If you are just beginning to think about adopting the CMMI, or even if you are a seasoned veteran, there are several "lessons learned" that will serve you well.

First, Have a Point

The CMMI is designed to improve the performance of your company – specifically, to improve the performance of your company's capabilities. Your long range business plan/strategy or long range objectives define what general types of business capabilities you may want to improve.

The results of this analysis will tell you what model viewpoint to adopt (typically Development or Services, or both). And, the results will enable you to put the model in context – to make it do what is important to your company. In the end, you will be much better prepared to interpret each model practice, and what it means to the future of your company. This contextual understanding of what the model should do for you is enlightening, and helps to avoid waste and the rework associated with implementing business processes that are not really what you need.

The graph below is one we generated years ago in an attempt to make this point clear.
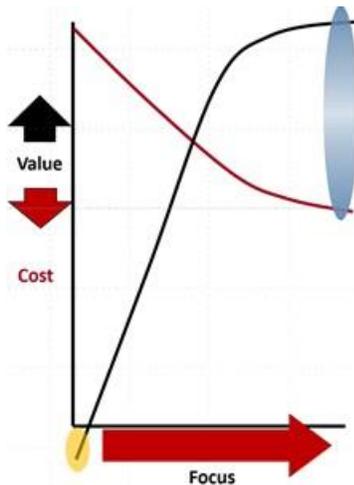
The point of the chart is that as focus increases from left to right (the reason why you are adopting the CMMI), costs decrease, and business value increases.

In fact, when there is little or no focus (adoption for the sake of the badge) costs are typically highest and business value is actually negative.

These phenomena have been found to be true in multiple cases over a period of more than 20 years.

Choose the Right Model(s)

The two most popular (useful to the most businesses) model viewpoints are Services and Development.

Development is meant to treat any development activity, from designing and baking cakes to the design and development of advanced aircraft engines. The typical development "project" (model term) has a start and finish time, and is focused on a particular product or line of products.

The service viewpoint is designed to make any service operate more efficiently and effectively – from telephone call centers to bus lines or even municipal operations. The typical service may have a start date, but does not have a completion date, and is focused on the provision of a particular service or group of services.

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Know what a Process Is…

Please understand that CMMI models do not contain any processes – only practices.

The CMMI <u>allows and expects</u> a business process to be made up of

- Procedures or processes (words, perhaps flow diagrams)
- Technologies and mechanisms: things like Cost Point, excel spreadsheets, forms, templates and other things are typically part of your business process
- Knowledge bases: for example, may agile processes are accepted as standards, and there are many others

<u>A Standard Process</u> is a special term that is important at Maturity Level 3 and above. A standard business process is a process that invokes repeatable, consistent outcomes across time and projects (service or development projects). We like to use the term "standard", as process may be a process/procedure, technology, or a standard knowledge base.

The CMMI V2.0 Comes to You

The CMMI is not a strange and mysterious thing. It is composed of guiding practices that codify the things a mature services or development company should already be doing – as determined by the joint voice of hundreds of companies. <u>But we find that most companies are already doing a maority of these things.</u>

Most companies are already estimating and planning future work based on past experience, overseeing the work, managing risk (informally or otherwise), making complex decisions, measuring progress and costs, exercising come kind of quality oversight of programs, and training their personnel to do their jobs well.

The CMMI just makes the things you are probably already doing more complete and robust- thereby lowering operational risk, reducing waste (and costs), and making outcomes more consistently repeatable.

And the model comes to you. Each and every practice is interpreted in the context of your business - which is why no two implementations are alike, Using another business' processes is not advisable.

For example, lean companies may tend to have business processes embedded in tools and technologies (which are then treated as "standards"). Agile development projects may adopt known agile constructs as their processes – and end up only modifying those constructs for their business. Some businesses may treat quality assurance as as audit function, while others may be compelled by the nature of their businesses to enage in a more multifaceted program of quality assurance and control.

One last note in this area: <u>the implementation of each and every model practice should add business value.</u> If it does not, talk with your consultant about it.

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In-House CMMI Expertise

We recommend hiring or developing in-house CMMI expertise – at least one person who is a Certified CMMI Associate see https://cmmiinstitute.com/learning/certifications/professional . This person, if possible, should also have hands-on CMMI experience implementing the model

At least one full time CMMI in-house expert is normally necessary, if you want to hold to a reasonable schedule and keep costs down. This person is responsible, with the advice and guidance of senior leadership, of ensuring CMMI implementation reflects the company's culture, business base, and future aspirations.

If a "newby" is assigned responsibility for implementation of the CMMI, we strongly recommend that your expert take advantage of our workshop on Process Management (see https://brightlineperformance.com/training-new-skills).

The CMMI as an Integrating Framework

A unique and powerful advantage of the CMMI model suite is that the CMMI is designed to act as an integrating framework for all quality frameworks and tools (aka ISO 9002-2015, AS9100, Lean, Six Sigma, agile, etc.).

The CMMI is designed get the best out of the total set of improvement tools and mechanisms you may have with one goal in mind: serve to improve the performance of company capabilities to enable the achievement of business objectives.

Our experience, consistently found in very small to large companies, is that the workforce wants (and deserves) "one process" to follow. That is, one integrated process. For example, we have found that the CMMI for Development fortifies implementations of AS9100, and that the CMMI for Services makes the use of ISO 9100-2015 more rigorous and value-add for service quality management. If you are interested in learning more, see our seminar on this topic at https://brightlineperformance.com/help-is-here .

Size Does Not Matter

Very small companies, with a headquarters staff of perhaps eight people, have successfully adopted the CMMI, and benefitted from it. Small companies enjoy a certain immediacy of communication, which tends to simplify the implementation of a good number of CMMI practices. In addition, they often share a greater degree of tacit knowledge, which helps even more.

Version 2.0 can be implemented so as to off-load what might otherwise be a process burden – and we are expert at doing that. About 20% of our customers would be classified as "very small".
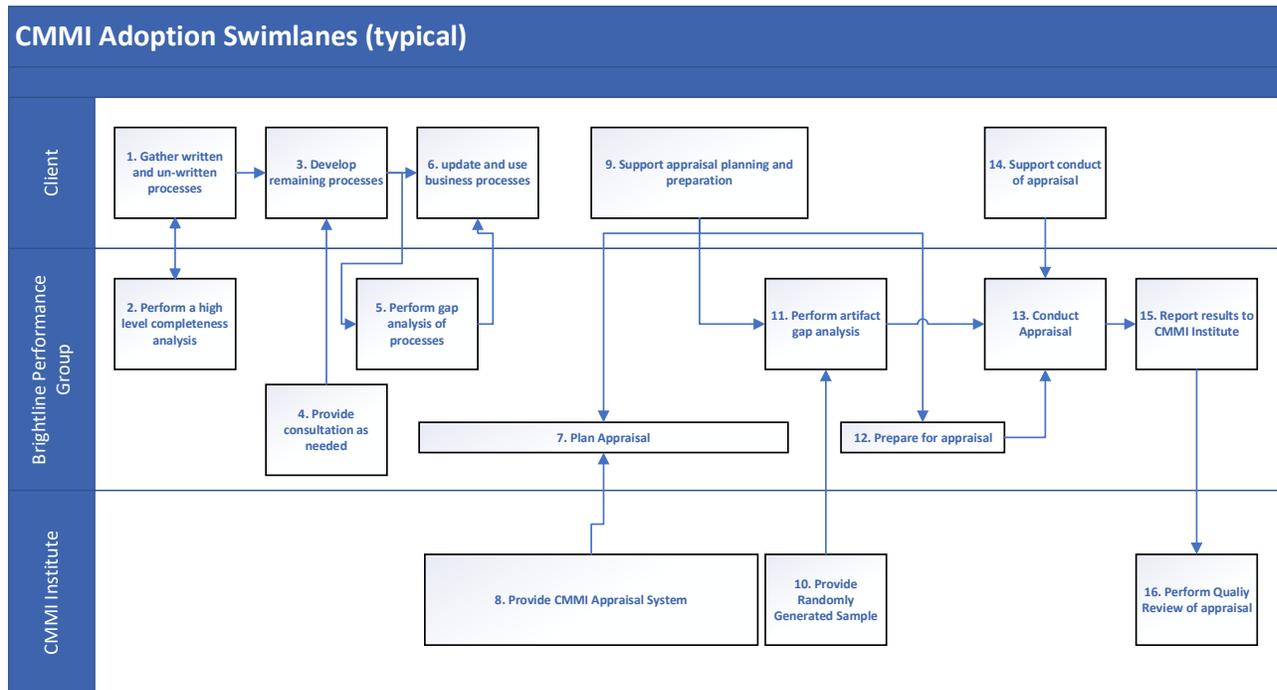
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A Typical Appraisal Sequence

If you are contemplating a first adoption of the CMMI, your perception of "what happens" may not be entirely clear. The following description of activities aligns with the figure below. Please note that this is a high level description, so some detail is left out. Please contact us if you have any questions.

1. (Client) Gather written and unwritten processes. Whether a process is written or not, there usually exist a way of doing things. The organization is asked to describe their processes that align with each of the Practice Areas they wish to comply with.
2. (Consultant) Perform a high level completeness analysis. The appraisal/consultant company provides a high level process gap analysis that can be used by the organization to better understand the scope of the improvement effort (i.e. what there is left to develop).
3. (Client) Develop remaining processes. The client is responsible, with consultation and other help if wanted, for development of the remaining business processes.
4. (Consultant) Provide consultation as needed. The appraisal/consultant company provides support as desired by the client.
5. (Consultant) Perform gap analysis of processes. The consultant evaluates the business process against the requirements of the CMMI model view as selected by the client.
6. (Client) Update and use business processes. The client puts the business processes into operation, updating as a result of process gap analyses.
7. (Consultant) Plan Appraisal. At about this time, appraisal planning begins in earnest, using the CMMI Institute's CMMI Appraisal System.
8. (CMMI Institute). Provides the CMMI Appraisal System.
9. (Client) Support appraisal planning and preparation. The client provides data and makes decisions about the projects (service and/or development) and other aspects of the appraisal.
10. (CMMI Institute). Provides the Randomly Generated Sample.
11. (Consultant, w/Client) Perform artifact gap analysis. When ready, the consultant evaluates the output of business processes to ensure they are consistent with the business processes themselves, and the CMMI model practices.
12. (Client and Consultant). Prepare for appraisal.
13. (Consultant) Conduct Appraisal. The Lead Appraiser leads the appraisal. A four person team is typically required.
14. (Client) Support conduct of the appraisal. The client provides Appraisal Team Members (typical) and otherwise supports the conduct of the appraisal.
15. (Consultant) Report results to the CMMI Institute. With the approval of the Appraisal Sponsor, the Lead Appraiser submits appraisal results and other artifacts to the CMMI Institute for Quality Review.
16. (CMMI Institute) Perform Quality Review of appraisal. The CMMI Institute reviews the appraisal results and other artifacts, and accepts that the appraisal was conducted correctly.

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CMMI Adoption Swimlanes (typical)

Client

- 1. Gather written and un-written processes
- 3. Develop remaining processes
- 6. update and use business processes
- 9. Support appraisal planning and preparation
- 14. Support conduct of appraisal

Brightline Performance Group

- 2. Perform a high level completeness analysis
- 5. Perform gap analysis of processes
- 4. Provide consultation as needed
- 7. Plan Appraisal
- 11. Perform artifact gap analysis
- 13. Conduct Appraisal
- 15. Report results to CMMI Institute
- 12. Prepare for appraisal

CMMI Institute

- 8. Provide CMMI Appraisal System
- 10. Provide Randomly Generated Sample
- 16. Perform Qualiy Review of appraisal

We recommend, if you want to deepen your understanding of the CMMI, that you buy a License to the full CMMI. It's not nearly as expensive as you might think. See

https://cmmiinstitute.com/store/cmmi-online-model-subscription to buy a single user license,

or go to https://cmmiinstitute.zendesk.com/hc/en-us/sections/360002020894-CMMI-V2-0-Enterprise-License for an enterprise license.

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