

# ROI – Building The Business Case For Professional Services Automation

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Professional Service Automation (PSA) systems empower Professional Services organizations with enhanced, automated & integrated capabilities to set-up, manage, control and report on client engagements. But how prepared is your firm to achieve a return on your systems investment? University of California Berkley and University of Southern California studies find 15-21% improvement in project execution and delivery costs by improving project management maturity one level. The purpose of this paper is to identify how to build your case for implementation of PSA tools in your firm and how leveraging the Oracle Project Management Key Performance Indicators (KPIs) assists in on going measurement of your business and charting a course of continuous process improvement.

## Significant 3<sup>rd</sup> Party Studies

As your organization prepares to spend significant money on new tools to help you better manage projects, how prepared are you to achieve a return on this investment? How do you obtain the planned benefits by making this investment?

In August 1997 Bradford K. Clark, at the University of Southern California, presented a paper summarizing his study across one hundred twelve software development projects titled: “THE EFFECTS OF SOFTWARE PROCESS MATURITY ON SOFTWARE DEVELOPMENT EFFORT”. Part of his conclusion states “Process Maturity was a significant factor affecting software development effort. After normalizing for the effects of other effort influences, a one-increment change in the rating of Process Maturity resulted in a 15% to 21% reduction in effort.”

In October 2002 Dr. William Ibbs<sup>1</sup>, University of California, Berkeley, presented a summary of his 20-plus year study of over 50 firms, including many prominent engineering and consulting firms, to the Silicon Valley Project Management Institute (PMI) Chapter. The title of his presentation was “The \$\$\$ Value of PM (Can Good PM Cost Less?)”. Dr. Ibbs identifies increased PM Maturity as leading to 1) Better cost and schedule management, 2) Less expensive PM and 3) Improved *PM/ROI*<sup>SM</sup>

Dr. Ibbs defined a Core Competency as something that 1) Provides a benefit to customers, 2) Must be sustainable and 3) Continuously improved. The continuously improved concept means done ahead of the competition (not following) and the improvements are items that customers desire, such as higher quality or lower cost. He provided an example of a company that improved both cost and schedule performance by 10% while having a savings of \$150,000+ on project delivery costs. His conclusions<sup>1</sup> are “1) Good PM can cost less (<10%), 2) Good PM can give higher Cost Performance Index (CPI), Schedule Performance Index (SPI) results on average, and 3) Good PM can give more predictable CPI, SPI.

## Project Management Maturity

Dr. Ibbs’ “Berkeley Project Management Maturity Model”<sup>1</sup> and PMI’s “OPM3”<sup>2</sup> define the project management maturity using similar steps. A basic model that combines these and other models, such as the Software Engineering Institute (SEI) and the Carnegie Mellon University Capability Maturity Model (CMM) can be summarized as follows:

- A level 1 organization, largely “reinvents the wheel” every time a new program/project is started. Since there are no agreed upon methods for conducting PM, the success of the project relies almost completely on the “heroics” of key individuals to keep the project on track.
- A level 2 organization has gotten tired of getting burned by projects failing to finish on time, within budget, and not accomplishing the intended project scope/quality. These organizations have taken the first steps towards globally managing the projects in their project portfolio, but the processes, PSA tools and metrics are still too new and poorly understood to make a dramatic impact.
- A level 3 organization, has taken the necessary steps to train their PM Teams in the PM processes, PSA tools and metrics. Additionally, they have implemented effective enforcement mechanisms. Adhering to these processes enables PM Teams to reap the benefits of sound financial management, scheduling, risk management, project communications, etc. The organization is beginning to see profound project performance improvement.
- At level 4, an organization has begun to measure the effectiveness of their PM processes and capture important performance data. The organization is capturing their best practices and making those available to the project teams. Performance improves with problems quickly detected and corrected. Manual processes become PSA enabling technology – PM applications, collaboration tools, knowledge management solutions.
- At level 5, the enterprise has achieved near optimal processes and therefore near optimal cycle time, costs, and quality. PSA tools capture and compare project data from throughout the organization. The firm’s culture rewards individual contributions and suggestions for productivity enhancements. Processes change at the rate necessary to keep ahead of the industry and technological advances. With low costs, high quality and reduced cycle time, a level 5 organization is extremely competitive in their market place.

## **Building the Business Case**

Begin with a frank appraisal of where your firm is today. Initial appraisal using internal resources and tools such as OPM3<sup>2</sup> from PMI, provides an objective baseline to build from. External consulting firm staff familiar with professional service organizations and PSA efforts or specialized consulting firms, such as Ibbs Consulting, provides comparisons of your firm to similar businesses. With this information baseline, identification of the benefit areas for PSA begins with the goal of order of magnitude improvement to the business model and process flow.

Professional Services Automation empowers the Professional Services organization by providing a set of enhanced, automated and integrated capabilities to set-up, manage, control and report on client engagements. The span of PSA includes the initial opportunity identification, through the proposal and planning processes, staffing and executing the work, collection of costs, recognition of revenue, invoicing the client, knowledge management and collaboration with both the internal team and the client representatives. PSA provides a single end-to-end, scalable system to manage the professional services business. This allows for growth of the business, reduces response time during the sales cycle, allows the Project Management Office (PMO) to foster innovation and increases quality of projects, better management of employees and subcontractor resources, and integrates intellectual capital management with the delivery of professional services. A wonderful end goal to work towards but a firm struggling at Level 1 must “get real”. Out of all this, where is a realistic place to start?

Start with your current Services Profit and Loss projections.

### Vision Professional Services Projections

	2006	2007	2008	2009	2010	2011	2012	2013
<b>Services Revenue Growth Rate</b>	Baseline	15.00%	20.00%	15.00%	15.00%	10.00%	10.00%	10.00%
<b>Net Sales - Services</b>	50,000	57,500	69,000	79,350	91,253	100,378	110,416	121,457
<b>Cost of Sales</b>								
Internal Billable (30%)	15,000	17,250	20,700	23,805	27,376	30,113	33,125	36,437
Internal non-utilized (8%)	4,000	4,600	5,520	6,348	7,300	8,030	8,833	9,717
Subcontractors (25%)	12,500	14,375	17,250	19,838	22,813	25,094	27,604	30,364
Other (6%)	3,000	3,450	4,140	4,761	5,475	6,023	6,625	7,287
<b>Total Cost of Sales</b>	<b>34,500</b>	<b>39,675</b>	<b>47,610</b>	<b>54,752</b>	<b>62,964</b>	<b>69,261</b>	<b>76,187</b>	<b>83,805</b>
<b>Gross Margin Services</b>	15,500	17,825	21,390	24,599	28,288	31,117	34,229	37,652
<b>Percent</b>	<b>31.0%</b>	<b>31.0%</b>	<b>31.0%</b>	<b>31.0%</b>	<b>31.0%</b>	<b>31.0%</b>	<b>31.0%</b>	<b>31.0%</b>
<b>GS&amp;A</b>								
Service Operations Payroll	4,500	5,513	7,166	8,779	10,754	12,367	14,222	16,355
Practice Overhead	2,500	2,688	2,956	3,178	3,416	3,587	3,766	3,955
Sales Commission	4,185	4,813	5,775	6,642	7,638	8,402	9,242	10,166
<b>Total GS&amp;A</b>	<b>11,185</b>	<b>13,013</b>	<b>15,898</b>	<b>18,598</b>	<b>21,808</b>	<b>24,356</b>	<b>27,230</b>	<b>30,476</b>
<b>Net Services Contribution</b>	4,315	4,812	5,492	6,000	6,480	6,761	6,999	7,176
<b>Percent</b>	<b>8.6%</b>	<b>8.4%</b>	<b>8.0%</b>	<b>7.6%</b>	<b>7.1%</b>	<b>6.7%</b>	<b>6.3%</b>	<b>5.9%</b>

There are four success measures for your PSA implementation: Revenue Production, Productivity Enhancement, Risk Reduction and Improved Cycle Times. In all cases these should be valid measurement criteria to determine success and measure the ROI of your investment. Using the baseline assessment of your firm, evaluate where the greatest weaknesses and pain points lie. If we can not do it all initially (no one can!) what do we start with?

Looking at the example of Vision Professional Services:

- High subcontractor use is due to poor visibility into the future work pipeline and difficulty in resource scheduling (quick, high cost solution). Better forecasting of future demand and better scheduling of internal resources will reduce subcontractor use with employees. There is a margin improvement using internal resources, resulting in lower cost and increased gross margin for services.
- Utilization of existing resources is difficult to evaluate due to people charging internal development projects and sales when on the bench instead of appearing as available time. Everyone knows bench time is high but the numbers are difficult to validate. That problem limits hiring more internal employee resources.
- Struggling to be a Level 1 project maturity even with the recent investment in establishment of a PMO and hiring PMI certified project managers. No tools beyond Excel and a shared data drive. Change agents in place, just need the tools.
- Service Operations cost and head count growing faster than sales. No scaling of back office process, throwing more bodies at the problem to stay up with business growth.

### Vision Professional Services Projections

	2006	2007	2008	2009	2010	2011	2012	2013
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Internal Billable (30%)	15,000	17,250	20,700	23,805	27,376	30,113	33,125	36,437
Internal non-utilized (8%)	4,000	4,600	5,520	6,348	7,300	8,030	8,833	9,717
Subcontractors (25%)	12,500	14,375	17,250	19,838	22,813	25,094	27,604	30,364
Other (6%)	3,000	3,450	4,140	4,761	5,475	6,023	6,625	7,287
Improve Utilization		-	-	-	(46)	(100)	(110)	(121)
Improve Effectiveness (internal)		-	-	(1,190)	(2,738)	(3,011)	(3,312)	(3,644)
Subcontractor to Employee				(218)	(502)	(552)	(607)	(668)
<b>Total Cost of Sales</b>	<b>34,500</b>	<b>39,675</b>	<b>47,610</b>	<b>53,343</b>	<b>59,679</b>	<b>65,597</b>	<b>72,157</b>	<b>79,372</b>
<b>Gross Margin Services</b>	<b>15,500</b>	<b>17,825</b>	<b>21,390</b>	<b>26,007</b>	<b>31,573</b>	<b>34,781</b>	<b>38,259</b>	<b>42,085</b>
<b>Percent</b>	<b>31.0%</b>	<b>31.0%</b>	<b>31.0%</b>	<b>32.8%</b>	<b>34.6%</b>	<b>34.7%</b>	<b>34.7%</b>	<b>34.7%</b>
<b>GS&amp;A</b>								
Service Operations Payroll	4,780	6,400	8,320	10,192	12,485	14,358	16,512	18,988
Practice Overhead	2,627	2,400	2,640	2,838	3,051	3,203	3,364	3,532
Sales Commission	3,067	4,813	5,775	7,022	8,525	9,391	10,330	11,363
Slow SO Payroll Growth		-	-	(75)	(158)	(244)	(335)	(431)
<b>Total GS&amp;A</b>	<b>10,474</b>	<b>13,613</b>	<b>16,735</b>	<b>19,977</b>	<b>23,903</b>	<b>26,708</b>	<b>29,870</b>	<b>33,453</b>
<b>Net Services Contribution</b>	<b>5,026</b>	<b>4,212</b>	<b>4,655</b>	<b>6,030</b>	<b>7,670</b>	<b>8,073</b>	<b>8,389</b>	<b>8,632</b>
<b>Percent</b>	<b>10.1%</b>	<b>7.3%</b>	<b>6.7%</b>	<b>7.6%</b>	<b>8.4%</b>	<b>8.0%</b>	<b>7.6%</b>	<b>7.1%</b>
Total change impact				-	(1,483)	(3,443)	(3,908)	(4,864)

Make projection adjustments based on your analysis and ability to change.

The assumptions for the cost reductions include modest improvement in Service Operations (1 head count growth reduction per year after full roll out), modest improvement in utilization (1% reduction) with the big changes reflected in movement of subcontractor work to internal resources (10% of subcontractor growth with a 22% margin improvement) and a 10% effectiveness improvement only on internal resources due to project management maturity improvement.

Build out implementation cost estimates, additional software and support costs, training, change management, travel and all the other estimated items, including contingency, combine into a summary presentation across multiple years. This example uses a roadmap of phased changes, in an existing Oracle EBS environment. Scope consists of existing HR, Procurement, Project Cost and Billing module updates combined with new Oracle Project Management and Resource Management module rollouts. Additional Oracle software licenses and maintenance costs are not detailed in this analysis; it is assumed these costs have already been incurred.

**PROJECT RETURN ON INVESTMENT**

<b>Project Benefits (Describe Above)</b>	<b>Year 0</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Total</b>
Increased GPM		\$ 1,408,463	\$ 3,285,090	\$ 3,663,788	\$ 4,030,167	\$ 4,433,183	\$ 16,820,690
Decreased Costs		75,000	157,500	244,125	335,081	430,585	1,242,292
Other		-	-	-	-	-	-
<b>Total Benefits</b>		<b>\$ 1,483,463</b>	<b>\$ 3,442,590</b>	<b>\$ 3,907,913</b>	<b>\$ 4,365,248</b>	<b>\$ 4,863,769</b>	<b>\$ 18,062,982</b>

<b>Project Costs</b>			<b>Year 0</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Total</b>
Initial Investment			\$ 35,000	\$ 112,000					147,000
Internal IT Implementation Cost	<i>Hours</i>	<i>Rate</i>							
PM	3,600	\$ 75	135,000	135,000					270,000
BA	7,500	\$ 75	337,500	225,000					562,500
Developer	2,200	\$ 75	45,000	120,000					165,000
DBA	400	\$ 75	26,250	3,750					30,000
Other	-	\$ 75	-	-					-
<b>Total Hrs</b>	<b>13,700</b>								
<b>Total Internal IT Implementation Cost</b>			<b>543,750</b>	<b>483,750</b>					<b>1,027,500</b>
Outside Consulting			621,000	460,000					1,081,000
Training - Core Team			45,000	45,000					90,000
Training - Organizational Development			30,000	40,000					70,000
New Software Support Costs			-	12,000	42,000	42,000	42,000	42,000	180,000
New IT Help Desk/BA Support			-	50,000	100,000	105,000	110,250	115,763	481,013
Patch/Upgrade IT Internal Cost			-	-	100,000	105,000	110,250	115,763	431,013
Other			-	-	-	-	-	-	-
Contingency			123,975	109,075	24,200	25,200	26,250	27,353	336,053
<b>Total IT Cost</b>			<b>1,398,725</b>	<b>1,311,825</b>	<b>266,200</b>	<b>277,200</b>	<b>288,750</b>	<b>300,878</b>	<b>3,773,578</b>
Business Implementation Cost	<i>Hours</i>	<i>Rate</i>							
Bus PM	4,000	\$ 50	100,000	100,000					200,000
Bus PA	4,000	\$ 50	100,000	100,000					200,000
Accounting	900	\$ 50	25,000	20,000					45,000
SME	3,800	\$ 50	130,000	60,000					190,000
<b>Total Hrs</b>	<b>12,700</b>								
Other			90,000	90,000					180,000
Patch/Upgrade Business Internal Cost			-	-	50,000	52,500	55,125	57,881	215,506
Contingency			44,500	37,000	5,000	5,250	5,513	5,788	103,051
<b>Total Business Cost</b>			<b>489,500</b>	<b>407,000</b>	<b>55,000</b>	<b>57,750</b>	<b>60,638</b>	<b>63,669</b>	<b>1,133,557</b>
<b>Total Project Costs</b>			<b>\$ 1,888,225</b>	<b>\$ 1,718,825</b>	<b>\$ 321,200</b>	<b>\$ 334,950</b>	<b>\$ 349,388</b>	<b>\$ 364,547</b>	<b>\$ 4,907,134</b>

<b>Net Project Cash Flows</b>	<b>Year 0</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Total</b>
<b>Net Cash Flows</b>	<b>\$ (1,888,225)</b>	<b>\$ (235,363)</b>	<b>\$ 3,121,390</b>	<b>\$ 3,572,963</b>	<b>\$ 4,015,860</b>	<b>\$ 4,499,222</b>	<b>\$ 13,085,848</b>

1.) Total Initial Project Costs	\$ 1,888,225
2.) Cost of Capital	15%
<b>Net Present Value</b>	<b>\$6,217,045</b>
3.) Internal Rate of Return	85%

Of the four measurement areas, only a modest productivity enhancement drove the numbers. Additional opportunity still exists in the Revenue Production, Productivity Enhancement, Risk Reduction and Improved Cycle Times areas.

Develop a long range plan to move your organization up the project management maturity level, targeting the four measurement areas and implementing only functions and features needed for success. Plan training programs to increase the understanding and skills of your Project Management team, not just in the tools, but in application of the tools to better manage your projects. Enable additional features and functions as your project management team matures.

## Leveraging Oracle Project Management KPIs

Key Performance Indicators can assist in assessing the present state of the business and to prescribe a course of action on an on-going basis. Real-time monitoring of KPI's allows maximization of performance over the shortest time period. Oracle Project Management, and Daily Business Intelligence, provides hundreds of KPI measurements for utilization by your team. Remember to be SMART in your use of these important tools:

Specific Measurable Achievable Realistic Timely

Plan on updating the maturity measurement of your organization on a regular basis to determine where you have been successful in your improvement and identify areas of opportunity for future improvement.

Oracle Project Management provides powerful access to pre-defined measures for use in establishing your own project measures. Follow the examples to define and create your own relevant measures for your specific organization.

Screen images shown capture Oracle Project Management Release 12 formatting and presentation but the functionality remains the same in Release 11.5.10 with patches applied through Roll Up Patch 4 (RUP4) for Projects.

**ORACLE** Projects

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**Project List**

TIP Unless specified otherwise, all amounts are in Project Functional Currency, Global Calendar (Accounting (Month)) Actions Create Project Go

**Views**

View Key Performance Areas Status Go Personalize Simple Search

Select Projects: Add to Project Set Export Previous 1-25 Next 25

Select Project Number	Project Name	Organization	Project Manager	Financial	Schedule	Health
<input type="checkbox"/> ABC	<a href="#">ABC-Financials Implementation</a>	Services-East		✓	✓	✓
<input type="checkbox"/> ABCHR101	<a href="#">ABC HR Implementation</a>	Services-East	<a href="#">Hamilton, Ms. Anne</a>	⚠	⚠	✓
<input type="checkbox"/> B100	<a href="#">Building 100 Construction</a>	Services-Construction	<a href="#">Marlin, Ms. Amy</a>	✓	✓	✓
<input type="checkbox"/> CP101	<a href="#">Cost Plus</a>	Services-West	<a href="#">Marlin, Ms. Amy</a>	⚠	✓	✓
<input type="checkbox"/> Construction Design	<a href="#">Construction with Retainage</a>	Services-East		✓	✓	✓
<input type="checkbox"/> Cost Reimbursable	<a href="#">Cost Reimbursable</a>	Services-East	<a href="#">Hamilton, Ms. Anne</a>	⚠	✓	✓
<input type="checkbox"/> E&C-100	<a href="#">Engineering + Construction-100</a>	Services-Construction	<a href="#">Marlin, Ms. Amy</a>	⚠	✗	✓
<input type="checkbox"/> FP101	<a href="#">Fixed Price</a>	Services-East	<a href="#">Jameson, Ms. Marcia</a>	⚠	✓	✓
<input type="checkbox"/> Feasibility Study	<a href="#">Feasibility Study-Imaging</a>	Services-East	<a href="#">Cochran, Mr. Bob</a>	✗	✗	✓
<input type="checkbox"/> Global Solution	<a href="#">Global Solution</a>	Services-East	<a href="#">Hamilton, Ms. Anne</a>	✓	✓	✓
<input type="checkbox"/> OKE Construction	<a href="#">OKE Construction</a>	Services-East	<a href="#">Heather, Ms. Emily</a>	✓	✓	✓
<input type="checkbox"/> OKE Services	<a href="#">OKE Services</a>	Services-East		✓	✓	✓
<input type="checkbox"/> Overhead	<a href="#">Overhead</a>	Executive Office	<a href="#">Kim, Sandy</a>	✓	✓	✓

Project List screen showing KPA indicators for selected projects

Follow the screen examples below to create your own Key Performance Areas (KPA) and KPI measures.

Projects: Key Performance Areas Lookups

Type: PA\_PERF\_KEY\_AREAS  
 Meaning: Key Performance Areas  
 Application: Projects  
 Description: Key Performance Areas

Access Level:  
 User  
 Extensible  
 System

Effective Dates: Enabled

Code	Meaning	Description	Tag	From	To	Enabled	[ ]
KPA_1	Financial	Exceptions for key finan	2	21-MAR-2004		<input checked="" type="checkbox"/>	
KPA_2	Schedule	Exceptions for key sche	3	21-MAR-2004		<input checked="" type="checkbox"/>	
KPA_3	Health	Exceptions for key mea	4	21-MAR-2004		<input checked="" type="checkbox"/>	
KPA_4	Key Performance Area		5	21-MAR-2004		<input type="checkbox"/>	
KPA_5	Key Performance Area		6	21-MAR-2004		<input type="checkbox"/>	
						<input type="checkbox"/>	
						<input type="checkbox"/>	
						<input type="checkbox"/>	
						<input type="checkbox"/>	
						<input type="checkbox"/>	

Enable Key Performance Areas with names and descriptions

Projects: Performance Indicators Lookups

Type: PA\_PERF\_INDICATORS  
 Meaning: Performance Indicators  
 Application: Projects  
 Description: Performance Indicators

Access Level:  
 User  
 Extensible  
 System

Effective Dates: Enabled

Code	Meaning	Description	Tag	From	To	Enabled	[ ]
INDICATOR_1	Critical	Critical	1	21-MAR-2004		<input checked="" type="checkbox"/>	
INDICATOR_2	Very Severe	Very Severe	2	21-MAR-2004		<input type="checkbox"/>	
INDICATOR_3	Somewhat Severe	Somewhat Severe	3	21-MAR-2004		<input type="checkbox"/>	
INDICATOR_4	At Risk	At Risk	4	21-MAR-2004		<input checked="" type="checkbox"/>	
INDICATOR_5	On Track	On Track	5	21-MAR-2004		<input checked="" type="checkbox"/>	
						<input type="checkbox"/>	
						<input type="checkbox"/>	
						<input type="checkbox"/>	
						<input type="checkbox"/>	
						<input type="checkbox"/>	

Enable the Performance Indicator names and associated indicator symbols

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**Key Performance Area Scoring Rules** [Create Scoring Rule](#)

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**Search**  
 Note that the search is case insensitive  
 Key Performance Area:  Scoring Rule:

Key Performance Area	Scoring Rule	Description	Effective From	Effective To	Update	Delete
Financial	Financial KPA	Used for contract type projects	25-May-2000			
Health	Health - KPA	Use for contract project type	25-May-2000			
Schedule	Schedule KPA	Used for contract project types	25-May-2000			

[Create Scoring Rule](#)

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Create Scoring Rules for each KPA

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Key Performance Area Scoring Rules >

**Update Key Performance Area Scoring Rule**

\* Indicates required field

Key Performance Area:

\* Name:

Description:

Precision:

\* Effective From:    
(example: 27-Feb-2006)

Effective To:

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**Threshold Levels**

Level Number	Threshold Range		Status Indicator
	From	To	
1	<input type="text" value="0"/>	<input type="text" value="150"/>	<input type="text" value="On Track"/>
2	<input type="text" value="151"/>	<input type="text" value="225"/>	<input type="text" value="At Risk"/>
3	<input type="text" value="226"/>	<input type="text" value="450"/>	<input type="text" value="Critical"/>
4	<input type="text"/>	<input type="text"/>	<input type="text" value="On Track"/>
5	<input type="text"/>	<input type="text"/>	<input type="text" value="On Track"/>

**TIP** Define atleast one threshold level for the scoring rule.

Define KPA threshold levels – this example for the Financial KPA



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Key Performance Area Scoring Rules >

**Update Key Performance Area Scoring Rule**

\* Indicates required field Cancel Apply

Key Performance Area: Health

\* Name: Health - KPA

Description: Use for contract project type

Precision: 1

\* Effective From: 25-May-2000

Effective To:

---

**Threshold Levels**

Level Number	Threshold Range		To Status Indicator
	From	To	
1	0	150	On Track
2	151	300	At Risk
3	301	1000	Critical
4			On Track
5			On Track

✓ TIP Define atleast one threshold level for the scoring rule. Cancel Apply

Define KPA threshold levels – this example is for the Health KPA

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Key Performance Area Scoring Rules >

**Update Key Performance Area Scoring Rule**

\* Indicates required field Cancel Apply

Key Performance Area: Schedule

\* Name: Schedule KPA

Description: Used for contract project types

Precision: 1

\* Effective From: 25-May-2000

Effective To:

---

**Threshold Levels**

Level Number	Threshold Range		To Status Indicator
	From	To	
1	20	100	On Track
2	101	150	At Risk
3	151	300	Critical
4			On Track
5			On Track

✓ TIP Define atleast one threshold level for the scoring rule. Cancel Apply

Define KPA threshold levels – this example is for the Schedule KPA

ORACLE Projects Diagnostics Home Logout Preferences Help Personalize Page

Performance Rules Create Performance Rule

**Search**  
 Note that the search is case insensitive  
 Key Performance Area: All  Performance Rule:

Key Performance Area	Performance Rule	Description	Measure	Period Type	Effective From	Effective To	Update	Delete
Financial	At Risk Revenue	At Risk Revenue Management	ITD Revenue at Risk	GL Calendar	25-May-2000			
Financial	Cost Performance Index (CPI)	The cost efficiency factor representing the relationship between the actual costs expended and the value of the physical work performed	ITD Cost Performance Index	Global Calendar	25-May-2000			
Financial	Cost Variance (CV)	Cost variance is the difference between the budgeted and actual cost of work performed - BCWP less ACWP.	ITD Cost Variance	Global Calendar	25-May-2000			
Financial	Forecast Cost Variance %	Forecast cost variance is the difference between the forecast and actual cost of work performed.	ITD Forecast Cost Variance %	Global Calendar	25-May-2000			
Financial	Nonbillable Cost % of Total Cost	Percentage of Nonbillable Costs against Total Cost	ITD Nonbillable Cost % of Total Cost	Global Calendar	25-May-2000			
Financial	Percent Complete	% Complete is a measure of performance based on the actual amount of a particular measure used to date and the estimated amount necessary to complete the task or project.	ITD % Complete	Global Calendar	25-May-2000			
Financial	Percent Money Spent	% Spent is a measure of performance based on the actual amount of a particular measure used to date and the amount that was originally planned for consumption.	ITD % Spent	Global Calendar	25-May-2000			
Health	ITD Margin % Variance	ITD Margin % Variance	ITD Margin % Variance	Global Calendar	25-May-2000			
Health	ITD Outstanding Receivables	ITD Outstanding Receivables	ITD Outstanding Receivables	Global Calendar	25-May-2000			
Schedule	Schedule Performance Index (SPI)	The ratio of work performed to work scheduled (BCWP/BCWS).	ITD Schedule Performance Index	Global Calendar	25-May-2000			
Schedule	Schedule-Baseline Finish Variance	Schedule-Baseline Finish Variance	Schedule-Baseline Finish Variance	Global Calendar	25-May-2000			
Schedule	Schedule-Estimated Finish Variance	Schedule-Estimated Finish Variance	Schedule-Estimated Finish Variance	Global Calendar	25-May-2005			
Schedule	Schedule-Prior Published Version Finish Variance	Schedule-Prior Published Version Finish Variance	Schedule-Prior Published Version Finish Variance	Global Calendar	25-May-2000			

Update or create Performance Rules for use across projects.

Create Performance Rules like the following examples created from Oracle pre-defined measures. Create your own rules using the additional custom defined measures for your specific needs.

ORACLE Projects Diagnostics Home Logout Preferences Help Personalize Page

Performance Rules >

**Update Performance Rule**

\* Indicates required field Cancel Apply

Key Performance Area: Financial

\* Name: At Risk Revenue

Description: At Risk Revenue Management

\* Measure: ITD Revenue at Risk

Period Type: GL Calendar

Precision: 1

\* Effective From: 25-May-2000 (example: 27-Feb-2006)

Effective To:

Threshold Levels					
Level Number	Threshold Range		Status To Indicator	Report as Exception	Weighting
	From	To			
1	-999999999	0	On Track	<input checked="" type="checkbox"/>	10
2	1	1000	At Risk	<input checked="" type="checkbox"/>	50
3	1001	999999999	Critical	<input checked="" type="checkbox"/>	90
4			On Track	<input checked="" type="checkbox"/>	
5			On Track	<input checked="" type="checkbox"/>	

TIP Define atleast one threshold level for the performance rule.

Cancel Apply

Create Performance Rule for At Risk Revenue

Performance Rules >

**Update Performance Rule**

\* Indicates required field Cancel Apply

Key Performance Area: Health

\* Name: ITD Outstanding Receivables

Description: ITD Outstanding Receivables

\* Measure: ITD Outstanding Receivables

Period Type: Global Calendar

Precision: 1

\* Effective From: 25-May-2000

Effective To:

Threshold Levels					
Level Number	Threshold Range		Status To Indicator	Report as Exception	Weighting
	From	To			
1	0	1000	On Track	<input checked="" type="checkbox"/>	10
2	1001	50000	At Risk	<input checked="" type="checkbox"/>	50
3	50001	100000	Critical	<input checked="" type="checkbox"/>	75
4			On Track	<input checked="" type="checkbox"/>	
5			On Track	<input checked="" type="checkbox"/>	

**TIP** Define atleast one threshold level for the performance rule.

Cancel Apply

Create Performance Rule for ITD Outstanding Receivables

ORACLE® Projects Diagnostics Home Logout Preferences Help Personalize Page

Performance Rules >

**Update Performance Rule**

\* Indicates required field Cancel Apply

Key Performance Area: Schedule

\* Name: Schedule-Estimated Finish Variance

Description: Schedule-Estimated Finish Variance

\* Measure: Schedule-Estimated Finish Variance

Period Type: Global Calendar

Precision: 1

\* Effective From: 25-May-2005

Effective To:

Threshold Levels					
Level Number	Threshold Range		Status To Indicator	Report as Exception	Weighting
	From	To			
1	0	10	On Track	<input checked="" type="checkbox"/>	10
2	11	20	At Risk	<input checked="" type="checkbox"/>	50
3	21	10000	Critical	<input checked="" type="checkbox"/>	75
4			On Track	<input checked="" type="checkbox"/>	
5			On Track	<input checked="" type="checkbox"/>	

**TIP** Define atleast one threshold level for the performance rule.

Cancel Apply

Create Performance Rule for Schedule – Estimated Finish Variance

**ORACLE Projects** Diagnostics Home Logout Preferences Help Personalize Page

Performance Rules >

**Update Performance Rule**

\* Indicates required field

Key Performance Area: Schedule

\* Name: Schedule Performance Index (SPI)

Description: The ratio of work performed to work scheduled (BCWP/BCWS).

\* Measure: ITD Schedule Performance Index

Period Type: Global Calendar

Precision: 0.01

\* Effective From: 25-May-2000

Effective To:

**Threshold Levels**

Level Number	Threshold Range		Status To Indicator	Report as Exception	Weighting
	From	To			
1	-99999	0.95	Critical	<input checked="" type="checkbox"/>	75
2	0.96	0.99	At Risk	<input checked="" type="checkbox"/>	50
3	1	9999	On Track	<input checked="" type="checkbox"/>	10
4			On Track	<input checked="" type="checkbox"/>	
5			On Track	<input checked="" type="checkbox"/>	

TIP Define atleast one threshold level for the performance rule.

Create Performance Rule for Schedule Performance Index.

http://hcdevatlorc02.hitachiconsulting.com:8007 - Search and Select List of Values - Microsoft In...

Search and Select: Measure

Search

To find your item, select a filter item in the pulldown list and enter a value in the text field, then select the "Go" button.

Search By: Measure

Results

Select	Quick Select	Measure
<input type="radio"/>		Current Forecast To Prior Forecast Workplan Effort Variance
<input type="radio"/>		Forecast Workplan Effort Variance
<input type="radio"/>		ITD % Complete
<input type="radio"/>		ITD % Spent
<input type="radio"/>		ITD % Spent Effort
<input type="radio"/>		ITD % Spent Equipment Effort
<input type="radio"/>		ITD % Spent People Effort
<input type="radio"/>		ITD Accrued Revenue
<input type="radio"/>		ITD Activity Calculated Custom Measure 1
<input type="radio"/>		ITD Activity Calculated Custom Measure 10

When creating the various Performance Rules, the Measure is generally going to be from the Oracle predefined list, as illustrated. You can define a limited number of new measures in each core area.

**ORACLE Projects** Project List Diagnostics Home Logout Preferences Help Personalize Page

Project Resources Workplan Control Financial Reporting  
 Home Overview Directory Attachments Relationships Setup

Home: Feasibility Study Imaging (Feasibility Study) Shortcuts Project Go

Customer **Imaging Innovations, Inc.** Sales Opportunity Value **20,000,000.00 USD**  
 Organization **Services East** Project Manager **Cochran, Mr. Bob**  
 Project Type **Cost Plus** Start Date **01-Jan-2000**  
 Status **Active** Finish Date **31-Dec-2008**

General Tasks And Deliverables Change Control Performance

**Key Performance Area Summary** Refresh Key Performance Areas

Overall Performance Status ✘

Key Performance Area	Status	Score	Score Threshold		Critical		At Risk		On Track		Last Recorded Date
			From	To	Count	Score	Count	Score	Count	Score	
Financial	<span style="color: red;">✘</span>	251	226	450	1	90	1	151	1	10	10 01-Aug-2006 12:13:48
Health	<span style="color: green;">✔</span>	75	0	150	1	75	0	0	0	0	0 01-Aug-2006 12:13:48
Schedule	<span style="color: red;">✘</span>	160	151	300	2	150	0	0	1	1	10 01-Aug-2006 12:13:48

Show Status Indicator Keys

Use KPA's in various screens across Project Management, such as the initial Project opening page

Project Performance Reporting provides additional opportunity to leverage and display your KPI's.

**ORACLE Projects** Project Feasibility Study Imaging (Feasibility Study) Project List Diagnostics Home Logout Preferences Help Personalize Page

Project Resources Workplan Control Financial Reporting  
 Performance Exceptions Status Reports Setup

Performance Overview Printable Page View Task Summary Go

Show Details and Parameters

**Cumulative Margin Percent**

**Cumulative Actual Cost**

**Financial Performance** Export

Indicator	At Completion			Period To Date			Inception To Date		
	Budget	Forecast	Variance	Budget	Actual	Variance	Budget	Actual	Variance
Revenue	27,175,400.00			0.00	321,754.41		27,175,400.00	23,525,282.68	-13.43%
Cost	19,756,500.00			0.00	272,803.82		19,756,500.00	22,550,761.83	14.14%
Margin	7,418,900.00			0.00	46,950.59		7,418,900.00	974,520.85	-66.86%
Margin %	27.3%				15.21%			4.14%	<span style="color: red;">✘</span> -23.16
People Effort	0			0	64		0	5574	

Define and use the indicators to enhance your performance report views and quickly call attention to important information about the project



**ORACLE® Projects**  
Project Feasibility Study-Imaging (Feasibility Study)

Project List Diagnostics Home Log

**Project Resources Workplan Control Financial Reporting**

Performance Exceptions Status Reports **Setup**

Reporting: Setup >

**Key Performance Area Scoring Rules and Notification**

**Key Performance Area Scoring Rules**

To enable status reporting for overall project performance exceptions, select a scoring rule for each key performance area.

**Key Performance Area Scoring Rules**

Financial	<input type="text" value="Financial KPA"/>	<input type="button" value="Search"/>
Schedule	<input type="text" value="Schedule KPA"/>	<input type="button" value="Search"/>
Health	<input type="text" value="Health - KPA"/>	<input type="button" value="Search"/>

**Notification**

To enable reporting of exceptions to specific recipients, select a report type and choose the notification Recipients icon.

<b>Report Type</b>	<input type="text"/>	<input type="button" value="Search"/>	<b>Notification Recipients</b>	<input type="button" value="Help"/>
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Setup the KPA's to be used under the Reporting > Setup tabs.

**ORACLE® Projects**  
Project Feasibility Study-Imaging (Feasibility Study)

Project List Diagnostics Home Log

**Project Resources Workplan Control Financial Reporting**

Performance Exceptions Status Reports **Setup**

Reporting: Setup >

**Performance Page Layouts**

Page Type	Layout	Preview
Period Analysis	<input type="text" value="Projects: Reporting: Defi"/>	<input type="button" value="Search"/> <input type="button" value="Preview"/>
Period Summary	<input type="text" value="Projects: Reporting: Defi"/>	<input type="button" value="Search"/> <input type="button" value="Preview"/>
Performance Overview	<input type="text" value="Projects: Reporting: Defi"/>	<input type="button" value="Search"/> <input type="button" value="Preview"/>
PTD Analysis	<input type="text" value="Projects: Reporting: Defi"/>	<input type="button" value="Search"/> <input type="button" value="Preview"/>
PTD Summary	<input type="text" value="Projects: Reporting: Defi"/>	<input type="button" value="Search"/> <input type="button" value="Preview"/>
Resource Analysis	<input type="text" value="Projects: Reporting: Defi"/>	<input type="button" value="Search"/> <input type="button" value="Preview"/>
Resource Summary	<input type="text" value="Projects: Reporting: Defi"/>	<input type="button" value="Search"/> <input type="button" value="Preview"/>
Task Analysis	<input type="text" value="Projects: Reporting: Defi"/>	<input type="button" value="Search"/> <input type="button" value="Preview"/>
Task Summary	<input type="text" value="Projects: Reporting: Defi"/>	<input type="button" value="Search"/> <input type="button" value="Preview"/>

Select the page layout to use for your specific project to show the KPI's and other information desired

Define both manual and automatic reports to capture and present the various measures you have defined and want to use for your project.

Name ▲	Description	Generation Method	Page Layout	Effective From	Effective To	Update	Delete
<a href="#">Customer</a>	Use only for customer status reports	Manual	<a href="#">Customer Status Report Layout</a>	01-Jan-2000			
<a href="#">Default Performance Status Report</a>	Seeded Report Type for Performance Status sent through email	Automatic	<a href="#">Default Performance Status Page Layout</a>	10-Jun-2004			
<a href="#">Default Status Report</a>	Default Status Report	Manual	<a href="#">Default Project Status Report Page Layout</a>	01-Jan-1950			
<a href="#">Healthcheck</a>	Use for Health check reporting only	Manual	<a href="#">Healthcheck Status Report Layout</a>	01-Jan-2000			
<a href="#">Internal Management</a>	Use for Internal Management review boards	Manual	<a href="#">Internal Management Status Report Layout</a>	01-Jan-2000			
<a href="#">Team</a>	Use for communicating the current status to the project team	Manual	<a href="#">Team Report Layout</a>	01-Jan-2000			

Define page layout and other report attributes for use on your project

**Report Type Details**

Name: **Healthcheck**  
 Description: **Use for Health check reporting only**

Generation Method: **Manual**  
 Page Layout: **Healthcheck Status Report Layout**  
 Allow Status Report Page Layout Override on Project Level

Effective From: **01-Jan-2000**  
 Effective To:

[Return to Report Types](#)

Enable report changes at the enterprise level or allow project managers to override the report for individual projects.

**ORACLE** Projects

Diagnostics Home Logout Preferences Help Personalize Page

Report Types >

**Update Report Type**

Cancel Apply

Name **Default Performance Status Report**

Description **Seeded Report Type for Performance Status sent through email**

Generation Method **Automatic**

Page Layout **Default Performance Status Page Layout**

Allow Status Report Page Layout Override on Project Level

Effective From **10-Jun-2004**

Effective To

(example: 27-Feb-2008)

Cancel Apply

## Planning For Success

As you prepare to implement new tools for your organization, consider establishment of a baseline across your firm. Assess where the organization is before you begin. Leverage this knowledge to help focus change management and training efforts where the return will be greatest. Develop a plan to move your organization up the maturity level. Target functions and features based on effective utilization in your organization. Plan training programs to increase the understanding and skills of your Project Management team, not just in the tools, but in application of the tools to better manage your projects. As your organization matures, enable additional features and functions within the tool set to further aid the project management team meet their objectives and measure the results.

## Three Client Experiences

Three clients illustrate the need to conduct this assessment and planning in advance of your implementation.

### Client A

Client A consisted of several diverse business groups that shared little in common except ownership. Change Management conducted a web based survey in advance of the project beginning. Divisions demonstrating high maturity, using solid project management principles, good multi-project capability and continuous process improvement existed with other divisions were barely able to hire semi-skilled project managers. As part of the pre-assessment, the client was able to scale back features and functionality for the groups with limited ability and focus the team doing the advanced functionality on the pockets that were in a position to leverage it effectively. This helped hold down the overall cost of the implementation for the geographical dispersed teams while aligning better with the user community needs.

### Client B

Client B did not do a formal assessment, but the pilot project sponsors were very aware of the limited project management capability in the initial pilot group. The organization consisted of a very sophisticated project management community that ran very large, long duration engineering and construction projects and wanted advanced functionality, but were not part of the pilot, and scattered smaller groups that had very few tools, limited staff and had to do everything themselves with small repetitive projects, who were the target of the pilot. As the project was underway, the advanced group tried to accelerate functionality into the pilot. The pilot sponsors understood the success of the fast track pilot required the original plan be



followed and resisted the scope creep. As a result, the pilot was successful and the advanced user group was able to accelerate the start of their own project team instead of changing the nature of the pilot.

## **Client C**

Client C did a serious formal assessment as the project was rolling out across multiple continents to core teams with widely ranging skills and environments. Europe was a very mature market with highly skilled, experienced, project managers running mostly smaller projects due to the maturity of the environment. China was a rapidly growing market with very large teams and projects but very limited skills and experience. A comprehensive series of training programs, along with employee evaluation and transfers combined to insure a better matching of skills and abilities to the positions needed, especially in the Project Management area. At the time of the initial assessment, there were 79 people with the title Project Manager in China. None of those people held the title 12 months later. Revisiting the same countries 5 years later found the strongest project management methodology and practices were in China, directly as a result of the significant effort made to take a comprehensive approach to building the right skills, rather than just putting tools in place.

## **Conclusion**

Tools, such as Oracle Project Management, assist an organization in the introduction of standards and common practices, and provide increased visibility into, and objective measurement of, project performance. The uniform capture and reporting capability allows easier sharing of lessons learned and the repetition of successful practices. When combined with an objective assessment of your firm before and after implementation of the new tools and introduction of new practices, you are positioned to make an honest and accurate assessment of the impact this effort has made. The data provides a basis to continue a planned series of improvements that will provide the best return for your firm. Remember, not everyone needs to be a maturity level 5 to be successful!

## **About the Authors**

Robert D. Anderson has worked extensively in project centric organizations for over 30 years and assisted more than 20 firms implement Oracle Project solutions. Bob's 20 years in industry, serving as a controller, CFO and General Manager provides insight to the challenges business leaders face on a daily basis. His hands on leadership have provided cutting edge solutions to complex business problems for international clients around the world.

Kimberly McDonald Baker has worked with project centric organizations for over 20 years, recognizing technology's ability to improve business operations even before the onset of packaged software. This prescience of technology's impact led Kimberly to Oracle Corporation where she became Senior Product Director for the Projects and Professional Services Automation applications, and grew revenue from \$2 Million to \$200 Million. She continues as a technology evangelist at Project Partners LLC, an Oracle and Primavera partner firm.

## **References:**

- 1) Professor C. William Ibbs of the University of California at Berkeley, <http://www.ce.berkeley.edu/~ibbs/> and <http://www.ibbsconsulting.com/>
- 2) The Project Management Institute, (PMI®) <http://www.pmi.org>. Organizational Project Management Maturity Model (OPM3), Project Management Institute, 2003