Maturity of preliminary design information self-assessment by information producer

CAD-File

Information Matury beeing assessed:
.....
(part name/number/unique identifier)

Information produced and assessed by:
.....

Date of assessment:
.....

		4	3	2	1	0
COMPLETENESS Maturity relating to content of the preliminary information	**Coverage** How well is everything in place that I know has to be there?	The CAD file I am providing contains **all needed (sub)assemblies** - regardless of how detailed each of these is worked out yet. I am sure that no (sub)assembly is still missing that should be there.		**Most (sub)assemblies** that shall go into this CAD file are already there only a few (sub)assemblies might have to be added.		I know **several (sub)assemblies** that should be there are **not there yet.**
	Depth How fine-tuned is the information (are all aspects detailed or do rough placeholders exist)?	The CAD file is worked out **until the finest level of detail** that is necessary (including rounds, tolerances, surface finished, appearance, etc.).		**Some** sub-assemblies of the CAD file are already **fine-tuned,** others contain placeholders or initial drafts for important parts which just need to be fine-tuned.		**Several** (sub)assemblies are **roughly in place**, either just consist of a skeleton structure, are simple solids lacking detail, appear final but are just carry-over, or downloaded parts or are not even there yet.
	Procedural Completeness What is the information's formal or informal status?	The CAD-file has reached its **highest possible stage** we use in our organisation, either by being formally signed-off and/or the highest PLM status has been assigned, or if no such formal stages exist, it could be a "**deliverable**" to an internal/external customer	The CAD-file is "**enabled**" to be published for the official validation process.	The CAD-file is "**exhibited**" for the purpose of getting insights from my personal network.	The CAD-file is a "**draft**" almost ready to be shared.	The CAD-file is **not even a "draft"** but just an idea or a hypothesis I have in mind but not to be shared yet.
CLARITY Maturity relating to presentation of the preliminary information	**Nomenclature** How rigorously are suitable units, symbols and definitions provided?	I have **checked the entire CAD-file** for conformance with company standards considering file names, model tree structure etc. **All** units {[m]vs.[inch]} material definitions, tolerances, origo, scale, data dependencies (no broken links) have also been checked.		I have **roughly checked most parts of the CAD-file** for conformance with company standards considering file names, model tree structure etc. **Most** of the units {[m]vs.[inch]} material definitions, tolerances, origo, scale, data dependencies (no broken links) have also been checked.		I have **not yet checked parts of the CAD-file** for conformance with company standards considering file names, model tree structure etc. Some units, material definitions, tolerances, origo, scale may be missing, missing data dependencies (broken links) are likely to exist.
	Conciseness How confident am I that the lack of waffle/unnecessary repetition was	For the CAD file I am providing, **all unnecessary detail** is **hidden/deleted** (mannequins, architectural details, reference-drawings ...) is scraped.		For the CAD file I am providing, **most unnecessary detail** is **hidden/deleted** (mannequins, architectural details, reference-drawings ...) is scraped.		For the CAD file I am providing, **some**, unnecessary detail is hidden/deleted (mannequins, architectural details, reference-drawings ...) is scraped.
	Vagueness How confident am I that there is no room for interpretation?	Either I used **no workarounds** to leave room for interpretation **or** I **indicated** these **clearly** (such as extreme tolerances, "black boxes", etc.)		I used **some workarounds** to leave room for interpretation **and** I **indicated** these **more or less clearly** (such as extreme tolerances, "black boxes", etc.)		I used **many workarounds** to leave room for interpretation **but** I **did not indicated** these **clarly** (such as extreme tolerances, "black boxes", etc.)
CONSISTENCY Maturity relating to meshing of the preliminary information within itself and with relevant context and Ambiguity.	**Compatibility** How well is the infromation meshing with its environment or other information?	I made sure my assembly has **no** interferences with spatially surrounding objects (if relevant: hole-patterns are matched, etc). **Interaction** among sub-assemblies/parts is **fully defined** (e.g. motion joints, etc.). I made sure that **all owners** of other **parts being dependent on mine** are kept in the **update-loop.**		I made sure my assembly has **only a few** interferences with spatially surrounding objects (if relevant: hole-patterns are matched ,etc). **Interaction** among sub-assemblies/parts is **mostly defined** (e.g. motion joints, etc.). I made sure that **most owners** of other **parts being dependent on mine** are kept in the **update-loop.**		My assembly **might have several** interferences with spatially surrounding objects (if relevant: hole-patterns are matched, etc.). **Interaction** among sub-assemblies/parts is **not yet defined** (e.g. motion joints, etc.). I have **not considered owners** of other **parts being dependent on mine.**
	Coherence How well is the data meshing well within itself?	**All** my CAD file **inputs** have been **checked** to be the **latest** versions. Where appropriate, **all** parameters are **defined relative,** not absolute. In case of referenced/copied/mirrored/... parts, I **always** use proper **inheritance**/linking etc. I **strictly follow** our **data storage protocol** (if applicable: I properly use the PDM/PLM system).		**Most of** my CAD file **inputs** have been **checked** to be the **latest** versions. Where appropriate, **most** parameters are **defined relative,** not absolute. In case of referenced/copied/mirrored/... parts, I **mostly** use proper **inheritance**/linking etc. I **mostly follow** our **data storage protocol** (if applicable: I properly use the PDM/PLM system).		**My** CAD file **inputs** have **not** been **checked** to be the **latest** versions. Some parameters are **defined relative,** some absolute. Referenced/copied/mirrored/... parts might be unreferenced. **I did not follow** our **data storage protocol.**
	Ambiguity Am I confident in the mental model of the content?	I have a **complete** mental model how to finish this CAD-file (e.g. I know **all** sub-assemblies needed to be included, where to get my data/resources to use etc.)		I have a **rough** mental model how to finish the CAD-file (e.g. I know **most** sub-assemblies needed to be included, where to get my data/resources to use etc.)		I have to find out what is required for this CAD-file.
DYNAMISM Maturity relating to anticipated future change in the preliminary information	**Change Extent** How significant do I expect the information to change?	**None** of the sub-assemblies/parts are expected to change at all.		Only a **small fraction** of the sub-assemblies/parts might undergo **minor** (geometric) changes.		**Most** sub-assemblies/parts might undergo **severe** changes.
	Stability How often do I expect the information to change?	The CAD-file is **stable** as I do not expect changes it to change anymore.		The CAD-file **might change infrequently**, such as at design reviews or quality gates during the project runtime.		As this CAD-file I am providing shall be understood just as an initial **draft**, I expect it to change **very frequently**, either as new information becomes available or at the weekly meeting with my boss.
	Predictability How well-known is the overall target and the related size of the problem to be overcome?	I know **exactly** what the **final version of this CAD-file shall look like** and have a **clear** impression of **how much effort this will entail** (how big the problem to overcome is).		I have a **rough idea** of how the final version of this CAD-file shall look like, I can **roughly estimate the amount of effort needed.**		I **don't know** how the final version of this CAD-file shall look like, what problems have to be solved underway and/or how much effort this requires.
PREREQUISITES Maturity relating to the inputs used for producing the preliminary information	**Availability** How significant were the assumptions required to proceed?	For this CAD-file, **all** needed **inputs** were **available**. I did **not** have to make any **assumptions**.		I had to make **some minor** assumptions for this CAD-file, but I am **confident** that these will hold/prove to be valid and **I indicated (annotated etc.) these clearly.**		I had to make **several assumptions** in order to get this initial draft of the CAD-file out, my confidence that the assumptions I made were realistic is quite low and I **did not indicate**, and differentiate these assumptions from hard facts.
	Traceability How well can I trace back the source of the information I used as an input?	**All** the sources of the input information used for this CAD-file can be **traced back easily** if needed.		**Most** of the sources of the input information used for this CAD-file can be traced back **with some effort** if needed.		**I do not know** where the input information used for this CAD-file stems from, some **might** be copy/paste from a colleague's flash drive.
	Credibility How confident am I that the inputs are credible?	I am **very confident** that all the inputs I have used for this CAD-file are **credible**.		I am **somewhat confident** that all the inputs I have used for this CAD-file are **credible**.		I am **not confident** that all the inputs I have used for this CAD-file are **credible**.
PROCESS Maturity relating to the method used to produce the preliminary information	**Rigour** How rigorously did I apply the method?	I **used the most sophisticated features** of the CAD software and didn't take any shortcuts/didn't use any workarounds.		I had to use **some shortcuts/workarounds** (either to cope with the deadline or because I don't know how to do it properly), if this CAD-file shall be integrated into a broader assembly, expert review **might be required.**		Given my basic understanding of this CAD-package, I probably used **many basic features** of the CAD software and did take many shortcuts/did use many workarounds. **Expert review is definitely needed.**
	Suitability How confident am I that the method used to create the information was appropriate?	I deem the underlying engineering science (testing or simulation [FEA, CFD,...]) **adequate** for this CAD file's current project status. At early stages, based on hand-calculations, at medium stages based on initial testing/simulation, at final stages detailed testing/simulation.		I deem the underlying engineering science (testing or simulation [FEA, CFD,...]) **a bit too basic** (e.g. more detail should have been used) or a bit too sophisticated (e.g. too high computational effort) for this CAD file's current project status.		I deem the underlying engineering science (testing or simulation [FEA, CFD,...]) **way too basic** (e.g. a lot more detail should have been used) **or too sophisticated** (e.g. excessive-high computational effort) for this CAD file's current project status.