Gianfranco Lanza (CSI Piemonte)

How to measure a CMS?

Main Topics:
- What is a CMS (Content Management System)
- Can the IFPUG Methodology fit with CMS?
- How we can identify Data functions and Transaction functions
- Can a tender based on a CMS solution apply FPA?
Benefits for Participants:

• To measure a particular environment as well as a CMS is

Abstract:

Nowadays we are facing in every moment with internet and with its apps. The portal webs are integral part of our life. They give us a lot of information through many graphic objects: images, films, link, photo galleries....
A Content Management System is a platform that permits to fill a portal web of data, using these different objects to present the information to the users. A CMS provides facilities that permits, also to people not expert in software, to create its portal web, to manage it and to update it. This presentation aims to highlight the different types of graphic objects that constitute a CMS, to see if each of them can be seen as an independent information for the user, each one with own characteristics and, if it is so, to identify the transactions to manage it. This presentation arises by the need to use FP (with a fixed price) in tenders to establish the CMS development costs.

The speaker:

Graduated in Computer Science.

CFPS, CSP, Cosmic Entry Level.
I have been working in the Measurement Environment by twenty years.
I am a Board member of GUFPI-ISMA by 2009 and I am a member of IMC IFPUG Group.
I presented works to several meeting (GUFPI-ISMA events, SMEF)
Now I'm working in CSI Piemonte (Turin, Italy) and I'm handling the portfolio application measures, applying Functional measures (IFPUG and Cosmic FP) and non-functional Measures (SNAP Point).
I'm also monitoring the use of measures in the tender that CSI Piemonte does.

Luigi BUGLIONE (IFPUG / Engineering Ingegneria Informatica SpA)

The ‘Balloon effect’: how (an improper) Scope Management can impact from Size to Effort, Duration and Costs

Main Topics:

• Defining and Managing the Project Scope: which stakeholders are you involving?
• Scope and Boundaries in FSM methods: which potential impacts on Sizing and Estimation?
• The ‘new’ Productivity Paradox
• How the EAM (Entity-Attribute-Measure) analysis can help to avoid mismatching
• The ‘Balloon Effect’: from theory to practice with some real projects examples

Benefits for Participants:

• To analyze similar projects, using the EAM analysis
• To de-compose better and better a UR into three possible sub-URs -> The ABC Schema
• To apply the ABC schema to the 123 schema (a ‘methodological’ DevOps version)
Abstract:
The first step for properly working on a project is defining its scope, otherwise it wouldn’t be possible to understand which quantity (Q) to consider in/out of scope for the project and consequently the effort-duration (T – Time) and related cost (C) needed. Thus, the Q->T->C logical sequence represents a project value chain helping us in better understanding for a project which could be the proper range of nominal productivity, as well as the level of elicitation of project requirements, needed for a proper project sizing and estimation, moving from the ‘ABC’ schema, a taxonomy for refining the initial Business Requirements in order to avoid the ‘scope creep’ phenomenon. But what about if this initial activity fails or would be improperly executed? Is a FP a project or a product functional size? Does a stress test or an integration test impact on the FP calculation in order to know how many FP/man-day should be needed for determining the effort and the duration for your next project minimizing errors? Why often an organization (no matter if providers or customers) fails in estimating? This presentation will present some of the main numerical paradoxes that risk happening daily in ICT contracts, moving from an EAM (Entity-Attribute-Measure) analysis for a typical project demonstrated by the ‘balloon effect’.

The speaker:
Luigi Buglione is currently the IFPUG Director for Conference and Education and the President of GUFPI-ISMA (Italian Software Metrics Association) and is a Measurement & Process Improvement Specialist at Engineering Ingegneria Informatica SpA (formerly Atos Origin Italy and SchlumbergerSema) in Rome, Italy and Associate Professor at ETS Montréal, Canada. Previously, he worked at the European Software Institute (ESI) in Bilbao, Spain. Measurement Certifications: IFPUG CFPS, CSP, CSMS and COSMIC CCFL. He's a regular speaker at international Conferences on Software/Service Measurement, Process Improvement and Quality, actively part of several International (ISO WG10-25-40, IFPUG, COSMIC, ISBSG, MAIN) and National (GUFPI-ISMA, AutomotiveSPIN Italy, AICQ, itSMF Italy) technical associations on such issues. He developed and was part of ESPRIT and of Basque Government projects on metric programs, EFQM models, the Balanced IT Scorecard and QFD for software and is a reviewer of the SWEBOK project (2004 and 2010 editions). He achieved several certifications, included IFPUG CFPS, CSP and CSMS. He received a Ph.D in Management Information Systems from LUISS Guido Carli University (Rome, Italy) and a degree cum laude in Economics from the University of Rome “La Sapienza”, Italy. Info: https://semqblog.wordpress.com/
Results of innovation research in corporate governance, how can we innovate the metrics?

Main Topics:
- How are companies dealing with the speed of innovation?
- Causal Model
- Motivators of innovation
- Factors of innovation
- How can we innovate the metrics?

Benefits for Participants:
- Academic contribution on innovation
- Reflection, what can we do to innovate in our area

Abstract:
The conclusion of this study is based on answers obtained during the data collection phase of the research. All data were collected and evaluated according to the individual statement registered in the interviews and is not focusing on comparisons to culture environments from other companies. The qualitative research permit us to evaluate the perception collected in each one of the interviews supporting the conclusion where each human being and their personal perceptions assume different points of view also considering professional experience which is considered as a very important part of the research conclusions.

Nowadays, the velocity of the information updates implies in a huge problem to all of us including the enterprises that are closely followed by an overload of data to be evaluated creating a big challenge for any study regarding innovation. The current superficial update related to innovation in enterprise turns some discussions regarding innovation a considerable potential risk for an accurate business decision. This study is focused on specific issues within a reduced portion of the enterprise universe.

Decision-making has always been a multiple subject although over the decades, the strategic plans, tools and studies have been supporting this matter. The decision to innovate supporting decision-makers still remains vulnerable considering this scenario.

To keep up updates and innovation subject velocity, there is a demand for more innovation-driven decision where the main proposal is to have more innovation experts participating as part of the enterprise board as well as having managers dedicated to innovation matters.

Regarding shared knowledge, there is an important issue regarding hierarchy in the enterprises and corporations no matter the industry or segment where the organization is inserted. We are accountable for reflecting about what we can do to innovate in metrics in large organizations and its areas increasing the value-aggregate to the business and company results.

The speaker:

She graduated in Mathematics, post-graduated in Project Management at University of Sao Paulo (USP) having a Master in Administration in Corporate Governance at FMU University in Sao Paulo city, Brazil. She was responsible for publishing a dissertation regarding innovation and having a successfully publication of an article in SEMEAD Congress - Innovative process. She is a confident speaker being responsible for attending congress and lectures events providing in-class sessions regarding Corporate Governance, Measurement Process and
Innovation.

She has a wide experience in Corporate Governance, Measurement Process, IT Governance and Management also having a strong background regarding process improvement working as employee and consultant in large companies such as Sharp (Developer, invoice mechanization system), Bayer (Analyst, stock control system), EDS (Consultant, SAP-RH implementation at General Motors), BankBoston (Business Analyst, investment funds and savings system), CPM / Bradesco (Consultant, investment funds system), IBM (Expert, implementation of estimation processes and demand management), Cielo where she managed among other roles and responsibilities, the IT governance area having a key leadership role in the management of high-performance measurement process related to IT.

She was responsible for implementing and developing metrics, outlooks, forecast and estimates in software assets in the IT Governance Area having a wide experience in the utilization of processes and methodologies such PMI and ITIL.

Rosangela has 25-years career in Information Technology and Process Management of which 15 years were managing technical and process oriented teams focused on the business needs, supporting external and internal customers, reporting to the top management as well as supporting decision-makers. She is currently working at Serasa Experiencing Company (Multinational Financial Enterprise) as Project Strategic Coordinator also working as Outsourcing Management related to measurement process.

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Talmon Ben-Cnaam (Amdocs)

Test Estimation – science or art?

Main Topics:
- Test Estimation techniques – overview
- Test cost drivers for functional testing and non-functional testing
- Waste in testing – measure and improve
- Test Automation – does it save test effort?

A test estimation model

Benefits for Participants:
- Participants will understand the complexity of test estimation
- Participants will be able to improve their estimation

Abstract:
The presentation will discuss the complexity of test estimation and the various factors that impact testing effort. Testing effort may be associated with the FP size of the tested application, but size is only one factor.
The presentation will also discuss waste that affects the testing cost. We will see how we can identify and measure this waste, and propose improvements.

We will briefly discuss early detection and defect prevention techniques, and how to identify the most effective improvements.

The presentation is divided to the following sections:

Test estimation – overview

- This section will describe basic techniques: Delphi, analogue, Software Size Based, Test Case Enumeration, Task (Activity) based and Testing Size Based Estimation

Test Cost drivers

- New Functionality test, regression test, digital test (Usability, accessibility, compatibility), performance and security testing

Waste in testing

- Software readiness level; Availability of test environments; Test Data preparation; bad fixes; defects cancellation; “Ping-Pong” – defect is re-allocated

Test automation

- What to automate; impact on cost and Time to Market

Test Estimation Model

Try to have all the above information is an excel.

The speaker:

Talmon Ben-Cnaan is a Quality Assurance and Testing Methodology manager at Amdocs. He led Amdocs Measurements Department and was responsible for implementing Function Points in Amdocs. On 2014 he was involved in the creation of Amdocs BEAT™ framework, an innovating cloud-enabled, analytics-driven software platform consolidating the company’s testing best-practice methodologies and tools.

Talmon leads IFPUG’s Non-Functional Software Sizing Committee since 2012, issuing advanced versions of SNAP manual, SNAP tool, SNAP training kit and more.
Thimoty Barbieri (ITECH Engineering) & Irene Rocca (Università degli Studi di Pavia)

USING JIRA TO SUPPORT IFPUG FPA-SNAP ESTIMATION IN A BIMODAL SOFTWARE PRODUCTION PROCESS

Main Topics:
• FP in Agile e Bimodal processes
• Issue tracking tool JIRA and FP
• Differences between Story Points and Function Points

Benefits for Participants:
The aim is to provide a useful tool which supports users in a continuous counting process suitable for a bimodal production process.

Abstract:
In the world of software development models, the Agile and the Waterfall processes are counterposed and the new proposal of a Bimodal model arises to combine their advantages. In an Agile environment, a functional estimation is usually expressed using Story Points, since it is very difficult to apply upfront a Function Point measurement because of the dynamicity of the process and the absence of requirements. On the other side, in a Waterfall process the functional estimation is suitable, but a clear disadvantage is represented by its intrinsic "non-promptness".

The proposed tool has been developed for a bimodal context allowing a prompt functional estimation, allowing a software development processes, whose requirements continuously change, to be estimated with a sizing measurement expressed in Function Points.

The tool is implemented as a plugin for JIRA 7.x, an Atlassian tool to support activities as planning and issue tracking in software projects: the add-on supports the combination of IFPUG FPA and SNAP methods, in order to achieve a complete estimation – both functional and non-functional. Several JIRA custom fields have been created to manage the Function Points and SNAP Points for each Jira issue; moreover, the plugin provides a JIRA gadget which immediately shows the whole project estimation on a customizable dashboard.

The speaker:

Thimoty Barbieri is a freelance IT consultant since 1999, affiliated to Milan's Order of Engineers and running his consulting boutique together with a dedicated team of highly-specialized collaborators. Thimoty's activities include: software design and implementation, testing, IT project management, training for companies and universities, technical translations and legal expertise in litigations. Thimoty and his staff can be hired on a project basis, for teaching a course, or for continuing collaborations on a pre-arranged schedule.

Thimoty Barbieri receives his MSc in Computer Engineering at Politecnico di Milano, Italy, in 1999. In 2003 receives his PhD in Computer Engineering and Automation at Politecnico di Milano. He is now Contract Professor at University of Pavia, where he teaches Software Engineering. For fifteen years he has taught Computer Graphics as Contract Professor at Politecnico di Milano. Since 1991 he works as a freelance translator for international PR companies, technical companies and customers in the field of Graphic Arts, Telecommunications, and Electronics. Thimoty translates from English into Italian, and from Russian into Italian.
Thimoty holds certifications as Architect and Software Engineer from Oracle, IBM, Microsoft, RedHat, IFPUG, OMG, Project Management Institute, MongoDB, and several other leading software vendors.

Since 1998, Thimoty worked as a professional consultant for domestic and international companies: he has designed and realized several systems for customers such as banks, commercial and trade enterprises, governmental institutions and utility companies. Thimoty has taught Object Oriented Design, Project Management, and Programming in several domestic and international companies using Java / Java EE and open source technology.


Irene Rocca has graduated in Computer Engineering at Pavia University. She is a Java Developer and an Enterprise Architect, consulting in the area of software production processes and tools.

Simon Wright (Symtech Ltd UK)

Better Estimates by Measuring Requirement Quality

Main Topics:
- Factors affecting quality of a functional size estimate
- The Correctness, Completeness and Consistency of user requirements
- Natural Language Processing techniques to quantify quality
- Requirement Patterns for measurable requirements
- Writing requirements that are measurable

Benefits for Participants:
- How to measure the quality of input User Requirements
- How to improve the quality of input User Requirement
- Guidelines for writing requirements that are measurable.

Abstract:
The quality of a functional size estimate is a function of several factors including: precision, accuracy and repeatability. The main factor affecting the precision of an estimate is the
completeness of the user requirements. If a requirement or user story has been missed, then the estimate is imprecise. The main factor affecting the accuracy of an estimate is the correctness of the user requirements. If a requirement is incorrectly phrased, then the estimate is inaccurate. The main factor affecting the repeatability of an estimate is the consistency of the user requirements. If requirements use terms inconsistently then they need to be interpreted; different estimators are likely to use different interpretations and thereby produce different estimates.

Assuming that the process of transforming requirements into an estimate is carried out using a standardised method then the quality of the estimate is directly proportional to the quality of the input requirements.

Modern Natural Language Processing techniques can be used to quantify the quality of the user requirements in terms of the Correctness, Completeness and Consistency, (CCC), of individual as well as sets of requirements. This paper sets out CCC metrics and explains how they are computed which leads to guidelines for writing requirements that are measurable.

The speaker:

Simon has a BSc and PhD from the University of London. For 15 years he worked for GECMarconi on various defence projects. He then moved into the commercial software world, initially with the System Modelling tool COSMOS and then with the Requirements Management tool RTM. For the last 13 years he has developed his own client base including the Russian Atomic Energy Authority, Moscow, The European Spallation Source, Lund, Novo Nordisk, Denmark and The Norwegian Army, Oslo. He has been a member of the UK Software Metrics Association for over 10 years. He is an experienced lecturer and has trained many hundreds of people in requirements engineering in a variety of countries. Simon is a good public speaker and has presented at over 30 conferences and seminars, in the UK, the USA and Europe.

Anne-Lies Willemen, Christelle Delcourt and Gabriel Gori (Euroclear)

Ten years of Software Development measurement in a critical Financial Market Infrastructure player: Evolution just happens!

Main Topics:

- How Function Point counting helped Euroclear in managing the relationship with Strategic Outsourcing vendors.
- How Function Points have been applied to assessing productivity in Euroclear’s largest front-end development programme, delivered in an Agile & offshored mode.
- How the definition of strong (Function Point based) KPIs have helped senior IT Management in their decision making.
• How the Function Point counting technique has been extended to assess and include non-functional aspects of Application Development projects.

Benefits for Participants:
• Euroclear is an international financial institution, recognized within the financial world for its resilient, stable and safe infrastructure. Our view on software measurement and Function Point counting is different from big software delivery companies as we work for our own company - meaning we have no seller-buyer relationship with our 'client' but more of an advisor/controller role, which we haven't seen highlighted in previous conferences we have attended. Moreover, as our team is involved in the outsourcing strategy of Euroclear, we will also highlight the 'other side' of the relationship between "software provider - client" where Euroclear is the client, who wants to have some productivity and quality controls in place on our service provider.
• We have attended ISMA 9 (Madrid) and ISMA12 (Rome) and both times we went back home with great ideas. We were able to implement some of these in our company - adapted to our own environment of course. So we are convinced people can learn from our story, like we have learned from others.
• Involving decision makers of the company we will explain the added value of the KPIs derived from software measurement and it’s usage inspiring the audience to make decisions based on facts that can be measured.

Abstract:
The Euroclear Group is the world's leading provider of post-trade services with a value of securities held for Euroclear clients that reached €27.7 trillion last year. Being an IT dependent company, software development measurement is key to correctly manage the investments on IT projects.

In 2008 a Function Point analysis team was setup, with the objective to support the estimation/budgeting process of critical IT projects. However, given the increasing size of required IT changes and of complexity of projects, the scope, mission and objectives have drastically evolved over the last 10 years:

1. initially, Function Point counting was performed externally, as the knowledge and competencies were not available within Euroclear.
2. Gradually, the competency has been acquired internally;
3. and has been then leveraged to support a big transformational outsourcing around 2012, allowing us to assess the productivity performance of our strategic outsourcing partners.

The team has developed a “fit for purpose” KPI framework illustrating the balance between different dimensions like productivity (mandays/FP), cost index (euros/FP), quality and reliability at different levels of aggregation. The KPI framework output is adopted by - and shared with IT senior management.

Nowadays our team is perceived as a single point of contact for “smart” project performance analysis. We collect and cross-relate all sources of data linked to IT projects to support decision making and continuous improvement.

This is the story of our team, proactively adapting to new challenges and expanding our scope and mission in line with the increasing complexity : evolution just happens!
Anne-Lies Willemen

Anne-Lies has been with Euroclear for 30 years. In all that time Anne-Lies has played several roles but always within the Application Development and Maintenance department: Programmer, Analyst, Project Leader, Senior Project leader, Functional Architect, Lead Designer etc.

In 2010 Anne-Lies joined Christelle’s team achieving CFPS Certification by the end of that year. While the initial mission of the team was more linked to Budget review, it evolved into more post fact analysis on productivity drivers on our projects. As in Euroclear we have quite some key applications which are impacted by subsequent changes, Anne-Lies has focused on documenting Function Point counts for future re-use.

Since 2013, Anne-Lies has set up the monitoring of our outsourcing partner productivity based on Function Points.

Christelle Delcourt

Christelle joined the Information Technology department in Euroclear in 1990. Very quickly, Christelle focused on deploying software modelling techniques, performing quality assurance reviews, IT project management reporting (and related KPIs) and performing independent budget reviews of application development projects. Progressively, the function evolved to build a management view on “How efficient is application development in delivering what is required by the business, i.e. software applications?”. To pursue this main objective, Christelle acquired the CFPS certification in 2010. Over the past 7 years, Christelle acted as guardian and promoter of the Function Point analysis and project performance measurement framework but also adapted the latest according to the evolution of Euroclear software development strategy. As an example, Christelle recently extended the existing counting method to allow the sizing of configuration aspects with the objective to improve the accuracy of projects productivity assessment.

Gabriel Gori

Argentinean of birth, Gabriel developed as from a very young age the passion for technology, computer sciences and innovation. After high school he moved to Italy to study Control systems engineering at the University of Rome “La Sapienza”.

During his career, having the opportunity to cover many different functions, he acquired a wide background on different IT aspects.

After having worked as an IT consultant for many years, Gabriel moved to the financial industry joining BNL (BNPP group). This experience contributed to develop the knowledge on IT projects lifecycle from a business prospective as a Business Analyst and later from a more technical perspective as a Functional Analyst, moving his first steps on Function Point counting to estimate projects.

Finally in 2015 Gabriel joined Euroclear’s Function Points Analysis team where he further developed his skills on software measurement getting the CFPS certification in December 2015.
Cecilie Thormodsrud (Telenor)

Function Point based multidimensional innovation at Telenor

Main Topics:
- Background, the 2013 setup and metrics driving wrong focus
- Execution of the Productivity Improvement Agenda (PIA)
- Establishing common baseline and goals
- Decisions based on IFPUG FP metrics

Next steps

Benefits for Participants:
- How various FP based metrics enable valuable business decisions
- What type of focus and decisions were implemented
- How a small PIA team can initiate valuable changes

Abstract:
- Background
  In 2013 the new mobile contract was signed, to reduce IT cost and make the vendor responsible for high stability in value chain, focused on high offshore degree and managed by a penalties regime. No standardization of way of work, poor handover and utilization of the new Telenor project model, resulted in very slow IT deliveries and ended in a time-consuming taskforce in 2015. Gartner conducted a Telco benchmarking by Fast Function Point Analysis and Root Cause Analysis. The Benchmarking indicated that productivity was much lower than average and cost per FP was high.

- Established joint vendor-customer Productivity Improvement Agenda (PIA). Our primary focus was to improve Trust, Collaboration and Transparency and then PIA proposed necessary changes in Organisation, Processes, Contract/Funding and Architecture.
- Establishing common baseline and goals
  The productivity improvement work included a parallel IFPUG FPA and Gartner FFPA count to set baseline and bridged IFPUG to the Benchmarking results. Based on the results the joint management group decided the 2017 cost-efficiency (NOK/FP) and productivity (FP/MD) ambitions.
- Decisions based on FP metrics
  Based IFPUG FPA and FFPA measurement pilots were launched to test new way of work.

  - Organisation; Launched medium size project factory, and 3 pilots in agile way of work, and tuned onshore/offshore decisions
  - Process; 50% cut in analysis time for large projects, automated product configuration into world class productivity and now standardizing software delivery workflows and supporting tools
  - Contract; changed metrics, contract models and funding
  - Architecture; started middleware and channel modernization
Next Steps

- Integrate IFPUG FPA into the software delivery lifecycle and estimation
- Simplification of organization, process, contract, funding and architecture
- Utilizing lean start-up techniques

The speaker:

Cecilie Thormodsrud has 30 years of experience from creating value from measurement in large transformation projects. In the 1990s she developed balanced scorecards to implement business goals and strategies in transportation and telco companies, both in the public and the private sector. First 5 years of this millennium, Cecilie delivered a successful multi billion cost saving transformation programme in leading position. She swithed from management consulting to Telenor in 2007 and improved internal collaboration between IT and the business, created better value chain stability measurement system and improved performance. From 2010 she managed a 3 year successful Data Center transformation project. Since 2014 the main focus has been improving vendor-customer relationship and establish the AD Productivity Agenda. This include several value creating decisions and executions based on Function Point and Root Cause Analysis.

Carlo Capeccia and Alberto Leardi (Leonardo S.p.A.)

Leonardo journey in the adoption of software metrics

Main Topics:

- Relevance of measuring Non Functional aspects in a specific industry sector (Defense)
- How the measurement is done ex-ante and ex-post
- How this is eventually related to software sizing and budgeting
- How the whole measurement initiative is benefiting the Software Engineering in Leonardo
- Next steps

Benefits for Participants:

- Organizational implications when disseminating a metrics culture
- Impacts and interesting thoughts when talking to developers
- Thoughts and ways to engage management on software risk and sizing

Abstract:

One of the major global defense player will talk about a situation starting where the software sizing was managed using different tools for budgeting and estimation purpose, such as code lines counting, requirements, defects, etc. Code scanning tools were also used, but these were delivering violations, not
metrics, or, when they did, these metrics were not always collected and made into value at higher levels. Limits of this approach are clear, even more if you consider that Leonardo is focused also on non-functional (reliability, performance) excellence.

Once the decision was taken to embark on a journey of metrics adoption: Automated Function Point approach is very interesting to couple with other measurements (i.e. quality), to give grounding to metrics regarding the development, maintenance and evolutions cost.

The adoption of a metrics framework, including at the same time risk measures and sizing, would have been impossible without automation: measurement cost made Leonardo opt for an automated solution as the only viable option. The path to wider adoption which will be shared is that of starting slow, work through the cultural aspect with a significant pilot team, then disseminate processes with metrics consumption both on the developers’ side and on the management’s side.

The speaker:

**Carlo Capeccia** is the Industrial Capability of Software Technology Engineering for Land & Naval Defence Electronics Division of Leonardo Company.

Carlo graduated from University of Rome La Sapienza as bachelor in Mathematical Sciences, Numerical analysis address in 1988. He spent 20 years of his career working in Software Engineering for Real Time and Mission Critical Application as a Software Developer, Team Leader and Project Manager for Leonardo in Defence Domain.

In actual capacity, Carlo is also responsible to collect metrics, historical data and KPI on project for his organization, and support project estimates and tracking based on assessments, analysis and historical data. He also facilitates project benchmarking and performs data analysis using project metrics.

**Alberto Leardi** works in the Industrial Capability Unit of Software Technology Engineering for Land & Naval Defence Electronics Division of Leonardo Company.


In actual capacity, Alberto deals with processes, methodologies and tools and is currently responsible for the management and administration of the whole divisional software engineering tool chain to support the software development lines in the various phases of the life cycle.
Paola Billia (Manager in NTT Data, Member of the Board of GUFPI-ISMA) and Maurizio Sapienza (Former TIM manager)

Waterfall vs Agile, How can I compare them?

Main Topics:
- Agile increasing in popularity
- Differences between Waterfall and Agile from a software process point of view
- How to make measures comparable in different environments
- Next steps

Benefits for Participants:
- Main point to take into account to make measures comparable in different environments

Abstract:
In most companies, the traditional “waterfall” projects are being replaced with Agile. In fact, in the last ten years technology has changed behaviors, organizations and their processes and AGILE gives the client exactly what they really need, offering more quality and more speed.

A reliable and instant set of measures is key to setting up an effective control over the software production process, and to build a dashboard with the main indicators of interest, such as productivity and unit costs. The indicators also need to be homogeneous across the company’s departments and projects.

However, in Waterfall and Agile, documentation and release management, and average project size are all different regarding both the timeframe between releases and the contents of the documents. This makes the comparison often difficult or misleading.

While software development in waterfall projects starts when the requirements have mostly been clearly defined, with Agile they are often defined, refined and reworked during the software development process itself.

How do you compare two projects: a big traditional waterfall project and an Agile version? How do you compare measures of the Agile projects against the company historical data (all previously waterfall)?

This presentation suggests how to increase the homogeneity level of measures from Agile and Waterfall projects, mainly for productivity comparison purposes, taking into account the reworking and time frame in releases. However, factors should be seen from a global perspective and the measures selected for the management reports should be balanced. With AGILE we also need indicators (e.g., speed of release, level of coverage, quality) to measure more than productivity.
The speaker:
Manager, expert in software measurement methodologies. Over 15 years' experience in telecommunications with an in-depth knowledge of sales and customer care processes. Key role in coordination of sizing activities for various clients with both traditional and AGILE methodologies. Organizes and provides training on the main methods of measuring software and their correct use. Apply best practices in identifying measurement elements in drafting or managing a contract.
- Member of the Board of GUFPI-ISMA (Gruppo Utenti Function Point Italia)
- IFPUG function points 4.3 (Certified CFPS)
- IFPUG SNAP (Certified CSP)
- Fast Function Point Analisys (by GARTNER)
- ITIL V3 (Certified)

In TIM (former Telecom Italia) from 1991, initially as project manager and from 2005 in organization of software quality processes. From 2005 he was team leader in introduction of FP metrics and methodology into Telecom Italia Software Factory and responsible of the set up of production indicators. He graduated in Electronic Engineering and has always been involved in activities related to the software production processes and management both in Italian and multinational companies. Now he works as a freelancer and consultant.

Thomas Fehlmann and Eberhard Kranich (Euro Project Office)

Consumer Metrics for Privacy & Safety - Metrics for the Age of Digitalization

Main Topics:
- Privacy issues
- Is it possible to define trustworthy software metrics for consumers?

Abstract:
Privacy issues – protection against malware, hackers and intruders – becomes more and more an issue when building software. Not only banks and public administrations are vulnerable but anything that runs on software can become a victim of some attack, e.g., ransomware. Purchasers of new software, or software amendments, need to know their level of vulnerability, taking precaution against opening new weak points when installing new software. Users of compromised software-intensive products eventually become accountable for damage
inflicted on others. Thus, consumers need software metrics that tell them how well their software behaves against attacks.

Similar concerns apply to safety. Before sitting in an autonomous car, a safety index should indicate how fit the car is against unforeseen traffic and weather conditions. Since car software is regularly updated, and maps and other cloud-based instruments adapt to changing environment, thus changing the behavior of the car, safety tests must become repeatable and autonomous. Consumers must be informed with safety metric whether they can trust their car. For robots, or IoT-equipped smart homes, it is quite similar.

Consequently, the role of Software Metrics organizations is going to change. Software metrics are no longer an academic discipline but have impact on legal status and economic, cause liability, and are an issue for politics and society. This is how digitalization affects us.

Is it possible to define trustworthy software metrics for consumers? Metrics, that make the degree of exposure of privacy and safety risk visible, comparable, and understandable? Metrics, that are applicable to all kind of software, be it embedded, standard, cloud, or custom? And metrics that work after each software upgrade or download showing whether the system has become more secure, or in contrary, more vulnerable?

Code analysis is no answer. Code is often not available when using cloud services, for instance. Since privacy and security are affected by unwanted functionality only, functional models like those of IFPUG, COSMIC, FiSMA, or NESMA can help. Such models can be created for any system, whatever services it uses and whether or not it is custom build or providing services. Like the SNAP counting rules of IFPUG, you can assign non-functional attributes to the elements of a model, be it data functions, transactions, or data movements. The attributes signify the amount of privacy risk, or safety risk, or any other non-functional attribute that matters for consumers. The evaluation of risk needs agreement between suppliers and consumer organizations.

Metrics organizations have the expertise to standardize such evaluation criteria.

This presentation outlines how to define such attributes and how to count them in a model, be it the COSMIC data movement map – suitable for communication among things – or an IFPUG-like transaction map, ideal for web portals. We also provide roadmap towards standardized consumer metrics.

The speaker:

Thomas Fehlmann is a senior expert in software metrics and project cost estimation, a Lean Six Sigma Black Belt for agile software development and promoter of customer-oriented software product design and testing. As a consultant, he has lead a few companies to market dominance even on global levels using QFD and New Lancester Theory. He runs the Euro Project Office since 1999, is internationally recognized as Quality Function Deployment (QFD) expert where he received the Akao price in 2001, and serves as software metrics expert of SwissICT since 2003. Since 2004, he is Swiss delegate in the International Software Benchmarking Standard Group (ISBSG), and vice-president since 2012. Furthermore, he is an academic member of the Athens Institute for Education & Research since 2016. Thomas Fehlmann started in the 1980 with functional sizing. Since 1990, Thomas Fehlmann has presented at many conferences targeting QFD, Software Quality, Software Engineering, Software Testing, and Software Metrics.

Eberhard Kranich studied mathematics and computer science with a focus on mathematical programming/optimization, mathematical statistics and complexity of algorithms, and has more than 30 years of industrial
experience in oil, food, and automotive industry, and in telecommunications. Together with Thomas Fehlmann he published papers on Six Sigma transfer functions applied to Lean Six Sigma, the Quality Function Deployment methodology and Taguchi methods.

Eduardo, Alves de Oliveira (COPPE-UFRJ - Postgraduate and Research in Engineering at Federal University of Rio de Janeiro)

Using FPA to Pay Software Development Contracts - Solutions from the Brazilian Government

Main Topics:
- Introduction to the SISP;
- How to use SISP in software development contracts;
- Counting projects using SISP with examples;
- Gaps and problems in SISP;
- How to upgrade the SISP.

Benefits for Participants:
- Understand a way to measure software development project effort using Function Point Analysis;
- When function point analysis is used to pay software development projects what topics are important;
- What gaps and problems occur when you use a effort method to pay a software development contract.

Abstract:
Since the Brazilian Government decided to use function point analysis to pay software contracts many things happened. Good and bad decisions were adopted and after many adjust the Brazilian government found a good solution. This solution is a effort manual called SISP (System of Administration of Information Technology Resources effort manual). The actual version of this manual is 2.2.
The adoption of SISP in the software development contracts, aimed at the payment of the projects, brought about changes in the contractual relations between the Brazilian software development companies and the Brazilian government. These contractual adjustments go through pricing, productivity and service level agreements.
How the FP (Function Point) was converted in a effort metric to be used in software development projects in Brazil? The presentation shows real examples of counting projects using the SISP 2.2.
After years of experience in the adoption of effort manuals the brazilian government still has challenges to improve this model of contracting. These challenges include the measurement of non-functional requirements and SISP adjusts when new technologies emerge (eg big data).
The speaker:

Member of IPFUG CEC, doctoral student in COPPE-UFRJ (Postgraduate and Research in Engineering at Federal University of Rio de Janeiro), master’s degree in IME (Engineering Military Institute). Degree in computer science from UFRJ, postgraduate in UFRG (Federal University of Rio Grande do Sul) and NCE-UFRJ. Professional experience of over 19 years in information technology. CFPS since 2004. Systems Analyst and Instructor SERPRO (Federal Processing Service Data from the Ministry of Finance of Brazil). Consultant in software metrics and quality. Instructor in postgraduate courses at CCE (Central Extension Courses) from PUC-Rio University (Disciplines Metrics Software Projects and Quality Software). Was selected to be a speaker at: ISMA 14 (Cleveland, USA – 2017), Nesma Autumn Conference 2015 (Utrecht, Holland), The Tenth International Conference on Software Engineering Advances - ICSEA 2015 (Barcelona, Spain), Nesma IWSM MENSURA 2014 (Rotterdam, Holland), WORLDCOMP’13 - SERP’13 - The 2013 International Conference on Software Engineering Research and Practice (Las Vegas, USA), ISMA 7 (Phoenix, USA - 2012), instructor and speaker at ISMA 5 (São Paulo, Brazil - 2010), speaker and member of the roundtable 2nd CBMAS (Brazilian Conference on Measurement and Analysis) (São Paulo, Brazil - 2011) and speaker at Metrics Conference 2012 (São Paulo, Brazil). One of the authors of the book "The IFPUG Guide to IT and Software Measurement" published by IFPUG in 2012.

Fabrizio Di Cola, Domenico Geluardi and Daniele Zottarel (Sogei Spa)

Measuring iterative processes in software development

Main Topics:

- Focus on iterative and agile development fundamentals
- A way to use IFPUG function point analysis with iteration
- Focus on the difference between iterative development function point measurement and measure of enhancement project
- A way to manage velocity with IFPUG function point analysis
- A way to manage effort related to function point measurement of iterations and to enhancement project

Benefits for Participants:

- Focus on link between iterative and agile development and ifpug Function Point Analysis.
- A way to apply elementary process and logical file definition in iterative development
- Focus on measurement difference between iterative software measurement and related development effort
Abstract:
The solution of the issue of measuring software requirements in a contest of agile iterative development is an important issue to manage in all company of IT Sector. In Agile environment the most used metrics aren’t a real solution to the issue for their nature of team dependent measure, so they are not useful to compare software product developed from different team. The only way is to experiment the use of iso standard functional measurement metrics, like IFPUG function point, to settle the issue. We have to manage two issues: measure velocity for iteration and cost for customer. We propose a way to do this, with an interpretation of IFPUG CPM 4.3 and a way to justify the different number of function points between iterative development measurement and measure of enhancement project. We propose also a way to link related effort to function point measurement in iterative development environment.

The speaker:

**Fabrizio Di Cola:** He got master graduated in Informatics Engineering, during university study he has worked in project regards machine learning and web search. Between 2000 and 2002 worked as a consultant in web solutions in publishing sector. In 2004 he started to work for Cluster Reply in the role of consultant in microsoft technologies. Some of Cluster Reply’s customers where he worked were Sogei Spa and Telecom Spa. In 2007 he was hired by Sogei Spa and at first he worked as IT Architect and then in the role of Software Architect as company reference in Microsoft .NET solutions. He has been working in software measurement metrics as company reference in this sector since 2011. Currently he works as a teacher in CFPP/CFPS exam preparation and he has coordination responsibility in software measurement metrics experimentation too. He got CFPS in 2012, PMP in 2016 and has been certified in .NET solutions.

**Domenico Geluardi** He got a Scientific high school graduation and he gained experience in publishing sales. From 1999 to 2009 he worked as a consultant in the field of IT solutions in telecommunications and banking fields. From 2010 to 2012 he worked as a consultant in web solutions in the gaming and institutional fields. In 2013 he was hired by Sogei Spa, in the role of expert analyst and software developer. Currently he deals with analysis, software development and testing in the gaming and institutional sector. He was certified in CFPS in 2014.
Daniele Zottarel was born in Rome in 1961 and got master graduated in Civil Engineering in 1987. He has been working as an IT technician since 1989 in Sogei. Currently he is the reference for the Data Warehouse solutions for the client Demanio Agency. In the past few years he has coordinated the realization of other applications in the operational field, both front-end and back-office for the same customer. He is certified "fellow" for IFPUG / FP (CFPS certificate for more than 20 years) and carries out methodological experimentation and consultancy as a company reference on the IFPUG metric.

Paolo Cecchini (Project Management Institute Central Italy Chapter – Ericsson Telecomunicazioni S.p.A.)

Tracking projects performance: from analytical to strategic results

Main Topics:
- Project Success
- Key Performance Indicators
- Process adherence
- Project Governance Adherence
- Customer satisfaction

Benefits for Participants:
- Understanding real project success
- Project Metrics from the real world
- Customer first

Abstract:
How do you define project success? Is it just a matter of analytical measurement? Does it involve customer satisfaction? Does it include providing value? The answer is yes for each item. This session will provide you an overview on how to mix all these aspects to fulfill organizational requirements both from the analytical and from the customer satisfaction perspective, through a real implementation case.

The speaker:

Over 19 years of international experience in project management as project manager, project management specialist and project management office leader (Italy, Sweden, Bulgaria, Romania, Serbia, United States, Mexico). Currently Principal Project Management Expert and Consultant, Risk Manager and Portfolio Manager at Ericsson Telecomunicazioni S.p.A.
Federico Maria Capo (IIBA® Italy Chapter)

Agile Business Analysis – Presenting IIBA® Approach to Agile Delivery

Main Topics:
- Agile Business Analysis
- Agile Extension to the BABOK® Guide
- Agile Mindset
- Planning Horizons
- Business Analysis Agile Techniques

Benefits for Participants:
- Understand core concept of Business Analysis and, in particular, Agile Business Analysis core elements, referring to BABOK Guide V3 and Agile Extension to the BABOK® Guide, Version 2.0

Abstract:
In recent years, Agile frameworks have become widespread, moving beyond the core area of software development towards any area of the business where changes happen within a fairly short time. Being “agile” on your business means, nowadays, to apply a common set of values and underlying competencies, prior to the technical skills. These human features are better known as “agile mindset”. Key elements of any agile mindset are inspection and adaptation. Focusing on maximizing business value, the Agile Business Analysis is the natural methodology for better development of any type of business outcomes. Planning Horizons and Right Techniques are main ingredients of the Agile BA formula, presented by Agile Extension to the BABOK® Guide to assure an appropriate level of granularity, responding time frame, and feedback loop exploitation in fast changing environment.
Federico Maria Capo received a degree cum laude in Economics from University of Rome “La Sapienza”, Italy and is currently working as a Senior Consultant for Consulting at NTT DATA Italia, gaining experience in Business Analysis applied to many Business Areas (Demand Management, Service Management, CRM, etc.) and Market Sectors (Telco, Energy, Banking). Mr. Capo is Certified Business Analysis Professional (CBAP®), Professional Scrum Master™ (PSM I) and Professional Scrum Product Owner™ Level I (PSPO I). In 2017, Mr. Capo has been awarded by IIBA® Italy Chapter in recognition of his contribution as Volunteer. Since January 2018 he is Deputy Director - Operations ad interim at IIBA® Italy Chapter.