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## **A Process Oriented Modelling Concept for Rich Vehicle Routing Problems**

The globalisation of the economy leads to a rapidly growing exchange of goods on our planet. Limited commodities and transportation resources, high planning complexity and the increasing cost pressure through the strong competition between logistics service providers make it essential to use Computer-aided systems for the planning of the transports. An important subtask in this context is the operational planning of trucks or other specialized transportation vehicles. These optimization tasks are called Vehicle Routing Problems (VRP). Over 1000 papers about a huge variety of Vehicle Routing Problems indicate the practical and theoretical importance of this NP-hard optimization problem. Therefore, many specific solvers for different Vehicle Routing Problems can be found in the literature. The drawback is that most of these solvers are specialized on limited problem types and it needs a lot of effort to adapt them to modified problems. Additionally, most real world problems are often much more complex than the idealized problems out of literature and they also change over time. To face this issue, we present an integrated modelling and optimization concept for solving complex and practical relevant Rich Vehicle Routing Problems. Its modular and process oriented structure, a library of VRP related neighbourhoods and algorithms, and a graphical user interface give the user both reusable components and high flexibility for rapid prototyping of complex Vehicle Routing Problems. An empirical investigation on standard benchmark problems for several VRP types shows that this flexible approach can also produce high quality solutions in reasonable time.