

## CONTROL OF WIND FARMS



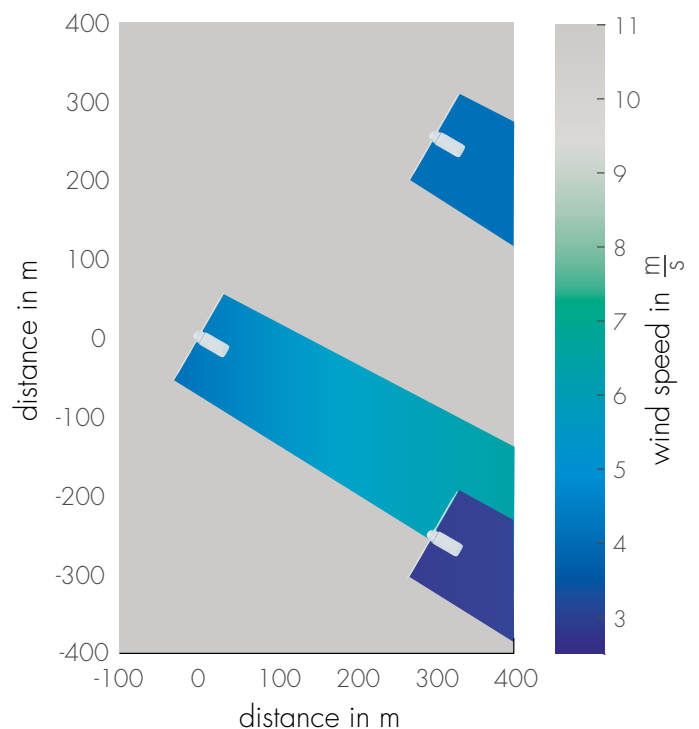
SILVER ATENA offers well-tailored software solutions in the field of safety-relevant systems and model-based systems engineering in various industries.

Wind farm simulation offers the possibility to analyse wind power plants. Suitable park controllers can lead to more economic use of the turbines.

Improving and optimizing control with help of simulations can result in more efficient production of wind power and therefore augment the customers' profits.

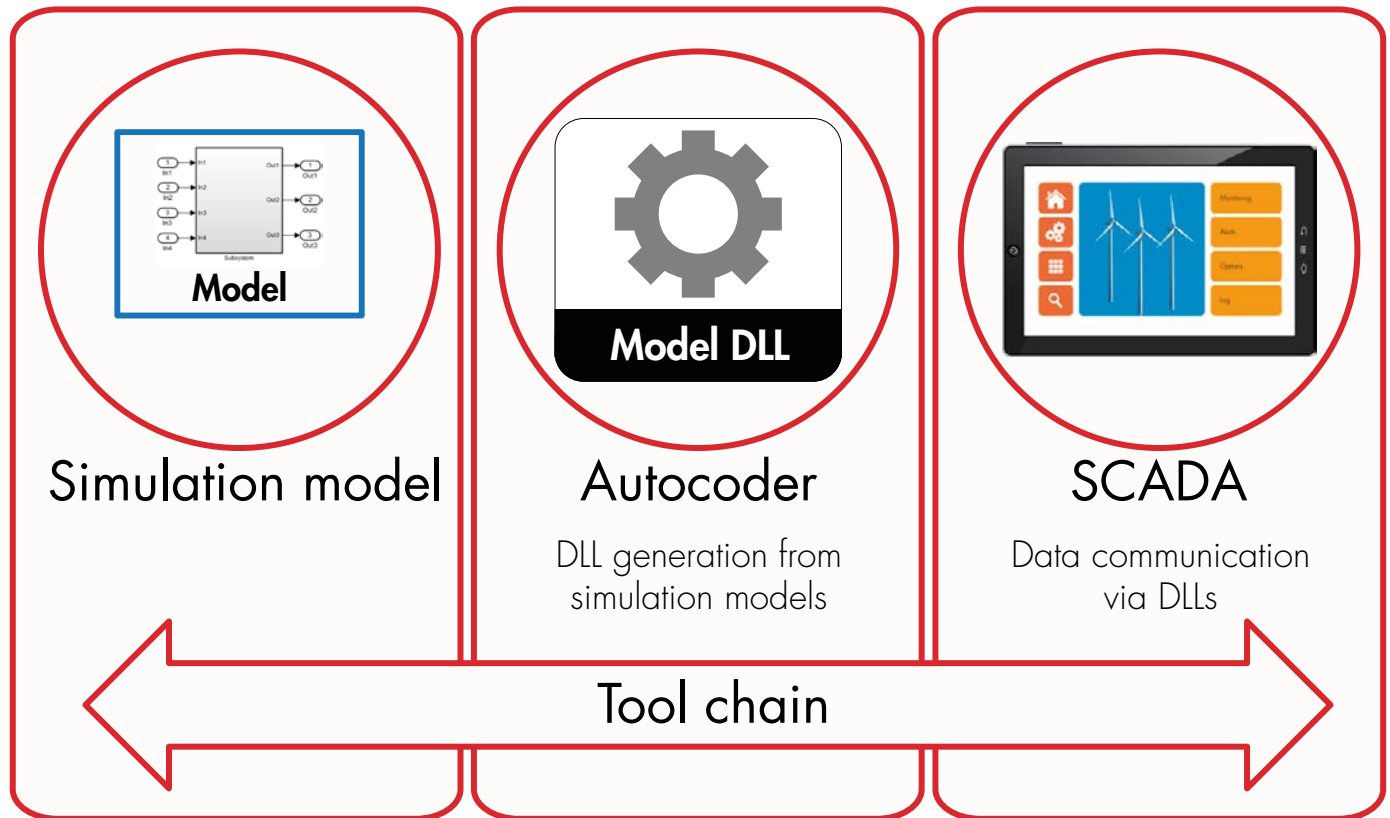
### WIND FARM CONTROL

- Self-controlled, autonomous wind turbines according to actual wind control standards including power limitation
- Variable, adaptable model with tower and rotor dynamics for offshore as well as onshore wind farms
- Inclusion of wake effects and resulting impacts on wind power production into the model
- Diverse control modes: single turbine and wind farm control
- Combination of autonomously acting wind turbines to an overall wind farm



## TOOL CHAIN

- Wind farm model development in Matlab/Simulink and PTC Integrity Modeler
- DLL generation by SILVER ATENA DLL Autocoder
- Model data acquisition and visualisation in SCADA software
- Communication and data exchanges via DLLs



## CUSTOMER BENEFITS

- Highly efficient wind power production results for wind farms
- Economic use of wind power farms
- Increasing profits due to ameliorated processes



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