

# IndustryWeek Best Plants Benchmarking Database

*Sample Report  
Version 11.0*

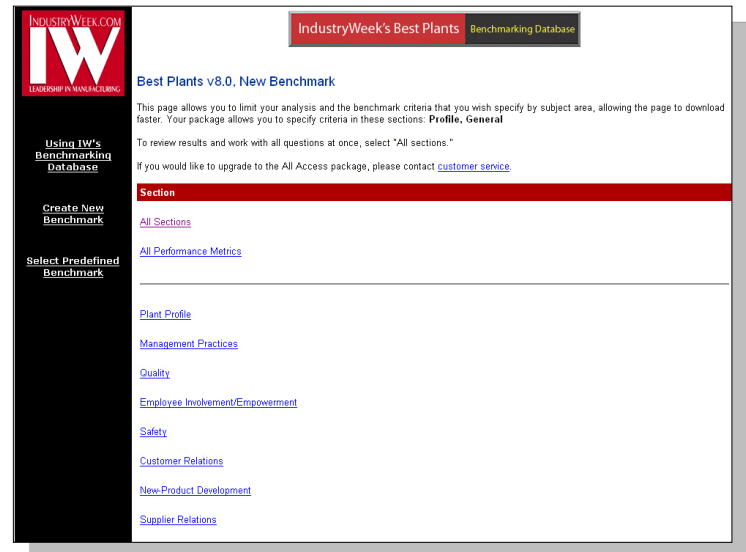


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# The only database of its kind in the world

The IndustryWeek Best Plants Benchmarking Database can show you how top manufacturers set themselves apart. Which tactics do they implement? How do they measure their performance? With more than 180 different metrics, the Best Plants database provides you with enough information to profile successful practices in areas such as operations, quality, maintenance, worker productivity, supply chain, innovation, and more.



## The Best Plants Benchmarking Product Includes:

- An interactive, Web-based benchmarking database, always updated with the latest data available
- The last five IW Best Plants Statistical Profile Research Reports, including the 2011 edition
- Complete editorial feature profiles from the past 18 years (over 150)

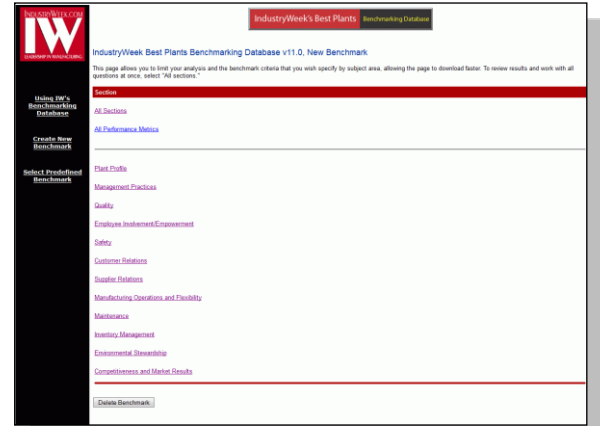
### **FACT:**

On average, IW Best Plants award winners and finalists conduct 4 benchmarking studies each year.

How much benchmarking is YOUR company doing?

# Screenshots

Welcome to the IndustryWeek Best Plants Benchmarking Database – select an operations section or view all of them at once.



Once inside a section, you can look through each metric, with frequency counts, percentages, quartiles (25%, means/50%, 75%, 90%), and standard deviations.

Current Sample Size: 146			Frequency	Percent
<b>1. Best Plants competition winner, finalist, or non-finalist:</b>				
<input type="checkbox"/> Finalist		47	32.2%	
<input type="checkbox"/> Winner		50	34.2%	
<input type="checkbox"/> Non-finalist		49	33.6%	
<b>2. Public or Private:</b>				
<input type="checkbox"/> Private		23	15.8%	
<input type="checkbox"/> Public		123	84.2%	
<b>3. Years since plant startup:</b>				
<input type="checkbox"/> 0-5		9	6.2%	
<input type="checkbox"/> 6-10		17	11.7%	
<input type="checkbox"/> 11-20		39	26.9%	
<input type="checkbox"/> Over 20		80	55.2%	
<b>4. Number of days operating per week?</b>				
Min. Value	<input type="text"/>	Mean	5.5	
		25th Percentile	5.0	
Max. Value	<input type="text"/>	Median	5.0	
		75th Percentile	6.0	
		90th Percentile	7.0	
		Std Dev.	0.9	
<b>5. Number of shifts:</b>				
<input type="checkbox"/> 1		20	13.8%	
<input type="checkbox"/> 2		51	35.2%	

Enter parameters to filter the data so that your custom benchmarks are created – then update the information by pressing the button at the top.



Current Sample Size: 61			Frequency	Percent
<b>1. Best Plants competition winner, finalist, or non-finalist:</b>				
<input type="checkbox"/> Finalist		22	36.1%	
<input type="checkbox"/> Winner		25	41.0%	
<input type="checkbox"/> Non-finalist		14	23.0%	
<b>2. Public or Private:</b>				
<input type="checkbox"/> Private		0	0.0%	
<input checked="" type="checkbox"/> Public		61	100.0%	
<b>3. Years since plant startup:</b>				
<input type="checkbox"/> 0-5		4	6.6%	
<input type="checkbox"/> 6-10		7	11.5%	
<input type="checkbox"/> 11-20		18	29.5%	
<input type="checkbox"/> Over 20		32	52.5%	
<b>4. Number of days operating per week?</b>				
Min. Value	<input type="text"/>	Mean	5.3	

Your results are displayed for every metric, and a running list of filters is right at the top of every metric list. Export your benchmarks at any time. Create as many benchmarks as you need.

## Benchmarking Metrics included in the IW Best Plants Database

IndustryWeek's Best Plants Database allows you to analyze more than 180 performance metrics from Best Plants winners, finalists, and participants. This list shows you all of the questions that are included in the database. You can cross-tabulate the data based on any one (or more) of the responses shown below. For example, you can view performance data for just Public companies, or for plants with 100-249 employees, etc.

\*\*Numerical responses: For any question with "Numerical" marked in the "Responses" column, you are able to view all of the following: Mean, Median, Standard Deviation, 25th Percentile, 75th Percentile, and 90th Percentile. You can also sort the data based on a Minimum or Maximum number -- for example, you can view the performance results for plants with "at least a 97% on-time delivery rate."

### Benchmarking Metrics included in the IW Best Plants Database

#	SECTION	QUESTION	RESPONSES
	<b>GENERAL INFORMATION</b>		
1		Best Plants competition winner, finalist, or non-finalist:	0=Finalist, 1=Winner, 2=Non-finalist
2		Public or Private:	0=Private, 1=Public
3		Years since plant startup:, 1=0-5, 2=6-10, 3=11-20, 4=Over 20	
4		Number of days operating per week?	
5		Number of shifts:	
6		Square footage of plant:	1=0-49,999, 2=50,000-99,999, 3=100,000-249,999, 4=250,000-499,999, 5=500,000-999,999, 6=1,000,000+
7		Number of employees:	1=fewer than 100, 2=100 -249, 3=250-499, 4=500-999, 5=1,000 or more
8		Are plant workers represented by a union?	0=Nonunion, 1=Union
9		In which value chain does this plant primarily participate?	1=Aerospace, 2=Automotive, 3=Chemicals, 4=Construction, 5=Consumer packaged goods/nondurables, 6=Consumer product durables, 7=High tech, 8=Industrial equipment and machinery, 9=Pharmaceuticals, biotechnology, medical, 10=Printing and publishing, 11=None of the above
10		Product type:	Discrete, Process, or Both, 1=Discrete, 2=Process, 3=Both
	<b>MANAGEMENT PRACTICES</b>		
11		Dedicated improvement people as a percent of total workforce	
12		Total documented cost savings as a result of specific improvement programs over the most recent year per employee:	
13		Number of major benchmarking studies conducted in the past year	
	<b>QUALITY</b>		
14		Has plant received ISO 9001:2008 certification?	0=No, 1=Yes
15		Quality techniques extensively implemented: Six Sigma	0=No, 1=Yes
16		Quality techniques extensively implemented: Quality function deployment	0=No, 1=Yes
17		Quality techniques extensively implemented: Poka-yoke (mistake-proofing) methods	0=No, 1=Yes
18		Quality techniques extensively implemented: Failure mode effect analysis (FMEA)	0=No, 1=Yes
19		Quality techniques extensively implemented: Total quality management	0=No, 1=Yes
20		Quality techniques extensively implemented: Employee problem-solving teams	0=No, 1=Yes
21		Quality techniques extensively implemented: Plan/do/check/verify	0=No, 1=Yes
22		Quality techniques extensively implemented: Advanced product quality planning (APQP)	0=No, 1=Yes
23		Quality techniques extensively implemented: Manual SPC	0=No, 1=Yes
24		Quality techniques extensively implemented: Computerized SPC	0=No, 1=Yes
25		Quality techniques extensively implemented: Design of experiments	0=No, 1=Yes
26		Quality techniques extensively implemented: Taguchi Methods	0=No, 1=Yes
27		Finished product current first-pass yield, %	

28	Finished product yield improvement* within last 3 years, %	
29	First-pass yield for all finished products (weighted average that accounts for differences in product volumes or in value-added), %	
30	First-pass yield for all finished products (weighted average that accounts for differences in product volumes or in value-added), %	1=Less than 75, 2=75-89.9, 3=90-94.9, 4=95-96.9, 5=97-98.9, 6=99-100
31	In-plant defect rate (fallout rate) on manufactured components and finished products, ppm	
32	Percent reduction in in-plant defect rate* in last 3 years, %	
33	Customer reject rate on shipped products, ppm	
34	Percent reduction in customer reject rate* in last 3 years, %	
35	Scrap/rework costs as a percent of sales, %	
36	Scrap/rework costs as a percent of sales, %, 1=Less than 1, 2=1-1.9, 3=2-4.9, 4=5-14.9, 5=15% or higher	
37	Percent reduction in scrap/rework as a percent of sales in last 3 years*, %	
38	Warranty costs as a percent of sales, %	
39	Warranty costs as a percent of sales, %	1=Less than 0.5%, 2=0.5-0.9, 3=1-1.9, 4=2-2.9, 5=3-9.9, 6=10% or more
40	Percent reduction in warranty costs as a percent of sales within last 3 years, %	
41	<b>EMPLOYEE INVOLVEMENT / EMPOWERMENT</b> What is the plant's current annual labor turnover rate? %	
42	What is the plant's current annual labor turnover rate? %, 1=Less than 3, 2=3-5.9, 3=6-10.9, 4=11-15.9, 5=16-20, 6=More than 20	
43	How often is employee satisfaction formally measured at this plant? ( __ times/year)	
44	How often is employee satisfaction formally measured at this plant? ( __ times/year), 1=Less than 1, 2=1, 3=More than once	
45	Percent of production workforce now participating in self-directed or empowered natural work teams, %	
46	Percent of production workforce now participating in self-directed or empowered natural work teams, %	1=0%, 2=1-50%, 3=More than 50%
47	Percent of total workforce now participating in self-directed or empowered natural work teams? %	
48	Work team responsibilities: Production scheduling	0=No, 1=Yes
49	Work team responsibilities: Interteam communications	0=No, 1=Yes
50	Work team responsibilities: Skills certification	0=No, 1=Yes
51	Work team responsibilities: Disciplinary actions	0=No, 1=Yes
52	Work team responsibilities: Safety review and compliance	0=No, 1=Yes
53	Work team responsibilities: Environmental compliance	0=No, 1=Yes
54	Work team responsibilities: Quality assurance	0=No, 1=Yes
55	Work team responsibilities: Firing of team members	0=No, 1=Yes
56	Work team responsibilities: Daily job assignments	0=No, 1=Yes
57	Work team responsibilities: Performance reviews (peer evaluation)	0=No, 1=Yes
58	Work team responsibilities: Training	0=No, 1=Yes
59	Work team responsibilities: Hiring of team members	0=No, 1=Yes
60	Work team responsibilities: Vacation/work scheduling	0=No, 1=Yes
61	Work team responsibilities: Materials management	0=No, 1=Yes
62	How many layers of management are there below the plant manager at this facility?	

63	Does plant share information about plant financial performance with all employees?	0=No, 1=Yes
64	How many improvement suggestions per employee did your plant record last year?	
65	How many improvement suggestions per employee were implemented last year?	
66	What were the total annual cost savings as a result of employee suggestions in the most recent fiscal year?	
67	Average annual hours of formal classroom training per production employee:	
68	Average annual hours of formal on-the-job training per production employee:	
69	Average annual hours of formal training per production employee:	
70	Average annual hours of formal training per production employee:	1=Less than 8 hours, 2=8 - 20 hours, 3=21 - 40 hours, 4=More than 40 hours
71	Percent of annual labor costs budgeted to training, %	
72	Percent of annual labor costs budgeted to training, %	1=0-3, 2=4-5, 3=6-10, 4=More than 10%
73	Has plant established a training curriculum with a local college or other provider?	0=No, 1=Yes
74	Does plant emphasize cross-training of production employees?	0=No, 1=Yes
75	Performance compensation: Rewards for individual performance	0=No, 1=Yes
76	Performance compensation: Rewards for team performance	0=No, 1=Yes
77	Performance compensation: Profit sharing	0=No, 1=Yes
78	Performance compensation: Gain sharing	0=No, 1=Yes
79	Performance compensation: Pay for knowledge	0=No, 1=Yes
80	Performance compensation: Pay for skills	0=No, 1=Yes
81	Average wage (calculated as hourly rate without overtime) of production employees, \$ /hr.	
82	Does plant employ temporary or seasonal workers?	0=No, 1=Yes
83	Average hours of overtime per week for production employees:	
84	Has the plant recently laid off any employees?	0=No, 1=Yes
85	<b>SAFETY</b> Has plant experienced any work-related fatalities in last 5 years?	0=No, 1=Yes
86	Has plant been cited for any serious OSHA violations in past 5 years?	0=No, 1=Yes
87	For the most recent calendar year, what was plant's OSHA-reportable incident rate (work related injuries and illnesses per 100 employees)?	
88	For the most recent calendar year, what was plant's OSHA-recordable injury and illness cases with days away from work, job transfer or restriction?	
89	Average OSHA-reportable incident rate as a percent of the industry average, %	
90	Average OSHA-recordable injury and illness cases with days away from work, job transfer or restriction as a percent of the industry average, %	
91	Percentage change in OSHA-reportable incident rate within last 3 years,%	
92	Percentage change in OSHA-recordable injury and illness cases with days away from work, job transfer or restriction rate within last 3 years, %	
93	As part of your accident prevention program, do you monitor and investigate near misses?	0=No, 1=Yes
94	Elements of safety program: Active mgmt by leadership	0=No, 1=Yes
95	Elements of safety program: Teams led by plant floor employees	0=No, 1=Yes
96	Elements of safety program:Safety integrated in change management of equipment	0=No, 1=Yes
97	Elements of safety program: Safety training for orientation and new work	0=No, 1=Yes
98	Elements of safety program:Routine safety refresher training	0=No, 1=Yes
99	Elements of safety program:Formal process to identify/eliminate workplace hazards	0=No, 1=Yes
100	Elements of safety program:Emergency planning and training	0=No, 1=Yes

101		Elements of safety program: Wellness and health promotion	0=No, 1=Yes
102	<b>CUSTOMER RELATIONS</b>	Does company have a formal customer-satisfaction program in place?	
103		How often are customer-satisfaction surveys conducted (per year)?	
104		Does the plant have access to and use real-time customer demand data to plan production?	0=No, 1=Yes
105		Does plant offer JIT delivery to customers?	0=No, 1=Yes
106		Percentage of customers for which the plant has adopted a continuous-replenishment or JIT delivery program:	
107		To what extent has plant created opportunities for employee interaction with customers?	0=None, 1=Some, 2=Wide
108		What percent of production employees visited customer locations in the last year? %	
109	<b>SUPPLIER RELATIONS</b>	Which of the following best describes your site's relationship with suppliers?	0=Focused on price, 1=Focused on delivery, 2=Focused on quality, 3=Focused on total cost, 4=Focused on capabilities, 5=Other
110		To what extent has plant adopted JIT/kanban systems with suppliers?	0=None, 1=Some, 2=Wide
111		What percent of key suppliers provide JIT delivery? %	
112		What percent of key suppliers have been formally certified? %	
113		Does plant have consignment inventory on site?	0=No, 1=Yes
114		Do high-volume suppliers deliver to point-of-use in the plant?	0=No, 1=Yes
115		Do major suppliers contribute to cost-reduction and/or quality-improvement efforts?	0=No, 1=Yes
116		When supplier initiatives yield cost savings for the plant, are cost savings shared with the supplier?	0=No, 1=Yes
117		What percentage of supplier orders are delivered on-time (by the request date)? %	
118		Percent of purchased material (dollar volume) that no longer requires incoming inspection, %	
119		Typical leadtime on class-A (high cost) purchased materials, days:	
120		Percent reduction of average leadtime on class-A purchased materials in last 3 years, %	
121		Has management undertaken a strategic sourcing initiative?	0=No, 1=Yes
122	<b>MANUFACTURING OPERATIONS AND FLEXIBILITY</b>	To what extent has this plant adopted value-stream mapping?	0=None, 1=Some, 2=Wide
123		To what extent has plant adopted cellular manufacturing practices?	0=None, 1=Some, 2=Wide
124		To what extent has plant adopted focused-factory production systems?	0=None, 1=Some, 2=Wide
125		To what extent has plant adopted JIT/continuous-flow production methods?	0=None, 1=Some, 2=Wide
126		To what extent does plant employ an internal "pull" system with kanban signals?	0=None, 1=Some, 2=Wide
127		To what extent has this plant adopted standardized work?	0=None, 1=Some, 2=Wide
128		To what extent has this plant adopted 5S?	0=None, 1=Some, 2=Wide
129		To what extent has this plant adopted level scheduling?	0=None, 1=Some, 2=Wide
130		Has plant emphasized lot-size reduction?	0=No, 1=Yes
131		By approximately what percentage have lot sizes been reduced, %?	
132		Have quick-changeover methods been widely adopted?	0=No, 1=Yes

133	How frequently is the master production schedule updated?,	1=Daily, 2=Weekly, 3=Monthly, 4=No production schedules, all work linked to customer orders
134	What is the manufacturing cycle time for a typical product? Hours	
135	What is the manufacturing cycle time for a typical product? Hours	1=Less than 5 hours, 2=5-24.9 hours, 3=25-99.9 hours, 4=100-999.9 hours, 5=1,000 hours or more
136	By what percent has manufacturing cycle time been reduced within the last 3 years? (5 years reported prior to 2002)	
137	By what percent has manufacturing cycle time been reduced within the last 3 years?	1=Decreased more than 40%, 2=Decreased 21-40%, 3=Decreased 1-20%, 4=Stayed the same, 5=Increased 1-20%, 6=Increased more than 20%
138	For major products, what is your current standard order-to-shipment leadtime in days? (day=24 hours)	
139	For major products, what is your current standard order-to-shipment leadtime in days? (day=24 hours)	1=Less than 5 days, 2=5-19.9 days, 3=20-49.9 days, 4=50-99.9 days, 5=100 days or more
140	By what percent has standard order-to-shipment leadtime been reduced within last 3 years?	
141	By what percent has standard order-to-shipment leadtime been reduced within last 3 years?	1=Decreased more than 40%, 2=Decreased 21-40%, 3=Decreased 1-20%, 4=Stayed the same, 5=Increased 1-20%, 6=Increased more than 20%
142	On-time delivery (% of time), %	
143	On-time delivery (% of time), %	1=Less than 70, 2=70-89.9, 3=90-94.9, 4=95-97.9, 5=98-99.9, 6=100
144	On-time rate based on:	1=Date customer requested, 2=Date promised
145	<b>MAINTENANCE</b> What is the average machine availability rate as a percent of scheduled uptime? %	
146	What percentage of maintenance work is reactive (in response to unexpected machine or equipment breakdown)?	
147	Operating equipment efficiency (OEE) for major production lines:	
148	Does plant practice Total Productive Maintenance?	0=No, 1=Yes
149	Do machine operators perform preventative and routine maintenance?	0=No, 1=Yes
150	Has plant implemented computerized maintenance management (CMMS)?	0=No, 1=Yes
151	<b>INVENTORY MANAGEMENT</b> Percent change in total plant unit volume within last 3 years, %:	
152	Percent change in total plant unit volume within last 3 years, %:	1=Decreased more than 20%, 2=Decreased 11-20%, 3=Decreased 1-10%, 4=Stayed the same, 5=Increased 1-10%, 6=Increased 11-20%, 7=Increased more than 20%
153	Average days of raw-materials inventory:	
154	Percent change in raw materials inventory within last 3 years,%	
155	Average days of work-in-process (WIP) inventory:	
156	Percent change in WIP inventory* within last 3 years, %	
157	Average days of finished-goods inventory:	
158	Percent change in finished-goods inventory within last 3 years, %	
159	Average days of inventory (raw material, WIP, and finished goods):	
160	Percent change in total inventory* within last 3 years, %	
161	Annual raw materials turns	
162	Annual raw materials turns:	1=Less than 5 turns, 2=5-11.9 turns, 3=12-23.9 turns, 4=24-51.9 turns, 5=52 turns or more
163	Annual work-in-process (WIP) turns	
164	Annual work-in-process (WIP) turns:	1=Less than 5 turns, 2=5-14.9 turns, 3=15-29.9 turns, 4=30-51.9 turns, 5=52 turns or more
165	Annual finished goods turns:	

166		Annual finished goods turns:	1=Less than 3 turns, 2=3-6.9 turns, 3=7-9.9 turns, 4=10-14.9 turns, 5=15-24.9 turns, 6=25 turns or more
167		Annual total inventory turns:	
168		Annual total inventory turns:	1=Less than 3 turns, 2=3-6.9 turns, 3=7-9.9 turns, 4=10-24.9 turns, 5=25 or more turns
169		Number of SKUs (stock keeping units) in finished goods inventory:	
170	<b>ENVIRONMENTAL STEWARDSHIP</b>	Has plant achieved ISO 14000 certification?	0=No, 1=Yes
171		By what percent has the plant reduced toxic waste releases in the last 3 years, %?	
172		Has plant been cited by federal or state Environmental Protection Agency authorities for violations of environmental laws within the last 5 years?	0=No, 1=Yes
173		By what percent has energy consumption per unit of production increased or decreased in last 3 years, %?	
174	<b>COMPETITIVENESS AND MARKET RESULTS</b>	By what percent has productivity improved within the last 3 years, annual value-added per employee, %?	
175		By what percent has productivity improved within the last 3 years, annual sales per employee, %?	
176		Approximate 3-year manufacturing-cost change per unit of product shipped, excluding purchased-materials costs, %	
177		Approximate 3-year manufacturing-cost change per unit of product shipped, excluding purchased-materials costs, %	1=Decreased more than 20%, 2=Decreased 11-20%, 3=Decreased 1-10%, 4=Stayed the Same, 5=Increased 1-10%, 6=Increased 11-20%, 7=Increased more than 20%
178		Approximate 3-year cost change per unit, including purchased-materials costs, %	
179		Percent change of customer price of typical product in the last 3 years, %	
180		Annual change in total plant revenue for the most recent fiscal year, %	
181		What is plant's major customer retention rate for the last 3 years, %?	
182		What is the plant's return on invested capital (ROIC)?	
183		Change in plant-level profitability (annual value of shipments minus materials costs and manufacturing costs) in last 3 years, %	

Included in your subscription:

## IW Best Plants Statistical Profile Research Report

- This report provides a composite picture of the winners and finalists of IW's Best Plants program from 2007 through 2011.
  - 73 pages
  - Data from 2007 to 2011
  - Glossary of IW Best Plants terms, including how the calculations were performed
  - List of IW Best Plants winners and finalists, by year
  - Copy of the complete 2012 IndustryWeek Best Plants application
  - IW Best Plants program background and introduction
  - Nomination form for the 2012 IW Best Plants competition
  
- This searchable electronic guide is packed with tables and statistics that quickly illustrate the practices and performances found within IW Best Plants finalists and winner companies.
  
- If you're looking for a guide to quickly determine how your plant stacks up against manufacturing leaders, this is it!

2011 Best Plants Statistical Profile

PLANT PROFILE

Private or public company—corporate parent (% of plants):

<u>Year</u>	<u>Private</u>	<u>Public</u>
2007	10	91
2008	5	95
2009	10	90
2010	10	90
2011	19	81
2007-2011	11	89

Number of plant employees (% of plants):

<u>Year</u>	<u>Less than 100</u>	<u>100-249</u>	<u>250-499</u>	<u>500-999</u>	<u>1,000 or more</u>
2007	14	24	24	4	14
2008	15	25	25	4	15
2009	5	15	25	25	5
2010	5	35	25	25	15
2011	13	31	26	25	25
2007-2011	10	27	27	23	14

Change in number of total employees—best plants, %:

<u>Year</u>	<u>Median</u>	<u>Minimum</u>	<u>Maximum</u>
2007	3.6	3.6	36
2008	2.0	3.6	44
2009	-2.0	-2.4	50
2010	-8.0	-6.0	40
2011	6.8	1.1	81
2007-2011	1.5	1.5	81

Age of plants (% of plants):

<u>Year</u>	<u>0-5 years</u>	<u>6-10 years</u>	<u>11-20 years</u>	<u>20 or more years</u>
2007	10	10	27	62
2008	15	15	25	50
2009	16	16	42	42
2010	10	10	35	55
2011	13	6	19	63
2007-2011	4	13	30	53

Number of shifts (% of plants):

<u>Year</u>	<u>1 shift</u>	<u>2 shifts</u>	<u>3 shifts</u>	<u>4 shifts</u>
2007	10	33	43	14
2008	20	25	50	5
2009	10	50	40	0
2010	5	25	45	25
2011	19	31	44	6
2007-2011	12	33	44	10

You'll also receive access to:

## Detailed features on 100 different IW Best Plants winners

- Learn how these facilities achieved world-class manufacturing status

Dell Americas Desktop Operations  
Austin

# The Value Of Velocity

**THE PROCESS-SPEED EMPHASIS AT DELL**  
Computer Corp.'s Desktop Operations facility in Austin is born of conviction deeper and older than the plant's quest for efficiency. That imperative was first demonstrated when founder Michael S. Dell, now CEO and chairman, was in elementary school. "When I was in third grade, I sent away for a high school diploma," he confesses in his book *Direct From Dell* (1999, HarperBusiness). He had seen an advertisement—"Earn your high school diploma by passing one simple test"—and recognized its significance. "If there was a way to get something done more quickly and easily, I wanted to try it."

That imperative was still ingrained when he left the University of Texas at the end of his freshman year in 1984 to devote his time to his newly incorporated company. He established speed as the basis of an innovative, build-to-order business model designed to heighten sensitivity to customer satisfaction. The premise is deceptively simple: develop and continuously improve a business process to deliver high-performance computer systems directly to the end user. "More than 95% of the orders received are shipped within eight hours," says Sharon Boyle, the Austin plant's operations manager. Customers routinely receive their orders within five days of placing an order. There is no finished-goods inventory—or warehouse.

Far more than a marketing tactic, the Dell approach has become famous as a highly refined value-chain strategy that emphasizes velocity and flexibility with a critical balancing of supply and demand. Manufacturing is at the core of that strategy along with a willingness to tackle stretch goals to constantly improve efficiency and customer satisfaction. For example, "We're targeting productivity improvements of 100% over the next two years for the Dell Americas Desktop Operations," says Stephen C. Cook, senior manager, engineering.

That kind of dedication has made the

DELL'S RULES: DISDAIN INVENTORY, ALWAYS LISTEN TO THE CUSTOMER, SELL DIRECT, AND ELIMINATE UNNECESSARY TOUCHES.

BY JOHN TERESKO

*The former North 2 building in Austin is Dell's first to have high-volume, integrated, and automated shipping capability. In a build cell at the plant (right), two employees assemble a custom-built desktop computer.*

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## IW Best Plants Benchmarking Database Ordering Information

### Individual pricing:

- 1-year subscription -- \$795
- 2-year subscription -- \$1,272 (\$636/yr, a 20% discount)
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