



POSITIVE

Metric Performance

POOR

Business Performance

How Does This Happen?

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Positive Metric Performance & Poor Business Performance – How Does This Happen?

Should you invest your time reading this article?

1. Check the box next to any of the listed attributes when you think that your organization *does not do a good job* accomplishing the described objective.
2. If there are *no boxes checked*, you and your organization would probably not gain much using one or more of the concepts described in this article.

Effective Management Attributes

Executive Performance Management Reviews

- ☐ Require minimal preparation resources.
- ☐ Provide productive dialog that results in whole-enterprise benefits.

Decision-making Process

- ☐ Incorporates a blend of analytics and innovative team-thinking.
- ☐ Avoids *gut-based* decisions.

Strategies

- ☐ Are achieved in a timely fashion.
- ☐ Don't *fall off people's plates* because of day-to-day crises.

Scorecard Reporting

- ☐ Is consistent across the organization.
- ☐ Has clear actions or non-actions to be undertaken from these reports.
- ☐ Encourages *fire prevention*, and risk management.

Organizational Improvement Efforts

- ☐ Give focus to analytically-determined, targeted business areas so that there will be big-picture benefits.

Abstract

In an organization, performance metrics should lead to the most appropriate actions or non-actions. Measurements are typically presented as a table of numbers, stoplight scorecards, or time-series charts. Do these forms of reports result in a good decision-making process or lead to unintended consequences that result in unhealthy, if not destructive, behaviors? Unfortunately, these forms of report-outs can result in playing games with the numbers or firefighting a problem that appears to be resolved but only reoccurs.

Traditional performance metric reporting typically provides only a snapshot of what occurred at some historical point in time. Organizations often establish numerical goals against these performance measurements, where compensation might even be established for achievement of these targets. A target-achieving-goal-setting system might appear to be a good approach but can lead to organizational behaviors that are not in the best interest of the business as a whole.

What is needed in business is a methodology that orchestrates the entire enterprise so that it performs as functionally as a symphony sounds. This requirement is achieved through the Integrated Enterprise Excellence (IEE) business management system.

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IEE and Malcolm Gladwell's Books

In his books, Malcolm Gladwell made the following points:

Book: *What the Dog Saw and other Adventures*

In this book a chapter titled "The Talent Myth: are smart people overrated?", Gladwell presents a very good argument for why the "talent mind-set" management style promoted by McKinsey and used by Enron was a major component in Enron's downfall at the turn of the century. The book stated: "The broader failing of McKinsey and its acolytes at Enron is their assumption that an organization's intelligence is simply a function of the intelligence of its employees. They believe in stars, because they don't believe in systems."

Book: *Blink – The Power of Thinking without Thinking*

In this book, Gladwell describes "thin slicing" as the use of limited information to come up with a conclusion. In our age of information overload, Gladwell contends that experts often make better decisions with snap judgments than with a lot of analyses. Gladwell describes how having too much information can, at times, interfere with the accuracy of a judgment.

The success of a business is a function of its processes and their inputs. If the output of a process is not satisfactory, then the process' inputs or the process itself needs to be enhanced. However, with current business management practices such as Gladwell's described "talent mind-set," organizations often can gain much by refocusing their emphasis to better understand and by enhancing the systems that impact the process' results.

Executives and operations in an organization need to make decisions; however, often the data set presentations can be overwhelming or provided in a format that it is very difficult to determine the most appropriate action or non-action. What management needs is a system that provides a "thin slicing" of the organization so that both effective strategic and operational decisions can be made.

IEE provides a system that addresses these issues which Gladwell highlighted. The described IEE system integrates predictive performance reporting with the development of analytical/innovative strategies that lead to improvement efforts that benefit the enterprise as a whole.



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Process Improvement: Are we trying to answer the wrong or not best question to the third decimal place?

Everyone should be well aware that organizations need to improve and adapt to survive. However, when times get tough, who is one of the first people to get laid off? It is the process improvement practitioner. Why does this termination occur, since one would think that in tough times process improvement is needed the most? Apparently, the efforts from improvement practitioners are often not viewed by senior leadership as important to the enterprise as a whole.

Consider also, why is it that scorecards often indicate an improvement was made only to find that things then again degraded? Did one really make an improvement when a red-yellow-green scorecard transitioned from red (i.e., the metric goal is not being met) to green (i.e., the metric goal was met), when the metric's color later transitions back to red? In processes, often there can be transitioning between the red and green colors when no improvement has been made!

Shouldn't organizations be doing things "smarter?" What does the organization need to make the business more successful? What are the major business management issues of leadership that should be addressed?

Leadership Business Management Issues

The following four leadership business management issues items can create much waste in an organization:

- 1. Executive management receives a monthly 60+ slide presentation or a huge spreadsheet file, which nets out the status of the organization's performance metrics.**

This report, which took much preparation resource, has out-dated information, can be difficult to interpret, and does not present information in an actionable format. Data are only historic and not presented in a timely fashion with prediction statements. Management would benefit if it had reporting that it could access at any point in time in order to have a high-level view to successfully "thin slice" its decision making process.

- 2. Quarterly executive management reviews (EMR) are lengthy and questionable in value.**

EMRs consume much resource for both executives and presenters. Presentations could highlight the status of corrective and preventative actions (CAPAs), but an alignment with business performance metrics is often lacking.

3. Resources are wasted in fighting fires, and the benefits of process improvement efforts seem questionable.

Issues of the day that are supposedly resolved only reoccur. Also, 100 million dollars in savings may have been reported from process improvement efforts, but nobody can find the money.

4. Our organization is operating in silos where little regard is given to the big picture.

Performance goals are set by function; however, what is right for one function might not be the best for another function and/or the business as a whole.

Traditional Performance Metric Reports

Consider the following four actual organizational example performance metric report-outs:

		Site ABC KPI Metrics Scorecard												
			Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
Perspective	Key Messages	No. Key KPIs	Perf.	Perf.	Perf.	Perf.	Perf.	Perf.	Perf.	Perf.	Perf.	Perf.	Perf.	Perf.
Operational Excellence	Satisfied customers through Innovation, Quality and Cost Leadership	1 Productivity factor company	112	106	89	91	83	89	108	96	88	102	88	100
		2 Stock turnover	100	81	67	80	79	84	80	84	76	75	75	80
		3 Productivity of Production (\$/unit)	107	105	109	108	109	110	103	93	100	106	108	103
		4 ABC Scrap Costs of Production	23	55	137	59	103	87	94	99	82	104	91	79
		5 KAIZEN Cis completed	37	35	122	63	100	41	98	33	61	255	46	207
		6 Kaizen Continuous Improvements per employee	37	36	120	72	130	50	100	32	60	250	50	220
		7 Local Manufacturing (%)	93	93	88	87	91	84	87	87	83	87	91	102
		8 Environment Cost savings - \$/Unit	#DIV/0!	106	119	173	80	90	87	87	92	86	83	138
		9 Local Purchase (%)	91	69	76	72	73	85	88	80	75	76	81	81
		10 Invest in Education (hours per employee)	99	99	99	100	100	100	99	100	80	120	136	80
Employees	We employ and develop responsible, cost-conscious, loyal and innovative employees	11 Employee Safety & Health - %	70	127	127	100	86	46	43	90	40	30	73	29
		12 Skill Matrix - %	100	100	100	100	100	100	100	100	100	100	100	100
		13 ABC Quality Cost Production (\$/unit)	23	390	128	47	128	113	87	92	83	199	86	91
Quality	The premium brand when it comes to quality and quality culture	14 On time Delivery Performance - Line Items %	93	97	101	87	83	84	83	96	84	95	95	88
		15 Final inspection (ppm)	31	174	4775	69	36	38	32	0	64	15	17	15
		15.1 Customer Defects (ppm)	831	135	260	0	1029	74	31	193	484	84	55	148
		16 Lead time order confirmation within 24 hours (%)	96	92	97	87	99.9	104	100	100	98	99	97	97
		16.1 Lead time order confirmation within 48 hours (%)	Introduced May 2013					99	102	99	99	99	99	97
		17 Total Unclean sales orders%	228	290	199	146	0	204	124	249	135	135	190	164
		17.1 Avoidable Unclean Sales Orders - %	210	395	194	166	0	240	104	284	188	188	236	184
		18 FPY%	101	101	101	100	101	101	101	101	100	101	100	101
		19 Complaints % contained in 48 hours	105	105	105	105	105	105	105	105	105	105	105	105
		19.1 Complaints % solved in <20 days	100	100	100	100	100	100	100	100	100	1400	100	100
Financial	Gaining sustainable market share through profitable growth	20 Incoming Inspection (Local supplier and XYZ) %	104	104	104	104	104	104	103	104	104	104	104	100
		21.1 ABC Growth Orders (\$US Millions)	97	96	73	35	87	74	105	95	92	127	98	85
		21.2 ABC Growth Net Sales (\$US Millions)	97	91	75	88	84	79	82	97	97	105	105	110
		22.1 ABC+ XYZ Growth Orders (\$US Millions)	122	84	72	88	90	90	188	49	105	114	84	78
		22.2 ABC+ XYZ Growth Sales (\$US Millions)	99	86	60	56	63	95	98	104	108	111	95	98
		23 Return on total assets (ROA) %	163	65	55	65	51	59	102	75	62	101	65	79
		24 Return on net sales (ROS) %	136	119	84	87	70	87	123	67	72	111	84	86
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Figure 1: Red-yellow-green scorecard



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Product A								Product B								Product C								Product D																																							
New Sales	% Change vs prev week	Total Sales	% Change vs prev week	Market Share New	Share Change vs prev week	Market Share Total	Share Change vs prev week	New Sales	% Change vs prev week	Total Sales	% Change vs prev week	Market Share New	Share Change vs prev week	Market Share Total	Share Change vs prev week	New Sales	% Change vs prev week	Total Sales	% Change vs prev week	Market Share New	Share Change vs prev week	Market Share Total	Share Change vs prev week	New Sales	% Change vs prev week	Total Sales	% Change vs prev week	Market Share New	Share Change vs prev week	Market Share Total	Share Change vs prev week																																
13,766	26.8%	47,831	23.3%	16.3%	0.4%	16.3%	-0.1%	16,474	22.9%	66,900	21.7%	15.0%	0.3%	16.6%	0.1%	11,103	18.1%	41,041	19.6%	1.6%	-0.1%	1.6%	0.0%	20,666	22.3%	71,409	22.2%	13.5%	-0.2%	12.7%	0.1%	16,543	20.2%	50,525	5.6%	15.8%	-0.6%	16.0%	-0.2%	20,675	25.5%	71,833	7.4%	15.8%	0.7%	16.9%	0.3%	12,314	10.9%	41,157	0.3%	1.5%	-0.1%	1.6%	-0.1%	25,581	23.8%	75,818	6.2%	14.0%	0.5%	12.9%	0.2%
14,944	-9.7%	46,176	-8.6%	15.4%	-0.3%	16.0%	0.0%	18,043	-12.7%	64,307	-10.5%	15.1%	-0.6%	16.5%	-0.3%	11,551	-6.2%	37,770	-8.2%	1.5%	0.0%	1.5%	0.0%	24,457	-4.4%	72,104	-4.9%	14.1%	0.1%	13.0%	0.1%	14,180	-5.1%	44,156	-4.4%	15.4%	0.0%	16.1%	0.0%	17,035	-5.6%	61,152	-4.9%	14.8%	-0.3%	16.3%	-0.2%	10,720	-7.2%	35,652	-5.6%	1.4%	-0.1%	1.5%	-0.1%	23,584	-3.6%	69,904	-3.1%	13.9%	-0.2%	13.1%	0.1%
14,590	2.9%	44,962	1.8%	15.0%	0.5%	16.2%	0.2%	17,037	0.0%	61,974	1.3%	14.9%	0.1%	16.3%	0.0%	10,833	1.1%	36,145	1.4%	1.3%	0.0%	1.5%	0.0%	24,185	2.5%	69,900	0.1%	13.9%	0.0%	12.9%	-0.2%	15,672	7.4%	49,380	9.8%	15.6%	-0.4%	15.9%	-0.4%	18,802	10.4%	69,285	11.8%	15.3%	0.4%	16.6%	0.3%	12,405	14.5%	41,159	13.9%	1.4%	0.1%	1.6%	0.1%	26,335	8.9%	75,735	8.2%	14.1%	0.2%	12.8%	-0.1%
15,629	0.3%	48,811	-5.2%	16.2%	0.6%	16.3%	0.4%	17,677	-6.0%	64,067	-7.5%	15.0%	-0.1%	16.5%	-0.1%	11,346	-8.5%	37,360	-9.2%	1.3%	-0.1%	1.5%	-0.1%	25,389	-3.6%	73,045	-3.6%	14.0%	0.0%	13.1%	0.3%	15,252	-2.4%	45,623	-2.5%	16.3%	0.1%	16.3%	0.0%	17,040	-3.6%	61,264	-4.4%	14.9%	-0.1%	16.3%	-0.2%	10,781	-5.0%	35,725	-4.4%	1.3%	0.0%	1.5%	0.0%	25,441	0.2%	71,843	-1.6%	14.3%	0.3%	13.1%	0.0%
15,659	2.7%	47,178	3.4%	16.2%	-0.2%	16.4%	0.1%	17,772	4.3%	63,058	2.9%	15.0%	0.1%	16.2%	-0.1%	11,292	4.7%	37,441	4.8%	1.3%	0.0%	1.5%	0.0%	26,342	3.5%	73,728	2.6%	14.3%	0.0%	13.1%	-0.1%	16,655	8.4%	50,764	7.6%	16.8%	0.5%	16.2%	-0.2%	19,700	10.8%	70,595	12.0%	15.7%	0.7%	16.6%	0.4%	12,351	9.4%	42,090	12.4%	1.4%	0.1%	1.6%	0.1%	27,865	5.8%	80,373	9.0%	14.5%	0.2%	13.1%	0.0%
16,399	-1.5%	47,655	-6.1%	17.1%	0.4%	16.5%	0.3%	18,139	-7.9%	64,781	-8.2%	15.3%	-0.4%	16.6%	0.0%	11,388	-7.8%	37,568	-8.9%	1.4%	0.0%	1.5%	0.0%	27,408	-1.6%	75,339	-6.3%	14.9%	0.4%	13.2%	0.2%	16,098	-1.8%	47,039	-1.3%	17.2%	0.1%	16.6%	0.1%	18,442	1.7%	63,487	-2.0%	15.8%	0.5%	16.6%	0.0%	11,202	-1.6%	36,747	-3.2%	1.4%	0.0%	1.5%	0.0%	26,575	-3.0%	74,892	-0.6%	14.9%	0.0%	13.4%	0.2%
15,294	-5.0%	46,242	-1.7%	16.6%	-0.6%	16.5%	-0.1%	17,982	-2.5%	62,445	-1.6%	15.6%	-0.2%	16.5%	-0.1%	10,721	-4.3%	36,585	-0.4%	1.4%	0.0%	1.5%	0.0%	26,955	1.4%	74,064	-1.1%	15.2%	0.3%	13.4%	0.0%	16,565	8.3%	50,045	8.2%	17.0%	0.4%	16.6%	0.1%	18,602	3.4%	67,219	7.6%	15.3%	-0.3%	16.4%	-0.1%	11,788	10.0%	40,105	9.6%	1.5%	0.1%	1.6%	0.0%	27,043	0.3%	78,818	6.4%	14.7%	-0.5%	13.2%	-0.2%
15,305	-7.8%	47,943	-4.2%	16.3%	-0.7%	16.5%	-0.1%	17,458	-6.1%	64,249	-4.4%	15.2%	-0.2%	16.4%	0.1%	10,758	-8.7%	36,332	-9.4%	1.4%	-0.1%	1.5%	-0.1%	25,434	-5.9%	74,021	-6.1%	14.5%	-0.1%	13.0%	-0.2%	15,764	3.0%	46,619	-2.6%	16.9%	0.6%	16.6%	0.1%	17,443	-0.1%	63,398	-1.3%	15.3%	0.1%	16.4%	0.0%	10,578	-1.7%	35,341	-2.7%	1.4%	0.0%	1.5%	0.0%	24,951	-1.9%	73,496	-0.7%	14.3%	-0.2%	13.1%	0.1%
16,139	2.4%	47,265	1.4%	17.3%	0.3%	16.8%	0.2%	17,818	2.1%	62,423	-1.5%	15.7%	0.4%	16.4%	0.0%	10,487	-0.9%	34,756	-1.7%	1.4%	0.0%	1.5%	0.0%	25,869	3.7%	73,614	0.2%	14.8%	0.5%	13.2%	0.1%	16,195	0.3%	48,898	3.5%	17.3%	0.0%	16.6%	-0.2%	17,426	-2.2%	65,171	4.4%	15.2%	-0.5%	16.5%	0.0%	10,866	3.6%	37,136	6.8%	1.4%	0.0%	1.5%	0.0%	26,217	1.3%	77,765	5.6%	14.7%	-0.1%	13.3%	0.1%
16,790	3.7%	50,040	2.3%	17.1%	0.2%	16.7%	0.1%	18,609	6.8%	66,981	2.8%	15.7%	0.5%	16.6%	0.2%	10,967	0.9%	37,423	0.8%	1.4%	0.0%	1.5%	0.0%	25,817	-1.5%	77,014	-1.0%	14.6%	-0.2%	13.2%	-0.1%	16,018	-4.6%	48,037	-4.0%	17.2%	0.1%	17.0%	0.3%	17,440	-6.3%	62,864	-6.1%	15.2%	-0.4%	16.4%	-0.2%	10,032	-8.5%	34,199	-8.6%	1.4%	0.0%	1.4%	-0.1%	25,661	-0.6%	74,165	-3.7%	15.0%	0.5%	13.3%	0.1%
16,706	4.3%	49,400	2.8%	17.2%	0.0%	17.0%	0.0%	17,355	-0.5%	63,588	1.2%	15.2%	0.0%	16.5%	0.1%	10,461	4.3%	35,730	4.5%	1.4%	0.0%	1.5%	0.0%	25,955	1.1%	76,249	2.8%	14.6%	-0.4%	13.3%	0.0%	14,361	-14.0%	46,153	-6.6%	16.9%	-0.3%	16.9%	-0.1%	16,026	-7.7%	60,815	-4.4%	15.2%	0.0%	16.4%	-0.1%	9,321	-10.9%	32,690	-8.5%	1.4%	0.0%	1.4%	0.0%	22,997	-11.4%	72,038	-5.5%	14.6%	-0.1%	13.3%	0.0%
17,090	19.0%	52,563	13.9%	17.2%	0.4%	16.9%	0.0%	18,395	14.8%	68,453	12.6%	15.3%	0.1%	16.5%	0.1%	11,439	32.7%	39,125	19.7%	1.5%	0.1%	1.5%	0.1%	26,443	15.0%	80,977	12.4%	14.2%	-0.4%	13.2%	-0.1%	16,571	-3.0%	49,576	-5.7%	17.6%	0.4%	17.1%	0.3%	17,508	-4.8%	64,245	-6.1%	15.3%	0.0%	16.6%	0.1%	9,919	-13.3%	33,585	-14.2%	1.4%	-0.1%	1.4%	-0.1%	26,069	-1.4%	76,465	-5.6%	14.7%	0.6%	13.5%	0.3%
16,073	-3.0%	49,064	-1.0%	17.2%	-0.4%	17.2%	0.0%	17,455	-0.3%	63,126	-1.7%	15.4%	0.1%	16.5%	-0.2%	10,206	2.9%	33,963	1.1%	1.4%	0.1%	1.4%	0.0%	25,480	-2.3%	76,062	-0.5%	14.6%	-0.2%	13.5%	0.0%	16,282	1.4%	49,335	0.6%	17.7%	0.4%	17.3%	0.1%	17,466	0.1%	63,170	0.1%	15.5%	0.1%	16.5%	0.0%	9,552	-6.4%	33,591	-1.1%	1.4%	0.0%	1.4%	0.0%	24,916	2.2%	76,084	0.0%	14.2%	-0.3%	13.5%	0.1%
16,607	1.8%	53,662	8.8%	17.5%	-0.2%	17.2%	-0.1%	18,501	5.9%	70,202	11.1%	15.8%	0.3%	16.6%	0.1%	10,831	13.4%	38,905	15.8%	1.5%	0.1%	1.5%	0.1%	26,143	4.9%	82,605	8.6%	14.5%	0.2%	13.2%	-0.3%	16,919	1.9%	51,201	-4.6%	17.6%	0.1%	17.3%	0.1%	18,454	-0.3%	67,052	-4.5%	15.5%	-0.3%	16.8%	0.2%	10,252	-5.3%	34,457	-11.4%	1.4%	-0.1%	1.4%	-0.1%	26,005	-0.5%	77,745	-5.9%	14.3%	-0.1%	13.3%	0.1%
16,401	-3.1%	49,970	-2.4%	17.2%	-0.4%	17.1%	-0.2%	18,398	-0.3%	65,442	-2.4%	15.5%	0.0%	16.5%	-0.3%	10,415	1.6%	34,774	0.9%	1.5%	0.1%	1.4%	0.0%	26,797	3.0%	79,598	2.4%	14.7%	0.4%	13.6%	0.2%																																

Figure 2: Table of Numbers

	Previous Year												Current Year											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Report 1	4,918	5,331	5,815	5,750	5,597	4,941	4,834	4,306	4,699	4,548	4,184	3,627	5,245											
Report 2						418	1,295	1,379	1,194	1,008	919	1,340												
Report 3	1,015	958	443	515	370	370	437	473	411	447	313	368	538											
Report 4	213	449	394	309	430	349	274	260	276	361	277	170	138											
Report 5	109	105	191	202	168	102	102	178	82	95	93	162	106											
Report 6	4,324	4,808	5,641	4,974	6,052	5,478	4,562	4,568	4,793	4,967	5,557	4,369	3,567											

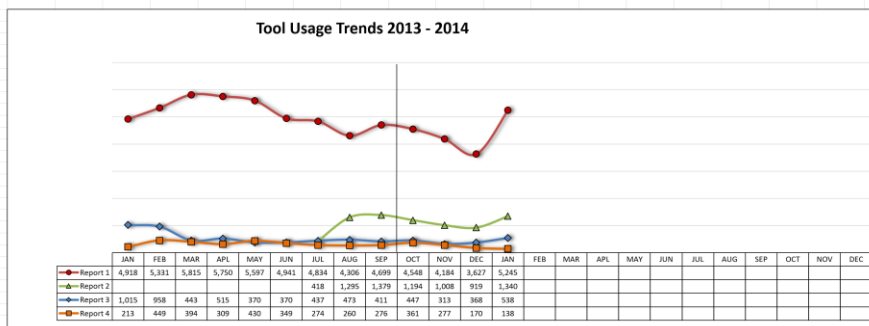


Figure 3: Time-series plot

Yield											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Wastage	4.92	5.08	5.18	5.34	5.41	5.35	5.66	5.09	5.48	5.23	5.26

Figure 4: Percentages in a Table



What actionable or non-actionable occurrence is appropriate from each of these historical-data-reporting organizational scorecards? It is very difficult to say. Those within an organization who have a differing “talent mind-set” could draw very different conclusions.

What is needed is a consistent system for reporting these performance metrics so that there is consistent interpretation and action by all personnel throughout an organization. Organizations benefit when this reporting provides an assessment of what might be expected in the future.

Predictive Performance Metric Reporting and its Benefits

The 30,000-foot-level performance reporting methodology described below is an extension of the concepts used in statistical process control (SPC) of manufacturing processes. One extension of SPC reporting is that 30,000-foot-level reporting provides predictive statements. This form of report generation will be illustrated for the above percentage-in-a-table situation shown in Figure 4. Detailed information on how to access information about a similar transitioning for all the above report-outs to a predictive format will be provided after this illustration.

With the monthly report-out format shown in Figure 4, one might ask the following questions:

- Why should a report-out include only monthly reporting and year-to-date values? After January 1, wastage doesn’t magically change from December 31. In addition, if something were to change between weeks three and four of a month, this shift would not be detected in this performance-metric-reporting approach. This tabular monthly reporting format discourages the thought process that a process’ output is the result of its inputs and process steps. If the normal variation in an output process response is undesirable, then something needs to be done to enhance the process.
- Could one determine from this table if anything changed in the process over time? With this type of performance management system metrics reporting, this question is very difficult, if not impossible, to answer.
- Why wait until the end of the month to see how metrics are performing? A more frequently automated updated reporting to these charts would have its benefits, where executives and others could access up-to-date, “thin-slice” of this information at any desired point in time. Labor in the creation of these charts would also be saved.
- Will this metric format for reporting lead to the most appropriate actionable or non-actionable activities? The answer to this question is typically no. With this form of reporting, often only “stories” are provided describing typical up and down changes that occur in the process. Also, this form of reporting could lead to much firefighting where one takes action trying to answer the question why a performance number has degraded from last month. Activities of this type are not linked to process thinking and may not lead to the most appropriate actionable or non-actionable activities.

A 30,000-foot-level predictive performance report-out for the overall wastage attribute response for this process is shown in Figure 5. With this report-out, more data were included and the reporting frequency was changed from monthly to weekly. These changes provide a timelier “thin-slice”



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insight to how the process is performing and what appropriate actions or non-actions should be taken.

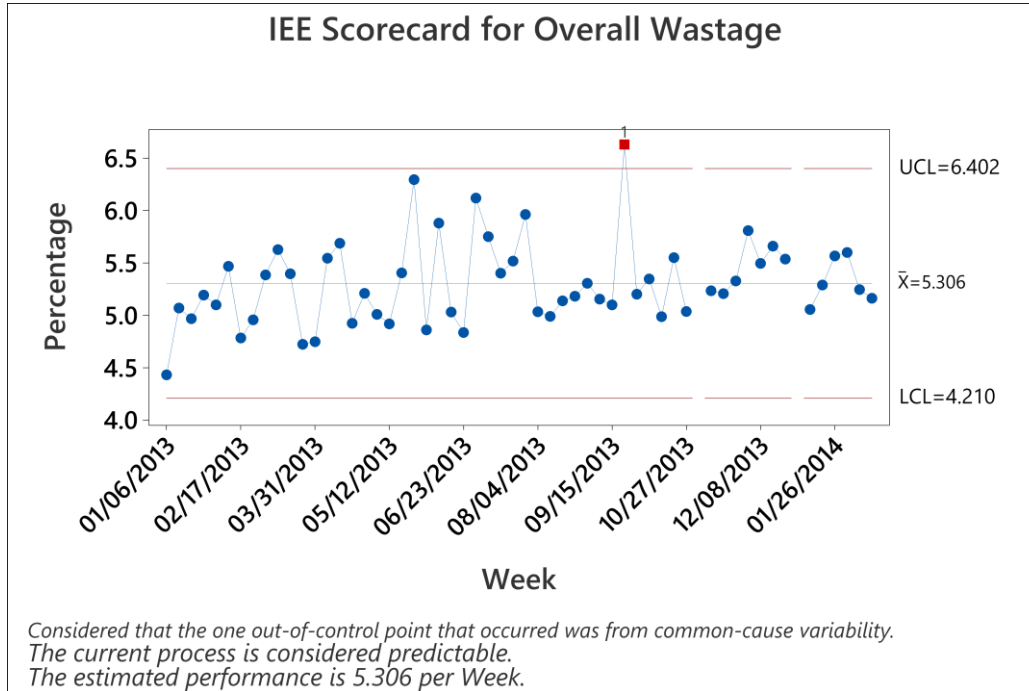


Figure 5: 30,000-foot-level Predictive Performance Report

The 30,000-foot-level predictive performance reporting process consists of two steps.

1. The first step is to determine if the process is stable. This is accomplished through the use of an individuals control chart. In an individuals control chart, an upper control limit (UCL) and lower control limit (LCL) are determined statistically from the data. If a point exists outside the UCL or LCL limits, the process may have a special-cause condition that impacted the metric's response. If there are no points outside the UCL or LCL limits or statistical-determined patterns, one can state that the process is stable. When a process has regions of stability, variation from these time intervals is from natural variations in the process, which is referred to as common-cause variability.
2. The next step is to describe the processes' capability or performance level. When there is a recent region of stability, the process can be said to be predictable. A futuristic statement can be determined by considering data from the recent region of stability as a random sample of the future. *If a process is stable and the prediction statement is not desirable, then enhancements are needed to the process in order to improve its performance.*

From the Figure 5 report-out of the process' performance at the 30,000-foot-level, one can make the following "thin slice" observations, which were not prevalent from the current tabular reporting in Figure 4:

- The red dot with the number 1 indicates that a special-cause condition may have occurred. This point can be investigated relative to determining a causal condition. However, since this point was close to the UCL limit, this value was considered in this analysis to be a response from common-cause process variability.
- Individual points within the upper control limit (UCL) and lower control limit (LCL) range should not be examined individually for causality. However, data in this region could be examined collectively relative to testing hypotheses for improvement opportunities; e.g., differences between days of the week, departments, and machines. This insight can be beneficial to determine what could be done differently to the process to enhance its performance.

A predictive measurement is reported, with the understanding that, if the prediction is not desirable, then something needs to be done to enhance the process. This type of understanding is not typically highlighted when organizations focus on having a business that uses Gladwell's described "talent mind-set" management approach. Organizations who give focus to this non-system way of thinking often make intuitive decisions that are not based on the performance of processes, which can yield very undesirable, unintended consequences.

Many have pointed out the importance of having predictive measurements in organizations. The 30,000-foot-level performance reporting methodology is a means to achieve this predictive-reporting objective.

Reporting Predictive Performance Measures throughout an Organization

Organizations can integrate predictive performance measurements throughout their enterprise using an IEE value chain. An IEE value chain describes what an organization does and how it measures the performance of what it does. An enterprise value chain perspective can provide a "thin slice" view of what is occurring in an organization, from which beneficial decisions can readily be made. An example value chain is illustrated in Figure 6.

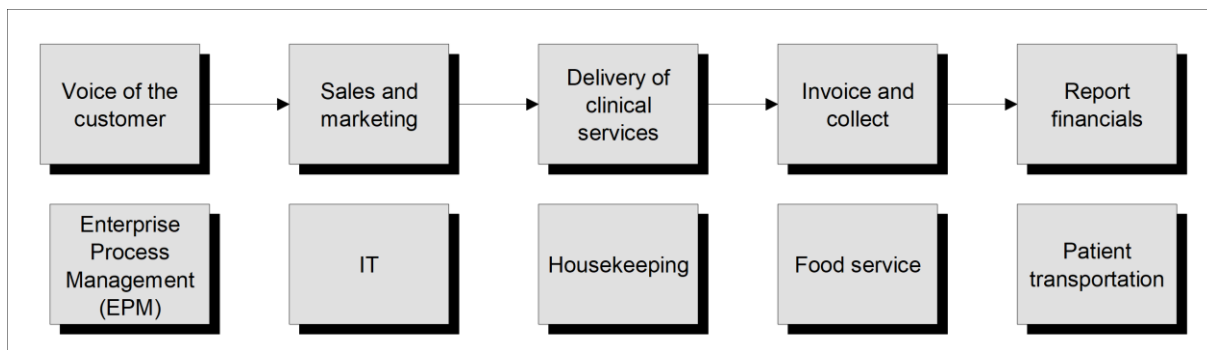


Figure 6: IEE Value Chain for a Hospital

Enterprise Performance Reporting System (EPRS) software can provide automatically updated IEE value chain performance metrics and procedural information, which is “clickable” to those who have authorization through an organization’s network or the internet.

Figure 7 illustrates a “clickable” drilldown of what the hospital value chain might be. In this illustration, there are two swim lanes. The top swim lane lists metrics that were agreed to for this delivery of clinical services function relative to quality, cost, and time. Each of these metrics, through a click of the mouse, can provide a 30,000-foot-level report-out of its recent performance level.

The bottom swim lane contains the procedures with its drill downs, which are the means for providing the current level of process performance. A mathematical expression for this is Y is a function of x or $Y=f(X)$.

In organizations, often the north wing of the building is working on organizational scorecards and the south wing of the building is working on process documentation and improvement, and these two functions do not communicate with each other. The IEE value chain brings these two functions together from a thin-slice organizational viewpoint.

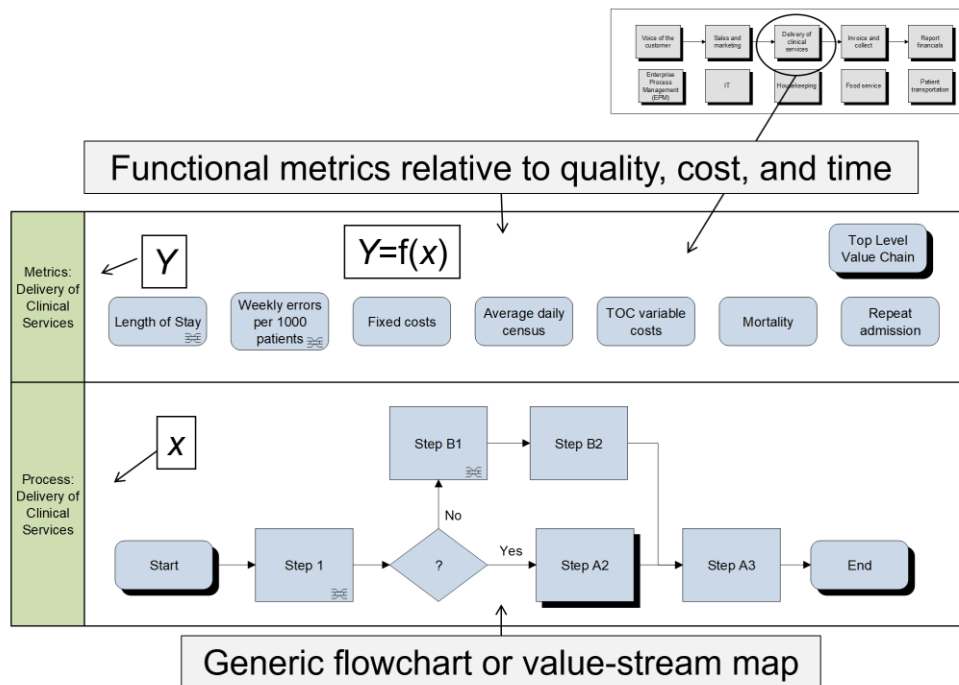


Figure 7: IEE Hospital Value Chain Drill Down

The IEE System and Whole-enterprise Improvement Projects

The lower left corner of the IEE value chain shown in Figure 6 has a function titled “Enterprise Process Management.” A drill down of this function is shown in Figure 8.

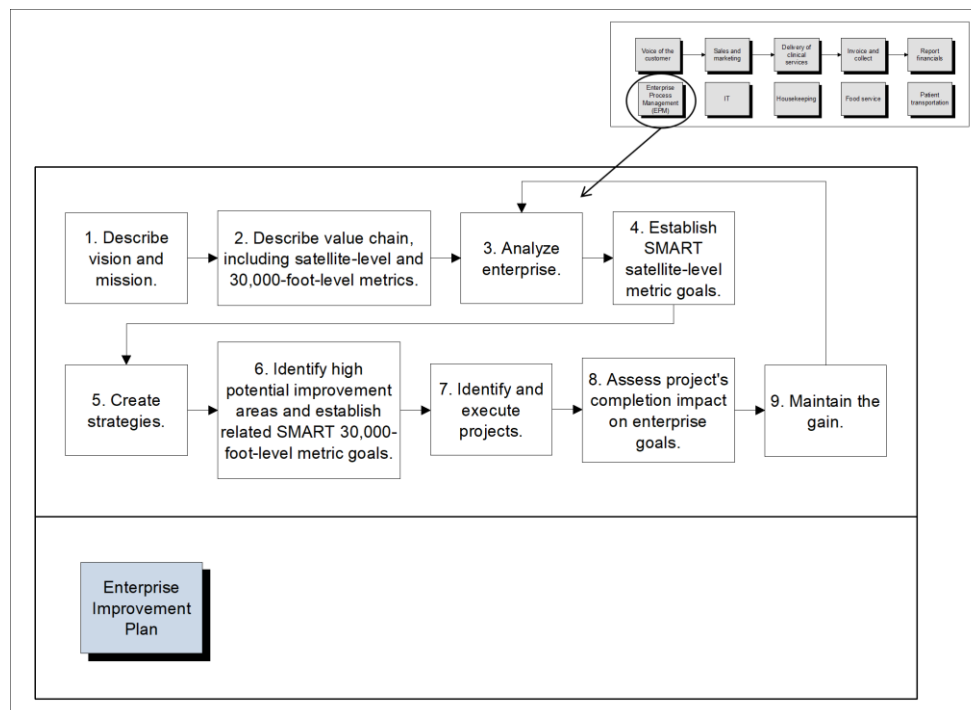


Figure 8: Enterprise Process Management Function Drill Down

The top swim lane of the Figure 8 describes the 9-step IEE business-management system. A summary of these steps are:

1. Describe vision and mission. Vision statements focus on the goals and aspirations of a company, while its mission statement is a statement of the purpose of the organization. Actions relative to the following steps should be in alignment with an organization’s vision and mission.
2. Describe value chain. As noted earlier, the IEE value chain describes what the organization does and its measurements relative to these functions. Reporting of the metrics in an IEE value chain can provide futuristic thin-slice statements through the previously illustrated



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30,000-foot-level reporting of operational metrics. Satellite-level metrics have a similar reporting to 30,000-foot-level metrics but involve the tracking of financial metrics.

3. Analyze enterprise. This involves a big-picture assessment of the enterprise as a whole. In addition to IEE value chain performance, other aspects of the business would be assessed such as organizational constraints, competition, and industry changes. This analysis can lead to areas of the business that could be enhanced.
4. Establish SMART (Specific, Measurable, Actionable, Relevant, Time-based) satellite-level or financial goals. These goals should be reasonable, where achievement of these objectives is illustrated through a satellite-level reporting transitioning to an enhanced level of performance.
5. Create strategies that are targeted and have an alignment with the business as a whole and its financials. Insight that is gained through the analysis step is blended with innovative thinking to develop these strategies.
6. Identify high potential improvement areas and establish SMART 30,000-foot-level metric goals. A big picture assessment can identify areas of the business where focus should be given to benefit the big picture; e.g., sales process if there is excess capacity. The metrics that are to be improved should be a part of the IEE value chain whenever possible. The owner of these metrics understands that to achieve the 30,000-foot-level reported objective he/she will need to improve the process.
7. Identify and execute projects that are to benefit the enterprise as a whole. These process owners will have a sense of urgency to complete improvement projects that are to positively impact the metric, since he/she will be reporting the status of their metric improvement to the boss' boss periodically; e.g., monthly.
8. Assess project's completion impact on enterprise goals. If a project is successful, then the procedures in the value chain were enhanced, which positively impacted a 30,000-foot-level metric, which in turn will positively impact the satellite-level metric; i.e., financials.
9. Maintain the gain not only through the execution of error-proof procedures whenever possible but also by monitoring through the IEE value chain the new-level of performance, making adjustments whenever the 30,000-foot-level chart degrades. Note how step 9 loops back to step 3 (not step 1). What is occurring in this 9-step IEE business system loop is basically a Deming's Plan-Do-Check-Act cycle for the enterprise as a whole.

Figure 9 illustrates an Enterprise Improvement Plan (EIP) for the described hospital illustration; i.e., a drill down of a function in Figure 8.

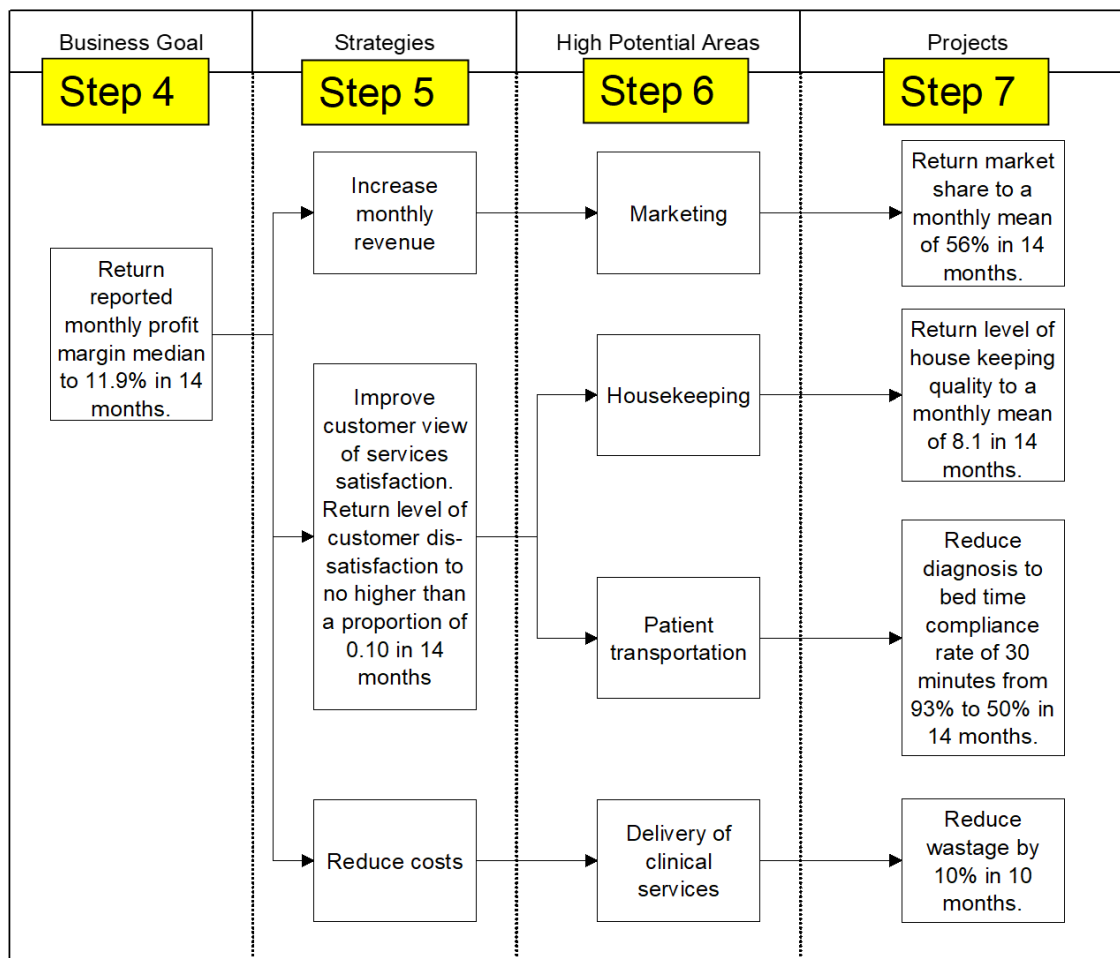


Figure 9: Enterprise Improvement Plan (EIP) for a Hospital

From an EIP one notes how improvement projects are in alignment with the business needs as a whole.

Improvement Project Execution and Benefit Quantification

IEE offers a means where metric enhancements, which benefit the enterprise as a whole, “pull” for the undertaking of efforts that improve these measurements.

When metric improvement needs are strategic, executive management will want frequent updates on how process improvement efforts are progressing to enhance the selected measurements. Because of this visibility, these focused process enhancement efforts will not *fall off the plate* of the project owner and/or project-execution leader because of other competing day-to-day activities.



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Improvement projects to advance a 30,000-foot-level metric to a better performing level can utilize a Lean kaizen event, follow a Lean Six Sigma Define-Measure-Analyze-Improve-Control (DMAIC) roadmap, or incorporate some other approach to improve the process. *In the IEE methodology, the approach to improve a measurement does not matter.*

One of the measurements in Figure 9 to improve the enterprise's profit margins was the reduction of wastage. Figure 5 indicated current operational wastage for the organizational process to be approximately 5.3%. A DMAIC project was executed for the purpose of establishing new procedures that would improve this process' wastage metric.

During this investigation, various hypothesis investigations of the region of stability could identify differences between operators, days-of-the-week, etc., which can provide insight to where improvement efforts should focus. Figure 10 provides the result of process improvement efforts to this metric.

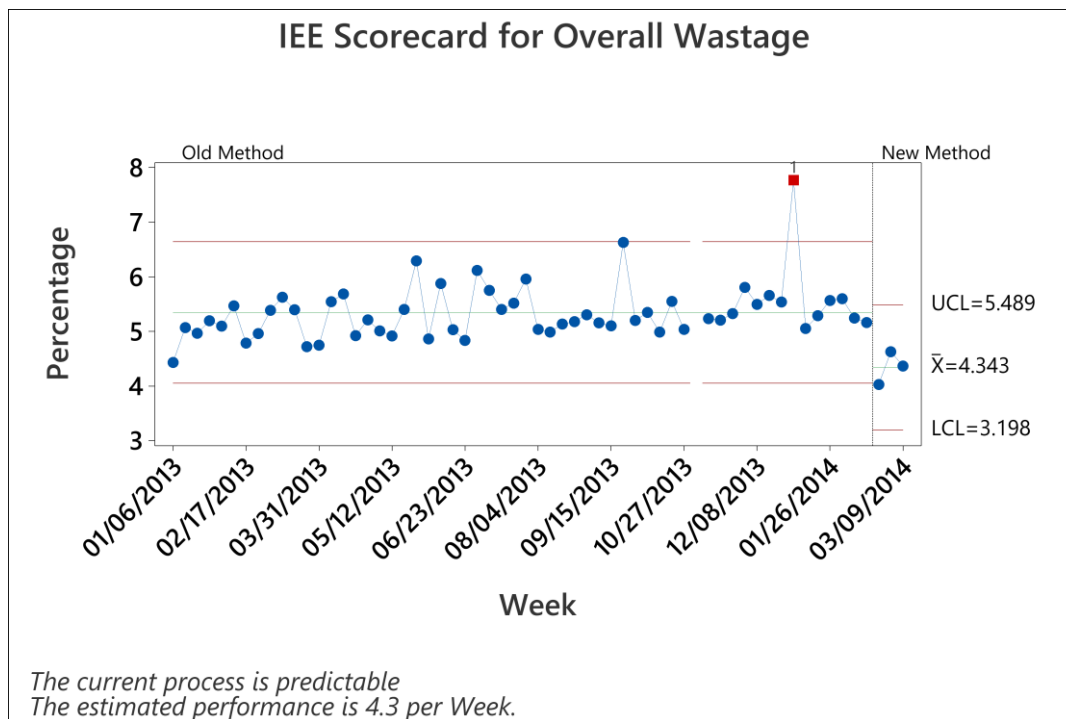


Figure 10: Demonstrating Amount of Wastage Reduction from Process Improvement Efforts

From Figure 10, it is observed that:

- An improvement was demonstrated from the “new method” as a stage in the individuals chart. Currently the last three weeks are performing at this enhanced level of performance.
- Since the new process is determined stable with this form of reporting, the three recent points can be used to provide an estimate of the future, which in 30,000-foot-level reporting



is automatically reported at the bottom of the plot; i.e., 4.3% wastage. When this value is compared to pre-process-improvement level of 5.3% wastage, one notes that the EIP improvement objective of 10% reduction in wastage was exceeded through execution of this project.

A 30,000-foot-level chart report-out not only can detect when a measurement was impacted by a process improvement effort but also estimates the amount of improvement.

How IEE Addresses Leadership Business Management Issues

The following four leadership business management issues were initially described in this article. What will now be described is how an IEE solution can address these problems. This thin-slice approach to business management addresses the issues of a “talent mind-set” and meet-the-numbers-or-else approach to management through and enhancement and integration of previous methodologies, as illustrated in Figure 11:

- 1. Executive management receives a monthly 60+ slide PowerPoint deck or a huge excel file, which nets out the status of the organization’s performance metrics.**

An IEE value chain with automatic updates provides up-to-date information, where performance metrics are reported predicatively and can be accessed at any time throughout the organization. Executive and other meeting presentations can make reference to specific value chain metrics, along with appropriate action plans or results, when appropriate.

- 2. Quarterly executive management reviews (EMR) are lengthy and questionable in value.**

Monthly or quarterly reviews benefit when there is a targeted focus to strategic metric improvement needs, as determined through an IEE Enterprise Improvement Plan (EIP). In EMRs, managers of processes that are to improve their predictive performance metrics should be given primary focus in the session. During EMR reviews, these targeted areas would report out the status of their 30,000-foot-level metrics and process improvement project(s).

- 3. Resources are wasted fighting fires and the benefits of process improvement efforts seem questionable.**

Firefighting is often the result of treating common-cause variability as though it were special cause. This issue is resolved with 30,000-foot-level reporting. If a process’ response has common-cause variability and its performance is unsatisfactory, a process improvement effort needs to be undertaken. A transition in the 30,000-foot-level individuals chart to an enhanced level of performance indicates that effective improvement efforts were achieved.

Application of an IEE Enterprise Improvement Plan (EIP) targets improvement efforts that benefit the enterprise as a whole; hence, executives, and others, can readily see and appreciate the efforts of process improvement efforts.

4. Our organization is operating in silos where little regard is given to the big picture.

An IEE value chain presents organizations as a system of interconnected processes with predictive performance metrics that break down silos. Organizational performance metrics goals can be established through an Enterprise Improvement Plan (EIP) where the enterprise as a whole benefits through targeted improvement efforts.

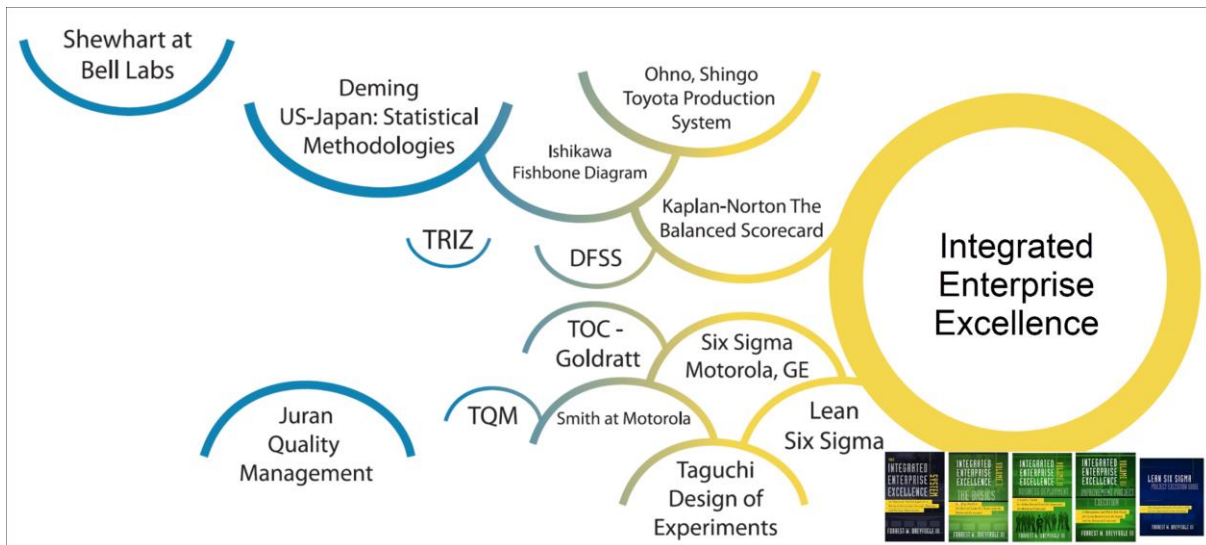


Figure 11: Evolution to the IEE Business Management System



Summary

It was previously noted that Gladwell, in his book *What the Dog Saw*, makes a good case that the fall of Enron after the turn of the century was in part caused by the use of “talent management,” where these organizational stars don’t believe in systems. It has been my observation that businesses still often manage using this approach, which can have grave consequences. Organizations need to incorporate a business-management methodology for creating systems that benefit the enterprise as a whole.

The described Integrated Enterprise Excellence (IEE) system provides a straightforward methodology for addressing this need. It still will be important to hire the right people and get them into the right positions for their skill set; however, with the IEE roadmap organizations and its created systems there is no need to focus on hiring superheroes for positions in their organization.

It was also noted how Gladwell points out the importance of “thin slicing” in his book *Blink*. Organizations often get such an overload of information that is very difficult to make appropriate action or non-action decisions. The presentation of this information can make good decision making very difficult; e.g., Figures 1-3. The use of “Big Data” techniques can exacerbate this dilemma.

The IEE roadmap with its organizational value chain provides a “thin slice” view of an organization along with a system to identify how the organizational business processes and policies can be improved so that the enterprise as a whole benefits. The IEE methodology provides a system to implement the business-management philosophy of W. Edwards Deming.

Next Steps

Leadership, management, and practitioners in an organization often readily see the benefits of an IEE system; however, they often have difficulty determining where to start. Strategies for initiating IEE and creating predictive performance metrics are described in the novel-written books *Management 2.0: Discovery of Integrated Enterprise Excellence* and *Leadership System 2.0: Implementing Integrated Enterprise Excellence*. These two books are available in paperback, Kindle e-book, and audible book formats.



Positive Metric Performance & Poor Business Performance – How Does This Happen?

About the Author



Forrest Breyfogle, a professional engineer, is an ASQ Fellow and the CEO of Smarter Solutions. He has authored or co-authored over a dozen books. His two book series, *Management 2.0: Discovery of Integrated Enterprise Excellence* and *Leadership System 2.0: Implementing Integrated Enterprise Excellence* provides an easy to understand novel-written description of IEE and its benefits. This two-book series includes advancements in the utilization and integration of scorecards, strategic planning, and process improvement. Forrest's five-book set, *Integrated Enterprise Excellence*, provides the how-to details for implementing IEE. Mr. Breyfogle was named Quality Professional of the Year for 2011 by *Quality Magazine* and in 2012 was awarded alumni of the year by Missouri University of Science and Technology. He also received the prestigious Crosby Medal from ASQ in 2004 for his book, *Implementing Six Sigma* and was presented the Leadership Award at the 2013 Lean & Six Sigma World Conference. Forrest is currently located in Austin, Texas where he founded Smarter Solutions, Inc. in 1992.

About Smarter Solutions

Smarter Solutions, Inc. is a business management and improvement consulting firm. Organizations across the globe partner with Smarter Solutions to evaluate and refine business systems, or the policies, practices, procedures, and processes used in developing and deploying strategies, their execution, and all associated management activities.