Among your contact center resources, agents are the most critical; they are your company's face to your customers. Agents interact and deliver services to customers. Thus, your agents directly affect customer satisfaction and loyalty, and hold the keys to your company's success. They are also the most expensive resource you have, accounting for 60 to 70 percent of expenses at a contact center. Workforce planning determines when agents will be available to deliver services. Your company's profitability, and satisfaction, and loyalty of your customers depend on your ability to develop workforce plans that have agents with the right skills available at the right time. Your workforce plans should achieve this objective while minimizing costs at service centers and maximizing profits at revenue centers.

Using the new generation workforce optimization technologies developed by ac² researchers in advanced statistical and mathematical optimization, the AWO Portal answers the industry's need and delivers breakthrough performance improvements. The AWO Portal provides the following new generation technologies for workforce optimization (WFO).

**Artificial Intelligence Supported Ease-Of-Use**

Today's workforce managers face the challenge of the complexity of the traditional workforce management (WFM) systems. Beyond the intricacy involved in using the software, they also have to provide weights to generate forecasts with no WFM software support in many cases, and manually work on schedules generated by their WFM system that are clearly not optimal. The Artificial Intelligence technology built into the AWO Portal has expert knowledge used in planning and managing your workforce. It offers the utmost in ease-of-use while generating forecasts with the highest levels of accuracy, and provable optimal schedules using its expert knowledge base. The AWO Portal also offers highly intuitive, streamlined software usability to help you start...
generating value immediately. It eliminates the taxing complexities of traditional WFM systems and allows you to focus on the performance of your contact centers.

**Advanced Forecasting Technologies**

Forecasting is one of the most critical steps in managing your contact centers. Despite its importance, the traditional WFM systems provide forecasting technologies based on ineffective weighted averages. The new generation forecasting technologies provided in the AWO Forecaster include the most advanced time-series forecasting methods such as:

- AWO Expert System Best Pick
- Box-Jenkins ARIMA,
- Exponential Smoothing (over 10 versions), and
- Dynamic Regression.

To ensuring optimal forecast accuracy, these methods are applied using the AWO Portal’s artificial intelligence technology, Best Pick, every time forecasts are generated. The AWO Forecaster also offers:

**Special event period forecasting:** The AWO Forecaster provides extensive special event forecasting capabilities for promotions campaigns, and calendar events.

**Data aggregation and forecasting:** The AWO Forecaster supports 15-, 30-, 45-, and 60-minute, daily, weekly, monthly, quarterly, as well as annual forecasting.

**Automatic extreme data and missing value detection:** The AWO Forecaster improves the quality of data used in generating forecasts by automatically detecting and smoothing extreme data and missing values using advanced statistical techniques.

**“What-If” forecasting and scenario analysis:** The AWO Forecaster provides extensive “What-If” forecasting and analysis capabilities for an unlimited number of scenarios.

**Automated forecast accuracy tracking:** Accuracy for all past forecasts, both short term and long term, are automatically calculated and reported when the actual contact data is realized and stored into the AWO database.

**Concurrent Schedule Optimization**

The AWO Optimal Scheduler uses ac2’s new generation concurrent schedule optimization technologies to achieve unmatched schedule efficiency. The AWO Portal’s concurrent optimal scheduling technology generates schedules simultaneously to determine the best work/off days, daily start, and end times, daily coffee and lunch breaks for agents, to meet your service level objectives and minimize costs.

In contrast, the traditional WFM systems use incremental scheduling rules that build schedules one at a time. Incremental scheduling optimizes each schedule individually by itself and the algorithm used is no different than in the manual scheduling process. Consequently, it creates the same schedule inefficiencies with excessive agent overages and shortages. Concurrent scheduling maximizes efficiency by simultaneously determining the optimal work and off time schedules. Concurrently optimized schedules achieve a 5-12% higher efficiency rate than the traditional WFM systems.
AWO concurrent optimal scheduling technology is highly flexible to optimize a variety of user requirements.

**Powerful mathematical models and mathematical optimization technologies:** Using the new generation mathematical optimization technologies, the AWO Optimal Scheduler develops concurrently optimized schedules with unmatched efficiency.

**Agent schedules by preference, availability, bidding, and fixed:** The AWO Optimal Scheduler allows preference- and availability-based and fixed schedules, as well as bidding to optimize agent satisfaction.

"What-If" scheduling and scenario analysis: The AWO Optimal Scheduler provides extensive "What-If" scheduling and analysis capabilities for an unlimited number of scenarios.

**Multi-skill, Multi-site, Multimedia**
Capabilities provided by the AWO Portal help you develop accurate and efficient plans, and optimize the performance of your multi-skilled agents, multi-site and multimedia contact centers. The AWO Portal offers new generation skills based optimization technology integrated with the AWO Optimal Scheduler using the concurrent optimal scheduling technology. It analyzes agent skills and availabilities, and routing rules to generate optimal agent schedules.

Advanced forecasting technologies provided in the AWO Portal generate accurate forecasts at the enterprise level and concurrently schedule agents at multiple sites optimally to maximize service performance as a virtual center while managing agents and schedules locally.

**Multi-criteria Schedule Manager**
The AWO Multi-criteria Schedule Manager uses ac2's multi-criteria optimization technology to facilitate schedule management. Agents may be scheduled based on their preferences, availability, or through a bidding process.

**Preference-based scheduling:** The AWO Optimal Scheduler allows scheduling agents based on preferred work hours.

**Availability-based scheduling:** The AWO Optimal Scheduler allows agents to enter times they are available to work together with the most preferred hours. Schedules are generated optimally to conform to these availabilities and assigned using the AWO Schedule Manager’s multi-criteria optimization technology to meet agents’ preferences.

**Bidding-based scheduling:** The AWO Optimal Scheduler generates concurrently optimal schedules to conform to agents’ availabilities. The AWO Schedule Manager’s multi-criteria optimization technology uses agents’ preferences and criteria including seniority, performance, or adherence to assign schedules.

**Integrated Strategic Planner**
The AWO Strategic Planner uses the same advanced forecasting and concurrent optimal scheduling technologies to develop plans for hiring and training. Strategic plans may be developed and implemented in phases to improve accuracy. The AWO Portal also allows the development of plans with constraints on budget, FT/PT hires by location, work pattern, and skills.

**Phased-strategic planning and re-forecasting/re-planning:** The AWO Strategic Planner uses a phased planning approach to improve the accuracy of strategic plans by allowing re-forecasting and plan updates.

**Constrained and unconstrained strategic planning:** Constraints on budget, resource levels, full-time/part-time agent numbers and mix at different centers, work patterns, alternative scheduling policies, AHT reduction, shrinkage level, etc. can be imposed on the plans developed.

**Tracking the accuracy of long-range forecasts:** The AWO Forecaster tracks forecast accuracy weeks, months, and even years into the future.

**AWO Performance Optimizer**
The AWO Performance Optimizer tracks adherence, contact traffic, and performance to optimize your contact centers as the day progresses.

**Intraday performance optimization:** The AWO Performance Optimizer provides timed intraday re-forecasting and re-scheduling.

**Agent adherence:** The AWO Performance Optimizer monitors agent adherence to their schedules and provides detailed reports to agents and managers.
Performance Optimizer: The AWO Performance Optimizer provides overtime and volunteer time off management by optimizing performance with re-forecasting.

AWO Dashboards and Scorecards: The AWO Performance Optimizer provides highly configurable dashboards and scorecards on agents, organizational units, contact groups, centers, and environment level KPI's.

Meeting Scheduler: With the AWO Performance Optimizer, meeting requests with flexible timing can be wait-listed. They are automatically scheduled in the periods when their effect on performance is minimal.

AWO Agent Workstation
The AWO Agent/Supervisor Workstation empowers agents and management to manage schedules, exceptions, overtime, volunteer time off (VTO), and other activities. With 100% web based architecture, the AWO Agent/Supervisor Workstation is available to agents online.

100% Web Based Architecture
The AWO Portal is 100% web based. Its architecture greatly simplifies accessing and using AWO Portal, Performance Optimizer, and Agent/Supervisor Workstation. Unlike traditional WFM systems with client-server architecture, there is no software to be installed or maintained on the workforce managers’, supervisors’, or agents’ computers. AWO’s 100% web based architecture lowers IT support costs significantly and makes upgrades easier.

About ac² Solutions, Inc.
Formed by experienced and highly skilled professionals from Bell Laboratories, IBM Global Services, and Rutgers University, and propelled by more than 15 years of scientific research on contact center optimization, ac² Solutions is the leading provider of new generation contact center optimization technologies. Our products empower clients with the state of the art management solutions using our proprietary artificial intelligence, advanced forecasting, concurrent optimal agent scheduling, multi-criteria optimization technologies, and provide a differentiating and sustainable cost and service advantage. For more information, visit www.ac2solutions.com

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