



*Quintiq Roster Solution*



## GET THE MOST FROM YOUR HUMAN CAPITAL

### TURN CHALLENGE INTO ADVANTAGE

An organization's most valued asset and often its largest expense is its workforce. Even a small rise in productivity can bring large revenue increases and significant cost savings. Furthermore, capitalizing on your workforce's distinct capabilities can set your organization apart from the competition. The opportunity is huge; however, because human capital is also the most difficult and expensive resource to optimize, so are the challenges. Most available scheduling solutions simply are not flexible or comprehensive enough for today's dynamic and complex work environments, because they are unable to represent every constraint exactly as it applies to your business. The result is inadequate planning which can incur expensive overtime as well as frequent and costly last minute scrambles to fill shortages. The added stress hurts employee morale; the unnecessary costs drain your company's budget. Additionally, your business may be blocked from reaching its full potential when your planning system does not allow you to profit from the unique skills and strengths of individual members of your workforce. A scheduling software solution that can take into consideration labor costs, employee skill sets, required productivity and employee preferences will thus have a dramatic positive impact on the financial success of your organization. All this is especially important if your organization's human resource supply and demand fluctuate or are difficult to predict.

### OPTIMIZED SHIFT GENERATION SAVES YOU MONEY

The Quintiq Roster Solution (QRS) optimizes the scheduling process, virtually eliminating expensive overtime and uneconomical undertime. When you input demand or forecasts, business regulations and norms, QRS then either automatically generates the best shift pattern or supports you in creating optimal shift patterns. There are no limitations on shift types, work/rest patterns or planning horizons. When considering the shift patterns, QRS considers the skills sets of your employees to determine the best combinations of shifts and skills ensuring the lowest cost for fulfilling your highly variable demand. You are assured of always having the right number of employees with the necessary skills and training at the right time and at the lowest cost. In addition, by taking employee preferences into account when scheduling, you create more employee-friendly and more stable schedules which need fewer future adjustments. This maintains the plans' original effectiveness and ensures your workforce has maximum positive contribution to the financial success of your organization.

### INDIVIDUAL ROSTERING INCREASES EMPLOYEE SATISFACTION

Traditionally, rosters are created using a set of fixed shift patterns able to cover the required period. These patterns are negotiated with unions and on average should make employees happy. The problem is that traditional rostering creates supply based on these fixed patterns, regardless of demand. Also, people are assigned shifts at times that would make them happy on average, but not actually truly happy given their

### Key Advantages

QRS stands out as a complete solution that delivers comprehensive human resource planning, especially for organizations in which mapping the demand to the proper shift set is a complex puzzle. It offers exclusive capabilities that enable your organization to:

#### Promote employee satisfaction

– By factoring employee preferences into schedules, you decrease absences and increase retention levels.

#### Improve customer satisfaction

– When human resource demand and available capacity are optimally matched, it is easy to meet service level agreements.

#### Boost productivity

– Effectively leverage employees with multiple skill sets. Match employee skills with demand.

#### Prevent regulatory violations

– Avoid costly infractions of labor laws and collective labor agreements.

#### Increase profitability

– Reduce labor costs by limiting overtime and dependence on contracted labor. Lower the cost and effort of scheduling your workforce.

individual preferences. As a result, the roster created by traditional methods creates mismatches for both employer and employees.

QRS supports Individual Rostering. The goal of this process is to find balance between demand and supply taking into account individual employee preferences. Employees can indicate their personal preferences regarding days, or parts of days that they do not wish to work, for example because they have their weekly card night, a tennis tournament or their child's school play. Each employee gets a number of points for each period and can bid points for non-working days to increase the chance of getting that day off. Bottleneck days, for which many employees indicate that they want a day off, for example Christmas Day, will require a higher bid than non-bottleneck days. In this stage, each night the optimizer creates a schedule showing who will work which hours on which days and indicate the cost in points of each day. In the second stage employees can shift their preferences to relieve the pressure on bottleneck days and opt to have another day off which requires fewer points. This will save points, leaving more for other days or the next period and at the same time solves bottlenecks in the planning through voluntary actions of employees. At this stage it is not allowed to add preferences to days indicated as bottleneck days. In the third and final stage the planner finalizes the last schedule created by the optimizer and publishes the results.

### ADVANCED TECHNOLOGY BOOSTS ACCURACY AND FLEXIBILITY

Based on Quintiq's sophisticated optimization engine, QRS adds a new level of flexibility and capability to existing scheduling solutions. Using advanced algorithms and built-in intelligence QRS has the unique capability of enabling any rules for legislation, labor contracts, employee preferences, skill sets, vacation time and training.

Rostering requirements vary for each organization and the ability to consider every rule in your workforce scheduling and make changes to the rules as your business grows helps meet your organization's goals.

### LEARNING FROM THE PAST IS NICE; DETERMINING THE FUTURE IS BETTER

Making decisions based on past performance is like driving your car while looking in the rearview mirror. With demand driven planning, Quintiq gives you the direction you need to steer your organization to success. This means that actual resource or production requirements, instead of best guess estimates based on what worked in the past, determine how many and which employees will be working on any shift. By creating 'what if' scenarios QRS accurately matches your production and service needs with available personnel. Moreover, the strength of Quintiq technology lies in its ability to consider both the present and future needs of your company. Planners can evaluate planning scenarios according to key performance indicators (KPIs). This option allows planners to know ahead of time the effects their decisions have on the company's bottom line results. QRS does not just report the past; it allows you to direct the future.



### SUPERIOR ANALYTIC CAPABILITIES PROMOTE ACCURATE DECISION MAKING

To measure the quality of planning decisions, performance is compared to resource utilization, employee satisfaction, customer service levels and other KPIs. This enables you to instantly determine the quality of any plan. Individual users or groups of users can customize the analysis by defining KPIs affecting their areas of operations. In addition, QRS offers a veritable treasure chest of management information and analyses of deployment, availability and planning trends. This management dashboard forms an excellent base for improving activity control.



The Best of Both Worlds: Custom Configuration with Cost-effective Upgrades, Scalability and Support  
With standard scheduling software systems, upgrades and technical support come at the price of inflexible and insufficient scheduling capabilities. However, with QRS there is no trade-off. Like all Quintiq solutions, QRS is a custom-configured solution based on a uniform technology. The modeling layer allows the system to be customized to precisely fit your organization's scheduling preferences and needs. The standard technology core allows cost effective, timely support and upgrades. With this unique architecture QRS can also meet your future scheduling needs, supporting even rapid and substantial growth. With its flexible,

open platform, QRS easily integrates with ERP, CRM and other systems, enabling you to leverage your existing investment. QRS can be integrated with all Quintiq Advanced Planning and Scheduling software solutions: comprehensive long-term planning, multi-resource planning and industry-specific planning solutions. In addition, the QRS solution can be integrated with any ERP, HR or payroll system.

### QUINTIQ ARCHITECTURE



The **orange layer** represents 80% or more of the solution. It is the standard Quintiq Application Suite, which consists of many planning functionalities, ranging from the Windows (and/or Web) user interface and the real-time knowledge engine where the knowledge tables and calculations can be specified, to the integrator that allows integration with other systems and optimizers that allows optimization of (parts of) the puzzle. The Quintiq Application Suite is used by all Quintiq customers.

The **blue layer** represents a Quintiq Industry Solution. Quintiq has a number of different Industry-variant Solutions for different market segments. This represents a further 10% of the solution (market specific, but company independent logic).

Finally, the grey layer is all that makes each customer's implementation unique. That is the part of the system that will be configured together during a project to provide the final 10% of the solution.

### ABOUT QUINTIQ

Quintiq provides advanced planning, scheduling and supply chain management solutions. The fast-growing Dutch company, established in 1997, offers software for planning and optimizing complex business processes throughout the enterprise. Deloitte has recognized Quintiq as being one of the fastest growing technology companies in Europe, and industry analyst Gartner has acknowledged Quintiq for its innovative products and market presence. The company's headquarters is located in the Netherlands and it has subsidiaries in Germany, UK, Finland, Malaysia, China, Australia and the USA. **For more information: [www.quintiq.com](http://www.quintiq.com)**

### Key Features and Benefits

- **Demand driven workforce planning** – Ensures you always have the right number of employees with the right skill sets when you need them.
- **Automatic compliance with labor rules and directives** – Avoids costly regulatory violations.
- **Absence and vacation planning** – Forecasts residual vacation days so you know in advance about upcoming employee shortages.
- **Employee preferences support** – Increases employee satisfaction, retention and efficiency.
- **Automated schedule generation** – Generates optimal rosters at the touch of a button.
- **Dynamic schedule generation** – Enables you to manage weekly peak/trough fluctuations.
- **Adherence to personal contracts** – Eliminates wasteful undertime and expensive overtime.
- **Employee training/skill requirements forecasting** – Helps you to consistently maintain a certified workforce.
- **Reporting and management data** – Provides valuable data to support accurate decision making.
- **Customizable user interfaces** – Meets the different planning needs of multiple planners.
- **KPI-driven scheduling** – Provides insight into the effects planning has on business goals.