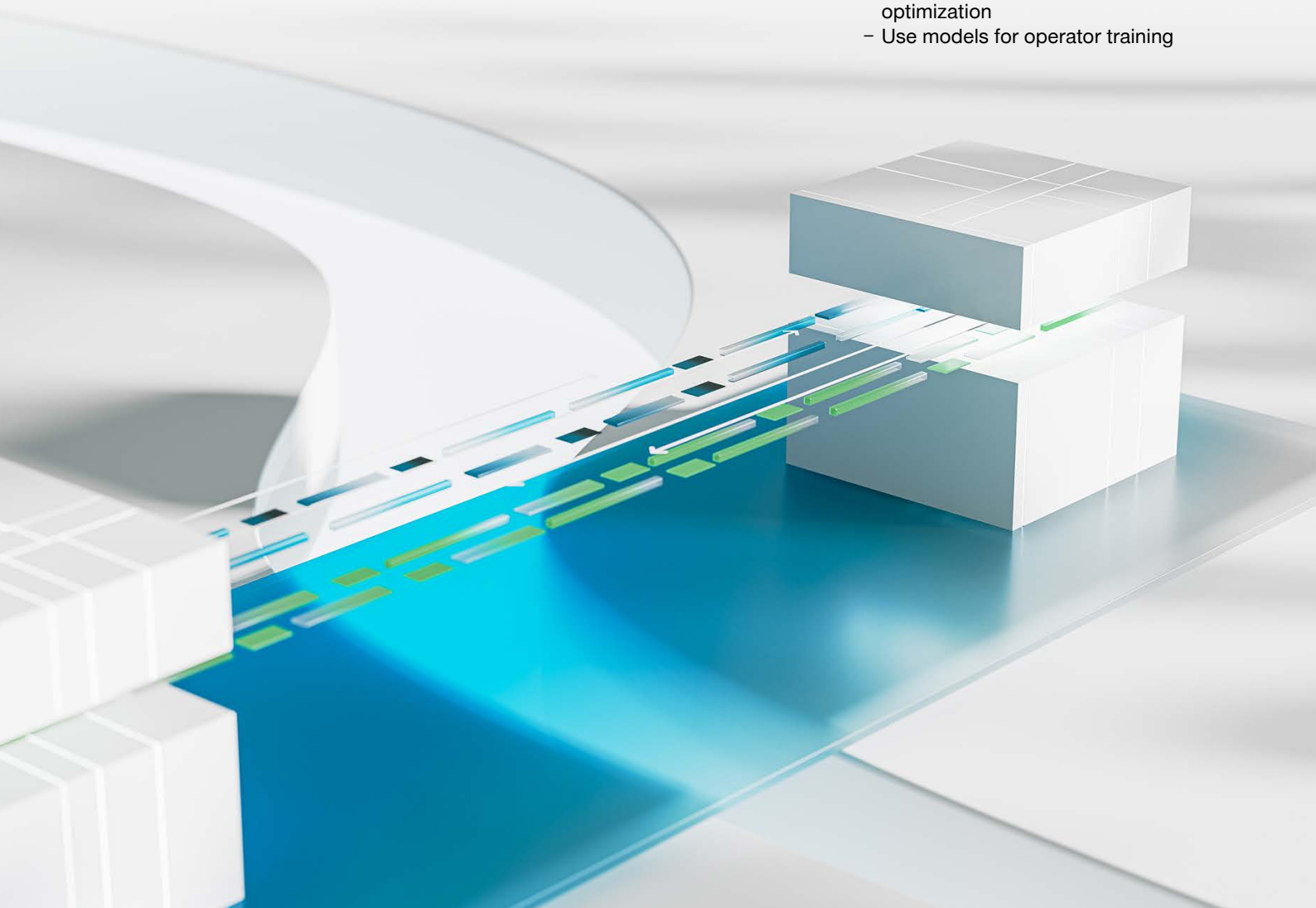
MAN Energy Solutions
Future in the making

Virtual commissioning

Virtual commissioning uses computer simulations to test and optimize production systems before they are physically built. This process helps identify and fix software issues early, ensuring accurate controller settings before on-site commissioning. By simulating system behavior in advance, virtual commissioning simplifies the development of complex control concepts and optimizes system controls.

Benefits at a glance

- Significant reduction in on-site commissioning time (by up to two weeks)
- Fix software issues before Factory Acceptance Tests (FAT) and Site Acceptance Tests (SAT)
- Ensure controller settings are correct before SAT
- Train commissioning engineers ahead of time
- Lay a strong foundation for future plant optimization
- Use models for operator training



Technical insights and features

Early detection of anomalies
Identifies potential problems in the design phase, reducing the risk of costly errors during physical commissioning.

Cost and time savings
Minimizes the need for physical prototypes and reduces downtime by allowing for comprehensive testing and optimization in a virtual environment.

Enhanced performance
Optimizes the control systems and operational parameters to ensure the equipment runs efficiently.

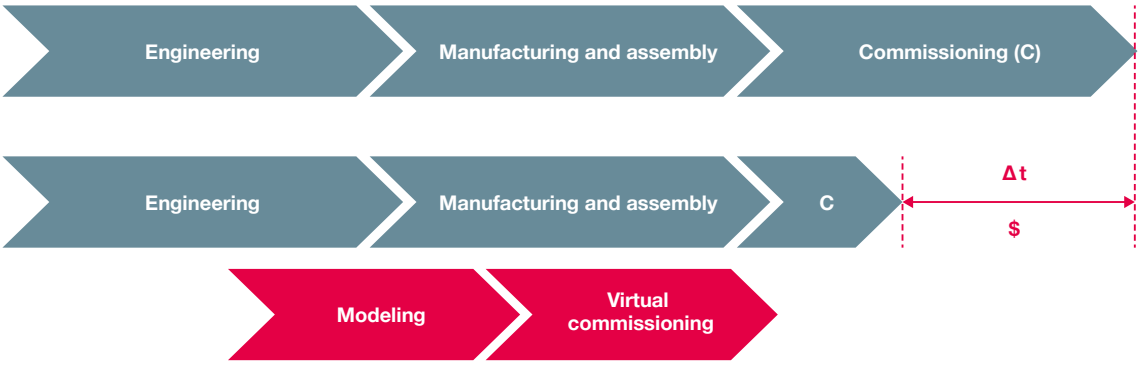
Improved safety
Allows for the testing of safety protocols and emergency scenarios without putting physical equipment at risk.

3D Modeling
Creating detailed digital models of the rotating equipment, often referred to as digital twins.

Simulation
Runs simulations to test mechanical and control system interactions, evaluate performance, and identify potential improvements.

Validation
Ensures that equipment will function as intended once deployed, while testing various operational scenarios and load conditions.

Cost and time efficiency through virtual commissioning



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