More efficient cutlery sorting for one of the region's largest university catering operations

How Studierendenwerk Heidelberg stabilised its processes, optimised hygiene and invested in a reliable long-term solution.
Sector: Institutional catering, university catering, canteen

Studierendenwerk Heidelberg operates one of the largest university catering services in the region. Several thousand meals are served here every day. Especially at lunchtime, large numbers of guests arrive within a short period, placing tightly coordinated kitchen and dishwashing processes under considerable pressure. This results in particularly high requirements for hygiene, availability and process reliability.

As part of a modernisation project, the existing cutlery sorting system was to be replaced. The third-party system previously in use had been operating for many years, but was increasingly affected by malfunctions, high maintenance requirements and longer response times when service was needed.

The aim was to find a robust, high-performance and future-proof solution that could be seamlessly integrated into the existing processes while also providing access to a local service partner.

The result: a modern, automated cutlery sorting system including conveyor technology, ensuring stable processes, high hygiene standards and significantly smoother day-to-day operations.

Challenges

The project requirements went far beyond simply replacing a machine:

- High numbers of guests during a short peak period from approximately 11:45 a.m. to 1:00 p.m. in the canteen
- Several thousand meals per day: depending on the semester period, the canteen operates 3–4 serving stations and serves an average of around 4,500 meals per day (± approx. 500). Over a five-day week, this amounts to around 22,500 meals per week and 90,000 per month.
- Very high volumes of returned trays and cutlery
- Strict hygiene requirements
- Limited space in the dishwashing area
- High requirements for availability and operational reliability
- Need for a local point of contact with fast response times

An additional challenge was that the dishwashing system and the new cutlery sorting system had to be located in separate rooms. This required a specially adapted conveyor system.

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Initial situation

An automatic cutlery sorting system was already in place before the project, meaning that Studierendenwerk Heidelberg was already familiar with the fundamental benefits of this technology.

However, the existing system was no longer able to meet the requirements of day-to-day operation reliably. Recurring failures, increased maintenance requirements and long response times in the event of malfunctions made operations considerably more difficult.

The consequences:

- Interruptions to operations
- Additional manual work
- Greater physical strain on staff
- More organisational effort when malfunctions occurred
- Uncertainty during peak operating periods

The primary objective was therefore not to reduce staffing levels, but to establish a permanently stable and reliable solution for daily operations.

Project objectives

Together with Studierendenwerk Heidelberg, the following objectives were defined:

- Increase process reliability
- Minimise downtime
- Reduce the workload for staff
- Further improve hygiene standards
- Make optimum use of the available space
- Reduce noise levels
- Reduce maintenance requirements
- Ensure fast service and response times

Implementation

A customised solution combining conveyor technology and automated cutlery sorting was developed for Studierendenwerk Heidelberg.

The project included:

- Direct connection to the cutlery lane of the existing dishwashing system
- Automatic transfer of the cutlery via a magnetic incline conveyor
- Transport of the cutlery via conveyor technology into an adjacent room
- Transfer via a chute into the singulation unit of the cutlery sorting machine
- Fully automatic identification and sorting of the cutlery
- Discharge into dedicated containers by cutlery type for subsequent return to the serving stations

The conveyor section passing through a fire door required particular technical attention. Special safety measures were integrated to ensure that the fire protection function remains fully operational at all times and that the door can close safely in the event of a fire.

For maximum flexibility, a manual diversion option was also integrated. A lever allows the flow of cutlery to be redirected as required. Additional cutlery can also be fed directly into the sorting system while it is in operation.

Results & benefits

With the new system, Studierendenwerk Heidelberg now benefits from permanently reliable and hygienic cutlery handling.

Key benefits at a glance

- High process reliability: Stable operation even during the lunchtime peak.
- Improved hygiene: Manual contact is minimised through a closed process chain.
- Reduced workload for the team: Smoother workflows, less stress and greater operational reliability.
- More pleasant working environment: Significantly lower noise levels.
- Local service: Fast response times and personal on-site support.

Customer testimonial

“We can report that the system is extremely reliable and has operated without any downtime so far. The only issue we have encountered was some slight abrasion from the conveyor belt in the sorting machine. However, your service team was on site within just a few days.” – Sven Winkler, Technical Officer, Facility Management

Conclusion

With the new cutlery sorting solution, Studierendenwerk Heidelberg now has a reliable and future-proof system for its university catering operations. The combination of customised conveyor technology, automated sorting and a local service partner ensures stable processes, high hygiene standards and cost-effective operation even at high capacity.

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Project impressions
Biggest challenge: logistics and operational reliability

The installation had to be carried out under very restricted spatial conditions. Individual components had to be brought in via a very small lift. To ensure continuous operation at all times, a temporary replacement machine was first delivered in individual parts and assembled on site.

At the same time, the new system was individually adapted to the structural conditions on site. Our team also repaired the existing third-party conveyor technology so that operations could continue without restrictions until the new solution was commissioned.

The result: a smooth transition without lengthy downtime and a tailor-made solution for the requirements of Studierendenwerk Heidelberg.

Before and after

The direct comparison clearly shows the progress: from an existing system prone to malfunctions to a modern, reliable and maintenance-friendly cutlery sorting solution with individually adapted conveyor technology. See the images on the following pages.

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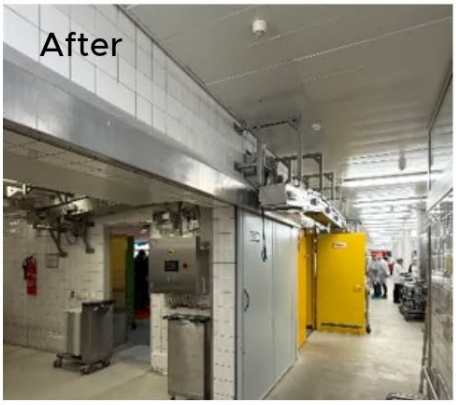









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A reference project you can experience first-hand

The project clearly demonstrates how existing kitchen and dishwashing processes can be sustainably optimised through intelligent automation. Operators of university canteens, staff restaurants and other institutional catering facilities are welcome to visit the system on site, subject to prior agreement with us and Studierendenwerk Heidelberg, and see the solution in operation for themselves.

Contact

Would you like to automate your kitchen processes?
We would be delighted to provide you with individual advice!



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