

Metrics Matter

MKS Prescribes Five Essential IT
Metrics for Success

An MKS White Paper

What's Measured

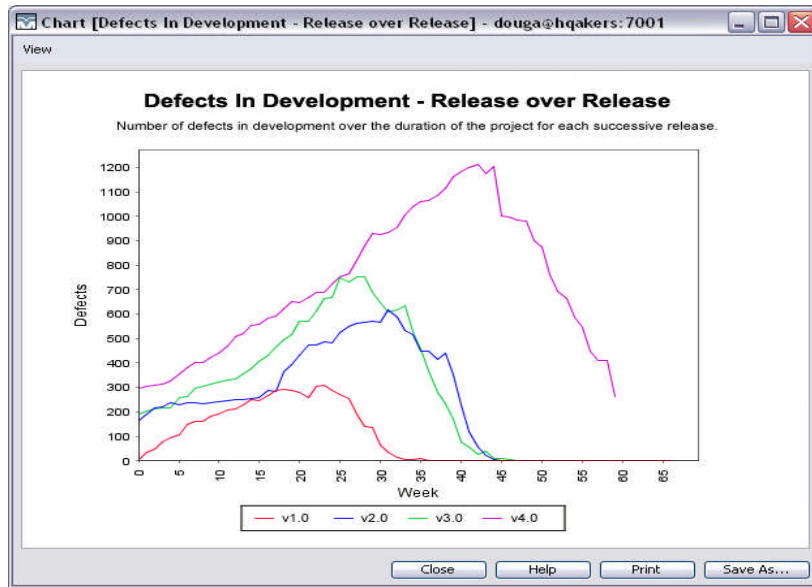
Ongoing application maintenance remains a blind spot for CIOs who are seeking to better understand, manage and account for total application development (AD) spending. Effective measurement must include data from new projects (on average 30% of AD spend) *as well as* the ongoing maintenance work such as bug fixes and enhancements (on average 70% of AD spend). MKS's single repository aggregates information from 100% of application development activities in an IT organization and provides data-mining capabilities to deliver effectiveness and efficiency metrics in real time.

Five Organizational Effectiveness Measures

1. **Team Efficiency** - This productivity measure (output/time), is most valuable when trended across projects and over a reasonable time, as a measure within the phases of a project. It answers such vital project management questions as:
 - Where are the defects in each project phase and in each application?
 - How much time is spent on each project task?
 - What are the most time-consuming tasks and what kind of improvements could make those tasks more efficient?

Using team efficiency metrics, a decision-maker is able to analyze whether the time invested is in alignment with the overall goals of the IT department and where changes to improve efficiency can be made.

Example: Defects Fixed Rate (by phase, by application, by component).



2. **Project efficiency** – These metrics demonstrate how well the project met its objectives and take into account project variances (schedule, budget, effort) as well as customer satisfaction metrics. Combined with process efficiency and quality metrics, project efficiency monitoring can also capture data post project completion (i.e. defects found during first 30-90 days after implementation). With project efficiency monitoring in real-time, project leaders and senior decision-makers can make critical time and budget saving decisions and course corrections while work is underway. Each aspect of the project can be viewed and assessed in terms of its costs and benefits.

Example: Cost and Schedule Performance Index from the PMI – PMBoK.

Active Project Details

Effort, Budget and Schedule metrics for all active projects.

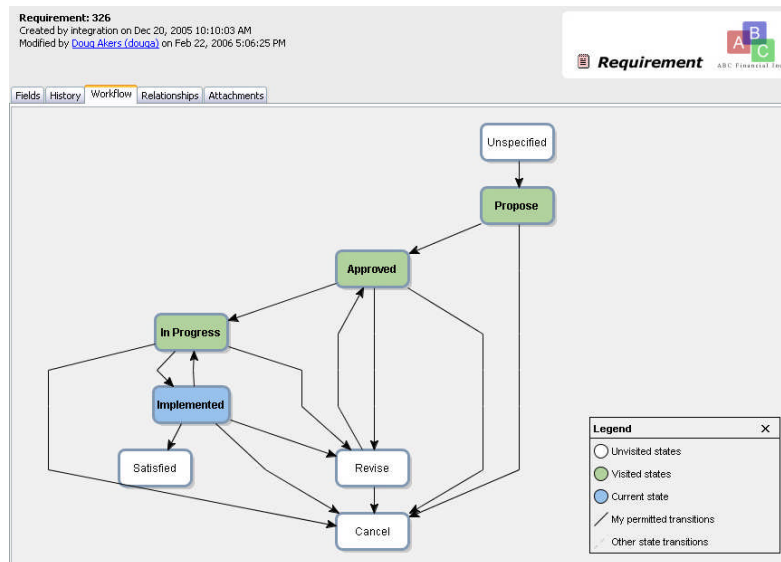
Projects	Health	Est. Budget	Act. Budget	Budget Variance	Est. Effort	Act. Effort	Effort Variance
Account Interest	🟢	\$100,000	\$87,225	🟢 \$12,775	450 hrs	345 hrs	🟢 105 hrs
Forms Branding	🔴	\$55,000	\$66,845	🔴 -\$11,845	250 hrs	200 hrs	🟢 50 hrs
Quotes Update	🟡	\$75,000	\$66,410	🟡 \$8,590	500 hrs	445 hrs	🟢 55 hrs
Commission Calculator	🟢	\$100,000	\$43,970	🟢 \$56,030	700 hrs	350 hrs	🟢 350 hrs
Order Integrations	🟢	\$85,000	\$29,555	🟢 \$55,445	450 hrs	165 hrs	🟢 295 hrs
Customer Localization	🟡	\$65,000	\$57,570	🟡 \$7,430	350 hrs	310 hrs	🟢 40 hrs
KB Field Extension	🟢	\$165,000	\$69,435	🟢 \$95,565	600 hrs	225 hrs	🟢 375 hrs
Activity Callback Upgrade	🟢	\$35,000	\$24,555	🟢 \$10,445	150 hrs	112 hrs	🟢 48 hrs
Shape Up to Ship Out	🔴	\$85,000	\$97,685	🔴 -\$12,685	325 hrs	316 hrs	🟡 9 hrs
GPS SAT5	🟢	\$95,000	\$55,660	🟢 \$39,340	250 hrs	196 hrs	🟢 54 hrs
3D-Receiving	🟢	\$120,000	\$30,915	🟢 \$89,085	550 hrs	165 hrs	🟢 385 hrs

3. Process Efficiency – If continual process improvement is your goal, it is vital to have metrics that track and report on the health of your internal processes. You will want to have answers to the following questions such as:

- Are you spending too much time doing rework?
- Are too many bugs being found during initial QA, perhaps pointing to inefficient design and code reviews?
- How often did the scope of the project change?
- How do project milestones map to ideals (in terms of % of total project)?

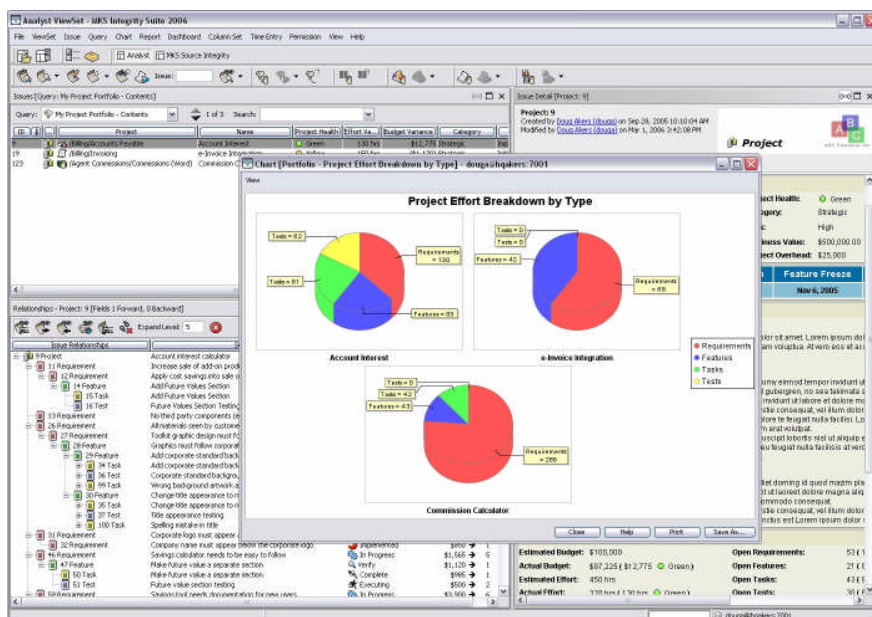
Metrics related to process efficiency can dovetail into maturity models such as CMMI.

Example: Time in state or phase, average # of times an issue enters a state or phase.



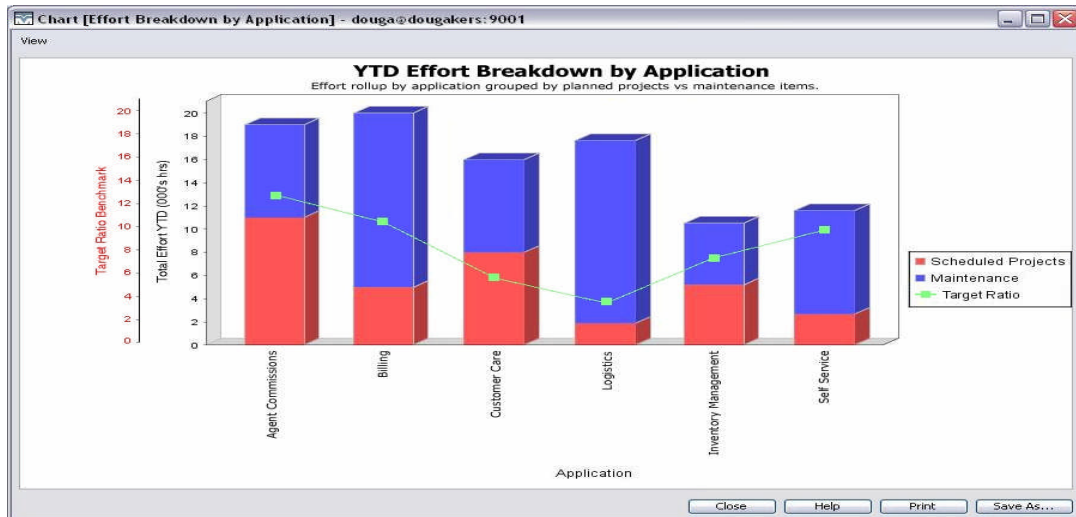
4. Quality - Quality metrics can include a pure measure of defects / unit of output (function, LOC, etc.), by project or by phase and can also include quality assurance (QA) and testing metrics. Additionally, metrics can be generated to measure individual or team re-work (i.e. how many iterations of development, testing or deployments have occurred). With quality metrics, decision-makers are able to assess what type of work and expense yields the greatest benefit to the overall project and evaluate if the project meets quality standards set by the organization. Such information allows management to review overall processes and remove roadblocks to enable higher quality outcomes such as a lower number of defects per line of code.

Examples: # of defects/unit delivered such as defects/line of code, defects/functional point by project or phase (using averages or percent can help compare project to project across the business).



5. **Value and Effectiveness** – This class of metrics assess how well the project and its output align to the organization’s strategic objectives. This data enables CIOs and IT leaders to prioritize projects and track the success of a project back to the core business objectives. While concrete metrics may be difficult to define in this category, often educated assigned measures will be sufficient. As businesses move rapidly to respond to their customers’ needs, monitoring IT value and effectiveness when it comes to resource spending on application development, maintenance and new projects is key information for decision-makers. IT leaders can see which projects are most essential to optimizing business results and allocate resources for the greatest customer impact.

Examples: Project Categorization (pre) and Customer Survey Data (post)



Summary

According to Forrester Research, only one-third of IT organizations today have a formal method in place for monitoring IT effectiveness; however measurement and monitoring of the IT function is critical to aligning IT with the business. Metrics provide critical support for CIO decision-making, and provide valuable information about key projects, budget expenditures and can demonstrate IT’s return on investment and value to the overall business. Through comprehensive application and project portfolio management, real-time metrics are drawn from a single repository and displayed in. Configurable charts and reports integrate and complement overall effectiveness models such as balanced scorecards and CMMI. Dashboards supported by real time data are invaluable assessment tools that build and support CIO credibility and the value of IT to the enterprise.

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