

presented at the 17th Weimar Optimization and Stochastic Days 2020 | Source: www.dynardo.de/en/library

> **DRISC** INNOVATION BY CONFIGURATION



SELLING THE NON-EXISTING. <u>CONFIGURE PRICE QUOTE AND METAMODELS.</u>

Dr. Georg Elsner, CEO ORISA



CPQ SOLUTIONS, INDIVIDUALLY CUSTOMIZED.

ORISA SERVICES



MEGATRENDS



Individualization



Knowledge Culture



Urbanization





Digitalization



Silver Society



Globalization



Health

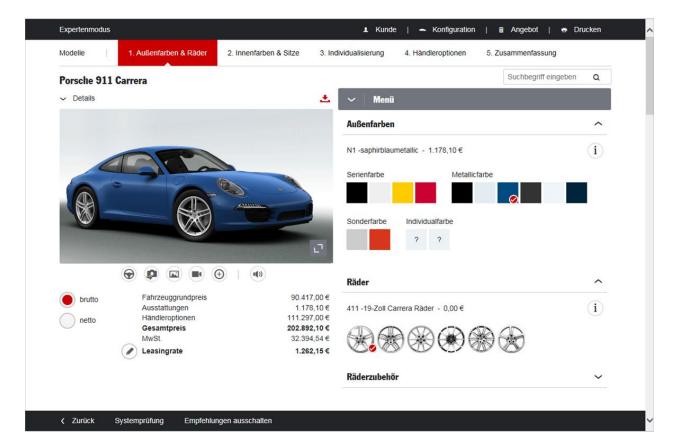


Mobility

INDIVIDUALIZATION – NOW AND THEN







Emperor Charlemagne's Imperial Crown

Today: An Individual Car for Everybody ...

CPQ DESIGN PATTERNS





CONFIGURATION IS FORWARD-CHAINING ON CONSTRAINT-KNOWLEDGEBASES

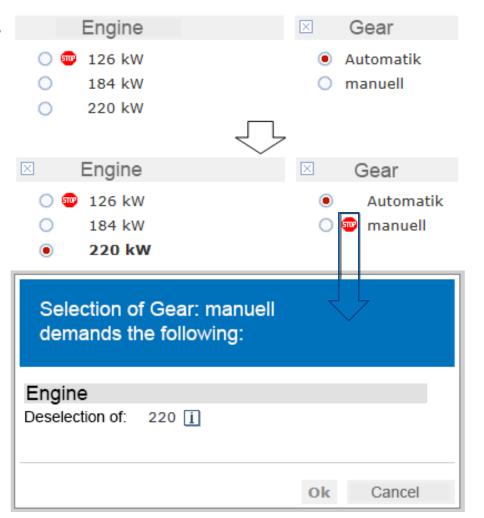


- UX, User Experience, Consistency of Expectations
- The user establishes an interaction.
- He or she exspects, that all changes in his world of decision are visualized immediately.
- He or she transfers his or her user experience to the configured product.

- Acknowledgements:
- Foreward Chaining everybody knows from Excel, that is a forward chainer for computations.
- Constraint Solving is near to the SAT (satisfaction) problem, a NP complete problem (does exist for a set of logical variables a solution so that a given logical normal expression on these variables becomes true, that is satisfied).

UX AND CONSISTENCY OF EXPECTATIONS

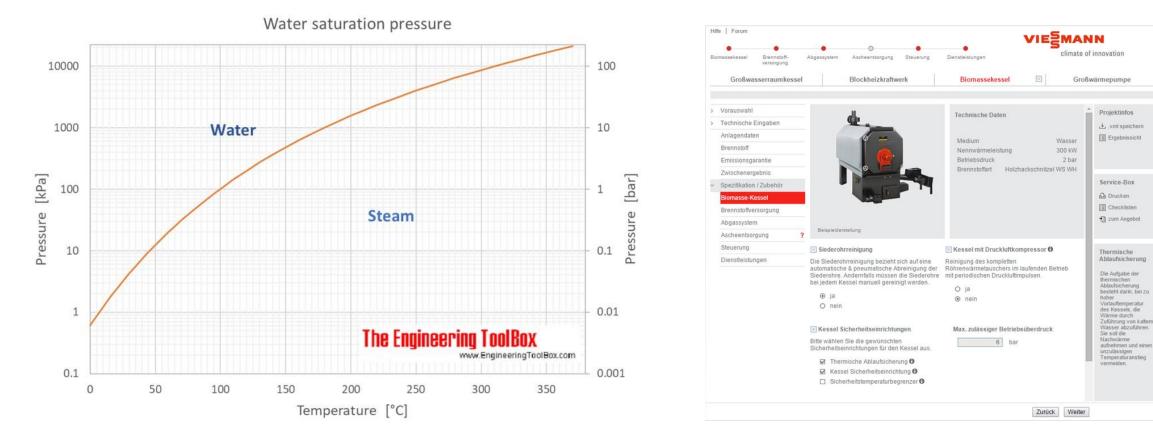
- Performance, informations at your fingertips.
- Support of any sequence of user decisions.
- Support in conflict solving, see example.





CONSTRUCTIVE DESIGN

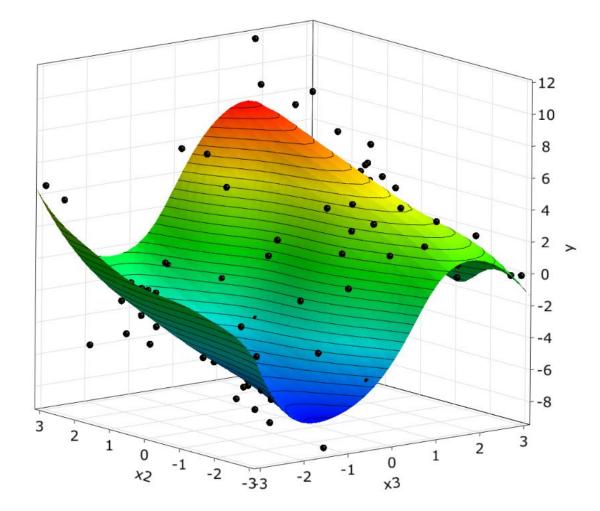




- Analytical dependencies via formulas, splines, NURBS (Non Uniform Rational Bezier Splines).
- Solution forwards and backwards (inverse).

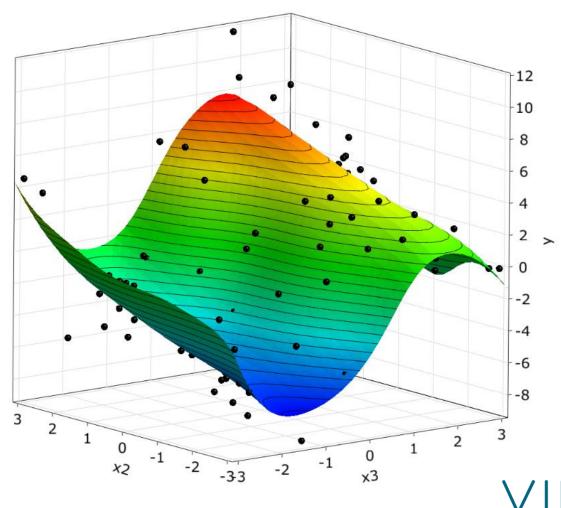
METAMODELS





- Simulation or measurement delivers support points.
- Multidimensional interpolation is solved by adequate technologies of interpolation or AI.
- Operations Research Algorithms can operate on these models to give solutions and inversions.

CPQ WITH METAMODELS



- Constructive design in a configurator tool "on your fingertips" with excellent performance.
- Constructive design also in the absence of an explicite formula.
- Constructive design also in cases where only simulations are available.
- Selling the non existing.

Bundesministerium für Bildung und Forschung

SIMULATION DRIVEN
PRODUCT AND PROCESS OPTIMIZATION

GEFÖRDERT VON





Thank you for your interest. Dr. Georg Elsner, CEO Georg.Elsner@orisa.de