Case Study: A Model of Digital Transformation in Hamburg's School Green Space Management

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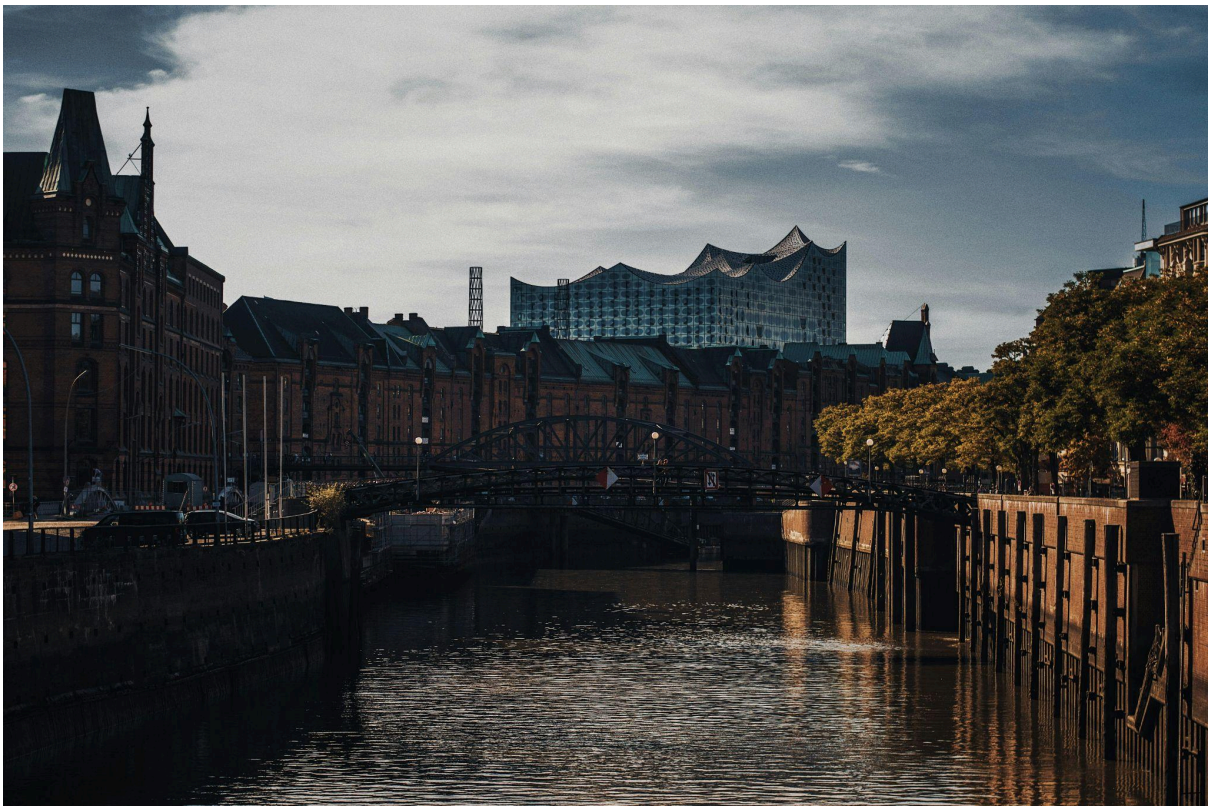

NOI Techpark, D1
Ipazia Street, 2
39100 Bolzano, Italy

www.r3gis.com
info@r3gis.com
+39 0471 155 1177

R3 GIS Srl
VAT: IT02372990214

Summary

This case study explores how SBH | Schulbau Hamburg, the municipal body responsible for over 400 school sites, transformed its urban green space management through the implementation of GreenSpaces. This digital solution has enabled comprehensive data collection, streamlined operational workflows, and collaborative engagement among all stakeholders.

Key outcomes include:

- Full documentation of every tree under Hamburg's Tree Protection Regulation, enabling data-driven management.
- Transition from reactive to proactive arboriculture and maintenance planning.
- Seamless collaboration between tree inspectors and tree care companies, supported by mobile access and GPS-based navigation.
- Significant reduction in administrative and communication overhead for all parties involved.
- Real-time data availability that allows for immediate reporting and faster resolution of safety issues.
- Inclusion of caretakers and school administrators in the digital workflow, fostering a culture of shared responsibility.
- Support for Hamburg's environmental education initiatives through integration with broader urban sustainability projects.
- Expansion of the GreenSpaces platform beyond SBH, demonstrating institutional trust and scalability across other departments.

Introduction

Hamburg has long pursued a vision of integrating green infrastructure into urban development. The “Green Network” of parks and corridors reflects the city’s commitment to environmental quality and mobility. In alignment with this vision, SBH | Schulbau Hamburg launched a digital transformation initiative to improve the management of green spaces across its school properties.

GreenSpaces was selected as the enabling platform, offering a modern, web-based approach to planning, maintaining, and documenting arboricultural and landscaping activities. The project was not merely a technological shift, but a strategic evolution in communication, coordination, and sustainability management within the public education infrastructure.

The Public Green Areas of Hamburg's Schools

SBH oversees a diverse portfolio of outdoor spaces: playgrounds, sports fields, courtyards, recreational lawns, and tree-lined areas. Maintenance involves a wide network of stakeholders: groundskeepers, caretakers, arborists, external contractors, and municipal administrators. Prior to GreenSpaces, coordination among these actors was fragmented, often resulting in inefficiencies and delays.

With the implementation of GreenSpaces, all stakeholders are now connected through a shared platform that provides centralized access to information, task histories, and inspection reports.

Implementation of GreenSpaces

Comprehensive Tree Inventory

A cornerstone of the GreenSpaces rollout was the creation of a complete, digital tree inventory. Previously, only trees with visible defects were cataloged. With the new platform, all trees governed by Hamburg's Tree Protection Regulation are documented, including

species, condition, location, and age. This facilitates proactive inspections and structured long-term care.

Inclusive Stakeholder Engagement

The platform's success lies in its ability to unify all relevant stakeholders. GreenSpaces is actively used by SBH staff, external arborists, and maintenance contractors, as well as school administrators and caretakers. This broad inclusion fosters accountability and quick response to emerging needs.

The rapid adoption of the platform by school staff, often resistant to new systems, was attributed to GreenSpaces' intuitive design and immediate utility. As noted by SBH staff, "It has totally simplified the workflow. We don't have to tell them anything or accompany them."

Streamlined Workflows

Tasks that once required manual coordination now take place within minutes:

- Tree inspections, maintenance needs, and potential hazards are logged and managed directly in the app.
- Real-time updates and mobile access facilitate faster decision-making.
- GPS navigation ensures contractors can locate trees independently and verify completion.
- The system also supports voice input and photo documentation, further enhancing on-site efficiency and reducing the administrative burden.

Management Advantages

Data-Driven Decision Making

The platform enables informed prioritization of maintenance tasks and budget planning. Inspection data supports evidence-based decisions and resource allocation.

Cross-Stakeholder Coordination

Caretakers, arborists, contractors, and municipal administrators work from the same data pool, reducing errors and duplicated effort.

Efficiency Gains

The digital workflow has significantly shortened the time required to assign, execute, and verify maintenance activities.

Transparency and Accountability

All activities are tracked and time-stamped, creating a reliable record for audits and compliance purposes. Contractors' presence on-site and work performed are verifiable through the system.

Beyond the School Grounds

The success of the GreenSpaces pilot at SBH has encouraged other school management departments in Hamburg to adopt the platform. Its modular structure and configurability make it well-suited for expansion into other municipal services, such as parks, roadsides, and public facilities.

Environmental Education and Broader Urban Integration

GreenSpaces contributes to Hamburg's broader environmental initiatives. Schools in the Neugraben-Fischbek area, for example, have integrated GreenSpaces into their sustainability efforts, which include school gardens, green roofs, and water management systems.

The platform also supports long-term ecological planning by quantifying environmental benefits, such as tree canopy coverage and carbon capture, aligning with the city's strategy for blue/green infrastructure and climate resilience.

Conclusions

SBH | Schulbau Hamburg's deployment of GreenSpaces has set a precedent for how digital platforms can transform public infrastructure management. The initiative demonstrates that innovation in urban greenery maintenance is not only feasible but scalable and impactful when built on collaboration and ease of use.

GreenSpaces is more than a software solution; it is a catalyst for systemic change, enabling a more connected, efficient, and sustainable urban environment. Hamburg's approach serves as a replicable model for other cities seeking to modernize their green infrastructure management while enhancing public engagement and ecological responsibility.

Further Information

[1] Watch the video case: https://vimeo.com/947268750

[2] GreenSpaces Pilotprojekt in Hamburg - R3GIS
https://www.r3gis.com/de/news/n-2/greenspaces-pilotprojekt-in-hamburg-69