



GEOROUTE

# DYNAMIC SOLUTIONS FROM PLANNING TO ROUTING

PLAN OPERATE MAINTAIN & MONITOR

G:RO



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## DYNAMIC SOLUTIONS FROM PLANNING TO ROUTING

GeoRoute is the routing software from GIRO that optimizes all operations on the last mile to ensure high-quality postal and parcel services.

Some of the best-performing postal operators around the world rely on GeoRoute, including An Post, bpost, Canada Post, Deutsche Post DHL, La Poste, Royal Mail and Swiss Post.

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### GeoRoute product summary

GeoRoute helps you make the best use of your production data to assure the success of your parcel and mail operations. The **GeoRoute pro** desktop client and **GeoRoute operations** Web application support every aspect of decision-making, from planning and evaluating territories to dynamic planning and routing.

GeoRoute's dynamic-planning features produce sustainable solutions that respect operational constraints. Dynamic optimization up to the final sorting, while also benefitting from local knowledge of planners and couriers, streamlines operational processes and maximizes operational efficiency.



# MAIN FEATURES

## Planning

- + Create mail and/or parcel routes with a complete set of automatic and manual features.
- + Pre-plan alternative scenarios for the day of operations, ensuring stability in your operations to manage volume fluctuations as well as resource limitations in case of unforeseen absences.
- + Produce accurate work evaluations respecting all operational duties, hit-rates, volumes and work regulations.
- + Create blocks to manage groups of addresses that should be kept in the same delivery order in all planned scenarios, to facilitate more stability based on local knowledge or other operational constraints.
- + Plan alternate-day delivery models to cope with decreased mail volumes.
- + Define a production calendar indicating which planned scenario(s) to apply on each day.

## Operations

- + Optimize planned routes and scenarios based on daily data.
- + Evaluate, sequence and compare planned routes with daily volumes.
- + Select best scenario to react to operative changes efficiently.
- + Create routes dynamically to improve efficiency, while maintaining operational stability.
- + Re-balance routes, considering routes' pre-defined building blocks.
- + The Web application enables depot managers and team leaders to react quickly and efficiently to daily volume and product variations.

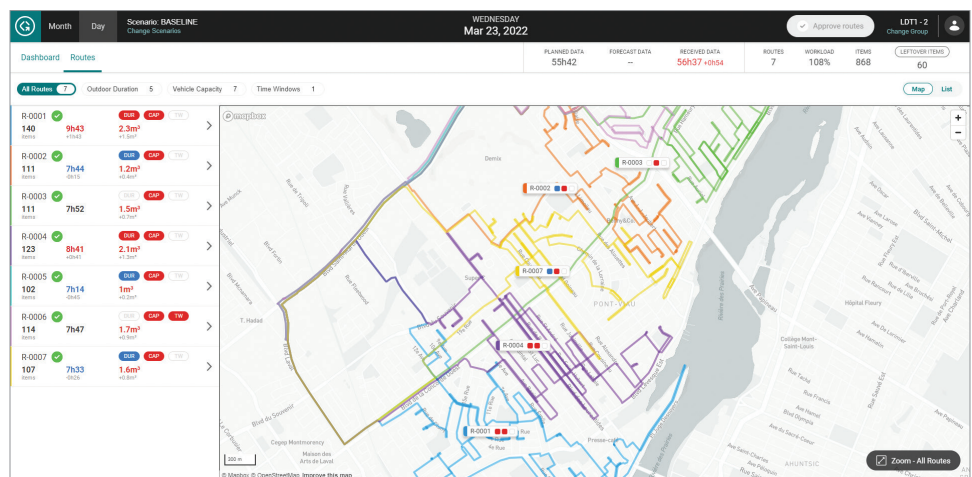
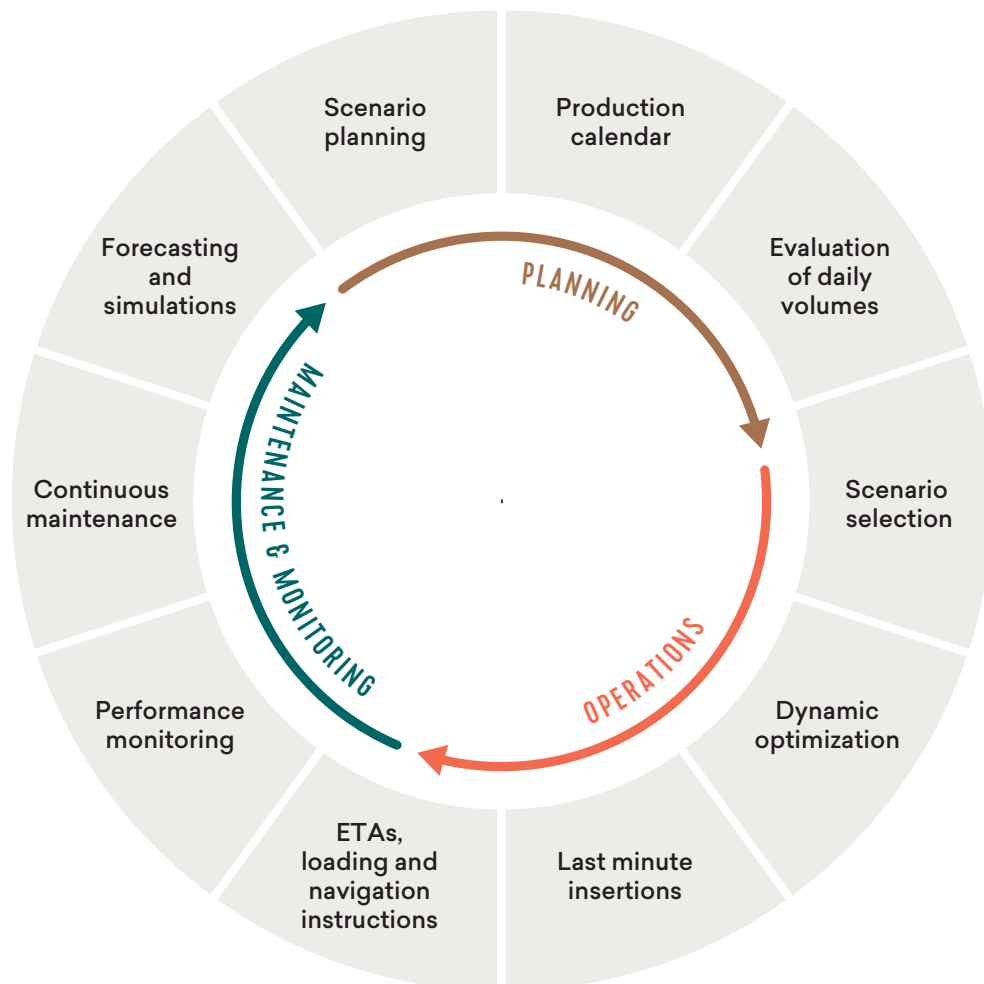


Figure 1.1 – GeoRoute Operations – Daily routes view.



## Maintenance & monitoring

- + Evaluate and optimize planned routes and scenarios based on forecasted volumes.
- + Monitor route workload continuously based on data updates (road network, addresses, volumes, etc.).
- + Adjust planned routes to react to volume variations and operative changes.
- + Continuously monitor and update the production calendar.
- + Monitor performance at route-, team- and depot-levels.
- + The Web application enables depot managers and team leaders to adapt routes to operational challenges.
- + Use comprehensive GIS features to manage road networks, addresses, postal locations, and background maps.



# SUPPORTING FEATURES

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## Algorithms

- Sophisticated, configurable algorithms respect soft and hard time windows and other constraints, various vehicle types (truck, car, bike, foot, etc.) and specific delivery contexts such as park & loop.
- Handle various complementary activities that must be included in the route workload evaluation, including breaks, reloading the bag at a relay location for a foot route or rerouting undelivered parcels to retrieval counters and parcel lockers.

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## Connectivity

- Automatic features to update data such as road networks, addresses and postal locations.
- Automatic inbound and outbound interfaces to sorting and other production systems.
- Web services to provide dynamic route creation or sequencing as services to external systems.

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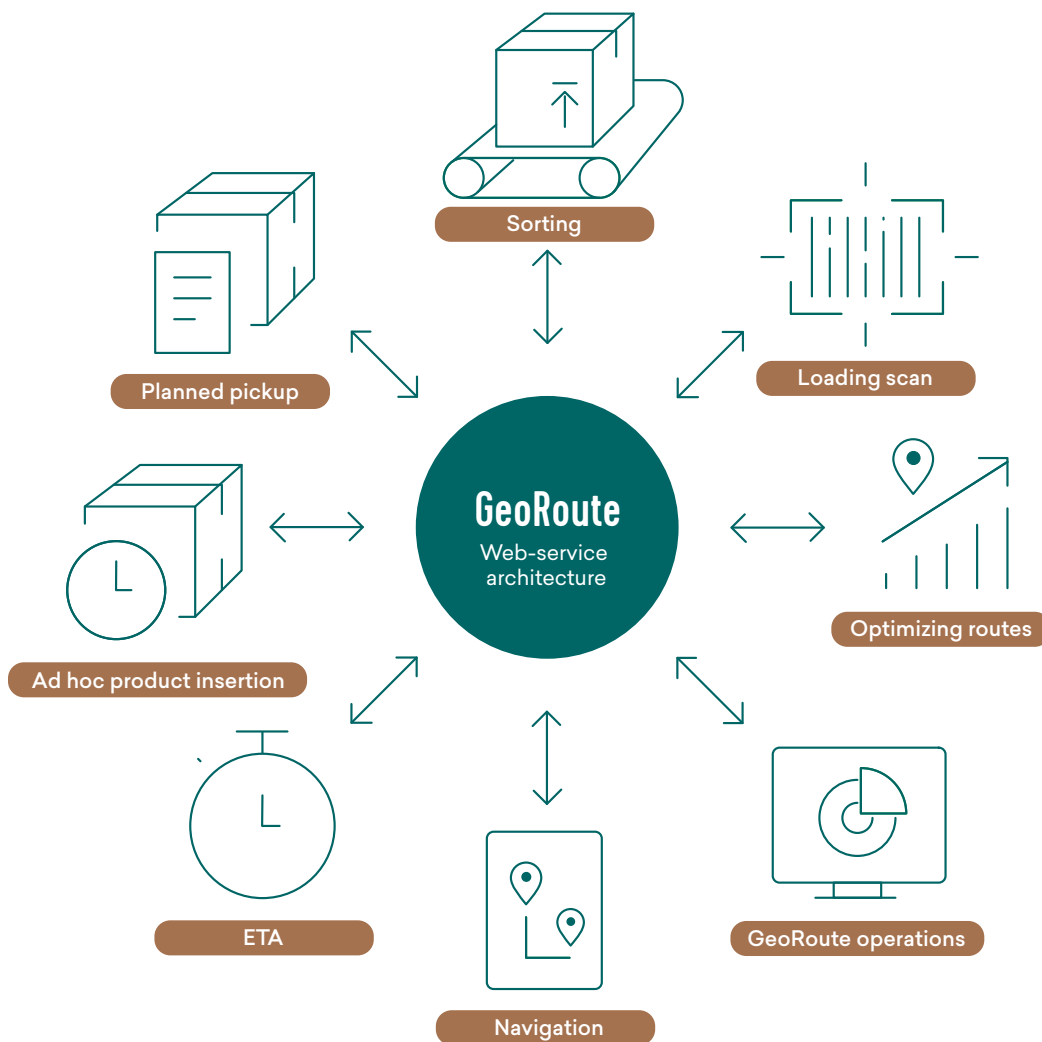
## Architecture

- Multi-processing architecture to handle large-volume operations such as road-network and address-data updates, historic-volume importation, etc.
- Dedicated high-performance Web architecture for operations management designed to respond quickly to any events/requests. importation, etc.
- Scalable architecture to manage yearly increases in volumes.



## Web-service architecture

GeoRoute offers a Web-service architecture to provide you the needed quick response times. Database interactions are reduced through preloading of necessary data and core usage is optimized through multi-threading.





# RESPONDING TO GROWING CHALLENGES

For more than 30 years we've been every step of the way with postal and parcel operators wherever you are in the world. We know your business, and together we can achieve so much more.

GIRO now counts on a team of more than 600 experts, including a specialized, dedicated algorithm team. With our long-established commitment to R&D to spur innovation – and meet your emerging challenges in the postal and parcel industry as they arise – GIRO continuously devotes 30% of resources to R&D and we collaborate with clients to take products in new directions.

In everything we do, GIRO is committed to contributing significantly, with the highest standards of excellence and sense of shared purpose, to your efficiency gains through solutions and services adapted to your specific reality.

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