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Comprehensive Validation of the Regeneration Workload Forecast for Complex Capital Goods Using Data Mining

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***Abstract*— Capacity planning in the regeneration of complex capital goods faces major challenges because it is affected by a high level of uncertain workload information. A methodology is developed here to predict the regeneration workload on the basis of the CRISP-DM model using Bayesian networks. The forecasts are validated for the different capacity planning levels. The results support the conclusion that capacity planning can gain permanent benefits from the methodology developed.**

***Index Terms*— Bayesian networks, capacity planning, complex capital goods, damage library, data mining, forecast, regeneration**