

White Paper

Obtaining ROI from an ALM Tool

This White Paper discusses how an Application Lifecycle Management (ALM) tool can quickly obtain a return on investment (ROI) for companies that develop and maintain software.

Narrative

Companies that develop and maintain software can dramatically improve their processes, obtain higher quality, and quicken their software releases by using a tool that manages the Application Lifecycle Cycle (ALM). Most companies will obtain a return on investment (ROI) within about a year of purchasing an ALM tool.

This white paper discusses the types of process improvements that are available and how to quickly obtain a return on investment. This white paper focuses on:

- How to deliver software releases more quickly, cost effectively, and in a repeatable fashion
- How to deliver higher quality software releases that result in less production support
- How to improve team member collaboration, communication, morale, and skill sets
- How to obtain metrics that allow you to continually improve your software releases

Process Improvements

Improving your processes involves instituting development methodologies and using tools to drive these processes. From a process perspective, below are some best practices that should be considered when evaluating your current development process:

- **Create a Product Backlog** – As enhancement requests and new requirements arrive for your software products, it is wise to create a product backlog. The product backlog identifies all requested enhancements to your product line so that you can identify, prioritize, estimate and determine the marketability of each backlog item. Once a product backlog is approved, it will move to the requirements stage.
- **Create Solid Requirements** – Once requirements are identified, it is best to create well defined requirement documents that include screen shots and prototypes.
- **Improved Test Case Management** – Upon defining and approving a requirement, your QA team should a set of test cases for each requirement and have key individuals review the test cases to ensure they have traceability (test cases cover all features of the requirement), testability and depth.
- **Publish Test Cases before Coding Begins** – Before coding begins on a requirement, the QA team should have all test cases defined for the requirement. It is important to require that the programmer run the defined test cases before releasing the code for QA. This normally results in a 30% time savings in the QA cycle because re-work is minimized.

- **Daily Meetings** – It is wise to implement a daily meeting that lasts between 15 and 30 minutes and is done at the beginning of each day. The programming lead, test lead, project manager and product owner should attend the daily meeting. In the meeting, the team should discuss the estimated hours remaining on each requirement, time entry, and defect statistics. Ask each member what they did since the last meeting, what they will do before the next meeting and discuss any impediments they are encountering. This daily meeting provides immediate transparency to the development process and can reduce the project lifecycle by as much as 20%.
- **Require Daily Time Entry** – It is important that each team member enter their hours at the end of each day. For each task worked on, they will record hours worked and estimated hours remaining (this should automatically calculate percentage complete). This ensures that each person works optimally and reduces the time spent in the development lifecycle.
- **Implement a Support Ticket Management System** – A Support Ticket management system allows clients and internal staff to log support issues and enhancement requests. It should allow them to track the status of each ticket online and should be used to send surveys so that you can track how well your support team is providing customer support. This can dramatically improve your customer relationships.
- **Use Discussion Forums** – For each release of software that is produced, it is important to create a threaded discussion forum that allows team members to ask questions and get answers. These can be questions/answers about features, development status, code builds, etc. This will ensure all team members work in a collaborative way.
- **Implement Automated Testing** – You can dramatically reduce the hours needed to perform regression testing on each software release by creating automated test cases that are run upon each build. By doing this, you can reduce regression testing from days to minutes. You should analyze the result of each automated test run and launch test runs on demand.

Using an Application Lifecycle Management (ALM) Tool

Once your software process has been optimized, you should consider using an ALM tool to manage the process. This can dramatically improve communication and analytics. Software Planner (<http://www.SoftwarePlanner.com>) is an ALM tool that can manage this process. It can help in the following ways:

- **Project Management** – Using Software Planner, you can manage all software projects across all teams and obtain visibility and metrics across all your projects. You can track the status, hours logged, variances and percentage complete of all projects and individual tasks within

- each project. You can quickly identify slipping tasks and who is causing the slippage – so that you can give them help before it impacts others.
- **Quality Management** – Software Planner allows entering/tracking of requirements, enhancement requests, and product backlogs. By keeping these online, you can analyze the scope, size, status of your requirements, and plan future releases. Your quality assurance (QA) team can use it to create test cases for each requirement and quickly view traceability to ensure all requirements are fully tested. The QA team will collaborate with the programming staff by tracking the status and resolution of all defects that are found during testing.
- **Support Management** – Software Planner provides a support ticket management tool that allows clients and internal staff to log support issues and enhancement requests. It allows them to track the status of each ticket online and can be used to send surveys so that you can track how well your support team is providing customer support. You can trend support tickets over time to see if you are getting more or less support tickets over time.
- **Automated Test Integration** – Software Planner integrates with all the major automated testing tools including HP Quick Test Pro, HP Win Runner, Automated QA Test Complete, Rational Robot, and Rational Functional Test. By integrating automated testing into Software Planner, you can launch the tests from within Software Planner, create test sets, analyze the results (which tests passed or failed), and automatically send emails upon test completion. You can also trend these results using graphical dashboards.
- **Management Reporting** – Software Planner has a myriad of different reports that can aid in improving your processes. You can view dashboards that show the progress of each project underway, identify slipping tasks by assignee or project manager, trend test case progress over time (how many test cases are awaiting run vs. passed vs. failed), trend defects over time, and trend support tickets. You can also analyze current requirements, test cases, and defects. Reporting is key for obtaining the metrics for the daily meetings, to ascertain the progress of each release, and to document the metrics– allowing you to drive process improvement.

Return on Investment

You should see a return on investment within a year of implementing the new processes and tools. This will be achieved by:

- **Better Marketability** –Your software releases will more closely match what your clients need and will be more marketable, allowing you to capture better market share.
- **Higher quality releases** – Your software releases will have fewer bugs and require less customer support because they will be of higher quality.

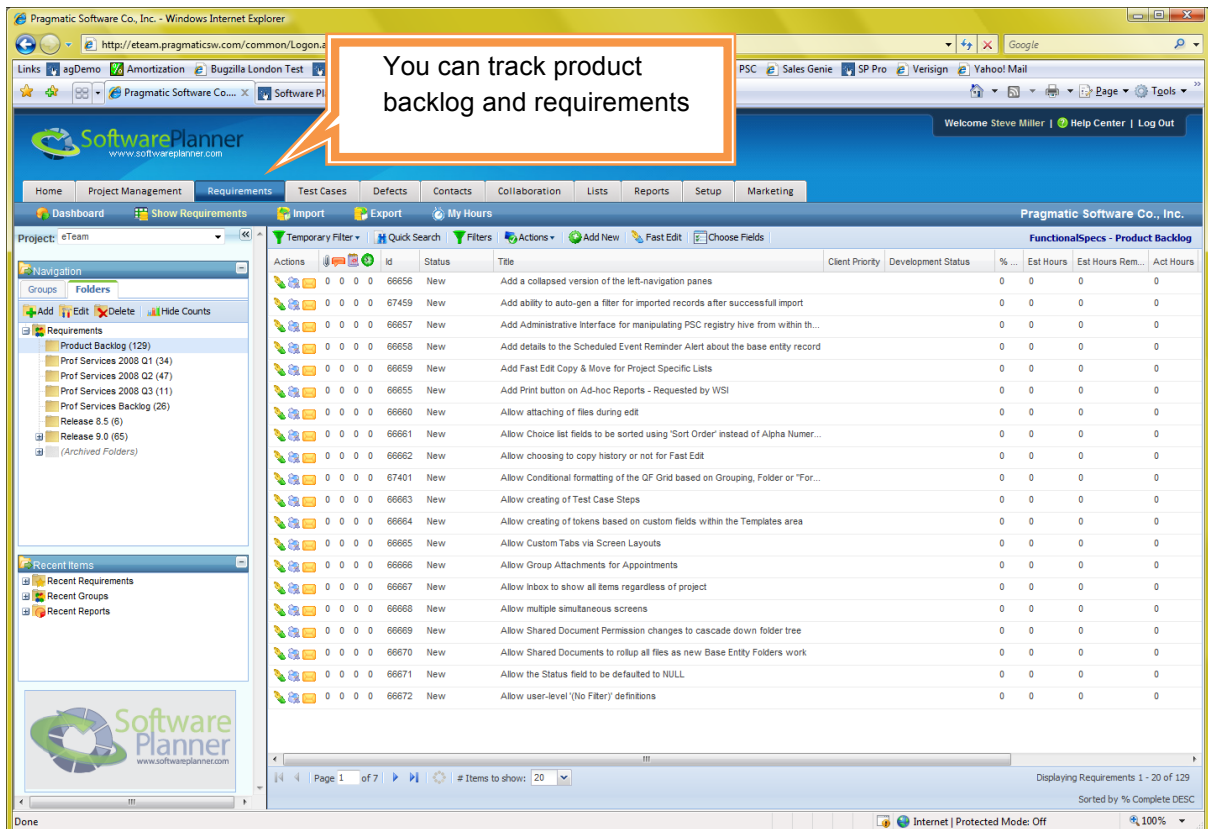
- **Happier Customers** – Your customers will be happier and more willing to serve as testimonials for future prospects.
- **Better Staff Retention** – By providing state-of-the-art project management and empowering team members to contribute at a higher level in software projects, your technical staff will be happier, feel more empowered, and will learn valuable skills that will continue to pay dividends over time.

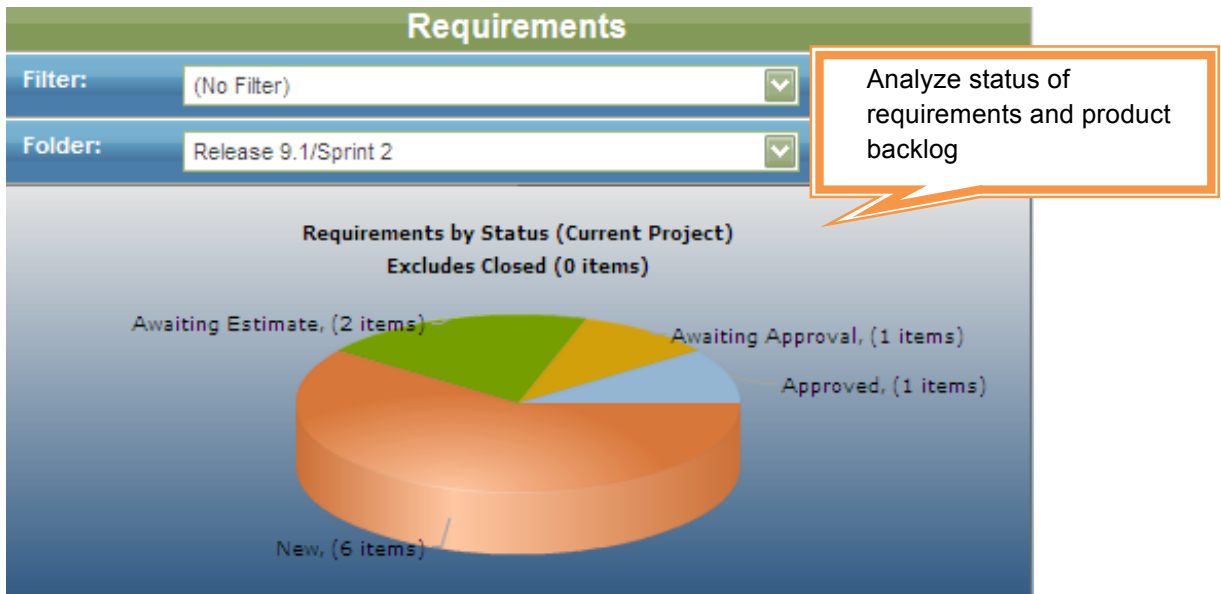
Software Planner Features

Software Planner provides many tools for helping you improve your software processes.

Analyzing Requirements and Product Backlog

You will be able to track product backlog and detailed requirements.



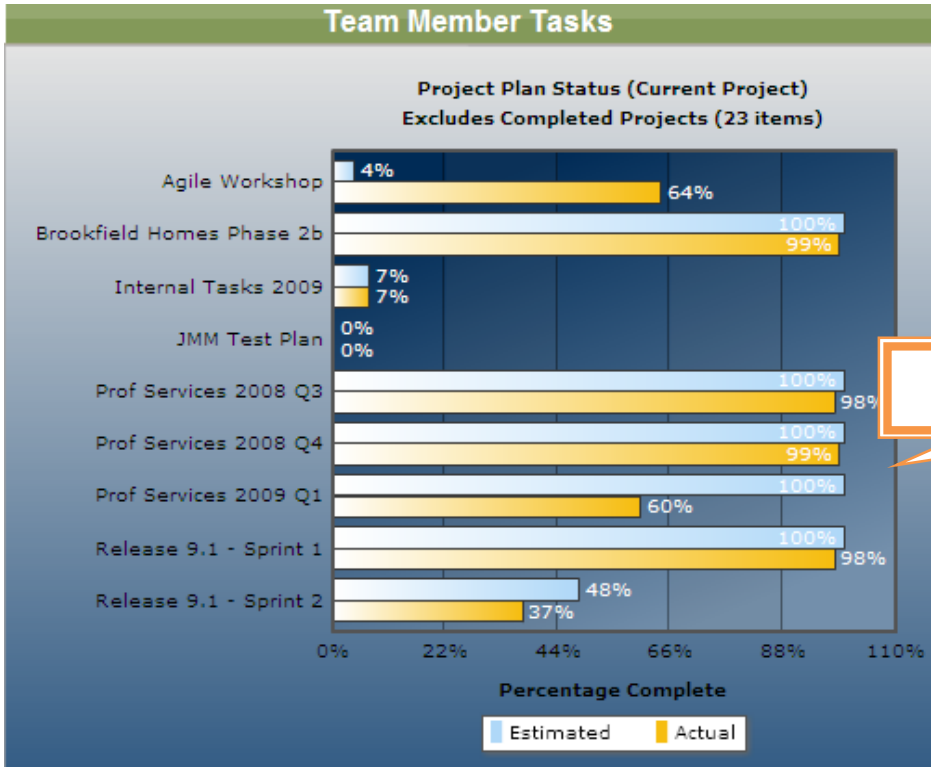


Project Management

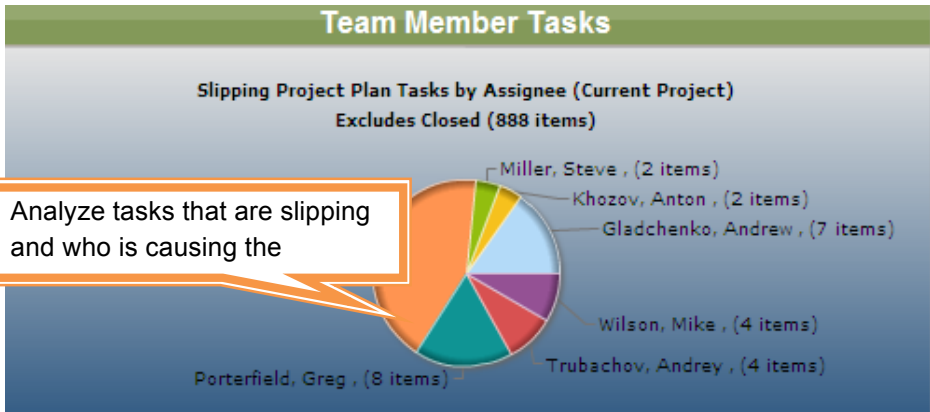
You can manage all software projects across all teams and obtain visibility and metrics across all your projects. You can track the status, hours logged, variances and percentage complete of all projects and individual tasks within each project. You can quickly identify slipping tasks and who is causing the slippage – so that you can give them help before it impacts others.

Provide project management for all

Action	Seq	% Complete	Task Name	Linked Item	Est Start Date	Est Finish Date	Assigned To	Est Hours	Act Hours	Est Hours Remaining
	1	88.2	Release 9.1 - Sprint 1		12/08/2008	02/05/2009		480	655.5	12
	2	18.64	Sprint 1 General Tasks		01/15/2009	01/27/2009		1	2.75	12
	3	100	Upgrade ExtJS Library to Latest Version	Link to Item...	01/15/2009	01/15/2009	Porterfield, Greg	1	0.75	0
	4	0	QA Licensing Engine - Jen	Link to Item...	01/27/2009	01/27/2009	Mollitor, Jennifer	0	0	0
	5	14	QA Licensing Engine - Greg	Link to Item...	01/27/2009	01/27/2009	Porterfield, Greg	0	2	12
	6	100	PSC-0053 psOutlookSync - Test/Deploy		12/08/2008	12/19/2008		80	78	0
	8	100	PSC-0128 Project Plans - Redesign Hierarchical View for Fewer Refresh		12/08/2008	01/08/2009		102	163	0
	16	100	PSC-0130 Traceability - Many to many relationships		12/22/2008	02/05/2009		253	391	0
	17	100	PSC-0130 Development		12/22/2008	02/05/2009		253	391	0
	18	100	PSC-0130.001 Traceability SubMenu	Req 67778_PSC-0130_Traceabi...	12/22/2008	12/22/2008	Khozov, Anton	3	1.5	0
	19	100	PSC-0130.002 Traceability Screen	Req 67778_PSC-0130_Traceabi...	12/23/2008	12/30/2008	Khozov, Anton	30	55.5	0
	20	100	PSC-0130.003 Traceability Form	Req 67778_PSC-0130_Traceabi...	12/30/2008	01/09/2009	Trubachov, Andrey	60	158	0
	21	100	PSC-0130.004 Traceability Report	Req 67778_PSC-0130_Traceabi...	01/09/2009	01/14/2009	Trubachov, Andrey	20	40	0
	22	100	PSC-0130.005 Quick Edit Enhancements	Req 67778_PSC-0130_Traceabi...	01/14/2009	01/23/2009	Khozov, Anton	60	54	0
	23	100	PSC-0130.006 Conversion	Req 67778_PSC-0130_Traceabi...	01/23/2009	01/29/2009	Khozov, Anton	30	14	0



Analyze all projects at a glance, including professional services.



Analyze tasks that are slipping and who is causing the

Timesheet reports show who worked on what

Timesheets by Week
 Sorted by Week Worked, User Worked

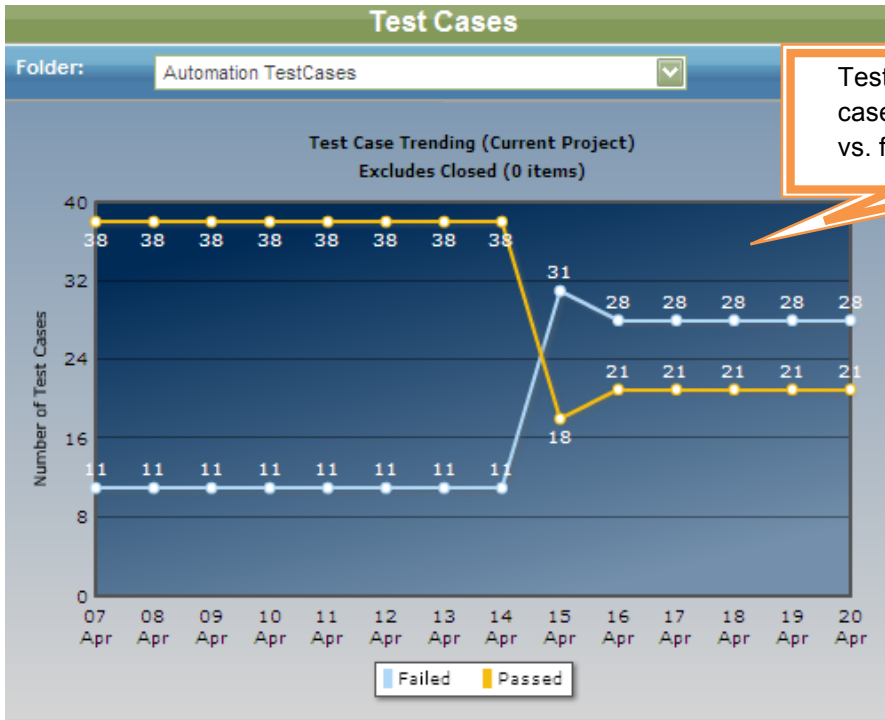
Date	Task Description	User	Time Spent
Mon 23-Mar-09	Defect #652765 - psBatchJobs - Send Emails - Not Replacing ContactId correctly - fix	Chekhomova, Nadya	2.00
	Internal Tasks 2009: #38434 - Internal Tasks - Nadya - Coding test page for QE	Chekhomova, Nadya	2.00
	Internal Tasks 2009: #38434 - Internal Tasks - Nadya - mail&planning; postinforum	Chekhomova, Nadya	1.00
	Total for Day:		5.00
Total for Chekhomova, Nadya: 5.00			
Mon 23-Mar-09	Defect #651894 - I need to pre-populate the Resolution field in the Defect screen	Gladchenko, Andrew	0.50
	Internal Tasks 2009: #38433 - Internal Tasks - Andrew - Mail & Planning	Gladchenko, Andrew	1.00
	Internal Tasks 2009: #38433 - Internal Tasks - Andrew - URGENT ISSUE with psEdgeMigration & ExtendedAttributes	Gladchenko, Andrew	4.00
	Prof Services 2009 Q1: #38503 - NO-0062 Tech Analysis/Detail Design - AG	Gladchenko, Andrew	2.50
	Internal Tasks 2009: #38433 - Internal Tasks - Andrew - Scrum meeting	Gladchenko, Andrew	1.00
Total for Day:		9.00	
Tue 24-Mar-09	Defect #653201 - Contacts (Send Email) - Overflow error	Gladchenko, Andrew	0.50
	Internal Tasks 2009: #38433 - Internal Tasks - Andrew - Mail & Planning	Gladchenko, Andrew	0.50
	Internal Tasks 2009: #38433 - Internal Tasks - Andrew - Investigate SSIS packages capabilities	Gladchenko, Andrew	4.00
	Internal Tasks 2009: #38433 - Internal Tasks - Andrew - EOC-0001 Energy Outreach Colorado XML Batch Processor	Gladchenko, Andrew	5.00
	Internal Tasks 2009: #38433 - Internal Tasks - Andrew - Scrum meeting	Gladchenko, Andrew	1.00
	Defect #653198 - Lists Quick Edit Printer Friendly Icon is incorrect image	Gladchenko, Andrew	0.50

Variance Reports show estimated vs. actual hours and

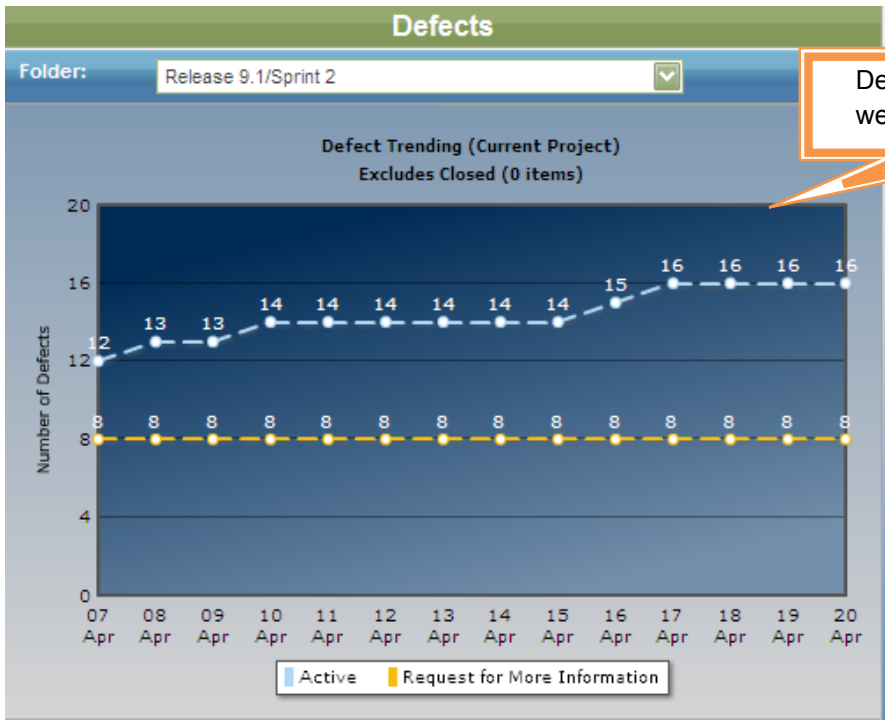
Variance by Project, Project Plan, Assignee

Sorted by Assignee, Estimated Start, Estimated Finish, Project Plan

Estimated	Actual	Estimated	Actual	Estimated	Actual	Estimated	Actual	Profit	% Done	Project / Project Plan / Task
12-Sep-2008	26-Sep-2008	12-Sep-2008	30-Sep-2008	8.00	13.50	\$900	\$1350	\$280	100%	27582 - PSC-0120.002 Changes to Project Plan Maintenance screen
Variance:				-5.50		-\$550		-\$743		-\$193
12-Sep-2008	11-Sep-2008	15-Sep-2008	24-Sep-2008	16.00	46.00	\$1600	\$4600	\$2160	100%	27581 - PSC-0120.001 New ExtJS Link to Item Window
Variance:				-30.00		-\$3000		-\$4050		-\$1050
Total for Assignee (Trubachov, Andrey):										
Estimated:		Actual:		45.50	100.50	\$4550	\$10050	\$6143	\$3518	Avg % Complete: 100%
Variance:				-56.50		-\$5650		-\$7628		-\$1978
Total for Project Plan (Release 9.0 - Sprint 4):										
Estimated:		Actual:		487.50	682.43	\$28814	\$40410	\$65813	\$51718	Avg % Complete: 99%
Variance:				-247.43		-\$13668		-\$33403		-\$19735
Project: eTeam Project Plan: Release 9.1 - Sprint 1 Assignee: Chekhomova, Nadya										
Start	Finish	Hrs	Int Costs	Ext Costs	Profit	% Done	Project / Project Plan / Task			
22-Dec-2008	24-Dec-2008	24.00	\$696	\$3240	\$2544	100%	38415 - PSC-0128.001 New Web Class			
25-Dec-2008	30-Jan-2009	70.00	\$2030	\$9450	\$7420					
Variance:				-46.00		-\$1334		-\$6210		-\$4876
29-Dec-2008	31-Dec-2008	24.00	\$696	\$3240	\$2544	100%	38416 - PSC-0128.002 JavaScript logic			
22-Dec-2008	23-Jan-2009	49.00	\$1421	\$6615	\$5194					
Variance:				-25.00		-\$725		-\$3375		-\$2650
07-Jan-2009	08-Jan-2009	8.00	\$232	\$1080	\$848	100%	38419 - PSC-0128.997 Programmer Runs Test Cases (Unit Testing)			
02-Feb-2009	04-Feb-2009	9.00	\$261	\$1215	\$954					
Variance:				-1.00		-\$29		-\$135		-\$106
29-Jan-2009	29-Jan-2009	4.00	\$116	\$540	\$424	100%	38488 - PSC-0135.001 DB Changes			
04-Feb-2009	09-Feb-2009	5.00	\$145	\$675	\$530					
Variance:				-1.00		-\$29		-\$135		-\$106



Test Case trending shows test cases awaiting run vs. passed vs. failed



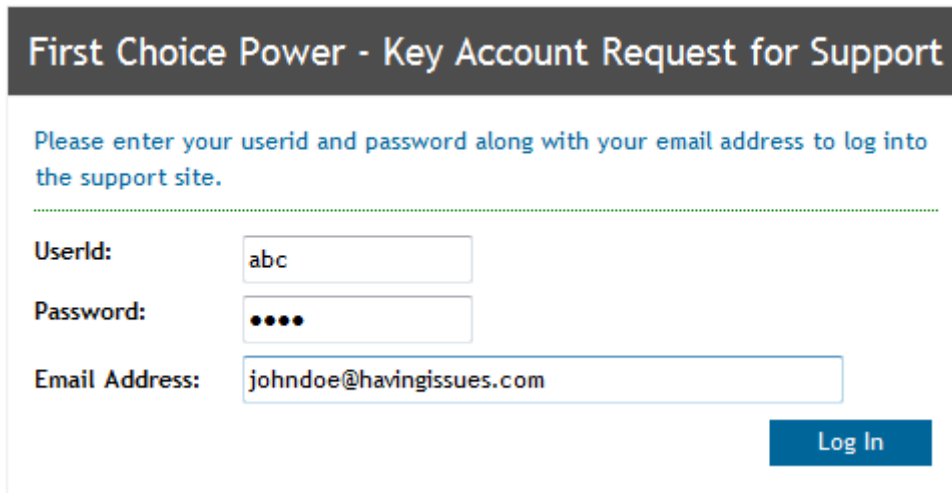
Defect Trending shows how well your testing effort is

Support Management

Software Planner provides a support ticket management tool that allows clients and internal staff to log support issues and enhancement requests. It allows them to track the status of each ticket online and can be used to send surveys so that you can track how well your support team is providing customer support. You can trend support tickets over time to see if you are getting more or less support tickets over time.

You can add a support link from your website, allowing clients to enter support tickets. You can either force them to log in (for extended support) or not require a login. Below is how they have implemented this for one of their other clients (First Choice Power):

Clients go to the First Choice Power website and click the **Support** link, and then they log in:



First Choice Power - Key Account Request for Support

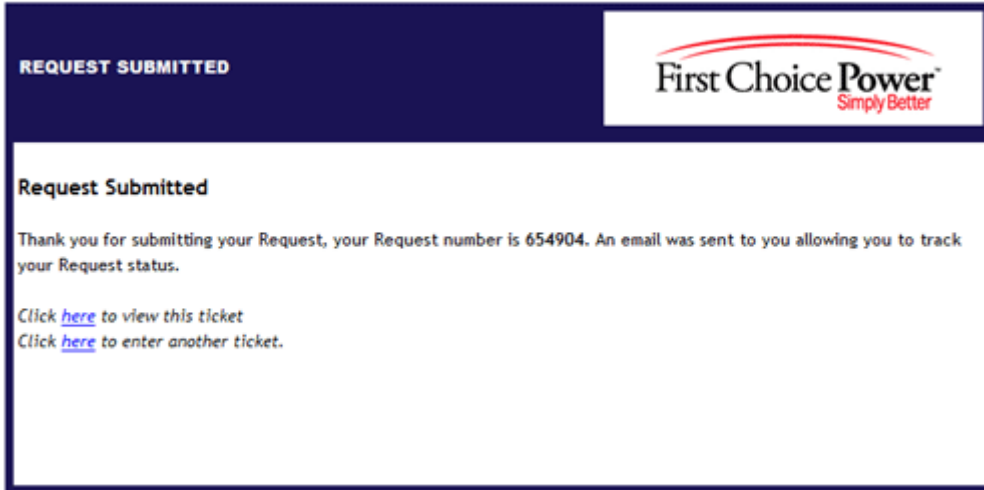
Please enter your userid and password along with your email address to log into the support site.

Userid:

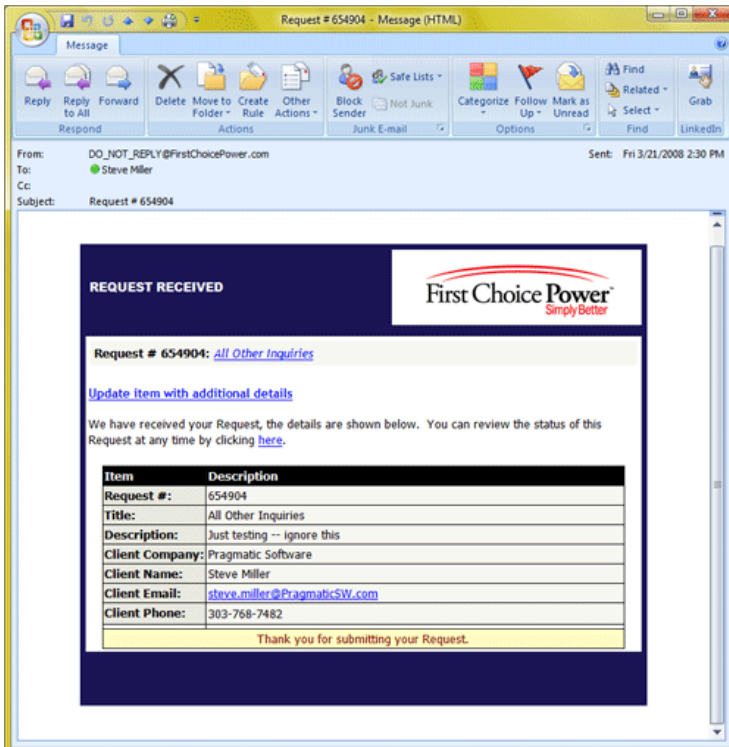
Password:

Email Address:

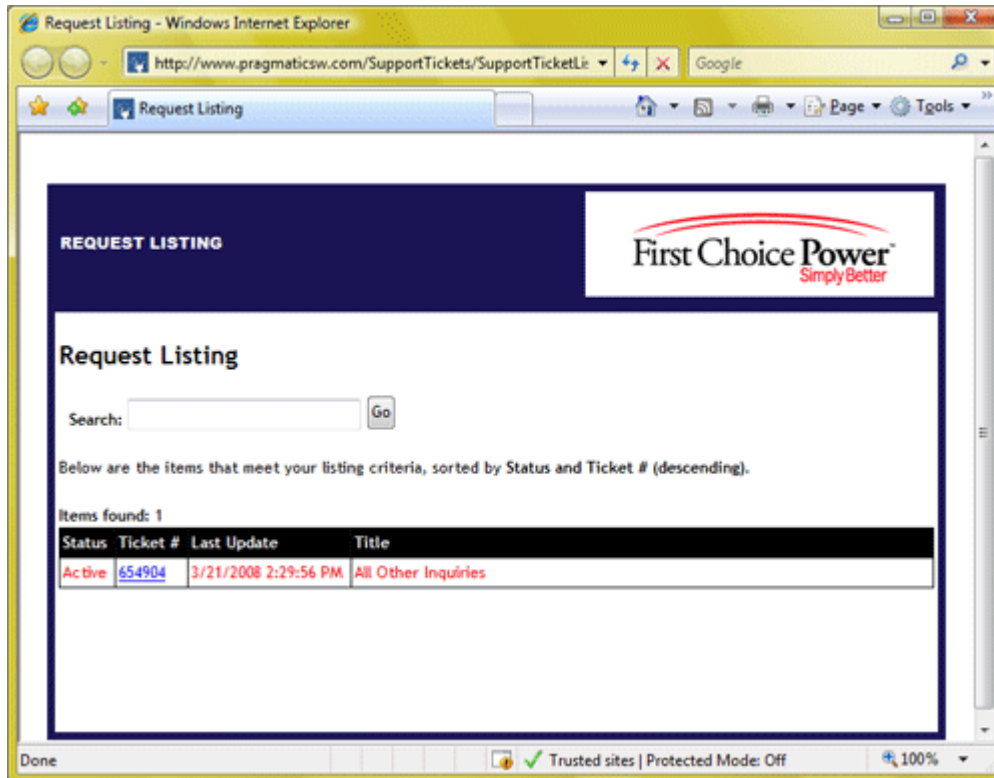
Once the ticket is added, it shows the client the ticket number:



The client and your support team are notified via email of the ticket:



The client can check the status of their ticket online at any time:



Request Listing - Windows Internet Explorer

http://www.pragmaticsw.com/SupportTickets/SupportTicketLi

Request Listing

REQUEST LISTING

First Choice Power
Simply Better

Request Listing

Search: Go

Below are the items that meet your listing criteria, sorted by Status and Ticket # (descending).

Items found: 1

Status	Ticket #	Last Update	Title
Active	654904	3/21/2008 2:29:56 PM	All Other Inquiries

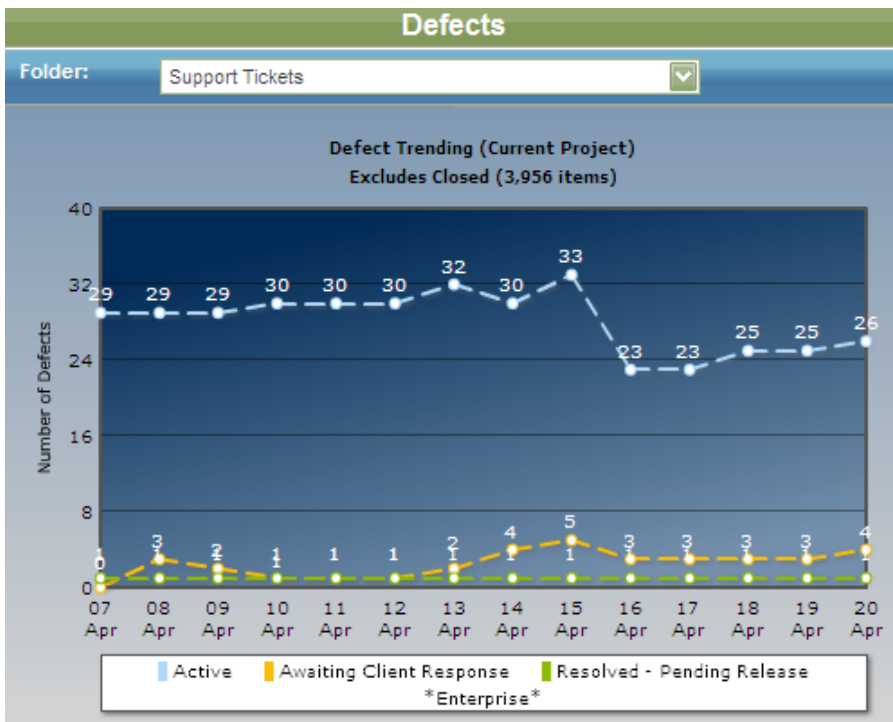
Done Trusted sites | Protected Mode: Off 100%

The ticket flows inside of Software Planner, allowing you to analyze and track the tickets:

The screenshot shows the Software Planner interface with a list of support tickets. The table contains the following data:

Actions	Id	Title	Folder Name	Status	Priority	Severity
0 4 0 0	111007	Error Receiving Email	Support Tickets	Closed	2-Fix Soon	3-Workarour
0 2 0 0	111031	Passwords visible on user export	Support Tickets	Closed	1-Fix ASAP	1-Crash
0 2 0 0	111087	This User can not see custom field (ISBN)	Support Tickets	Closed	1-Fix ASAP	2-Major Bug
0 2 0 0	111089	Missing functional specs	Support Tickets	Closed	2-Fix Soon	2-Major Bug
0 6 0 0	111090	Timeout issues	Support Tickets	Closed	1-Fix ASAP	1-Crash
0 3 0 0	111140	need Reg # ?	Support Tickets	Closed	4-Informational	5-Informational
0 2 0 0	111141	Shared Docs Fast Track Functionality	Support Tickets	Closed	4-Informational	5-Informational
0 2 0 0	111270	Help Desk and Support Trouble Tickets	Support Tickets	Closed	3-Fix If Time	3-Workarour
0 2 0 0	111451	Company Wide Documents Question	Support Tickets	Closed	3-Fix If Time	3-Workarour
0 2 0 0	111452	Privileges Question	Support Tickets	Closed	3-Fix If Time	3-Workarour
0 2 0 0	111770	Can Defects Close Themselves?	Support Tickets	Closed	3-Fix If Time	3-Workarour
0 2 0 0	111973	Link to this form from within Defect Tracker	Support Tickets	Closed	1-Fix ASAP	3-Workarour
0 2 0 0	111994	Deleting individual imported items	Support Tickets	Closed	1-Fix ASAP	3-Workarour
0 2 0 0	112066	Can I remove a custom field?	Support Tickets	Closed	2-Fix Soon	3-Workarour
0 2 0 0	112067	Software Planner questions	Support Tickets	Closed	2-Fix Soon	3-Workarour

You will also be able to analyze tickets over time:



Automated Test Integration

Software Planner integrates with our awarding winning Test Automation tool, **TestComplete** (<http://www.testcomplete.com>). By integrating automated testing into Software Planner, you can launch the tests from within Software Planner, analyze the results (which tests passed or failed), create test sets, and automatically send emails upon test completion. You can also trend these results using graphical dashboards and scheduler tests to run unattended. For more information on the integration view the User's Guide at http://www.softwareplanner.com/UsersGuide_TC.pdf.

Learn More

If you wish to learn more about Software Planner, request a free a trial, or receive a personalized demo of the product, contact **SmartBear Software** at +1 303-768-7480. You can also learn more at <http://www.SoftwarePlanner.com>.

About SmartBear Software

SmartBear Software provides enterprise-class yet affordable tools for development teams that care about software quality and performance. Our collaboration, performance profiling, and testing tools help more than 100,000 developers and testers build some of the best software applications and websites in the world. Our users can be found in small businesses, Fortune 100 companies, and government agencies.

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