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Software Engineering Institute

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Getting Started with CMMI®-Based Process Improvement

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Topics

Collect Information

Know Where You Are

Know Where You Are Going

Commit Resources

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Collect Information

There are several sources of information and many types of information available to you about CMMI.

Sources include

- **The CMMI Web site** (www.sei.cmu.edu/cmmi/)
- **SEI Partner organizations** (www.sei.cmu.edu/collaborating/ partners/partners-tech.html)
- **Online forums of CMMI users** (www.sei.cmu.edu/cmmi/ adoption/knowledge-exchange.html)
- **Conferences and other events** (www.sei.cmu.edu/cmmi/ adoption/cmmi-events.html)
- **Written publications** (www.sei.cmu.edu/cmmi/adoption /adoption.html
- **CMMI related courses** (www.sei.cmu.edu/cmmi/training /training.html)

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The CMMI Web Site

The CMMI Web site (www.sei.cmu.edu/cmmi/) is a treasure trove of information about CMMI and pointers to more information.

Examples of information available include
- CMMI models and appraisal method descriptions
- Descriptions of available training courses
- Presentations made by those who have adopted CMMI
- Pointers to events and publications
- Answers to frequently asked questions
- Contact information for CMMI early adopters who can provide advice and information

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SEI Partner Organizations

A number of SEI Partners provide consulting services to those who wish to adopt CMMI.

The SEI licenses these organizations to provide
- Introduction to CMMI training courses
- SCAMPI appraisal services

Some of these organizations also offer additional services to help you adopt CMMI. Some have Web sites, publications, and tools that can help you in your adoption of CMMI.

For more information, see www.sei.cmu.edu/collaborating/ partners/partners-tech.html

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Online Forums

Online forums focusing on process improvement, CMMs, and CMMI exist. The following three online forums are those the SEI is most familiar with:

- The Software Engineering Information Repository (SEIR) has over 25,000 registered users and is a forum used to contribute and exchange information about software engineering improvement activities, including CMMI.

- The BSCW Shared Workspace is a forum used to contribute and exchange CMMI-related materials.

- Yahoo! CMMI Process Improvement Discussion Group is a forum used to contribute and exchange ideas about CMMI-based improvement.

For more information, see www.sei.cmu.edu/cmmi/adoption/ knowledge-exchange.html.

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Conferences

There are many conferences and events associated with process improvement. The ones that have a strong CMMI presence include the following:

- The Software Engineering Process Group (SEPG) Conferences
  - United States
  - Europe
  - Australia
  - Latin America

- The CMMI Technology Conference and User Group

- Systems and Software Technology Conference

For information about scheduled upcoming events, see www.sei.cmu.edu/products/events/events.html.

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Publications

If you search the Internet, you will find books, articles, and reports about CMMI. We've collected some of these and linked them to our Web site:

Articles
http://www.sei.cmu.edu/cmmi/adoption/articles.html

Books
http://www.sei.cmu.edu/cmmi/adoption/books.html

Reports
http://www.sei.cmu.edu/cmmi/adoption/reports.html

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CMMI Courses

The SEI offers beginning and advanced CMMI courses:

- Introduction to CMMI (Staged and Continuous)

- Introduction to CMMI (Staged Representation)

- Introduction to CMMI (Continuous Representation)

- Intermediate Concepts of CMMI

- CMMI Instructor Training

- SCAMPI Lead Appraiser Training

For more information about CMMI training courses, see www.sei.cmu.edu/products/courses/courses.html#CMMI

Process Improvement Courses

Process Improvement courses are also valuable to those just getting started with CMMI-based process improvement. A few that the SEI offers include

- Mastering Process Improvement

- Defining Software Processes

- Implementing Goal-Driven Software Measurement

- Process Measurement and Analysis

For more information about process improvement training courses, see www.sei.cmu.edu/products/courses/courses.html#PROC

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Know Where You Are

If you don't know where you are, then having a map (CMMI best practices) won't help you.

Do an informal gap analysis to determine how your processes compare to CMMI model practices using an ARC Class C compliant appraisal method (e.g., SCAMPI C).

Do a culture survey to gather data from managers, project leads, and workers to gauge opportunities and barriers to change.

Build a picture of the present.
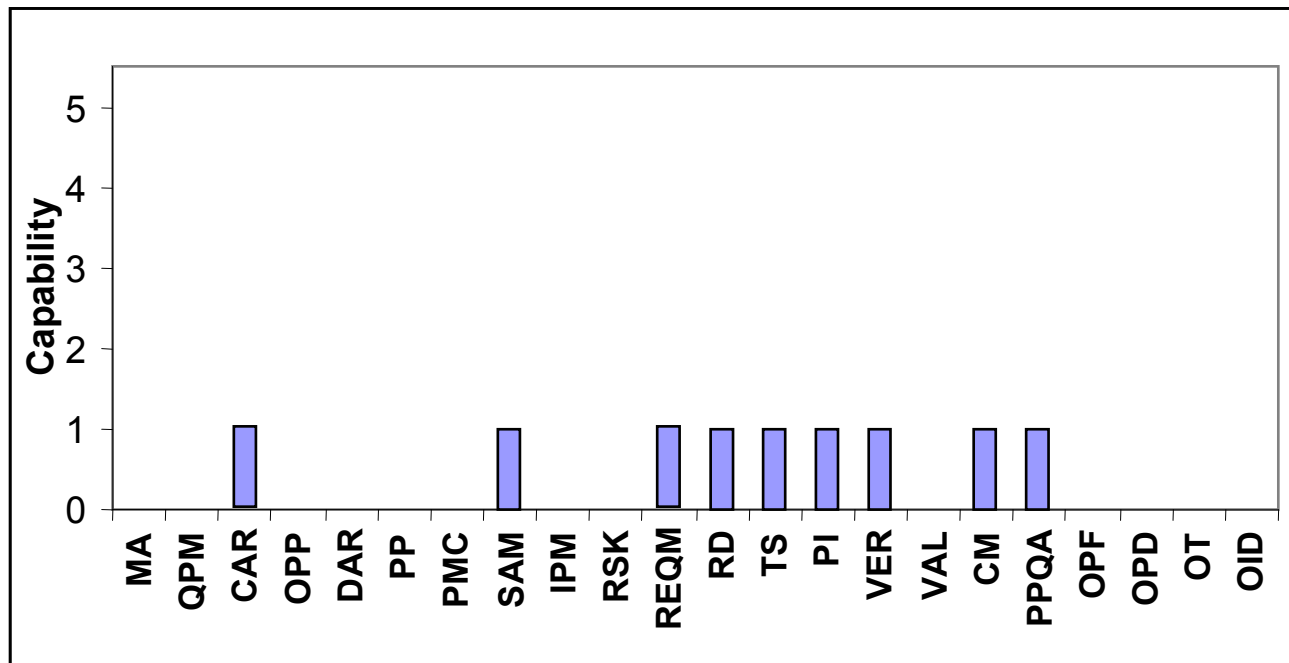
A Picture of the Present

The picture you create can take any form.

Use the representation that makes the most sense for your organization.

Sample Picture -1

Capability Profile

Sample Picture -2

Current Status

	Process Management			Project Management					Engineering						Support				
GG3	0%	0%	0%	0%	0%	10%	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	GG3
GG2	0%	0%	9%	0%	13%	33%	22%	14%	31%	44%	25%	50%	27%	36%	36%	36%	0%	0%	GG2
GG1	45%	18%	18%	0%	22%	44%	90%	24%	39%	50%	57%	81%	53%	50%	44%	44%	0%	0%	GG1
SG3					56%			41%		56%	100%	88%	88%			56%			SG3
SG2	45%	27%		100%	0%	61%	90%	65%		65%	86%	94%	53%	69%	63%	63%		31%	SG2
SG1	45%	27%	18%	0%	0%	50%	100%	24%	39%	72%	64%	94%	88%	59%	44%	63%	7%	0%	SG1
	OT	OPF	OPD	IPM	PP	PMC	SAM	RISK	REQM	RD	TS	PI	VER	VAL	PPQA	CM	DAR	MA	

Achieved goal satisfaction   Did not achieve goal satisfaction   No goal in model

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Know Where You Are Going

If you don't know where you are going, any road will do.

- Characterize the success you want before you begin.

- Get a balanced view from management, project leaders, and staff. Each will have different objectives they want to achieve.

- Prioritize the process areas to address and build your improvement plan.

- Track your progress against the plan.

Tracking Your Progress

Using the same format as the picture of where you are, create a picture of where you want to be.
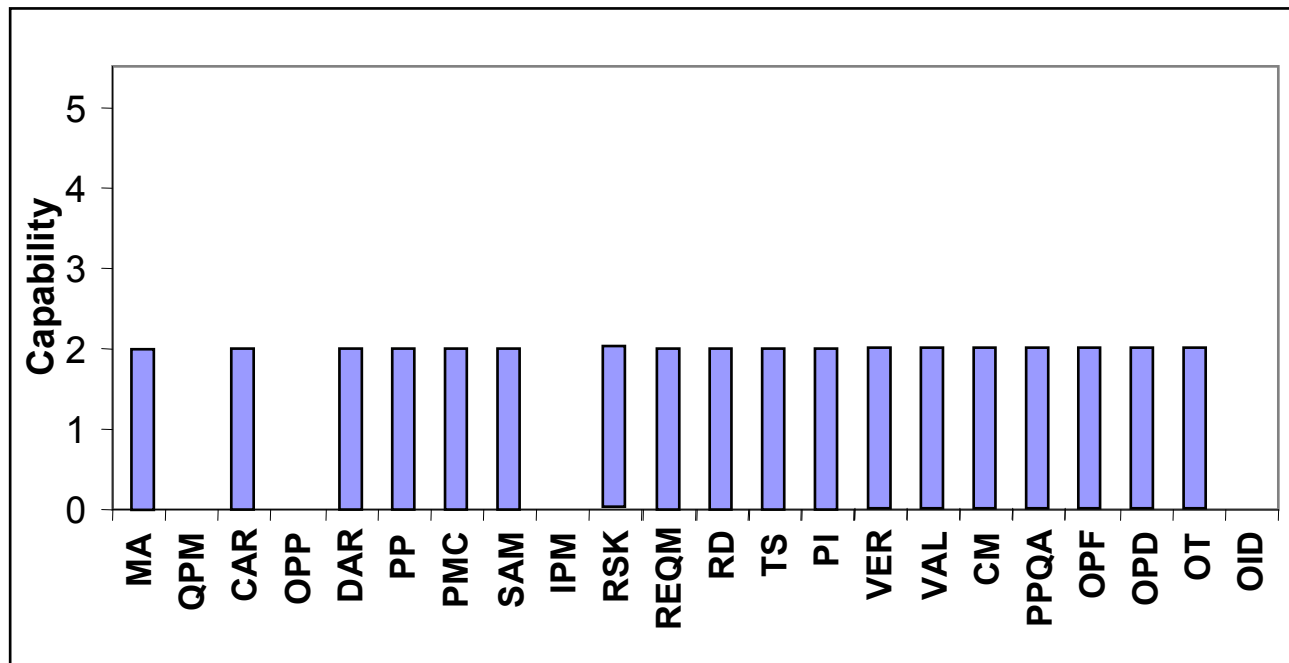
Compare the picture of where you are to the one of where you want to be. The difference between the two is the focus of your process improvement program.

Create a periodic (e.g., monthly, weekly) report that demonstrates your program's progress in reaching its (and the organization's) goals.

Sample Picture -1

Target Profile

Sample Picture -2

Target Status

	Process Management			Project Management				Engineering							Support				
GG3	0%	0%	0%	0%	100%	100%	14%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	GG3
GG2	0%	0%	9%	0%	100%	100%	22%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	GG2
GG1	45%	18%	18%	0%	100%	100%	90%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	GG1
SG3					100%			100%	100%	56%	100%	100%	100%	100%	100%	100%	100%	100%	SG3
SG2	45%	27%		100%	100%	61%	90%	100%	100%	65%	100%	100%	100%	100%	100%	100%	100%	100%	SG2
SG1	45%	27%	18%	0%	100%	50%	100%	100%	100%	72%	100%	100%	100%	100%	100%	100%	100%	100%	SG1
	OT	OPF	OPD	IPM	PP	PMC	SAM	RISK	REQM	RD	TS	PI	VER	VAL	PPQA	CM	DAR	MA	

■ Achieved goal satisfaction   ■ Did not achieve goal satisfaction   ■ No goal in model

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Commit Resources

Choose the best people to manage the process improvement effort.

Make sure that enough resources are available:
- people
- money

Make sure that the resources available are the right ones:
- skills
- experience
- responsibility/authority

Monitor the process improvement program over time to be sure that it is healthy and not lacking quality resources.

Summary

Getting started with CMMI requires

- research

- introspection

- insight

- sponsorship

- commitment

In the end, you will have a vital process improvement program that can bring the many benefits of CMMI adoption to the organization.

For More Information About CMMI

Go to CMMI Web site:

http://www.sei.cmu.edu/cmmi
http://seir.sei.cmu.edu

Contact SEI Customer Relations:

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