Efficient parcel and express logistics planning solutions

Discover how Quintiq’s intelligent planning and optimization solutions reduce costs and maximize operational efficiency.
The parcel and express market is undergoing rapid changes, with swift fluctuations in parcel volumes on one hand, offset by a more complex business landscape on the other.

Trends such as increased competition, rising expectations for flexible and fixed-time delivery schedules, tighter environmental requirements and expanding B2C deliveries are together forcing operators to rethink their business strategies.

Exceptional parcel and express operators distinguish themselves by outperforming the market norm for reliability, speed and cost-effectiveness. They offer tailored services and guaranteed service levels, such as next day and before-9AM deliveries, SMS delivery notifications, and more.

In addition to improving and diversifying services, parcel and express operators need to extend their geographic coverage – while reducing their operating costs.

In this environment, operational efficiency and flexibility are vital to the financial success of any parcel and express company.

Quintiq helps operators meet these challenges by providing an integrated set of advanced and adaptive planning systems, optimized for the industry.

The Quintiq parcel and express planning solution enables you to make optimal use of resources, to improve service quality, flexibility and reach, and to successfully introduce new services – with maximum cost effectiveness.
Effective parcel and express pick up & delivery planning

The key to achieving operational efficiency is integrating all commerce, pick up & delivery (PUD) and network operation processes so that your entire organization is focused on common goals.

Reliable and optimized medium-term tactical planning – that guarantees any shipment is accepted against the lowest costs and highest margin – is essential. However, only by combining tactical planning with robust short-term operational scheduling can one achieve operational excellence.

Furthermore, adding real-time event management to handle daily disturbances enables you to optimize all processes on all planning levels.

Quintiq provides immediate insight into the effect of planning decisions on your key performance indicators. The result? Operational efficiency, organizational and service flexibility, customer satisfaction and financial success.

Quintiq’s Parcel and Express Planning Solution fully supports the planning and optimization of all your express services. It’s an integrated solution for tactical planning, operational scheduling and real-time event management. Quintiq is the only solution that supports multiple structures – it offers the ability to integrate multiple networks by planning across air schedules, sorting centers, charters, road networks and PUD services.

In today’s tough parcel and express environment, tight cost management, exceptional customer service delivery and the ability to quickly adjust to market changes are fundamental to the success of your company.

Quintiq provides a full range of powerful planning solutions that can support your current processes and promote your business growth.
The Quintiq Parcel and Express Planning Solution

The Quintiq multi-resource planning application suite includes the following features:

**Company planning**
- Supports the commercial division by addressing order acceptance and sales quoting
- Enables online confirmation of PUD time windows and costs.

**Network planning**
- Generates optimal timetables and line hauls, directs parcels through the network and ensures optimal network-wide resource utilization by balancing forecast needs with the actual resources, such as vehicles, depots/hubs, charters and drivers
- Evaluates the effects of network changes, such as the introduction of a new depot.

**Resource planning**
- Ensures the efficient use of capital and labor resources by determining the most effective schedule
- Aligns workforce supply with the parcel flow; generating optimal labor rosters
- Assigns tasks to people for the day of execution to create greater throughput in sorting centers.

**Pick-up & delivery planning**
- Generates optimized PUD tours on a tactical planning level, reducing the need to rely on geographically knowledgeable drivers
- Supports parcel dispatch to depots and tours
- Supports dynamic route planning – Tours are generated as late as possible, on the day-before-operation or even during the day-of-operation, based on the PUD addresses and time windows
- Diary management enables planners to offer flexible delivery time slots to your customers, taking into account service levels, customer preferences and other parameters
- Balances the distribution of parcels to depots based on the depots’ capacities (depot load balancing)
- Ensures the efficient assignment of drivers, vehicles and carriers to meet customer delivery requirements, improving first-time delivery rates, minimizing missed delivery attempts, and reducing costs
- Takes into account all business specific-rules, e.g. delivery address characteristics and constraints
- Integrates with navigation and telematics systems, enabling timely response to disturbances and quick, cost effective rectification of missed pick ups/deliveries

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Key benefits

- **Integrated planning** – PUD, network and depot operations are coordinated in real time to synchronize the flow of activities and push the buffers out of the organization.
- **Service flexibility** – Easily and quickly offer new or tailored services while taking advantage of commodity costs.
- **Exceptional customer service levels and service quality** – Attain a strong competitive position.
- **Significant PUD cost savings** – Benefit from efficient resource utilization and increased productivity.
- **Fewer tours** – Dispatch in real time and eliminate ad-hoc tours.
- **Significant savings in network operation costs** – Improve capacity balancing.
- **Improved utilization of capacity** – Assign vehicles and personnel more efficiently on a daily, weekly and monthly basis.
- **Reduced labor costs** – Optimal alignment of workforce supply with parcel processing demand.
- **Reduced fuel consumption** – Improve environmental friendliness and save on fuel costs through efficient tour generation, integration with telematics, and improved first-time delivery rates.
- **Company-wide visibility** – Access up-to-date information on all operations and across all planning horizons.
- **Exceptional and profitable delivery performance** – Choose the most profitable deliveries and achieve optimal yet flexible, delivery schedules.
Superior analytic capabilities for accurate decision making

With shrinking reaction times, decision-making must be quick and accurate.

To measure the quality of planning decisions, Quintiq compares operational performance against resource utilization, employee satisfaction, customer service levels and other KPIs.

This enables you to instantly evaluate the quality of any plan. For example, before bidding on a new tender, you will have insight into how the contract will affect operations by performing what-if scenario analyses to discover hidden costs and benefits.

Moreover, the Quintiq platform offers complete visibility of management information based on your business data and analyses of deployment, availability and planning trend sets.

Its user-friendly interface makes interaction between the planner and system direct, fast and intuitive. Individual planners choose the visualization according to their specific planning requirements. Insightful displays of data enable the planners to make informed and effective decisions. This results in a system where the planner is always in control.

Integration with other systems

Integration with other IT systems is essential to any advanced planning and optimization system. The Quintiq technology is able to integrate with external systems (ERP, HR systems, sorting machines, handheld devices) using a multitude of technologies, including XML, ODBC, SOAP and many others.
Because every express delivery company has its own specific planning preferences and requirements, having a planning and scheduling solution customized to your organization's needs is essential.

Conventional software is built upon parameters. This results in an incomplete fit with organizations’ specific planning requirements and compromises planning quality and relevance.

The Quintiq Parcel and Express Planning Solution is a fully configurable solution based on the uniform Quintiq technology core. Quintiq is a business logic-driven planning platform: any business rule or constraint can be easily defined in the system. This means Quintiq creates a solution that’s an exact fit with your organization’s needs.

And, because the Quintiq solution is flexible, it will meet your future planning and scheduling needs, supporting even rapid and substantial growth. This gives you the best of both worlds: the perfect fit of a tailor-made system with the long-term scalability and upgrade benefits of a standard solution.

In addition, fast implementation sets Quintiq apart from the competition. Quintiq has developed a standard project methodology which enables fast and easy deployment. A fully serviceable and customized solution can be delivered and implemented quickly, with many users experiencing a return on investment within just 6 to 18 months.

“Quintiq will become the global standard for planning and dispatching for DHL Express.”

– Charlie Dobbie, EVP Global Network Operations, DHL Express
The functional overview highlights all areas where Quintiq could support your business processes. A specific solution can comprise of one or more particular areas.

“With Quintiq, we now have a platform for all our IT planning applications within TNT Express and can thereby also improve our customer service.”

– Nigel Barton, Director Strategic Operations, TNT Express
**Select Quintiq logistics customers**

**DHL** is the global market leader of the international express and logistics industry, specializing in providing innovative and customized solutions from a single source.

DHL offers expertise in express, air and ocean freight, overland transport, contract logistic solutions as well as international mail services, combined with worldwide coverage and an in-depth understanding of local markets.

DHL’s international network links more than 220 countries and territories worldwide. Some 300,000 employees, including more than 40,000 employees in the US, are dedicated to providing fast and reliable services that exceed customers’ expectations. DHL is a Deutsche Post World Net brand.

**TNT Express** is an international market leader in global express services. Through its two divisions, Mail and Express, packages are transported, sorted, handled and stored in over 200 countries by around 161,500 TNT Express employees.

**Roberts Europe** is a leader in the premium freight market. This market segment handles items that cannot be transported by standard logistics service providers because of stringent time limitations or service requirements.

Roberts Europe is an independent company specialized in offering seamless solutions to complicated transport problems. Through its extensive ground network, that covers most of Europe, and worldwide air network, Roberts Europe provides its customers with individual, tailor-made solutions.
Every business has its supply chain planning puzzles. Some of those puzzles are large. Some are complex. Some seem impossible to solve. Since 1997, Quintiq has been solving each of those puzzles using a single supply chain planning & optimization software platform. Today, approximately 12,000 users in over 80 countries rely on Quintiq software to plan and optimize workforces, logistics and production. Quintiq has headquarters in the Netherlands and the USA, and offices around the world.