

## A unified framework improving interoperability and symbiosis in the field of Systems Engineering

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# Propositions

Accompanying the dissertation

*A unified framework improving interoperability and symbiosis in the field of Systems Engineering*

by

Leo van Ruijven

1. To be successful in the realization of a complex one-off system, per definition an innovation process is required (this thesis).
2. A project team that is capable of realizing a complex system successfully, has to be considered as a complex system in itself (this thesis).
3. The complexity of a system can only be mastered if the information is mastered (this thesis).
4. Information can only be mastered by using a commonly shared ontology and quality of data (this thesis).
5. Complex systems only can be successfully designed interdisciplinary by elaborating on all interactions in the context of that system with respect to energy, information, matter and construction (this thesis).
6. Knowledge of the evolution mechanism will play an important role in system science in the future.
7. Ballroom dancing and horseback riding both ask feeling, precise control, cooperation and respect for each other, but end with satisfaction of the highest order.
8. Deepening the literature for a PhD will make you aware of the fact that a lot of knowledge that has been gained in the past is still valid and valuable but has been ignored or not understood so far.
9. Listening to 432Hz music helps to releases emotional blockages and expands your consciousness while writing a dissertation.
10. The only place you will get to see when attending an international ISO meeting is its meeting venue, no matter how beautiful the environment is.

These propositions are regarded as opposable and defensible, and have been approved by the promotors Prof. ir. J.J. Hopman and Dr. ir. H. Veeke.