

Next-Generation Deployment Planning

Resource Planner is a powerful tool for demand based schedule development for personnel and resources, balanced with service level agreements and financial goals. Industry leaders use Resource Planner to improve UHU and crew satisfaction, and dramatically decrease scheduling efforts and costs. Improve compliance and increase transport revenues with optimized scheduling of your resources.

Resource Planner analyzes your system demand and your possible combinations of shift types and start times to create an optimized schedule which takes into account your system's priorities for either coverage or cost.

Although Resource Planner is separate, incredibly powerful stand-alone software, it fits incredibly well into our FirstWatch offerings, as our customers are typically looking to do the best they can with the resources they have available, and harness the power of computers do what they do best, saving humans for those other tasks that humans are needed for.

The combination of Resource Planner and FirstWatch tools for traditional Demand Analysis (as taught by Todd's dad, EMS icon Jack Stout) and newer "consumption-based" Demand Analysis, along with triggers and reports for workload and fatigue management is an unbeatable combination.

Challenges in Schedule Creation

Scheduling has the largest impact of any high-performance EMS (HPEMS) concept/approach/theory, and patient care can be compromised if it's not executed properly. Effective scheduling can save tens to hundreds of thousands of dollars. It can also provide employees with shifts and options never before available, which improves employee satisfaction. Resource Planner is critical to meeting these challenges.

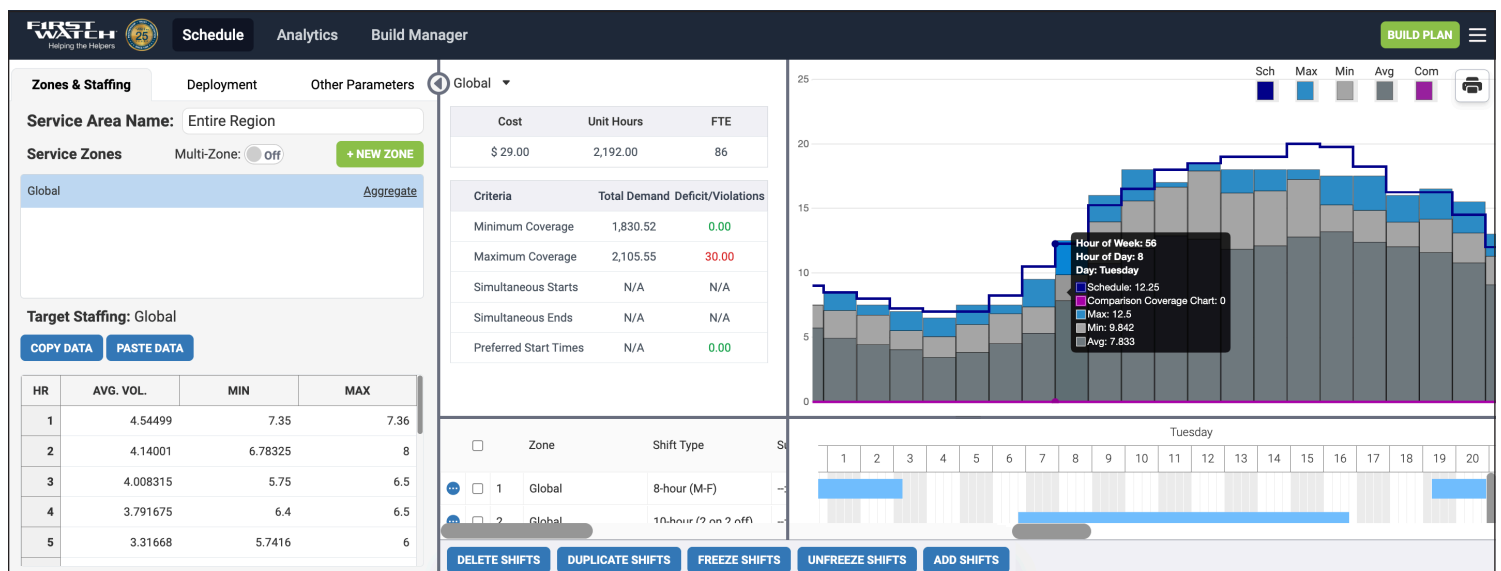
A Powerful Solution Engine

Schedule development has traditionally been a time-consuming process. Resource Planner easily imports demand data, either for your entire coverage area or geographic subsets and lines of business. It quickly analyzes the demand, and based upon your organization's priorities (coverage vs cost) and your business rules such as schedule types and start times, it produces a set of optimized schedules.

Flexibility is Key

With maximum flexibility, you can conduct an analysis based upon what is important to you. The analysis can be done by setting your priorities relative to cost or coverage. For cost, the analysis can be focused on unit hours, FTEs or shift cost. This is ideally suited for not only understanding how to improve your current operations, but to properly evaluate the cost associated with any new contracts you may have on the horizon.

Resource Planner Overview



Flexibility and ease-of-use make Resource Planner an excellent tool for planning the appropriate staffing and resource levels to meet fluctuating demand in a volatile environment. The results are easily viewed through the creation of a histogram, which is a visualization of the distribution of call demand and how staffing levels—determined by your business rules—meet that demand. The real power is unleashed with the ability to quickly build and save multiple scenarios for comparison. Resource Planner is also a decision support tool for managers to quickly and effectively develop shift plans to meet a range of business objectives.

Seize the Opportunity

With flexibility comes opportunity, and Resource Planner provides the opportunity to improve crew satisfaction. Creating multiple scheduling models is quick and easy with Resource Planner, so administrators can create several sets of schedules that meet demand. The most successful users involve crews in helping to decide which set of schedules to put in place. Resource Planner gives you the ability to not only meet demand, but help retain employees by boosting employee satisfaction.

A Proven Solution

Resource Planner is a proven solution for quick, efficient and accurate deployment planning. Eliminate the challenges of traditional deployment planning such as planning for inconsistent levels of demand, the inability to tie organizational financial constraints and goals to the deployment plan, and not knowing if the plethora of multiple shift types are the right ones.

Resource Planner – ROI

By allowing agencies to create schedules ideally matched to their needs and historical demand, customers gain a significant return on their investment. Specifically, their return falls in three areas: costs associated with over-staffing, lost revenue associated with under-staffing and employee satisfaction.

Decrease Costs

By eliminating areas of the schedule where staffing was higher than demand needed, agencies directly save the cost of those excess shift hours. Shifts cost (conservatively) in the neighborhood of \$75 per marginal unit hour to run (staffing + equipment costs). So eliminating just 8 unnecessary hours per day from a schedule can mean savings in excess of \$200,000 per year for the company.

Agencies experiencing significant growth often purchase new vehicles and “throw them at the problem.” Resource Planner can ensure that new vehicles aren’t purchased until truly needed, saving an expense that can easily exceed \$200,000.

Avoid Lost Revenue

When an agency is understaffed, they have to refer out calls to other agencies, or arrive late. Referring out the call directly costs the agency revenue, and arriving late means decreased customer/patient satisfaction, and potentially fines for being out of contractual compliance.

Increase Employee Satisfaction

By having a tool that allows the user to play what-if scenarios, agencies can now have fact-based conversations with employees that recommend new shift types. They can plug in the new shift type and see the effects on cost and coverage and decide whether it’s a good fit. Additionally, multiple schedules can be created that have similar cost and coverage factors and the employees can vote on which one they’d like to use. Engaging the employees in the scheduling process has a tremendous impact on their job satisfaction.

Resource Planner Feature Benefits

Automatic Generation of Schedules	Allows users to create schedules based on their criteria that best cover their historical demand.
Histogram showing demand and coverage	Gives a visual perspective of how well the current schedule covers demand...the eye can quickly see areas of too little or too much coverage.
Interactive Shift Bar Graph	Gives the user a visual image of the shifts in the schedule. Also allows them to grab shifts and move, delete, or copy them to modify coverage.
Create Multiple Service Areas	The user can specify different coverage areas and create schedules for each, this allows them to break apart their business into separate problems, create ideal schedules for each, and roll them up into a master schedule.
User defined Shift Types	Users can define what kind of shift types they want included in the schedule. This lets them make sure that their business needs are covered. It also lets them play “what if” games and see how the introduction of different shifts affects their coverage and cost.
Define Shift Limits	By specifying a minimum or maximum number of any shift type, the user can ensure that business requirements are satisfied by the schedule, for example, they may have a contractual requirement to have a 24 CCT car available each day, even though it may not be needed to satisfy demand.
Define Schedule Criteria	The user can specify what criteria has the most or least influence on the schedule to be built. For example they can say that cost is more important than coverage, or vice versa.

How Resource Planner Works

1 Enter Demand data (desired Unit Hours for the 168 hours of a week)

Enter manually or paste from CAD, Resource Planner spreadsheet, or FirstWatch Demand Analysis

2 Use FirstWatch-supplied shift options to start, then add, edit, or remove shifts, to meet your needs

Involve crews in this process:

- To teach about demand and juggling available resources
- To get ideas for shift types they want to work and include them as options for Resource Planner to use

3 Set Coverage vs. Cost priorities for Resource Planner

4 Have Resource Planner create an optimized schedule

5 Use schedule as-is or tweak parameters and re-run until your specific goals are met

6 Implement optimized schedule

7 Save money and improve crew engagement and happiness

Flexible Business Rules

The screenshot displays the 'Deployment' tab of the Resource Planner software. It features a 'Shift Types List' with options like '8-hour (M-F)', '10-hour (2 on 2 off)', '24-hour (7-day)', '12 Hr School (MWF)', and '12 Hr School (TTh)'. Below this is a 'Basic Settings' section for the '8-hour (M-F)' shift, including 'Shift Cost' (1), 'FTE' (2), and 'Hours Per Day' (08 : 00). A 'Downtime During Shift' section shows 'At Start' and 'At End' times as 00 : 00. To the right, a 'Medium Priority Criteria' table is visible, listing criteria such as 'Minimum Coverage', 'Maximum Coverage', 'Simultaneous Starts', 'Simultaneous Ends', and 'Preferred Start Tim...'. The table has columns for 'Criteria', 'Include', 'Limit', and 'Importance'. The 'Include' column contains checkboxes, and the 'Limit' column contains values like 'Default', 'Disabled', or '2000'. The 'Importance' column contains dropdown menus with values like 'Very High', 'Moderately Low', and 'High'.

Criteria	Include	Limit	Importance
Minimum Coverage	<input checked="" type="checkbox"/>	Default	Very High
Maximum Coverage	<input checked="" type="checkbox"/>	Default	Moderately Low
Simultaneous Starts	<input type="checkbox"/>	Disabled	
Simultaneous Ends	<input type="checkbox"/>	Disabled	
Preferred Start Tim...	<input checked="" type="checkbox"/>	Default	High

Demand Analysis & Resource Planner – a winning combination!

Deployment & Resource Planning – FirstWatch style; saving time, money & resources!

The opportunity to combine Jack Stout's traditional Demand Analysis approach & the more modern Demand Consumption Analysis, along with a very powerful, proven EMS Resource Planning software tool is an opportunity that could not be overlooked, as FirstWatch now views the new combination of Demand & Resource tools as a guaranteed way to save customers even more time, money & resources!

For years EMS industry leaders have used the Demand Analysis / Demand Consumption approaches, which FirstWatch is now exponentially enhancing by also offering Resource Planning functionality designed to improve your UHU and crew satisfaction, as well as dramatically decreasing scheduling effort and costs – the true beauty is all of this power is now offered by FirstWatch.

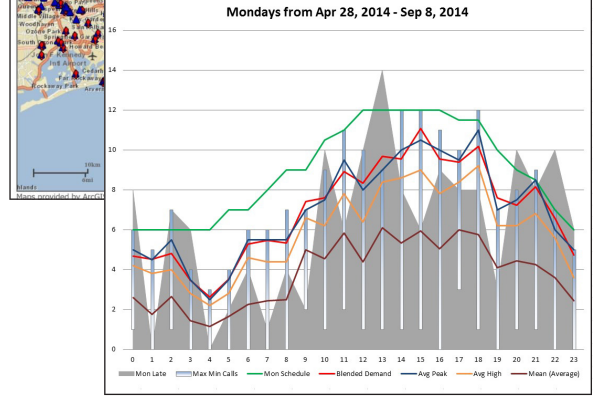
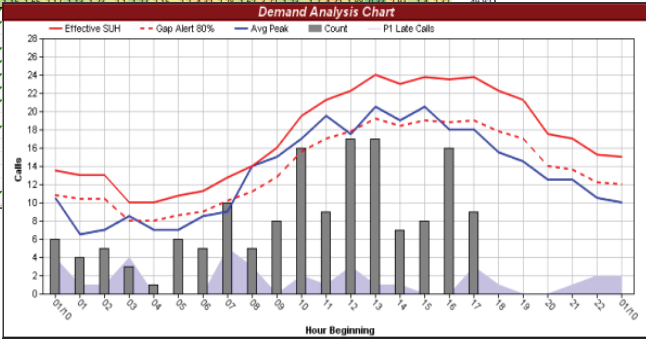
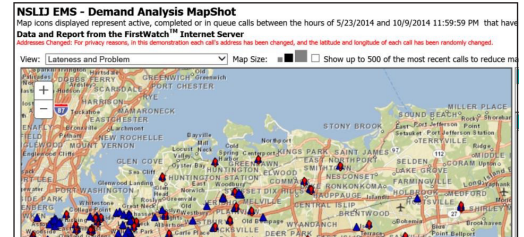
Would you & your EMS teams like to improve compliance and increase transport revenues with accurate deployment of your resources? We're betting that you would; so please ask us for a demo of the FirstWatch Demand Analysis Module & our NEW FirstWatch Resource Planner software today!!

Demand Analysis (FirstWatch add-on Module)

One of the many challenges faced by agencies is making the most effective use of the resources they have available. A common way to forecast needs for staffing, scheduling and resource deployment is to analyze historical patterns of demand for service, both by day of week and hour of day and geographically. This time proven approach is referred to as "Demand Analysis."

Variations of this approach have been used for more than 20 years all around the world. In the past, the process of compiling and creating a complete temporal and geographic Demand Analysis was tedious, time-consuming, and too often, very manual.

Hr Beginning - Demand	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Totals
3/22/2018	2.27	1.48	3.13	3.45	3.58	1.12	1.58	2.02	1.68	2.15	1.19	5.43	3.33	3.75	4.7	4.6	1.98	5.23	7.78	3.31	6.58	6.05	6.2	2.17	93.47
3/19/2018	2.4	2.25	2.7	3.48	0.88	0.95	1.77	3.07	5.4	2.57	4.8	6.83	2.82	1.3	1.8	9.03	3.48	1.38	4.5	5.95	7.77	3.78	2.12	1.72	84.75
3/26/2018	3.08	6.28	1.8	2.6	1.3	1.78	1.65	1.63	3.02	4.97	2.57	6.83	3.9	4.12	8.75	6.88	10.9	7.23	6.58	8.45	5.92	4.32	1.57	115.10	
3/9/2018	0.7	2	2.7	3.25	3.62	2.9	3.5	3.77	4.07	3.22	5.92	5.33	3.93	4.65	4.5	4.78	7.32	6.45	8.43	7.18	6.33	3.08	11	108	119.42
9/9/2018	3	5.3	1.98	4.7	5.22	5.47	2.7	3.2	5.22	5.28	6.05	6.52	6.77	4.42	2.67	5.85	7.58	7.42	6.2	5.12	3.45	5.43	4.17	0.45	114.15
9/16/2018	2.32	4	1.98	3.05	0.87	0.85	0.57	1.42	3.63	3.5	2.88	4.38	5.23	7.42	6.72	5.18	8.02	6.27	5.75	7.63	7.67	4.27	3.53	0.68	97.60
9/23/2018	3.1	4.8	1.3	3.53	3.58	2.45	2.03	2.13	2.77	4.32	2.92	5.35	6.65	4.88	3.03	6.15	5.92	6.67	6.77	5.15	7.06	3.82	2.87	2.75	99.97
9/30/2018	1.05	1.4	0.4	1.27	0.95	0.83	1.53	1.75	1.55	3.05	1.38	1.52	1.28	1.92	0.43	1.95	4.52	1.73	3.82	0.62	4.05	1.55	2.22	3.48	45.27
10/7/2018	2.18	3.8	2.32	1.88	1.88	2.33	1.38	2.22	0.83	5.42	2.32	2.93	4.67	1.25	1.95	3.17	2.67	1.88	4.38	1.47	0.83	1.05	2.92	1.82	58.58
10/14/2018	0.87	1.33	2.87	0.62	0.67	0.72	0.82	0.92	2.12	3	0.95	1.83	4.88	3.45	2.17	0.67	3.67	0.78	1.58	2.17	0.85	1.57	2.97	1.55	43.00
10/21/2018	2.33	0.78	0	1.7	0.52	1.25	1.3	1.55	1.08	1.08	1.33	1.42	1.17	2.55	3.92	3.22	0.78	1.8	4.02	0.78	2.53	3.53	1.87	0.75	41.22
10/28/2018	4.63	2.53	1.57	1.03	1.37	0.67	0.67	0.62	4.6	2.13	0.64	0.6	3.18	3.98	2.3	1.82	2.83	2.63	2	1.97	0.88	1.15	1.77	0.85	49.90
11/4/2018	2.6	0.6	0.7	0.95	0.65	2.47	0.15	2.4	1.57	3.02	3.53	3.6	2.73	3.13	2.9	2.07	2.2	1.15	2.12	0.78	3.92	1.03	2.08	1.43	46.75
11/11/2018	1.78	0.42	2.38	1.38	0.07	0.03	1.4	1.85	0.72	0.77	3.7	2.87	6.2	3.38	4.02	4.25	2.45	1.82	1.22	2.42	5.42	1.92	2.17	0.53	46.82
11/18/2018	2.87	3.35	3.57	2.1	0.52	1.52	0.9	2.83	3.47	2.12	1.73	1.97	2.5	2.47	1.17	1.82	2.28	4.25	5.43	1.87	1.58	3.42	6.32	1.48	61.45
11/25/2018	3.7	2.1	2.42	0.5	2.63	0.7	0.92	3.05	2.73	0.13	2.2	2.6	1.38	2.92	0.73	3.37	4.07	2.53	3.08	1.82	2.15	3.6	2.03	1.87	53.23
12/2/2018	2.37	2.9	0.6	0.6	1.57	0.41	2.43	1.18	1.75	0.08	3.38	0.68	3.32	1.52	2.2	3.72	2.7	1.81	2.08	0.78	1.25	3.87	4.55	0.85	45.55
12/9/2018	2.92	0.87	1.33	0.27	1.93	0.65	1.82	3.75	1.32	1.77	2.93	2.95	3.08	2.55	1.28	1.13	2.57	2.82	3.25	1.32	1.02	1.85	2.1	1.17	49.07
12/16/2018	3.08	2.85	3.2	1.13	1.57	1.87	1.52	4.22	3.5	1.97	2.4	2.3	0.45	2.55	3.08	1.82	1.87	1.5	2.15	1.3	2.65	2.5	1.37	51.83	
12/23/2018	1.45	2.67	1.8	1.8	1.65	3.12	1.73	3.13	1.73	3.13	1.73	3.13	1.73	3.13	1.73	3.13	1.73	3.13	1.73	3.13	1.73	3.13	1.73	3.13	49.83



FirstWatch has created a real time, dynamically updated and calculated Demand Analysis Module which offers views of select customer data. The Demand Analysis calculations in the data can be downloaded into an Excel spreadsheet, with all formulas intact. We're working to enhance the Demand Analysis module by adding a Demand Consumption-based approach, as well as addressing geographical demands by creating up-to-the minute problem/solution maps for each hour of the day and each day of the week and/or other user-defined intervals.

	A	B	C	D	E	F	G	H	I	J
1	Hr Ending	1	2	3	4	5	6	7	8	9
2	20060501	6	7	4	3	3	3	7	11	8
3	20060508	6	7	4	3	3	0	6	9	3
4	20060515	2	2	7	3	1	3	8	2	7
22	Total	145	110	119	83	59	79	101	122	147
23	Min	2	1	1	0	0	0	0	0	3
24	Max	15	13	12	7	7	9	8	11	16
25	Mean	7.25	5.5	5.95	4.15	2.95	3.95	5.05	6.1	7.35
26	Median	6	5	5	4	3	3	5.5	6	6.5
27	Mode	6	5	4	3	3	3	6	6	6
28	StDev	3.32	2.93	3.07	2.83	1.82	2.42	1.96	3.08	3.53
29	Avg High	10.6	8.6	8.8	5.8	4.8	6.6	6.8	9	11.8
30	90th Percentile Rank	12	9	10	7	5	7.1	7.1	11	11.4
31	Avg Peak	13.5	11.5	11	7	6	7.5	7	11	13.5
32	2x StDev + Mean	13.9	11.4	12.1	8.22	6.59	8.78	8.97	12.3	14.4
33	Smoothed Average Peak	12.9	11.8	10.3	7.6	6.5	7.1	7.9	10.7	13.8
34	Blended Demand	12.9	10.8	10.9	7.61	6.03	7.66	7.99	11.3	13.2