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Available vs Accessible data and information _ the strategic role of adaptive communication in the Naval Architecture and Marine Engineering processes

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Efficient Data & Information sharing is key to and backbone of the collaborative effort to successful completion of projects on time and on budget. Current software tools generating growing amounts of data, and some generate information in more-or-less structured ways, too. However, a heterogeneous, collaborative approach is not supported much by the software industry which remains rather insular in its strategy, thereby forcing format conversions, data repetition and time-line fractures during the life-time design-to-delivery process. This causes data & information to remain, at best, accessible. A new "availability" paradigm that looks at the current environment from a different perspective is proposed for adoption and application to commence remedying the situation. Accessibility is, by definition, a search-based, existence dependent, uncertain and error-prone condition, while availability is, by definition, a data and information supply strategy that follows specific requirements expressed by each stakeholder. Contrary to general perception, proactive exploitation of data and information in the ship and yacht industries is very rarely undertaken and, even then, much less efficiently than possible today, the causes spanning from incompatible formats to culture. Although the first out-of-the-box fully enabled PLM environment for ship design and ship building is now available as a commercial software product, there remains a requirement for upstream preparation work which remains in itself a techno-cultural obstacle. On the other hand, it is nowadays possible to connect many common-place software tools into a managed, adaptive communication environment thereby effectively making data and information available to all stakeholders at the time and in the format required by each. The research presented in this paper discusses the structure and functioning of the collaborative, shared environment achieved with software tools already in common use. The already-in-use-software element is a fundamental facilitator in adjusting current practices to a more PLM-cognizant strategy and also greatly mitigates the cultural obstacles that hamper the much-needed evolution towards an AGILE and LEAN based PLM approach in our industry. The strategic role of adaptive communications is discussed in the context of requirements, constraints and the changes thereof experienced during the design-to-delivery process, disruptions which of even greater impact when caused by unforeseen events.

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