SEMAT Newsletter

SEMAT Inc. (http://semat.org)

Essence adoption taking off in 2016

Message from Ivar Jacobson, Chair., Advisory Board, SEMAT

After almost seven years we are now seeing significant results, not just technical but real adoption. These are truly exciting times for SEMAT.

Who are the clients of Essence?

Although, in the early phases of adoption, a number of companies are embracing Essence as their way forward.

1. Fujitsu UK and Munich Re have been using Essence for many years and are scaling up. It is interesting to note that no company introduced to Essence has stopped using it. Adoption across the organization has been slower than we hoped but we have learnt a significant amount and are now fully engaged with these clients to help them scale Essence across the organization.

2. Tata Consulting Services (TCS) has publicly said that they are in process of essentializing all their methods. Essentializing means describing a method or a practice such as Scrum using Essence

(the kernel and the language) as a platform. Essentializing doesn't mean changing its intent, it just focuses the method/practice on what is essential, and presents it with a fresh user experience (poker sized cards).

3. In fact several of the largest and most prestigious service companies have made decisions to essentialize their methods. Red Hat is using Essence for consulting engagements and are now scaling up to other areas. 2e Consulting in Korea has rewritten their methodologies in Essence.

4. A large telecom vendor in East Asia has adopted Essence in their IT organization. It is now spreading nicely to other organizations both within the same company and to competing companies.

5. The largest project within New Zealand government uses Essence as a platform for their methods. Another government organization in South Africa is doing the same thing.

6. Many other organizations are in the early phases on the road to full adoption of Essence.

This is not an impressive list, but given that the Essence standard was taken just two years ago, and that no real value could be achieved at that time, it is still excellent. Now real value starts to get in place through practice libraries built on top of Essence.

My company has essentialized around 50 practices and made about 30 public at https://practicelibrary.ivarjacobson.com/start, so the attention has grown substantially. And, we are not the only ones doing that.

Which are the universities adopting Essence?

Software engineering is a tough subject to teach, in particular teaching methods. Today, most teachers select a particular method (or method framework) to teach, but it is really difficult for them since they rarely have any own practical experience of the method.

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Essence adoption taking off in 2016 (Continued)

However, first teaching Essence and thus understanding the common ground is a very different story. Essence is systematic and well-developed (being a standard) and quite easy to understand and teach. After having a common ground makes many things easier:

1. Teaching a number of different methods with Essence as a common ground.

2. Being able to analyze methods and compare them.

3. Since methods are essentialized students can learn what really matters faster and easier.

Universities around the world are already teaching Essence, for instance and in no particular order CMU West, Florida Atlantic University, Copenhagen, Oslo, Trondheim, Stockholm, Vienna, Seoul, Beijing, Johannesburg, Medellin, Sao Paolo, Mexico City, St Petersburg, and Wellington. We expect this list will grow as more and more teachers are becoming acquainted with Essence.

Here a quote from prof Pekka Abrahamsson, Norwegian University of Science and Technology, "In the foundational course "Software Engineering" I am teaching Essence to 400 students introducing Essence from day 1. We will deliver a functioning system over the coming 3 months' time developed by small teams. In the past we used a best-selling textbook, but not anymore. Tomorrow education will be fundamentally changed starting with the Essence of software engineering."

A new book 'Software Engineering Essentialized' for first year students is just a few months away. Bud Lawson, Michael Goedicke, Pan Wei Ng, Paul Mc Mahon and I are the authors. This book will come with training material, exercises and a web site with complementary material. This will make it significant easier for teachers to set up classes with Essence to teach.

Who are the method owners adopting Essence?

1. The old DSDM framework, quite popular in the UK, is now redesigned to the ABC (Agile Business Change) framework, and it is being essentialized at the very start.

2. Scott Ambler has publicly announced that he is going to essentialize his unique practices. The value to him is that these practices will be protected, instead of as today easily be "borrowed" by the most aggressive guru and incorporated in his method framework. DAD's unique practices will be marketed and possibly sold via the SEMAT web site. Moreover, since his practices can be added to any other essentialized method, their usage will be significantly wider.

3. Essentialization of Ignite, the most popular method for Internet of Things, is going on.

4. Discussions are going on with several of the other most famous method owners.

What is the value proposition of Essence and Essentialization?

Large companies see two major values: 1) from Craft to Engineering, and 2) a forever learning organization. Here please find a link to a paper recently published in CACM: https://www.ivarjacobson.com/sites/default/files/field_iji_file/article/industrial_scale_agile_acm.pdf.

What is in the future of Essence?

In the near future Essence will be extended to also be applicable for systems comprising both software and hardware such as for Internet of Things applications. This is an easy update, basically we just need to remove statements that imply that our systems are just software systems.

Norwegian University of Science and Technology adopted Essence.

Essence adoption taking off in 2016 (Continued)

We know that this works well since it already is used for such systems, systems in which the hardware is not dominant.

In the longer term having used Essence makes it rather easy to support practices with deep learning capabilities - a branch within AI. Prototypes have been built to give evidence that this can be done.

What is it that really turns people on?

The answer to this question is actually that they turn on when they realize what they have today and realize how better it can become. Today this is the situation:

1. With every major paradigm shift such as the shift from structured analysis and design to object/component design and from the latter to agile, the industry throws out all they know about software development and start all over with new terminology with little relation to the old one. Old practices are garbage and new practices are hyped. To make this transition from the old to the new is extremely costly to the software industry in the form of training, coaching, and change of tooling. If we had had essentialized practices, the costs would not be low, but they would be significantly lower.
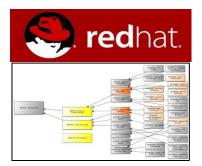
2. With every major new set of practices, for instance cloud computing, the method authors also 'reinvent the wheel'. Fortunately, the costs are significantly lower since they are not fundamental cross everything we do; the impact is limited to, for instance, cloud development. With Essence, reinvention should not be an option.

3. Within every software development trend there are many competing methods. For instance back early 1990 there were about 30 competing object-oriented methods. Recently there are about 10 competing methods on scaling agile to large organizations. They typically include some basic widely used practices such as Scrum, user story, continuous integration, but the method author has 'improved' them – for instance what Scaled Agile has done with Scrum. On top of these generic practices, there are some practices specific for each method. Usually there are good practices in all of them. The problem is that all these methods are monolithic, not modular, which means that you cannot easily mix and match practices from different methods. If you select one of these methods, you are more or less stuck with that

method. This is not what teams want and certainly not what their executives want.

4. Typically, every recognized method has a founding parent, sometimes more than one parent. If successful, this parent is raised to the guru status. The guru more or less dictates what goes into his/her method. Thus, once you have adopted a method, you get the feeling you are in a method prison controlled by the guru of that method. I was once such a guru governing the Unified Process prison. I realized that this was "the craziest thing in the world", and unworthy of any industry and in particular such a huge industry as the software industry.

With this situation it is easy to understand why Essence and Essentialization are attractive.

Over the 10+ years I have been working on Essence, I have never been so sure of the success of SEMAT as now evidenced by everything around us.
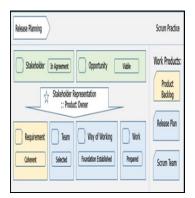
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Red Hat Consulting essentialized its project management method, called Red Hat Architectural Framework.
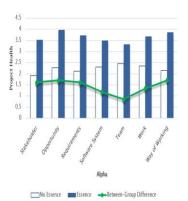
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SEMAT around the World

Report from June Sung Park, President, SEMAT

Activity Definition Cards can be generated to provide concise checklists of "done" for daily activities of team members (in Scrum Powered by Essence)

Project health measures improved significantly by applying Essence. (in Theoretical and Empirical Studies on Essence-Based Adaptive Software Engineering)

There are 8 regional chapters of SEMAT including China, India, Japan, Korea, Latin America, Russia, South Africa and Turkey. A lot of activities are going on in all these regions.

For example, In Japan Chapter, from Dec. 2015 Dec to Dec. 2016, a working group of ITA (Information Technology Alliance--an association of Japanese information technology companies: http://ita.gr.jp) led by Mr. Hiroshi Kobayashi reviewed existing project failure cases using SEMAT Essence, and identified root causes and counter measures of these cases efficiently from wider viewpoints.

In 2017, the WG of ITA has a plan to customize SEMAT Essence by adding and extending alphas and other related elements in order to make SEMAT Essence easily and intuitively applicable to Japanese industrial cases. Moreover, the WG will publish the result at some venue in public.

In South Africa, Essence form an integral part of a few courses presented at Wits University in Johannesburg. These include: "Principles of Software En-

gineering", "Software Project Management" and "Management and Control of IT".

The government of Gauteng Province has agreed to adopt Essence as the assessment tool used during desk-driven assessment of applications developed for the public of Gauteng. The use of Essence as an assessment tool is also being introduced to formal Performance Testing of applications. These activities form part of the services provided to Province by the Design and Validation (DAV) Centre, hosted in the Tshimologong Precinct in Braamfontein, Johannesburg. http://tshimologong.joburg/

One of South Africa's largest banks has offered to provide administrative support for Chapter activities.

In Turkey, chapter members organized a training session in National Conference on Software Architecture in Istanbul Kultur University in September 2016.

Another training session was organized within the scope of National Symposium in Software Engineering in October 2016. Approximately 50 participants

from academia and industry attended to the training session.

SEMAT members all around the world have actively published papers, doctoral and masters theses. For example, Ivar Jacobson, Ian Spence and Ed Seidewitz published a paper titled "Industrial-Scale Agile: From Craft to Engineering," in *Communications of the ACM* in December 2016.

June Sung Park, Paul McMahon and Barry Myburgh published a paper titled "Scrum Powered by Essence" in *ACM SIGSOFT Software Engineering Note* in January 2016. June Sung Park, Jinyoung Jang and Eunjung Lee published a paper titled "Theoretical and Empirical Studies on Essence-Based Adaptive Software Engineering" in *Information Technology and Management* in January 2017. (http://rdcu.be/onJu)

Turkey chapter members published a paper titled "Modeling Synthesis-based Software Architecture Design Approach Using Essence Turkey Framework" (DOI: 10.21205/deufmd.201719 5533) in a Turkish journal.

New Books about Essence

"Timing is Almost Everything" by Roland Racko

How do successful companies create software systems that people love? Why do some software projects capture full business value while others flop? Is there a pattern underlying how successful managers hook into their team's excellence? What makes software teams engage with certain projects in a way that surprises and delights everyone? Are you interested to learn the stealth tactics to make SEMAT Essence take off in your company?
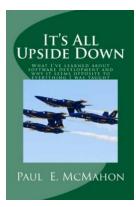
Roland answers these questions (and many more) by explaining how "management by query" - a 12-step process during the software development process - subtly encourages positive team behavior.

"It's All Upside Down" by Paul E. McMahon

This book provides true software development stories that may challenge long held thinking.

It highlights 26 upside down principles along with upside down principle clarifying thoughts. Paul also highlights 18 coaching tips that can help you get your organization "right side up" with respect to performance.

Paul has framed the highlighted principles and coaching tips that have materialized from my stories within the Essence framework. Paul says "I find Essence to be a remarkably straightforward medium for communicating software development practices and fostering collaboration, even among non-technical stakeholders."

"When I help troubled projects I have found Essence to be an incredibly useful tool to help communicate to key organizational and project team leaders in a simple way where they went off course, and how to get back onto a healthy path." Paul McMahon, Author of It's All Upside Down

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