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## ISMA<sup>6</sup> Heads to Richmond!

by Terry Vogt, Conference Committee Chair

This year IFPUG will host the Sixth Annual International Software Measurement & Analysis (ISMA) Conference September 11-14 in Richmond, Virginia, a city with a rich historic past. Themed *Creating Solutions with Measurement in Changing Times*, ISMA will feature innovative ideas from industry leaders, workshops and conference sessions on a wide variety of topics.

Read on to find out more details about the event and the host city of Richmond—and visit the IFPUG web site for further details and registration/travel information. We look forward to seeing you there.



### From the Editor's Desk



Paul Radford

#### In this issue.....

***They say the future belongs to those who plan for it.***

IFPUG is looking to and planning for the future—and much of that is talked about in this edition of *MetricViews*.

David Cleary writes about his vision of the *Future of Function Points*. His breadth of experience in encountering difficulties in implementing function point based business solutions becomes clear. He sets out his blueprint for upgrading and widening the use and utility of function point analysis, with a clear and distinct emphasis on business value.

***But, of course, the future is now.***

Your IFPUG Marketing Committee has been looking at improved communication with all our members and that means, at least, social networking. Yes, they are considering a range of options—if you have something to contribute, start with our new Facebook page, become a Facebook Fan!

Coming up in the short term, September, is ISMA<sup>6</sup> in Richmond, Virginia. Back in the US of A. The Education Committee has lined up a series of great educational

(continued on page 3)



## Message from the President

**Bruce Rogora**

Building on the success of the Brazilian conference last September and in spite of the sluggish economy, the IFPUG volunteers have been diligently working on a variety of exciting activities and are planning events that will be commencing in the next few months. I would like to highlight a few of them.

First, the 2011 ISMA conference sponsored by IFPUG will be in Richmond, Virginia at the Greater Richmond Convention Center from September 11-14. The Conference and Education committees have planned some new and exciting items on the agenda this year. One of the new items will be "Interest Group" sessions, which are an extension of the conference call sessions that the New Environments Committee initiated over the past couple of years and participation in those sessions has been excellent. A second new item is the IT Performance Committee will be presenting a workshop on SNAP, the non-functional sizing method that they have been working feverishly on for the past couple of years, with a planned release date to coincide with the ISMA conference in September.

Switching from the workshops and conference into other areas; the IFPUG Counting Practices Manual is now available in seven languages: Chinese, English, French, Italian, Korean, Portuguese and Spanish. The Certification Committee is

working with Prometrics to have the automated exam translated into those languages as the need arises. The Counting Practices Committee has recently released the 4.3 DVD, which details the changes to the CPM. The 4.3 DVD is available via the online ordering form and individuals who order the DVD are eligible for CFPS certification credit and having their certification upgraded to version 4.3. The Management Reporting Committee is working on a new book that is projected to be published later this year. It is a collection of articles from industry notables and IFPUG members.

I would also like to inform you that our long time Executive Director, Barbara Swanda, has left the IFPUG office to pursue other opportunities. She has been replaced by Connie Holden. Please join me in welcoming Connie to the IFPUG family and when you see her at the next ISMA conference say hello.

As IFPUG membership expands in numerous countries around the world, I would like to encourage those new members and also those who have been members for a number of years to volunteer to become a member of an IFPUG committee. While not all committees need members at the present time, I would recommend volunteering for more than one committee. You can go to the IFPUG website and fill out a volunteer form.

In closing, I would like to encourage each of you to start your planning to attend the 2011 ISMA conference in Richmond, Virginia. Hope to see you in Richmond.

**Bruce Rogora**  
**IFPUG President**

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*(From the Editor's Desk continued from page 1)*

opportunities in Richmond. There is a strong focus on emerging technologies, expanded measurement approaches and interestingly, new types of business applications.

***ISMA<sup>6</sup> sounds like it will have a whole new feel to it.***

Terry Vogt has given us not only an interesting introduction to Richmond and the “feel” of the location; he has also outlined a conference with a very agile context. New sessions, new ideas—more ways to be involved and to communicate with peers. And all the issues of the age addressed.

When you are looking for one place where most of the “issues of the age” occur, you suspect that the IT giant that is Infosys might be a good place to start. On page 13, Amit Javadekar and Aman Kumar Singhal of Infosys Technologies Limited have given us a detailed insight into the processes undertaken by Infosys and how they have applied function point analysis within their application management. This type of access to the inner workings of such a large and competitive IT supplier is a rare privilege—don't miss it.

So have a good look around this edition. The committee reports are always interesting. They give us all the opportunity to understand and be involved with a concept that, despite difficulties, has stood the test of time and constant change. How these techniques develop and are presented is dependent on what is done by the committees. Some committees are conducting fairly deep research into enhanced ways of measuring alternate technologies—but a clear way forward is still emerging. Others are looking at the very basics of what we should count and when we should count. Opportunities exist to get involved, to be influential, and to learn at the same time.

Measuring software through its capabilities has proved itself to be timeless and of increasing value. Function points have the potential to be a massive game changer—now is your opportunity to be part of that.

***Paul Radford***  
***Editor***

## CURRENT CONTACT INFORMATION?

To ensure you do not miss out on any IFPUG communications, please notify the IFPUG Office immediately of any changes to your e-mail or postal address. You may do so in one of the following ways:

E-mail to [ifpug@ifpug.org](mailto:ifpug@ifpug.org), call 609/ 799-4900, fax 609/ 799-7032

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## ISMA<sup>6</sup> Conference Content



ISMA<sup>6</sup> presentations are scheduled to include a keynote presentation on Agile project management and troubled project recovery by Kevin Aguanno (GenXus Corporation) and a featured presentation on solving problems in management and development of software projects by Dan Galorath (Galorath Incorporated).

Additional content will be provided in presentations organized into tracks with logical continuity of content. These will include standard content tracks for function point theory and practice, as well as estimation, metrics, management and issues. Content is expected to include presentations on topics such as FP based estimation, function point analysis applied to requirements capture, FP counting rule issues with websites, estimating Agile projects, dealing with estimation across lifecycle phases, measuring performance, measurement for contracts, productivity analysis, boundary identification, functional sizing for vendor package software, cost benefit analysis, baselining, transaction analysis, implementing a measurement program, caveats and assumptions in measurement, industry benchmarks, FPA scope, measuring software reuse, measurement information sources, resource requirement for measurement, and many others.

In addition, there will be several Interest Group (IG) interactive sessions on topics selected for their relevance and appeal to the attendees. As announced, all prospective attendees are encouraged to submit ideas for the IGs to [isma@ifpug.org](mailto:isma@ifpug.org) with "IG Session" in the message header. Scheduled IGs will be selected based on input from the measurement community and announced well before the conference begins. IGs will be scheduled so that they are not in conflict with related track presentations.

ISMA<sup>6</sup> will also include announcements and presentations for several committees and task groups, and the general membership meeting at the close of the conference. Be ready for problems and solutions, issues, controversies and lively discussion as ideas are shared among some of the top experts in the field of software measurement.

## **Program: Sunday, September 11**

1. Introduction to the Software Non-functional Assessment Process (SNAP), with duration of one day, this workshop focuses on non-functional assessment techniques consistent with the SNAP Assessment Practices Manual (APM). At the completion of this workshop, participants will be familiar with basic SNAP concepts, non-functional assessment methodology, SNAP categories, and uses for SNAP assessment results. Participants will apply IFPUG SNAP assessment in a hands-on interactive workshop environment. The expected target audience is composed of Measurement and Development specialists desiring an introduction and "hands on" training in the SNAP method for non-functional assessment. The workshop has no prerequisites for attendees and all of them will receive a copy of the SNAP APM. The course will be taught by instructors coming from ITPC.
2. FPA Emerged Business Technologies, with duration of one day. Today's function point analysts must be able to accurately apply IFPUG function point counting rules to a variety of

software environments and technologies. This course will focus on the emerged technologies which are today becoming more common when conducting function point analysis for business systems. The following technologies will be covered in this session:

- Multimedia
- Rules Based
- Data Warehousing
- Internet
- Voice/Prompt response applications/projects

This is a hands-on, interactive workshop based on examples and case exercises. Specific interpretations of the IFPUG CPM rules will be provided. The course will be taught by instructors coming from Software Measurement Expertise.

3. FP-101. Introduction to Function Point Counting: Basics, this course will have a duration of two days, starting Sunday, September 11, 2011 and finishing Monday, September 12, 2011. This course is designed for professionals at all levels of experience who desire a working understanding of function points and their use as a software metric. This course will provide the participants with the fundamental concepts behind function point analysis and counting. The uses and benefits of function point analysis will also be demonstrated. IFPUG has certified this training to be compliant with the most current standards and version of the Counting Practices Manual (CPM). The course will be taught by instructors coming from Q/P Management Group.

### Program: Monday, September 12

4. FPA Emerged Technical Environments, with duration of one day. Today's function point analyst is faced with sizing a wide range of software and technology applications that are unlike traditional business systems. This course

demonstrates how function point analysis techniques are applied to emerged technological environments. The environments addressed include: Windows, Graphical Users Interface (GUI), Object Oriented, Embedded Software Applications, Real-time Systems, Process Control Applications, Client/Server Applications, and Middleware. This hands-on, interactive workshop will prepare you to apply the current function point counting guidelines to these environments. Specific interpretations of the IFPUG CPM rules will be provided. The content of the course will be reinforced with examples and hands-on case studies. The course will be taught by instructors coming from David Consulting Group.

5. Function Point Analysis and Counting Enhancements, with a duration of one day. This workshop focuses on issues and techniques for function point counts of enhancement activities. It starts with a review of FP 4.3 counting rules and then proceeds to address the following objectives:

- To discuss different types of "enhancement" activities and how they differ
- To discuss the fundamental FP boundary concepts and the issues prevalent with enhancement activities
- To equip students with tools to aid in counting enhancement projects
- To practice, through a hands-on case study, applying FP counting to enhancement activities

The target audience is individuals who have previously taken function point training and who need to learn how to size and estimate their enhancement projects using FPA. The course will be taught by instructors coming from Quality Plus Technologies.

## Day One – September 13

### Keynote Speaker: Kevin Aguanno

Kevin Aguanno is known in the IT industry for his innovative approaches to solving common problems with a special emphasis on complex application development and systems integration projects. His presentation will focus on two specialty areas: Agile project management and troubled project recovery.

As a well-known keynote speaker, trainer, and coach in Agile management methods, Aguanno has taught thousands of people how to better manage high-change projects by using Scrum, Extreme Programming, Feature-Driven Development, and other agile methods. He is a frequent presenter at conferences and private corporate events where he delights audiences with practical advice and fascinating stories from his own experiences in the trenches.

He has taught for several years at the University of Toronto where he won the coveted Excellence in Teaching Award, and is a regular guest lecturer in software engineering and project management classes at other universities.

Aguanno holds a B.A. from the University of Western Ontario and a Master's in Project Management from the School of Business and Public Management at George Washington University. He is a certified Project Management Professional (PMP), certified by IBM as a Certified Executive Project Manager and by the International Project Management Association (IPMA) as a Senior Project Manager (IPMA Level B).

Aguanno is an active member of the Project Management Institute (USA) including the Information Systems SIG, the American Society for the Advancement of Project Management (USA), the Association for Project Management (UK), and the Project Management Association of Canada where he is a founding director.

He is accredited by the IPMA (Geneva, Switzerland) as a project management competency assessor,



and he performs IPMA Level-A, Level-B and IPMA Level-C assessments for the PMAC-AGPC in Canada and the ASAPM in the USA.

Aguanno is the author of over twenty books, audiobooks, and DVDs.

## Day Two – September 14 Keynote Speaker: Dan Galorath

Dan Galorath is the founder and CEO (1978 – Present) of Galorath Incorporated, provider of SEER parametric models for estimation, planning, analysis and control. Galorath consults and lectures extensively on software measurement, estimation and management, in the U.S. and internationally, most recently in Brazil, Japan, the U.K. and China. His presentation will focus on the application of measurement to devising solutions to problems and issues in software development and management.

During his more than three decades in the industry, Galorath has been solving a variety of management, costing, systems, and software problems for both information technology and embedded systems. He has performed all aspects of software development and software management. One of his strengths has been reorganizing troubled software projects, assessing their progress, applying methodology and plans for completion and estimating cost to complete. He has personally managed some of these projects to successful completion. He has created and implemented software management policies, and reorganized (as well as designed and managed) development projects.

Galorath Incorporated has developed the SEER solutions, methods, and training for Software, Hardware, Electronics & Systems, Manufacturing, and Information Technology: cost, schedule, and risk analysis, and management decision support. Galorath was one of the principal architects of SEER for Software (previously known as SEER-SEM) cost, schedule, risk, and reliability estimation modeling tool. His teaching experience includes development and presentation of courses in Software Cost, Schedule, and Risk Analysis;

Software Management; Software Engineering; and Weapons Systems Architecture.

Among Galorath's published works are papers encompassing software cost modeling, testing theory, software life cycle error prediction and reduction, and software and systems requirements definition. He was named winner of the 2001 International Society of Parametric Analysts (ISPA) Freiman Award, awarded to individuals who have made outstanding contributions to the theoretical or applied aspects of parametric modeling. His book "Software Sizing, Estimation, and Risk Management" was released in March 2006.

## Interest Group Sessions New Feature at ISMA Conference

ISMA<sup>6</sup> in Richmond Virginia will include a new feature in addition to its standard content of outstanding speakers from the IT industry: Interest Group Sessions.

The intent of the Interest Group (IG) sessions at ISMA<sup>6</sup> will be to encourage the identification and prioritization of issues in software development, acquisition, management and support and to identify approaches by which the application of measurement can specifically support those objectives. IG session topics will be identified based on interest preferences of IFPUG members and industry experts.

IG sessions will be interactive meetings of practitioners, clients and industry experts that will focus on an issue or problem and seek to devise a solution or approach in response to it. In these IG sessions, participants will begin by defining their shared specific point of interest, then engage in discussions on solution alternatives with the objective of determining a course of action for resolution, and conclude by announcing one or more opinions, recommendations or other responses to the general conference attendees.

Each IG session will be approximately two hours long and will be conducted in a separate conference room supported by a facilitator and

scribe with appropriate AV equipment. Spectators will not be permitted in IG sessions, only participants will be allowed to be present. Attendance in each IG session will be limited to approximately 20 persons. Attendees may be anyone attending the conference as well as selected personnel from client organizations and industry practitioners. All participants must be registered before the conference begins. While the IG session is underway, the facilitator will drive the participants to focus on the specific issue or problem and move toward exploring potential solutions and selecting the most promising ones from the available alternatives. A scribe will take notes on the discussions and decisions reached. When the IG session is completed, the facilitator and scribe will assemble the discussion notes and materials and package these for review by conference attendees. A designated IG participant will provide a brief oral recap of the session to the conference at the end of Day Two immediately before the General Membership Meeting at the close of the conference.

Outputs from the IGs may take any potential form including recommendations for standards, identification of appropriate techniques, new or modified definitions, proposals to undertake research projects, agreements to share data, creation of working groups to sustain the work of the IG, or others. The intent of the IGs is to help the IT measurement community and IFPUG in particular to identify high-priority issues related to software measurement as well as communicate to the software industry potential solutions to persistent problems and issues in all aspects of software development, acquisition and management.

All IFPUG members and other persons interested in IT measurement and the software industry at large are encouraged to submit recommendations for IG session topics. Send suggestions to [isma@ifpug.org](mailto:isma@ifpug.org). Please be concise and identify if you will want to be a participant in that session. Depending on responses there will be between two and four IG sessions conducted. Due to scheduling requirements, all suggestions

for IG sessions at ISMA<sup>6</sup> must be received by July 31, 2011. The IG sessions selected and their currently registered participants will be announced approximately four weeks before the conference. Any participant slots available will be announced and allocated on a first-come, first-served basis. Please watch the IFPUG Conference link <http://ifpug.org/conferences/> for ongoing information updates on the IG sessions

## About Richmond

This year ISMA visits a city with a long and historic past in a region noted for a unique concentration of American history. Richmond, the state capital of Virginia, is located 100 miles south of Washington, DC. Its origins date back to the earliest times of the American nation. Richmond has an array of interesting and historically significant features worth a look to anyone curious about American history and culture.

Today Richmond is a regional center of government, law, medicine and trade. Richmond is home to several major educational, financial and research institutions and some colorful and historically interesting neighborhoods including The Fan, Shockoe Bottom and Church Hill. Features include the Confederate White House, the Edgar Allen Poe Museum, the John Marshall House and the Jefferson Hotel, the only five star, five diamond hotel in Virginia. At St. John's Church in Church Hill, Patrick Henry delivered his "Give me liberty or give me death" speech just prior to the start of the Revolutionary War in 1775.

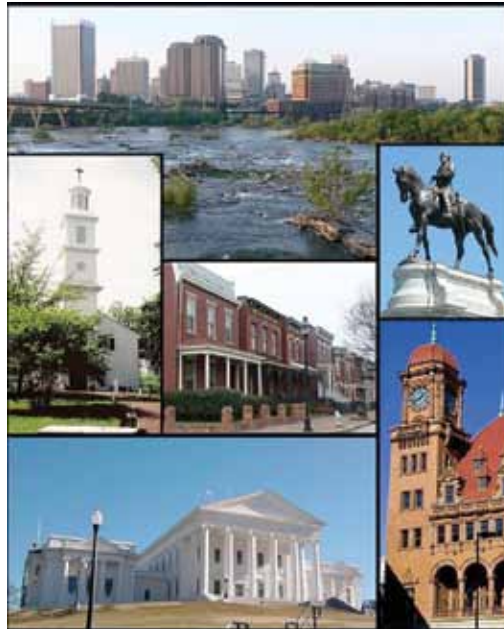
In the early 1860s during the American Civil War, Richmond was the capital of the Confederate States of America and was nearly destroyed in battle. There are several historic Civil War sites in Richmond, including the notorious Belle Isle prisoner of war camp and the Tredegar iron works. Most of the prominent generals of the Union and Confederate armies fought in Virginia, which was the site or more battles of the Civil War than any other state. Richmond itself and nearby St. Petersburg were the locations of several major campaigns. Fredericksburg located

55 miles north of Richmond is the location of the Battle of Fredericksburg and the point of departure for other battlefield tours in that area including Chancellorsville, Spotsylvania and the Wilderness. Approximately two hours drive north of Richmond is Manassas, the location of Bull Run, the first battle of the Civil War. Appomattox

Court House, site of the surrender signing that ended the Civil War, is located approximately two hours drive west of Richmond. Filming will begin in Richmond in 2011 on Steven Spielberg's movie about the life of Lincoln.

Several other historic sites in the area are within an easy drive of Richmond, including the homes of many of the first US presidents. George Washington's boyhood home is located outside Fredericksburg. Thomas Jefferson's boyhood residence, Tuckahoe, is located just outside Richmond on the James River. Jefferson's famous self-designed home Monticello is located 70 miles northwest of Richmond near Charlottesville, home of the University of Virginia, which was founded by Jefferson. Jamestown, the first permanent English settlement in what is now the United States of America, was founded in 1607 on the James River and is now a restored historic destination located 60 miles southeast of Richmond. Located near Jamestown, Colonial Williamsburg is a re-creation of the original Virginia colonial capital. This entire town is populated with professional reenactors in authentic costume and provides a view of America 300 years ago. Norfolk, home of the US Atlantic fleet including aircraft carrier task groups, is located 30 miles southeast of Williamsburg. Most of these destinations are directly accessible via the interstate highway system, and many are overseen by the US Park Service.

There will be further details on attractions in and near Richmond in upcoming email announcements for the conference and on the IFPUG website conference page in the weeks ahead.



## Communications and Marketing Committee

*by Linda Hughes, Chair and Kim Ovuka, Vice-Chair*

We hope you enjoy this issue of *MetricViews* and find value in the Feature Articles. Paul Radford has pulled together some very interesting articles for this edition.

The CMC is geared up to provide all the interesting information on the upcoming ISMA<sup>6</sup> conference to be held in Richmond, Virginia, September 11th -14th. This year's conference will emphasize creative problem solving using industry measurement best practices. Look for eblasts with details on the keynote speaker, featured track presentations and educational opportunities. Our IFPUG.org site is also being updated to include conference details, including registration information, daily agendas, and Richmond area highlights. We hope you will consider attending this annual conference as a way to expand your network and gain the latest knowledge and insights from experts in the measurement field.

CMC is also looking into the vast possibilities for social networking. We have a new Facebook page set up and would love for you to become our Facebook Fan! Look for us on Facebook: <http://www.facebook.com/>

Please remember that CMC is available to help you communicate with our entire IFPUG network, special interest groups, or other task groups, etc. Committees and task groups can find the Web Update and E-blast Request forms on the CMC page: <http://ifpug.org/about/marketing.htm>. Please access the CMC page for the latest version of the form and complete the forms in their entirety.

Also, if you are interested in providing a feature article for the next *MetricViews* to be mailed in hard copy, please contact us at [CMC@ifpug.org](mailto:CMC@ifpug.org).

## Counting Practices Committee

*by Bonnie Brown, Vice Chair*

The CPC has recently released the course FP 241 – CPM 4.3 Update DVD. Although this course is named CPM 4.3 Update, it was written after CPM 4.3.1 was released and is in accordance with the text in CPM 4.3.1. This course explains the changes made with version 4.3 of the IFPUG Counting Practices Manual and the rationale and significance of those changes. This course consists of six modules of about 20-25 minutes each, for a total of about 2.75 hours playing time. The first module provides an overview of the changes, along with background information about key elements in an ISO Standard. The remaining modules each focus on changes within a given area of the manual. The course includes slides and audio and is published such that the modules can be completed in any sequence and students can directly navigate to a particular topic. This course is eligible for

Certification Extension Program (CEP) credits and is available for purchase on the IFPUG website (see Publications and Products).

The CPC's next big project is updating the IFPUG Case Studies to be consistent with CPM 4.3. Work has begun on Case Study 1 and its completion is the CPC's highest priority. The CPC is also working on three white papers addressing the following topics: Additional Shared Data Scenarios, Security Functionality and Control Information. These white papers are in various states of development and are expected to be complete over the next year and a half.

## ISO Committee

*by Carol Dekkers, Vice Chair*

When you read this update, I will be back from the ISO/IEC meetings representing IFPUG held May 23-27, 2011 at a university on the outskirts of Paris, France. As a reminder to new readers, IFPUG participates in the development of software engineering standards in three ways:

1. As a Category C liaison to ISO/IEC JTC1 SC7 – where we can submit international (non-country specific) comments to ballots. IFPUG does not have a vote as a Category C liaison.
2. As a voting member of the US Technical Advisory Group (TAG) which formulates the USA national body vote to developing ISO standards. Our IFPUG / ISO committee must attend two US meetings per year and pay dues to the ANSI (American National Standards Institute) in order to have a voice and input to the US position.
3. I (Carol Dekkers) am a project co-editor to the emerging suite of Software and Systems Performance Benchmarking Standards ISO/IEC 29155 based on functional size measurement (function points). Project editors, co-editors and convenors of working groups are members of ISO/IEC JTC1 SC7 as officers irrespective of the national body (country) or liaison organization they represent.

### Current work underway

1. **Working Group 10 subgroup on Project Performance Benchmarking** – we are progressing with work on 29155-1 (Framework) which recently passed its DIS (Draft International Standard) ballot. This standard will become an international standard in the next six months. In Paris, we worked on development of the second standard in this series ISO/IEC 29155-2 as a working draft document. IFPUG members who are interested in contributing to or reviewing a draft of these standards can contact me at [dekkers@qualityplustech.com](mailto:dekkers@qualityplustech.com) for copies of the draft documents.
2. **Working Group 6 subgroup on Functional Size Measurement** – we are working to advance two corrigendum items (in layperson's terms corrigendum means "update") of the ISO/IEC 14143-1 (Framework standard)



and ISO/IEC 14143-6 (Guide to Usage of Functional Size Measurement related standards) for which the New Work Item proposals were recently balloted within the subcommittee 7 (ISO/IEC JTC1 SC7). This work will be lightweight (in comparison to the development of new standards from scratch) because it constitutes purely an update to existing standards to bring them in line with other standards developed since their original publication.

Thank you to IFPUG members and the IFPUG board of directors for continuing to support this important work on behalf of IFPUG. It is critical to ongoing visibility that IFPUG continue to participate in both the US Technical Advisory Group (TAG) to SC7 and in the international standards arena on behalf of the US. Please send me an email if you have comments or want to become more involved in the IFPUG ISO standards work.

## IT Performance Committee

*by Dan Bradley, ITPC Chair*

The IT Performance committee's goal is to provide services, based on a collection of software metrics data that assist IFPUG members to understand, plan, manage and improve software engineering processes and practices.

The ITPC and the SNAP Team has had a very busy winter. Since the last ISMA Conference in São Paulo, the team has accomplished the following:

1. The Beta Assessment Practices Manual has been circulated to Beta testers
2. Feedback has been received on the manual and minor revisions are being incorporated
3. The first round of Beta testing results has been received and is being analyzed
4. Preparations are being made for the second Beta test

Many thanks are extended to those who participated in the first Beta test. We had so much interest in the project that we had to divide the testers into two groups. The second round began in early May. So far the results are very encouraging.

The Software Non-functional Assessment Process (SNAP) Assessment Practices Manual (APM) will allow organizations to capture the size of the non-functional (technical) requirements surrounding delivery of functionality to customers. With the input from the Beta test organizations and the subsequent calibration of the model, the SNAP method will compliment the functional measures and enhance efforts to size, estimate and manage application development. Stay tuned for more on the Beta testing results.

The ITPC wants to thank the project team involved in creating, editing and reviewing the initial Beta Release of the SNAP APM. This accelerated effort has only been possible because of hundreds of hours volunteered by measurement experts around the globe.

We are planning to have initial training in the SNAP method at the Fall ISMA Conference and the first release of the APM should be available at that time.

For additional information on SNAP see the documents and presentations posted in the ITPC section of [www.ifpug.org](http://www.ifpug.org). Other ITPC activities include:

- Representing IFPUG at the International Software Benchmarking Standards Group (ISBSG). As part of this group we are currently working on:
  - An ISO Standard for Benchmarking
  - Contributing projects to the Benchmark database
  - Marketing ISBSG products to IFPUG members at a reduced price
  - Keeping ISBSG informed of SNAP progress and suggesting the addition of data elements required to benchmark assessment results
- Responding to Member inquiries:
  - Posed to the ITPC on the IFPUG bulletin board
  - Concerning ISBSG Products and Data Demographics
- Updating and presenting the ITPC created course, "MS-222 - Principles of Estimating and Benchmarking Using Industry Data"
- Developing a new course to be presented at ISMA that will introduce the SNAP method and train attendees in the basics of non-functional assessment

## Education Committee

*by Juan Cuadrado-Gallego, Chair*

The Director, Steven Woodward and I are very proud of the set of five workshops that have been selected for the upcoming ISMA<sup>6</sup> Conference. We believe the program will be very interesting for the conference attendees and are anticipating a high member participation rate in the workshops. There are two one-day workshops on both Sunday, September 11, 2011 and Monday, September 12, 2011 with one two-day Workshop on Function Point Basics starting on Sunday and finishing on Monday.

## Membership Committee

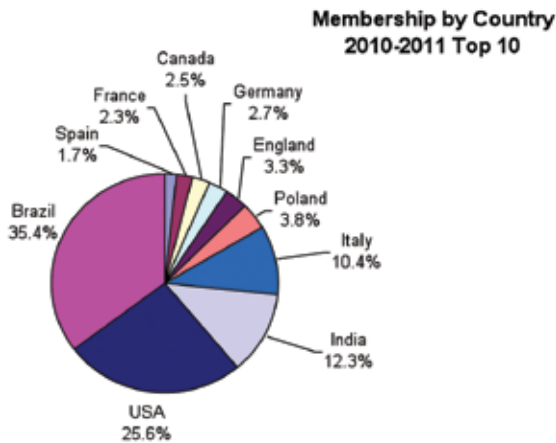
*by Marcio Silveira, Director of International and Organizational Affairs*

The Membership Committee is working on several major initiatives to enhance the benefits of IFPUG membership, to widen the scope and size of membership and to make IFPUG membership an even more effective investment and association.

The first initiative is to offer current members a discount if they bring a new member to IFPUG. Details are still under discussion but good news will be provided once finalized. If you have a friend or a company that is thinking of becoming an IFPUG member, stay tuned because you can benefit from that.

The second one is the fidelity program. In this initiative we are trying to understand why some members didn't renew their

membership with IFPUG. In order to understand that, we launched a survey during December 2010 – February 2011 with several questions related to this issue and the data was compiled and it is being analyzed by the board of directors. Soon we will have more news about actions that will be taken to address possible issues that came from the survey. Understanding what motivates and guides our members is critical to meeting their future needs. At the most basic level, understanding where our members are situated and where growth is occurring is also very important.



Another initiative is related to the replacement of our current membership database program by a more robust one providing the members more functionality and better ways to interact with IFPUG.

Finally, we are doing a benchmarking with other similar organizations in order to understand their fee structure and benefits. From this analysis we will review the current IFPUG benefits and fees to make adjustments if necessary.

## Management Reporting Committee

*by Dawn Coley, Vice Chair and Luigi Buglione, Committee Member*

The mission of the Management Reporting Committee (MRC) is to promote and encourage the use of function point metrics in management reporting. Its current primary activity is producing our second book on IT Measurement.

The new book, to be published by Taylor & Francis (CRC Press), is expected to be published in the first quarter of 2012. Many interesting and thought-provoking abstracts have been submitted. The committee is finalizing the chapters and sections organization, and the accepted authors are busy writing their papers. We look forward to working with the authors as the written papers are submitted. The new book will be composed of more than 40 chapters in 12 subject areas and will take into account several facets of IT measurement with topics ranging from function point use to cloud computing to outsourcing.

The book will be a valuable addition to the industry and will provide great value to the readers, enlarging the scope of topics covered in the first book, *IT Measurement: Practical Advice from the Experts*, which is still available for purchase. More details, reviews and purchasing information for that book are available at [www.ifpug.org/publications/itMeasure.htm](http://www.ifpug.org/publications/itMeasure.htm).

We hope to see you at the ISMA<sup>6</sup> Conference September 11-14 in Richmond, Virginia ([www.ifpug.org/conferences/](http://www.ifpug.org/conferences/)) where we will be sharing the latest news on the next IT measurement book!

More information and updated news are regularly published on the MRC webpage: [www.ifpug.org/about/reporting.htm](http://www.ifpug.org/about/reporting.htm)

## New Environments Committee

*by Deb Maschino, Chair*

In an effort to support our mission, the IFPUG New Environments Committee (NEC) is making some evolutionary changes. These changes will help provide guidelines on how to apply function points to new and emerging environments and to present more timely feedback to the membership on the applicability of function points in said environments.

Early in 2010, the NEC decided to pilot topic-specific Interest Group meetings. After piloting these groups for the past year, the NEC reviewed the results and determined that there were some good activities to carry forward and that others needed to be reworked. One of the positive things that came out of the Interest Group meetings was the innovation of quarterly presentations on hot topics of interest to those groups. In light of these presentations, we are creating a process that involves the user community becoming more active participants in sharing information with the Interest Groups and the IFPUG members. This new process is being developed to include a call for presenters similar to the annual IFPUG conference. This will allow more individuals to be able to share their ideas during the year in a more informal teleconferencing environment. The presentations will be reviewed by the NEC and the timeliest topics will be chosen and scheduled.

Due to the overlap across the Interest Groups, we decided to combine several of them into one Interest Group meeting. The current Interest Groups of Financial Insurance/Banking, Service Oriented Architectures (SOA) and Telecommunications will be combined into one Interest Group. The remaining Interest Groups will stay the same; Unified Modeling Language (UML) and AGILE functional analysis.

We hope that these changes will continue to provide valuable and timely information to the IFPUG community. The information and perspectives provided by our participants can then be provided to the IFPUG executive board to help guide the IFPUG organization to better satisfy IFPUG members' needs and priorities.

# The Future with Function Points

by David Cleary, CHARISMATEK Software Metrics, Australia

Amongst those people working in the field of software development, delivery and support – or at least amongst those who are aware of the concept – Function Point Analysis is a polarizing idea. It has highly committed supporters and equally vehement detractors.

Similarly, on the question of whether Function Point Analysis has been successful there are equally strong and opposing arguments. On one hand, Function Point Analysis has demonstrated great longevity – it's now 32 years since it entered the public domain – and enormous adaptability – back in the late 70s, today's software landscape would have appeared more like science fiction than day-to-day business and personal reality. On the other hand, it can be argued that Function Point Analysis has never really entered the software mainstream. In a room of software developers it is usually only a handful who are in any way familiar with Function Point Analysis and an even smaller number who have any more than a rudimentary understanding of the technique or its potential uses.

So what needs to be done in the future to build on the last three decades of history and to enable Function Point Analysis firstly to survive and sustain itself and then to grow its applicability and take-up across the software industry? In this article I propose three goals that I think need to be considered when thinking about the future of both the definition and application of Function Point Analysis.

Before doing that, however, I need to start by saying that I am definitely a supporter of Function Point Analysis. I believe it is an extremely useful technique that provides real and substantial benefits to a range of important software development, delivery and support activities, including but not limited to, early life-cycle estimation, project risk assessment, scope management & control and productivity &

quality benchmarking. My evidence of this? For over ten years I have worked for a commercial organization that has built its business success on the benefits that Function Point Analysis provides. If Function Point Analysis really did not work and was not useful to business, I would not be in the position that I am in today to be thinking and writing about it.

However, in contrast to my personal view, throughout the decade I have been involved with Function Point Analysis I have regularly heard and read disparaging remarks about the technique. "It's not applicable to modern software delivery"; "It's too hard and too expensive"; "It simply doesn't work"; and so on. Whilst it would be nice to be able to label these remarks as inconsequential, as coming from ill-informed individuals or as being fundamentally wrong, my problem is that all too often this has not been the case. Instead, I have heard these remarks from experienced, successful software developers, many of whom are the very same individuals who have been involved with – and sometimes invested in – past Function Point Analysis initiatives that have simply failed to deliver on what was promised. Therefore, I believe that any plan for the future of Function Point Analysis must address the issues that lead to these negative views, otherwise it is likely to never get beyond being "a plan".

So what needs to be done to facilitate success and, hopefully, grow the use of Function Point Analysis? The three goals that I think need to be considered both in terms of its definition and application are:

- 1. Function Point Analysis should only ever be performed when there is a business reason to do so.**
- 2. Function Point Analysis needs to provide useful information to support the business reason for which it is being performed.**

- 3. Function Point Analysis needs to be applicable to contemporary software applications and software development and delivery approaches.**

In the rest of this article I discuss what I mean by these three goals and suggest some initial ideas about what needs to be done to achieve them.

**Function Point Analysis should only ever be performed when there is a business reason to do so.**

Performing Function Point Analysis impacts on a software project or application support team's budget. It costs money! Therefore, to justify performing Function Point Analysis it needs to lead to benefits that have a potential value greater than the cost.

Knowing the function point size of a software project or application is only ever of benefit when that size is used in the context of an identified business reason. Luckily for Function Point Analysis and its adherents, there are many business reasons where knowing the function point size is extremely useful. These include but are not limited to: early life-cycle estimation, risk management, scope management & control and benchmarking.

My experience suggests that in situations when Function Point Analysis is performed in response to an identified business reason, where it aids in providing useful information to address specific goals or problems, then Function Point Analysis is seen as a valuable resource by the organization in question and is supported and nurtured.

In contrast, if Function Point Analysis is performed without a clear business reason then, firstly, Function Point Analysis is simply viewed as a cost that fails to deliver anything useful and is therefore likely to be discontinued in the future; and, secondly, it reinforces the negative view espoused by too many individuals that Function Point Analysis is fundamentally a waste of time.



***Function Point Analysis needs to provide useful information that supports the business reason for which it is being performed.***

Using Function Point Analysis to provide inputs to address a business reason is still of no real benefit if the function point size information obtained does not usefully address the goals and problems being considered.

For example, using Function Point Analysis for enhancement project estimation in situations where the majority of the enhancement project effort is concerned with problem investigation or entering new data values into the existing application, as opposed to the addition, modification or deletion of software functionality, is not useful. In such situations, an enhancement project's assessed function point size does not correlate with the project's required effort and so can not sensibly be used to estimate that effort. Yet, despite this fairly self-evident reality, I still see situations where this is exactly what is being attempted.

So, how to ensure that Function Point Analysis is only applied in situations where it is likely to provide useful information?

Firstly, do not apply Function Point Analysis in situations where it is obvious that it can never work. Common sense can usually identify these situations.

For example, in a normal state of affairs there is obviously no useful relationship between the function point size of a standard office productivity suite of applications and the effort to implement those applications within a small business. So, do not attempt to use the former to forecast the latter.

Secondly, ensure that Function Point Analysis is applied both correctly and also consistently. I see many examples of Function Point Analysis that bear only a passing resemblance to either the IFPUG method or a well-defined variant on that method. Function Point Analysis correctness and consistency is best achieved via the standard mechanisms of clearly defined processes, effective tools, appropriate training of function

point analysts and adequate quality assurance and validation of function point counts.

Thirdly, and more contentiously, Function Point Analysis sometimes needs to be applied flexibly. On the surface this may appear to be at odds with the requirement that Function Point Analysis is always performed correctly and consistently. However, this should not be the case. What I am suggesting is not a rejection of a rigorous and careful application of the Function Point Analysis rules and guidelines but rather a rejection of dogmatic interpretations of those rules and guidelines that make the delivery of useful function point size information impossible.

For example, in my experience an approach that uses Function Point Analysis in a well-defined but non-standard manner for project estimation and generates good estimates that align well with actual effort, schedule and cost is usually valued highly by the organization that applies it. Such organizations will speak glowingly about Function Point Analysis.

In contrast, a Function Point Analysis estimation approach that dogmatically conforms to a conceived right interpretation of the technique at the expense of generating effective estimates is next to useless. Not only does it fail the business goal of providing usable project estimates, it is also a short route to turning an organization away from Function Point Analysis for good.

One criticism of supporting the flexible application of Function Point Analysis within a particular organization or situation will invariably be that it means the function point counts in question can no longer be compared with counts from other organizations or situations. Whilst this is undoubtedly true, it is only relevant when the business reason to perform the Function Point Analysis is to benchmark one organization or situation against others. Function Point Analysis performed for many other business reasons can proceed unhindered.

Fourthly, Function Point Analysis needs to be continually tested both to ensure that the technique as it is applied does work and also to allow for continuous improvement.

***Function Point Analysis needs to be applicable to contemporary software applications and software development and delivery approaches.***

Contemporary software applications and projects have particular attributes that Function Point Analysis needs to address. These include the extensive use of configurable packages and COTS components, alternative and sometimes complex software architectures and the all encompassing impact of the Internet. Attempts to address these attributes should begin by considering the business reasons underlying why Function Point Analysis is likely to be performed in contemporary software environments and not simply provide an arbitrary mapping of the technique onto the contemporary environment. Doing so will help ensure that the guidelines are defined in such a manner that, when they are applied, the resultant function point sizes are useful for their purpose.

Consider a not-untypical contemporary situation where it is proposed that Function Point Analysis be used to help in forecasting the effort required to deliver software changes to the middleware business logic within a web application with a multi-tiered architecture. If drawing a single application boundary around the software entire application would fail to deliver a function point size that is useful for forecasting the required project effort, then the Function Point Analysis guidelines should not suggest that as the approach to take. Instead, an alternative more useful approach might be to draw a separate boundary around the middleware component and to identify as elementary processes the added or changed interactions that cross that boundary.

## Conclusion

Everyone, from commentators in gossip magazines and up, regularly reminds us that today technology is evolving at an ever quickening rate. In this frenetic environment, if Function Point Analysis is to survive and prosper and avoid going the way of punch cards, COBOL and data entry front-ends to batch processes, it needs to ensure its relevance and usefulness for those people and organizations that work in developing,

delivering and supporting software applications.

In this article I have put forward three goals that I believe, if addressed, can help ensure that Function Point Analysis does continue to provide real benefits across the software process. Of course, even if Function Point Analysis did cease to be used and the technique was ultimately forgotten, the need for a consistent and objective measure of software size that can be determined

early in the software life-cycle to support a wide range of necessary software development and project management tasks would remain. Someone would simply have to reinvent Function Point Analysis.

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# Experiences in Institutionalizing Function Points in a Large IT Services Organization

by Amit Arun Javadekar, Principal and Aman Kumar Singhal, AVP and Head-Process Group, of Infosys Technologies Ltd.

## Abstract

Predictability and de-risking of software projects are essential for the success of IT services organizations. Equally important is the need to deliver measurable value to the clients along with best-in-class project performance. Function Points provide a basis to measure these key parameters (i.e. quality, productivity, value delivered) and in turn improve the same. It helps in creating a platform for healthy comparison internally among various delivery units and also provides a basis for industry comparison. This is possible only when there is a good institutionalization of Function Points usage by an organization. Especially in a large organization (> 10000 people), the institutionalization success depends on being driven as a process change management program.

Infosys is a large IT services company with over 130,000 employees spread over 75 cities across the globe and executes thousands of projects at a given point in time in various business and technology domains. This paper highlights the experiences in institutionalizing Function Points usage on such a large scale at Infosys and creating a sustainable ecosystem. This includes, right investment and management commitment/reviews, effective governance

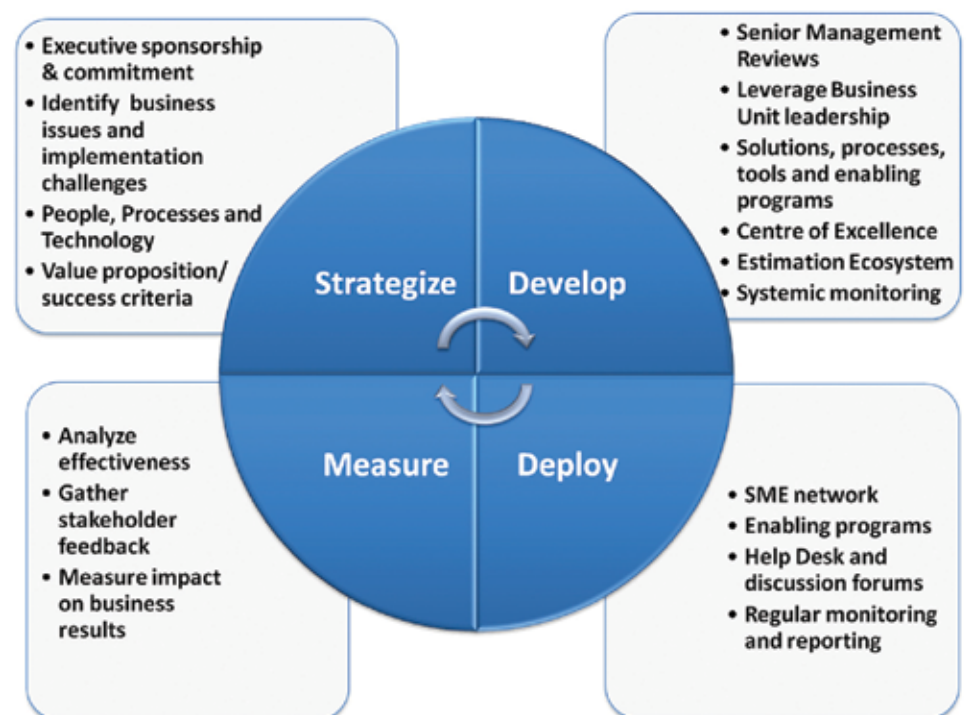
of such change management program, integration with business process and system workflow, understanding of process capability, innovative role based competency development program, linkage to performance management.

## Institutionalizing Function Points Usage

At Infosys, a structured process change management program (ESTEEM-Infosys Estimation Center of Excellence) is being driven to adopt and institutionalize standard sizing methods for various service lines and Function Points is one of the key methods adopted for applicable service lines. The program

goes through a structured improvement cycle via Strategize, Develop, Deploy and Measure. The **Strategizing Phase** involves projecting value proposition, getting the senior management sponsorship, analyzing the current business challenges and creating a plan to drive improvements. This phase involves engaging key leadership team including Board of Directors on a periodic basis. The **Develop Phase** involves developing key solutions in line with the direction and the plan charted out that involves people, processes and systems enablement. A periodic review by the senior leadership proves vital in ensuring

Figure 1: Approach for FP Institutionalization





accelerated progress. The **Deploy Phase** ensures that there are right infrastructure, monitoring and enabling for smooth implementation of the solutions. The **Measure Phase** is focused on analytics and feedback mechanism to make sure that there is measurable impact on business and a feedback loop is provided to the planning cycle.

### Key Experiences

Some of the key experiences that have helped us manage change and institutionalize Function Points in a large organization like Infosys are as follows:

### 1. Integration with Business Processes, Workflows and Systems

Function Point sizing was introduced as a key step in relevant engineering and project management processes. A decision in this regard was taken after controlled implementation in a few select areas and understanding its benefits. Further, this was made part of a project workflow through integrated systems and tightly linked with key project deliverables like project management plan. It was also ensured that there is traceability from proposal stage to project planning and subsequently to the project closure regarding usage of Function Point method at various stages of a project life cycle. The project teams were provided necessary guidelines, enabling sessions, tool and other infrastructure to implement Function Point method. Automatic alerts and reports from systems greatly helped in monitoring the level of usage across thousands of projects. It also helped in strengthening CMMI implementation. Over a period of time, this standardization of size measure has greatly helped in understanding our process performance and leveraging the relevant baselines for future projects in estimation and performance prediction.

### 2. Basis for Goal Setting and Senior Management Reviews

Function Point method forms the basis for Quality (defects / 1000FP) and Productivity (FP / Person Month) goals at various levels for relevant service lines. These goals (with a substantial weight) are taken at the organization leadership level and flow down till the project level. This goal setting exercise greatly helps in aligning various roles / levels to the metrics based on Function Point method. These goals get evaluated as part of performance management process for relevant roles.



Figure 3: Goal Flow Down



Figure 2: Integrated Project Management System

The goal setting also triggers Senior Management Reviews to ensure that right measurements and strategies are being adopted to achieve the goals. Also, a software quality advisor (SQA) gets associated with each project and as part of SQA service; he/she also reviews the measurements and their effectiveness.

### 3. Establishing a Formal Governance Structure (Estimation Centre of Excellence / FP Council)

Infosys ESTEEM – Estimation Center of Excellence (CoE) at the organization level was formally established to provide effective governance and direction to overall estimation program. This also helped in getting the right investment and sponsorship for the program. This has brought adequate focus on scientific sizing and developing estimation ecosystem.

Further to scale up in a large organization and ensure wider coverage across multiple business units (BU), a local estimation council was formed for key business units. It leveraged the talent and expertise available in various business units to drive estimation program in general and Function Point method in particular to manage change. It provides active direction based on business unit context, periodically reviews interim results and identifies adjustments to ensure achievement of the planned outcome. It also helped in supporting unit level improvement initiatives and estimation needs.

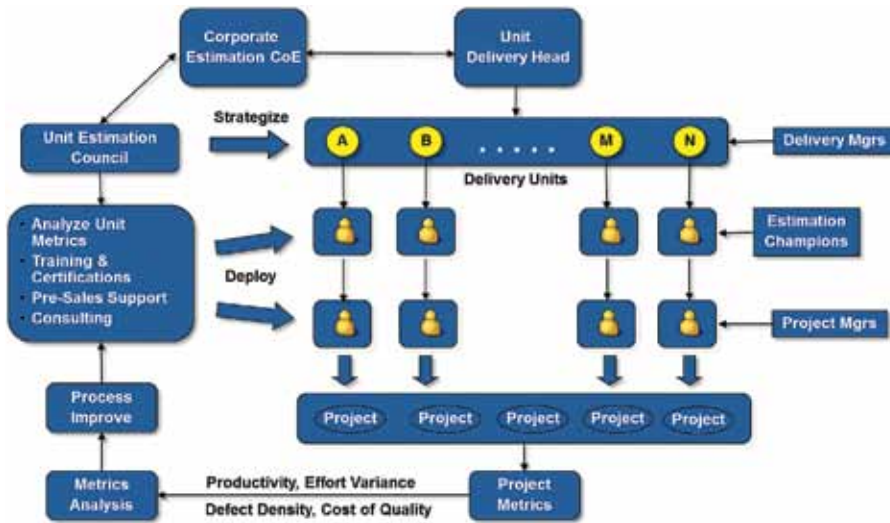


Figure 4: Business Unit Estimation Council

## 4. Function Points Enablement and Awareness Program for Key Roles

Based on the business needs to improve estimation competency, customized training workshops for various roles (like delivery, pre-sales/sales and quality assurance) were developed and rolled out. The training workshops with a focus on Function Points are largely driven by scenarios / case studies based on project experiences. The role specific training customization also included effective reviews, early life cycle estimates and conversion of size to effort, schedule and cost. The effectiveness of training workshops and other enabling mechanisms are ensured through an Infosys certification program. This program contributed significantly in developing knowledge clusters that in turn supported projects across the globe on estimation related matters. Over 15000 Infosys employees have gone through this enabling program.

Also, there has been a focus on briefing senior management on Function Points usage and its benefits.

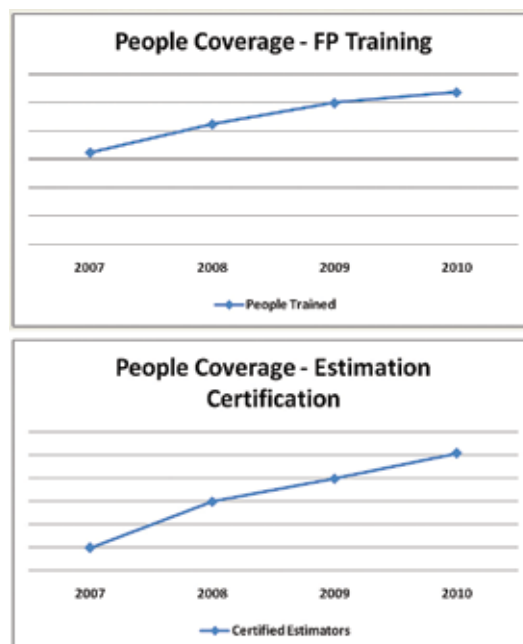


Figure 5: Function Point Training & Certification

## 5. Raising the Performance Bar - External and Internal Benchmarking

Benchmarking key performance parameters like productivity, quality and estimation accuracy help in understanding best-in-class performance and raises the performance bar for others to emulate.

This has been done at two levels - internally (among various business units) and externally (industry available information).

Internally, a healthy competition was brought in by comparing key performance

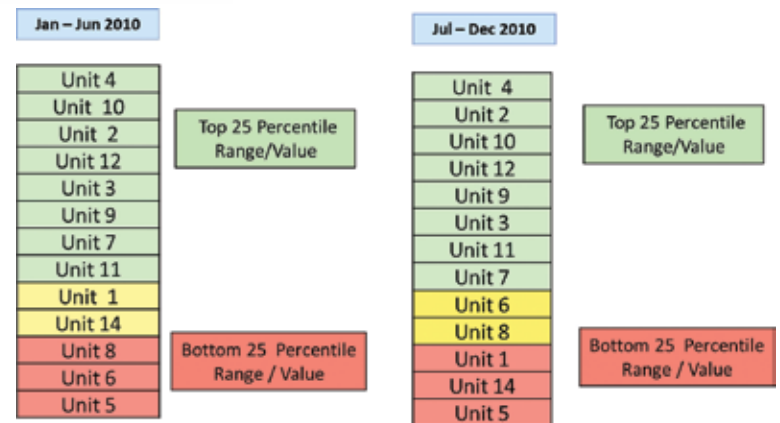


Figure 6: Business Units Comparison on Key Performance Parameters

parameters among various business units. This helped business units to learn from each other and draw a roadmap to improve their estimation capability.

There has been also a large focus on understanding best-in-class performance from various industry references. The business units were also provided this view to help them compare with other industry players.

The above internal / external benchmarking outputs are reviewed regularly in senior management meetings and actions taken.

## 6. Providing Estimation Ecosystem for Scalability and Global Coverage

In order to provide an environment and infrastructure for better institutionalization of estimation practices across Infosys projects globally, an effort has been made to create an ecosystem that supports sharing of learning, on-demand help and enabling.

Key highlights of the ecosystem with a focus on Function Point method:

- Developing global Knowledge Clusters (subject matter experts) on Function Points that helps projects in sizing and estimation
- Estimation Portal as a one-stop-shop for all estimation needs (Body of knowledge, Tools, Reference baselines, latest updates etc.)
- Dedicated Helpdesk support with defined service levels
- Providing standard process performance analytics / on-demand information to facilitate project work
- Case studies and collaterals to facilitate learning and sharing internally and externally.
- Training and certification program has been linked to organization competency framework.



Figure 7: Estimation Ecosystem

## Conclusion

The focus on Function Point method institutionalization has brought rich dividends to relevant service lines of Infosys. It has helped in improving estimation accuracy (15-20%) and providing a sound basis for quality and productivity measurement. This has helped in higher predictability and better client experience of Infosys services.

## About the Authors

**Amit Arun Javadekar,**  
*Principal – Quality Programs, Infosys Technologies Limited*

Amit has over 16 years of experience in software development and project management. He has held numerous technical and managerial positions and is currently the Program Manager for the Estimation Center of Excellence (ESTEEM) at Infosys Technologies Limited. He holds a Masters degree in Computer Science and is a recipient of the Infosys Award for Excellence.

**Aman Kumar Singhal,**  
*AVP and Head – Process Group, Infosys Technologies Limited*

Aman has over 17 years of experience primarily in the area of software services, project management, large program management, process solution design, quality system design, process consulting, change initiatives, training, audits and assessment.

As part of his diverse portfolio, Aman currently heads Software Engineering Process Group, Quality Academy and Estimation

Center of Excellence at Infosys Technologies Limited. He also leads multiple large scale improvement initiatives at the organization level.

Aman is also a part of the IFPUG Membership committee.

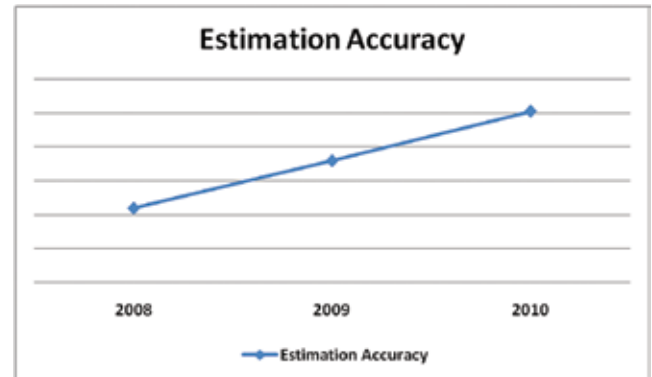


Figure 8: Estimation Accuracy Improvement

<sup>1</sup>CMMI – Capability Maturity Model Integration is a process maturity model developed by SEI, CMU. For more details, please visit <http://www.sei.cmu.edu/cmmi/>. Infosys is assessed at CMMI Level 5, the highest level of process maturity.



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