC - Deliver the operational documentation
- DTA - Manage data
- HSE - Ensure personal health and safety to individuals and preserve environment in maintenance
- IST - Provide the needed infrastructures
- MRQ - Deliver maintenance requirements during items design and modification
- OPT - Improve the results
- RES - Provide internal human resources
- SER - Provide external maintenance services
- SPP - Deliver spare parts
- TOL - Deliver the tools, support equipment and information system