

Who



does What



with What



When



Where



for Whom



***Dr. Moshe BenBassat***

***Chairman and Chief Executive Officer***

***ClickSoftware Strategy for Sustainable Profitable Growth***

*Analyst & Investor Day*

*May 24, 2011*

# Analyst Day Agenda

## Welcome & Introduction

Simon Morris, VP Marketing, ClickSoftware



## ClickSoftware's Strategy for Sustainable Profitable Growth

Dr. Moshe BenBassat, Chairman and CEO, ClickSoftware



## ClickSoftware's Financial Performance

Shmuel Arvatz, CFO, ClickSoftware



## Network Centric Operations and the Field Service Opportunity

Kevin Benedict, Mobility Analyst and SAP Mentor



## Enterprise Mobility -- The Beginning of a New Era for ClickSoftware

Dr. Moshe BenBassat, Chairman and CEO, ClickSoftware



## Client Case Study: Leveraging ClickSoftware Solutions to Deliver Business Value

Dwight Jellison, Manager - Service Delivery Team, Diebold



## Innovation and Growth Opportunities

Hannan Carmeli, President and COO, ClickSoftware



## Conclusion and the Road Ahead

Dr. Moshe BenBassat, Chairman and CEO, ClickSoftware

# Presentation Outline

*Company Overview*

*WFM is a Platform; Not a Point Solution*

*Mission (Grand Strategy)*

*The Service Chain; End to End: Updates*

*Appointment Booking: Uniqueness*

*Shift & Scheduling: Uniqueness*

*Mobility- Intro to Afternoon Session*

*Summary*

# Who We Are?

## Market Leader

- Leader in automated workforce management, enterprise mobility and optimization solutions for service businesses
- >170 enterprise customers from a variety of industries and geographies
- >260,000 service people managed by ClickSoftware products every day

## Global Presence

- Offices in North America, Europe, and APAC
- 340 employees worldwide



## Fundamentals

- Listed on NASDAQ Global Select – ticker CKSW
- Market Cap: ~\$280M
- Consistent multi-year revenue growth and cash generation
- Q1-2011 revenues: \$19.3M, up 10% y/y
- Strong balance sheet with no debt

# What Business Are We In?

## Market

- **Service sector:** whose primary resources are **people** and **time**



## Business Pain We Address

- **Workforce efficiency, productivity, and/or utilization:** *too low*
- **Customer service quality:** *below desired level*

## How We Do It

- We automate and optimize scheduling and decision-making via software
- We leverage mobility technology to the max, interacting with hand-held devices, real-time customer communication, GPS, real-time traffic updates

## Addressable Markets

- All service industry verticals
- All sizes of businesses - from very small (5 employees) to the largest (hundreds of thousands of service personnel and assets)



# Workforce Management is a Platform, NOT a Point Solution

# WFM is the Dual Side of CRM and EAM

The need for WFM is the dual side of the need for CRM and EAM

Mobility is strongly relevant to all: WFM, CRM, EAM



# The Need for Unified WFM Platform

- In absolute terms, 70%+ of the GNP of developed countries come from service industries where the primary resource are people and their time
- In-house staff and field staff
- Wide spectrum of job types representing customer demand
- Wide spectrum of structures for the resources to deliver this demand
- Many RFP's include specific requirements **for one unified platform** that can address quite rich spectrum of job/resource mix
- Enterprise software companies selling unified WFM platforms are likely to enjoy a **high win rate**

**The depth and breadth of ClickSoftware's products offer the best platform in the market**



# Market Growth Drivers

- **Service is strategic:** an asset for customer acquisition & retention, or ... liability and a constant source of troubles
- **Profitability and revenue pressures:** Organizations recognize the ability to “mine” the service activity to increase revenues and reduce costs
- **The hand-held phenomenon (tablets, smart phones):** This is taking enterprise mobility to a new level and opens opportunities for new types of business applications
- **The “inter-connected” age:** Customers expect more control over the service experience – like web-based appointment booking, up-to-the-minute updates on arrival schedules, etc.



# Why ClickSoftware

- The depth and breadth required from a Workforce Management solution are constantly growing and the bar keeps moving higher and higher.
- Major investments over many years are required to catch up with market requirements and **barriers to entry are very high** due to the unique mix required in terms of:
  - domain business expertise,
  - mathematical algorithmic knowledge, and
  - software engineering for scalable implementation, fast response and mobility.
- The case for standardizing on ClickSoftware's integrated suite of products is extremely compelling.

# Patent Awarded for Continuous Planning and Scheduling

**US Patent NO: US 6,985,872 B2**

The  
United  
States  
of  
America



The Director of the United States  
Patent and Trademark Office

*Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.*

*Therefore, this*

#### United States Patent

*Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America for the term set forth below, subject to the payment of maintenance fees as provided by law.*

*If this application was filed prior to June 8, 1995, the term of this patent is the longer of seventeen years from the date of grant of this patent or twenty years from the earliest effective U.S. filing date of the application, subject to any statutory extension.*

*If this application was filed on or after June 8, 1995, the term of this patent is twenty years from the U.S. filing date, subject to any statutory extension. If the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121 or 365(c), the term of the patent is twenty years from the date on which the earliest application was filed, subject to any statutory extensions.*

Director of the United States Patent and Trademark Office

ClickSoftware's products implement many of the ideas and methods described in this patent:

- ClickSchedule
- ClickMobile
- ClickContact
- ClickLocate
- ClickFix
- ClickRoster
- ClickPlan
- ClickForecast
- ClickAnalyze

# Mission

To be the worldwide leading provider of workforce management and service optimization solutions for companies:

- ✓ Of all sizes,
- ✓ In all verticals/sectors,
- ✓ For all levels in the organization,
- ✓ In all delivery modes; on premise or hosted.
- ✓ In all territories

Aiming High:  
When people think **'workforce management'**,  
they think ClickSoftware

# ClickSoftware on Gartner's Magic Quadrant for Field Service Management

2010 ← 2009



**ClickSoftware**

- Improved position
- Greater distance from competition

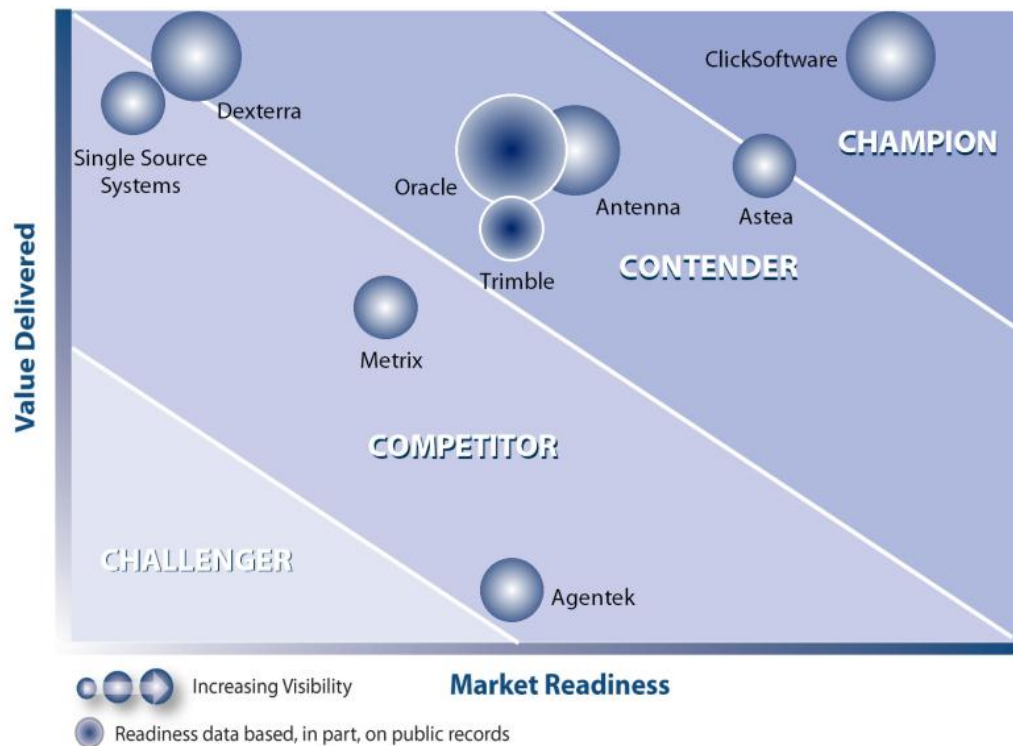


As of May 2009

As of June 2010

*Gartner: "ClickSoftware has the most complete line of products for technician scheduling and optimization of any other vendor in this market. It has extensive configuration and customization tools. An exclusive focus on field service forecasting, rostering, schedule and dispatch, and a position as the largest and most stable company of its kind give ClickSoftware credibility and appeal to prospects."*

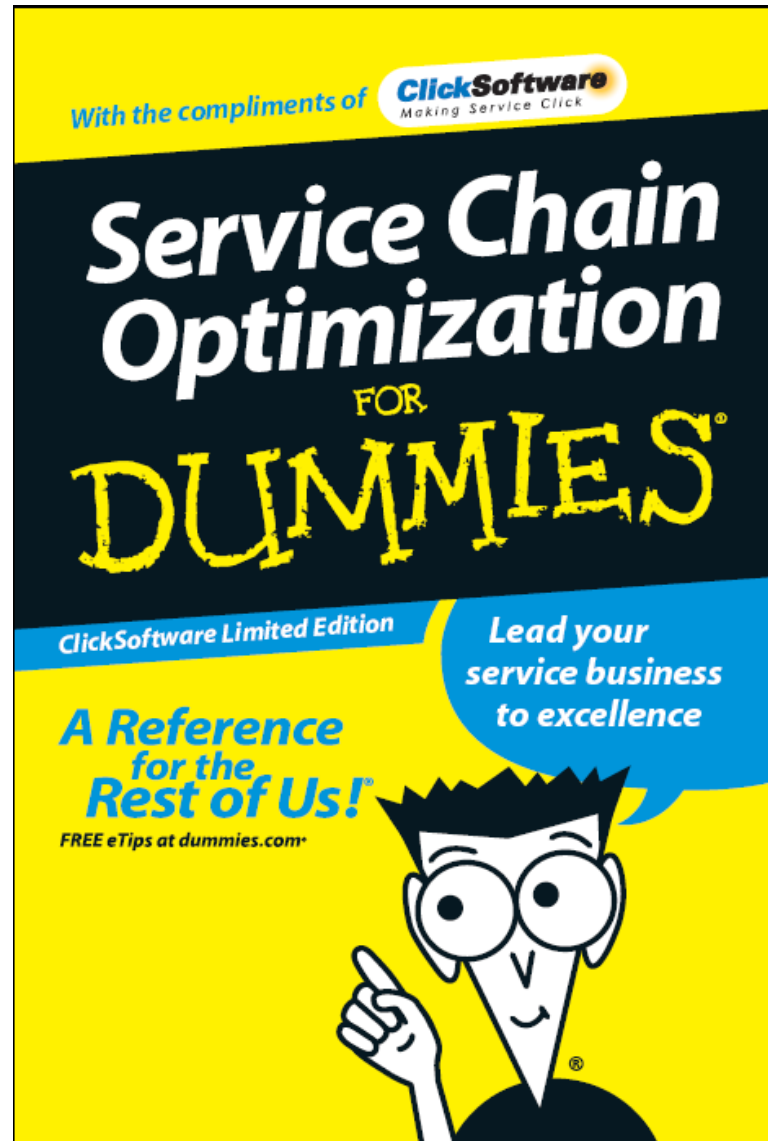
# ClickSoftware on Aberdeen's Mobile Field Service AXIS



**ClickSoftware ranked  
Champion  
in mobile field service  
market**

*Aberdeen: "The ability of ClickSoftware to adapt and respond to customer demand and market requirements is a key reason for its above average Market Readiness score. Research and development is the cornerstone of the company and it continues to release new service-specific modules and updates to meet its customers' needs despite tough economic times."*

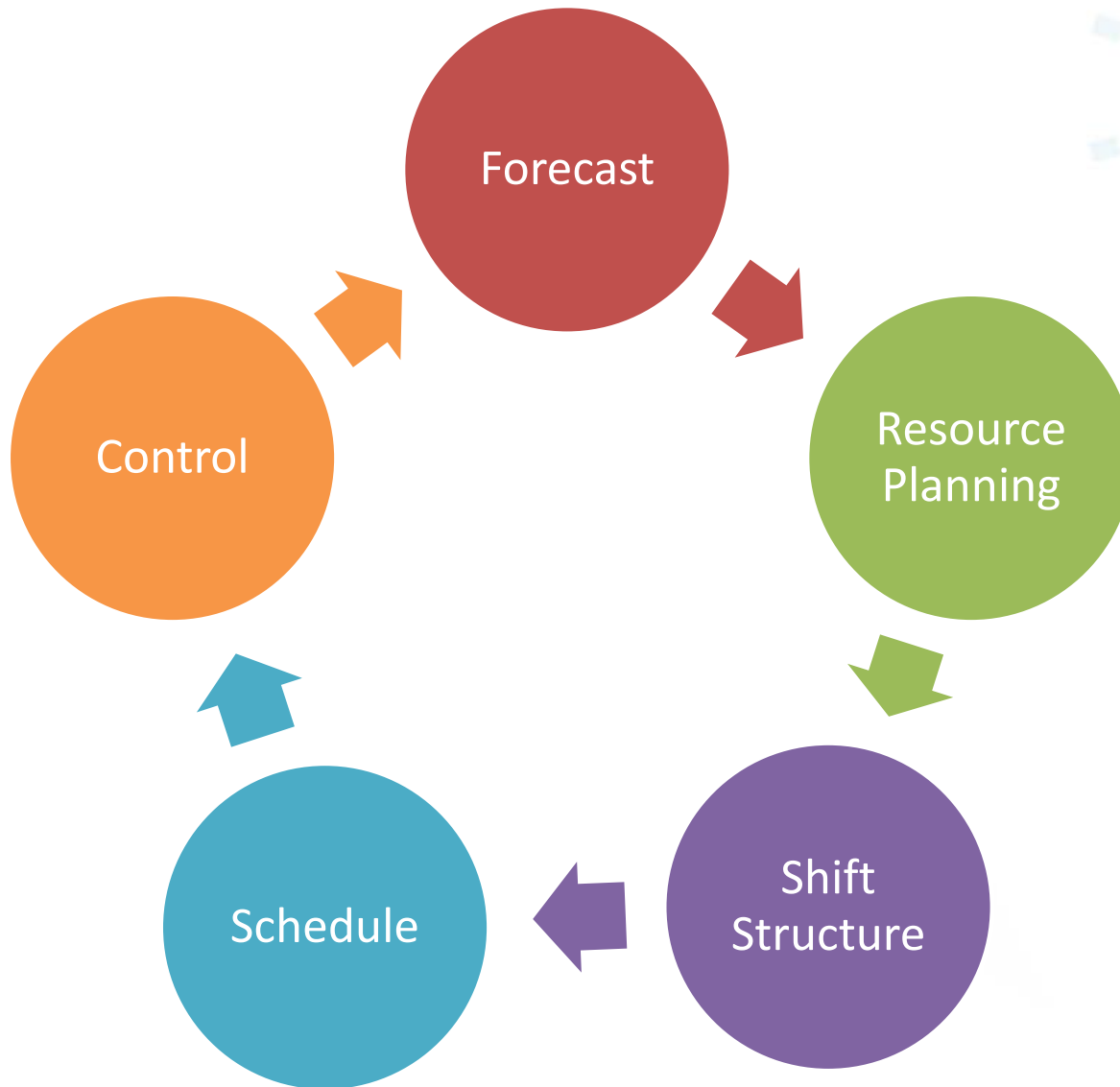
# Dummies Book - 2<sup>nd</sup> Printing



# The Service Chain; End to End: Updates



# Workforce Management Lifecycle



# Planning Horizons and Frequency

*Quarterly Planner moves the horizon by 1 quarter every quarter.*



Quarterly, 5 year horizon

*Monthly Planner moves the horizon by 1 months every month.*

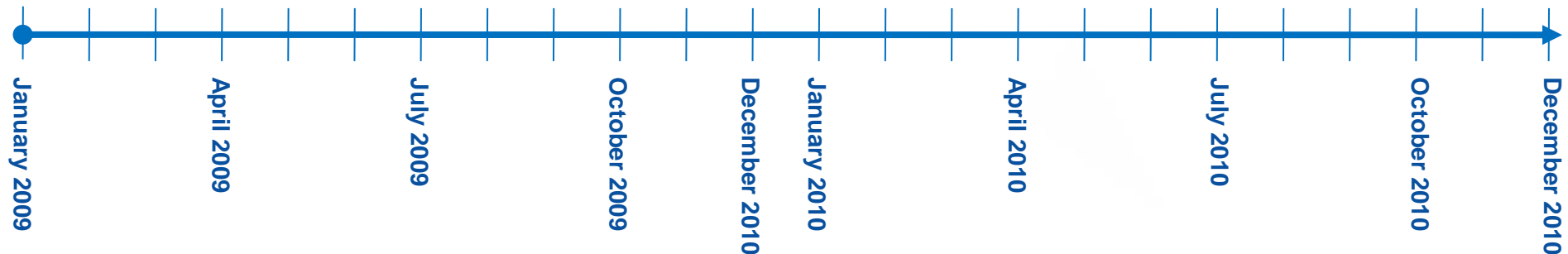


Monthly, 2 year horizon

*Weekly Planner moves the horizon by 1 week every week.*

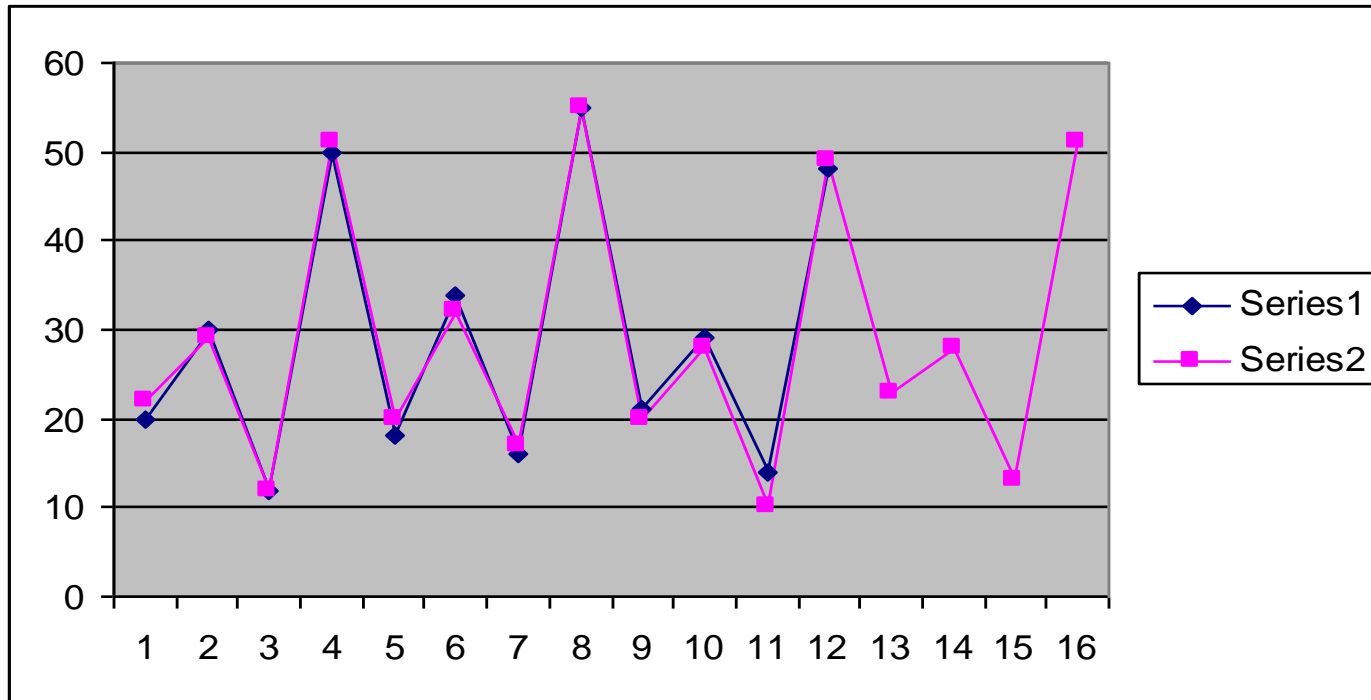


Weekly, 3 month horizon



# Forecasting is a Prerequisite for all Planning

- Use of a model to forecast unknown future values based on patterns of past data.



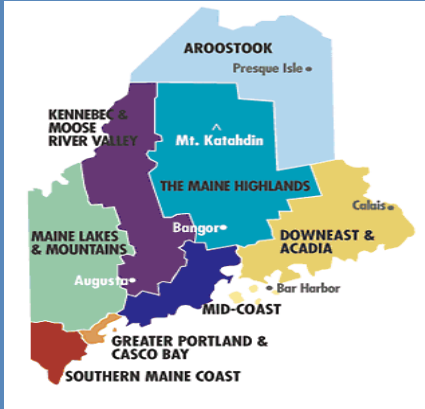
# Forecasting: The Scale Challenge

## Assume monthly:

# Regions	6
#Districts	10
Total Geo units	60
# Job types	15
# Forecasts per month	900
Time to process 1 forecast <b>manually</b>	1 hour
# Hours required monthly	900
#Forecasters	5 to 6
<b>Cost per year</b>	<b>\$700,000</b>

**With *ClickForecast* all of these can be obtained with one click!**

# The Decision Making Chain: 7 Months Earlier...



How many people are required? Where? When?



With what skills?



What is the best way to get extra capacity?



How many people can take vacations? When?



What is the best timing for special activities?

**Now**

**7 months**

# The Decision Making Chain: 7 Weeks Earlier...



Who can go to training? When?



Who works in what shift?



When should I use subcontractors?

**Now**

**7 weeks**

# Plan, Assign, and Manage All Workforce Shifts

The screenshot displays a workforce management application interface. On the left is a navigation tree with categories like 'MPD', '1st District', 'Blue Watch', 'Green Watch', 'Orange Watch', 'Purple Watch', 'Red Watch', '2nd District', '3rd District', '4th District', '5th District', '6th District', 'Flexi Duty', and 'Special Events'. The main area shows a shift plan for 'All Employees' from '4/01/10' to '17/01/10'. The table has columns for days of the week and shift types. Employees listed include Bernia Casey, Jose Amers, Lilian Phillips, Thomas Gates, Tom Vogell, Don Gilan, Gary Houseton, Lilian Phillips, Sara Kilington, Toby Johns, and Tracy Ormicks. Red circles highlight a relocation icon for Don Gilan and a contract violation icon for Sara Kilington.

	ID	Ran	Mon, 4/01/10	Tue, 5/01/10	Wed, 6/01/10	Thu, 7/01/10	Fri, 8/01/10	Sat, 9/01/10
MPD / Patrol Services / 1st District			10.00 0.00	42.00 0.00	46.00 10.00	8.00 10.00	13.00 9.00	19.00 4.00
Blue Watch			R1 - Rest Day 1 08:00 AM - 06:00	E1 - Early Respo 07:00 AM - 03:00	E1 - Early Respo 07:00 AM - 03:00	E1 - Early Respo 07:00 AM - 03:00	E2 - Early Respo 07:00 AM - 05:00	R1 - Res 08:00 AM
Bernia Casey	206	Conc	R1 - Rest Day 1 08:00 AM - 06:00	E1 - Early Respo 07:00 AM - 03:00	E1 - Early Respo 07:00 AM - 03:00	E1 - Early Respo 07:00 AM - 03:00	E2 - Early Respo 07:00 AM - 05:00	R1 - Res 08:00 AM
Jose Amers	208	Chie	R1 - Rest Day 1 08:00 AM - 06:00	E1 - Early Respo 07:00 AM - 03:00	E1 - Early Respo 07:00 AM - 03:00	E1 - Early Respo 07:00 AM - 03:00	E2 - Early Respo 07:00 AM - 05:00	R1 - Res 08:00 AM
Lilian Phillips	209	Conc	R1 - Rest Day 1 08:00 AM - 06:00	E1 - Early Respo 07:00 AM - 03:00	L1 - Late Respor 03:00 PM - 11:00	E1 - Early Respo 07:00 AM - 03:00	E2 - Early Respo 07:00 AM - 05:00	R1 - Res 08:00 AM
Thomas Gates	205	Conc	R1 - Rest Day 1 08:00 AM - 06:00	E1 - Early Respo 07:00 AM - 03:00	E1 - Early Respo 07:00 AM - 03:00	E1 - Early Respo 07:00 AM - 03:00	E2 - Early Respo 07:00 AM - 05:00	R1 - Res 08:00 AM
Tom Vogell	207	Serg	R1 - Rest Day 1 08:00 AM - 06:00	E1 - Early Respo 07:00 AM - 03:00	E1 - Early Respo 07:00 AM - 03:00	E1 - Early Respo 07:00 AM - 03:00	E2 - Early Respo 07:00 AM - 05:00	R1 - Res 08:00 AM
Green Watch			R1 - Rest Day 1 08:00 AM - 06:00	R1 - Rest Day 1 08:00 AM - 06:00	L1 - Late Respor 03:00 PM - 11:00	L1 - Late Respor 03:00 PM - 11:00	N1 - Night Respo 11:00 PM - 07:00	N1 - Nig 11:00 PM
Don Gilan	211	Conc	R1 - Rest Day 1 08:00 AM - 06:00	R1 - Rest Day 1 08:00 AM - 06:00	L1 - Late Respor 03:00 PM - 11:00	L1 - Late Respor 03:00 PM - 11:00	N1 - Night Respo 11:00 PM - 07:00	N1 - Nig 11:00 PM
Gary Houseton	210	Ser	R1 - Rest Day 1 08:00 AM - 06:00	R1 - Rest Day 1 08:00 AM - 06:00	L1 - Late Respor 03:00 PM - 11:00	L1 - Late Respor 03:00 PM - 11:00	N1 - Night Respo 11:00 PM - 07:00	N1 - Nig 11:00 PM
Lilian Phillips	209	Conc	R1 - Rest Day 1 08:00 AM - 06:00	E1 - Early Respo 07:00 AM - 03:00	L1 - Late Respor 03:00 PM - 11:00	E1 - Early Respo 07:00 AM - 03:00	E2 - Early Respo 07:00 AM - 05:00	R1 - Res 08:00 AM
Sara Kilington	213	Supr	R1 - Rest Day 1 08:00 AM - 06:00	R1 - Rest Day 1 08:00 AM - 06:00	Sick 03:00 PM - 11:00	Sick 03:00 PM - 11:00	N1 - Night Respo 11:00 PM - 07:00	N1 - Nig 11:00 PM
Toby Johns	212	Conc	R1 - Rest Day 1 08:00 AM - 06:00	R1 - Rest Day 1 08:00 AM - 06:00	L1 - Late Respor 03:00 PM - 11:00	L1 - Late Respor 03:00 PM - 11:00	N1 - Night Respo 11:00 PM - 07:00	N1 - Nig 11:00 PM
Tracy Ormicks	214	Conc	R1 - Rest Day 1 08:00 AM - 06:00	R1 - Rest Day 1 08:00 AM - 06:00	L1 - Late Respor 03:00 PM - 11:00	L1 - Late Respor 03:00 PM - 11:00	N1 - Night Respo 11:00 PM - 07:00	N1 - Nig 11:00 PM

- After planning, we can see the results of the shift plan for any or all segments of the entire force.
- Ability to meet shift demands is shown at the top, and we can easily see icons indicating relocations, and contract violations.

# The Decision Making Chain: 7 Days Earlier...



- Can Mary take a day off?
- Thomas will be out for a week (Surgery)...



- How much overtime should be used?
- Use contractors?



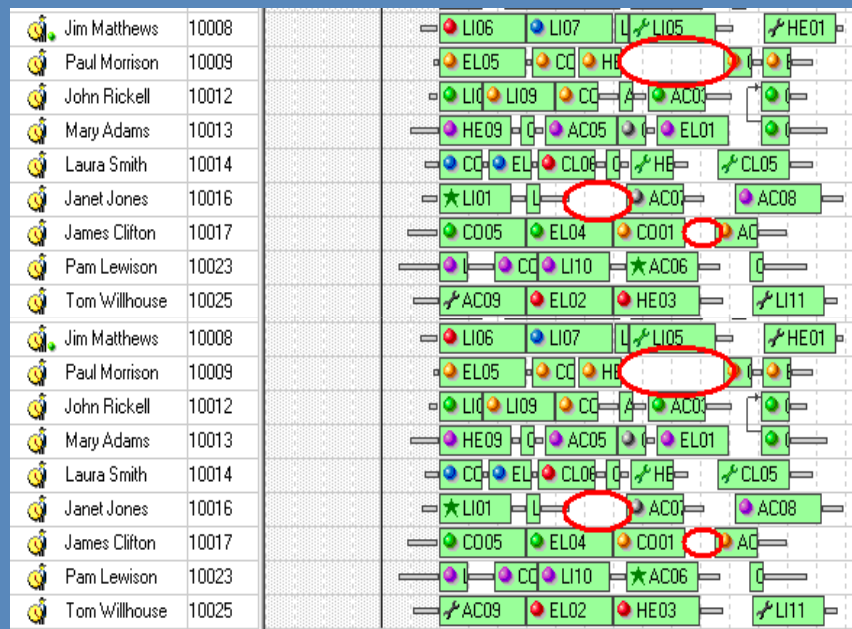
How many people are needed in the city center?  
When?

**Now**

**7 days**



# The Decision Making Chain: 7 Hours Earlier...

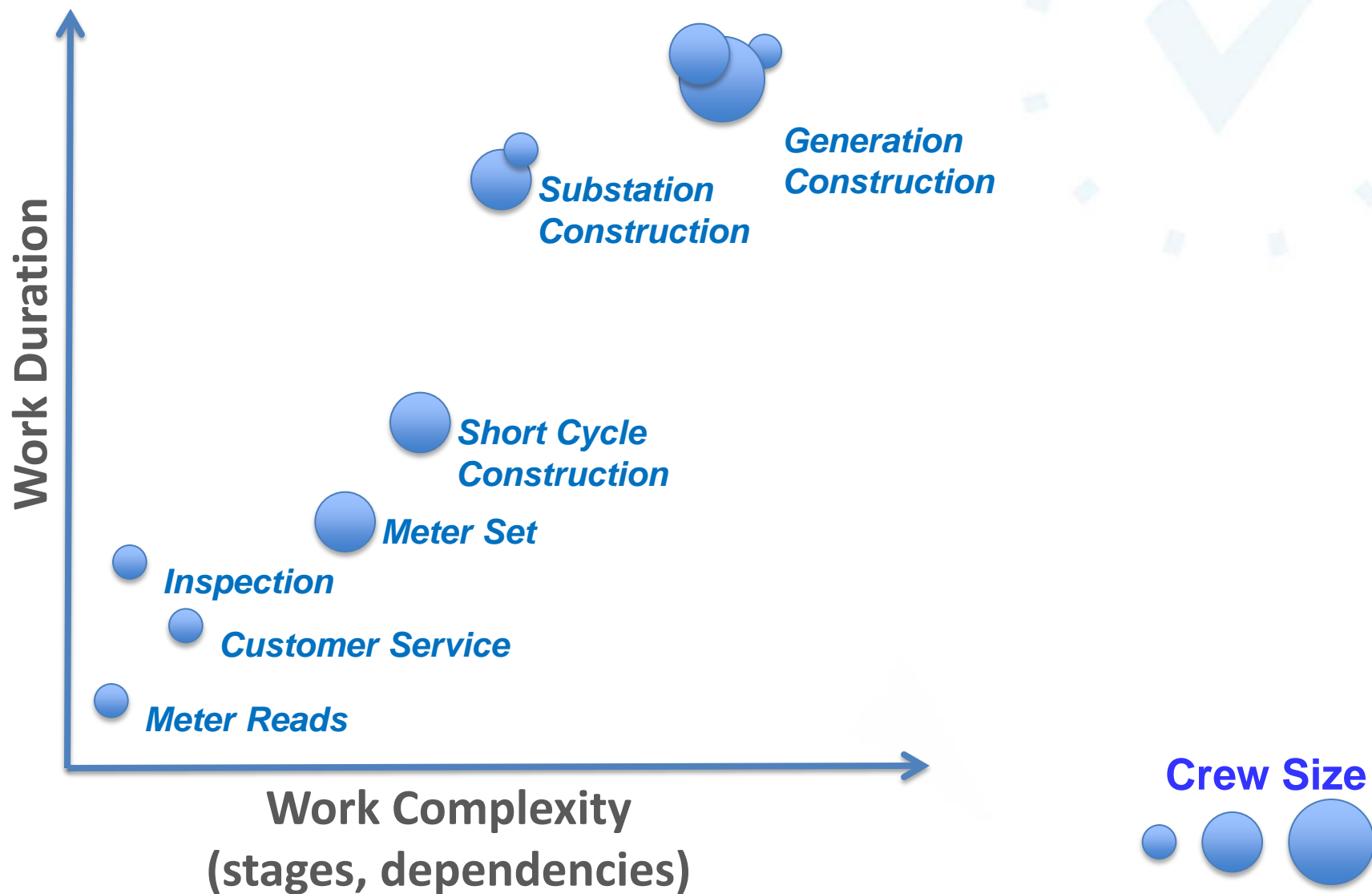


- The “free installation” marketing campaign was too successful!
- Not enough capacity is left for the 23% calls that we get on the day for the day

Who does What, Where, When with What and For Whom?

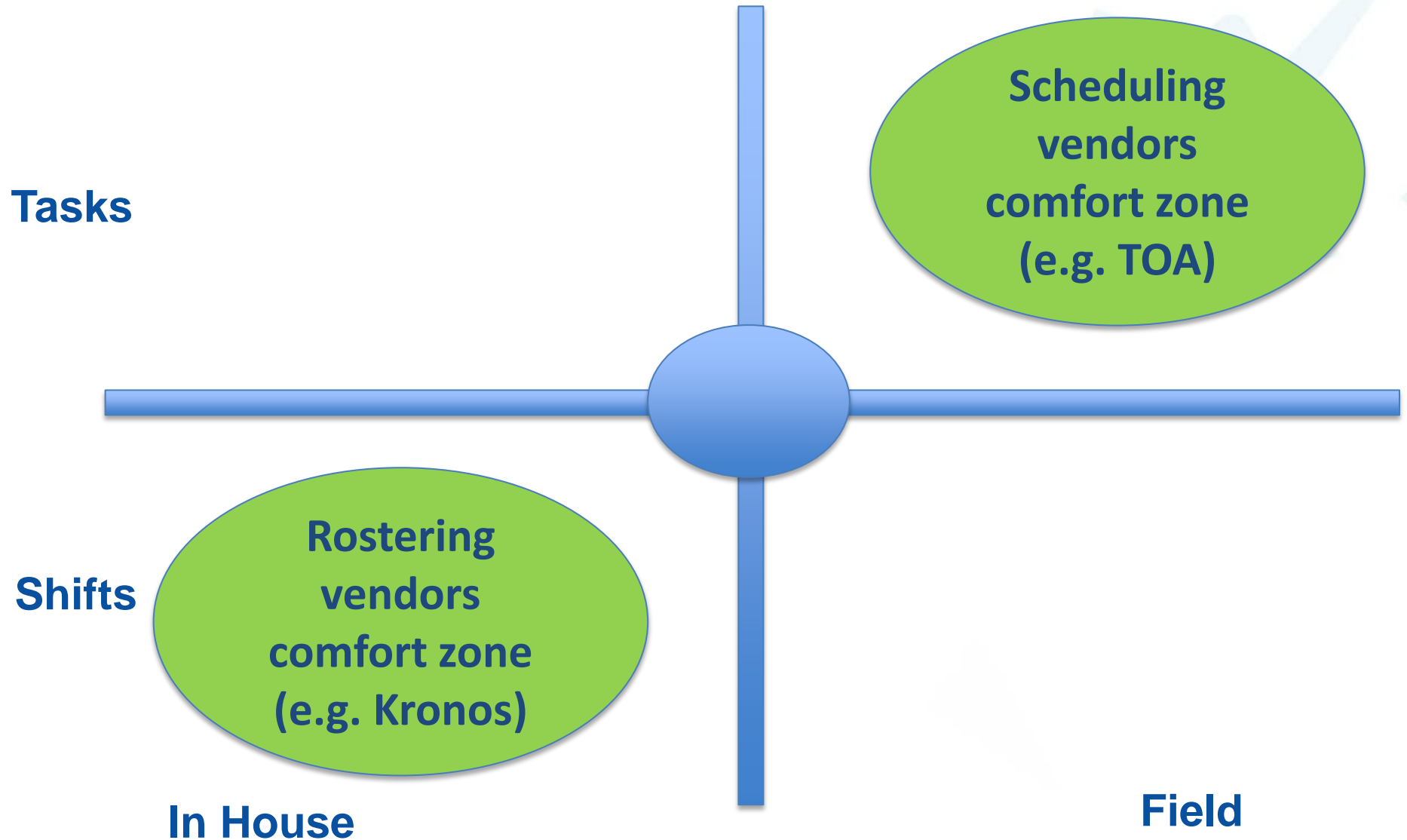
Now 7 hours

# ClickSoftware Enables Centralized Optimization for All Work Variations

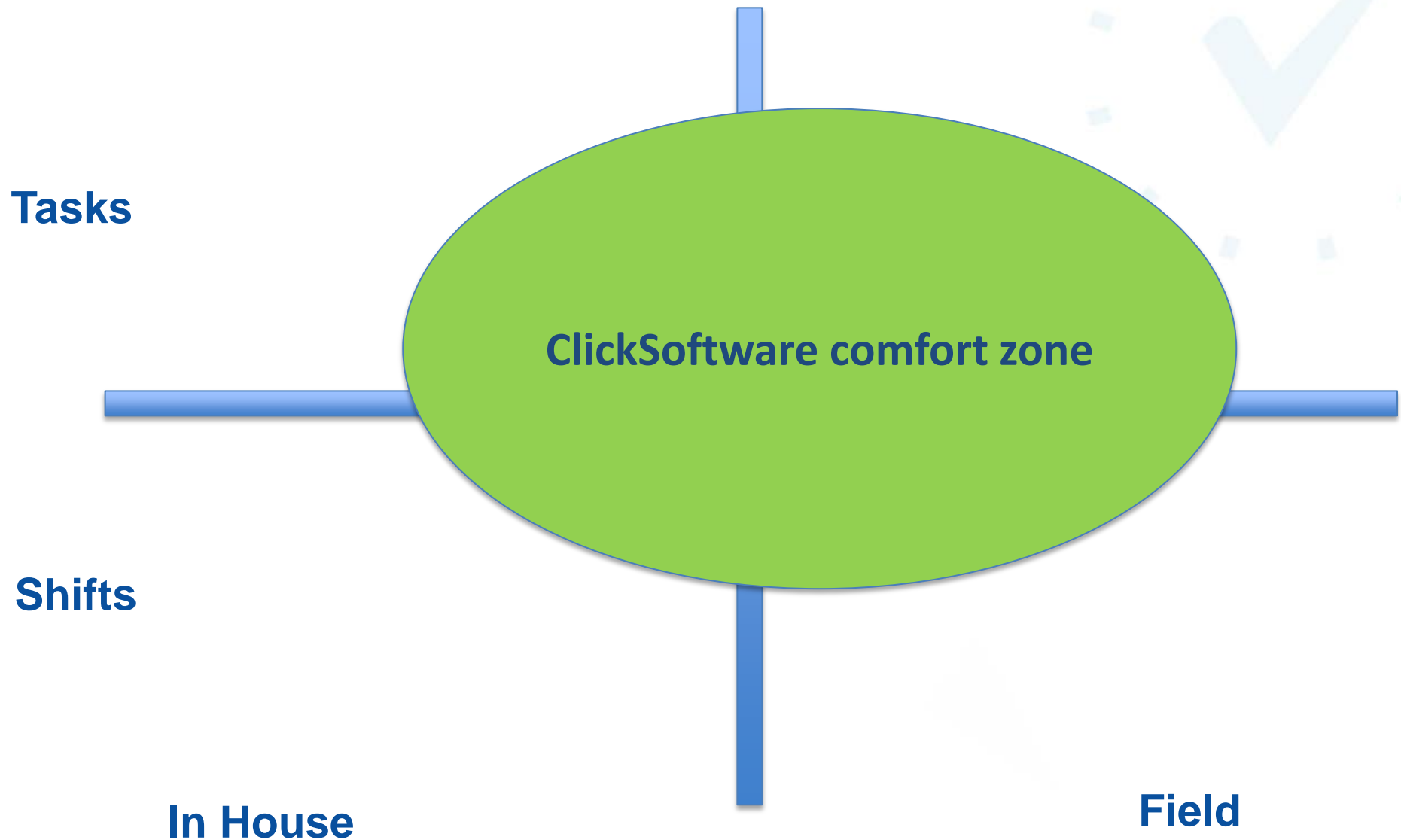


# Enterprise Wide Scheduling

# Traditional market segmentation



# Traditional market segmentation



# Enterprise Wide Scheduling - Examples

## Tasks

- Allocate platform worker to a train
- Allocate a check-in agent at counter to boarding at gate

- Escort prisoners to the court or hospital
- Allocate police officers to event
- Schedule train drivers to services
- Schedule technicians to tasks

## Shifts

- Schedule shifts to:
- Call center agents
- Check in agents, security and platform workers in airport
- Train station workers
- Cashiers in a supermarket

- Schedule shifts to:
- Police / Fire officers
- Train drivers
- Technicians

In House

Field

# Public Security



Tasks



Shifts



In House

Field

# Transportation - Railways

Tasks



Shifts



In House

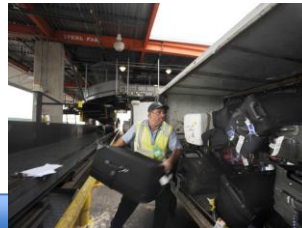


Field



# Transportation - Aviation

## Tasks



## Shifts



In House

Field

# Utilities

Tasks



Shifts



In House

Field

# Telco's

Tasks



Shifts



In House

Field

# Retail

Tasks



Shifts



In House

Field

# Healthcare

Tasks



Shifts



In House

Home  
healthcare &  
hospitalization

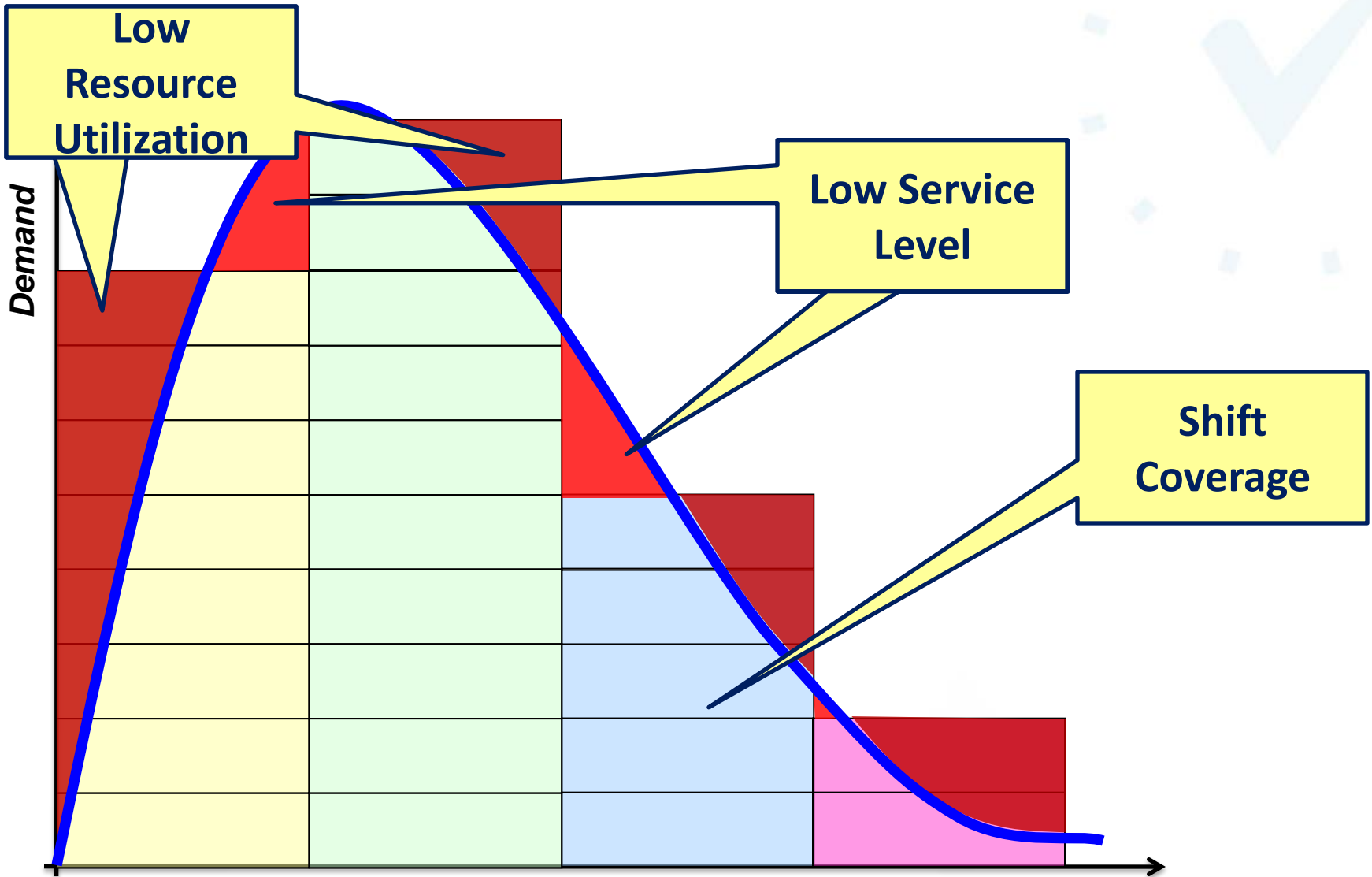
Field



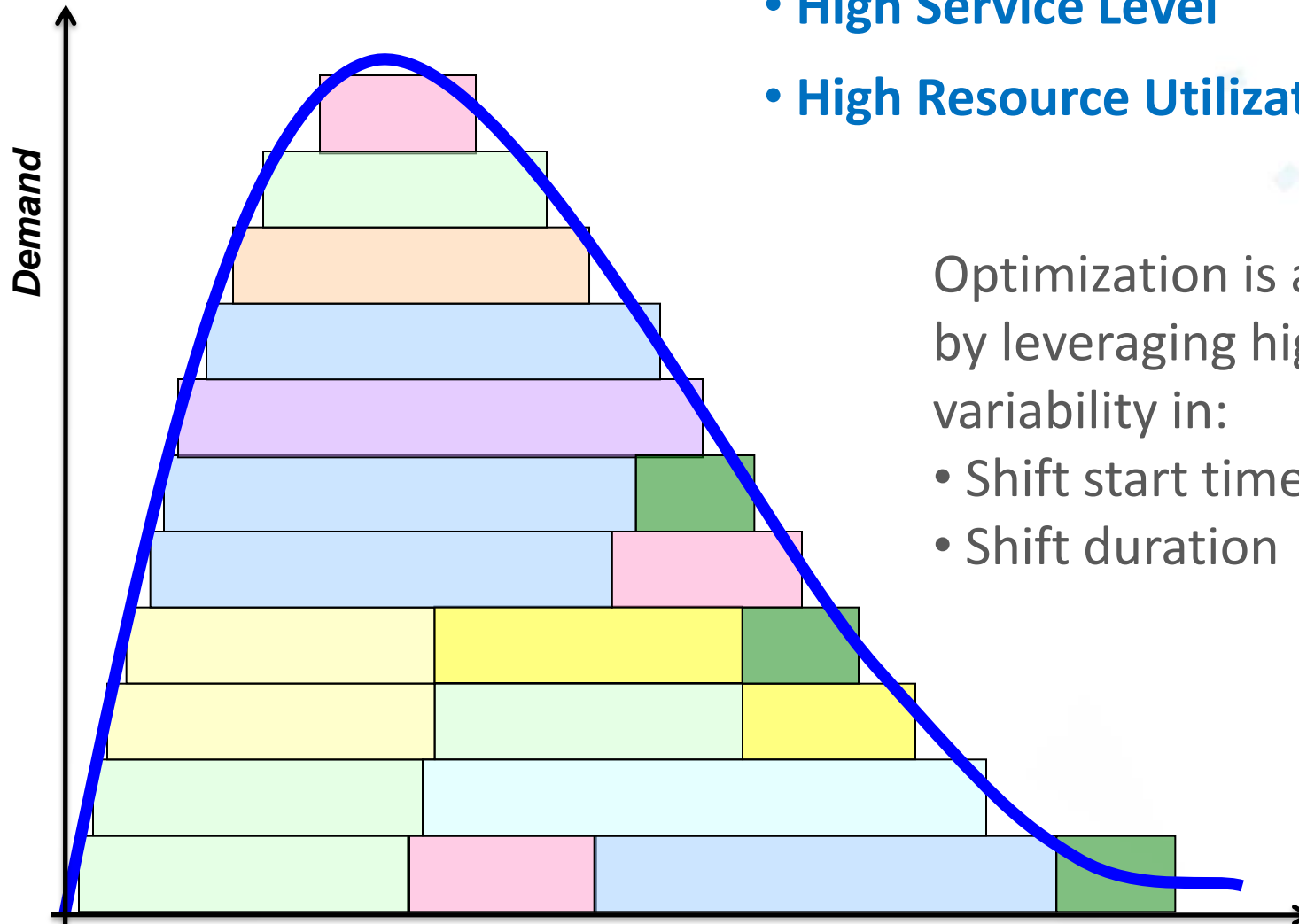
Beyond assigning people to pre-set shifts,  
ClickRoster designs shift patterns for:

- Maximum demand coverage
- Maximum resource utilization

# Sub-Optimal Shifts Structure



# Optimal Shifts Structure



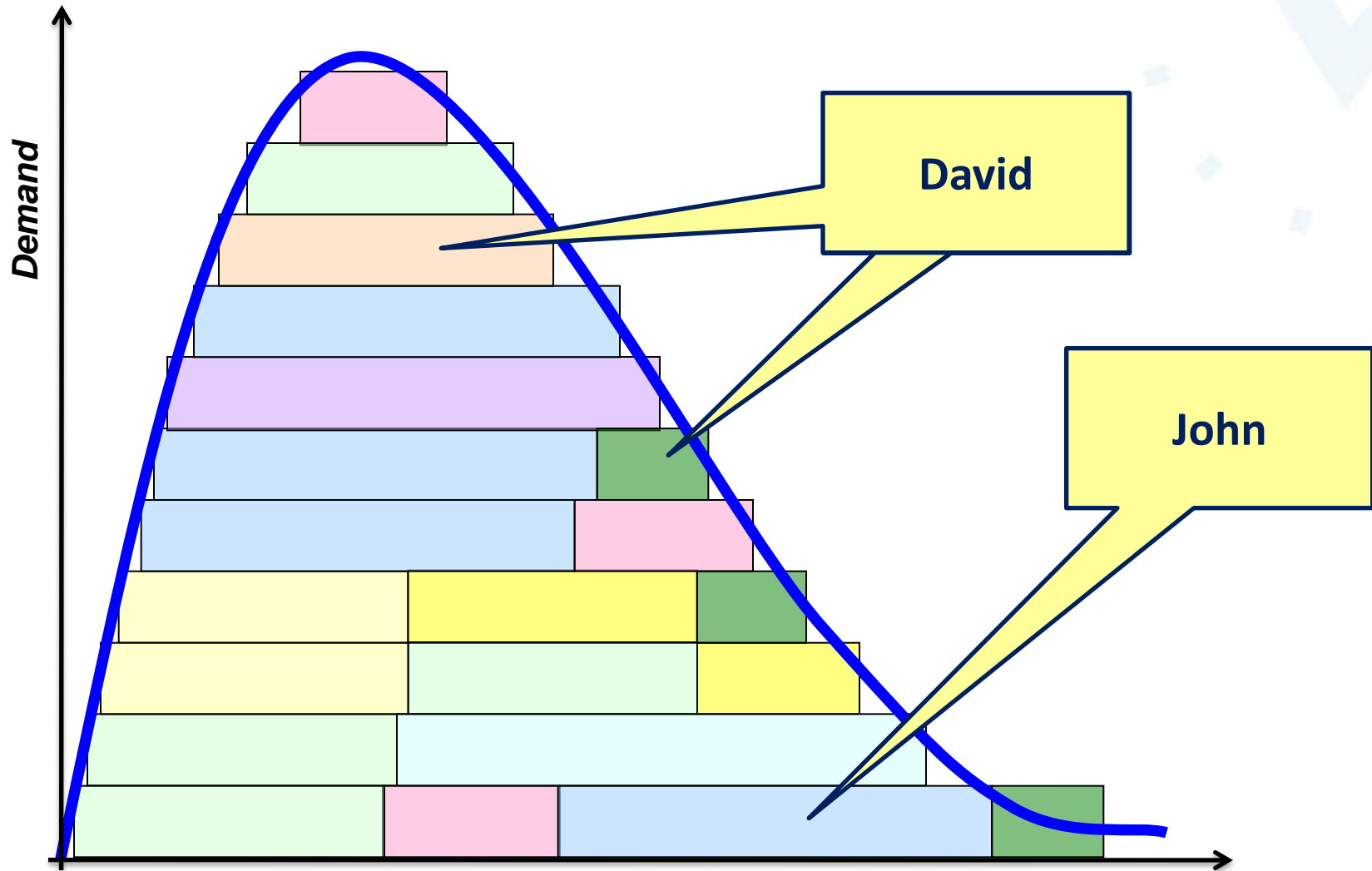
- High Service Level
- High Resource Utilization

Optimization is achieved by leveraging higher variability in:

- Shift start time
- Shift duration



# Optimal Shifts Schedule



# Optimal Position Allocation Within the Shift

Activities Allocation

11-7 5/04/11, 11:00 AM - 5/04/11, 7:00 PM Marath

Canton - Operations South Area

- A. Chief
- B. CAT Console
- C. Crude Console
- D. Poly Field
- E. CAT Field
- F. Vac. Field
- G. Crude Field

Activity to cover

Position that required certain skills

Optimal allocation

5/04/11 - 19/04/11

Engineer (9)	Tue, 5/04/11	Wed, 6/04/11	Thu, 7/04/11
Marathon Oil / Canton /	72.00 00.00	88.00 00.00	88.00 00.00
Crew A (S)	11-7	Off	Off
Dave	11-7	Off	Off
Fred	11-7	Off	Off
Jeff	11-7	Off	Off

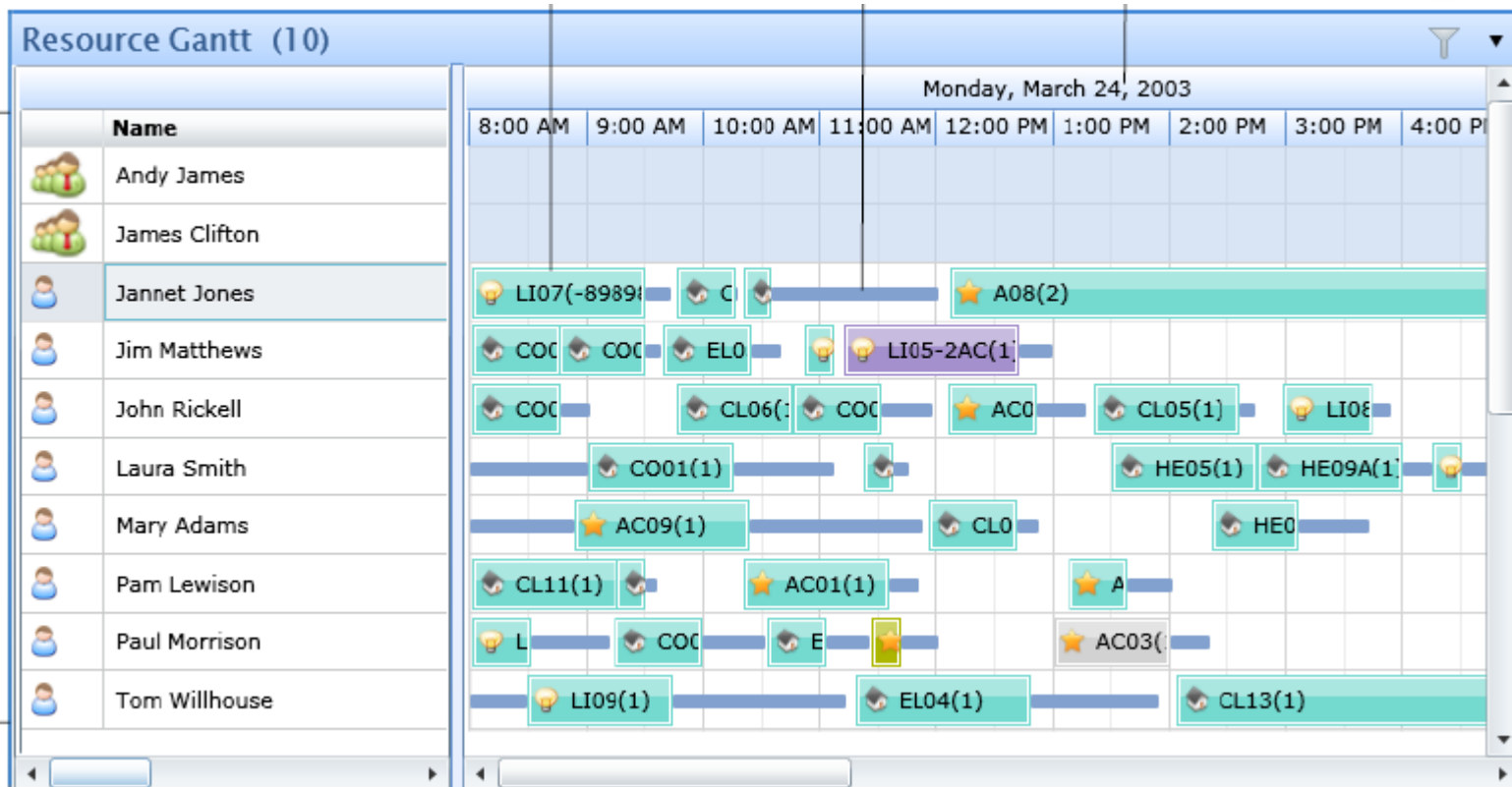
Resources with their shifts and skills

# Optimal Tasks Scheduling

Shifts in  
ClickRoster



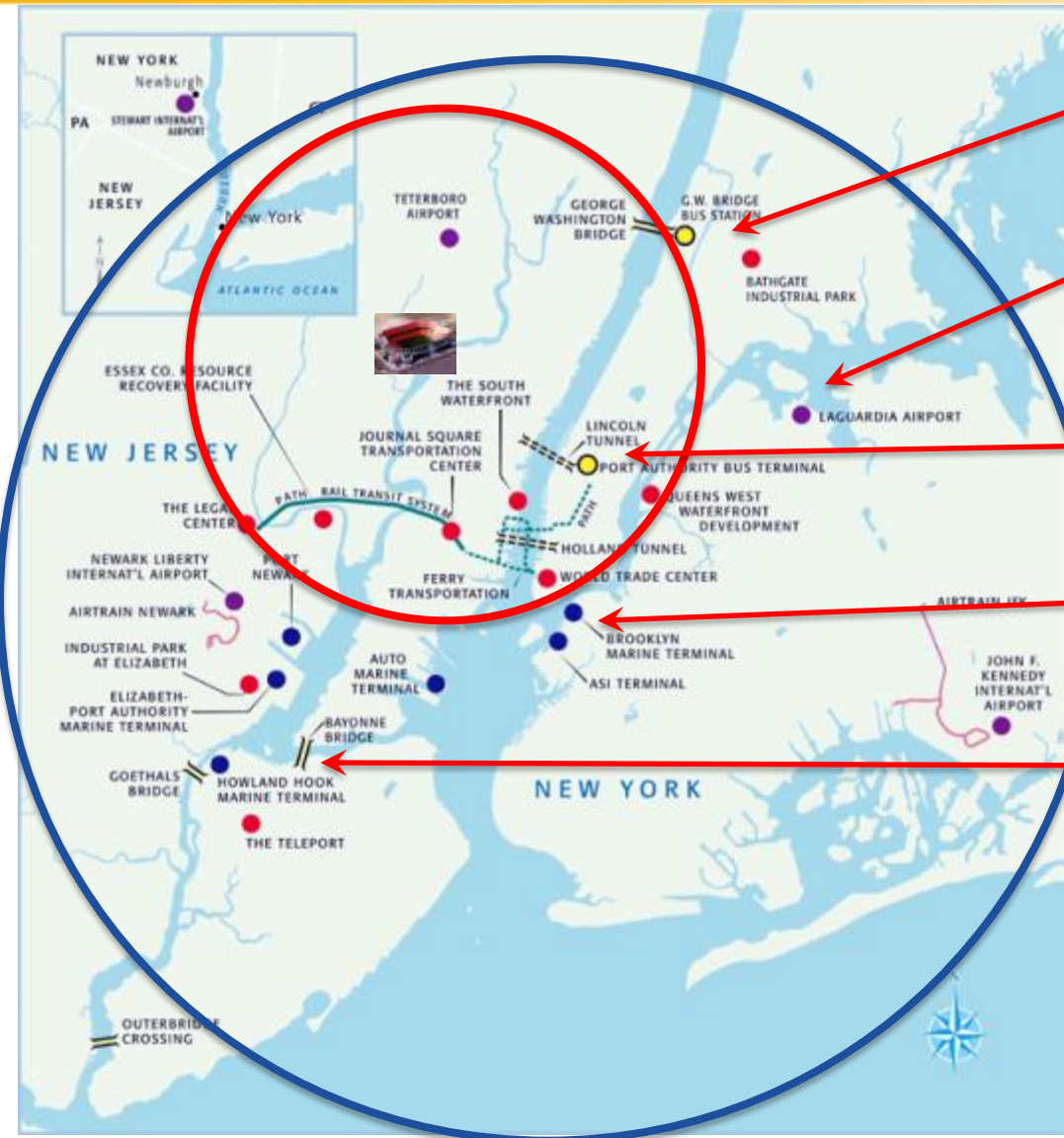
Availability in  
ClickSchedule  
(calendar)



# THINK BIG

## *Workforce Management in A Very Large Scale Event*

# A Coordinated Workforce of Thousands



**Bridges: Toll staff, Police**

**Airports: Police, Security, Customs & Immigration, Maintenance, Information, Parking**

**Bus Terminals: Drivers, Ticketing, Maintenance**

**Port Commerce: Dock staff, Customs & Immigration, Police, Maintenance, Passenger Ticketing**

**Roadways: Police, Road Maintenance**

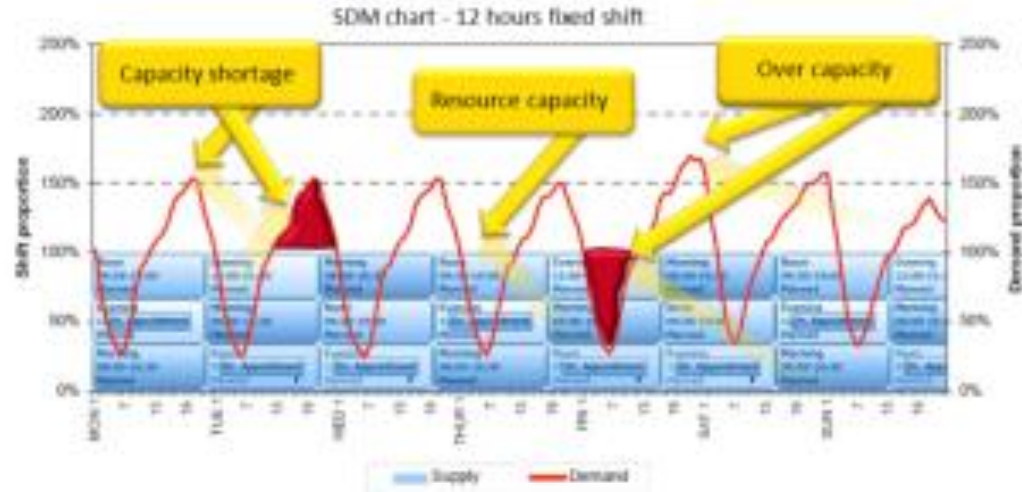
***Personnel may be under your agency's control or from other organizations. Coordinated management and visibility is critical to effectiveness & efficiency.***

# The ClickSoftware Equation

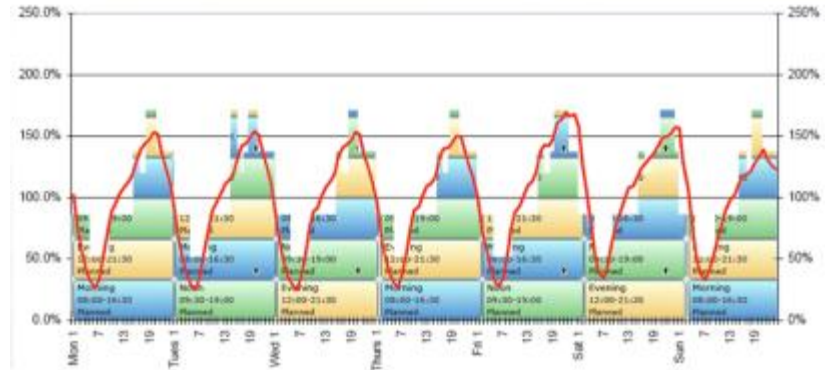
## Expected Incident Volume & Proactive Programs



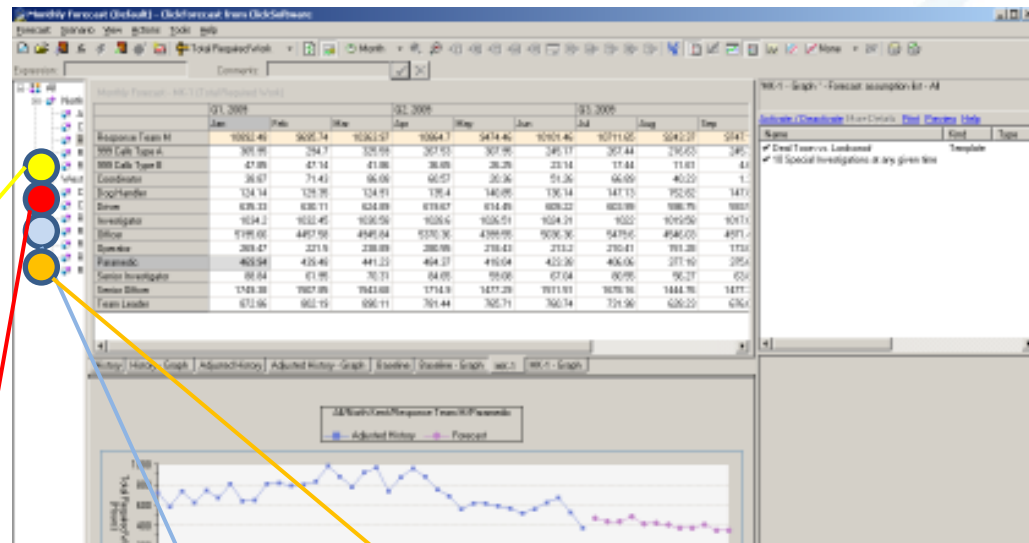
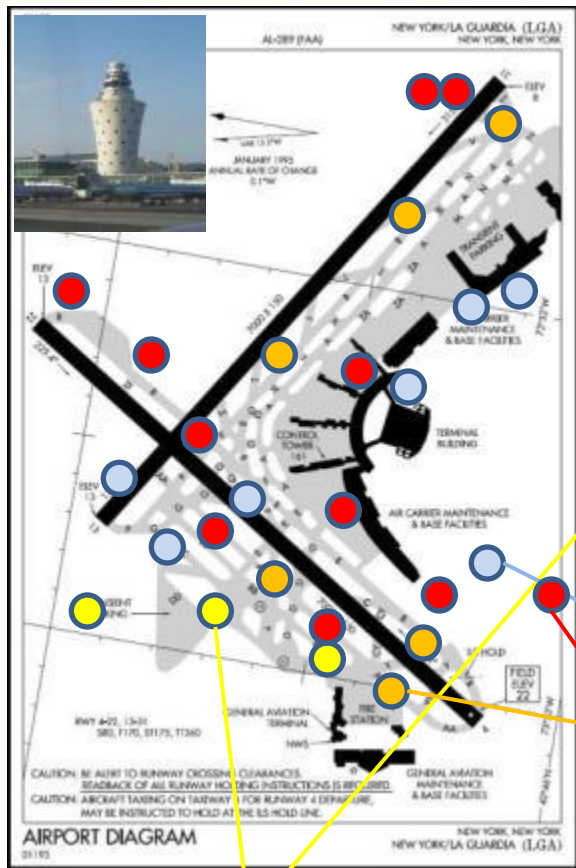
Historical Shift & Incident Demand + Resource Availability enables police to plan



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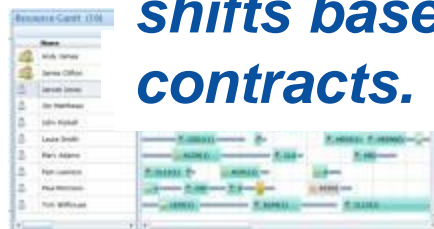


# Planning Ahead at Airports & Other Venues

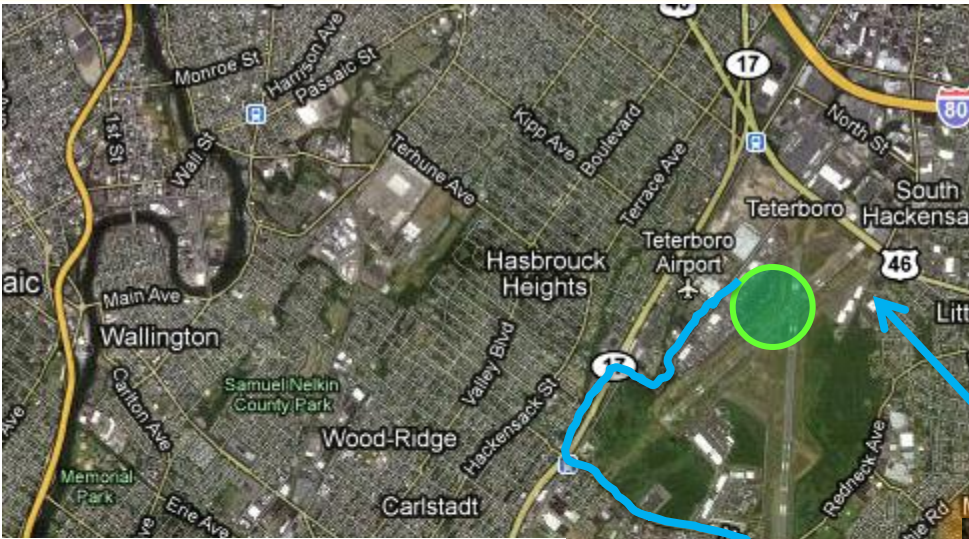


**Your Input: Workload by time period (e.g. hour) by worker type, skills, vehicles, location.**

**ClickSoftware Output: Optimized staffing of shifts based upon policies and employee contracts.**



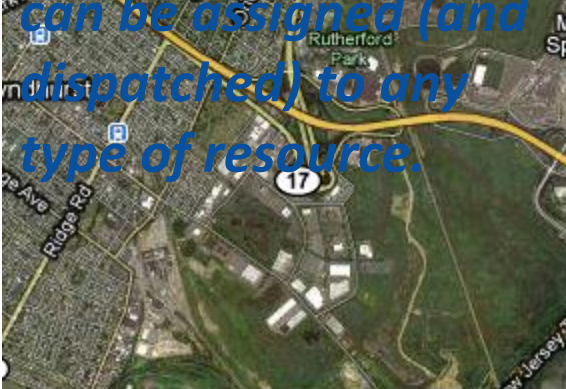
# VIP Escort from Airport to the Event



A screenshot of a dispatch software interface. The top navigation bar shows the date range "4/01/10 - 17/01/10". The interface displays a roster for "MPO / Patrol Services / 1st District". The roster is organized into columns for different days of the week (Mon, Tue, Wed, Thu, Fri, Sat, Sun) and rows for individual officers. A blue arrow points from the green circle on the map to a specific cell in the roster, and another blue arrow points from a cell in the roster to the red circle on the map.

Officer	Mon, 4/01/10	Tue, 5/01/10	Wed, 6/01/10	Thu, 7/01/10	Fri, 8/01/10	Sat, 9/01/10	Sun, 10/01/10
Blue Watch							
James Caves	81 - Rest Day 2 08:00 AM - 06:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Rest Day 1 07:00 AM - 03:00 AM
Joe Adams	81 - Rest Day 2 08:00 AM - 06:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Rest Day 1 07:00 AM - 03:00 AM
Lilian Phillips	81 - Rest Day 2 08:00 AM - 06:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Rest Day 1 07:00 AM - 03:00 AM
Thomas Gates	81 - Rest Day 2 08:00 AM - 06:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Rest Day 1 07:00 AM - 03:00 AM
Tom Vogel	81 - Rest Day 2 08:00 AM - 06:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Rest Day 1 07:00 AM - 03:00 AM
Green Watch							
Don Wilan	81 - Rest Day 2 08:00 AM - 06:00 AM	81 - Rest Day 1 08:00 AM - 06:00 AM	81 - Late Release 07:00 AM - 03:00 AM	81 - Late Release 07:00 AM - 03:00 AM	81 - Night Release 07:00 AM - 03:00 AM	81 - Night Release 07:00 AM - 03:00 AM	81 - Night Release 07:00 AM - 03:00 AM
Gene Henderson	81 - Rest Day 2 08:00 AM - 06:00 AM	81 - Rest Day 1 08:00 AM - 06:00 AM	81 - Late Release 07:00 AM - 03:00 AM	81 - Late Release 07:00 AM - 03:00 AM	81 - Night Release 07:00 AM - 03:00 AM	81 - Night Release 07:00 AM - 03:00 AM	81 - Night Release 07:00 AM - 03:00 AM
Lilian Phillips	81 - Rest Day 2 08:00 AM - 06:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Late Release 07:00 AM - 03:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Early Release 07:00 AM - 03:00 AM	81 - Rest Day 1 07:00 AM - 03:00 AM	81 - Rest Day 1 07:00 AM - 03:00 AM
Sara Hinkley	81 - Rest Day 2 08:00 AM - 06:00 AM	81 - Rest Day 1 08:00 AM - 06:00 AM	81 - Late Release 07:00 AM - 03:00 AM	81 - Late Release 07:00 AM - 03:00 AM	81 - Night Release 07:00 AM - 03:00 AM	81 - Night Release 07:00 AM - 03:00 AM	81 - Night Release 07:00 AM - 03:00 AM
Tolly Johns	81 - Rest Day 2 08:00 AM - 06:00 AM	81 - Rest Day 1 08:00 AM - 06:00 AM	81 - Late Release 07:00 AM - 03:00 AM	81 - Late Release 07:00 AM - 03:00 AM	81 - Night Release 07:00 AM - 03:00 AM	81 - Night Release 07:00 AM - 03:00 AM	81 - Night Release 07:00 AM - 03:00 AM
Tom Willhouse	81 - Rest Day 2 08:00 AM - 06:00 AM	81 - Rest Day 1 08:00 AM - 06:00 AM	81 - Late Release 07:00 AM - 03:00 AM	81 - Late Release 07:00 AM - 03:00 AM	81 - Night Release 07:00 AM - 03:00 AM	81 - Night Release 07:00 AM - 03:00 AM	81 - Night Release 07:00 AM - 03:00 AM

*Within scheduled shifts, tasks with specific times, locations, and skills*



A screenshot of a dispatch software interface showing a roster for individual officers. The roster is organized into columns for different days of the week and rows for individual officers. A blue arrow points from the red circle on the map to a specific cell in the roster, and another blue arrow points from a cell in the roster to the red circle on the map.

Officer	Mon, 4/01/10	Tue, 5/01/10	Wed, 6/01/10	Thu, 7/01/10	Fri, 8/01/10	Sat, 9/01/10	Sun, 10/01/10
Andy James							
James Clifton							
Jannet Jones							
Jim Matthews							
John Rickell							
Laura Smith							
Mary Adams							
Pam Lewison							
Paul Morrison							
Tom Willhouse							



# Planning in the Transit System



**Drivers**



**Maintenance**



**Network  
Maintenance**



**Tickets**



**Station Agents**



**Ticketing  
Agents**



**Platform  
Workers**



**Police**

# Plan, Assign, and Manage All Workforce Shifts

After planning, we can see the results of the shift plan for any or all segments of the entire force.

Ability to meet shift demands is shown at the top, and we can easily see icons indicating relocations, and contract violations.

The screenshot displays a workforce management application interface. The main window shows a shift plan for the period 4/01/10 to 17/01/10. The interface includes a navigation tree on the left, a menu bar at the top, and a main table of employee shifts. The table columns represent days from Monday, 4/01/10 to Saturday, 4/07/10. The rows list employees and their assigned shifts. Red circles highlight specific icons in the table: a relocation icon for Don Gilan and a contract violation icon for Lilyan Phillips.

	ID	Ran	Mon, 4/01/10	Tue, 5/01/10	Wed, 6/01/10	Thu, 7/01/10	Fri, 8/01/10	Sat, 9/01/10
MPD / Patrol Services / 1st District			10.00 0.00	42.00 0.00	46.00 10.00	9.00 10.00	13.00 9.00	19.00 4.00
Blue Watch			R1 - Rest Day 1 08:00 AM - 06:00	E1 - Early Respo 07:00 AM - 03:00	E1 - Early Respo 07:00 AM - 03:00	E1 - Early Respo 07:00 AM - 03:00	E2 - Early Respo 07:00 AM - 05:00	R1 - Rest Day 1 08:00 AM - 06:00
Sernie Casey	206	Cont	R1 - Rest Day 1 08:00 AM - 06:00	E1 - Early Respo 07:00 AM - 03:00	E1 - Early Respo 07:00 AM - 03:00	E1 - Early Respo 07:00 AM - 03:00	E2 - Early Respo 07:00 AM - 05:00	R1 - Rest Day 1 08:00 AM - 06:00
Jose Amers	208	Chie	R1 - Rest Day 1 08:00 AM - 06:00	E1 - Early Respo 07:00 AM - 03:00	E1 - Early Respo 07:00 AM - 03:00	E1 - Early Respo 07:00 AM - 03:00	E2 - Early Respo 07:00 AM - 05:00	R1 - Rest Day 1 08:00 AM - 06:00
Lilyan Phillips	209	Cont	R1 - Rest Day 1 08:00 AM - 06:00	E1 - Early Respo 07:00 AM - 03:00	L1 - Late Respo 03:00 PM - 11:00	E1 - Early Respo 07:00 AM - 03:00	E2 - Early Respo 07:00 AM - 05:00	R1 - Rest Day 1 08:00 AM - 06:00
Thomas Gates	205	Cont	R1 - Rest Day 1 08:00 AM - 06:00	E1 - Early Respo 07:00 AM - 03:00	E1 - Early Respo 07:00 AM - 03:00	E1 - Early Respo 07:00 AM - 03:00	E2 - Early Respo 07:00 AM - 05:00	R1 - Rest Day 1 08:00 AM - 06:00
Tom Vogell	207	Serg	R1 - Rest Day 1 08:00 AM - 06:00	E1 - Early Respo 07:00 AM - 03:00	E1 - Early Respo 07:00 AM - 03:00	E1 - Early Respo 07:00 AM - 03:00	E2 - Early Respo 07:00 AM - 05:00	R1 - Rest Day 1 08:00 AM - 06:00
Green Watch			R1 - Rest Day 1 08:00 AM - 06:00	R1 - Rest Day 1 08:00 AM - 06:00	L1 - Late Respo 03:00 PM - 11:00	L1 - Late Respo 03:00 PM - 11:00	N1 - Night Respo 11:00 PM - 07:00	N1 - Night Respo 11:00 PM - 07:00
Don Gilan	211	Cont	R1 - Rest Day 1 08:00 AM - 06:00	R1 - Rest Day 1 08:00 AM - 06:00	L1 - Late Respo 03:00 PM - 11:00	L1 - Late Respo 03:00 PM - 11:00	N1 - Night Respo 11:00 PM - 07:00	N1 - Night Respo 11:00 PM - 07:00
Gary Houseton	210	Ser	R1 - Rest Day 1 08:00 AM - 06:00	R1 - Rest Day 1 08:00 AM - 06:00	L1 - Late Respo 03:00 PM - 11:00	L1 - Late Respo 03:00 PM - 11:00	N1 - Night Respo 11:00 PM - 07:00	N1 - Night Respo 11:00 PM - 07:00
Lilyan Phillips	209	Cont	R1 - Rest Day 1 08:00 AM - 06:00	E1 - Early Respo 07:00 AM - 03:00	L1 - Late Respo 03:00 PM - 11:00	E1 - Early Respo 07:00 AM - 03:00	E2 - Early Respo 07:00 AM - 05:00	R1 - Rest Day 1 08:00 AM - 06:00
Sara Kilington	213	Sup	R1 - Rest Day 1 08:00 AM - 06:00	R1 - Rest Day 1 08:00 AM - 06:00	Sick 07:00 AM - 03:00	Sick 07:00 AM - 03:00	N1 - Night Respo 11:00 PM - 07:00	N1 - Night Respo 11:00 PM - 07:00
Toby Johns	212	Cont	R1 - Rest Day 1 08:00 AM - 06:00	R1 - Rest Day 1 08:00 AM - 06:00	L1 - Late Respo 03:00 PM - 11:00	L1 - Late Respo 03:00 PM - 11:00	N1 - Night Respo 11:00 PM - 07:00	N1 - Night Respo 11:00 PM - 07:00
Tracy Orricks	214	Cont	R1 - Rest Day 1 08:00 AM - 06:00	R1 - Rest Day 1 08:00 AM - 06:00	L1 - Late Respo 03:00 PM - 11:00	L1 - Late Respo 03:00 PM - 11:00	N1 - Night Respo 11:00 PM - 07:00	N1 - Night Respo 11:00 PM - 07:00

# Define Teams in Advance

Teams define required roles, skills, & equipment, ...with or without specific resource assignments (e.g. drug investigation).

Teams can be assigned to shifts, to specific tasks and locations (e.g. VIP escort) to respond to an event.

The screenshot displays the 'Events Manager' interface. At the top, there are radio buttons for 'View Event' (selected) and 'Add Event'. The event name is 'Ridge Stone Drug Investigation', and the start and finish dates are '4/7/2010' and '4/8/2010' respectively. Below this, there are 'Update' and 'Clear' buttons. A dropdown menu shows 'Drug Investigation Team' with 'Add Group' and 'Remove Group' buttons. The main section is titled 'Ridge Stone Drug Investigation - Resource Group Definitions' and contains a grid of resource icons: Commander (police officer), Drug Investigation Team (magnifying glass), Helicopters (helicopter), Family Liason Officers (person), Crime Scene (police officer), CCTV Operators (headset), Dog Handlers (dog), Media Team Coordinator (computer), Casualty Bureau (red cross), and Traffic Management (police officer). At the bottom, a 'Team 1' dropdown is set to 'Drug Investigation Team'. Below this, three roles are defined: 'Team Lead' (Jose Amers), 'Investigator 1' (Andy James), and 'Investigator 2' (Ronnie Castro). To the right of these roles are 'Auto Assign', 'Apply', and 'Cancel' buttons.

# Minimize Impact by Reacting Quickly



How do we quickly:

- ✓ Dispatch a crowd & media control team?
- ✓ Move passengers to an alternate station?
- ✓ Change the schedules for all transit drivers on Meadowlands & Bergen Lines?
- ✓ Deploy additional staff to Rutherford Station?

# Centralized, Parallel, Quick Workforce Response



Employee (44)	Mon, 12/11/09	Tue, 12/15/09	Wed, 12/16/09	Thu, 12/17/09	Fri, 12/18/09
Emp01	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM
Emp02	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM
Emp03	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM
Emp04	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM
Emp05	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM
Emp06	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM
Emp07	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM
Emp08	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM
Emp09	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM
Emp10	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM	7A-5J 08:30 AM - 05:00 PM

Events Manager

Ridge Stone Drug Investigation - Resource Group Definition

- Commander
- Drug Investigation Team
- Helicopters
- Family Liaison Officers
- Crime Scene
- CCTV Operators
- Drug Handlers
- Media Team Coordinator
- Casualty Bureau
- Traffic Management

Team 1

Drug Investigation Team

Team Lead: Andy Jarvis

Investigator 1: Ramona Castro

Investigator 2: [Name]

Buttons: Auto Assign, Apply, Cancel

✓ *Pre-defined crowd control and media teams are automatically filled with qualified people.*

✓ *On-call bus drivers are scheduled to pick-up at Meadowlands and drop-off at Rutherford Station.*

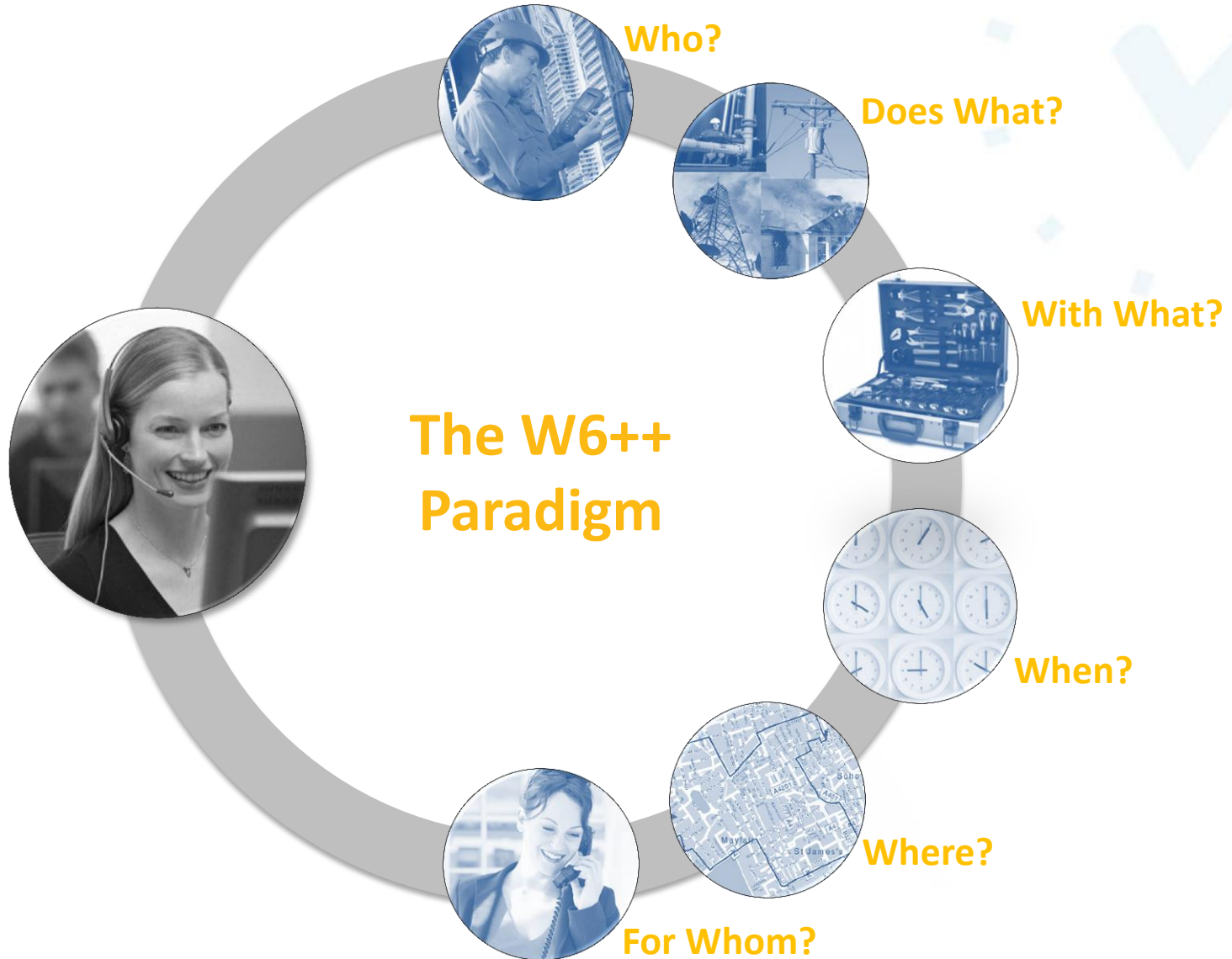
✓ *Operators' schedules (and breaks) are re-optimized according to updated timetables & NJ Transit policies.*

✓ *Supplementary ticketing & service staff assigned (and scheduled for transfer) to Rutherford Station*



# The Power of W6++

# Workforce Management and Service Optimization



# W6+++

- The trademark W6 originally referred to: Who (technician) does What (Job type), for Whom (customer), With what (Tools, spare parts), Where and When
- Since we coined the term we expanded the number of dimensions to be unlimited
- Example 1: you can add “on What” as a 7<sup>th</sup> W- dimension to indicate the asset being serviced
- Example 2: you can break the With what into two dimensions one for Tools , the other for Spare parts
- Example 3: you can add a dimension for the Vehicle: “riding on...”



# UDP and UDO

- **UDP:** Every business object that come with our software can be expanded by any number of **user-defined-properties**
- **UDO: User-Defined-Objects-** New generic objects can be defined to represent a new type of players that participate in the application

# W6++ Scales to the Ultimate (May 2011)

Version 8.1.4 of our products (May 30 2011), will scale to the ultimate values.

- up to 20,000,000 (20M) W-dimensions (=families of business objects)
- within each dimension up to 2,000,000,000 (2G) objects can co-exist.

This means for example, that in one application instance we can include:

- the entire world population of consumers
- with all their electricity meter readers,
- all the living technicians, and
- their vehicles,....

YES in one application instance.

**In memory computing enables large scale automation and optimization, but first you need to have a software program that can represent large scale problems, and that is what W6++ offers,...**

# Summary

# Enterprise Service Chain Optimization

## Decision Making Time Horizon

### Before

*Proactive  
Management*

**ClickForecast**

**ClickPlan**

### Shift Planning

**ClickRoster**

### The Day of Service

*Execution*

Daily Scheduling:

**ClickSchedule**

**ClickMobile**

**ClickLocate**

**ClickContact**

Mobility:

### After

*Business  
Intelligence*

**ClickAnalyze**

Our portfolio of solutions are available on premises as well as on demand

## SMB Offering

Medium Business:

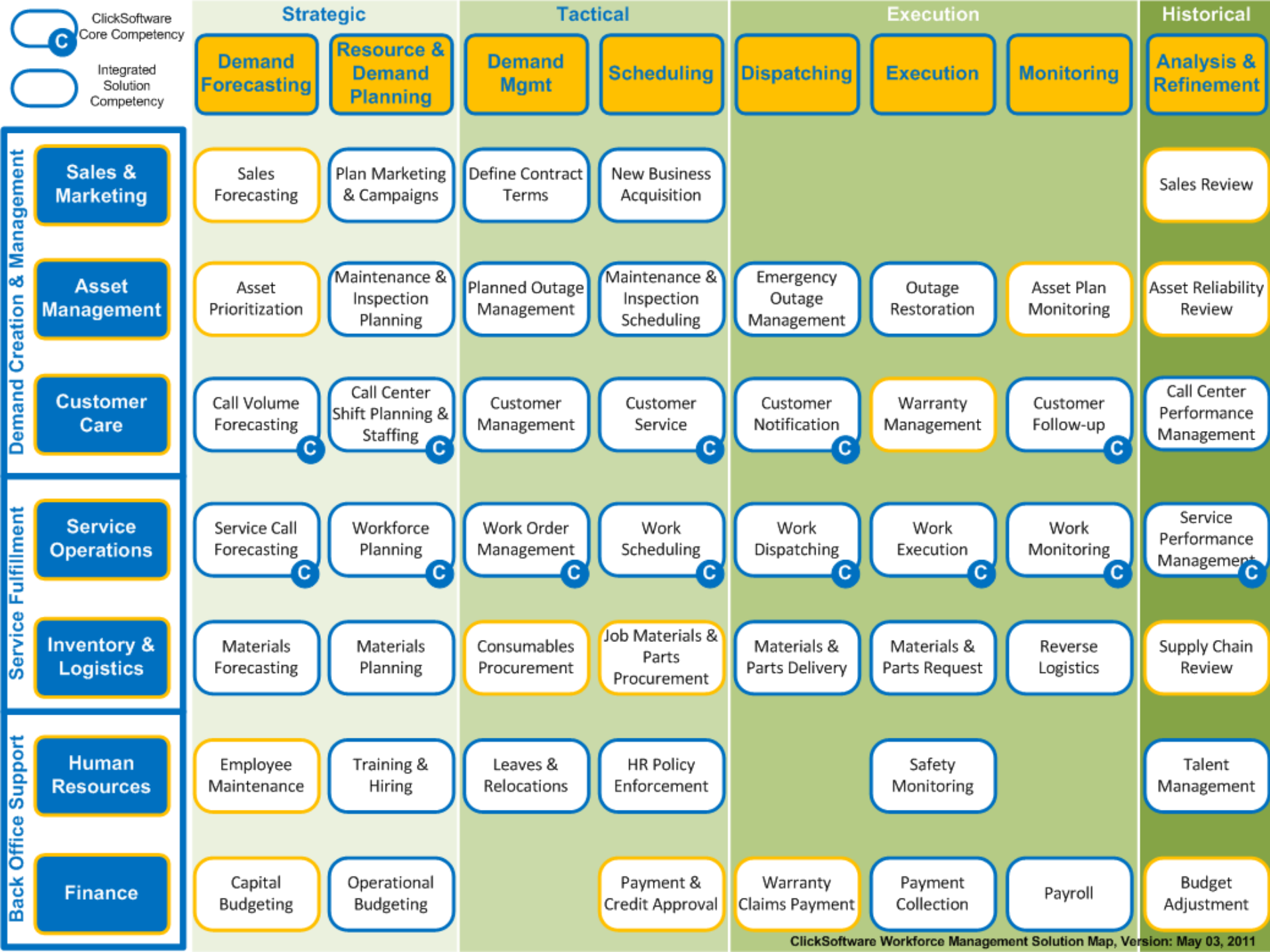
**ClickIMRS**

Small Business (SaaS):

**ServiceTycoon**  
On Demand Field Service Management

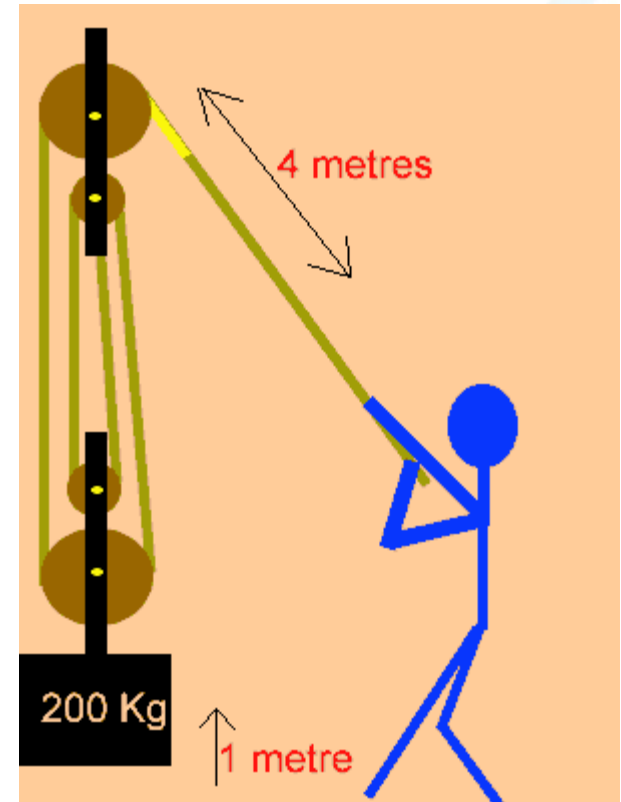
# Solution Map of ClickSoftware

- As we increase the coverage of business needs
- And specifically with the introduction of ClickAppStore
- The solution map notion facilitates a business-need orientation to customer engagements



# Strong Synergies Between Our 4 Growth Engines

1. **Enterprise field force optimization** engine
  2. **Mobility** engine,
  3. **Shift planning** engine, and
  4. **SMB** (Small, Medium Businesses) engine
- Choice: On premise or OnDemand or hybrid



**Strong synergies between our 4 growth engines  
create force multipliers.**



# Thank You!