WORKFORCE RESOURCE MANAGEMENT

PERFORMANCE BLUEPRINT APPLICATION BRIEF

A WEB-BASED PERFORMANCE MANAGEMENT APPLICATION

COGNOS | INNOVATION CENTER
for Performance Management™

INTRODUCTION

This application brief demonstrates a Web-based planning process for managing workforce resources to driver-based activity requirements using Cognos Planning. By implementing the *Workforce Resource Management Performance Planning Blueprint*, you can manage the process of aligning one of your most important and expensive assets—your employees—to the activities required to effectively and efficiently run the business. The *Blueprint* and processes described in this application brief are generic and can be configured to support the specific requirements of any company that wishes to improve workforce utilization.

MODEL OVERVIEW

Although employee-related costs are often the largest expense line on a profit-and-loss statement, companies recognize that employees are among their most important assets. Companies should strive to minimize employee costs, yet maximize the benefits gained from employee investments.

Staffing managers are primarily responsible for assigning and scheduling employee activities. Having either too little or too much staff cover can effect both financial and non-financial business performance.

The Cognos Workforce Resource Management Blueprint frees managers from making ad hoc, best guess decisions and helps ensure that they can make the most efficient, most effective use of staff resources. The *Blueprint* takes a best-practice, driver-based approach that helps provide a clear picture of staffing needs.

BLUEPRINT OBJECTIVES

The *Workforce Resource Management Performance Planning Blueprint*

- Determines headcount requirements by activity, based on highly flexible, best-practice, driver-based methods.
- Enables managers to set staffing effectiveness by activity for each employee.
- Offers managers real-time visibility into the cumulative schedule's variance from ideal driver-based requirements by activity when entering employee shift patterns.
- Gives clear warning should managers attempt to assign an inappropriate activity.
- Streamlines entry of employee shift details to reduce schedule creation time.
- Includes a clear shift-summary output of the staffing schedule.
- Can vary employee pay rates as required.
- Can set additional pay multiples (such as for national holidays) by employee by day.
- Automatically generates detailed financial implications of the schedule.

KEY COGNOS PLANNING BENEFITS

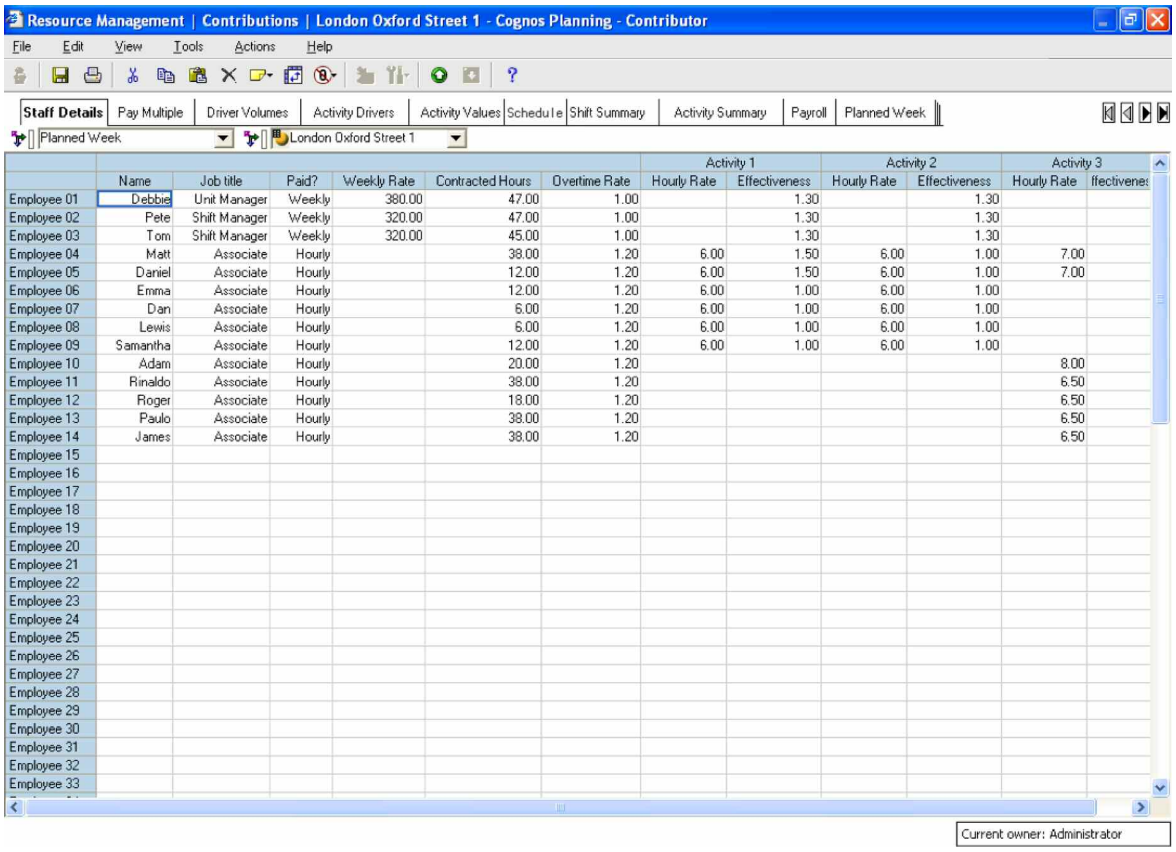
- Flexible *Blueprint* development using Cognos Analyst to support any *Workforce Resource Management Blueprint*.
- Web-based deployment of models for data collection and consolidation.
- Real-time workflow.
- Real-time consolidation.
- Real-time browser-based calculation for immediate results.
- Scalable architecture with proven deployments to thousands of line mangers.
- Linking functionality to provide collaboration between all areas of the corporation.
- Capability for form-based planning using selection boxes to drive application logic and calculations.

STAFF DETAILS

The *Staff Details* tab contains employee information used in the *Blueprint*. Typically, some of this information—such as staff names, job titles, and salary details—is automatically populated from an HR system. Other data—such as "Effectiveness"—may be entered manually by the staffing manager.

Note how hourly rates and effectiveness can vary according to Activity. The generic *Blueprint* is set up for 3 different Activities (Activity 1; Activity 2; Activity 3), but allows for easy modification of Activity descriptions and additional Activities as required.

"Effectiveness" is a measure of the employee's ability to perform a particular Activity. It is measured in FTE (Full Time Equivalents). An Effectiveness value of 1.5 would mean that an employee is capable of performing 50 percent more of a particular activity within the same timeframe than an average employee.

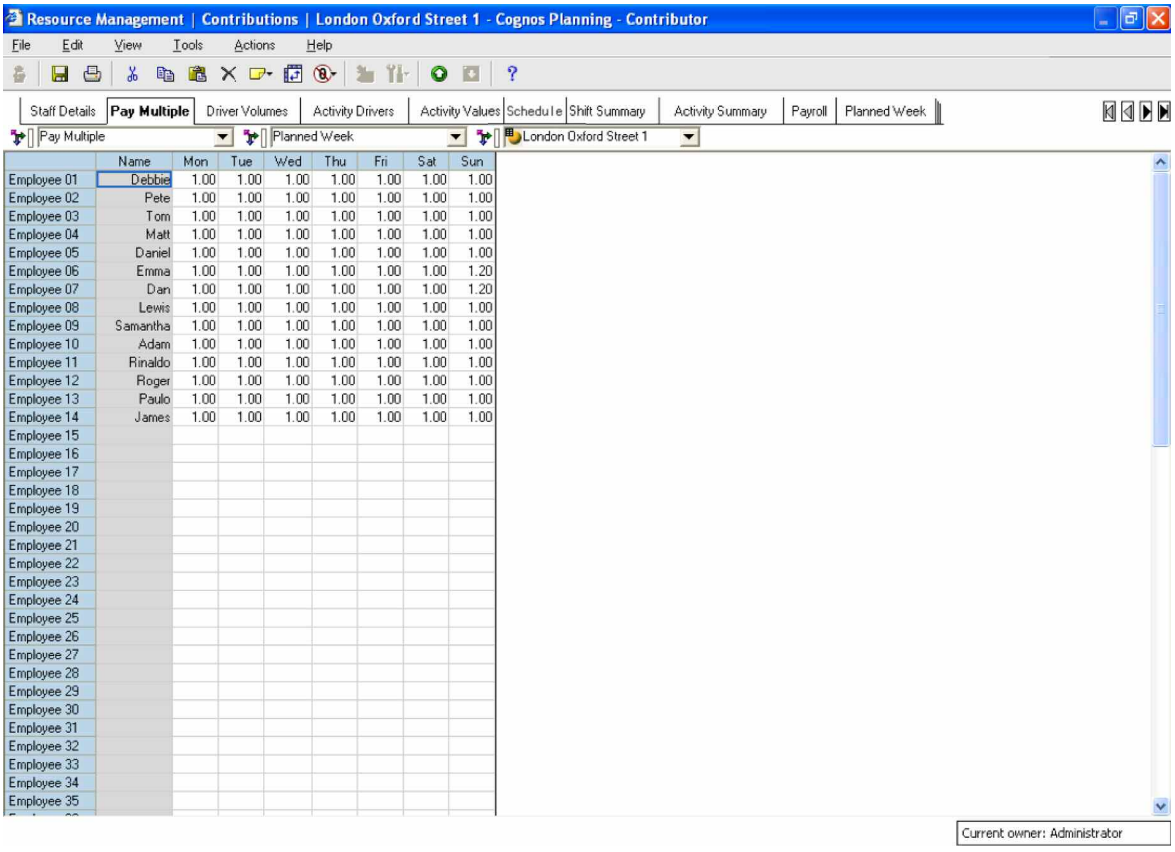


							Activity 1		Activity 2		Activity 3	
	Name	Job title	Paid?	Weekly Rate	Contracted Hours	Overtime Rate	Hourly Rate	Effectiveness	Hourly Rate	Effectiveness	Hourly Rate	ffectiveness
Employee 01	Debbie	Unit Manager	Weekly	380.00	47.00	1.00		1.30		1.30		
Employee 02	Pete	Shift Manager	Weekly	320.00	47.00	1.00		1.30		1.30		
Employee 03	Tom	Shift Manager	Weekly	320.00	45.00	1.00		1.30		1.30		
Employee 04	Matt	Associate	Hourly		38.00	1.20	6.00	1.50	6.00	1.00	7.00	
Employee 05	Daniel	Associate	Hourly		12.00	1.20	6.00	1.50	6.00	1.00	7.00	
Employee 06	Emma	Associate	Hourly		12.00	1.20	6.00	1.00	6.00	1.00		
Employee 07	Dan	Associate	Hourly		6.00	1.20	6.00	1.00	6.00	1.00		
Employee 08	Lewis	Associate	Hourly		6.00	1.20	6.00	1.00	6.00	1.00		
Employee 09	Samantha	Associate	Hourly		12.00	1.20	6.00	1.00	6.00	1.00		
Employee 10	Adam	Associate	Hourly		20.00	1.20					8.00	
Employee 11	Rinaldo	Associate	Hourly		38.00	1.20					6.50	
Employee 12	Roger	Associate	Hourly		18.00	1.20					6.50	
Employee 13	Paulo	Associate	Hourly		38.00	1.20					6.50	
Employee 14	James	Associate	Hourly		38.00	1.20					6.50	
Employee 15												
Employee 16												
Employee 17												
Employee 18												
Employee 19												
Employee 20												
Employee 21												
Employee 22												
Employee 23												
Employee 24												
Employee 25												
Employee 26												
Employee 27												
Employee 28												
Employee 29												
Employee 30												
Employee 31												
Employee 32												
Employee 33												

PAY MULTIPLE

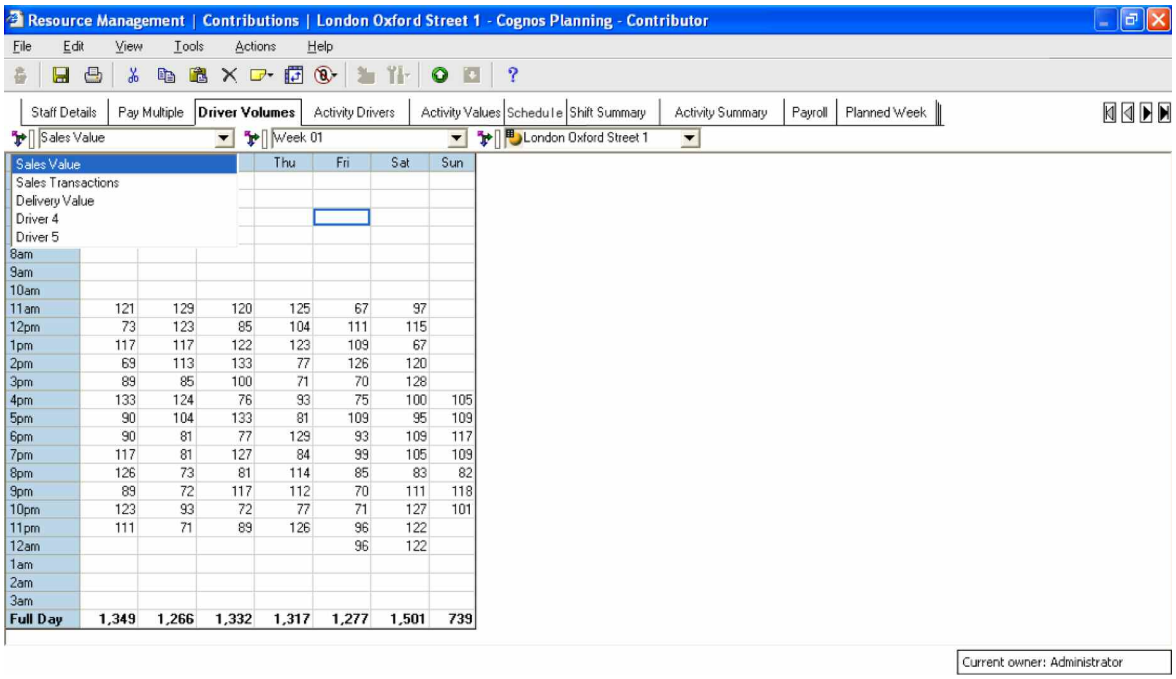
Typically, the *Pay Multiple* tab is automatically populated with data from a payroll system. The tab is a record of the multiplier of an employee's standard pay rate for a given day.

In the example shown, Emma and Dan are paid 20 percent above their usual rate for every hour they work on a Sunday. Note that, although pay multiples vary, it would be a simple matter to customize the *Blueprint* to allow pay multiple variation by hour if required.



DRIVER VOLUMES

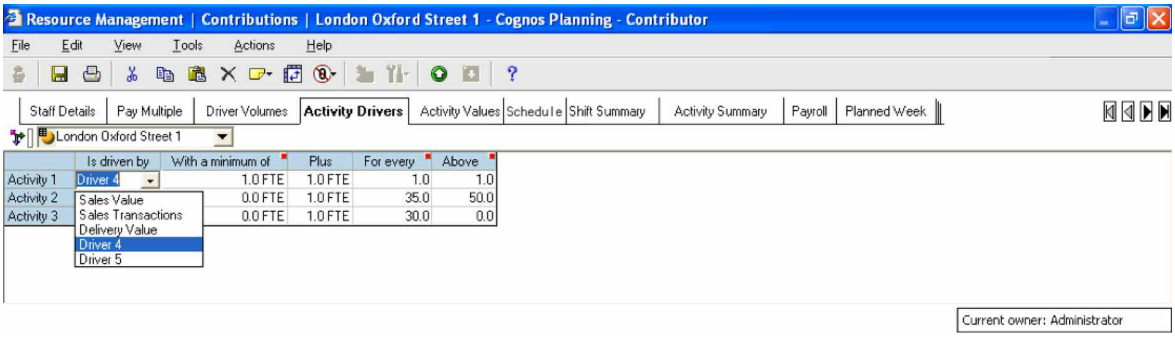
Data in the *Driver Volumes* tab would likely be automatically supplied by another system. This tab holds the volumes for all drivers used to determine activity headcount requirements. In the generic *Blueprint*, there is space for five different drivers (the first three having been given actual names), but space can easily be expanded if required.



Sales Value				Thu	Fri	Sat	Sun
Sales Transactions							
Delivery Value							
Driver 4							
Driver 5							
8am							
9am							
10am							
11am	121	129	120	125	67	97	
12pm	73	123	85	104	111	115	
1pm	117	117	122	123	109	67	
2pm	69	113	133	77	126	120	
3pm	89	85	100	71	70	128	
4pm	133	124	76	93	75	100	105
5pm	90	104	133	81	109	95	109
6pm	90	81	77	129	93	109	117
7pm	117	81	127	84	99	105	109
8pm	126	73	81	114	85	83	82
9pm	89	72	117	112	70	111	118
10pm	123	93	72	77	71	127	101
11pm	111	71	89	126	96	122	
12am					96	122	
1am							
2am							
3am							
Full Day	**1,349**	**1,266**	**1,332**	**1,317**	**1,277**	**1,501**	**739**

In the example above, we have selected Sales Value from the drop-down list.

ACTIVITY DRIVERS



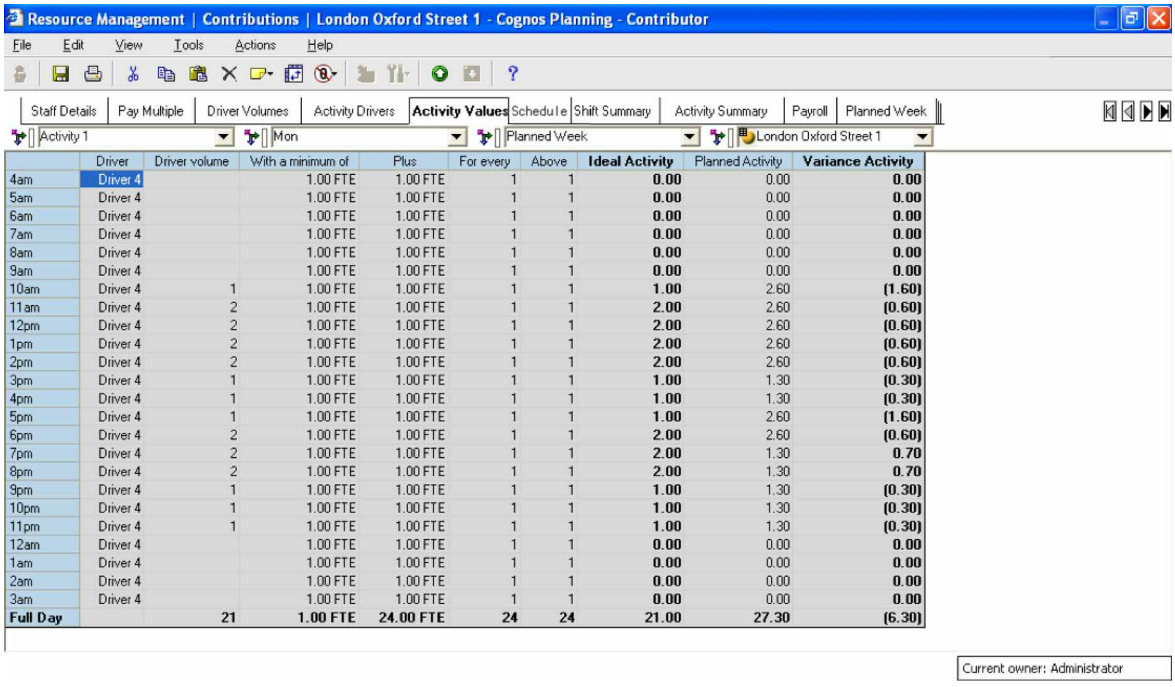
In the *Activity Drivers* tab, we are able to set which items drive the various activities, and at what rate. There is substantial activity available in setting driver rates. Examples shown include:

- Activity 1 is driven by Driver 4; *where*
  - Activity 1 has a minimum requirement of 1 FTE when Driver 4 exists; *plus*
  - Once the value of Driver 4 rises above 1; *an additional*
  - 1 FTE for every additional increment of 1 in Driver 4's value
- Activity 2 is driven by Sales Value (hidden by the drop-down); *but*
  - There is no requirement for any FTE for Sales Values up to 35; *then*
  - For every additional 50 units of Sales Value; *we require*
  - 1 FTE
- Activity 3 is driven by Driver 5 (hidden by the drop-down)
  - We require 1 FTE for every 30 units of Driver 5's value

ACTIVITY VALUES

The next tab, *Activity Values*, is a calculation-only tab that requires no direct end-user input; no data need be loaded into it. It is used for modeling purposes only, and could be either hidden from end-users or displayed for explanatory purposes.

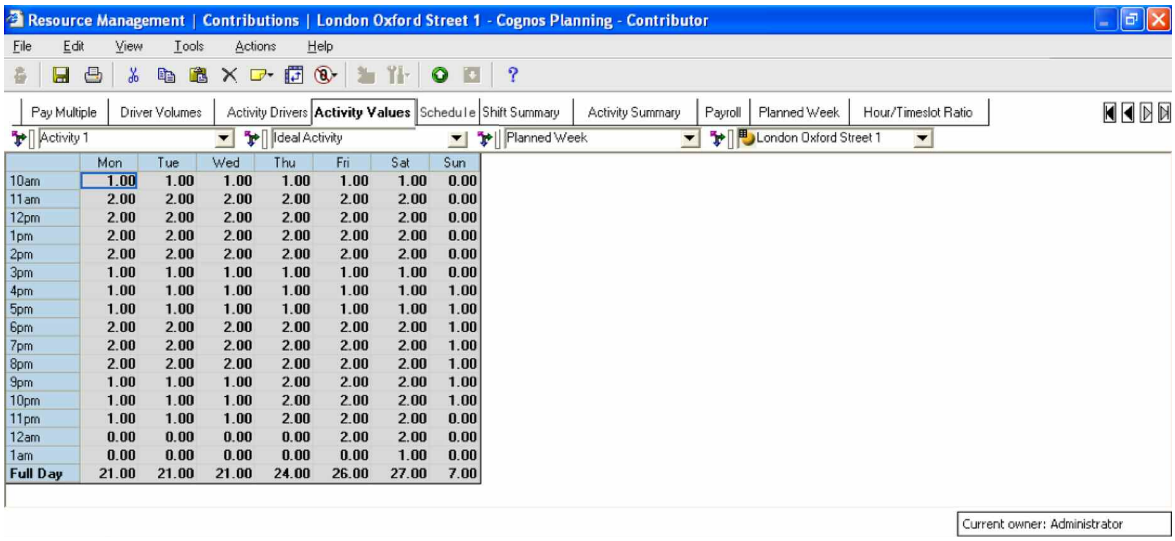
In the standard Blueprint tab layout, data is laid out as shown:



	Driver	Driver volume	With a minimum of	Plus	For every	Above	Ideal Activity	Planned Activity	Variance Activity
4am	Driver 4		1.00 FTE	1.00 FTE	1	1	0.00	0.00	0.00
5am	Driver 4		1.00 FTE	1.00 FTE	1	1	0.00	0.00	0.00
6am	Driver 4		1.00 FTE	1.00 FTE	1	1	0.00	0.00	0.00
7am	Driver 4		1.00 FTE	1.00 FTE	1	1	0.00	0.00	0.00
8am	Driver 4		1.00 FTE	1.00 FTE	1	1	0.00	0.00	0.00
9am	Driver 4		1.00 FTE	1.00 FTE	1	1	0.00	0.00	0.00
10am	Driver 4	1	1.00 FTE	1.00 FTE	1	1	1.00	2.60	(1.60)
11am	Driver 4	2	1.00 FTE	1.00 FTE	1	1	2.00	2.60	(0.60)
12pm	Driver 4	2	1.00 FTE	1.00 FTE	1	1	2.00	2.60	(0.60)
1pm	Driver 4	2	1.00 FTE	1.00 FTE	1	1	2.00	2.60	(0.60)
2pm	Driver 4	2	1.00 FTE	1.00 FTE	1	1	2.00	2.60	(0.60)
3pm	Driver 4	1	1.00 FTE	1.00 FTE	1	1	1.00	1.30	(0.30)
4pm	Driver 4	1	1.00 FTE	1.00 FTE	1	1	1.00	1.30	(0.30)
5pm	Driver 4	1	1.00 FTE	1.00 FTE	1	1	1.00	2.60	(1.60)
6pm	Driver 4	2	1.00 FTE	1.00 FTE	1	1	2.00	2.60	(0.60)
7pm	Driver 4	2	1.00 FTE	1.00 FTE	1	1	2.00	1.30	0.70
8pm	Driver 4	2	1.00 FTE	1.00 FTE	1	1	2.00	1.30	0.70
9pm	Driver 4	1	1.00 FTE	1.00 FTE	1	1	1.00	1.30	(0.30)
10pm	Driver 4	1	1.00 FTE	1.00 FTE	1	1	1.00	1.30	(0.30)
11pm	Driver 4	1	1.00 FTE	1.00 FTE	1	1	1.00	1.30	(0.30)
12am	Driver 4		1.00 FTE	1.00 FTE	1	1	0.00	0.00	0.00
1am	Driver 4		1.00 FTE	1.00 FTE	1	1	0.00	0.00	0.00
2am	Driver 4		1.00 FTE	1.00 FTE	1	1	0.00	0.00	0.00
3am	Driver 4		1.00 FTE	1.00 FTE	1	1	0.00	0.00	0.00
Full Day		21	1.00 FTE	24.00 FTE	24	24	21.00	27.30	(6.30)

With this orientation, we can see the calculation of Ideal FTE headcount requirement for an individual Activity ("Ideal Activity") for one day by hour. We also have a view of the "Planned Activity" (see next tab), and the variance between the Ideal and Planned Activities.

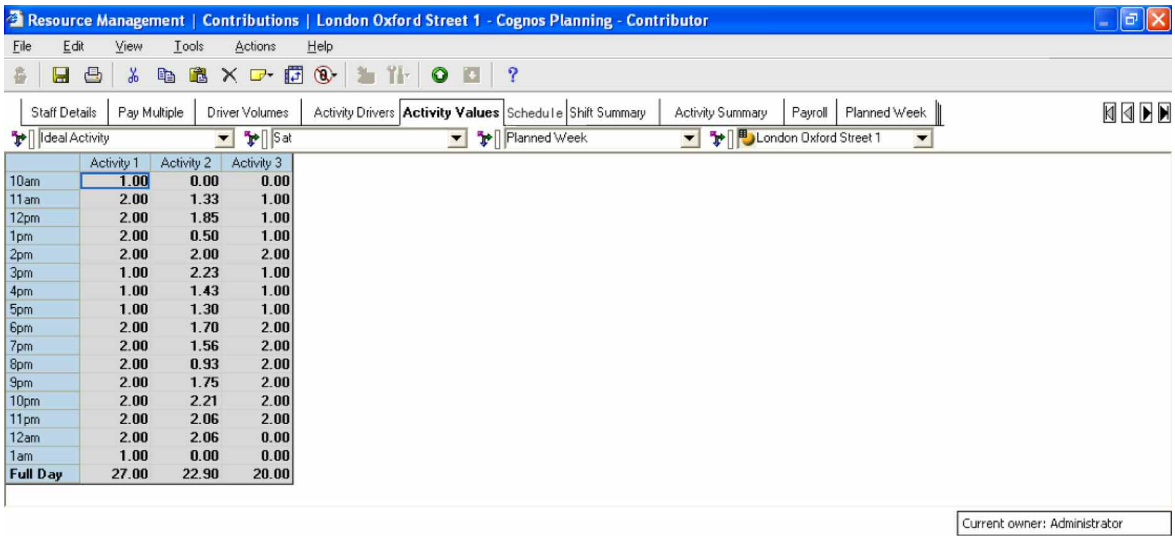
End-users may also find the following orientations useful.



	Mon	Tue	Wed	Thu	Fri	Sat	Sun
10am	1.00	1.00	1.00	1.00	1.00	1.00	0.00
11am	2.00	2.00	2.00	2.00	2.00	2.00	0.00
12pm	2.00	2.00	2.00	2.00	2.00	2.00	0.00
1pm	2.00	2.00	2.00	2.00	2.00	2.00	0.00
2pm	2.00	2.00	2.00	2.00	2.00	2.00	0.00
3pm	1.00	1.00	1.00	1.00	1.00	1.00	0.00
4pm	1.00	1.00	1.00	1.00	1.00	1.00	1.00
5pm	1.00	1.00	1.00	1.00	1.00	1.00	1.00
6pm	2.00	2.00	2.00	2.00	2.00	2.00	1.00
7pm	2.00	2.00	2.00	2.00	2.00	2.00	1.00
8pm	2.00	2.00	2.00	2.00	2.00	2.00	1.00
9pm	1.00	1.00	1.00	2.00	2.00	2.00	1.00
10pm	1.00	1.00	1.00	2.00	2.00	2.00	1.00
11pm	1.00	1.00	1.00	2.00	2.00	2.00	0.00
12am	0.00	0.00	0.00	0.00	2.00	2.00	0.00
1am	0.00	0.00	0.00	0.00	0.00	1.00	0.00
Full Day	21.00	21.00	21.00	24.00	26.00	27.00	7.00

In this orientation, we can see the Ideal Activity levels for Activity 1 for the entire week.

Alternatively:

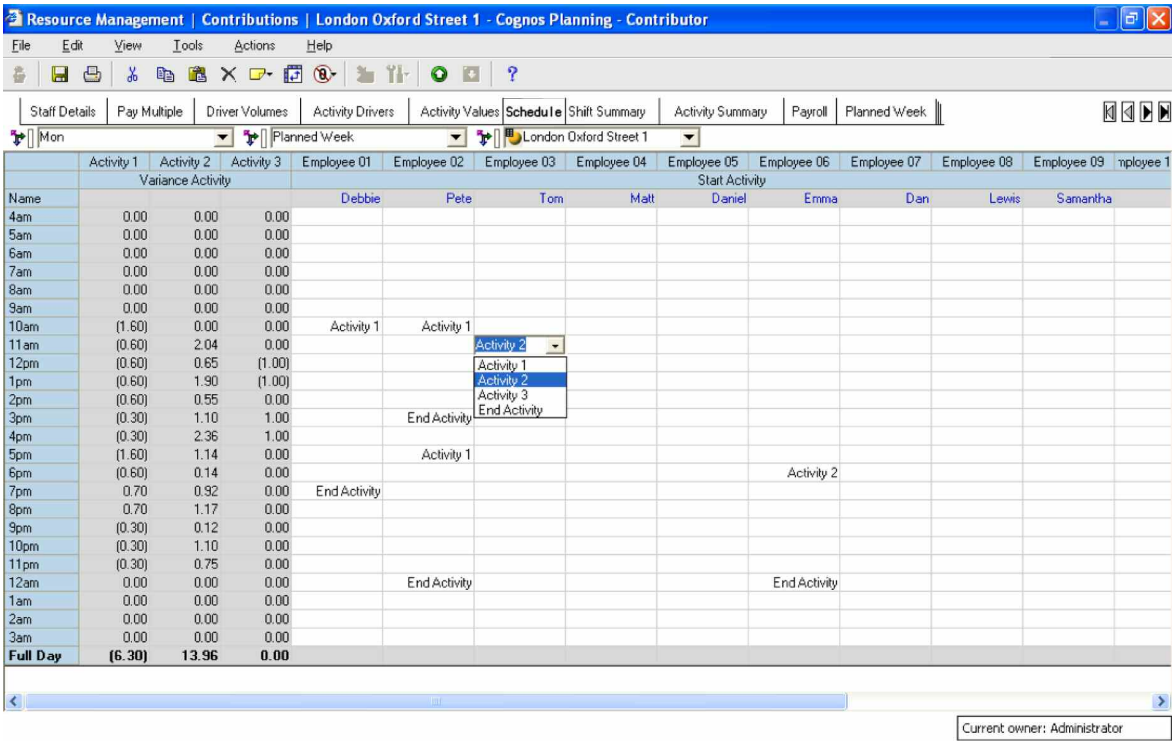


	Activity 1	Activity 2	Activity 3
10am	1.00	0.00	0.00
11am	2.00	1.33	1.00
12pm	2.00	1.85	1.00
1pm	2.00	0.50	1.00
2pm	2.00	2.00	2.00
3pm	1.00	2.23	1.00
4pm	1.00	1.43	1.00
5pm	1.00	1.30	1.00
6pm	2.00	1.70	2.00
7pm	2.00	1.56	2.00
8pm	2.00	0.93	2.00
9pm	2.00	1.75	2.00
10pm	2.00	2.21	2.00
11pm	2.00	2.06	2.00
12am	2.00	2.06	0.00
1am	1.00	0.00	0.00
Full Day	27.00	22.90	20.00

With this orientation, a user can view Ideal Activity levels for every Activity for an individual day.

In summary, although there is no requirement to make this tab visible to the end user, it does contain data of interest, and is a useful demonstration of the power of Cognos Planning “slice-and-dice” functionality.

SCHEDULE



Schedule is the key tab in the model, and may be the only tab into which end-users directly enter data. In the screen above, the day being planned is Monday (as seen in the top left drop-down box), with hours of the day displayed as rows. Note that although the standard Blueprint has hourly "timeslots" for the schedule, it can easily be adapted—for example, to allow for half-hourly timeslots..

The columns are split into two sections:

The first three automatically display the total variance for each Activity between the ideal level (as determined on a best-practice driver basis) and the planned activity that the staffing manager enters in the schedule.

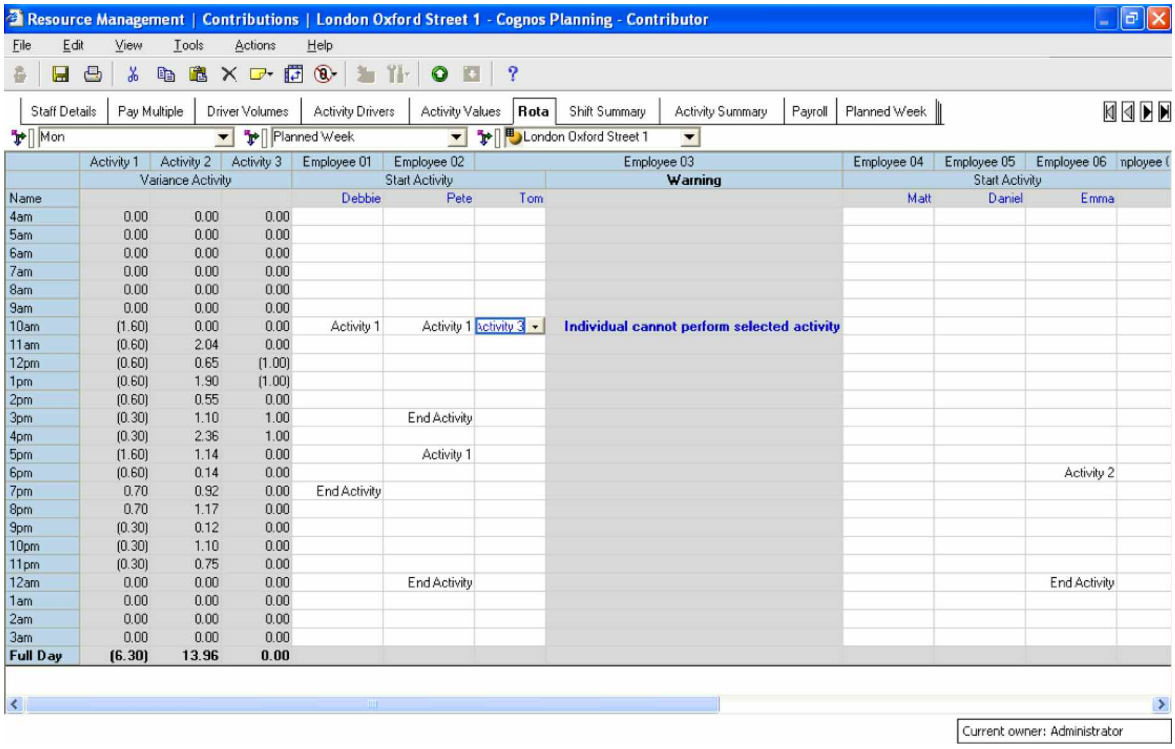
The remaining columns are used to enter individual employee shifts.

In order to make entering shifts as quick and efficient as possible, the staffing manager only needs to enter information *where it changes*. For example, Debbie (Employee 1) has a shift starting at 10 a.m. and finishing at 7 p.m. with a single activity (Activity 1) throughout. Because every possible entry is available from a drop-down list (as shown in Tom's column), entering a shift requires only two inputs.

Note that Pete has a "split shift" on Monday: He starts work at 10 a.m. on Activity 1, breaks at 3 p.m., and then returns at 5 p.m. where he continues on Activity 1 until he finally finishes for the day at 12 a.m. The *Blueprint* allows for up to six different shifts in a single day, although shifts can easily be added.

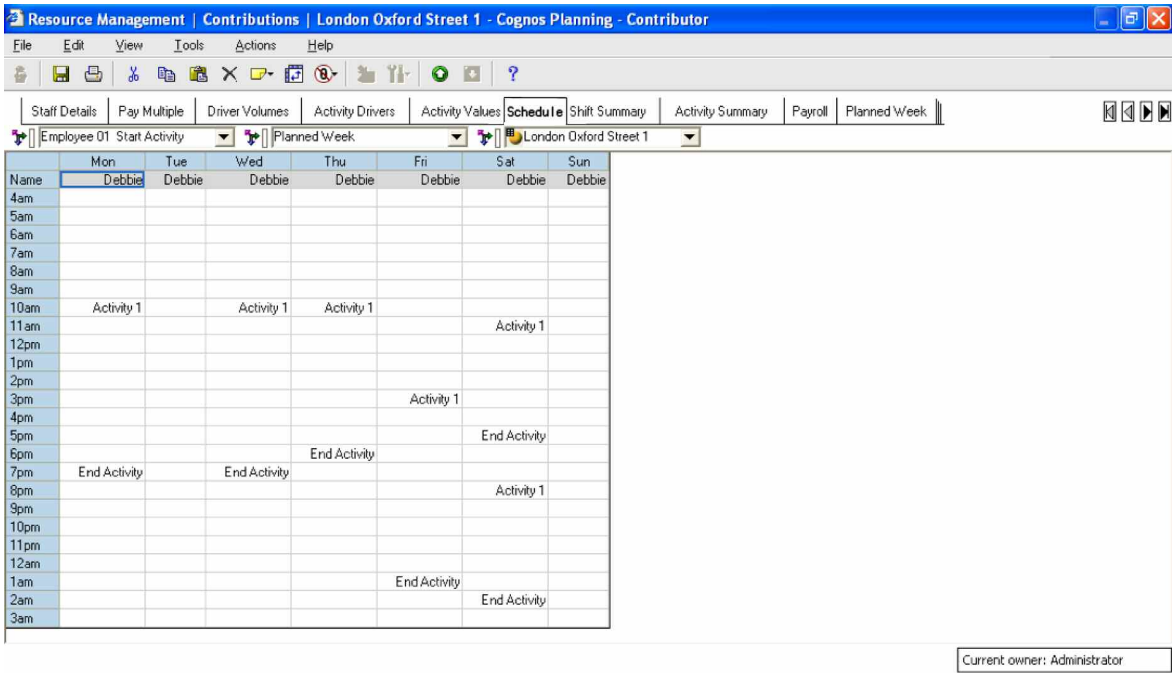
As the start and end of each shift are entered, the Variance Activities on the left hand side of the screen are automatically recalculated, so that the staffing manager has continual visibility into what activities still require headcount.

Recall how we were able to set an employee's "Effectiveness" at each Activity in the *Staff Details* tab. Effectiveness is the value by which the activity variance will change as we enter shifts. However, it is possible that an employee will have an effectiveness value of zero for an activity. This does not mean that an employee cannot be *assigned* to that activity, but only means that he or she cannot *perform* that activity effectively.



In the example above, a manager has assigned a task to an individual with a zero effectiveness rating for that activity and a warning has been displayed.

As with the *Activity Values* tab, we can take advantage of Cognos Planning "slice-and-dice" functionality.



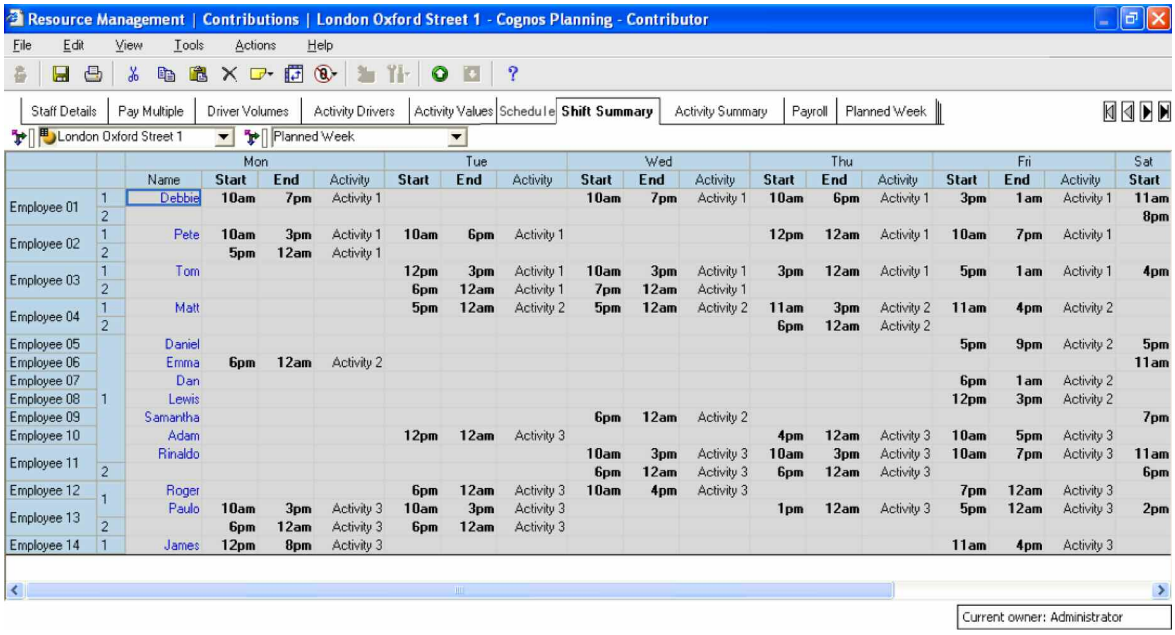
	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Name	Debbie	Debbie	Debbie	Debbie	Debbie	Debbie	Debbie
4am							
5am							
6am							
7am							
8am							
9am							
10am	Activity 1		Activity 1	Activity 1			
11am						Activity 1	
12pm							
1pm							
2pm							
3pm					Activity 1		
4pm							
5pm						End Activity	
6pm				End Activity			
7pm	End Activity		End Activity				
8pm						Activity 1	
9pm							
10pm							
11pm							
12am							
1am					End Activity		
2am						End Activity	
3am							

A useful example of slicing and dicing the *Schedule* tab is shown above. Rather than showing the schedules for all employees on a particular day, we can simply change the tab's orientation to show an individual employee's schedule for the entire week.

SHIFT SUMMARY

Although we may design an input mechanism to be as efficient as possible (such as the "two inputs to enter a shift" approach as in the *Schedule* tab), we often require output to be displayed in a completely different way.

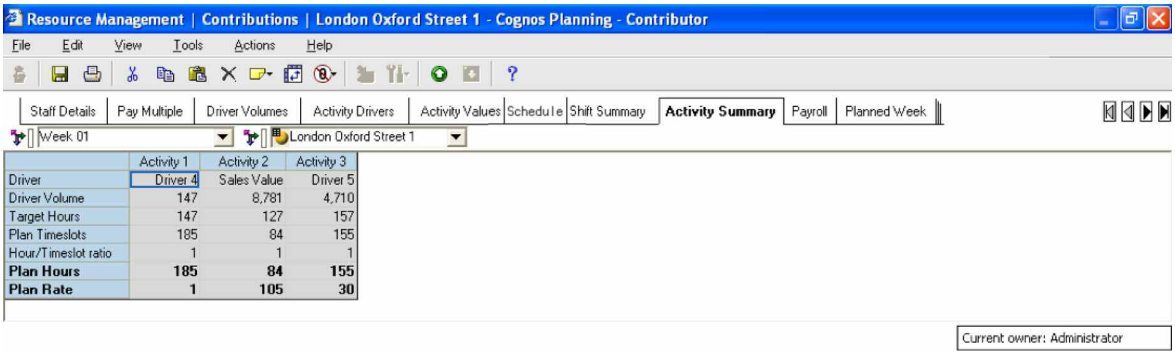
The *Shift Summary* tab meets just such a need. Typically, a staffing manager will want to print out and post on the office notice board a single sheet that describes the entire shift pattern for that week (as shown in the screenshot below).



		Mon				Tue				Wed				Thu				Fri			Sat
		Name	Start	End	Activity	Start	End	Activity		Start	End	Activity		Start	End	Activity		Start	End	Activity	Start
Employee 01	1	Debbie	10am	7pm	Activity 1					10am	7pm	Activity 1		10am	6pm	Activity 1		3pm	1am	Activity 1	11am
	2																				8pm
Employee 02	1	Pete	10am	3pm	Activity 1	10am	6pm	Activity 1						12pm	12am	Activity 1		10am	7pm	Activity 1	
	2		5pm	12am	Activity 1																
Employee 03	1	Tom				12pm	3pm	Activity 1		10am	3pm	Activity 1		3pm	12am	Activity 1		5pm	1am	Activity 1	4pm
	2					6pm	12am	Activity 1		7pm	12am	Activity 1									
Employee 04	1	Matt				5pm	12am	Activity 2		5pm	12am	Activity 2		11am	3pm	Activity 2		11am	4pm	Activity 2	
	2													6pm	12am	Activity 2					
Employee 05		Daniel																5pm	9pm	Activity 2	5pm
Employee 06		Emma	6pm	12am	Activity 2																11am
Employee 07		Dan																6pm	1am	Activity 2	
Employee 08	1	Lewis																12pm	3pm	Activity 2	
Employee 09		Samantha								6pm	12am	Activity 2									7pm
Employee 10		Adam				12pm	12am	Activity 3						4pm	12am	Activity 3		10am	5pm	Activity 3	
Employee 11		Rinaldo								10am	3pm	Activity 3		10am	3pm	Activity 3		10am	7pm	Activity 3	11am
	2									6pm	12am	Activity 3		6pm	12am	Activity 3					6pm
Employee 12	1	Roger				6pm	12am	Activity 3		10am	4pm	Activity 3						7pm	12am	Activity 3	
Employee 13		Paulo	10am	3pm	Activity 3	10am	3pm	Activity 3						1pm	12am	Activity 3		5pm	12am	Activity 3	2pm
	2		6pm	12am	Activity 3	6pm	12am	Activity 3													
Employee 14	1	James	12pm	8pm	Activity 3													11am	4pm	Activity 3	

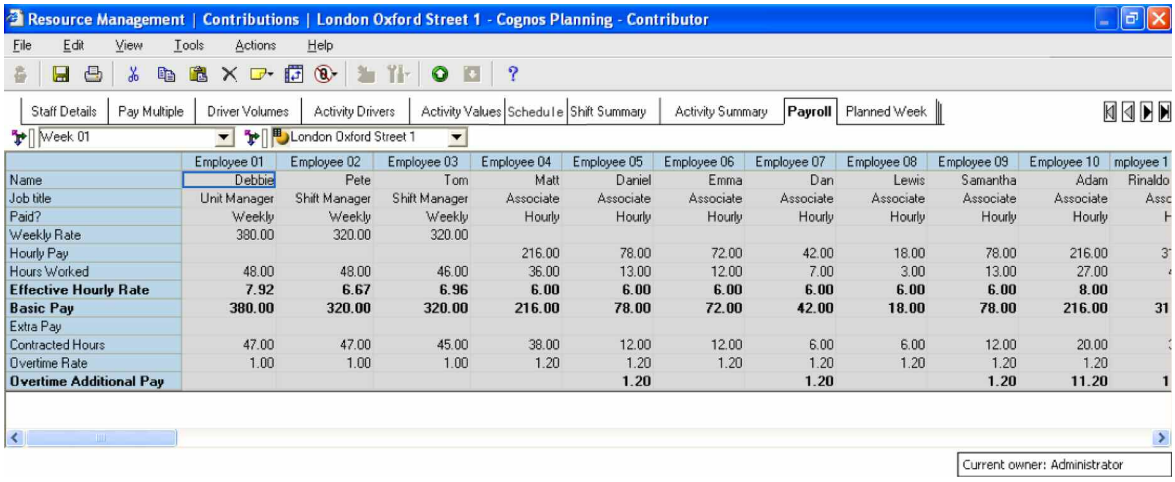
The *Blueprint* will automatically calculate shift numbers and display start- and close up, along with the relevant activity, for each shift, employee, and day of the week.

ACTIVITY SUMMARY



This tab is an example of the higher-level functionality the *Blueprint* can provide. Included are simple metrics (such as Driver Volumes, targeted hours, planned hours, and so on) for the full week for each activity. This tab may be extended to display most relevant metrics or KPIs.

PAYROLL

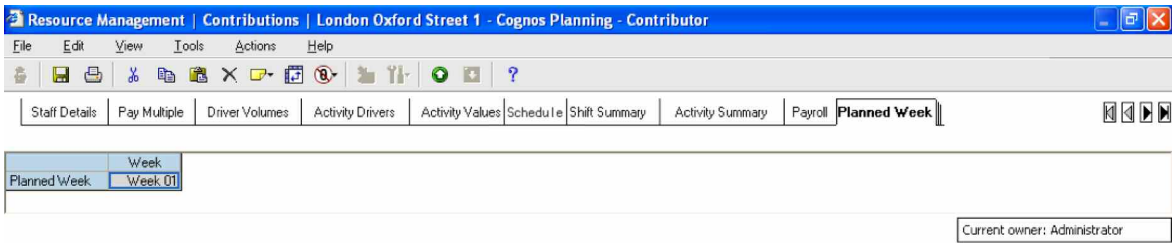


	Employee 01	Employee 02	Employee 03	Employee 04	Employee 05	Employee 06	Employee 07	Employee 08	Employee 09	Employee 10	mployee 1
Name	Debbie	Pete	Tom	Matt	Daniel	Emma	Dan	Lewis	Samantha	Adam	Rinaldo
Job title	Unit Manager	Shift Manager	Shift Manager	Associate	Associate	Associate	Associate	Associate	Associate	Associate	Assc
Paid?	Weekly	Weekly	Weekly	Hourly	Hourly	Hourly	Hourly	Hourly	Hourly	Hourly	H
Weekly Rate	380.00	320.00	320.00								
Hourly Pay				216.00	78.00	72.00	42.00	18.00	78.00	216.00	3
Hours Worked	48.00	48.00	46.00	36.00	13.00	12.00	7.00	3.00	13.00	27.00	
Effective Hourly Rate	**7.92**	**6.67**	**6.96**	**6.00**	**6.00**	**6.00**	**6.00**	**6.00**	**6.00**	**8.00**	
Basic Pay	**380.00**	**320.00**	**320.00**	**216.00**	**78.00**	**72.00**	**42.00**	**18.00**	**78.00**	**216.00**	**31**
Extra Pay											
Contracted Hours	47.00	47.00	45.00	38.00	12.00	12.00	6.00	6.00	12.00	20.00	
Overtime Rate	1.00	1.00	1.00	1.20	1.20	1.20	1.20	1.20	1.20	1.20	
Overtime Additional Pay					**1.20**		**1.20**		**1.20**	**11.20**	**1**

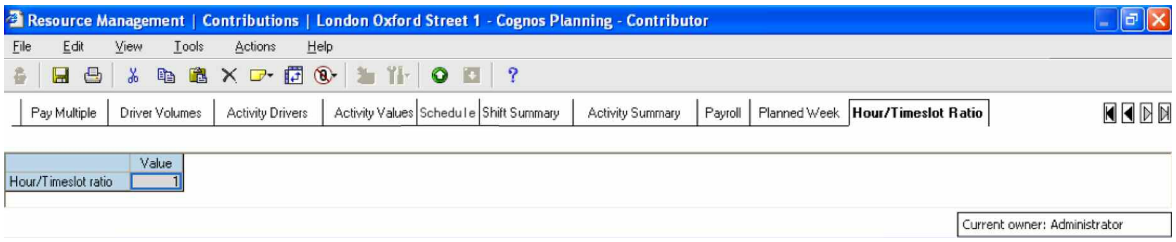
The *Payroll* tab as an example of financial outputs available from the *Blueprint*. Although the prime goal is improving staff scheduling efficiency and effectiveness against driver-based requirements, because such information as employee pay-rates is included, we can leverage user input in ways impossiblewithout the *Blueprint*. Additionally, the data from this tab could be used to automatically populate a short-term forecasting model with expected (and highly accurate) staffing expenses.

PLANNED WEEK

This tab would usually be hidden. It is used solely for modeling purposes and defines the financial week currently being planned.



HOUR/TIMESLOT RATIO



This tab would usually be hidden. It is used for modeling purposes only and defines the number of timeslots available during a single hour. In the standard *Blueprint*, a timeslot equals one hour and has the value of 1. If, for example, each timeslot in the model were 15 minutes, it would have the value 4.

ABOUT THE COGNOS INNOVATION CENTER FOR PERFORMANCE MANAGEMENT

The Cognos Innovation Center was established in North America and Europe to advance the understanding of proven planning and performance management techniques, technologies, and practices. The Innovation Center is dedicated to transforming routine performance management practices into "next practices" that help cut costs, streamline processes, boost productivity, enable rapid response to opportunity, and increase management visibility.

Staffed globally by experts in planning, technology, and performance and strategy management, the Innovation Center partners with more than 600 Cognos customers, academicians, industry leaders, and others seeking to accelerate adoption, reduce risk, and maximize the impact of technology-enabled performance management practices.

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