Reifer Consultants LLC
Software Economics Newsletter

Happy New Year – Reifer Consultants LLC, its principals and its staff wishes everyone a happy new year. May you, your family and colleagues have a healthy and prosperous new year.

Jan 2017 Edition of Software Benchmarking Report to be Issued - The first release of our Software Benchmarking report for 2017 will be issued later this month. *These benchmarks are used by many of our clients as yardsticks for comparison, i.e., to assess one's relative performance and competitiveness*. Each release of our software benchmarking report is updated and improved based on feedback from subscribers. This new edition contains the following changes:

- We have enhanced our graphics to make it easier for our users to pinpoint information of interest.
- All productivity and cost figures have been updated to reflect the results of our benchmarking analysis using data collected during the 2006 to 2016 timeframe.
- Trend information related to the benchmark data set has been updated using the method of moving averages.
- All of our quality ratings have been revised using the most current data set.
- 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 are still experimenting with box plots and will move to them in a limited way in our next issue.
- We plan to include more details on development stage only productivity, cost and quality.

We will continue to publish our software 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.

Offices Now Open for Business in Arizona and California – We are pleased to announce that we moved into new office space in Prescott, Arizona and in La Quinta, California during the fall of 2016. Besides providing better access for our clients, these offices provide our teams with the workspace they need for conducting research and experiments into new concepts. Our new addresses are:

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1042 Willow Creek Rd, Ste. A101-485   79410 Azahar
Prescott, AZ 86301   La Quinta, CA 92253

We continue to receive our mail in Prescott as it remains our main office. Our phone number [(310) 922-7043] and web site (http://www.reifer.com) remain the same for both sites.

Don Reifer's Benchmarking Talk in Brazil Available – Don Reifer's presentation entitled *"Is There Any Magic Associated with Software Benchmarks?"* in Sao Paulo, Brazil in November 2016 is available upon request to info@reifer.com. Besides discussing the generic benchmarking process and benefits, this talk compared software productivity, cost and quality benchmarking results for projects completed using traditional and agile methods. The talk was well received by the audience which came from all over USA, Europe and all over South America.

Cognitive Computing Report Published – We also released a report entitled *"Cognitive Computing and Software Development Automation: A Bright Future"* earlier this fall (i.e., it is available on our web site). Cognitive computing is a term used to highlight initiatives being mounted by IBM, HP and others in the industry to seize upon the ability of machines to reason and take control of man's everyday tasks. Such technology is being used today to do things like automate your home, program drones deliver packages and drive your car. This report looks at the current use of technologies like artificial intelligence, big data analytics, machine understanding and learning, the "internet of everything," and natural language processing to automate software development tasks like requirements elicitation, regression testing and version rollup. As the report's title infers, timing might be right for use of the technology for software automation.

Agile Estimating Guide Updated and Released – We released an updated version of our report entitled *"Agile Estimating – Straightforward and Simple"* in October 2016. This report provides guidelines for use in estimating the size and resources (labor, time, $, etc.) needed to deliver products developed using agile and/or agile-at-scale methods. This report and our other publications are available on our web site at http://www.reifer.com/products.

New Study on Agile Sizing Methods Now Available – We have surveyed the field to determine what best practices are being used for sizing agile applications whose requirements were represented by user stories. One hundred and twelve professionals participated. The study started by looking at the strengths and weaknesses of sizing by analogy, function points and user stories/story points. It then investigated the use of proxies and the Halstead concepts of vocabulary. Finally, the study evaluated the five identified sizing methods using nine criteria selected for that purpose.

New Agile-at-Scale Workshop Offered – An action-oriented, two-day workshop looking at managing agile-at-scale projects is being offered. This workshop, which debuted last fall, discusses how to setup a collaborative infrastructure that can be used to coordinate, synchronize and maintain visibility into and control over agile teams operating as a collective under a project management group.

You Can Participate - Agile Quality Study Update Underway – We recently embarked on an effort to look at update our agile quality report. Besides just looking at the state of agile quality, we have increased the study's scope to include findings relative to software quality based on hard data during both the software testing phase and the first year of operations. The results should be revealing because we plan to compare the quality that resulted during software developments on like projects that used traditional test techniques against agile efforts which embraced test-first and continuous integration concepts. In addition to looking at quality metrics, we will also investigate the potential use of various test metrics and models to answer key questions during development like "how much effort will it take to adequately test my products," "have I tested enough," and "how good are my products (from a quality point-of-view)." As part of the report, we also continue to look at the relative quality of software products during their first year of operational use. Our target completion date is the second quarter of 2017. Anyone who has data and wishes to participate in the survey should contact us at info@reifer.com.

Web Site Blog Updated – If you have not visited our web site, you should as it is continuously being updated. Besides providing an overview of the firm and its services, the site provides interesting postings and a blog provides much more information about items identified in this newsletter.

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