

Webinar: What Are You Getting For Your Software Maintenance Dollar

**September 2, 2009
11:00 a.m. – 12:30 p.m.**



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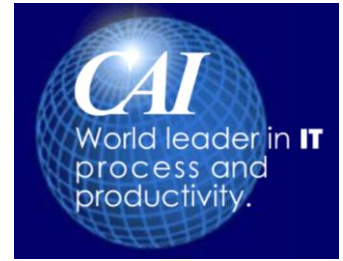
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About David Consulting Group

David Garmus is a Founder of The David Consulting Group (DCG), an SEI CMMI® Approved Transition Partner and a PSM Transition Organization that supports software development organizations in achieving software excellence with a metric-centered approach.

David is an acknowledged authority in the sizing, measurement and estimation of software application development and maintenance. He serves as a Past President of the International Function Point Users Group (IFPUG) and as a member of the IFPUG Counting Practices Committee. David is a member of QAI, PMI and SEI. He has a BS from the University of California at Los Angeles and an MBA from Harvard University. He has spoken at numerous conferences and has written many articles and several books.



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About Computer Aid, Inc. (CAI)

- **CAI** is a global IT outsourcing firm currently managing active engagements with over 100 Fortune 1,000 companies and government agencies around the world.
- **CAI** is a leader in IT Best Practices for legacy support and new development application management.
- **CAI's** focus is directed toward practical implementations that track and measure the right activities in software activity management
- **CAI** consistently promises and delivers double digit productivity in its outsourcing and consulting engagements.
- **CAI** makes all of this possible through the use of:
 - Standard processes
 - Management by metrics
 - SLA compliance management
 - Detailed cost, resource, and time tracking
 - Capacity management
 - Standard estimation
 - A unique, metrics based methodology along with a proprietary, real time data repository and management system (**TRACER®**).



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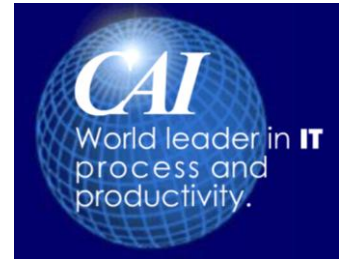
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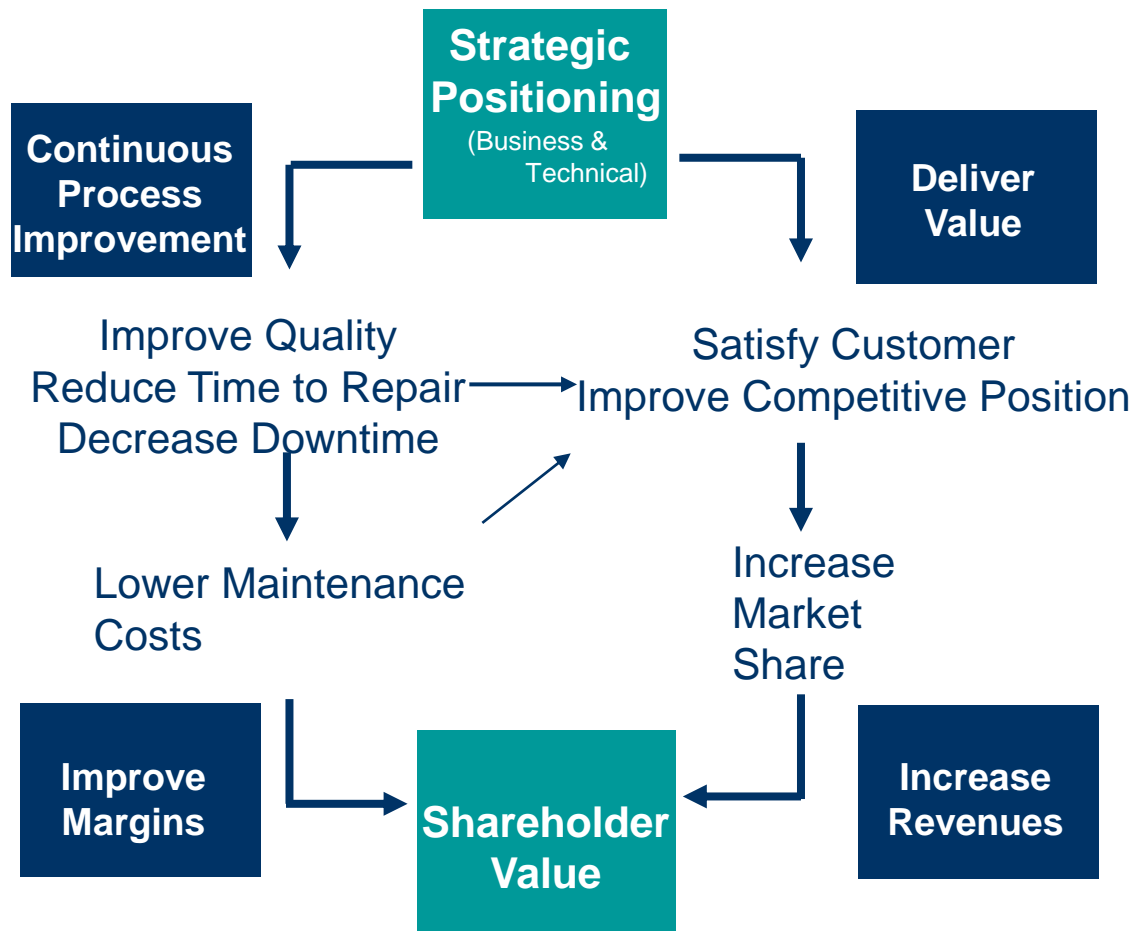
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Presentation Topics

- Identifying Your Organization's Needs
- Comprehensive Measures Available
- Legacy System Characteristics
- Critical IT Needs Of Your Organization
- The Need For Measurement In Your Organization
- Application & Project Attributes
- Project & Application Portfolio Support Rates
- Identifying & Estimating Best Practices

What Are Your Organization's Needs



Comprehensive Measures

Contribution

Business Related Measures

Unit Delivery Cost
Time To Repair
Customer Satisfaction

Measure the impact
of IT on the business

Process Related Measures

Effectiveness
Integration
Compliance

Identify maintainability &
assess progress

Maintenance Measures

Repair Tracking
Down Time
Change Management

Effective utilization
of measures in a
pro-active format

Maintaining Legacy Systems

Typical Legacy Systems

- Older Source Code Languages
- Large Systems
- Highly Structured Environments
- High Financial Or Safety Risk
- Significant Software & Hardware Integration
- Not Well Documented
- Less Frequent Enhancements
- Strong Potential For Outsourcing
- Predictive Performance

It is necessary, however, for an organization to put a “**stake in the ground**” relative to current performance level in order to outsource or improve maintenance practices.

What Are Your Organization's Critical IT Needs

New Business Opportunities:

- Quick 'Time To Market' Development Projects
- Small Systems or Packages
- Use of High Level Source Code Languages
- Use of Agile Methodology
- Less Potential for Outsourcing

Outsource 80% of IT work that is generic and let someone else worry about it; work on 20% that's critical to and has major impact on new business.

What Are Your Organization's Critical IT Needs

Typical Development Staff Resources

- Younger
- Less Experienced with Legacy Systems
- Experienced with New Source Code Languages
- Prefer New Methodologies; e.g., Agile
- Anxious to Build Innovative Systems
- Like Exploratory Projects
- Active Business Partners

The Need for Measurement

FACT: It is important to improve your ability to define, design, develop, deploy and maintain cost effective, high quality software solutions.

ACTION: Improvement is a continuous process which requires organizations to introduce innovation and change.

SOLUTION: Effectively managing outsourcing or internal change requires an ability to measure the impact.

Application and Project Attributes

- Establish a standard set of attributes for the organization
 - May include well defined and objective characteristics (e.g., development language)
 - May include subjective and loosely defined characteristics (e.g., relative project complexity)
- These attributes can be classified into a variety of categories, such as:
 - General Project/Application Characteristics
 - Resources
 - Project and Process Management
 - Technology and Environmental Factors

(These characteristics are discussed on the next slides)

Defining Application and Project Attributes

General Project/Application Characteristics

- Project type (new development, enhancement, maintenance software release or upgrade, acquisition, conversion, replacement, support)
- Project characteristics (risk assessment, in-house developed versus purchased and customized, outsourced)
- Application type (real-time, data warehouse, financial, telecomm)
- Architecture (main frame, client/server, web based, PC)
- Degree of innovation (whether the application has been done previously by your organization, within your industry or at all)
- Relative project complexity (low, medium, high)
- System performance requirements (speed, security)
- Project team (developer & user - person count, skill levels, etc.)
- Organization (number of people, sites, countries, languages, etc.)

Defining Application and Project Attributes

Resources (People)

- Technical experience (e.g., level of project team experience with tools, language, methodology)
- Business experience in functional area (e.g., banking, inventory control, weapons, taxes, telecommunication, etc.)
- Users (e.g., degree of involvement, experience level with application subject area, familiarity with the system development process, prior experience with a specific hardware or software platform)
- Support (e.g., support staff service levels)
- Software developer (e.g., in-house, outsourced or a combination)
- Training (e.g., included or excluded in project, conducted by IT or users)

Defining Application and Project Attributes

Project and Process Management

- Methodology (e.g., Structured Analysis/Design, Prototype, Information Engineering, Object-Oriented, Agile)
- Project management approach
- Modeling techniques
- Standards used (e.g., IEEE, ISO, CMMI)
- Percentage of reuse (code, design, test cases, etc.)
- Release strategy (e.g., phased, "x" releases per year, prototype, evolutionary, rolled out)
- Project structure (e.g., project team throughout versus analysts handing off to programmers)

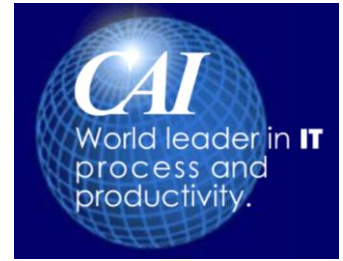
Defining Application and Project Attributes

Technical, Technological and Environmental Factors

- Database management systems (flat, indexed, hierarchical, network, relational)
- Number of database management systems
- Development platform (new, good response time, access)
- Physical environment (space, temperature, lighting, noise level)
- Testing and debugging tools
- Automated testing tools
- Code analysis tools
- Configuration management tools
- Development languages (COBOL, C++, Java, .Net, HTML)
- Operating systems
- Communications/Networking requirements (none, LAN, WAN, Web)
- Organization structure



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Function Points Supported By One FTE

Average of Corrective/Preventative Maintenance Support
Provided by One FTE for Various Platforms

Client Server	642
Main Frame	978
Web	756
e-business Web	438
Vendor Packages	740
Data Warehouse	392

*Support required for an application portfolio over time



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Hours Per Function Point for Enhancements

Average of Development Hours for Adaptive Maintenance on Enhancement Projects for Different Platforms

Client Server	7.6
Main Frame	10.0
Web	5.2
e-business Web	8.7
Vendor Packages	7.2
Data Warehouse	14.4

Hours Per Function Point for Agile Projects

Averages of Development Hours for Enhancement Projects for Appropriate Agile Projects

	Agile
Client Server	4.2
Main Frame	7.0
Web	3.2
e-business Web	5.8

Estimating and Monitoring Best Practices

The Software Engineering Institute (SEI) identified requirements for good estimating:

- Corporate historical database
- Structured processes for estimating product size and reuse
- Mechanisms for extrapolating benchmark characteristics of past projects
- Audit trails
- Integrity in dealing with dictated costs and schedules
- Data collection and feedback processes foster correct data interpretation



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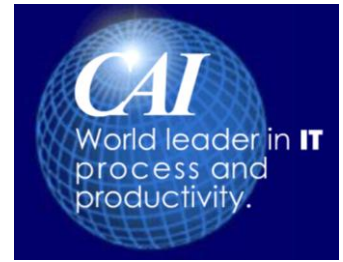


Summary

- Identify Critical Needs of Your Organization
- Identify Key Measures Based On Organizational Needs
- Review your Application Portfolio and Projects
- Evaluate Current Maintenance Support Requirements
- Identify Outsourcing Opportunities
- Monitor Internal & External Support Rates
- Effectively Manage Your Software Maintenance Dollars



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Questions?

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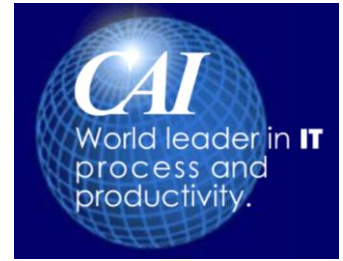
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