

# Appendix 7. Software tools

	Disciplines	Project domains	Application specialities
ANSYS	Mechanics Civil Eng. Electrical Eng.	System Design System Integration Commissioning Maintenance	FEM Analyses Static, Modal, Thermal, Non Linear Analyses (Buckling, etc.), PSD, Fatigue, Transient wind load.
SOLIDWORKS	Mechanics Opto- Mechanics Civil Eng. Electrical Eng.	System Design System Integration Commissioning Maintenance	CAD-CAM Mechanical design Opto-mechanical design Building and foundation design Cable routing. Kinematics simulations Design communication Rendering Drawings Limited FEM Analyses
PDM WORKS	Mechanics Opto- Mechanics	System Design System Integration Maintenance	Product Data Management of CAD Models, Drawings and Documents management
CFX	Mechanics	System Design System Integration	Fluid Dynamics simulations
MATLAB	Mechanics Control AO Active Optics Meteorology	System Design System Integration	Control Simulations Analytical AO simulations Site Characterization
SMI	Control	System Design	Structural Modelling Interface Between ANSYS and MATLAB
SIMULINK	Mechanics Control	System Design System Integration	Control Simulations
MathCad	All.disciplines	System Design System Integration Commissioning Maintenance	Mathematical models and solver.
modeFrontier	Mechanics Opto- Mechanics	System Design	Opto-Mechanical Design Optimisation

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TBD	System Eng. Electronics	System Design System Integration Commissioning Maintenance	
TBD	Electrical Eng.	System Design System Integration Commissioning Maintenance	
TBD	Software Eng.	System Design System Integration Commissioning Maintenance	
CODE V	Optics	System Design	Telescope and instrument Optical Design and analyses
ZEMAX	Optics	System Design	Telescope and instrument Optical Design and Analyses
BEAM WARRIOR	System Engineering Optics	System Design	Opto-mechanical analyses
DOORS	System Engineering	System Design System Integration Commissioning Operation Maintenance	System Requirements Managment
Hardware Configuration Control	System Engineering	Integration Commissioning Operation Maintenance	Maintenance, Treceability of parts, and components.
Interactive Data Language	AO Meteorology and Geodesy	System Design System Integration Commissioning	Plotting and EPICS simulations (coronagraphy), Sky Coverage, atmospheric dispersion, simulations. Site Characterization. Meteorological and geotechnical investigation data analysis and visualisation.
C code ESO written	AO Optics Active Optics	System Design System Integration Commissioning	Segmentation error analysis, Diffraction analysis. Operation of Active Optics
Fortran code ESO written	Active Optics	System Design	Elastic deformation of meniscus mirrors
PASCAL code ESO written	Optics	System Design System Integration Commissioning	Diffraction analysis
MIDAS	Meteorology and Geodesy	System Design System Integration Commissioning	Site Characterization Meteorological and geotechnical investigation data analysis and visualisation.

	Disciplines	Project domains	Application specialities
GEO JAVA based SW	Meteorology and Geodesy	System Design System Integration Commissioning	Site Characterization Meteorological and geotechnical investigation data analysis and visualisation.
Microsoft Project	Project management & Control	System Design System Integration Commissioning	Planning, Schedule and Resource Management; Budget and Cost tracking
NAVISION	Project management & Control	System Design System Integration Commissioning	Project Management; Resource control and planning; Budget Management