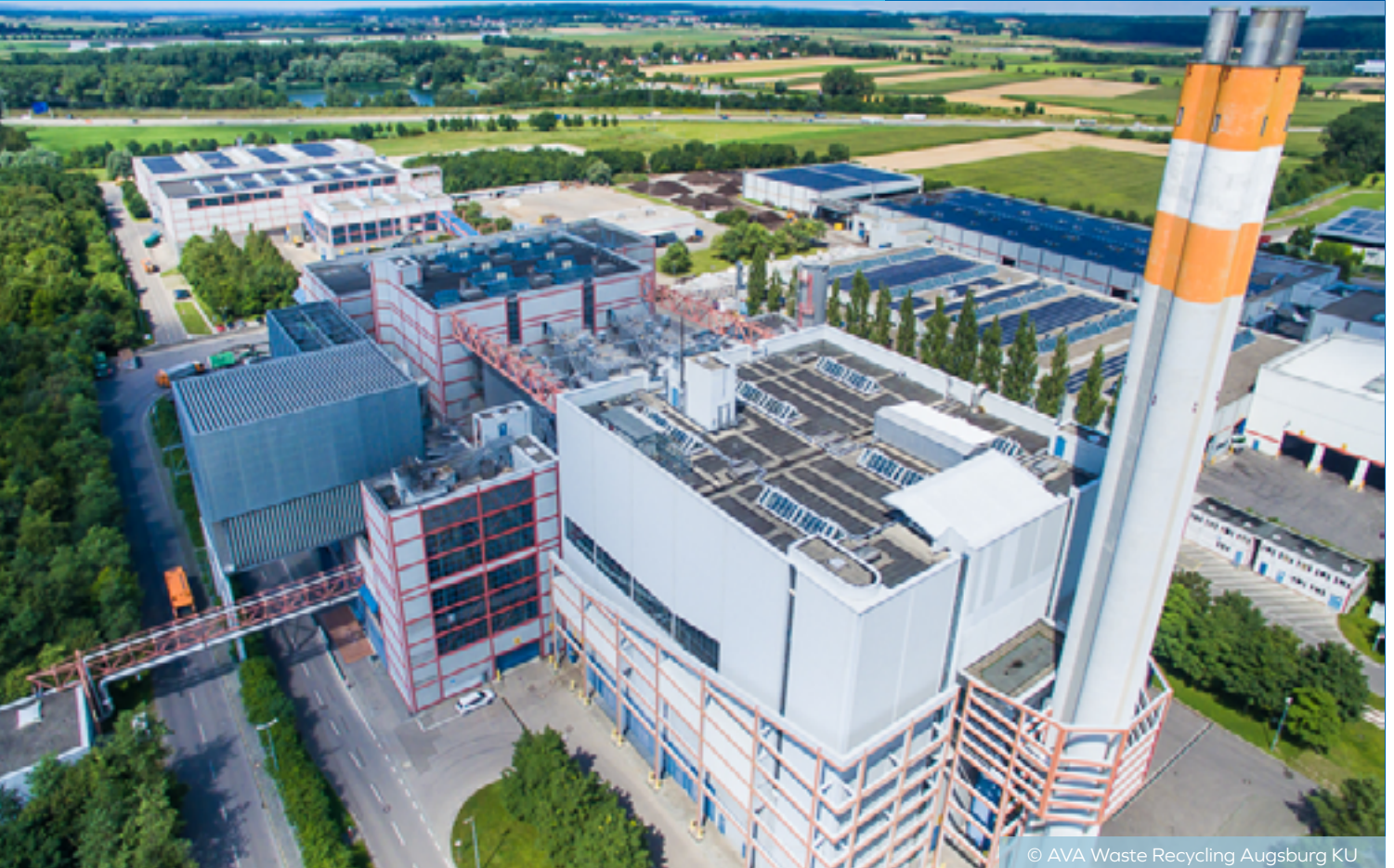




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AVA WASTE RECYCLING AUGSBURG KU

Migration of the process control system to
SIMATIC PCS 7



PROJECT OVERVIEW

By modernizing its process control technology, AVA Waste Recycling Augsburg KU has taken an important step toward ensuring the long-term availability and operational safety of its facilities. The goal of the project was to replace the existing ABB Procontrol P14 control system with a modern and future-proof automation platform based on SIMATIC PCS 7.

SAR was awarded the contract for the phased migration of the entire control system. Particular emphasis was placed on ensuring the implementation proceeded with as little disruption as possible during scheduled maintenance shutdowns, as well as on integrating modern IT and cybersecurity concepts.

Key project features include:

- Migration from ABB Procontrol P14 to SIMATIC PCS 7
- Virtualized control system architecture
- Highly available automation systems
- Integrated user and access management
- Comprehensive cybersecurity measures in accordance with current standards
- Phased implementation while the plant remains in operation

With the new control system, AVA Waste Recycling Augsburg KU is laying the foundation for safe, efficient, and future-oriented plant operations.

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PROJECT SCOPE AND APPROACH BY SAR

SAR took a holistic approach to the migration—from planning and engineering through system implementation to the commissioning of the individual plant components.

A particular focus was placed on replacing an existing system that had evolved over many years without compromising plant availability. The transition is therefore taking place in stages during the incineration lines' regular maintenance shutdowns.

The scope of services includes, among other things:

- Planning and engineering of the new control system architecture
- Migration of the existing automation solution to SIMATIC PCS 7
- Setup of a virtualized server infrastructure
- Implementation of user and access rights concepts
- Integration of modern cybersecurity solutions
- Commissioning and optimization of the new systems

By consolidating all services with SAR, a seamless technical and organizational implementation was ensured.

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TECHNICAL IMPLEMENTATION

At the heart of the modernization is a high-availability SIMATIC PCS 7 system of the latest generation. The control system was consistently built on a virtualized infrastructure, enabling a flexible, future-proof, and maintenance-friendly system architecture.

The automation solution is complemented by modern IT and security concepts. These include, among other things, Active Directory and domain controllers for centralized user management, as well as end-to-end authentication for system access.

Key components of the solution include:

- Highly available PCS 7 automation systems
- Virtualized server environment on VMware ESXi
- ET200SP HA as a modern I/O platform
- Centralized user management via Active Directory and RADIUS
- Redundant firewall and DMZ structures
- Certificate-based communication
- Centralized event and system logging
- Continuous network monitoring and data backup

The combination of modern automation and comprehensive security mechanisms creates a powerful platform for the long-term operation of the plant.

IMPLEMENTATION UNDER TIME-SENSITIVE CONDITIONS

The tight time constraints for the retrofit of each plant section posed a particular challenge. The complete switchover to the new control system had to be completed within the timeframe of a regular maintenance shutdown for each section.

Only a maximum time window of three weeks per line was available for implementation. Thanks to detailed preparation, precise scheduling, and close collaboration among all project participants, the work was completed on schedule.

After the maintenance shutdown was completed, the plant sections were brought back online as planned.

ADDED VALUE THROUGH MODERNIZATION

With the new control system, AVA Abfallverwertung Augsburg KU benefits from a future-proof and scalable system platform.

The key advantages are:

- Long-term assurance of plant availability
- Modern and intuitive user interfaces
- Increased transparency across all process areas
- Improved maintainability and expandability
- Comprehensive IT security concepts
- Simplified user and access rights management
- Foundation for future digitalization initiatives

The new system architecture combines proven process control with modern requirements for availability, security, and efficiency.

CONCLUSION

The migration of the process control system at AVA Abfallverwertung Augsburg KU impressively demonstrates how challenging modernization projects can be successfully implemented even under tight deadlines. The phased replacement of the existing control system has resulted in a high-performance, future-proof automation platform that supports the long-term operation of the plant.

Drawing on its experience with complex control system migrations, SAR was able to manage all project phases from a single source—from planning and system integration to successful commissioning. Particularly when it comes to time-critical retrofits during short maintenance windows, SAR has once again proven itself to be a reliable partner for challenging modernization projects in the field of thermal waste treatment.





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