



An Oracle White Paper  
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# Oracle's Instantis Six Sigma Maturity Model: Survey Results and Analysis

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## Introduction

Originally published in September 2006, Oracle's Instantis Six Sigma maturity model defines five commonly experienced stages of Six Sigma maturity. The model aims to help Six Sigma practitioners, deployment leaders, and executives do the following:

- Benchmark their progress against industry norms
- Assess implementation strengths and performance gaps
- Anticipate common adoption pitfalls
- Communicate progress effectively and garner enterprisewide support for the Six Sigma initiative

The current version of this model, 1.0 is based on the experience of Instantis (acquired by Oracle in February 2012) in working with scores of leading Six Sigma companies as well as on input from the Instantis Six Sigma executive advisory board, consisting of prominent Six Sigma industry experts, authors, and luminaries in the field. Version 1 contains a series of qualitative hypotheses that were published for comment and feedback. Version 2.0 (under development) will include the results of the online survey discussed here. In addition, version 2 will be able to score maturity level based on quantitative metrics.

					Culture Transformation		
Culture Change		Scale Replication			Institutionalization		
Beyond DMAIC		Early Success		DFS, Lean		DNA of Org.	
Strategy		Launch		Project Roll-up		Full Closed-Loop	
Software		Excel, Stats		Portfolio Mgmt		Strategy + Portfolio	
Reporting		Anecdotal		Cross-org Comps		Multi-Year History	
Financial Impact		Aggregate, Average		Validation; TLG		General Ledger	
Project Selection		Cost Reduction		Idea Pipeline		Formalized Eval	
People		Low Hanging		Repatriated		Majority	
Training		More Believers		Internal, eLearning		Internal, Specialty	
Leadership Support		External, BB/GB		Expected		Ingrained	
		Validated		Cross-Org			
		Level 1		Level 2		Level 3	
		3-9 Months		6-18 Months		12-36 Months	
		Level 4		Level 5			
		24-48 Months		36+ Months			

Figure 1. Oracle's Instantis Six Sigma maturity model defines five commonly experienced stages of Six Sigma maturity.

During a four-month period starting in October 2006, Instantis conducted an online survey, to which a total of 105 individuals responded. The respondent pool consisted of Six Sigma professionals (Master Black Belts, Black Belts, and Six Sigma experts); senior directors and functional managers of QA, operations, and supply chains; and executives and deployment leaders. In addition, the respondents represented all major industries and geographies.

At least 20 to 25 of the respondents perceived themselves to be in each of the first four levels of maturity defined by Oracle's Instantis Six Sigma maturity model (Launch, Early Success, Scale & Replication, and Institutionalization), so the data pool was rich enough that it could be broken down by maturity level to yield some reliable conclusions.

In general, the hypothesized state of maturity described for each of the five levels of maturity along each of 10 maturity axes (leadership, training, people, project selection, and so on) was validated by the study results. Specifically, just over 80 percent of the maturity level/axis descriptors hypothesized by the model were validated by the survey responses. That is, the average response variance was within an acceptable range of the expected mean and mode values. In approximately 10 percent of the cases, organizations were farther along a particular axis than predicted by the maturity model, and in another 10 percent of the cases, organizations were behind the level of maturity predicted by the model. The results discussed here highlight these gaps and suggest updates to the model for inclusion in the next version of Oracle's Instantis Six Sigma maturity model.

This white paper concludes with some recommended next steps for utilizing this data to help guide organizations on their Six Sigma journey.

## Respondent Pool

This section profiles the respondents by job title, industry, geography, and maturity level.

### Job Title

Roughly 25 percent of the survey respondents were Six Sigma professionals (Black Belts or Master Black Belts) or Six Sigma experts. A slightly smaller percentage comprised managers and directors of quality control, operations, or supply chain functions. A significant percentage of the respondents also had the term *process* or *performance* in their titles. Deployment leaders and executives rounded out the respondent pool.

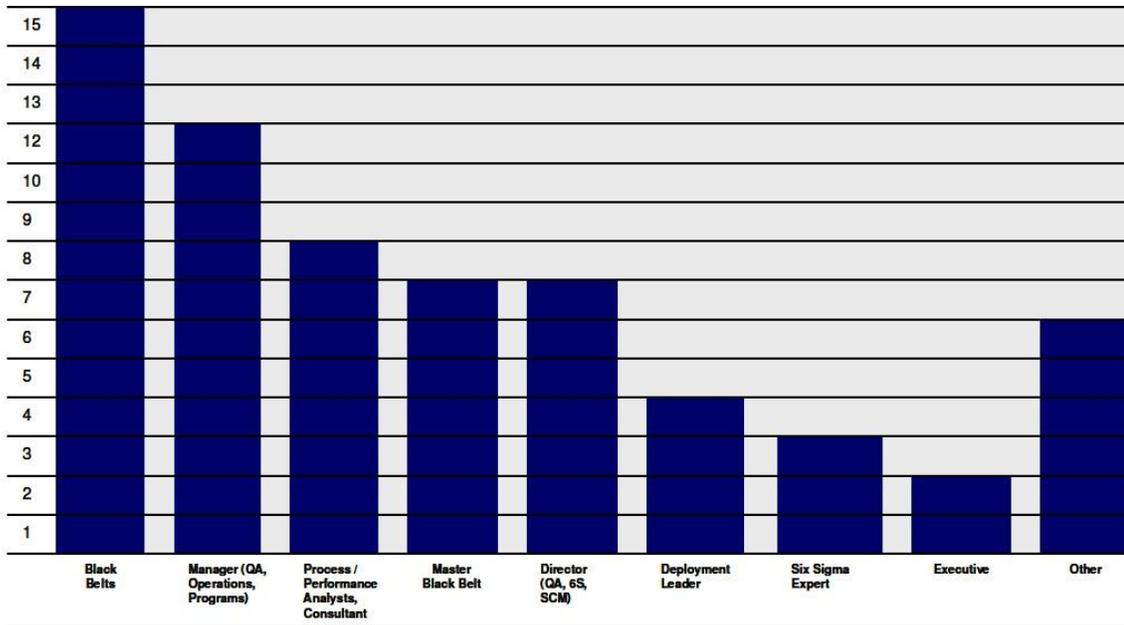


Figure 2. One-quarter of the survey respondents were Six Sigma professionals or experts.

### Industry

Manufacturing companies, particularly discrete manufacturers of industrial equipment and devices, dominated the survey population. All major industries were represented in the survey, however, including healthcare, financial services, and business services. The respondents in the “Other” category were employed in government, telecom, utilities,

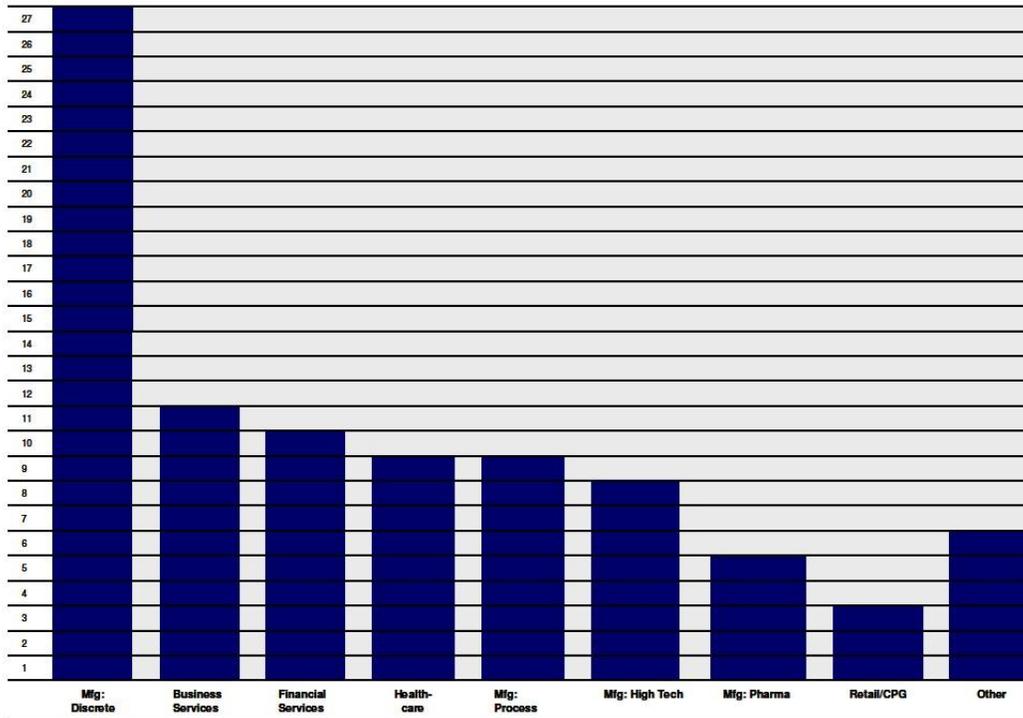


Figure 3. Discrete manufacturers of industrial equipment and devices dominated the survey population.

### Geography

Although most (70 percent) of the respondents were based in the United States, all geographic regions were represented in the survey respondent pool.

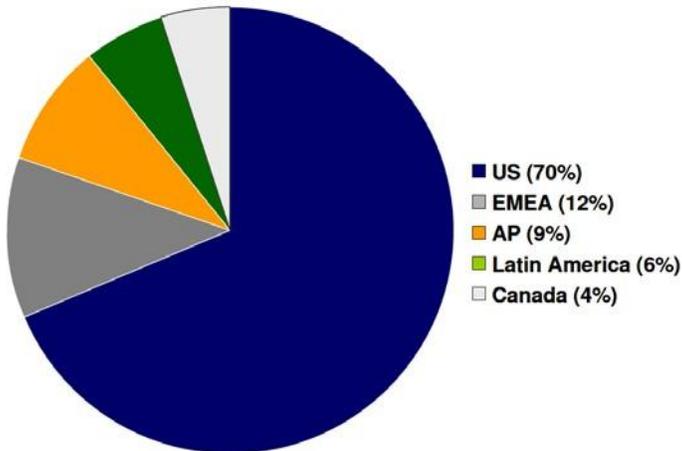


Figure 4. A large majority of the survey respondents were based in the United States.

## Maturity Level

The respondents were asked to rate their organization's current level of Six Sigma maturity, using the following labels and descriptions:

- **Launch.** Training is initiated, and projects are begun.
- **Early Success.** Initial projects are yielding results, and early successes are being achieved.
- **Scale & Replication.** Other parts of the organization are buying in to Six Sigma, and a broader launch of projects is under way.
- **Institutionalization.** Throughout many parts of the organization, projects are yielding broad-based financial impacts.
- **Cultural Transformation.** Throughout many parts of the organization, projects are yielding broad- based financial and cultural impacts.

The respondents were also provided with the model overview graphic (Figure 1) as a reference.

As you can see in Figure 5, the Six Sigma community is less than halfway through its collective journey. On a scale of 1 to 5, the average maturity level of the respondent organizations was 2.7, with a standard deviation of 1.25. Roughly three-quarters of the survey respondents believed their organizations to be at one of the middle three maturity levels, in roughly equivalent (~25 percent) proportions. A smaller portion of the respondents (20 percent) reported that their organizations were still in the Launch phase, and a handful of the respondents believed that their organizations had achieved cultural transformation.

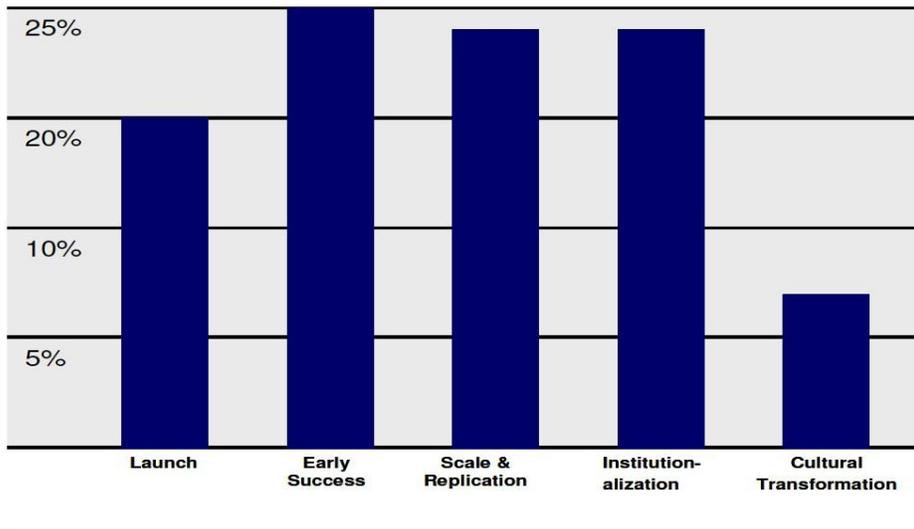


Figure 5. The Six Sigma community is less than halfway through its collective journey.

The survey population was consistent with general expectations—despite the potential for self-selection bias (meaning that the respondents motivated to participate in the study were likely to be farther along in their initiatives).

The fact that a relatively smaller percentage of the organizations were in the Launch phase reflected the maturity of Six Sigma in industry (where it has been accepted practice for 20 years). More companies were in the Early Success phase. And relatively fewer companies had achieved higher levels of maturity—reflecting the increasing difficulty of attainment. In particular, the small percentage of respondents in the Cultural Transformation phase is consistent with the notion that this is a very exclusive club.

What is more salient in this data (with respect to the broader survey results) is that the relatively even distribution of the first four maturity levels (each representing 20 to 25 percent of the respondent pool) means that the data pool is rich enough that it can be broken down by maturity level to yield some reliable conclusions. Cross-tabulations of data by maturity level are plentiful in this white paper. Conversely, it is important to note the small sample size when drawing conclusions about the culturally transformed population.

## Global Benchmarks

This section summarizes the survey results in the following three categories (referred to here as *global benchmarks*):

- **Maturity-level progression.** This refers to the age of the Six Sigma initiative at the time of the survey. This data is used to determine the typical amount of time a company spends at each maturity level (before progressing to the next).
- **Staffing.** This refers to the number of full-time Black Belts in place at each maturity level.
- **Beyond Six Sigma.** This refers to the number of strategic (CXO-driven) initiatives beyond Six Sigma that are under way at respondent organizations, and it puts the Six Sigma initiative into a broader strategic context.

### Maturity-Level Progression

To help benchmark the maturity of a company's Six Sigma initiative, Oracle's Instantis Six Sigma maturity model (Version 1.0) hypothesizes the typical duration of each maturity level as shown below in Figure 6.

<i>Launch</i>	<i>Early Success</i>	<i>Scale Replication</i>	<i>Institutionalization</i>	<i>Culture Transform</i>
<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>
<i>3-9 Months</i>	<i>6-18 Months</i>	<i>12-36 Months</i>	<i>24-48 Months</i>	<i>Not Applicable</i>

Figure 6. Oracle's Instantis Six Sigma maturity model predicts the typical duration of each maturity level.

The survey asked, "How long has it been since the initial launch of your Six Sigma initiative?" but the model does not inquire about the duration of each level. Thus, it's necessary to translate model duration estimates into the actual typical age of the initiatives (by taking the cumulative low and high marks for each level, as shown in Figure 7) to compare survey response data with the model.

<b>Launch</b>	<b>Early Success</b>	<b>Scale Replication</b>	<b>Institutionalization</b>	<b>Culture Transform</b>
<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>
<b>0-9 Months</b>	<b>9-27 Months</b>	<b>21-73 Months</b>	<b>45-121 Months</b>	<b>69+ Months</b>

Figure 7. Comparing survey response data with the model involved translating the model duration estimates into the actual typical age of the initiatives by taking the cumulative low and high marks for each level.

The survey results were in line with the model estimates.

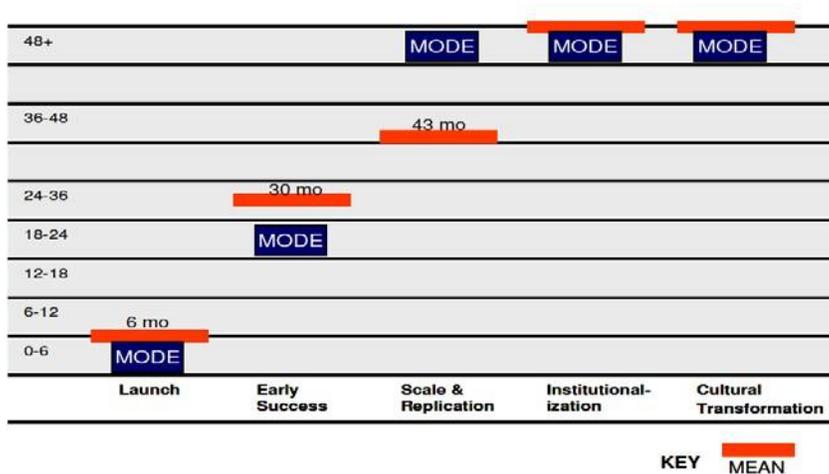


Figure 8. The survey results were found to be in line with the estimates in Oracle's Instantis Six Sigma maturity model.

### Staffing

To provide a simple personnel benchmark, the survey asked, "How many Black Belts does your organization have?" The number of Black Belts in an organization was cross-tabulated with its maturity level. The data indicates that the number of Black Belts steadily increases as organizations progress from Launch to Early Success to Scale & Replication. However, there is a dramatic acceleration in the number of Black Belts as organizations cross the chasm from Scale & Replication to Institutionalization and Cultural Transformation.

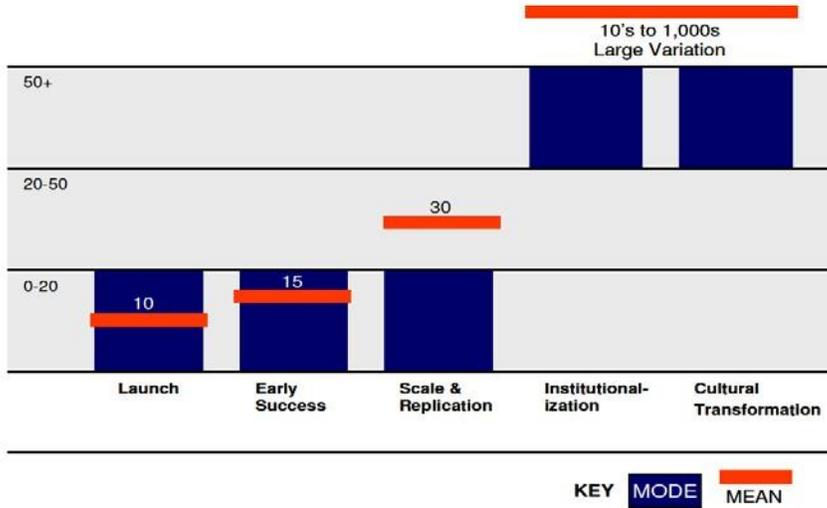


Figure 9. The number of Black Belts steadily increases as an organization moves from Launch to Early Success to Scale & Replication.

### Beyond Six Sigma

To put the Six Sigma initiative into a broader strategic context, the survey asked, "What active strategic initiatives are under way?" The (mean) average number of initiatives by maturity level ranged from 2.0 to 3.5.

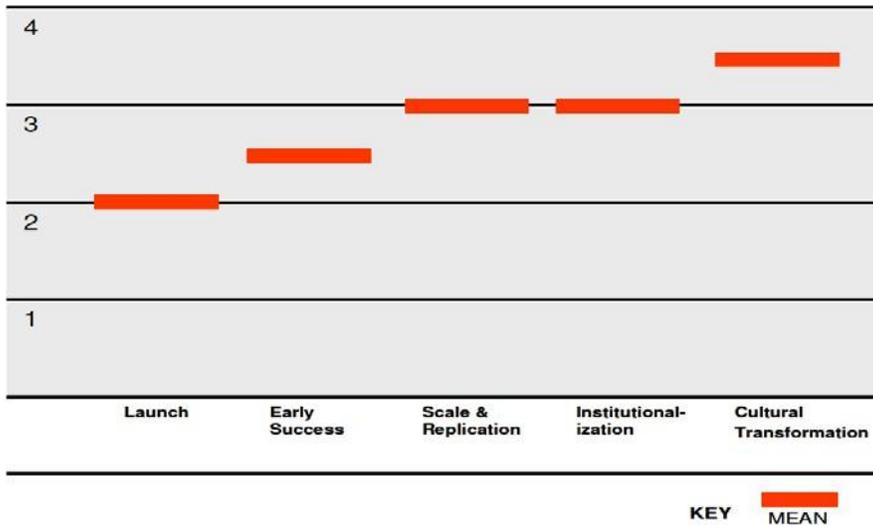


Figure 10. For the survey respondents, the average number of initiatives by maturity level ranged from 2.0 to 3.5.

More specifically, the percentage of organizations responding affirmatively to each choice—Six Sigma, Lean, IT, NPD (new product development), Compliance, M&A (mergers & acquisitions), and Other— was cross-tabulated with their maturity level.

The data indicates that the majority of the organizations with a Six Sigma program also embrace Lean. The correlation is most striking starting in the Institutionalization phase, where virtually all Six Sigma organizations have a separate or integrated Lean initiative.

A significant percentage of Six Sigma/Lean organizations have enterprise-wide IT and NPD initiatives.

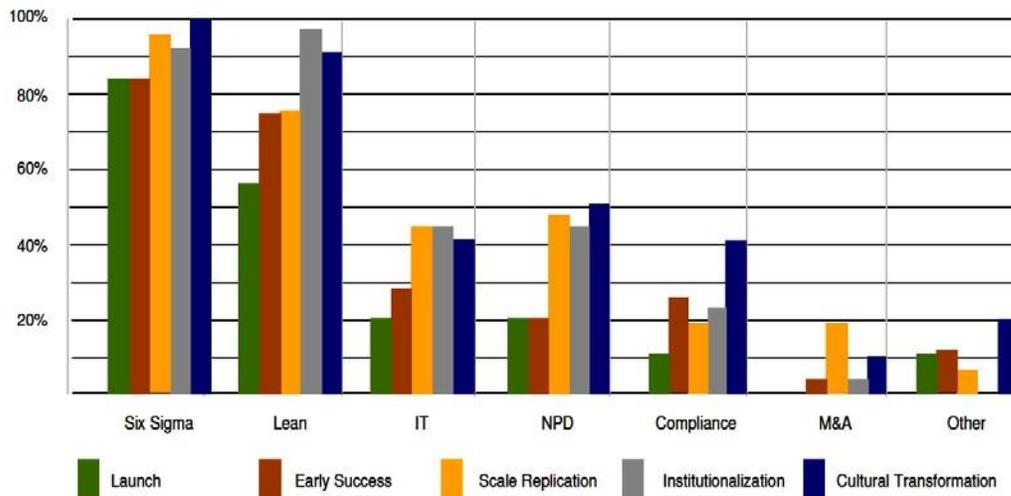


Figure 11. Most companies that adopted a Six Sigma program also embraced Lean.

## Maturity Model Survey Results by Maturity Axis

In addition to defining five *levels* of maturity (Launch, Early Success, Scale & Replication, Institutionalization, and Cultural Transformation), Oracle's Instantis Six Sigma maturity model defines ten axes of maturity: Leadership, Training, People, Project Selection, Financial Impact, Reporting, Software, Strategy, Beyond DMAIC, and Culture. This section discusses the survey results by axis, comparing the model's hypotheses and conclusions to determine how they need to be updated to reflect survey data.

The survey respondents were asked one question at each axis to characterize their level of maturity for that axis (see Figure 12 for an example). In general, the answer choices corresponded to the five levels of maturity defined for that axis in the model, so most responses were coded with a number from 1 to 5. Some responses included a 0 response to allow for organizations that had not yet reached the initial level of maturity for a given axis and/or a "No response" code for respondents who provided "None of the above" or "Not sure" responses.

Which best characterizes the state of reporting on your Six Sigma leadership support?		
Reporting Maturity Level	Choices	
1	<input type="checkbox"/>	None yet or anecdotal, no projects completed
2	<input type="checkbox"/>	No consistency yet, no roll-ups yet since the number of projects is still small
3	<input type="checkbox"/>	A critical mass of projects have been completed so that average impact per project, per belt, etc. can be predicted
4	<input type="checkbox"/>	Comparison of results for each organizational unit is done; aggregate corporate-wide results are reported
5	<input type="checkbox"/>	Multi-year history is available

Figure 12. The survey respondents were asked one question at each axis—in this case, Reporting—to characterize their organization's maturity level for that axis.

For each maturity axis question, a survey response table is provided that shows the expected value for each maturity level, the survey results (mean and mode averages), and the mean variation. Any mean variation above .5 or mode variation of 1.0 or more is considered significant (that is, closer to the next- higher or -lower value than the expected value).

In the survey response table (Figure 13), the yellow-shaded cell indicates significant variations *in excess* of the expected values whereas the red-shaded cell indicates significant variations *below* the expected values. Where survey results are in line with the model, the response table cells are shaded green; when there is not enough data to draw a conclusion, the table cells are shaded gray.

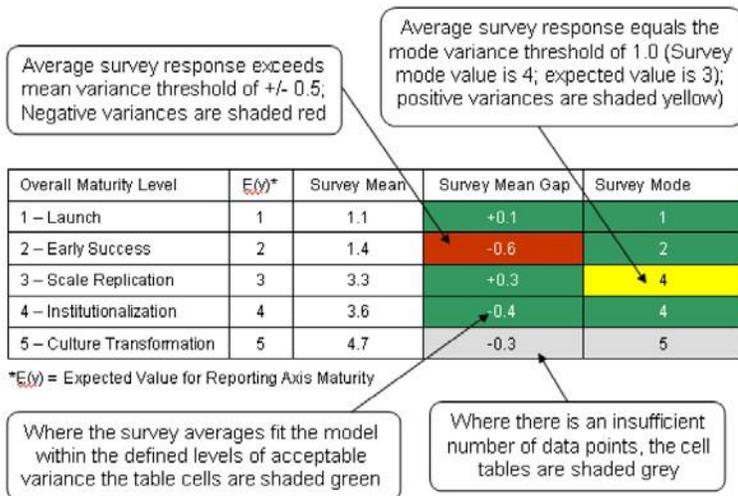


Figure 13. Each maturity axis question had a corresponding survey response table that showed the expected value for each maturity level, the survey results (mean and mode averages), and the mean variation.

Note that not all questions provided choices that corresponded to all five levels of maturity, because some of the distinctions defined in the model were considered too subtle to be tested in an online survey. Also, the model doesn't define a descriptor for some of the axes at the higher maturity levels

## Leadership

Figure 14 presents the question posed to determine maturity along the model's Leadership axis.

Which best describes the state of Six Sigma leadership support?		
Leadership Maturity Level	Choices	
1	<input type="checkbox"/>	1-2 visionaries providing impetus for adoption
2	<input type="checkbox"/>	Initial completed projects have validated our leadership's vision
3	<input type="checkbox"/>	A decision has been made to drive Six Sigma throughout the company
4	<input type="checkbox"/>	Top leadership across the business are expected to be supporters
5	<input type="checkbox"/>	Six Sigma is ingrained in the leadership mentality

Figure 14. These question and answer choices were used to ascertain leadership support for Six Sigma.

Figure 15 shows the survey results for the Leadership axis by maturity level.

Overall Maturity Level	E(v)*	Survey Mean	Survey Mean Gap	Survey Mode
1 – Launch	1	1.3	+0.3	1
2 – Early Success	2	2.3	+0.3	3
3 – Scale & Replication	3	3.3	+0.3	4
4 – Institutionalization	4	3.9	-0.1	4
5 – Culture Transformation	5	4.4	-0.6	5

\*E(v) = Expected value for *Leadership* maturity level

Figure 15. The respondents reported significantly stronger leadership support at Levels 3 and 4 than predicted by the model.

Leadership support for Six Sigma was highly correlated with the overall maturity level (Pearson coefficient of 0.74). In general, the survey results aligned with the model in terms of the mean average response. However, the *mode* (most popular answer) for Early Success and Scale & Replication showed stronger leadership support than indicated by the model. The variation between the mean and the mode indicated a significant variation in leadership support at these levels. The model descriptors should be updated to allow for a moderately stronger characterization of leadership support at this level. The mean for Cultural Transformation was just outside the variation threshold, but the mode was in line. Given that no choices are coded above 5, the mode is more important at this level, because a mean can be thrown off by a few outlier (Code 1 or 2) responses.

## Training

Figure 16 presents the question posed to determine maturity along the model's Training axis.

Which most closely describes the level of Six Sigma Training?		
Training Maturity Level	Choices	
0	<input type="checkbox"/>	We are not quite there yet
1	<input type="checkbox"/>	Executive buy-in via external trainers, champions and initial Black Belts trained
2	<input type="checkbox"/>	A few waves are completed by external providers, mostly black/green belt focused
3	<input type="checkbox"/>	Many waves completed across the company by external providers and with custom company content
4	<input type="checkbox"/>	Very large scale, mostly internal content, using in-house MBBs as trainers and eLearning to scale.

Figure 16. These question and answer choices were used to determine the training level under way for Six Sigma initiatives.

Figure 17 presents the survey results for the Training axis by maturity level.

Overall Maturity Level	E(v)*	Survey Mean	Survey Mean Gap	Survey Mode
1 – Launch	1	0.3	-0.7	0
2 – Early Success	2	2.2	+0.2	2
3 – Scale & Replication	3	2.8	-0.2	3
4 – Institutionalization	4	2.8	-1.2	3
5 – Culture Transformation	4	4.0	0.0	4

\*E(v) = Expected value for *Training* maturity level

Figure 17. Survey results for the Training axis differed significantly from the model's projections in one area: organizations appeared to be launching their Six Sigma initiatives *before* they had completed their Six Sigma training.

Where there was sufficient data (that is, at maturity levels 1 through 3), the survey results aligned with the model in terms of the mean average and mode responses—with one caveat: Six Sigma initiatives appeared to be launched frequently before training had been completed. On phase exit, organizations in the Launch phase might have conformed more to the model hypothesis.

There was insufficient data (six or fewer responses) at maturity levels 4 and 5 to reach any conclusions.

## People

Figure 18 presents the question posed to determine maturity along the model's People axis.

Which best describes the employee view?		
People Maturity Level	Choices	
1	<input type="checkbox"/>	A few driven believers, the rest of the organization is mostly skeptical
2	<input type="checkbox"/>	More believers, initial results are helpful, but most are waiting to see if this will impact them.
3	<input type="checkbox"/>	Six Sigma is now widely seen as career development opportunity
4	<input type="checkbox"/>	Initial Black Belts have been repatriated back into their organization, often with enhanced career prospects and stature.
5	<input type="checkbox"/>	Majority of relevant employee base is on-board.

Figure 18. These question and answer choices were used to determine the maturity of employee perceptions regarding Six Sigma initiatives.

Figure 19 shows the survey results for the People axis by maturity level.

Overall Maturity Level	E(v)*	Survey Mean	Survey Mean Gap	Survey Mode
1 – Launch	1	1.3	+0.3	1
2 – Early Success	2	1.7	-0.3	2
3 – Scale & Replication	3	2.4	-0.6	2
4 – Institutionalization	4	3.5	-0.5	4
5 – Culture Transformation	4	4.7	-0.3	5
E(v) = Expected value for <i>People</i> maturity level				

Figure 19. The survey data differed significantly from the model's projection at Level 3, Scale & Replication.

The only significant variance between the survey results and the model projections came at the Scale & Replication level, where the data suggests that the statement “Six Sigma is *starting* to be viewed as a career development opportunity” is more accurate than the statement “Six Sigma is widely seen as a career development opportunity.” During the later stages of (or on exit from) the Scale & Replication phase, the initial survey statement may have rung truer. Because the respondents were midphase, the gap—which was just outside the acceptable variation—could have been viewed as acceptable.

## Project Selection

Figure 20 presents the question posed to determine maturity along the model's Project Selection axis.

Which best characterizes the typical projects being selected?		
Project Selection Maturity Level	Choices	
1	<input type="checkbox"/>	A burning platform is providing focus
2	<input type="checkbox"/>	Low-hanging fruit projects with high impact potential are plentiful
3	<input type="checkbox"/>	We are replicating the patterns of success we have experiences with previous projects
4	<input type="checkbox"/>	No more low-hanging fruit, projects are selected from a formal idea generation and evaluation process.

Figure 20. These question and answer choices were used to determine Project Selection maturity.

Figure 21 presents the survey results for the Project Selection axis by maturity level.

Overall Maturity Level	E(v)*	Survey Mean	Survey Mean Gap	Survey Mode
1 – Launch	1	1.6	+0.6	1
2 – Early Success	2	2.1	+0.1	2
3 – Scale & Replication	3	2.8	-0.2	2
4 – Institutionalization	4	3.5	-0.5	4
5 – Culture Transformation	4	2.7	-1.3	4

\*E(v) = Expected value for *Project Selection* maturity level

Figure 21. Project Selection is the defining axis of the Scale & Replication phase.

A plurality of the organizations in the Scale & Replication phase chose the phrase “Low-hanging-fruit projects with high potential impact are plentiful” to characterize the projects being selected. Given that Project Selection is the defining axis for the Scale & Replication phase, this anomalous mode response could be accounted for by the choice’s phrasing. In other words, the descriptor—“We are replicating the patterns of success we have experienced with previous low-hanging-fruit projects”—may have resonated the most with the Scale & Replication respondent pool.

### Financial Impact

Figure 22 presents the question posed to determine maturity along the model’s Financial Impact axis.

Which best describes the financial impact of your Six Sigma initiative currently?		
Financial Impact Maturity Level	Choices	
1	<input type="checkbox"/>	None yet, no projects completed
2	<input type="checkbox"/>	Some impact starting to be felt, typically cost reduction
3	<input type="checkbox"/>	Consistent measures of impact are in place
4	<input type="checkbox"/>	Strict controls are in place to ensure validation of results, measures evolving to include revenue impact.

Figure 22. These question and answer choices were used to determine the financial impacts of the Six Sigma initiatives at the respondents’ organizations.

Figure 23 presents the survey results for the Financial Impact axis by maturity level.

Overall Maturity Level	E(v)*	Survey Mean	Survey Mean Gap	Survey Mode
1 – Launch	1	1.4	+0.4	1
2 – Early Success	2	2.1	+0.1	2
3 – Scale & Replication	3	2.5	-0.5	2
4 – Institutionalization	4	3.5	-0.5	4
5 – Culture Transformation	4*	3.4	-0.6	3

\*E(v) = Expected value for *Financial Impact* maturity level

Figure 23. The respondents at the Scale & Replication level lagged on the Financial Impact axis—with many reporting no consistent way of measuring financial impacts.

In the Scale & Replication phase, the model assumes that consistent measures of financial impact are in place. The survey data suggests, however, that a more apt description of the Financial Impact axis in this phase would read, “Consistent measures of impact are *starting* to be put in place.” The variance at the Cultural Transformation level is vexing: either respondents’ organizations had not truly met the model’s standard of cultural transformation or cultural transformation had been achieved without the presence of any strict financial validation controls and/or revenue impact metrics.

Reporting

Figure 24 presents the question posed to determine maturity along the model’s Reporting axis.

Which best characterizes the state of reporting on your Six Sigma leadership support?		
Reporting Maturity Level	Choices	
1	<input type="checkbox"/>	None yet or anecdotal, no projects completed
2	<input type="checkbox"/>	No consistency yet, no roll-ups yet since the number of projects is still small
3	<input type="checkbox"/>	A critical mass of projects have been completed so that average impact per project, per belt, etc. can be predicted
4	<input type="checkbox"/>	Comparison of results for each organizational unit is done; aggregate corporate-wide results are reported
5	<input type="checkbox"/>	Multi-year history is available

Figure 24. The respondents selected among these options to indicate the reporting level for Six Sigma projects.

Figure 25 shows the survey results for the Reporting axis by maturity level.

Overall Maturity Level	E(v)*	Survey Mean	Survey Mean Gap	Survey Mode
1 – Launch	1	1.5	+0.5	1
2 – Early Success	2	2.4	+0.4	2
3 – Scale & Replication	3	3.4	+0.4	4
4 – Institutionalization	4	4.3	+0.3	5
5 – Culture Transformation	5	4.7	-0.3	5

\*E(v) = Expected value for *Reporting* maturity level

Figure 25. The survey data showed significant variation in the state of reporting in organizations at maturity levels 3 and 4.

The most popular (mode) responses for Scale & Replication and Institutionalization suggest that organizations were more sophisticated in their reporting than the model suggests. However, the mean averages' being in line with the model suggests considerable variation in the state of reporting for organizations at maturity levels 3 and 4.

Software

Figure 26 presents the question posed to determine maturity along the model's Software axis.

Which best characterizes your use of software technology to support your Six Sigma initiative?		
Software Maturity Level	Choices	
2	<input checked="" type="checkbox"/>	Focus is on statistical tools for the belt, Excel is commonly used
3	<input checked="" type="checkbox"/>	Focus now is on project tracking, consistent application of methodology, financial impact reporting
4	<input checked="" type="checkbox"/>	Project tracking has evolved to include knowledge and portfolio management
5	<input checked="" type="checkbox"/>	Integrated portfolio and strategy management enterprise-wide, replacement of legacy apps with vendor apps

Figure 26. The respondents answered these questions to characterize their software use in support of Six Sigma.

Figure 27 shows the survey results for the Software axis by maturity level.

Overall Maturity Level	E(v)*	Survey Mean	Survey Mean Gap	Survey Mode
1 – Launch	Undefined	2.7	--	3
2 – Early Success	2	3.5	+1.5	3
3 – Scale Replication	3	3.4	+0.4	4
4 – Institutionalization	4	4.2	+0.2	4
5 – Culture Transformation	5	4.0	-1.0	4
* E(v) = Expected value for <i>Software</i> maturity level				

Figure 27. The survey data demonstrated that organizations were typically farther along in their software usage in levels 2 and 3 than the model projected.

The initial model (since updated) clearly missed the mark in its characterization of software usage in the Early Success phase and, to a lesser extent, in Scale & Replication. Organizations in these phases are typically farther along with their software infrastructure for project tracking and management. Given that software is typically used to automate reporting, this is consistent with the responses provided for the Reporting axis.

## Strategy

Figure 28 presents the question posed to determine maturity along the model's Strategy axis.

Which best describes the state of your strategy alignment?		
Strategy Maturity Level	Choices	
0	<input type="checkbox"/>	None, not there yet
3	<input type="checkbox"/>	Use of strategy maps to ensure basic alignment between projects and corporate strategic priorities
4	<input type="checkbox"/>	Strategy maps maintained at corporate go beyond alignment and focus on project that impact strategic goals
5	<input type="checkbox"/>	Full closed loop of strategy to projects to roll-up of project results to strategic goals

Figure 28. The respondents chose among these answers to characterize the state of their organizations' strategy alignments.

Figure 29 shows the survey results for the Strategy axis by maturity level.

Overall Maturity Level	E(v)*	Survey Mean	Survey Mean Gap	Survey Mode
1 – Launch	Undefined	0.6	--	0
2 – Early Success	Undefined	2.0	--	0
3 – Scale Replication	3	2.9	-0.1	4
4 – Institutionalization	4	3.9	+0.1	4
5 – Culture Transformation	5	4.3	-0.7	4

\* E(v) = Expected value for Strategy maturity level

Figure 29. Many organizations were farther along with strategy alignment than the model predicted.

The mode average indicates that many organizations were farther along with strategy alignment than the model predicted. However, the mean (which is slightly below the expected value) suggests considerable variation for organizations at this maturity level.

## Beyond DMAIC

Figure 30 presents the question posed to determine maturity along the model's Beyond DMAIC (define-measure-align-improve-control) axis.

How would you describe the evolving role of DMAIC?		
Beyond DMAIC Maturity Level	Choices	
2	<input type="checkbox"/>	Just starting out
3	<input type="checkbox"/>	DMAIC has been mastered on a broad scale
4	<input type="checkbox"/>	DMAIC is mastered but DFSS, Lean, Kaizen, etc. are also an integrated part of the organization
5	<input type="checkbox"/>	We are beyond DMAIC, Six Sigma is being applied in spirit to all project portfolios – IT, new products, etc.

Figure 30. The respondents chose from among these phrases to describe the evolving role of DMAIC in their organizations.

Figure 31 shows the survey results for the Beyond DMAIC axis by maturity level.

Overall Maturity Level	E(v)*	Survey Mean	Survey Mean Gap	Survey Mode
1 – Launch	Undefined	2.1	--	2
2 – Early Success	Undefined	2.8	--	2
3 – Scale Replication	Undefined	3.5	--	4
4 – Institutionalization	4	4.1	+0.1	4
5 – Culture Transformation	5	4.5	-0.5	5

\* E(v) = Expected value for the *Beyond DMAIC* maturity level

Figure 31. The survey response data for the Beyond DMAIC axis was in line what the model projected.

Oracle's Instantis Six Sigma maturity model characterizes the evolution of DMAIC adoption and expansion only for companies at maturity levels 4 and 5. The survey response data was consistent with expected values.

### Culture

Figure 32 presents the question posed to determine maturity along the model's Culture axis.

How would characterize the impact of Six Sigma on your culture?		
Culture Maturity Level	Choices	
2	<input type="checkbox"/>	No impact yet
3	<input type="checkbox"/>	Starting to become ingrained in early adopter organizations
4	<input type="checkbox"/>	Has started to impact the company-wide culture
5	<input type="checkbox"/>	Six Sigma is embedded in the culture and extends to customers and business partners

Figure 32. To determine the cultural maturity of an organization's Six Sigma efforts, the survey asked the respondents to choose among these phrases to describe Six Sigma's impact.

Figure 33 shows the survey results for the Culture axis by maturity level.

Overall Maturity Level	E(v)*	Survey Mean	Survey Mean Gap	Survey Mode
1 – Launch	Undefined	2.2	--	2
2 – Early Success	Undefined	2.8	--	3
3 – Scale Replication	Undefined	3.0	--	3
4 – Institutionalization	Undefined	4.1	--	4
5 – Culture Transformation	5	4.5	-0.5	5

\* E(v) = Expected value for the *Culture* maturity level

Figure 33. Once again, the survey data was consistent with the model's expected value.

Oracle's Instantis Six Sigma maturity model characterizes the cultural impact only at the Culture Transformation level. The survey response data was consistent with the expected value.

## Maturity Model Survey Results by Maturity Level

The survey results table in Figure 34 brings together all the axis gap data (significant variances from the expected mean and mode values) from the previous section. The result is a clearer view of how well the maturity model predicted responses by maturity level.

	Launch		Early Success		Scale Replication		Institutionalization		Culture Transform	
	Mean	Mode	Mean	Mode	Mean	Mode	Mean	Mode	Mean	Mode
Significant Gaps:										
Leadership	Green	Green	Green	Yellow	Green	Yellow	Green	Green	Red	Green
Training	Red	Green	Green	Green	Green	Green	Grey	Grey	Grey	Grey
People	Green	Green	Green	Green	Red	Red	Green	Green	Green	Green
Project Selection	Green	Green	Green	Green	Green	Red	Green	Green	Grey	Grey
Financial Impact	Green	Green	Green	Green	Green	Red	Green	Green	Red	Red
Reporting	Green	Green	Green	Yellow	Green	Yellow	Green	Green	Green	Green
Software	Grey	Grey	Yellow	Yellow	Green	Yellow	Green	Green	Grey	Grey
Strategy	Grey	Grey	Grey	Grey	Green	Yellow	Green	Green	Grey	Grey
Beyond DMAIC	Grey	Grey	Grey	Grey	Grey	Grey	Green	Green	Green	Green
Culture	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Green	Green

Figure 34. Combining all the gap data from the study, this table provides a clear picture of how well the maturity model predicted responses by maturity level.

The results can be summarized as follows for each maturity level:

- Launch.** The survey results aligned with the model on all axes except Training. It appears that some organizations launched their Six Sigma initiatives without having completed significant training.
- Early Success.** The data indicates that leadership support was frequently stronger than the model predicted at this stage. Reporting and software infrastructure were also frequently more mature.
- Scale & Replication.** Organizations in this phase revealed tremendous variation along multiple axes. Although the mean averages were in line for all but one axis, the modes were consistently out of sync with the model. For this reason, axis descriptors will be adjusted to reflect these variances in the next version of Oracle's Instantis Six Sigma maturity model.
- Institutionalization.** The survey results were in line with the model hypothesis.
- Cultural Transformation.** Most companies that identified themselves as being at this level did not have "strict controls in place to ensure validation of results and/or measures evolving to include revenue impact," as hypothesized by the model. Thus, the appropriate financial criteria descriptor for cultural transformation will be revisited in the next version of the model.

## Conclusion

The survey results can be used to

- Benchmark Six Sigma initiative progress against industry norms
- Assess areas (axes) of relative maturity and strength as well as areas of weakness and performance gaps to refocus management attention and resource investments
- Garner additional support for Six Sigma initiatives
- Going forward, you should
- Review your perception of your Six Sigma initiative with respect to the five levels of maturity defined in Oracle's Instantis Six Sigma maturity model
- Compare your perception of your program's maturity with survey averages for each axis of maturity
- Determine areas where your initiative maturity exceeds the industry average by a significant margin as well as areas where it falls short
- Evaluate whether these gaps are intentional and appropriate, given your unique organizational context
- Develop action plans to bring areas where your performance gaps are not planned or appropriate in line with your plan
- Use the survey results to garner executive support for your action plan so that you can refocus management attention and resource investments



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