Dott

How we use machine learning to manage public space well

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Dott’s Data Dashboard

Dott’s Data Dashboard, powered by our **proprietary machine learning models** is the heart of our operations.

To operate Dott’s **highly efficient micro-mobility systems**, we go beyond simply knowing the location and status of our fleet.

It’s our job to understand the historical, current, and future condition and location of each vehicle, as well as real-time predictions of rider demand.

Et voilá - **The Dott Data Dashboard.**

Built upon **trillions** of operational data points gathered over 3 years of service across **9 European countries**, our sophisticated AI monitors the precise location and dozens of vehicles statuses of each vehicle in our fleet.

Our Data Dashboard powers every task of our daily operations:

- 4k+ daily repair & maintenance tasks
- 7k+ daily fleet redistributions tasks
- 10k+ daily battery swapping tasks

Predictive Maintenance

When the e-scooter industry began, scooters had a shorter lifespan than the shelf life of milk.

Dott was born in 2019 to do micromobility differently.

We use predictive modeling to **extend our vehicle lifespan, increase the safety of our fleet while decreasing our carbon footprint.**

Sophisticated Fleet Management

We know much more than just the number of vehicles on the street.

Our system allocates fleet deployments, initiates proactive rebalancing, and anticipates low battery levels.

It also tracks patterns to **encourage equitable distribution and prevent clutter by fastest possible reaction times.**

Historical supply and demand combined with well designed local regulations help optimise for maximum impact.

Smart Parking Recommendations

Dott is the pro-regulation operator.

We know that the success of the industry depends on responsible management of public spaces.

We use predictive modeling to make smart recommendations to cities on **where to create parking spaces and help implement them.**

And then we only allow rides to end in those designated parking spaces.

We operate in-house for full safety and accountability.

Our machine learning models take into account sensor data, trip data, user feedback and session information to predict which of our vehicles on the streets may need repair.

But the best predictive models don't deliver strong results if not used by a professional team.

We apply full **functional safety checks on average every 10th ride,** informed by our AI model.

We operate fully compliant with **highest Health & Safety standards,** raising the bar of the industry.

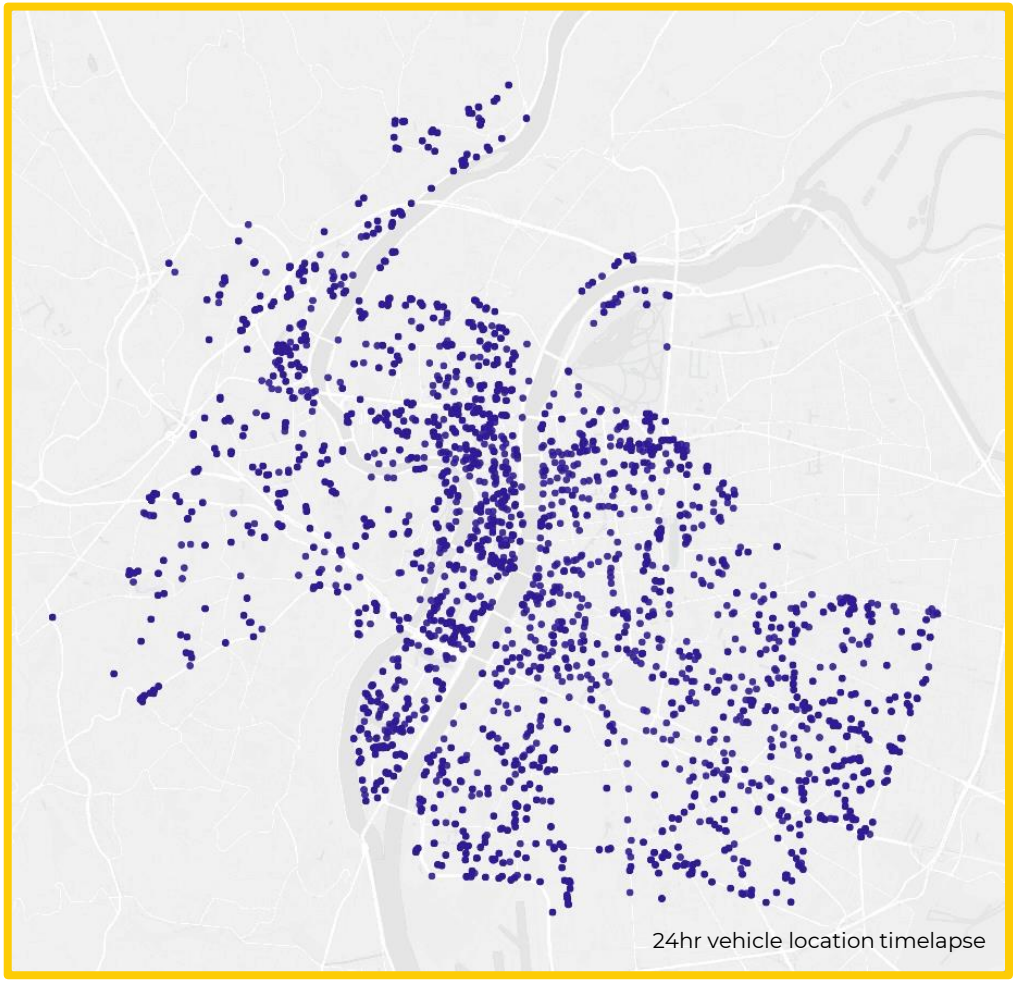
Our cities are alive.

Urban mobility patterns are complex and driven by multiple underlying systems.

To run Dott's **highly efficient** operations, we go beyond simply knowing the location and status of our fleet.

It's our job to understand the underlying systems, including past, current, and future condition of each vehicle, and real-time predictions of rider demand.

This ensures that our vehicles are always in the **right place** at the **right time.**

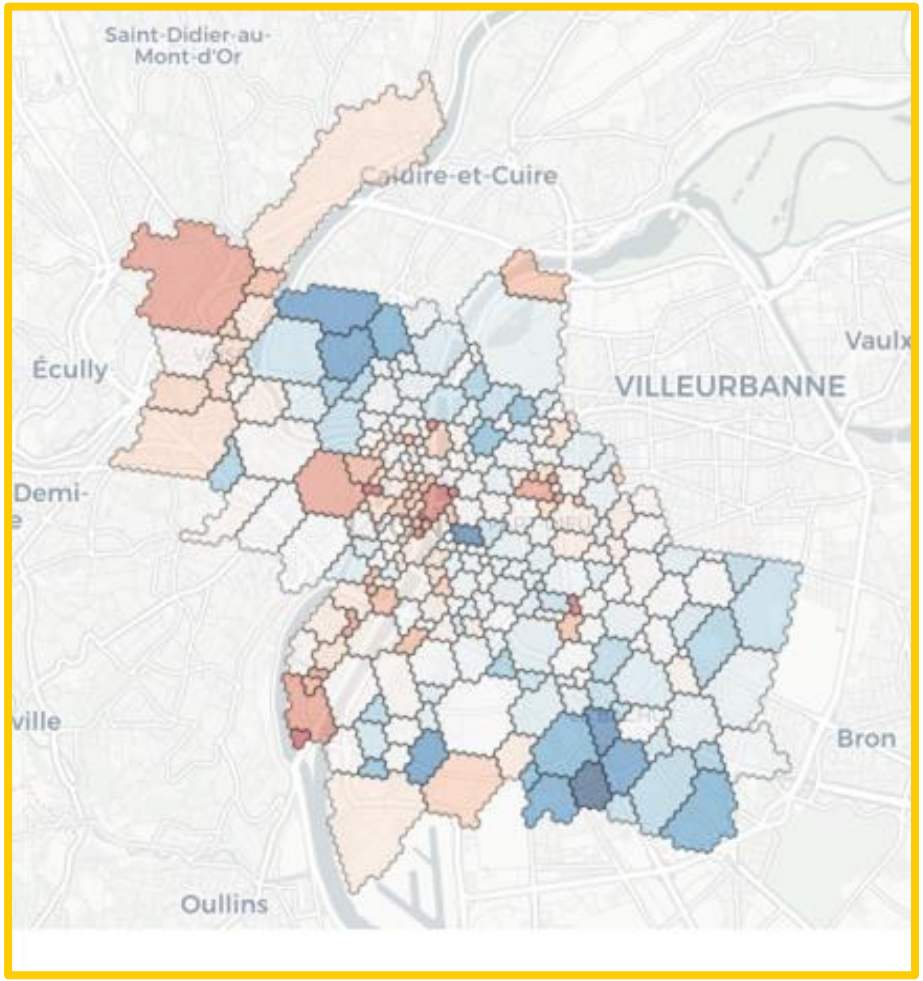


Understanding the Rider Behaviour.

Our predictive models take into account the natural variation of demand through the week.

Demand is influenced by:

- Regular mobility patterns (time of day, day of week)
- Special events (public transit strikes, concerts, sport events, etc)
- Weather
- Availability of other mobility options



Matching supply and demand.

Our predictive models match the supply and demand and guide our teams with **90+% precision** based on

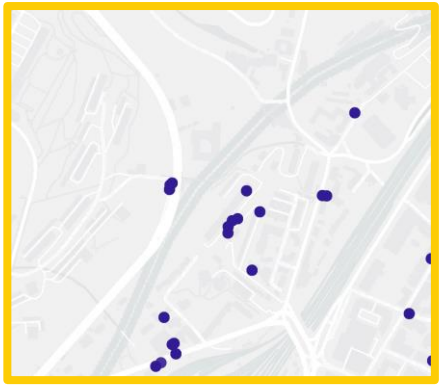
- **End-of-trip locations** - Where and when are vehicles located?
- **App sessions** - Where and when do users need a vehicle?
- Long term trends, including impact of Corona restrictions

We adjust our deployment and rebalancing tasks accordingly to provide a mobility option for the masses.

Did You Know...

We log up to 2.000 trips per hour in Lyon, equivalent to 6 bus lines at a 10 min interval.

Low demand area



High demand area

Keeping our cities clean.

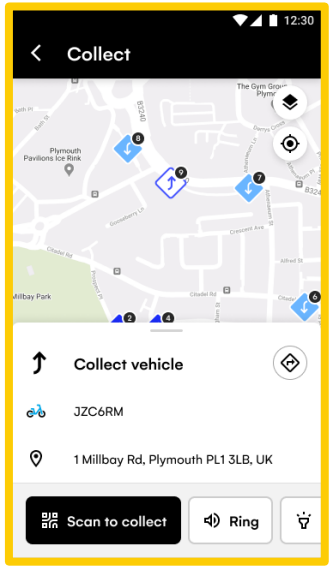
Our predictive models ensure **saturation control and fast reaction times**.

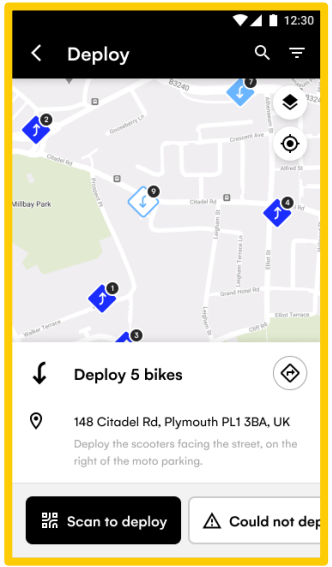
We create tasks for our patrollers sometimes even before issues occur.

- Resolving saturation at parking hubs
- Picking up abandoned vehicles
- Ensuring compliance with local regulations (X vehicles per zone / hub, etc)

Did You Know...

96% of all our tasks on the streets in Paris are completed within 3 hrs.



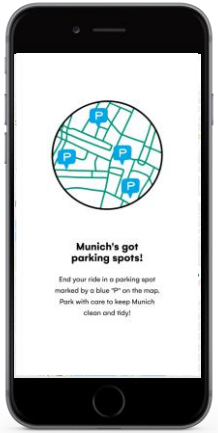


Our service informs infrastructure needs.

Dott's Data Dashboard is both predictive and reactive to increase the efficiency of our operations every day while managing the variables of the real-world.

Over time, we identify clusters of high demand density in our data to make **smart parking** hub recommendations, **customised to each city's mobility and usage patterns cities.**

Then we only allow our riders to end their trips in designated parking locations.



Ensuring highest parking compliance.

Thanks to the **combination of accurate GNSS and end-of-trip photos** we achieve highest parking compliance.

- 2.500 parking hubs in Paris
- 382 parking hubs in London (expanding)
- Milano, Stockholm, Barcelona and many more will follow

Did You Know...

94-97% of all our Dott scooters in London and Paris are parked correctly within dedicated hubs.

Selection of user photos received and reviewed by Dott

Thank you

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