Creating synergies in the aftermarket: using the service network analysis for designing wind energy service networks

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Abstract
As the industrialization of the wind energy market is further progressing, ensuring a high technical availability of a wind turbine is becoming more and more crucial. Maintenance services have a significant impact on this availability. Nevertheless the wind energy service business is facing shortages of resources like spare parts or service personnel and thus is not able to provide the demanded quality. An appropriate means for dealing with these challenges is the establishing of service networks, which allow for coordinated processes, information exchange and resource sharing. However, as of today there is a lack of methodical support about how to structure the fragmented wind energy service market and how to identify cooperation potentials which lead to higher service quality. Thus, this paper presents a methodology for structuring the service market, identifying existing problems and developing solutions for an enhanced cooperation between the relevant players.

Objectives
- Structuring and designing the service network in order to identify potential for cooperation and improvement in the aftermarket
- Identification of existing problems in the aftermarket with impact on the availability of wind turbines

Methods
- Service Network Analysis as a methodology for structuring the service market
- Combination of the supply chain analysis and the value stream method in order to analyse wind energy service networks
- Classification and structuring services using the product life cycle or using their specific contribute to the value network and problem solving process at the customer

Results

Conclusions
- The industrialization of the renewable energy sector demands for professional service concepts
- In dynamic markets like wind energy establishing service networks is an appropriate means of professionalization
- The optimization of information sharing within the service network has great potential for achieving high service quality

References
1. Schuh, Günther, Friedli, Thomas and Kurr, Michael A., Kooperationsmanagement, Hanser, München [u.a.], 2005
2. Hartel, Ingo: Virtuelle Service-kooperationen in der Investitionsgüter-industrie, ETH, Zürich, 2004
3. Rother, Mike and Shook, John, Learning to See, One Cambridge Center, Cambridge, 2003