

Summary of Agile Pilot

Company name	nextdrop s.r.o.
Company location	Plzeň, Czech Republic
Domain	Blue green infrastructure
Municipality	City of Plzeň, Czech Republic Pilot site: Techmania Science Center, Plzeň
Project period	September 2025 – January 2026 (main implementation phase: 1 September 2025 – 30 January 2026)
Solution	<p>The agile pilot tested the nextdrop control system, a digital water infrastructure management solution based on real-time monitoring and data analytics.</p> <p>The system enables:</p> <ul style="list-style-type: none"> • Continuous real-time water consumption monitoring, • Automated detection of leakages and abnormal consumption patterns, • Advanced data visualization and historical analysis, • Operational decision support for facility managers. <p>The pilot was implemented at Techmania Science Center in Plzeň. In addition to operational monitoring, the project included an interactive public exhibit presenting live water consumption data, combining technological validation with an educational dimension. The pilot demonstrated the potential of digital water management both for public building operations and for raising awareness about sustainable water use among citizens.</p>
Stakeholders	<p>Stakeholders are:</p> <ul style="list-style-type: none"> • City of Plzeň • Techmania Science Center • SITMP (Municipal IT Administration of Plzeň) • VODÁRNA PLZEŇ a.s. (Water utility company) <p>The cooperation enabled cross-sector coordination between municipal IT, water management stakeholders, and a public institution, laying the groundwork for broader city-level implementation.</p>
Lessons learned	<ul style="list-style-type: none"> • Agile piloting proved effective: Intensive coordination within a short timeframe enabled rapid validation of both technical and educational components. • Continuous monitoring is essential: Daily aggregated water readings are insufficient for detecting leakages in complex public buildings. • Real-time data reduces operational risks: Facility managers benefit significantly from immediate alerts and historical data analysis. • Education requires optimization: While the exhibit increased awareness, the presentation format can be improved to enhance engagement. • Scalability potential is strong: The solution can be replicated in other municipal buildings and integrated into city-wide management systems. • Administrative simplification would strengthen the agile pilot model: Feedback from the provider highlighted the need for clearer, unified instructions and streamlined administrative processes to reduce the coordination burden during implementation
KPI 1 Number of innovation prototypes tested	<p>Status: Achieved</p> <p>During the monitored period (1 November 2025 – 31 January 2026):</p>

	<ul style="list-style-type: none"> ● 11 water leak incidents were detected, ● Average daily water consumption: 1,247 m³, ● Average leakage intensity: 8–10 litres/minute, ● Leakages accounted for approximately 3% of total consumption, ● Estimated avoided costs: CZK 1,000–2,500 per day per leakage. <p>The pilot confirmed that leakages cannot be reliably identified using daily consumption summaries. Continuous monitoring at short time intervals (minutes) is necessary. The system demonstrably reduced detection time and prevented further financial and water losses.</p>
<p>KPI 2 Number of innovative EV charging solutions ready for the market</p>	<p>Status: Achieved</p> <p>Based on qualitative feedback from the Head of Technical Department at Techmania:</p> <ul style="list-style-type: none"> ● The system is clear, understandable, and user-friendly, ● Facility management can independently use monitoring and analytical features, ● Real-time access to data reduces uncertainty and stress related to potential failures, ● Historical analysis supports operational decision-making. <p>The system is considered a practical and beneficial tool for daily operation of complex public facilities.</p>
<p>KPI 3 Increased public awareness through interactive exhibit</p>	<p>Status: Partially achieved</p> <p>Survey results (77 respondents):</p> <ul style="list-style-type: none"> ● Over 80% consider water management personally important, ● Over 90% try to save water, ● ~65% do not know their own water consumption, ● 25% reported reconsidering their approach to water use after interacting with the exhibit. <p>The exhibit increased awareness, particularly among secondary school students (30% reported attitude change).</p> <p>However:</p> <ul style="list-style-type: none"> ● 60% of visitors did not complete the full exhibit, ● Presentation format needs optimization (too much text, structure improvements needed). <p>The educational impact was validated but requires refinement for stronger engagement.</p>
<p>Evaluation of the business model focusing on its viability and potential for growth</p>	<p>Pre-pilot model</p> <ul style="list-style-type: none"> ● Target customers: municipalities and public institutions managing complex public buildings ● Revenue model: <ul style="list-style-type: none"> ○ One-time installation investment ○ Annual service contract (monitoring, analytics, operational supervision) ● Hardware-dependent model <p>Strengths validated by pilot</p> <ul style="list-style-type: none"> ● Strong value proposition for complex public buildings ● Demonstrable cost savings and operational risk reduction ● Reference installation in a public building

	<ul style="list-style-type: none"> ● High scalability potential within municipal ecosystems <p>Identified barriers</p> <ul style="list-style-type: none"> ● Business development strongly dependent on personal networking ● Partner-connection model difficult to standardize ● Hardware installation can slow international expansion <p>Adjustments initiated</p> <ul style="list-style-type: none"> ● Testing workshop-based outreach model for municipalities ● Development of a hardware-independent service model (algorithm licensing usable on third-party infrastructure) ● Increased focus on scalability and international expansion
Impacts	<p>Impact on the City of Plzeň</p> <ul style="list-style-type: none"> ● Verified compatibility with Smart City strategy ● Strengthened cooperation between municipal stakeholders ● Foundation for integration into the city's metropolitan dispatching system ● Potential expansion to additional municipal buildings ● Increased trust in digital water management tools <p>Impact on nextdrop</p> <ul style="list-style-type: none"> ● Confirmed technological and operational readiness ● Validated economic benefits through real data ● Established a strong reference case ● Increased visibility via Smart City Expo World Congress and URBIS ● Opened pathways for scaling and international expansion
Suggestions for future actions, especially focusing on sustainability and replication	<p>Suggestions for future actions (sustainability & replication):</p> <ul style="list-style-type: none"> ● Integrate data into the municipal metropolitan dispatch system ● Expand monitoring to additional public buildings ● Optimize educational exhibit format (gamification, improved visual clarity) ● Develop standardized workshop format for municipal outreach ● Accelerate development of hardware-independent service model ● Strengthen visibility through professional platforms and Smart City networks <p>Broader significance:</p> <p>The pilot demonstrates that digitalization of water infrastructure:</p> <ul style="list-style-type: none"> ● Enables measurable cost savings ● Reduces operational risk ● Supports climate adaptation and sustainable resource management ● Enhances transparency and public trust ● Combines infrastructure management with public education <p>It represents a transferable model for smart water governance in European cities.</p>
Next steps	<ul style="list-style-type: none"> ● Use Techmania installation as a reference case ● Pilot hardware-independent algorithm licensing model ● Expand within Plzeň under the "Plzeň – City of Water" initiative ● Present results at Smart City Expo World Congress (Barcelona) and URBIS ● Explore pilot installations abroad
Provider's Reflection	<p>The agile pilot validated both the technical robustness and strategic positioning of the solution.</p>

	<p>It confirmed that:</p> <ul style="list-style-type: none"> ● Continuous digital monitoring is essential for effective water management ● Municipal stakeholders recognize the value of real-time analytics ● Educational integration increases societal relevance ● Agile piloting is an efficient mechanism for real-world validation ● The project provides a strong foundation for further scaling within Czech municipalities and internationally.
<p>Municipality's Reflection</p>	<p>The City of Plzeň considers the project fully aligned with its long-term Smart City strategy and blue-green infrastructure development.</p> <p>The agile pilot enabled:</p> <ul style="list-style-type: none"> ● Rapid validation in real operation ● Effective stakeholder cooperation ● Concrete data-driven justification for further expansion ● The city sees strong potential for broader deployment and integration into municipal systems.
<p>Expert's Reflection</p>	<p>From an independent expert perspective, the pilot:</p> <ul style="list-style-type: none"> ● Achieved all contractual objectives ● Delivered measurable and quantifiable results ● Demonstrated high operational usability ● Confirmed strong scalability potential ● The agile pilot model proved effective and value-generating for all stakeholders involved.