



Editorial



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The EuroSPI Improve (Systems, Services, and Software Process Improvement) Newsletter is a free newsletter extending short articles from leading European task forces and communities offering collaboration in process improvement topics.

EuroSPI promotes the SPI Manifesto which is a manifest with values and principles for Process Improvement and which was elaborated in September 2009 by international experts and representatives from leading companies and universities.

The EuroSPI Improve Newsletter will give you an insight into the ongoing European activities, new methods and qualification opportunities for Process Improvement.

The EuroSPI Improve Newsletter is managed by the EuroSPI partnership which organises an annual SPI conference since 1994. This year the 17th annual conference takes place at Grenoble, France from 1st to 3rd September 2010 hosted by the Grenoble Institute of Technology.

The subscription is free of cost and guarantees that you are up-to-date. Experts from all European countries contribute, so join the SPI community!



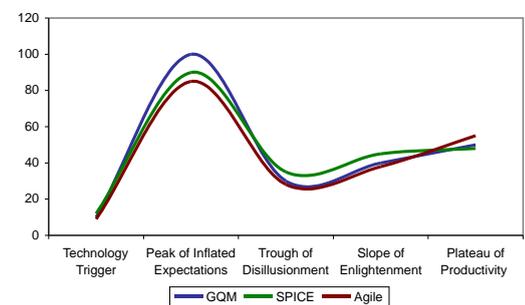
The SPI Hype Cycle – An Innovation Vision for SPI in Practice

M. Biró, Corvinus University of Budapest, Hungary,
R. Messnarz, ISCN, Ireland & Austria

It is typical in research and industry that any new concept runs through an innovation hype cycle (ref. the idea of the Hype Cycle was introduced by Gartner in 1995). This hype cycle includes the following stages:

1. Technology Trigger
2. Peak of Inflated Expectations
3. Trough of Disillusionment
4. Slope of Enlightenment
5. Plateau of Productivity

Especially in SPI, we could observe many methods and concepts to come and claim that they represent the silver bullet to solve all problems. When we observe the last 20 years of SPI, it is actually not true that we ever found one single solution that solved all problems. It is rather as that all new concepts and methods ran through a hype cycle and were integrated later on a plateau of combined use of methods and concepts based on industrial feedback and experience.



Here are some examples:

- In the early 90s there was a competition between the GQM (Goal Question Metrics) approach and the assessment methods. Nowadays people do not really remember this era any more and consider it natural, that in assessments and improvement methods we use techniques to align business with improvement goals and metrics and track SPI actions.
- In the early 2000s there was the new strategy of teamwork based environments to apply processes organisation-wide. Meanwhile people consider it natural that Wikis, teamwork systems and process libraries support assessments, improvements and goal tracking (GQM).
- Over the last years a strong agile community has emerged pointing out the higher value it attributes to approaches which were less favoured by earlier ones. However looking at 20 years of experience in the EuroSPI community, it is already visible that practical experience from industry shows its impact to enter the plateau of productivity. Leading engineering firms will hold this year a workshop about 14 practices, that really worked in agile development and outline what does not work.
- Over the last years, a safety engineering community came up with safety standards and claimed the superiority of their own approaches. Since 2009 methods to combine SPICE and safety standards have been published.

What EuroSPI really makes interesting is, that we formed a platform for experience exchange, empowering new ideas (supporting researchers) but also collecting realistic practices on the plateau levels for industrial implementation (providing support to industry).

References: Miklós Biró (2009): The Software Process Improvement Hype Cycle. Invited contribution to the Monograph: Experiences and Advances in Software Quality (Guest editors: D.Dalcher, L. Fernández-Sanz) CEPIS UPGRADE Vol. X (5) pp. 14-20.

< <http://www.upgrade-cepis.org/issues/2009/5/up10-5Biro.pdf> >

EuroSPI fosters Systems Improvement for Integrated Product Development

Andreas Riel, Grenoble Institute of Technology, France

Since 2008 EuroSPI extends its improvement concepts to the complete product development process. For this purpose, the community has partnered up with EMIRacle (www.emiracle.eu), a leading international authority in the area of innovation in integrated product development and manufacturing. Together they are currently running three major initiatives for the development of products and services in the area of system competence improvement, as well as two programs for the broad dissemination of the underlying concepts and results. All these activities are financially supported by the European Commission, and involve academic and industrial institutions from several different sectors.

When implementing improvement programs one should not just focus on the software part of the system. A mechatronics system contains mechanics, software, electronics and looks at improvement in an integrated sense. When combining the system aspects of improvements the ROI (Return on Investment) in improvement can be much higher. One of the most important keys to achieving this is to make experts from different fields and different organisational departments work together for clearly defined common targets in innovative interdisciplinary teams just as if pencils of many different colours point altogether on the same target point (see picture).



Improvements on the products and systems level are addressed in a new collaboration of EuroSPI and EMIRacle in the iDesigner project, which is establishing a complete training and certification program for competencies needed to implement improvements in the Integrated Engineering Design. The project is financially supported by the European Commission under the Agreement LLP-LdV-TOI-2008-FR-117025, involving representatives of five different EU member states, each of which capitalizing on the experience of collaborations with numerous leading companies in Europe. The knowledge transported in seminars addresses

- Advantages of Integration in Design,
- Improvements which can be achieved by Integration in Design,
- Which Methods and Best Practices for Integration are required,
- Best practices for Complexity in Integrated Design,
- Best Practices for Knowledge Management in Integrated System Improvements,
- Best Practices for Collaborative Integrated Design, as well as
- Best Practices selected Aspects of Integration, such as Risk Considerations, Safety Design, Sustainable Design etc.

This highly productive cooperation of members from EuroSPI and EMIRacle communities has been extended recently to other systems improvement topic "Improvements by Lean Six Sigma Development", and "Integrated Competencies for Entrepreneurship". These two new topics are part of two further initiatives running 2010 - 2011 publishing results in EuroSPI.

Do you find SPI Projects Challenging?

New Certified Profession – ECQA SPI Manager

T. Schweigert, SQS, Germany, M. Korsaa & J. Johansen, DELTA, Denmark, R. Nevalainen, FISMA, Finland, M. Biró, Corvinus University of Budapest, Hungary, R. Messnarz, ISCN, Ireland & Austria

"Running SPI projects is just like any other change project." Then again there are differences. Let's re-phrase:

"Running SPI projects requires all the same skills that already make a change project so challenging - and then some!" SPI projects are definitely challenging.

The "and then some" part is now defined. Based on the SPI Manifesto and the latest research in the field including the ImprovAbility model, a group of international experts has turned the skills definition into a syllabus, a set of training materials and examination questions. All this is recognized by ECQA and is now introduced as a certified profession - SPI Manager.

The training is designed to qualify for 12.5 ECTS points when delivered in cooperation with a local university and includes a personal project and examination.

The ECQA SPI manager certification is adding skills to a CV that already includes project management skills and the process professional will be competent to lead his/her organizations process improvement activities with appropriate support from top management. The SPI manager can

- align activities to business goals
- design the organizational framework that will optimize the effect of process improvements
- manage expectations from all involved parties
- identify competence gaps that will compromise the success
- set up teams and monitor their performance



- know state of the art process models/practices/experiences and where to find practical support sources
- manage risks related to process improvement
- plan activities - from concept to implementation
- facilitate the change process.

The first certificates will be passed over to process professionals in Denmark in June, after the first course is performed by DELTA Axiom and Roskilde University.

ECQA and the job role committee expects the focus on the qualifications to largely increase the success with process improvement and the certificate to be considered valuable by the beholders and their current and future employers.

[Links to ECQA](http://www.ecqa.org)

<http://www.ecqa.org/index.php?id=37>

[Next available trainings](http://www.madebydelta.com/spim)

<http://www.madebydelta.com/spim>,

<http://www.sqs.de/training-prozessoptimierung.php>,

<http://www.methodpark.de/training/training/seminare-details/ecqa-certified-software-process-improvement-spi-manager/>

Promoting Agile Principles to Systems Engineering @ S2QI

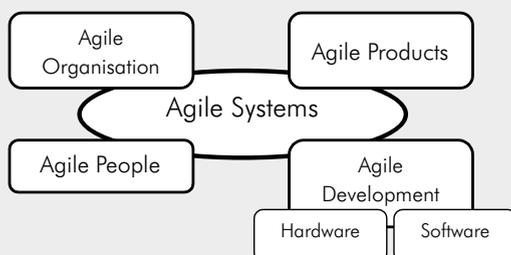
E. Stelzmann & Ch. Kreiner, University of Technology Graz, Austria,
G. Spork, Magna Powertrain, Austria,
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Change is a major issue for most management and engineering disciplines in today's business environment. The concept of agility is considered as adequate answer to face change successfully.

Especially in software development, many agile principles, methods and practices have been successfully applied. The abstract Manifesto for Agile Software Development is very well known in software development world and so are tangible agile methods like Extreme Programming, Scrum, Feature Driven Development, Crystal and others. Common principles within these methods are iterative development and incremental delivery resulting in regular and fast feedback loops on all levels. Well known tactics include strong customer involvement, direct communication, tacit knowledge, test driven development, continuous integration and more. These methods do not only promise a better handling of change, but also faster development, more satisfied customers and happier developers.

Software development however, very often is only one process within engineering of larger systems, especially when engineering knowledge of several disciplines has to be combined. For the discipline of Systems Engineering no generally accepted concept of an "Agile Systems Engineering" has been found yet. But there is a discussion whether the approaches of Agile Software Development could be transferred into the domain of Systems Engineering.

The S2QI Agile Workgroup tries to mine industry experience in the light of agile paradigms known from theory and software development. The anticipated goal is to move forward towards a practical body of knowledge for Agile Systems Engineering. So far, a list of 15 common traces and properties for agile system development has been compiled. While some are very familiar from agile software development, others deal with process synchronization and systematic reuse. Although based on real industrial practice, we know that this compilation is neither complete, nor mature: stay tuned for a public discussion.



The System and Software Quality Initiative (S2QI) is a platform of experts from industry and academia exchanging on system development processes, quality, standards and more. It is organized in working groups, such as the "Agile Workgroup". S2QI originally started with a strong Austrian bias, but its focus soon became wider, and new members are certainly welcome. S2QI is cooperating with SoQrates.

SPI Manifesto

J. Pries-Heje & J. Johansen, DELTA, Denmark

In September 2009 a group of experts in Software Process Improvement (SPI) from all over the world gathered in connection with the EuroSPI Conference for a workshop at Universidad de Alcalá in Spain.

EuroSPI's mission is to develop an experience and knowledge exchange platform for Europe where SPI practices can be discussed and exchanged and knowledge can be gathered and shared.



At the workshop 15 experts presented their 'wisdom' grounded in many years of process improvement experience. Based on the presentations 30 workshop participants brainstormed on core values and principles. Via affinity analysis and group thinking exercises we ended up with a manifesto for SPI.

At the end of the workshop 4 values and 14 principles were identified. Among the group of participants authoring responsibilities were distributed on a voluntary basis, where for some values and principles more than one voluntary were found.

By mid-October 2009 all the contributions were available to the editors, who edited the document thoroughly. A number of principles were written with considerable overlap so it was obvious that they should be consolidated. The same consolidation applied to one of the values.

The editors restructured the documented and edited the text so that it introduces itself in a uniform style. The result was a document with three core values and eleven principles. This document was ready in November 2009.

Eight reviewers read the resulting document and commented thoroughly. Finally all the comments were addressed in this final version from January 2010, including a joining of two principles and a shorter formulation of the principles so the final document consists of 3 values and 10 principles

Manifest – what is that?

A 'manifest' makes things clear and obvious or evident. This manifesto gives expression to state-of-the-art knowledge on SPI. It is based on hundreds of person-years of practice and experience from organisations worldwide.

What to use the manifesto for?

You can use the manifesto to obtain knowledge on SPI. It will help you to remember what is important about software process improvement? Each value and the consequent principles are written so you can easily place yourself into the problem and its context. Short explanations for each value are provided that further augment your understanding. Each value also has some relevant examples that will make it easier to learn and remember the values and principles.

Next step

At the next 3 years EuroSPI conferences workshops are established to take value by value and related principles and support these with experience and knowledge.

Participants authors and reviewers

Bo Balstrup, Miklos Biro, Yin Kia Chiam, Alec Dorling, Kurt S. Frederichsen, Sema Gazel, Elli Georgiadou, Christian Hertnick, Jørn Johansen, Tim Kasse, Diana Kirk, Kouichi Kishida, Morten Korsaa, Patricia McQuaid, Richard Messnarz, Risto Nevalainen, Rory O'Connor, Tom Peisl, Jan Pries-Heje, Andreas Riel, Clenio F. Salviano, Jürgen Schmied, Tomas Schweigert, Bernhard Sechser, Kerstin Siakas, Gunther Spork, Serge Tiechkiewitch, Detlef Vohwinkel, Thomas Wegner

EuroSPI Supports European Certification – The European Certification and Qualification Association (ECQA)

M. Reiner, University of Applied Science Krems, Austria,
R. Vajde Horvat, ProHuman, Slovenia,
R. Messnarz, ISCN, Ireland & Austria

Effective implementation of improvements in organisations requires a broad set of complementary skills. Contributions to EuroSPI over the last 17 years showed that effective SPI requires a lot of complementary skills, such as improvement management, innovation management, integrated design, optimised testing processes, optimised requirements processes, lean methods, agile methods and much more. Each of the methods need a recognition and support by the industrial community. To empower this recognition we started to build upon certification strategies since 2003. The outcome of this is the ECQA (European Certification and Qualification Association, www.ecqa.org).

Europe-wide certification

The ECQA is the result of a number of EU supported initiatives in the last ten years where in the European Union Life Long Learning Programme different educational developments decided to follow a joint process for the certification of persons in the industry.

Through the ECQA it is possible to attend courses for a specific profession in one country and perform a Europe-wide agreed test at the end of the course. The certificate will then be recognized by European training organisations and institutions in 18 member countries.



Why is such a certificate of interest?

European work forces are highly flexible and need to work for industries across Europe. Imagine that you are attending a course in one country and that you perform and pass the test at the end of the course. The certificate will then be recognized by certifiers and training organisations in all European countries including large countries like France, Germany, Spain, Italy, Scandinavian countries, all Eastern European countries, etc. This will automatically lead to a higher recognition of the certificate and higher chances of working for customers in an open European market.

How to cooperate with ECQA?

Go to www.ecqa.org and read the guidelines and the membership section.

Which communities are already supported in ECQA?

ECQA Certified SCOPE Manager, ECQA Certified SPI Manager, ECQA Certified Innovation Manager, ECQA Certified Governance SPICE Assessor, ECQA Certified Integrated Designer, ECQA Certified IT Consultant for SMEs, ECQA Certified E-Learning Manager and many more.

17th EuroSPI Conference – Call for Papers and Workshops

Theme 2010 - Process Improvement and Innovation has to get people actively involved, affect their daily activities, is what you do to make business succeed and is inherently linked with continuous change.

<http://2010.eurospi.net>

Research Papers should describe innovative and significant work in software process improvement, which is relevant to the software industry. The papers should be readable for a scientific and industrial audience, and support claims with appropriately described evidence or references to relevant literature. The papers will be published in the Springer Communications in Computer and Information Science (CCIS) series. CCIS is a spin off from LNCS and the same typing instructions apply as for the Lecture Notes in Computer Science Series.

Industry Experience Papers should describe practical experiences related to software process improvement with relevance to other practitioners. All accepted papers will be printed in the conference proceedings. The best 10 industry papers will be additionally selected and published in a special issue of the Wiley SPIP (SPI in Practice) series. 5 selected papers concerning people issues will be published in the International Journal of Human Capital and Information Technology Professionals.

A set of interactive workshops takes place. Each workshop includes 4 industry and research key notes and allows participants to actively contribute. The outcomes of workshops are documented and distributed to all workshop participants. The workshop key notes are also published in the Springer proceedings.

EuroSPI is supported by a set of publishers and produces a set of annual books and journals.

- Wiley SPIP Journal
- Springer CCIS Series
- International Journal of Human Capital and Information Technology Professionals (IJHCITP)

Next important date: 19th March 2010 for Industrial Experience and Research Papers and for Workshop Proposal

Imprint

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