Basic Regulations

- The CA-Documentation-Guideline is valid for all production equipment procured by the Technology Assembly and controls which CAD-System has to be used by the supplier for the design process and documentation.
- The workflow and data characteristics are specified in the appropriate guidelines (Catia V5: OEM-Guideline for the Jig Design with Catia V5 and Guide to Design of production tooling; MicroStation: Delivery Instructions CAD-Layoutplanning for Technology Assembly).
  The guidelines are provided in the BMW Partner Portal: https://b2b.bmw.com -> public area -> Departments -> Technologies -> Assembly
- For topics marked 'AS' in the following table, the 3D geometry has to be delivered as alternative shape without drawing and without BOM. For Catia V5, the geometry has to be provided as cgr or All.CATPart. For MicroStation, the geometry has to be provided as simplified representation for the layout according to the Delivery Instructions CAD-Layoutplanning for Technology Assembly in dgn file format.
- The Team Virtual Assembly is responsible for questions concerning Catia V5 topics. The Team Layout Assembly is responsible for questions relating to MicroStation v8 layouts. The team members are listed in BMW Partner Portal.
  The Team Fastening Technology is responsible for the homologation and CAD supply regarding assembly tools for screws and nuts.

Topic	Catia V5 (3D, 2D and BOM)	Layout 3D MicroStation v8 (dgn)	Layout 2D MicroStation v8 (dgn)	Comment
workshop facilities				
fastening tools (pneumatic or battery), hand tools (standard, not custom-made)	**AS**			standard fastening tools with homologation (HSD), catalogue products
hand tools (custom-made products)	**X**			
assembly rigs, measuring and test equipment	**X**		**X**	
torque reaction arms and fixture devices for EC assembly tools	**X**			including EC assembly tool as alternative shape
handling equipment, manipulator	**X**			
assembly gauges, equipment gauges	**X**	**AS**	**X**	layout relevant, if required space >= 5 sqm
robot	**AS**	**AS**	**X**	2D layout with illustration of operating area
robot tooling	**X**	**AS**	**X**	
conveyor equipment				
assembly adapter (crossbar, car adapter, etc.)	**X**			
hangers (e.g. for tilt assembly, heavy duty conveyor, etc.)	**X**	**AS**	**X**	
carriers	**X**	**AS**	**X**	
load handling equipment, workpieace holder, etc.	**X**	**AS**	**X**	
conveyors				
overhead conveyor		**X**	**X**	TriCAD FT for early planning phase and accordingly for documentation if TriCAD FT corresponds to built hardware; structural steelwork in TriCAD BT
floor conveyor		**X**	**X**	TriCAD FT for early planning phase and accordingly for documentation if TriCAD FT corresponds to built hardware
roll, belt or chain conveyors (e.g. dual strand conveyors)		**X**	**X**	TriCAD FT for early planning phase and accordingly for documentation if TriCAD FT corresponds to built hardware
slat conveyor, associates carrier		**X**	**X**	TriCAD FT for early planning phase and accordingly for documentation if TriCAD FT corresponds to built hardware
AGV		**X**	**X**	TriCAD FT for early planning phase and accordingly for documentation if TriCAD FT corresponds to built hardware
lifter, converter, etc.	**X**	**AS**	**X**	
equipment				
systems engineering, automated equipment, testing bays	**X**	**AS**	**X**	
storage racks, buffers, etc.		**X**	**X**	TriCAD FT or TriCAD BT
automatic racks		**X**	**X**	TriCAD FT or TriCAD BT
cranes		**X**	**X**	
protective fences		**X**	**X**	TriCAD FT, where appropriate also Catia, if part of an entire installation designed in one CAD-system
team areas, line runner stations		**X**	**X**	
structural steelwork, haengers, tool steel		**X**	**X**	TriCAD BT
control cabinets, maintenance cabinets		**X**	**X**	TriCAD FT, where appropriate also Catia, if part of an entire installation designed in one CAD-system
workbenches, workplace layout, tool cabinets, etc.		**X**	**X**	cells from TriCAD LT for layout
mezzanines, platforms, machine beds, etc.		**X**	**X**	TriCAD BT
logistics				
container, special purpose container (FFG)	**X**	**AS**	**X**	Catia construction is attended by Technology Logistic; Cells from TriCAD LT for layout
facilities, racks, live storage racks, heavy duty racks, etc.		**X**	**X**	Cells from TriCAD LT for layout
building, technical facility equipment				
building design (steel structure, concrete structure)		**AS**	**AS**	Speedikon
areas, assembly topology			**FIS**	BMW Area-Information-System (FIS) based on Bentley Facilities Planner
electric lighting		**X**	**X**	TriCAD HT
water supply, wastewater disposal		**X**	**X**	TriCAD HT
heating, ventilation		**X**	**X**	TriCAD HT
cable trays, network, electricity		**X**	**X**	TriCAD HT