WP #	WP Title	Responsibility	2003 V1				2004 V2				2005 V3				2006				2007				2008				FTE V1	FTE V2	FTE V3
			JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND			
1	**ESO VISTA software deliverables and documentation**	**PSB**																									**0.5**	**0.5**	
1.1	DFS user requirements document	PSB																											
1.2	Data reduction specification	PSB																											
1.3	Calibration plan document for ESO	PSB																											
1.4	Specification of calibration procedures for ESO	PSB																											
1.5	Interface control document ESO/VPO	PSB																											
1.6	Instrument specification and interface documents	PSB																											
1.7	Delivery software modules Exposure Time Calculator	PSB																											
1.8	Liase with VISTA IR camera development team	PSB																											
1.9	Development of DQC measures	PSB																											
2	**Management and Definition of Responsibilities**	**MJI**																									**0.4**	**0.2**	**0.2**
2.1	Report to VISTA Board, GSC	MJI																											
2.2	Interface Control Document between CASU and JAC	MJI																											
2.3	Interface Control Document between CASU and WFAU	MJI																											
2.4a	Define data structures and FITS headers	JRL																											
2.4b	Define VISTA data structures and FITS headers	JRL																											
2.5a	Define observing protocols	STH																											
2.5b	Define VISTA observing protocols	STH																											
2.6a	Liaise with UKIDSS & JAC on observing strategy	DWE																											
2.6b	Liaise with VSC + VO on observing strategy	DWE																											
2.7a	Liaise with UKIDSS & JAC on survey planning	DWE																											
2.7b	Liaise with VSC + VO on survey planning	DWE																											
2.8a	Liaise with UKIDSS & JAC on survey progress database	JRL																											
2.8b	Liaise with VSC + VO on survey progress database	JRL																											
2.9a	System Documentation	STH																											
2.9b	VDFS System Documentation	STH																											
3	**Pipeline Infrastructure and Progress Monitoring Tools**	**JRL**																									**0.4**	**0.2**	**0.2**
3.1	Interactive tools for running pipeline	JRL																											
3.2	High level scripts to interrogate headers	STH																											
3.3	Develop automatic progression of results to WWW pages	STH																											
3.4	Automate checks to spot failures of pipeline	STH																											
3.5a	Tools for fixing problem datasets	JRL																											

3.5b	Tools for fixing VISTA problem datasets	JRL																									
3.6	Group Documentation for above	JRL																									
3.7a	Reprocessing after bug fixes or improvements to algorithms	RWA																									
3.7b	Reprocessing VISTA after bug fixes or improvements to algorithms	RWA																									
4	**Set up and Manage Raw Science Archive**	**RWA**																							**0.1**	**0.2**	**0.1**
4.1	Extend current UKIRT archive to cope with WFCAM/VISTA	JRL																									
4.2a	Ingest and verify WFCAM data	RWA																									
4.2b	Ingest and verify VISTA data	RWA																									
5	**Set up and Manage Data Processing System Hardware**	**MTB**																							**0.2**	**0.2**	**0.2**
5.1	Investigate alternatives (benchmarking, reliability etc)	MTB																									
5.2	Buy hardware and install software	MTB																									
5.3	Integration and testing	MTB																									
5.4	Manage day-to-day, maintenance and upgrades	MTB																									
5.5	Hardware additions for further data processing system	MTB																									
6	**Run Standard Pipeline**	**RWA**																							**0.0**	**0.9**	**1.0**
6.1a	Ingest and verify WFCAM data **(duplicated in 4.2a)**	RWA																									
6.1b	Ingest and verify VISTA data	RWA																									
6.2a	Update master calibration frames	JRL																									
6.2b	Update VISTA master calibration frames	JRL																									
6.3a	Monitor detector performance	JRL																									
6.3b		JRL																									
6.4a	Oversee standard processing	RWA																									
6.4b		RWA																									
6.5a	Astrometric calibration	DWE																									
6.5b		DWE																									
6.6a	Photometric calibration	STH																									
6.6b		STH																									
6.7a	Verify science products and monitor DQC measures	RWA																									
6.7b		RWA																									
6.8a	Monitor product data transfer to WFAU	JRL																									
6.8b		JRL																									
7	**Development Work for WFCAM Summit Pipeline**	**JRL**																							**0.2**	**0.1**	**0.1**
7.1a	Interface test pipelines to ORAC-DR	JRL																									
7.1b	Interface test pipelines to summit DR	JRL																									
7.2a	Implement WFCAM pipeline at summit	JRL																									
7.2b	Implement VISTA pipeline at summit	JRL																									
7.3a	Documentation of interface	JRL																									

7.3b	Documentation of interface	JRL																									
7.4a	Upgrade and maintain summit pipeline	JRL																									
7.4b	Upgrade and maintain summit pipeline	JRL																									
8	**Development and Testing of Standard 2D Processing**	**STH**																							**0.4**	**0.2**	**0.0**
8.1a	Further development of standard pipeline	JRL																									
8.1b	Development of VISTA specific packages	JRL																									
8.2a	Liaison with WFCAM development team	JRL																									
8.2b	Liaison with VISTA camera development team	JRL																									
8.3a	Partake in planning commissioning observations	STH																									
8.3b		STH																									
8.4a	Participate directly in commissioning	STH																									
8.4b		STH																									
8.5a	Tuning pipeline during commissioning and after	JRL																									
8.5b		JRL																									
8.6a	Documentation of 2D processing software	JRL																									
8.6b	Documentation of additions to 2D processing	JRL																									
8.7	Comparison between automated and manual data products	STH																									
9	**Development and Testing of Standard Catalogue Products**	**DWE**																							**0.5**	**0.2**	**0.0**
9.1a	Add in new measures requested	MJI																									
9.1b	New measures for VISTA ?	MJI																									
9.2a	Refine astrometric calibration model	MJI																									
9.2b	Refine astrometric calibration model - VISTA specific	MJI																									
9.3a	Generate model simulations of expected data (WFCAM)	STH																									
9.3b	Generate model simulations of expected data (VISTA)	STH																									
9.4a	Assess catalogue parameter reliability	DWE																									
9.4b	Assess catalogue parameter reliability	DWE																									
9.5	Intercomparison of catalogue products with other packages	STH																									
9.6a	Completeness and error estimates	MJI																									
9.6b	Completeness and error estimates	MJI																									
9.7a	Documentation of catalogue software and products	MJI																									
9.7b	Documentation of catalogue software and products	MJI																									
10	**Set up, Trial, and Run Further Processing Software**	**MJI**																							**0.1**	**0.3**	**1.5**
10.1	Manage and run further processing stages	MJI																									
10.2	Development and assessment of PSF options 1,2	MJI																									
10.3	Develop 1D/2D PSF-deconvolved Sersic profile fits	MJI																									
10.4	Develop LSBG/nebulosity detection/parameterisation	MJI																									
10.5	Full iterative profile fitting for stellar images	TBD																									

10.6	Develop and optimise Bayesian image classification	TBD																								
10.7	Modelling and simulations of further processing steps	STH																								
11	**Photometric Standards and Calibration**	**STH**																							**0.2**	**0.3**	**0.1**
11.1	Agree on primary standards (WFCAM + VISTA)	STH																								
11.2	Choose secondary standard fields (WFCAM + VISTA)	STH																								
11.3a	Take part in commissioning observations	STH																								
11.3b	Take part in commissioning observations	STH																								
11.4a	Reduce data, compute zero points and colour equations	STH																								
11.4b	Reduce data, compute zero points and colour equations	STH																								
11.5	Update, maintain and extend secondary standards system	STH																								
11.6	Investigate photometric calibration field systematics	STH																								
11.7	Assess extinction monitoring methods and develop measures	DWE																								
12	**Further Development of DQC Measures at Summit and Cam**	**JRL**																							**0.2**	**0.2**	**0.0**
12.1	Develop extra systematic noise measures	MJI																								
12.2	Refine current measures for WFCAM/VISTA data	JRL																								
12.3	Implement 2MASS - cf. for throughput measures	MJI																								
12.4	Master calibration frames for detector monitoring	JRL																								
13	**Co-Located List Driven Photometry**	**MJI**																							**0.1**	**0.2**	**0.5**
13.1	Test methods for master catalogue generation	MJI																								
13.2	Develop basic WCS-based list driven photometer	MJI																								
13.3	Externally driven WCS photometry and define parameter set	MJI																								
14	**Stacking and Mosaicing**	**MJI**																							**0.1**	**0.2**	**0.5**
14.1	Develop benchmark simple stacking/mosaicing framework	MJI																								
14.2	Nearest neighbour algorithm with simple rejection	MJI																								
14.3	More sophisticated rejection dealing with pixellation	MJI																								
14.4	Stacking with optimum weighting and defect rejection	MJI																								
14.5	Advanced stacking/image restoration for variable PSF	TBD																								
15	**Continuum Subtraction and Basic Difference Imaging**	**STH**																							**0.1**	**0.1**	**0.5**
15.1	Simple WCS-based subtraction techniques	MJI																								
15.2	Investigate and apply different interpolation methods	DWE																								
15.3	Develop adaptive kernel matching option	TBD																								
15.4	Transient event detection	STH																								
16	**Interpolation Techniques and PSF Modelling**	**DWE**																							**0.4**	**0.2**	**0.0**
16.1	Investigate alternative interpolation/PSF schemes	DWE																								
16.2	Implications for different stacking methods	DWE																								
16.3	Implications for deriving catalogues and parameters	DWE																								
16.4	Oversampled PSF generation per detector	DWE																								

16.5	Develop oversampled spatially varying PSF model	DWE																											
																											3.9	**4.2**	**4.9**
YEAR			**DWE**	**JRL**	**MJI**	**MTB**	**PSB**	**RWA**	**STH**	**NEW**	**Total**				**Total**				**Total**				**Total**						
2003	VDFS funded		0.6	1	0.8	0.2	0.5		0.8	0.4	**####**				**4.3**				**####**				**####**						
2004	VDFS funded		0.6	0.8	0.7	0.2	0.5	0.7	0.7	0.5	**####**				**4.7**				**####**				**####**						