

12-7-2010

The Challenges of Small Shop Development: A Case Study

Jeffry Babb

West Texas A&M University, jbabb@wtamu.edu

Jacob NÅ, rbjerg

Copenhagen Business School, jno.itm@cbs.dk

Follow this and additional works at: http://aisel.aisnet.org/sprouts_all

Recommended Citation

Babb, Jeffry and NÅ, rbjerg, Jacob, " The Challenges of Small Shop Development: A Case Study" (2010). *All Sprouts Content*. 380.
http://aisel.aisnet.org/sprouts_all/380

This material is brought to you by the Sprouts at AIS Electronic Library (AISEL). It has been accepted for inclusion in All Sprouts Content by an authorized administrator of AIS Electronic Library (AISEL). For more information, please contact elibrary@aisnet.org.

The Challenges of Small Shop Development: A Case Study

Jeffry Babb

West Texas A&M University, USA

Jacob Nørbjerg

Copenhagen Business School, Denmark

Abstract

Small companies dominate the landscape of systems and software development companies. With a few exceptions, very few studies have investigated the development and managerial processes and practices of these companies, their customer relationship, and their overall position and role in the software supplier and procurer relationships. A recent in-depth study reveals a number of challenges facing a small shop software development company -- e.g. owner and employees having insufficient formal training in software engineering and information systems development, lack of consistent and systematic practices, little time to reflect upon practices and learn new technologies and techniques, barriers for access to the (end)users, a need for short cycle development in order to maintain a steady income, and a sometimes fragile or problematic relationship with customers and clients who are often much bigger and stronger than the small development shop. Several of these problems have been shown to be persistent in Software Engineering and Information Systems Development across time as well as types of companies and settings. We do, however, believe that there is a need to investigate how these problems play out in the context of small shop development. The study will build on the action research of which focused on introducing a learning and reflection model into a small development shop. In the present study, we will analyze that case further.

Keywords: agile learning

Permanent URL: <http://sprouts.aisnet.org/10-88>

Copyright: Creative Commons Attribution-Noncommercial-No Derivative Works License

Reference: Jeffry Babb, Jacob Nørbjerg (2010). "The Challenges of Small Shop Development: A Case Study," Proceedings > Proceedings of IFIP 8.2/Organizations and Society in Information Systems (OASIS) . *Sprouts: Working Papers on Information Systems*, 10(88). <http://sprouts.aisnet.org/10-88>

The challenges of small shop development. A case study.

Jeff Babb, West Texas A&M University, Jacob Nørbjerg, Copenhagen Business School

Small companies dominate the landscape of systems and software development companies. According to a 2005 US survey, almost 80% of the companies in the categories "Software Publishers" and "Computer Programming Services" (NAICS 511210 and 541511) had less than 10 employees (Babb, 2009). A recent survey of the ICT sector in the Copenhagen and southern Sweden region shows similar figures with close to 89% of ICT service and consultancy company having less than 10 employees (Hansen and Serin, 2010)

These dramatic figures are contrasted by the lack of systematic research into the challenges these companies face and their coping strategies (Babb, 2008). With a few exceptions; e.g. (Kautz, 1998) very few studies have investigated the development and managerial processes and practices of these companies, their customer relationship, and their overall position and role in the software supplier and procurer relationships.

A recent in-depth study reveals a number of challenges facing a small shop software development company (Babb, 2008); e.g. owner and employees having insufficient formal training in software engineering and information systems development, lack of consistent and systematic practices, little time to reflect upon practices and learn new technologies and techniques, barriers for access to the (end)users, a need for short cycle development in order to maintain a steady income, and a sometimes fragile or problematic relationship with customers and clients who are often much bigger and stronger than the small development shop.

Several of these problems have been shown to be persistent in Software Engineering and Information Systems Development across time as well as types of companies and settings (Kautz et. al. 2007). We do, however, believe that there is a need to investigate how these problems play out in the context of small shop development. First, as pointed out above, because of the lack of research into this particular, but important, part of the sector, and second because the specific characteristic of small shop development pose particular challenges for e.g. learning and reflection when time pressure is high and there are no experienced developers or established company routines and practices to learn from. Finally, because most traditional ISD methods and managerial advice are ill-suited in a small shop setting (Fayad, 2000).

The study will build on the action research of (Babb, 2008) which focused on introducing a learning and reflection model into a small development shop. In the present study, we will analyze that case further.

References

Babb, J. (2009): *Towards A Reflective-Agile Learning Model And Method In The Case Of Small-Shop Software Development: Evidence From An Action Research Study*, PhD Dissertation, Virginia Commonwealth University, Richmond, VA.

Fayad, M.E., Laitinen, M., and Ward, R.P. Thinking objectively: software engineering in the small, *Communications of the ACM* **43**:3, March 2000, pp 115-118.

Hansen, P. A. and Serin, G. (2010): *The Structure of the ICT Sector in the Øresund region*, BrandIT report, ÖresundIT, Copenhagen.

Kautz, K. (1998). Software Process Improvement In Very Small Enterprises: Does It Pay Off?, *Software Process – Improvement and Practice* **4**: 209-226.

Kautz, K., Madsen, S. and Nørbjerg, J. (2007). Persistent problems and practices in information systems development, *Information Systems Journal* **17**: 217-239

Editors:

Michel Avital, University of Amsterdam
Kevin Crowston, Syracuse University

Advisory Board:

Kalle Lyytinen, Case Western Reserve University
Roger Clarke, Australian National University
Sue Conger, University of Dallas
Marco De Marco, Università Cattolica di Milano
Guy Fitzgerald, Brunel University
Rudy Hirschheim, Louisiana State University
Blake Ives, University of Houston
Sirkka Jarvenpaa, University of Texas at Austin
John King, University of Michigan
Rik Maes, University of Amsterdam
Dan Robey, Georgia State University
Frantz Rowe, University of Nantes
Detmar Straub, Georgia State University
Richard T. Watson, University of Georgia
Ron Weber, Monash University
Kwok Kee Wei, City University of Hong Kong

Sponsors:

Association for Information Systems (AIS)
AIM
itAIS
Addis Ababa University, Ethiopia
American University, USA
Case Western Reserve University, USA
City University of Hong Kong, China
Copenhagen Business School, Denmark
Hanken School of Economics, Finland
Helsinki School of Economics, Finland
Indiana University, USA
Katholieke Universiteit Leuven, Belgium
Lancaster University, UK
Leeds Metropolitan University, UK
National University of Ireland Galway, Ireland
New York University, USA
Pennsylvania State University, USA
Pepperdine University, USA
Syracuse University, USA
University of Amsterdam, Netherlands
University of Dallas, USA
University of Georgia, USA
University of Groningen, Netherlands
University of Limerick, Ireland
University of Oslo, Norway
University of San Francisco, USA
University of Washington, USA
Victoria University of Wellington, New Zealand
Viktoria Institute, Sweden

Editorial Board:

Margunn Aanestad, University of Oslo
Steven Alter, University of San Francisco
Egon Berghout, University of Groningen
Bo-Christer Bjork, Hanken School of Economics
Tony Bryant, Leeds Metropolitan University
Erran Carmel, American University
Kieran Conboy, National U. of Ireland Galway
Jan Damsgaard, Copenhagen Business School
Robert Davison, City University of Hong Kong
Guido Dedene, Katholieke Universiteit Leuven
Alan Dennis, Indiana University
Brian Fitzgerald, University of Limerick
Ole Hanseth, University of Oslo
Ola Henfridsson, Viktoria Institute
Sid Huff, Victoria University of Wellington
Ard Huizing, University of Amsterdam
Lucas Introna, Lancaster University
Panos Ipeirotis, New York University
Robert Mason, University of Washington
John Mooney, Pepperdine University
Steve Sawyer, Pennsylvania State University
Virpi Tuunainen, Helsinki School of Economics
Francesco Virili, Università degli Studi di Cassino

Managing Editor:

Bas Smit, University of Amsterdam

Office:

Sprouts
University of Amsterdam
Roetersstraat 11, Room E 2.74
1018 WB Amsterdam, Netherlands
Email: admin@sprouts.aisnet.org