

Improving urban mobility in Pisa using data-driven insights



Pisa sets a benchmark for smarter mobility

Data is the cornerstone of every good decision. As the mobility industry undergoes a profound digital transformation, where data is no longer just a resource, cities are looking for effective ways to solve their urban mobility challenges while balancing efficiency, profitability, and policy demands.

Insights by Arrive provides data-driven solutions so cities can better understand their parking ecosystem – with a full picture of compliance and demand, hour by hour, across all parking areas – and create flexible parking policies that adapt to evolving usage patterns.

With advanced technology and citywide data, Insights helps forward-thinking municipalities make smarter decisions to improve mobility and make cities more livable.

The parking challenge in Pisa

Parking was a major challenge in Pisa, driven by fluctuating tourist numbers, limited availability, and no real understanding of parking usage. This led to traffic congestion, inefficient parking management, and frustration for residents, visitors, and businesses.

Solving Pisa's parking problem

Faced with growing parking and mobility issues, Pisa became the first Italian city to introduce Insights by Arrive. This commitment to innovation was recognized in October 2024, when Pisa was named a leading smart city in Italy, highlighting its drive to modernize services, improve daily life, and set a benchmark for other cities wanting to transform how they plan and move.

A data-driven way forward

Pisa and its parking operator, Pisamo, partnered with Arrive to put Insights into action. The goal: to build a comprehensive digital parking map and unlock valuable data to help:



Optimize mobility decisions through data-driven insights.



Reduce congestion by improving parking allocation.



Support more informed urban planning.



Enhance quality of life with more accessible parking.

Between November 2024 and April 2025, Arrive worked with Pisa to build a clearer picture of parking demand and usage patterns across the city. Here's how:

1. Parking regulations analysis

Arrive audited and digitized the city's entire parking ecosystem. Instead of a static map, Pisa now has a dynamic, unified view of all its parking rules, including permit zones, loading bays, and restricted access areas.

2. Parking pressure analysis

Arrive transformed raw street-level data into a clear understanding of actual vehicle demand by analyzing utilization trends across weekdays and weekends.

3. Advanced analytics and monitoring

Arrive replaced complex spreadsheets with clear, visual intelligence using smart color-coded trend reports.

4. Evidence-based policy execution

Arrive provided Pisa with a comprehensive urban intelligence platform. Rather than just viewing data, city planners now have the actionable insights they need to confidently implement policy adjustments.

To carry out this work, Arrive used its own scancar to map the number of parking spaces across the city. Additional data, including occupancy patterns by hour and day, was captured using existing vehicles and city-owned ones equipped with Arrive's LiDAR scanner. These vehicles patrolled the city, gathering detailed street-level imagery and transforming it into valuable insights.



A parking system pushed to its limits

What the data revealed was both clear and concerning. Pisa is approaching a tipping point: its parking ecosystem is operating very close to capacity.

The city has 49,426 parking spaces, 73% of them on-street. Of those, around 60% are free of charge. On the surface, this might seem like a good balance. But the data told a different story.

With overall occupancy averaging around 82%, the system is under almost constant strain. Parking is a citywide challenge where a lack of availability slows movement and turns searching for a space into a daily pain point. For a globally recognized cultural hub, this level of saturation requires smarter, more effective solutions.

Diagnosing the problem

Without a clear view of the parking ecosystem, strategic decisions become guesswork. But with Insights by Arrive, Pisa can finally see what's really happening and where new parking policies will have the greatest impact.

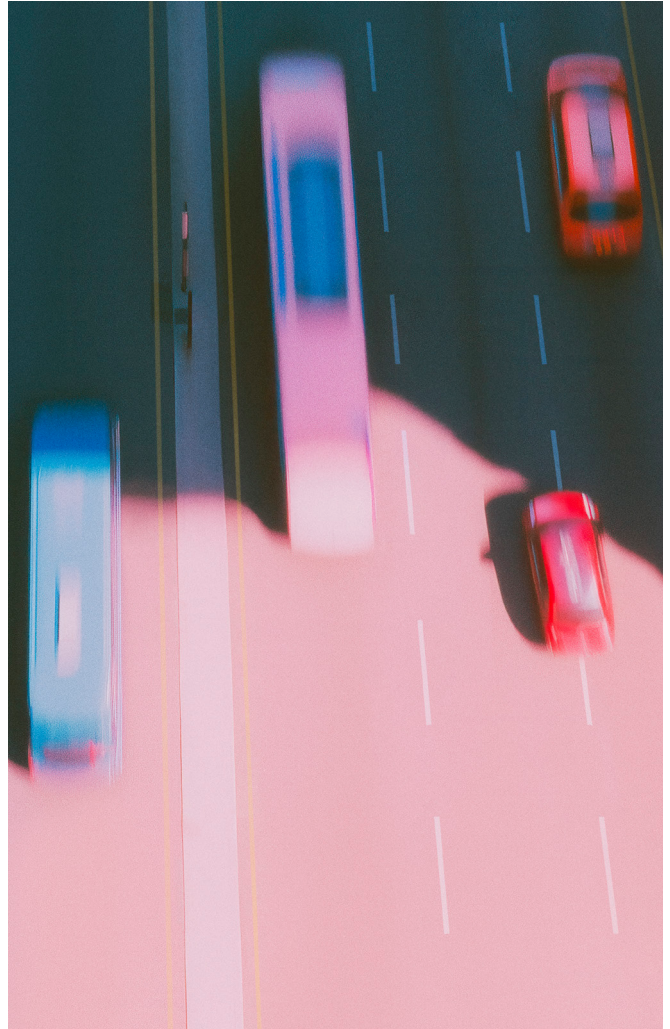
The analysis revealed two critical citywide issues: high occupancy and low turnover. Together, they limit space availability across the entire parking network.

There is strong, sustained demand and limited fluctuation:

- Paid parking averages 85% occupancy. Although it varies slightly throughout the day, most areas remain saturated during operating hours.
- Free parking averages 82% occupancy. This remains stable across all hours, indicating long-stay usage and low turnover, particularly in the outer districts where free parking is concentrated.

Peak periods intensify the problem:

- Weekday peaks reach 86% occupancy, especially from 9–10 a.m., driven by commuters, tourism, and activity around offices, schools, and public services in central areas like Centro Storico, Sant'Antonio, San Martino, and Porta a Lucca.
- Weekend peaks shift to the evening, reaching 84% around 9–10 p.m., fueled by residential demand and leisure-related parking in the same central zones.



The pattern is clear: regardless of day, time, or whether it's a free or paid space, Pisa's parking system is under constant strain.

This isn't a temporary situation. It's an ongoing problem backed by data, visible across the city, and experienced daily by residents, visitors, and businesses. With a clear understanding of parking demand and usage patterns, Pisa now has a solid foundation for action.



Deep dive: the Stadium area

Citywide trends only tell part of the story. To demonstrate how saturation affects movement at street level, Insights focused on one of Pisa's busiest districts: the Stadium area.

This neighborhood is dominated by free parking, with paid spaces limited and highly concentrated. Occupancy across both types averages 84%, which is above the city's benchmark range of 75–82%. The district is busy from morning to late evening, and availability often nears capacity, putting the area under sustained pressure.

Paid parking in the Stadium district averages 88% occupancy. On weekdays, the peak reaches 94% around midday, staying above 80% for most regulation hours. At weekends, peak occupancy is around 96% at 7 p.m.

Free parking has a similar pattern, averaging 84% occupancy with a weekday peak of 93% at 2 p.m. These spaces remain near or above capacity for much of the day, with little relief in the evening. On weekends, the peak rises to 88% at 9 p.m.

The analysis reveals a critical opportunity: redistribution. During weekend afternoon hours, paid zones are typically near full, while free areas have 10–15% spare capacity. Rather than increasing supply, smarter allocation and regulation could help balance demand and relieve pressure.

Pisa's first policy implementation informed by Insights by Arrive

Using the Stadium area analysis as a key input, Pisano and the city council introduced a restricted traffic zone on football match days in March 2026. This measure is designed to help reduce congestion, deter unauthorized parking, and improve mobility for residents in one of the city's busiest neighborhoods.

The restricted traffic zone is active from two hours before kickoff until the end of the match. Fans are required to park outside the zone, redistributing demand to areas with available capacity and easing pressure on streets closest to the stadium.

To facilitate its operation, Pisa has invested in new infrastructure to manage access for residents and authorized vehicle owners, who can apply for a free permit. Twenty new gates have been installed – 18 for entry and two for exit – at a total cost of €250,000.

The measure is intended to be regulatory rather than punitive. It will begin with a trial period during which no fines will be issued, allowing the city to monitor the system's operation, assess its impact, and introduce any necessary adjustments to minimize disruption to residents and businesses. Enforcement will start after the trial period.

The policy change demonstrates how Insights by Arrive can help cities move from identifying problems to implementing targeted measures that improve traffic flow and make high-demand areas more manageable, without increasing parking supply.



The opportunity: turning Insights into action

Pisa's parking ecosystem is saturated, but there are solutions, and the city has already started acting on them. With a clearer view of demand and availability, Pisa can continue moving from diagnosis to strategy, using targeted regulatory levers to increase turnover, distribute demand more evenly, and restore efficiency.

Insights shows that citywide occupancy is around 82%, with limited variation throughout the day, especially around key hubs. This is an opportunity to encourage faster space rotation and make the network more resilient.

Pisa doesn't need to increase supply. It can make more efficient use of the space it already has. Building on the action taken in the Stadium area, Arrive will help the city by sharing examples from other municipalities around the world that have introduced levers such as:

1. Dynamic pricing

Adjust tariffs based on demand, with **higher prices during peak midday** hours and lower prices later in the afternoon. This would help distribute usage more effectively and encourage rotation at high-pressure times.

3. Peripheral promotion

Use signage and wayfinding to **highlight alternative parking options** outside the most saturated areas. Directing drivers to available spaces could help reduce congestion and improve the parking experience.

2. Short-stay incentives

Introduce **reduced rates for the first 30 to 60 minutes**, followed by higher fees to encourage rapid rotation. This would make short visits more convenient while discouraging long-stay parking in high-demand areas.

4. Regulatory adjustments

Review paid-parking times and pricing structures, especially in areas with high demand. These changes could help the city better manage long-stay behavior.

Together, these solutions can help Pisa move from saturation to smart mobility, unlocking a more efficient and accessible parking experience for all.

A blueprint for urban mobility

This is about more than collecting data; it's about understanding and using it. Insights by Arrive turns complex parking analytics into strategic guidance that helps cities solve today's challenges and plan for long-term improvements.

With a complete view of its parking system, Pisa is now making decisions based on real insights instead of guesswork. As a result, the city is creating a more efficient way of managing parking that helps improve traffic flow, reduce unnecessary circulation, balance supply and demand, and make Pisa more livable

About Arrive

Arrive, including brands like EasyPark, Flowbird, RingGo, ParkMobile and Parkopedia, is a leading global mobility platform. Present in over 90 countries and 20,000 cities, the company helps people and decision-makers make smarter decisions about urban mobility.



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