



# Field Guide to Provide Step-by-Step Examples for Improving Processes in Small Settings

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*To help organizations in small settings pursue process improvement, the Software Engineering Institute (SEI) is inviting contributors to help develop a field guide with how-to guidance, examples, templates, checklists, and other information.*

If you work for a small business, participate on a small team, belong to a small business unit, or work on small projects, then you work in a small setting and are likely familiar with the challenges of process improvement in these contexts.

Consider the following example from a small business: The Chief Executive Officer complains that she does not have enough cycles or resources to try out even one of several process improvement concepts that her various customers are asking for. She recognizes the risks of inaction, but the cost seems prohibitive, and she has never used consultants before. Her employees are all busy and many believe that *it's always worked fine the way it is*. She would like to have repeatable, predictable work processes that produce quality products and services and enable her company to stand out from the crowd. She knows she needs some kind of process improvement activity. But is her company ready? Is she ready? How can they become ready? What can they do themselves, and how can they be better consumers of process improvement products and services?

The SEI has heard stories like this from small settings around the world, and began to explore this arena in 2003 and 2004 with a pilot study in Huntsville, Alabama. The study resulted in new knowledge and ideas for how to accelerate implementation of one improvement methodology – Capability Maturity Model Integration (CMMI®) – in small businesses [1, 2]. This was followed by an insightful workshop in October 2005 involving researchers from around the world [3].

Based on this work and recommendations from the International Process Research Consortium, the SEI launched the Improving Processes in Small Settings (IPSS) project, in collaboration with University of Pittsburgh Medical Center (UPMC) and Lockheed Martin Corporation (LMCO). Why would UPMC and LMCO – whose employees number in the tens or hundreds of thousands – be interested in a project for small settings? Because, like many large organizations, they are amalgams

of many small projects and business units, with myriad small business partners and suppliers.

The first IPSS project is the Field Guide for Improving Processes in Small Settings. The guide is not constructed like CMMI or any other process improvement models or frameworks; it is a collection of how-to guidance for process improvement in small settings, independent of the process model or standard used. We intend it to help fast-track the improvement effort and convey the scope of effort and skills involved at each step so that the small-setting practitioner can be a smarter consumer of process improvement products and services or be better at doing it themselves, whichever they choose.

The information in the field guide is organized under six competencies: (1) building and sustaining sponsorship and ownership; (2) developing and measuring realistic goals; (3) developing and sustaining a process improvement infrastructure; (4) defining and describing processes; (5) developing new or improved processes; and (6) determining improvement progress. Each competency comprises a set of activities that describe *what* to do to achieve that competency, and each activity comprises a set of tasks that explain *how* to do each activity.

Our plan for populating the field guide includes collecting real-world experiences from experts across the process community who can provide knowledge, techniques, examples, checklists, scripts, and other artifacts to help others succeed in small settings. The guidance will include step-by-step tasks for various situations and constraints of the small setting.

We welcome the involvement of small settings experts, citizens, and their stakeholders to help accelerate the development of the field guide. There are currently three ways to participate:

- Become a project affiliate and work directly on the guide at various stages.
- Become a project sponsor, which enables organizations to influence the priority order of the guide's development and content for their particular needs.

- Complete the brief survey we have created to collect information at <[www.sei.cmu.edu/iprc/ipss.html](http://www.sei.cmu.edu/iprc/ipss.html)>.

For more information on the field guide and the IPSS project, please visit <[www.sei.cmu.edu/iprc/ipss.html](http://www.sei.cmu.edu/iprc/ipss.html)>.◆

## References

1. Chrissis, M., M. Konrad, and S. Shrum et al. "CMMI: Guidelines for Process Integration and Product Improvement v1.2." Boston: Addison-Wesley, 2006.
2. Garcia, S. Highlights from Piloting CMMI With Two Small Companies. Proc. of the First International Researcher's Workshop on Process Improvement in Small Settings. Pittsburgh: SEI, Carnegie Mellon University (CMU), 2006 <[www.sei.cmu.edu/publications/documents/06.reports/06sr001.html](http://www.sei.cmu.edu/publications/documents/06.reports/06sr001.html)>.
3. Garcia, S., Caroline Graettinger, and Keith Cost. "Proc. of the First International Researcher's Workshop on Process Improvement in Small Settings." Pittsburgh: SEI, CMU, 2006 <[www.sei.cmu.edu/publications/documents/06.reports/06sr001.html](http://www.sei.cmu.edu/publications/documents/06.reports/06sr001.html)>.

## About the Authors

The authors are members of the IPSS project at the SEI and were part of the International Process Research Consortium that, from 2004–2007, brought together leaders from the international process community to explore strategic research directions in software and systems process. Caroline Graettinger, Suzanne Garcia, and William Peterson are senior members of the SEI CMU technical staff. Christian Carmody is Director of Process and Performance Improvement for UPMC. M. Lynn Penn is Director of Process Management at LMCO Integrated Systems and Global Services.

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