

## **Reifer Consultants LLC Software Economics Newsletter**

**Happy Summer** – Reifer Consultants LLC, its principals and its staff wishes everyone a happy spring/summer season. Be with family, go to the beach and enjoy the weather. It has been a cold winter.

### **Jun/Jul 2016 Edition of Software Benchmarking Report to be issued** -

The second release of our Software Benchmarking report for 2016 will be issued in early July 2016. *These benchmarks are used by many of our clients as yardsticks for comparison, i.e., to assess one's relative performance and competitiveness.* This release of our benchmarking report continues to be updated and improved based on the feedback from subscribers. The new edition contains the following changes:

- We continued to condense the material to make it easier for users to pinpoint information of interest.
- All productivity and cost figures have been updated to reflect the results of our analysis of the 2005 through the end of 2015 benchmark data set.
- Trend information related to the benchmark data set has been updated using the method of moving averages.
- All of our quality ratings have been slimmed down and focused.
- Our watch list containing technologies that can impact each of our application areas has been updated.

Based on comments received from subscribers, here are some of the improvements that we plan to make in our next edition:

- We will continue to condense the summary materials and use additional graphics to highlight trends.
- We will move to box plots to show how our data varies by reporting the mean and the 25<sup>th</sup>, 50<sup>th</sup>, 75<sup>th</sup>, and 90<sup>th</sup> percentiles.
- We will include more details on development stage only productivity, cost and quality.

We will continue to publish our benchmarks twice a year in the January/February and June/July timeframes. These reports will continue to be sold on an annual subscription basis. Substantial university, government and not-for-profit discounts are available for new subscribers. If you would like information about how to enroll in our software benchmarking service, please contact us at [info@reifer.com](mailto:info@reifer.com).

**Annual Agile Quantitative Study Released** – We have released the ninth edition of our “Quantitative Analysis of Agile Methods” report earlier this month. This report documents our current software productivity, cost and quality benchmarks for agile methods based on the results from 2,000 completed software projects, 1,000 of which were done with agile methods and the other 1,000 with traditional ones. Besides the norms, the report develops 14 major findings of which the following five provide the conclusions of most interest to our subscribers:

- Agile has become the mainstream approach for developing software in the USA.
- The average gain in software productivity experienced by those using agile methods during the past three years has increased to about 10 to 15 percent per year.
- The average reduction in software costs experienced by those using agile methods during the past three years is about 8 to 12 percent per year.
- Use of agile methods cuts development time by 75 to 90 percent solution on time by focusing on delivery of functionality that the user designates as important.

- Software quality increases by as much as 20 percent when agile methods are used as measured by defect densities during the first year of operations.

The report also highlights some of the weaknesses that organizations have observed during their journeys to agile use and discusses assessing value using traditional financial measures like Return-On-Investment.

All of our publications are available for a nominal fee on web site at <http://www.reifer.com/products>.

**New California Office to Open this Fall** – We are pleased to announce the opening a new office in La Quinta, California this fall. The office, which is in the Palm Springs area, was selected because it is near Los Angeles where a large number of our clients reside. Besides providing ample workspace for our teams, these facilities provide a state-of-the-art laboratory for conducting experiments and testing new concepts. They also contain an expansive Research & Development (R&D) library. Phones will ring in both of our facilities. If you are in the area, please come visit us.

**Software Defect Research Study Postponed** – Because we could not get commitments needed to supply the necessary data, the defect study that we announced in our previous newsletter has been postponed by its sponsor. The primary reason for this hesitancy on the part of potential participants stemmed from difficulties in getting permission to make the data available in the public domain. While still of interest to the sponsor, the study has been delayed until these data issues are resolved.

**New Study on Cognitive Computing Underway** – We have just begun a study to assess the potential of cognitive computing technology. This term refers to use of a combination of machine learning, knowledge-based, analytic and other techniques to guide decision-making, instinctive control and automata. Based on results emerging from R&D laboratories and practice, we will investigate whether we can use these techniques during software development to improve the software “make” and “manufacture” processes. Specifically, we will look at whether we can use cognitive computing to elicit requirements more quickly, develop better designs, reduce code complexity, automate testing and simplify maintenance. We will also explore whether the related technology can be used to improve estimation, collaboration; i.e., identify and involve the right group members, control and decision-making and make software design and testing self-metric. Our sponsor has agreed to permit us to make preliminary progress reports public. However, the full report will only be made available to subscribers of our benchmarking service and those who provide inputs to the study. If you are interested in participating in the study, please contact us at [info@reifer.com](mailto:info@reifer.com).

**Don Reifer to Speak in Brazil** – Don Reifer will present a talk entitled “*Is There Any Magic Associated with Software Benchmarks?*” in Sao Paulo, Brazil in November of this year for TI Metricas. As part of its key points, the talk will highlight the results of our recent agile benchmarking activities and discuss what they mean for businesses and IT organizations in South America. Other speakers include Dr. Brad Clark of Software Metrics and Tom Cagley of David Consulting Group.

**Web Site Blog Updated** – If you have not visited our web site, you should as it is continuously updated. Besides providing an overview of the firm and its services, the site provides postings that highlight our new work and findings. In addition, the blog provides much more information about items identified in this newsletter.

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