



Wanted: Smart Cleaning Tool



Briefing: Fraport Digital Factory Project "Smart Cleaning"

The Digital Factory is a virtual organizational unit at Fraport that acts as an internal solution partner with digitalization and technology specialists to support Fraport divisions in Frankfurt and worldwide in solving problems. In a three-month project phase, the team develops a solution in the form of a Minimum Viable Product (MVP). More information about our approach can be found on our [homepage](#).

Below you will find the open call for one of our projects.

Problem/goal description and technology focus:

Fraport Facility Services (FFS) is responsible for the infrastructural services, including maintenance and cleaning of the terminal areas at Frankfurt Airport. Compared to the market, FFS employs too many supervisors in the cleaning sector, representing a significant cost problem. Another central issue is the lack of digital tools for efficient planning and control of cleaning staff. This leads to inefficient use of resources, longer response times, and increased error rates. Additionally, the dependency on foremen and the lack of direct communication possibilities between cleaning staff delays the handling of ad-hoc tasks, affecting flexibility and response speed. Another problem is the use of private mobile phones by employees, which presents a data protection risk and makes it difficult to separate professional from private use.

The project goal is to improve the efficiency and quality of maintenance cleaning. To this end, a digital application is to be developed and implemented that supports and transforms traditional cleaning processes. This solution should not only reduce costs but also contribute to improving customer satisfaction and sustainability by deploying resources such as time, personnel and cleaning materials as needed. Specifically, software solutions for route optimization and real-time control are to be introduced to increase productivity and cost efficiency. Mobile devices (e.g., tablets) on which the respective app is installed should enable direct and GDPR-compliant communication and distribution of orders, achieving faster response times and higher flexibility. These measures aim to create a smart cleaning solution that makes processes more efficient and transparent, ensuring smooth and resource-saving airport operations.

What we are looking for: A digital solution for efficient planning and control of cleaning staff to reduce costs and improve response time.

We are not looking for a solution that mainly serves the purpose of documentation.

Schedule and milestones:

- If interested, please contact us at digitalfactory@fraport.de with information about your company and a short outline of your solution (max. 5 slides) by March 26, 2025.
- Solution provider presentations (pitch) on April 15/16/17, 2025
- Shortlisting of providers asked for an offer by April 22, 2025
- Submission of offers by April 28, 2025, 8 a.m. CEST

- Contracting and start of collaboration within 2-3 days after offers have been submitted
- End of project and final presentation by solution provider on July 2, 2025

Acceptance Criteria:

Requirements/ characteristics/ functionalities of the MVP:

- **Digital application:** The solution must provide a platform or mobile app that supports traditional cleaning processes and facilitates the transition to structured maintenance cleaning.
- **Planning support:** The application should offer foremen an overview of ongoing and planned cleaning activities.
- **Pictogram representation:** Cleaning tasks must be represented in the form of easily understandable, standardized pictograms accessible to all users, regardless of language skills.
- **Communication system:** The application must enable real-time communication between foremen and cleaning staff, for example, through text, voice, or push notifications.
- **Feedback function:** The solution must allow cleaning staff to directly report the status of their tasks (e.g., "completed").
- **Ad-hoc tasks:** Ad-hoc tasks must be integrated into the existing route planning and dynamically distributed to cleaning staff in real-time.
- **User-friendliness:** The user interface must be intuitively designed to allow easy operation without extensive training.
- **Platform independence:** The solution should work on various devices (e.g., smartphones, tablets) and operating systems (e.g., Android, iOS).

List of KPIs the MVP will be validated against:

- **Improved response time:** Ad-hoc tasks are distributed and processed within ≤ 15 minutes of entry.
- **Increased employee satisfaction** (according to survey)
- **System availability** of at least 98%

These KPIs/ requirements must be achieved or verifiably achievable by July 2, 2025.

Affected Products/Services/Processes/Interfaces:

- Operational processes: Cleaning and control processes
- Interface capability of the solution

Affected Fraport business units:

- Digital Factory & IT
- Fraport Facility Services
- Aviation

Data Requirements:

Collection and processing of personal data:

- Initially, no personal data should be used.

Collection and processing of non-personal data:

- The basis of cleaning documentation should continue to be the digital recording of cleaning.
- Data collection during cleaning must/should be evaluable.
- Currently, data collection only consists of manually recorded data, i.e., no application of sensors or automatically generated data.
- After data collection, it should be possible to use the data for optimization.
- The optimized data should lead to the creation and optimization of cleaning plans or cleaning routes.
- Optionally: Through automated data collection linked to the current flight schedule, passenger-dependent sight cleaning at the gate should be ensured.

List of standards and norms to be complied with:

- GDPR
- IT Security Act

Priority questions to be answered during a possible pitch:

- Does your solution work via WLAN or via SIM card?
- Are there any restrictions on compatibility/integration with other IT tools (interfaces)?
- How adaptable is the application in terms of design and functionality?
- Can building and area plans be displayed in the application to show cleaning progress (e.g., CAD plans)?

Evaluation criteria:

Should you be invited to pitch, you will be evaluated according to the following criteria:

1. Customer reference: Customer references in the aviation industry (airports, airlines) or in similar industries, not older than 3 years (*simple scoring*)
2. Effectiveness: Can this technology solve the problem? (*triple scoring*)
3. Maturity of the solution: Existing product or new development? (*triple scoring*)
4. Efficiency: How well can the technology solve the problem (KPI achievement, MVP scope)? (*triple scoring*)
5. User Interface: User-friendly, clear interface – the following criteria will be assessed: graphics, design, clarity and intuitive user interface, practicability (*triple scoring*)
6. Data collection and storage: Where is the data stored (e.g. on-premise/cloud)? (*simple scoring*)
7. Data sharing: Possibility of data sharing (data flows into data lake or similar, APIs etc.?) (*simple scoring*)
8. Access: Is there a user concept, can different users be assigned different access rights etc. (*simple scoring*)
9. Primary scope of rollout: Use of additional areas, scalability (FRA) (*simple scoring*)
10. Other possible applications, e.g. in other airport areas or for different use cases (*simple scoring*)
11. Use in the Fraport Group: Use for subsidiaries (*simple scoring*)
12. GDPR compliance / compliant with German law (*simple scoring*)

13. Visualization: Were a demo/photos/videos shown? (*simple scoring*)
14. Presentation style: Convincing presentation and reaction to questions (*simple scoring*)
15. Price indication: Was a first indication provided, info about pricing model? (*simple scoring*)
16. Speed of implementation: Describe timeline, prove feasibility (*simple scoring*)

Please keep the evaluation criteria in mind for your presentation and be responsive to the demanded content. Should you not be able to address all points in your pitch due to time restrictions, please make sure to include all information in the presentation you send us afterwards.

Based on the aforementioned criteria, Fraport will select suitable providers for a shortlist and ask for a cost proposal.

Should you not be able to offer us the whole solution and wish to work with a partner, please provide information about the partner and your previous experience. Please keep in mind that Fraport will commission one contractor only. Your partner needs to be commissioned as a subcontractor on behalf and for account of you as the contractor. Should you be shortlisted and asked to submit a cost proposal, Fraport will only accept a comprehensive offer.

Further hints and instructions

You will have 30 minutes to pitch your solution idea to us. Please plan for 15-20 minutes of presentation at maximum, so that we have time for questions. You may present in German or English language and we would appreciate to receive your presentation slides afterwards (please send us a version that we are allowed to distribute internally for information purposes).