

# 优化劳动力管理，推动HR战略转型

迎接精益化劳动力管理时代的到来

TIME & ATTENDANCE

SCHEDULING

ABSENCE MANAGEMENT

HR & PAYROLL

HIRING

LABOR ANALYTICS



克罗诺思软件(亚洲)有限公司

陳卓琪 **Bonnie Chan**

顾问

# Agenda



## 为什么需要精益化劳动力管理

- 控制人工成本
- 提高劳动力效率
- 减少法规风险

HR帮助企业实现精益化劳动力管理

关于Kronos

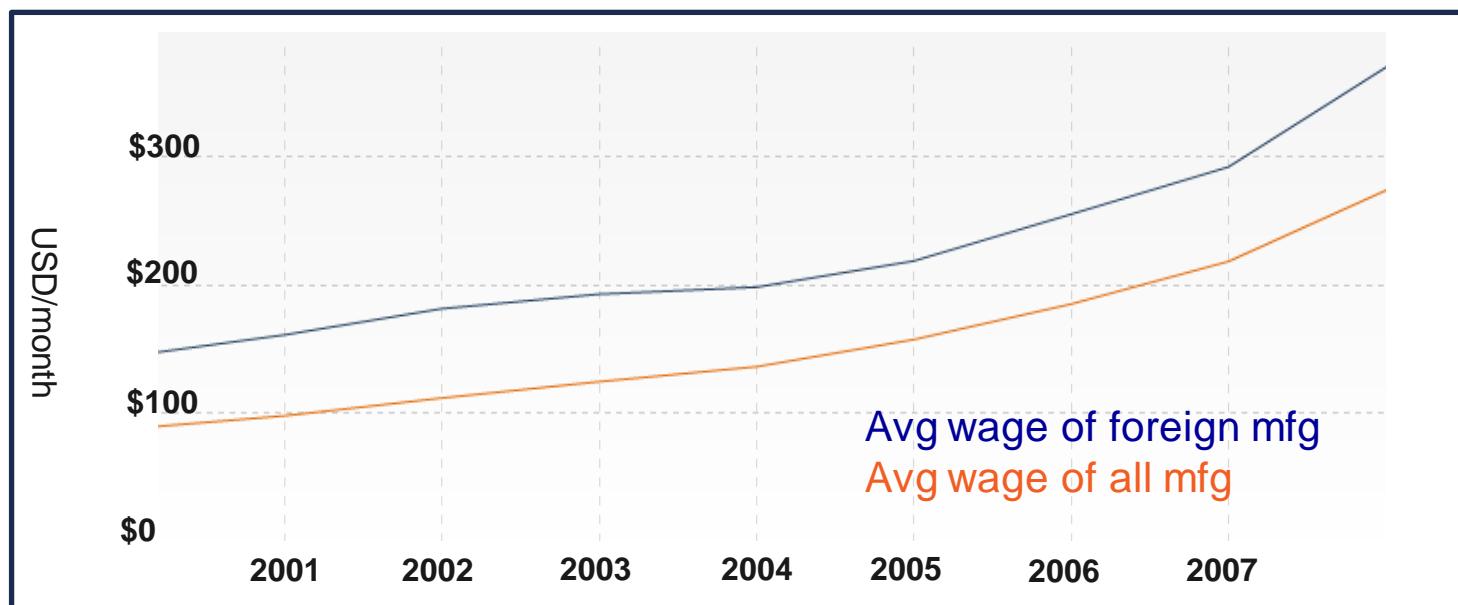


# 人工成本上升趋势明显

- 工资每年增长 **15-20%**
- 未来10年, 工资占GDP比重将从目前的15%增加至**30%**
- Adding \$1.5 **trillion** in new costs to employers by 2015 (**RMB10,150,000,000,000**)

Wages will **double over the next 5 yrs** in manufacturing.

Morgan Stanley



Source: World Bank, "Lewis Turning Point & China's FDI Prospects"

# 刘易斯转折点显现 - 劳动力过剩变成劳动力短缺

- 刘易斯曲线：“过多的劳动力不存在”将推动工资、消费和通胀
  - Surplus of rural workers suitable for labor-intensive work has fallen to 25 million from 120 million in 2007 (Intl Monetary Fund)
  - By 2015, no more excess labor
  - Labor shortages begin when the ratio of job openings to job seekers rises above 0.96,
    - In eastern China, the ratio currently 1.01,
    - In the Pearl River Delta region, ratio is 1.26
    - In Fujian province, ratio is 1.14
- 劳动力短缺随着营业额的增加而恶化
  - Avg turnover ranges from 5%-20% per month
  - % employees currently professing “low loyalty” to employer is 2.5 higher than US/Europe average



**“China has arrived at its Lewis turning point.”**  
**Now it will have to turn to increased efficiency and productivity for further growth.”** *Business Week*

# 效率和成本需要匹配

- Common assumption that MNCs more efficient and productive compared to SOEs and PLEs
- For MNCs, efficiency is higher, but costs are higher too
- Ratio of productivity to employee costs **lowest for MNCs**
- Major challenge to MNC competitiveness

<i>Figures in RMB</i>	<b>Value Added per Worker (Median)</b>	<b>Wages (Median)</b>	<b>Ratio</b>
<b>Privatized SOE</b>	4,268	1,200	3.6
<b>PLE</b>	3,204	1,115	2.9
<b>Other JV</b>	14,448	5,351	2.7
<b>Greater China JV</b>	9,753	3,717	2.6
<b>SOE</b>	8,773	3,472	2.5
<b>Greater China WFOE</b>	12,344	5,606	<b>2.2</b>

**Source:** "How Productive is Chinese Labor? The Contributions of Labour Market Reforms, Competition, and Globalization," University of Oxford (UK), Department of Economics

# 合规问题日益突出

- **Work actions:** High profile strikes and work stoppages at Foxconn, Honda Lock, dozens others
- **Arbitration & Courts:** 94% YoY increase in labor disputes heard by Supreme People's Court 问题纠纷每年增加94%
- **Enforcement:** Further crackdown expected as economy rebounds and expands



“50% of the cases due to overtime rates & payment.”  
50% 的问题与加班&薪酬有关

*China Daily, December 12, 2009*

# 劳动力管理能改变什么？

关键业务问题	Kronos 如何解决？
控制人工成本	<ul style="list-style-type: none"><li>• 减少不合理的工资支付</li><li>• 消除手工操作</li><li>• 提供可视性和监控</li><li>• 精确跟踪工时成本</li></ul>
减少法规风险	<ul style="list-style-type: none"><li>• 集中化的政策</li><li>• 法律法规的体现和遵循</li><li>• 详尽的审计追踪</li></ul>
提高劳动力效率	<ul style="list-style-type: none"><li>• 自动化的劳动力效率管理</li><li>• 按业务量安排人工，减少排班多余或不足</li><li>• 理解员工对生产业务的影响</li><li>• 全员参与劳动力管理</li></ul>



**What is 0.5% to 3% of payroll worth?**

# Agenda



## 为什么需要精益化劳动力管理

## HR帮助企业实现精益化劳动力管理

- Accuracy 精确考勤
- Scheduling 合理排班
- Activities Tracking 活动追踪
- Performance Analysis 绩效分析

## 关于Kronos



# 重视考勤数据准确真实对薪资的影响

## Data Errors?

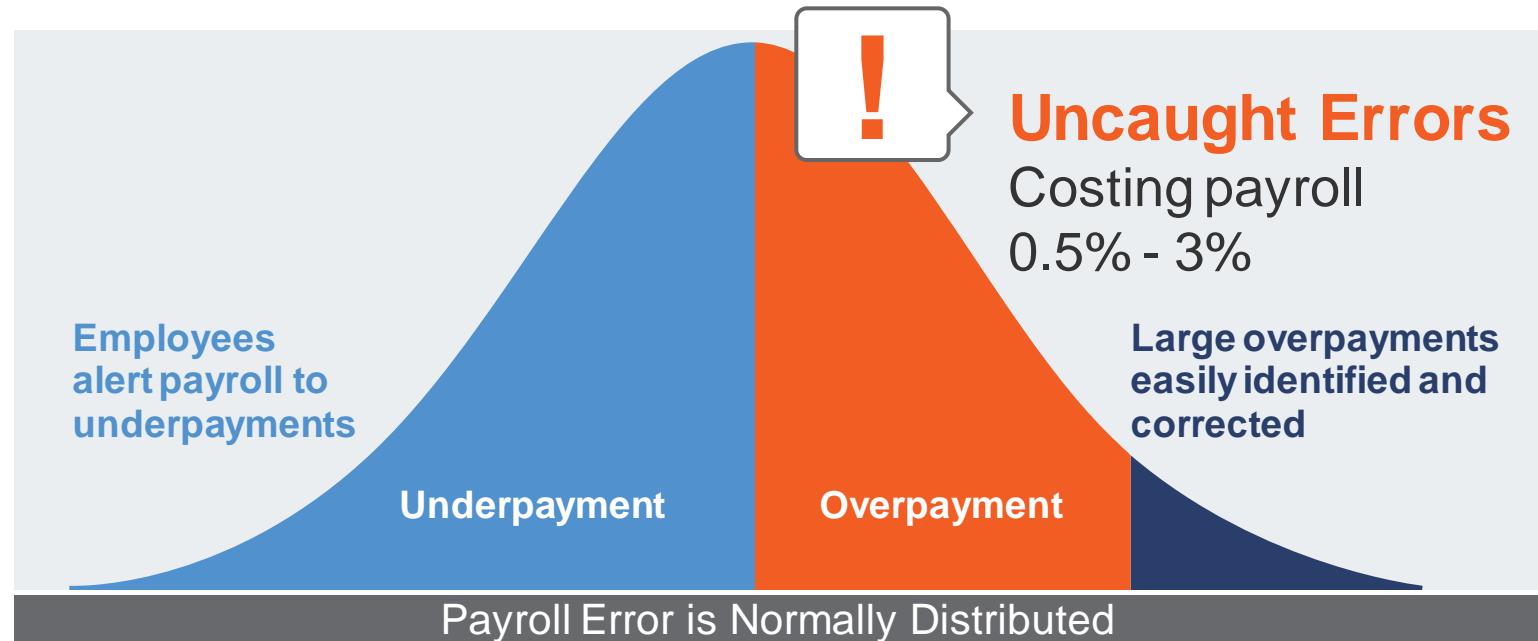
- Tedious
- Error prone
- High volume

## Application Errors?

- Premium pay
- Holiday & PTO
- State, local, union

## Intentional Errors?

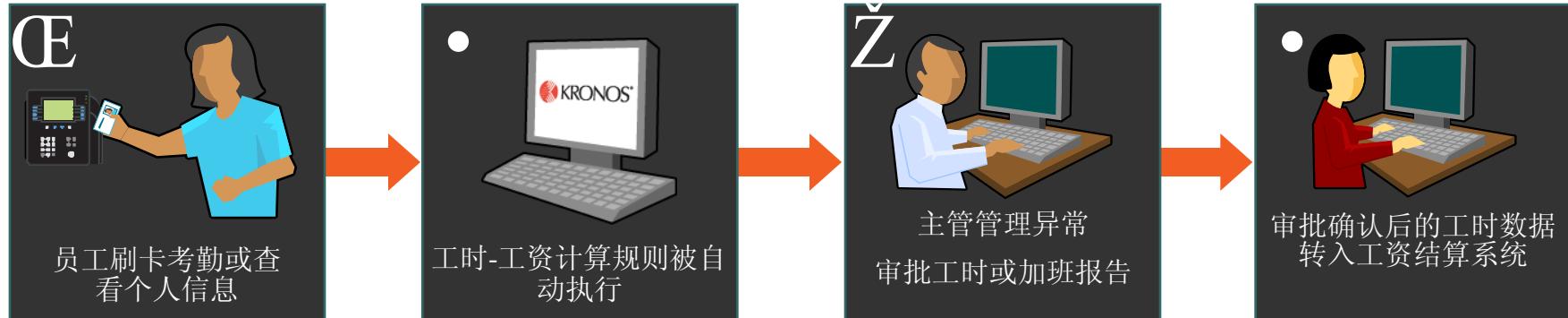
- Fraud
- Preferential treatment
- Gaming rounding rules



## 员工自助: 友好的员工交互界面



实时准确的数据，完善的考勤流程，自动化的工时运算



## 什么是工时-工资计算规则?

针对不同类型工时核算或统计的规则或规则组合, 如正常工时、加班、病假、特休假等。



# 正向管理时间，采用领先的时间账户模式，融入综合工时等弹性管理



考勤卡

上次已保存: 14:15

姓名和 ID 刘敬一 Fisher ... S001

时间周期 上一个工资周期

	日期	工资代码	数量	到达	转移	离开	班次	每日	累计
x	星期一 6/01			6:58		15:33		8.0	8.0
x	星期二 6/02			7:00	2011-0704//	16:00		8.6	8.6
x	星期三 6/03			7:13		15:31		7.75	7.75
x	星期四 6/04	事假 Personal...	8.0					8.0	32.25
x	星期五 6/05			7:01		15:21		7.75	7.75
x	星期六 6/06								40.0
x	星期日 6/07			6:58		16:03		8.5	48.5
x	星期一 6/08			7:00		19:00		11.5	60.0
x	星期二 6/09								60.0

实际打卡和异常

总数和排班
累计项目
审核
签核和批准
移动的数量
活动事件
事件审核

全部 ▾

实时的工时计算

帐户	工资代码	数量	工
101/202/305/407/71-0702//	待批准加班 Unappro...	0.6	
(x)101/202/305/407/71-0704//	平日加班 Daily OT	0.6	
101/202/305/407/71-0702//	事假 Personal Leave	8.0	
(x)101/202/305/407/71-0704//	日常工时 Regular	8.0	
101/202/305/407/71-0702//	晚班 Evening	9.25	
101/202/305/407/71-0702//	年休假 Annual Leave	8.0	
101/202/305/407/71-0702//	平日加班 Daily OT	12.5	
101/202/305/407/71-0702//	日常工时 Regular	130.75	

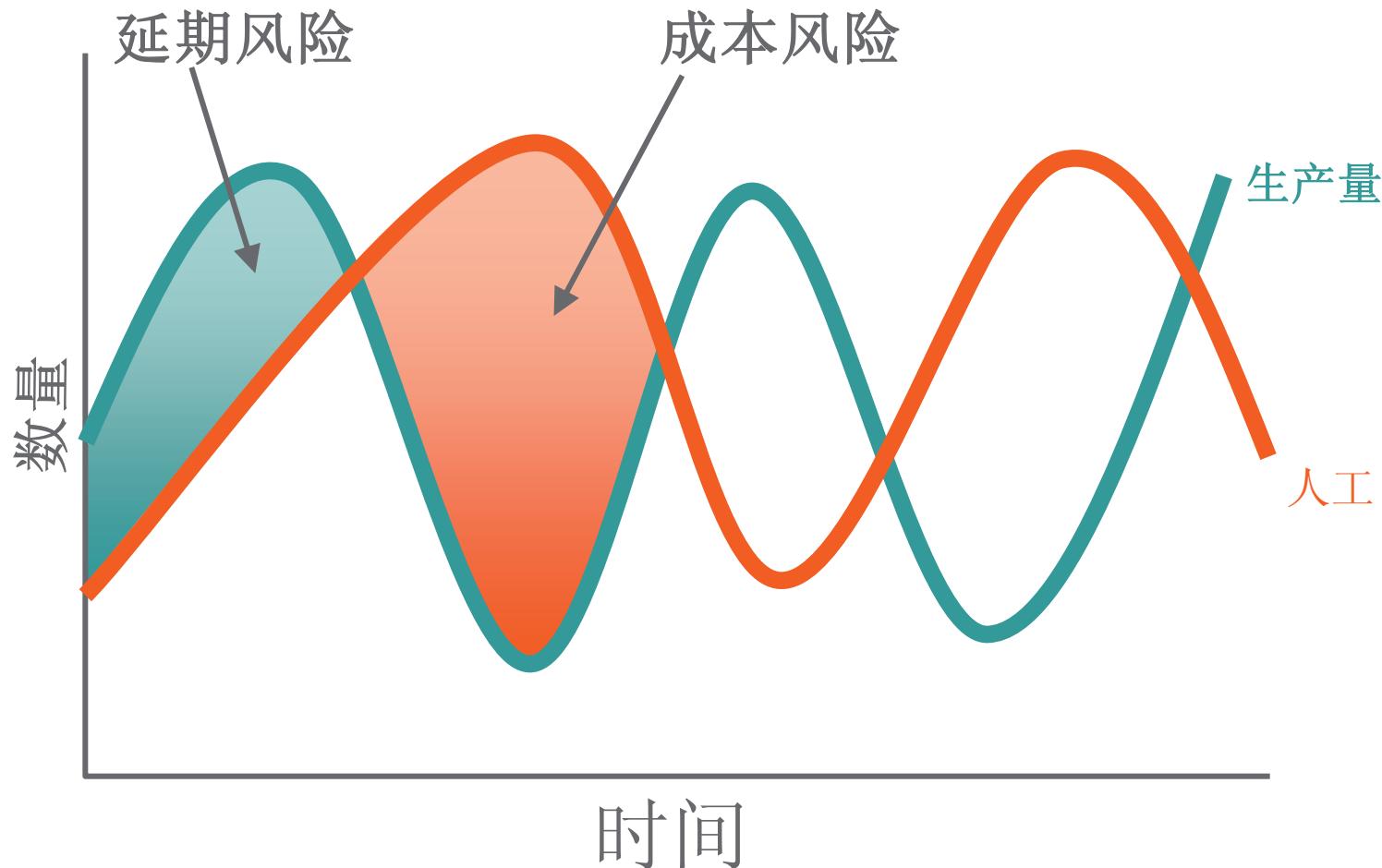
累计项目代码
截止至选定日期...
单位

病假 Sick Leave	44.0	小时
年休假 Annual Leave	60.0	小时

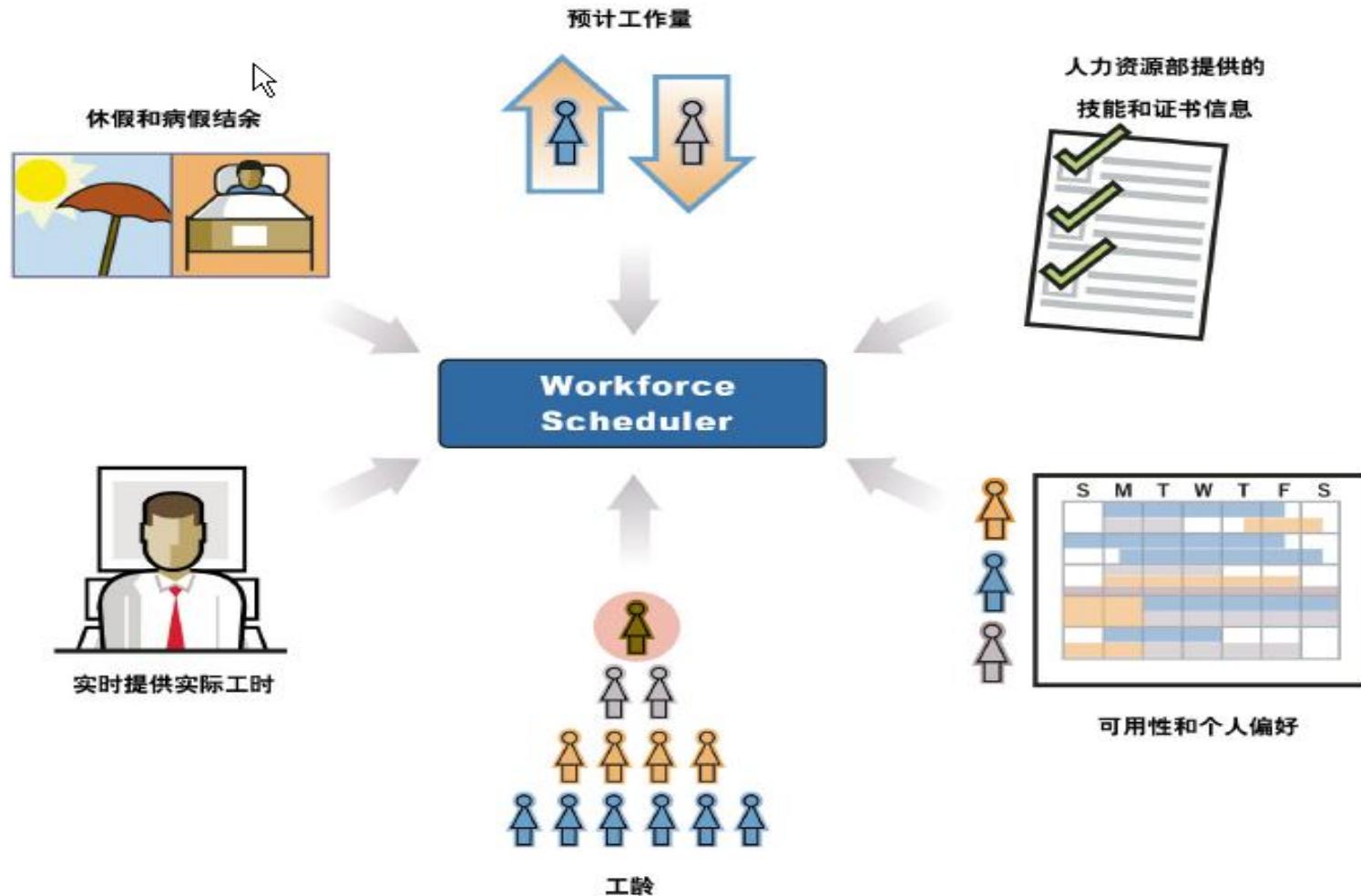
日期
开始时间
结束时间
数量

星期一 6/01	7:00	15:30	
星期二 6/02	7:00	15:30	
星期三 6/03	7:00	15:30	
星期四 6/04	7:00	15:30	
星期五 6/05	7:00	15:30	
星期六 6/06			

# 排班调度的差异是客观存在的



# 需求驱动 – 始终在正确的时间向正确的工作岗位分配合适的人员



# 让排班调度更优化、更合理、更公平

**MY SCHEDULE**

Loaded: 3:13PM Show Selected Locations Edit  
Time Period Next Schedule Period Refresh

◀◀ 10/12/2008-10/18/2008 ▶▶

**BY EMPLOYEE** **BY JOB**

Save Actions Shift Pay Code Accrual Amount Availability View

Name	Schedule Hours	Dept	Job	Sun 10/12	Mon 10/13	Tue 10/14	Wed 10/15	Thu 10/16	Fri 10/17	Sat 10/18
				4a 8a 12p 4p 8p						
Laymond, Wayne	32.00	Front End	Cashier	10a - 630	2p - 9p	9a - 2		11a - 730	101	
Love, Brian	23.50	Front End	Cashier		4p - 9	445		430p	515p -	5p -
McThomas, Harold	32.00	Front End	Cashier	1030a - 7	215p -		445	945a - 61	930a -	
Naveen, Nathan	32.00	Front End	Cashier	10a - 630	9a - 2		3p - 9	9a - 4p	3p - 9	
Madison, Scott	38.75	Receiving	Receiver		615a - 2	6a - 145	6a - 145		615a - 2	6a - 145
Morgan, Amanda	38.75	Receiving	Receiver		6a - 145	6a - 145	6a - 145		6a - 145	6a - 145
Murphy, Michael	38.75	Receiving	Receiver		6a - 145	615a - 2	615a - 2		6a - 145	615a - 2
Atkinson, Sally	13.75	Childrens	Associate	1030a - 7						9a - 2
Azelton, Jack	27.25	Childrens	Associate	10a -		12p		9a - 31	9a - 445	945
<b>Schedule Cost</b>	<b>0.00</b>			<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$28.00</b>	<b>\$0.00</b>
										<b>\$0.00</b>

**SCHEDULE ASSISTANT** **COVERAGE** RULE VIOLATIONS HOURS SUMMARY COST SUMMARY COMMENTS METRICS

Date 10/13/2008 Job Total Jobs Plan view: Unconstrained Toggle Bar/Line

People

Planned

Scheduled

Time

# 在劳动力管理中体现精益制造的思想

致力于减少浪费

浪费 – Anything a customer is unwilling to pay for:

- 等待

- For materials to arrive at an operation
- For operator availability
- For line change-over

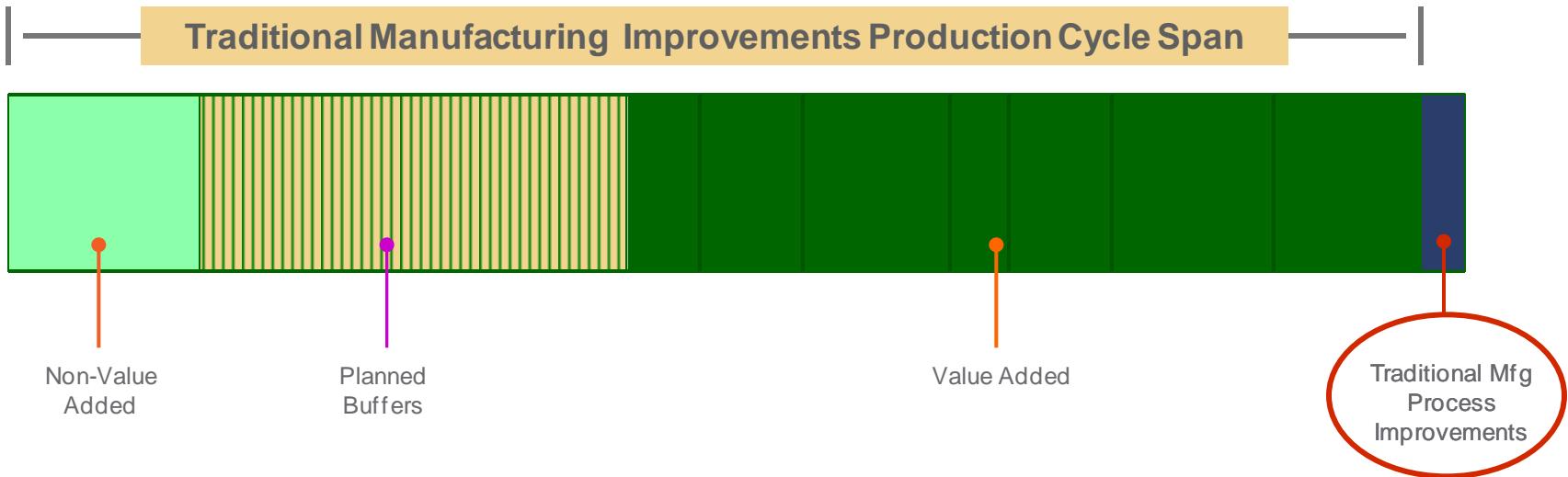
- 在制品流转

- Material Handling between operations, etc.

- 不必要的额外工资成本



# 优化间接时间和直接时间同样重要



- 过去，制造业往往致力于优化直接工时，但目前对于成熟行业，这种优化的空间在日益减小
- 直接工时可见性强且较容易分析
- 但**间接时间往往没有被准确地统计和分析**

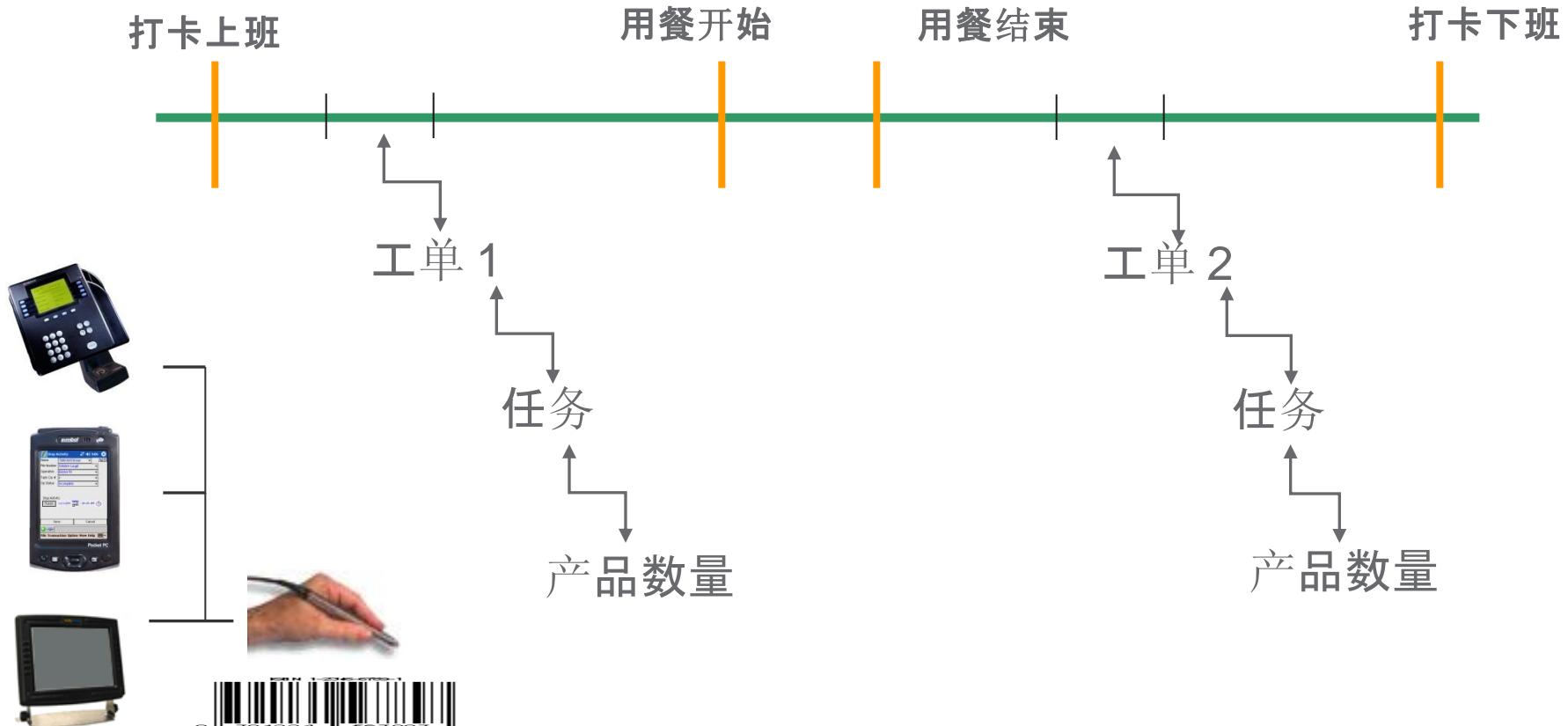
# 员工工时分类举例

## Kronos Hours Breakdown

Timekeeping Hours	Non-activity Hours	Project Hours	Re-work Hours	Quality Hours	Waiting Hours	Meeting	Training	5S	Ad hoc Hours
	Activity Hours								
		Non-project Hours		Other Non-project Hours					

# 自动化的生产工时与薪资工时核对，找到浪费

界定具体每个员工耗费在工单上的时间数量，在这个时间段内他的产量是多少，以及在这个特定的生产过程中他所耗费在停工待料、会议甚至是怠工的无效工时时间是多少



## 生产活动数据采集表单举例/Sample of data form

用户名 刘敬一 Fisher Liu

生产开始

Production Order 定单 \* 1111

Task Number 任务 \* 302

Asset Number 设备 A-159

用户名 刘敬一 Fisher Liu

生产结束

Production Order 定单 \* 1111

Task Number 任务 \* 302

Quantity Complete 完工 27

Defect Quantity 废品 2

Defect Reason Code 原因 MOOD



包括条形码扫描的多种形式

汇报内容可以自定义，操作简单方便

# 员工活动追踪的精细化管理

考勤时间/Payroll hours									
	日期	到达	离开	班次	每日	累计			
x ↗	星期三 11/26	▼	▼	▼					
x ↗	星期四 11/27	▼	6:59 <sup>0°</sup>	▼ 17:35	▼	10.0	10.0	10.0	
x ↗	星期五 11/28	▼	▼	▼					

总数和排班		累计项目	审核	注释	活动事件	事件审核			
	活动名称	实际开始时间	实际停止时间	分配的时数	分配的总时数	经理批准	员工批准		
x ↗	i.Inactive	7:00	7:08	0.13	0.13	✓			
x ↗	05400-71806P01E	7:08	11:00	3.87	4.0	✓			
x ↗	SYS-UNPAID BREAK	11:00	11:30	0.0	4.0	✓			
x ↗	i.Inactive	11:30	12:45	1.25	5.25	✓			
x ↗	i.Eqmt Delay 机器故障	12:45	13:30	0.75	6.0	✓			
x ↗	75210100100P01E	13:30	18:00	4.0	10.0	✓			
x ↗									

考勤时间/Payroll hours

工作时间明细 /Actual working hours

- 工作时间的明细分配/Reconciliation between pay hours and earned hours
- 透过追踪直接和间接的活动, 從而獲取 **直接时间及间接时间**
- 异常现象比如原料延迟供应, 机器停机待修及时纪录, 可通过邮件及时自动发至主管和相关人员/Timely reaction for the production exceptions
- 如果有加班, 加班明细也有准确记载/ Reasonable OT control



## WIP 可視性:

实时掌握WIP状况, 跟踪定单/工序进展状况



Manufacturing Portal Navigation

Labor Level Set GMI Location-1A LL set

Refresh

Last Refreshed 2:56:29 PM

Inactive Past Due Commitments

Activity By Due Date		Customer		Due Date	Status	Percent Complete	Employee or Cell	Activity	Time Started	Elapsed Time
1555/70	1/25/2010	20.93333		23.2%			Aguirre, Raymond	i.Inactive Cell	7:00AM	1279.95
1400/50		111.66666		5.19%			Alcaino, Clark	i.Inactive Emp	9:13AM	97.73333
1210/70	1/26/2010	52.46666		3.78%						797.7
1615/60	1/26/2010	47.01666		68%						
1780/50	1/27/2010	83.98333		1.93%						
1192/60		75.68333		13.25%						
1391/60		79.56666		2.73%						
PAST DUE					Current Shop Status					
1222	1/30/2010	Elliott Machinery		21.71%	12/26/2009		Due Date		Number of Employees	Cell Count
1474/60	1/31/2010			3.34%	1999/402			12/19/2009	1	0
1192/70	1/31/2010	Ceradyne		3.81%	1222/402			12/22/2009	1	0
1400/60	2/01/2010	Elliott Machinery		11.4%	1444/502			12/30/2009	1	0
1695/60	2/01/2010			7.98%	1777/502			1/03/2010	1	0
1780/60	2/02/2010	51.68333		6.64%	1888/502			1/06/2010	1	0
1780/70	2/06/2010	Tri-State Supply		29.81%	1210/402	1/03/2010		1/13/2010	4	1
1400/70	2/07/2010			10.5%	1210/402			1/13/2010	4	1
1695/70	2/07/2010	101		3.45%	1780/402			1/21/2010	4	1
1474/70	2/07/2010	102		99.9	1780/402	12/17/2009		1/21/2010	4	100%
		201			1391/702			2/03/2010	1	0
Activity By Due Date					12/18/2009					
		302			12/23/2009					
PAST DUE	402	Customer		Due Date	In Progress		Status	Hours To Complete	Percent Complete	
1222		Elliott Machinery		12/26/2009	12/26/2009		12/26/2009		76.92%	
1333		Ceradyne		12/27/2009	12/27/2009		12/27/2009		0%	
1999		Elliott Machinery		12/31/2009						
1444		Tri-State Supply		1/03/2010						
101								0.0		0%
102				12/17/2009				0.0		100%
201				12/18/2009				0.0		0%
302				12/23/2009				0.0		100%
402				12/26/2009				2.9		76.92%
501				12/27/2009				0.0		0%



# WIP 可視性: 实时車間狀況



Manufacturing Portal Navigation

Labor Level Set GMI Location-1A LL set Refresh  
Last Refreshed 2:56:29 PM

Inactive Past Due Commitments

1555/702	1/25/2010	20.93333	23.2%
1400/502			
1210/702			
1615/602			
1780/602			
1192/602			
1391/602			
1615/702			
1474/602			
1192/702			
1400/602			
1695/602			
1780/602			
1780/702			
1400/702			
1695/702			
1474/702			

## Current Shop Status

Activity	Due Date	Number of Employees	Cell Count
1999/402	12/19/2009	1	0
1222/602	12/22/2009	1	0
1444/502	12/30/2009	1	0
1777/502	1/03/2010	1	0
1888/502	1/06/2010	1	0
1210/402	1/13/2010	4	1
1210/402	1/13/2010	4	1
1780/402	1/21/2010	4	1
1780/402	1/21/2010	4	1
1391/702	2/03/2010	1	0

Activity By Due Date

- PAST DUE
- 1222
- 1333
- 1999
- 1444

Activity	Location	Due Date	Employee Status	Time Started	Elapsed Time
101	Emboss Machinery	12/16/2009			0.0 0%
102	Tri-State Supply	1/03/2010	●		0.0 0%
201		12/17/2009	●		0.0 100%
302		12/18/2009	●		0.0 0%
402		12/23/2009	●		0.0 100%
501		12/26/2009	●		2.9 76.92%
		12/27/2009	●		0.0 0%



# WIP可視性:

## 提醒對使用率 & 費用的影響(瓶頸)



Manufacturing Portal Navigation

Labor Level Set GMI Location-1A LL set Refresh

Last Refreshed 2:56:29 PM

Inactive Past Due Commitments

Shop Expense Alerts

### Shop Expense Alerts

Employee or Cell	Activity	Time Started	Elapsed Time
Aguirre, Raymond	i.Inactive Cell	7:00AM	1279.95
Alcaino, Clark	i.Inactive Emp	9:13AM	797.73333
Brooks, Bob	i.Eqmt Delay	9:15AM	797.7

1780/702	2/06/2010	68.9	29.81%	1210/402	1/13/2010	4	1
1400/702	2/07/2010	117.13333	10.5%	1210/402	1/13/2010	4	1
1695/702	2/07/2010	115.81666	3.45%	1780/402	1/21/2010	4	1
1474/702	2/07/2010	99.9	3.58%	1780/402	1/21/2010	4	1
				1391/702	2/03/2010	1	0

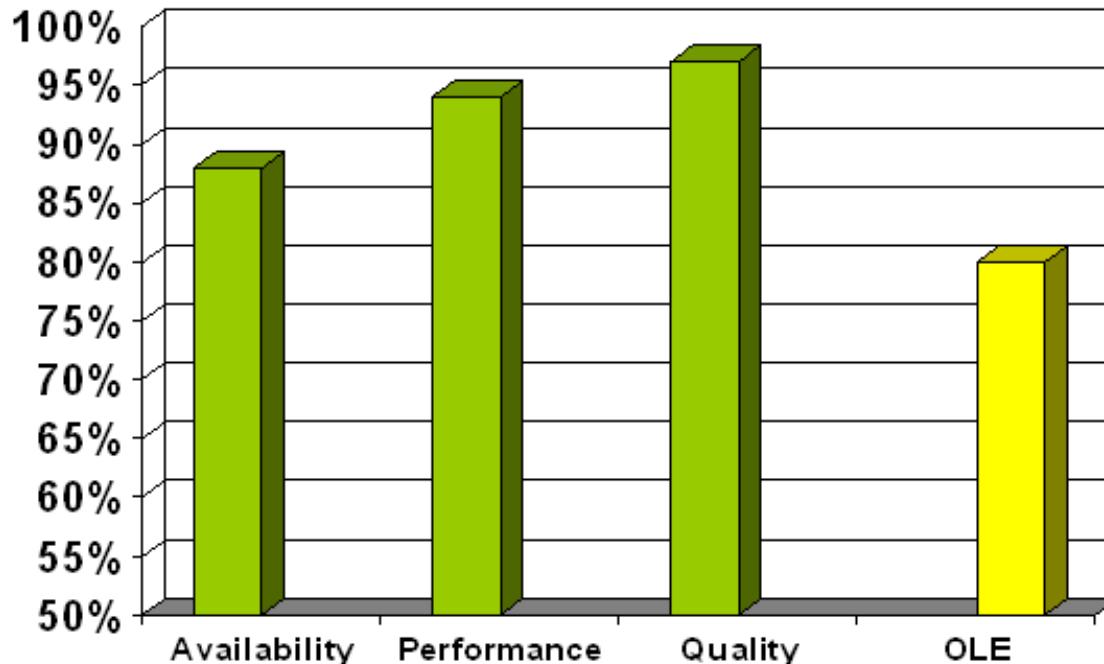
Activity By Due Date

Activity	Customer	Due Date	In Progress	Status	Hours To Complete	Percent Complete
PAST DUE						
1222	Elliott Machinery	12/26/2009				
1333	Ceradyne	12/27/2009				
1999	Elliott Machinery	12/31/2009				
1444	Tri-State Supply	1/03/2010				
101					0.0	0%
102		12/17/2009			0.0	100%
201		12/18/2009			0.0	0%
302		12/23/2009			0.0	100%
402		12/26/2009			2.9	76.92%
501		12/27/2009			0.0	0%

# 整体劳动效能 – 切实有效的考核指标

## Overall Labor Effectiveness

$OLE = Utilization * Efficiency * Quality$



Typical Dep't metrics	70/80 direct hours/day	19/20 units/hour	310/320 Saleable units	127/160 Saleable units
-----------------------	------------------------	------------------	------------------------	------------------------

Actual Production (Units)	160	140	131	127	127
---------------------------	-----	-----	-----	-----	-----

# 整体劳动效能 纵览完整的劳动力画面

What OEE does for equipment, OLE does for labor

Click here to log on

1 of 1 | Find | Next | 100% | Export | Select a format

**Key Performance Indicators**

Overall Labor Effectiveness

[Detail Reports](#)

73.10 %

⬇

▪ Labor Efficiency

88.20 %

⬆

▪ Labor Utilization

86.65 %

➡

▪ Quality Performance

95.65 %

⬇

▪ Productivity Detail

**Labor Analyzer**

Event Date ▾  
All

**OLE Cost Performance**

Cost Center	OLE Cost Performance (%)
Assembly	78.5
Fabrication	91.5
Quality Assurance	78.5
Secondary Ops	86.5

**Unit Labor Cost**

Order Cost Center: Task

Ord 05400-71806P01E

Zonal Inspection

Std Cost

Act Cost

10,000.0000 17,866.8983

**Productivity Trend**

Month	Productivity (%)
January	96.5
February	96.5
March	95.5
April	95.5
May	91.5
June	95.5
July	90.5
August	94.5
September	90.5
October	97.0
November	90.5
December	85.5

**Utilization Analyzer**

Expense Type ▾  
All

**Labor Utilization**

Cost Center	Labor Utilization (%)
Assembly	90.0
Fabrication	95.0
Quality Assurance	100.0
Secondary Ops	95.0

© 2009 KRONOS INCORPORATED | August 30, 2010

# 精益化的劳动力管理

- 计算工资很麻烦吗?
- 加班合理吗?
- 考勤对生产绩效造成了什么影响?
- 绩效为什么下降?
- 找到浪费了吗?
- 准确的实际人工成本是多少?
- 人工匹配实际的业务需求吗?
- 排班调度是否公平合理?
- 一线人员的考核客观真实吗?
- 员工真正满意了吗?
- 能不能保证决策的主动和及时?



## 问题迎刃而解

# Agenda

为什么要做精益化劳动力管理  
HR帮助企业实现精益化劳动力管理



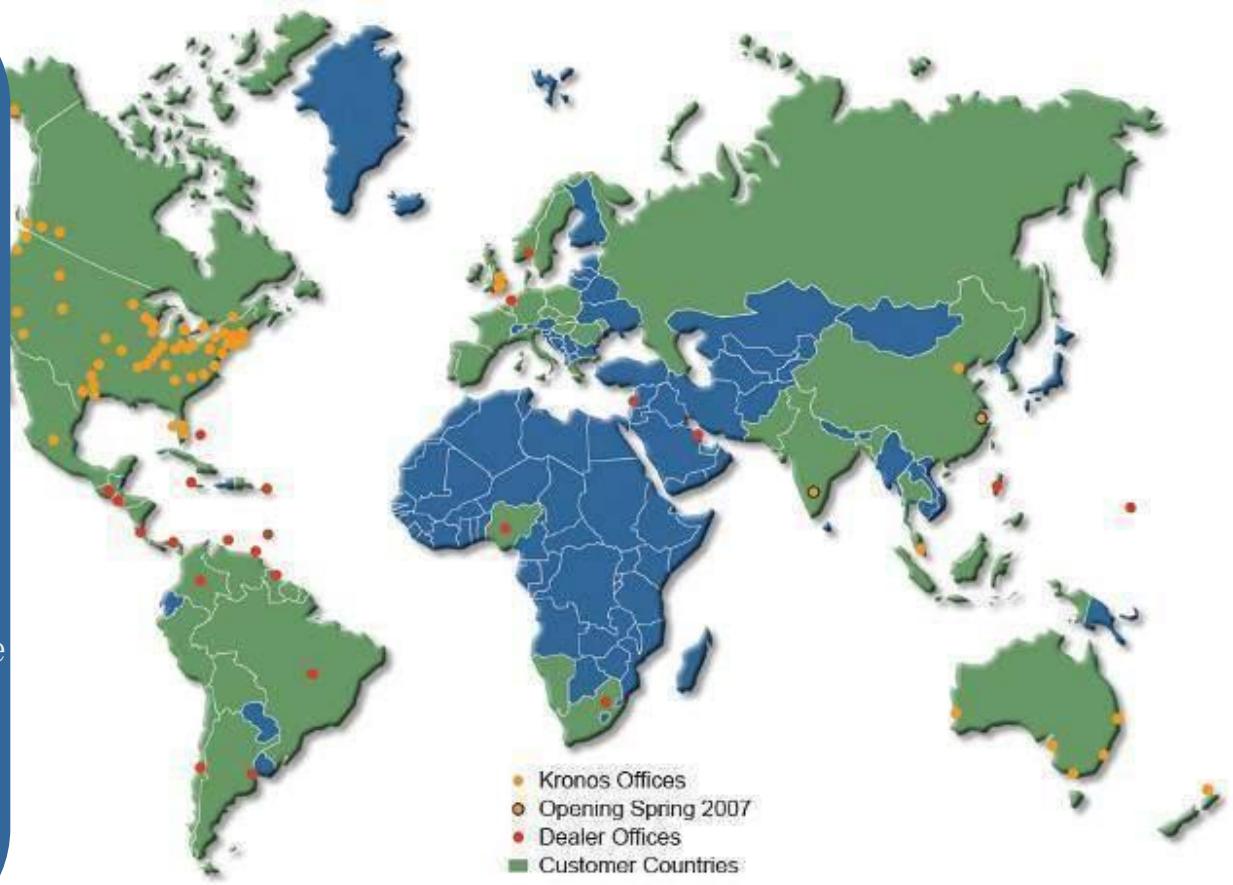
## 关于Kronos

全球劳动力管理专家



# Kronos

- 公司1977年创立于美国马萨诸塞州  
U.S. headquarters in Massachusetts, USA, founded in 1977
- 客户遍及全球60多个国家  
Serve customers in more than 60 countries
- 2009财年营业额6.72亿美元  
\$672 million in annual revenue of 2009
- 在全球拥有 60多间办公室 和 3,000多雇员，超过650人的开发小组  
60+ offices worldwide, 3,000 employees, 650 R&D team



**目前有3千万用户在每天使用Kronos, 共计4万多家客户。其中1.3万家客户员工规模在万人以上。**

*30 million people use a Kronos solution every day*

Source: IDC



# 克罗诺思助力众多国内外成功企业优化劳动力管理



Schneider  
Electric



Barbie

Valeo  
法雷奥

ArvinMeritor™

Rio Tinto Alcan



LIFETIME  
FOR THE WAY YOU LIVE.

SANDVIK

smith&nephew  
ceradyne, inc.

ROGERS  
CORPORATION

KSS  
KEY SAFETY SYSTEMS



GE  
Energy



ALBANY  
INTERNATIONAL

Johnson  
Controls



HANESbrands INC

Johnson & Johnson

DELL™

HEAT AND CONTROL®

Honeywell

Wyeth

IR Ingersoll Rand  
Inspiring Progress™

Hilton



Nestlé

© 2009 KRONOS INCORPORATED

3M



PEPSICO



FedEx Kinko's.  
Office and Print Center

0, 2010

# Kronos 劳动力管理解决方案整体架构



- 劳动力及工时/ Time and Labor
- 假勤管理/ Absence Management
- 员工生产活动追踪/ Labor Activities
- 经理自助/ Manager Self Service
- 员工自助/ Employee Self Service
- 排班及劳动力配置优化/ Scheduling
- 智能分析/ Analytics
- 数据采集/ Data Collection
- Kronos 劳动力管理套件平台/  
Workforce Central® Platform



员工自助终端/Terminal

# 通过WFM进行实时评估和管理实现卓越运营

