



AMCS concrete planner

Ready to streamline processes and reduce operational costs?

Book a call with our experts today for a personalized consultation ➤

AMCS Concrete Planner is a revolutionary, standardized system developed specifically to optimize the distribution of ready-mix concrete in real time through event-driven, incremental planning functionality.

AMCS Concrete Planner is a vital resource for companies moving toward Performance Sustainability – the pragmatic approach that prioritizes people and the planet, while maintaining a focus on growth and profitability.

The solution enables major cost savings and CO2 emission reduction, and increases control of operational complexity by providing a comprehensive overview of processes. AMCS Concrete Planner decreases planning time drastically, and helps improve both customer service and distributional agility.

Ready-Mix Concrete Distribution Optimization

The distribution of ready-mix concrete is among the most demanding tasks within the transport industry.

The challenge is enormous. Issues like precision, variability, tight timing, and rapid operational pace all contribute to the complexity. Timing is particularly important: The short lifespan of ready-mix concrete poses a significant challenge to a distributor's planning abilities.

Batch planning is practically unfeasible in the ready-mix industry. That's primarily because predictions about quantities, unloading and driving times, delivery pace, and other variables are often inaccurate, resulting in last-minute orders, delays, and changes. In such a dynamic environment, it's vital for distributors to be able to react quickly to any unforeseen event.

Within this highly competitive industry, the product itself isn't enough to make a company stand out. To gain market share, companies must distinguish themselves in other ways, like lowering prices, or providing better customer service through improved delivery accuracy and order flexibility.

An efficient, high-quality planning system can make those advancements happen.

Anything related to transport is a major cost burden, and the potential benefits of improving the efficiency of ready-mix distribution are enormous. Savings in this area have a direct impact on company

margins. That means it's essential to find the most effective tools for optimizing your distribution fleet.

AMCS Concrete Planner is a sophisticated and user-friendly automated solution for planning and managing distribution in ready-mix concrete companies. It offers industry-specific features and configurations to handle the complex distribution challenges of this sector effectively.

AMCS Concrete Planner delivers significant improvements in a wide range of areas, including distribution accuracy and delivery flow, production plant and vehicle choice, resource sharing between plants, capacity utilization and planning of production, and handling pickup, pump, and PUMI orders.

This is a state-of-the-art enterprise solution, which features key elements of both service-oriented architecture (SOA) and distributed architecture, as well as multi-user access, scalability, advanced security, and much more.

Companies can even utilize AMCS Concrete Planner as a fully integrated supply chain planning system, able to handle planning of the inbound transportation of aggregates and cement. The company's aggregate and cement divisions will both have a comprehensive overview of all ready-mix plants' present and forecasted output. AMCS Concrete Planner uses that data to automatically generate deliveries according to the minimum and maximum required stock levels at each plant.



Benefits

AMCS Concrete Planner enables ready-mix concrete companies to streamline internal work flows considerably, and achieve significant savings on transportation costs. Companies typically see these benefits:

- 10–20% increase in the number of delivered loads per vehicle
- A striking improvement in customer service levels, including the ability to meet tight time windows
- 25–50% less time spent on planning and resource scheduling
- 30–60 % less time spent on registration and follow-up
- 5–15% overall reduction in operational costs
- Significantly increased employee satisfaction due to stress-free planning and order entry

At AMCS, we continually develop new solutions and enhance our offerings, driven by our customers and partners. We value long-lasting relationships, ensuring our customers contribute to a circular economy while focusing on profitability and growth.

With 35 years of experience in creating advanced planning systems, we are a leading provider in Europe and are expanding internationally with our superior, industry-specific solutions.

AMCS Concrete Planner is built on our standardized platform, enhanced with ready-mix-specific features. Leveraging our extensive knowledge of ready-mix concrete distribution, we continuously refine the platform to maintain its position as the most advanced planning and optimization system in the industry.

AMCS Concrete Planner

AMCS Concrete Planner is a comprehensive enterprise system which integrates seamlessly with ERP systems, mobile devices, and ready-mix batching systems. This ensures effective and easy communication among all process constituents, and a smooth operational flow. Additionally, the system's functionality and user interfaces are highly configurable, providing a customizable, user-friendly user experience.

As an enterprise solution, AMCS Concrete Planner also serves as an advanced client-server platform, which allows multiple planners to access and process the same data simultaneously. Other client-server features include Citrix compatibility and role-based access control.

A high level of integration and interaction makes AMCS Concrete Planner ideal for dynamic and incremental planning, as it facilitates real-time and event-based resource scheduling and re-optimization. The system's unique Gantt chart capability is extremely useful, and provides a comprehensive visual overview of all relevant data concerning vehicles, drivers, terminals, and both planned and delivered loads.

Powerful Concrete Features

AMCS Concrete Planner is equipped to handle the special demands of ready-mix concrete distribution, with a wide range of unique capabilities that includes:

- Automatic splitting of sales orders into delivery loads for parallel or sequential delivery
- Planning across plants and sharing of vehicles
- Warnings when too many vehicles are on site

- Distribution of loads among vehicles according to qualifications, cost profiles, and availability
- Ability to handle pumps, PUMIs, and orders combining ready-mix and pumps
- Parameters to ensure a steady flow of loads (shuttle delivery, time between loads, or cubic meters per hour)
- Handling of alternative capacities and loading times
- Forecasting of detailed plans in order to calculate raw material consumption

This expansive selection of features and modeling opportunities enables you to optimize across every aspect of ready-mix distribution.

Advanced Planning Algorithms

AMCS Concrete Planner uses powerful planning algorithms which are tailored for the ready-mix concrete industry. The algorithms are designed to react quickly and effectively to order changes and delivery updates, second by second. The resulting functionality is ideal for executing incremental planning, scheduling, and optimization in real time.

High-quality algorithms enable quick and informed planning decisions when delays and unforeseen events emerge. By utilizing the power of the algorithms, planners can secure a steady and timely flow of delivery, while improving the deployment of resources and prioritizing deliveries according to service agreements.

Planners can easily access the most popular planning restrictions and optimization criteria. And, comprehensive configuration capabilities enable “super users” to customize planning in great detail.



Easily Integrated Planning.

AMCS Concrete Planner operates across the entire planning cycle of ready-mix concrete distribution, from order entry (interacting closely with the ERP system), to planning and execution, to the delivery of post-operational data for follow-up.

AMCS Concrete Planner features strong planning facilities for the following:

- Order booking: Receiving sales orders, splitting them into loads, and checking capacities without locking the plan
- Resource scheduling: Providing overview of resources and facilitating the management of these according to demand and availability
- Operational planning: Performing incremental planning and inserting new orders, both automatically and via a manual drag-and-drop process
- Execution: Real-time monitoring of the operation, fast handling of last-minute and changed orders, real-time re-optimization, and data collection from trucks
- Follow-up: Supplying collected data for reporting, e.g. invoicing, statistics, and self-billing
- What-if scenarios: Simulating consequences of relocating plants, using different vehicle types, etc.

AMCS Concrete Planner integrates all planning levels, creating an all-encompassing planning environment tailored specifically for ready-mix distribution planning processes.

Order Booking

AMCS Concrete Planner integrates seamlessly with any ERP system. When the system receives an order, it automatically splits it up and assesses the capacity according to geocoding and ordered goods type. This makes it possible to plan and provide a precise

time of delivery, while efficiently linking the order-taking process with distribution and production. The system is also ideal for time-slotting services.

AMCS Concrete Planner's client-server design supports both centralized and decentralized planning. That means planners can be positioned at one or several locations, depending on the company's preferred organizational structure. Moreover, the system's service-oriented architecture enables it to merge order-taking and distribution planning into one platform, or to keep the processes separate.

Resource Scheduling

The Gantt chart capability in AMCS Concrete Planner provides an excellent overview of the resources available at any given time. The system assigns a standard calendar to each resource, which specifies the availability of the resource by working time, qualifications, district, and other criteria. When the system receives new orders, or assigns time slots to existing orders, those orders are booked directly against the scheduled resources.

Of course, changes are inevitable. Perhaps more orders come in than expected – or fewer. Maybe a specific vehicle needs repairs. Or several drivers are out sick or on vacation. AMCS Concrete Planner makes it easy to monitor and adjust for these unpredictable variations in resource demand and availability.

Additionally, the system can use Gantt chart functionality to assign virtual resources to orders to estimate capacity requirements. That allows for quick adjustments in available resources, both before and during the actual operation.

Operational Planning

AMCS Concrete Planner is particularly well suited for incremental planning, and can continually optimize plans as new orders arrive. While optimizing, the system can consider a wide range of parameters relating to vehicles, customers, terminals, and other variables, taking both costs and restrictions into consideration.

The system embraces both automatic and manual planning. It can perform continuous automatic background optimization, while also enabling planners to modify the plan manually by dragging-and-dropping orders in the Gantt chart. The ability for the system and planners to interact closely forms a strong basis for creating optimal plans.

Making any change to a plan prompts an automatic consequence calculation dialogue box, which gives the user an instant overview of KPI consequences and possible restriction violations

Real-Time Plan Execution

Because AMCS Concrete Planner is a genuine real-time planning system, it can re-optimize ready-mix distribution the moment delays occur, or last-minute orders and other unforeseen events emerge. The system enables users to monitor distribution status, e.g. delivered versus not yet delivered loads, which is crucial to a smooth operation.

AMCS Concrete Planner delivers true mobility through integration with mobile units in trucks, which enables continuous messaging about current load status and GPS positioning. The GPS' geofencing functionality informs planners of a truck's exact expected arrival time, so they can adjust ready-mix concrete production to ensure a just-in-time delivery.



This powerful functionality makes AMCS Concrete Planner a highly dynamic, real-time-based dispatch system, enabling full control of a hectic operation.

Distribution Follow-Up

With real-time connectivity to trucks, AMCS Concrete Planner can automatically collect all transport KPIs from the source, and merge them with the system's planning KPIs, creating an ideal resource for analysis and follow-up.

Because all data is stored in AMCS Concrete Planner, users can instantly access the information they need for any type of post treatment. That can include invoicing (including potential waiting time payment), analyzing order handling time, evaluating customer service fulfilment, paying drivers, and enabling self-billing in connection with external contractors. This expansive data is valuable for management, as well, and can serve as a basis for fine-tuning and calibrating the AMCS Concrete Planner's planning model and parameters.

Users can turn to the system's built-in report functionality to analyze the collected KPIs, or export information to a data warehouse or an ERP system for further analysis.

What-If Simulations

AMCS Concrete Planner provides an effective tool for building and comparing different what-if scenarios. That capability makes it easy to test and evaluate the results of planning scenarios reflecting different strategies, policies, and legislation.

Planning scenarios could include varying the type and number of ready-mix vehicles, assessing the

optimal placement and number of production plants, considering internal versus external vehicles, or using different service levels.

Users can also evaluate long-term investment scenarios that reflect strategic initiatives, incorporating detailed KPIs and customer service level indications.

AMCS Concrete Planner

The distribution of ready-mix concrete is a demanding and highly challenging business. And, the industry's complexity holds considerable potential for improving efficiency and achieving savings. To help ready-mix companies take advantage of that potential, AMCS has called on years of experience to develop AMCS Concrete Planner – a cutting-edge planning system for ready-mix concrete distribution.

This robust system can handle the wide range of industry-specific distribution challenges the ready-mix concrete industry faces. And, it's designed to manage the full planning process, including order booking, resource scheduling, operational planning, execution, real-time optimization, follow-up, and even strategic what-if scenarios.

AMCS Concrete Planner is equipped with a range of powerful optimization algorithms tailored for the industry. These algorithms can carry out efficient planning with a large number of last-minute orders, delays, and order changes, while securing a steady flow of delivery and optimizing resource utilization.

With AMCS Concrete Planner, ready-mix concrete companies can improve their overall distribution efficiency, increasing the number of delivered loads per vehicle by 10 - 20%, and

improving their competitiveness through more accurate deliveries and better customer service.

AMCS Concrete Planner gives ready-mix companies a powerful platform that enables them to simultaneously boost efficiency, optimize processes, and equip themselves for a future where sustainability sets a new standard for business growth and prosperity.