SCALARE

Systematic guidance to decision makers for scaling scenarios

Most product innovations today are enabled through software components, so it is no surprise that software is the primary means of competitive differentiation. Software plays a key role in the digitalisation of many products that hitherto were completely driven by electronics, so scaling software in a controlled and efficient way is crucial, and represents a major challenge for organisations. The required transformations are often driven by the technological evolution of products, systems or services as well as by how the business and the company are organised. In many instances, existing processes must be reshaped, and new best practices and tools incorporated. The challenge taken up by the ITEA project SCALARE, a joint effort of industry and academia from five countries, was how to support and enable organisations in scaling their software capability in a systematic, proactive way.

Impact highlights

› SCALARE has enabled Husqvarna to make the digital transition, with its team of 4-5 software developers expanding to more than 160 people and enabling a 50% shorter time-to-market compared to 2016.

› For the Swedish consultancy company Addalot, the results of the SCALARE project led to the recruitment of 1 senior consultant working with new consultancy services and an increased revenue of approx. 150 k€ per year and growing.

› Thanks to SCALARE, Softhouse Consulting found a new way to enter the business area and was able to recruit 6 additional senior consultants working with new consultancy services and achieved an increased revenue of over 400k€ per year.

› The book 'Scaling a Software Business', published end of November 2017 and freely available as open access under a Creative Commons license, is downloaded 16,000 times by the beginning of 2020.

› Since the research studies conducted as part of the SCALARE project, researchers at the University of Limerick have developed this work further, which led to a prestigious 4-year research grant from Science Foundation Ireland.

› Together with Open Source advocate Danese Cooper, who started the InnerSource Commons community, one of the SCALARE researchers co-authored a book on Inner Source published by O'Reilly and freely available. The InnerSource community has steadily grown since, with over 250 members representing a wide range of companies worldwide.

Project results

The SCALARE approach is unique in that it provides a holistic vision for scaling in three dimensions: software systems and services, processes and methods, and business and organisation. One of the key outcomes of SCALARE is the Scaling Management Framework (SMF), which organisations can use to assess their software development capability and plan their efforts to scale up that capability. The SMF is an analytical tool that companies can use to assess where they are and define the steps to take to improve their software process.

The SMF and a rich set of case studies are reported in a practitioner-oriented book 'Scaling a Software Business', published end of November 2017. The book is freely available as open access under a Creative Commons license. Building on the first book, which had been downloaded 16,000 times by mid-2020, the Swedish SCALARE project partners published a second book in 2018 based on the scaling management framework from SCALARE, called 'Principles for Industrial Open Source'. This book emphasises that the most innovative software is Open Source and that it is possible to simultaneously support Open Source while keeping parts of the code proprietary.

Exploitation

In addition to these books, the SCALARE project partners have exploited the strong results in several ways.

The project has enabled Husqvarna to make the digital transition, allowing them to respond to the increasingly demanding customers needs. Husqvarna now has 32 times as many software developers, which equates to 160.

Lero, the Irish Software Research Centre at the University of Limerick developed a prototype of the open source pattern tool ASPIRE that helps managers identify key practices when faced with scaling scenarios. The Inner Source topic, which refers to the adoption of Open Source practices and processes within an organisation, has attracted considerable attention from companies worldwide including Nokia, PayPal, SAP, and Robert Bosch. The research studies conducted as part of the SCALARE project also gained a lot of interest from companies globally. And besides a great number of research studies that were published during the SCALARE project and a Special Issue of Softhouse's magazine, six Masters students completed their theses on the SCALARE topics.

Furthermore, the Continuous Delivery (CD) assessment model was developed by Softhouse Consulting. It defines different maturity levels for various disciplines within the software development lifecycle, necessary to deliver software fast with good quality. With this maturity model, Softhouse Consulting already helped over 30 organisations to understand where they stood in the software development lifecycle, and from there to define where they wanted to go. The Swedish consulting company Addalot also extended its consultancy services portfolio as Open Source and Servitisation consultancy services were introduced.

With an estimated 10,000 people having been reached via numerous organised events, tutorials and keynotes, online videos, the project partners are helping to 'arm' the European industry for the digital transformation!

SCALARE

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