CMMI Technical Report: Performance Results

Reflecting CMMI Performance Results from January 2019 to December 2024

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Content Highlights by Data Source

This annual technical report features the following insights into performance data.

Data Source	Report Description			
	Relevant Market Sectors Which industries and market sectors are using CMMI and where is the current focus?	<u>7</u>		
Appraisal ResultsBy Year	CMMI Locations Where in the world is CMMI being adopted and where is it the most popular?	<u>8, 26</u>		
By IndustryBy LocationBy Org Unit	Domains Affinity Which of the CMMI domains are being used most and how many appraisals are being performed across multiple domains?	<u>10</u>		
	Size of Organizations How big are the Organizational Units that are adopting CMMI in terms of headcount?	<u>24</u>		
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	Most Improved Categories Which categories have the highest levels of improvements across all available appraisals?	<u>11</u>		
Performance Improvement Objectives: • By Category • By Subcategory	Most Popular Categories & Subcategories Which are the top categories of improvement objectives across the available report period?	<u>12-14</u>		
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Executive Summary

What We See... and What's Coming Next

Six years of consistent performance data independently verified by CMMI Institute trained and certified individuals during nearly 20,000 appraisals. Impressive results indeed!

Sustaining Habit, Persistence, and Performance: In times of uncertainty, mature organizations hold firm to their processes and capabilities to get them not only through the uncertain times but coming out on the other side a stronger and better performing organization. One of the unsung benefits of CMMI that rarely gets reported or talked about is the fact that CMMI helps an organization make critical processes and capabilities routine, so the team can focus on innovation and improvement opportunities to continually be a better organization. I am not a betting man, but a 91% performance achievement rate seems like a pretty safe, no-brainer bet. Sounds like a cool place to work when you think about it.

Consistent Admirable 91% Performance

Achievement: 67,658 business objectives from 19,221 approved appraisals, over six years. Below is a list of the most reported and improved business performance measurement subcategories, including:

- Defect Density
- Customer Satisfaction
- Schedule Variance
- Productivity
- On Time Delivery

The Future of CMMI Performance Solutions: When we think about the future of CMMI and the world around us, Artificial Intelligence (AI) is already a clear and key factor in many ways. It's ubiquitous, it's growing, and it is evolving business operations everywhere. Having now looked at our draft AI content, along with the quality of the review comments, this "new" content for CMMI is likely to facilitate another pivotal year for us around the globe. CMMI V2.0 was a major overhaul of the previous versions of the CMMI, and the initial basic capabilities described in V2.0 were mostly similar to previous versions, whereas the breadth, depth, and quality of the CMMI AI (CMMI V3.1, coming soon!) content is brand new, and positions CMMI to play a critical role in many organizations and verticals, enabling successful and responsible use of AI.

The CMMI Performance Report & Process: We

heard feedback from our community and have continued to improve the CMMI Performance Report template, which forms the basis of this report. Simplifying the most common categories and subcategories with built-in data validation has helped make the submitted data more consistent and of higher quality. The other key related resource generating positive feedback is the Practical Guide to the Performance Report. This is a key resource for CMMI Lead Appraisers and Appraisal Team Members (ATMs) when completing and verifying the data required in the template. We continue to rely on and appreciate our Appraisal Team Leaders (ATLs) and ATMs for their diligence in completing and verifying the CMMI Performance Report for every appraised organization they support, which provides the foundation for this report.



-Ron Lear, Vice President, CMMI Institute, Models and Frameworks CHMLA, LSSGB, ISO Lead Auditor

Details: For more about adopting CMMI Performance Solutions, visit CMMIinstitute.com.

Goal Achievement

Maximizing Potential: Performance Data Overview

Over 17,000 appraised Organizational Units (OUs) affirm the proven results achieved by leveraging CMMI to set, meet, and exceed organization goals.

87%

Rate

87%

Background: For over 25 years, high-performing organizations have achieved clear, sustainable business results with Capability Maturity Model Integration (CMMI). Originally created for the U.S. Federal Government to assess the quality and capability of software contractors, CMMI has expanded beyond software engineering to help organizations in 4% any industry better understand their current level of capability and performance, offering compre-**Success** hensive guides to optimize business results.

Report Basis: The information in this presentation is based on an analysis of the performance improvement results from over 19,000 approved appraisals from 2019 to 2024.

Data Sources: These appraised Organizational Units (OUs) reported their "before and after" improvement intentions, which included a total of 67,658 objectives across the 17,416 OUs appraised, in the required CMMI Performance Report template. The

> result of this was an astounding 87% achievement success rate for their accomplished improvement objectives; this is a 1% increase over the cumulative data from the 2023 report. Another 4% was "soon to be achieved" for a total of over 91% across key areas-including guality, cost and schedule performance, productivity, and more. The remaining 9% reflects improvements in progress or objectives not yet achieved.

Validation: Each of these results was identified and achieved by the Organizational Units (OUs) being appraised against CMMI, with the performance improvements independently validated by trained and certified CMMI appraisal teams.

Appraisal Years:

Approved Appraisals:

19,221

2019-2024

17,416

Appraised Organizations:

Objectives Reported:

67,658

2024 Appraisals:

4,548

Performance Achieved:

91%

Compared to Previous Years: Over 4,500 appraisals were performed in 2024. The data also showed an increase to 87% successful achievement of objectives, up from the previous 86% in the cumulative 2019 to 2023 data.

Notables & Standouts

Key Takeaways: Best Practices

The data is clear. Adopting CMMI Performance Solutions yields consistent, measurable performance results across multiple industries and locations.

Exceed Performance Expectations

- CMMI adoption enables a proven and effective approach for performance-based improvement and enables innovation and transformation
- CMMI's focus on habitual and persistent performance improvement sets it apart from any other standard or model
- Flexible architecture and an online experience enable the adaptation of content to customer requirements, using other frameworks such as ISO, DTEF, COBIT

Best Practices: CMMI Addresses Sustaining Habit and Persistence

Continuous performance improvement becomes the norm. CMMI best practices sustain habit and persistence over time and between appraisals, with a "self-raising bar" for performance. Appraisals demonstrate and corroborate that improvement. Processes become habitual when:

- There is active senior management support
- Processes apply to everyone in the organization
- There are consequences for following or not following established processes

Top Improvement Areas

The average improvements for the top 6 popular performance categories from 2019 to 2024 are as follows:

- Technical Performance: On-Time Delivery increased by 18%
- Technical Performance: Schedule Variance decreased by 15%
- Productivity Performance: Overall Productivity improved by 24%
- Quality Performance: Defect Density decreased by 26%
- Operational Performance: Customer Satisfaction rose by 18%
- Productivity Performance: Project or Solution Productivity grew by 20%



Section One

Appraisal Results

These results are based on over 67,000 performance objectives* appraised to CMMI Performance Solutions, reported and registered with CMMI Institute, and independently corroborated by CMMI Appraisal Teams.

In 2024, CMMI usage continues steady growth in both its historically strong business sectors as well as new markets around the world.

- **Business Types:** Information Technology, Professional, Scientific and Technical Activities, Financial, Manufacturing and Telecommunications (based on reported ISIC code)
- Location: Primary adoption in the United States, China, India, and Mexico
- Remarkable Results: All categories of business performance objectives showed significant performance improvement results
- Achieving Expectations: 87% of reported performance objectives were met or exceeded
- The Biggest Categories of Improvement: Quality Performance, Productivity Performance, Technical Performance, Financial Performance, Operational Performance



* 17,416 Organizational Units (OUs) conducted 19,221 appraisals with a total of 67,658 performance objectives. Several organizations conducted more than one appraisal resulting in a larger number of appraisals compared to the number of OUs.

Location: Where in the World?

Appraised Organizations by Country

The U.S., India, and China remain the top three adopting countries in 2024.

Appraisal activity grew in seven of the top ten countries. The continued upward trend in adoption across multiple regions confirms the expanding global relevance of the CMMI.

Notable year-over-year increases:

- +16% in the United States
- +26% in India
- +3% in Mexico
- +7% in South Korea
- +140% in Saudi Arabia
- +44% in Vietnam
- +38% in Japan



For a list of all countries, refer to Appendix Locations section on page <u>26</u>.

"We have been using the CMMI framework for the last 4 years and have been successfully appraised for Level 3. This has enabled process standardization for our Product and Implementation verticals, across our offshore development centers around the world (in Turkey, India, Pakistan, Egypt and Canada).

With a clientele spread across the world, CMMI offers us a global mechanism to consistently serve the needs of our clients by providing consistent quality in our offerings." -- Zubair Ahmed, Chief Industry Officer, Financial Services for VeriPark

Maturity Focus

Appraisals by Maturity Level

Achieving a benchmark maturity level (ML) or a capability level (CL) demonstrates an organization's commitment to quality and continuous performance improvement. This recognition not only bolsters the organization's credibility in the eyes of its customers; it also reinforces its competitive advantage in the market. By demonstrating adherence to the CMMI best practices, organizations can differentiate themselves from competitors and foster trust among stakeholders, paving the way for continued success and growth.

Of the five CMMI maturity levels described below, appraisals for **Maturity Level 3** at 77% and **Maturity Level 5** at 21% are the most widely chosen for most organizations. Appraisals for Maturity Levels 1, 2, and 4 rose from 1% to 2% in 2024.





CMMI Levels

Domain Affinity

Appraisals by Domain

Appraisals are a key resource for organizations seeking to build capability, optimize their processes, and embrace a culture of continuous performance improvement.

A CMMI Appraisal serves as a critical tool for organizations seeking to enhance their processes and align them with industry-recognized best practices. By conducting a comprehensive evaluation of an organization's existing processes, a CMMI Appraisal facilitates the identification of strengths and areas for improvement, enabling organizations to focus on the most crucial aspects of their operations. This thorough examination ensures that the processes in place are not only effective but also adhere to the highest standards of quality and efficiency as described by the CMMI framework.



Development at 88% and Services at 10% continue to be the most popular domain appraisal choices, with a growing number of appraisals that include the new domains.

Suppliers, Security, Data, Virtual, Safety, and People domains each account for 1% or less with multiple domain appraisals overlapping. V3.0 Appraisals, with 8 domains, began in April 2024.

Conducted by our licensed CMMI Partners, these appraisals offer organizations a valuable opportunity to gain insight into their current processes and chart a course for performance improvement. By uncovering and prioritizing areas for enhancement, organizations can strategically allocate resources and efforts to drive the most significant business impact. This targeted approach allows for continuous growth and improvement, ultimately fostering a culture of excellence and innovation within the organization.



Organizations opting for the ability to appraise against multiple domains declined for the first time, by 17% last year.

By identifying strengths and weaknesses, aligning with best practices, and prioritizing performance enhancements, organizations can unlock their full potential and achieve sustained success in today's competitive business landscape. CMMI V3.0 is keeping pace with the ever evolving and increasingly complex business environments. Most organizations are multi-dimensional in their capabilities, hence the continued reflection of multiple domain appraisals.

"CMMI has been the engine guiding our Business Transformation, enabling us to embed structured approach, driving digital agility, through Cyber Resilience into our core operations towards exceeding customer expectations. By implementing 7 out of 8 domains, we are optimizing our processes, strengthened Governance, and enhanced Service Delivery resulting in sustainable growth and innovation." —Thomas Collins, CEO, Marlabs

Performance Objective Categories

Improvements: 93% in Top Five

While organizations that adopt CMMI consistently realize tangible performance improvements in multiple aspects and areas of their business, these five categories (blue bars) are consistently on top.



Significance of the Top Five Categories

Since 2019, the top five categories have consistently emerged as the most frequently measured areas across all appraised organizations. As shown in both the stacked bar chart and supporting data table below, these together represent over 90% of all performance objective categories selected over a six-year period.

This distribution highlights the enduring priorities shared by organizations pursuing measurable performance improvement.

- Quality Performance was the most frequently selected category each year, with a cumulative total of 18,534 instances—nearly 27% of all entries.
- **Productivity Performance** followed with 13,874 entries, indicating widespread emphasis on efficiency and output.
- **Technical and Financial Performance** both categories remained in the top tier each year, reflecting consistent focus on core delivery and cost areas.
- **Operational Performance** rounded out the top five, showing increasing attention to day-to-day execution and dependability.



Categories	2019	2020	2021	2022	2023	2024	Total
Quality Performance	212	643	3,647	4,047	5,160	4,825	18,534
Productivity Performance	143	507	2,762	3,188	3,822	3,452	13,874
Technical Performance	125	494	2,639	2,889	3,508	3,218	12,873
Financial Performance	128	506	2,233	2,281	2,317	2,534	9,999
Operational Performance	86	352	1,480	1,808	1,781	2,111	7,618
Process Performance	102	168	824	538	418	571	2,621
Workforce Management	50	125	520	399	293	489	1,876
Security Management	0	4	33	54	39	48	178
Supplier Performance	1	2	12	18	14	8	55
Safety Management	3	1	2	7	5	12	30
Total	850	2,802	14,152	15,229	17,357	17,268	67,658

Top Subcategories: Digging Deeper

Organizational Priorities: The top subcategories represent the most common areas of performance improvement selected by organizations. Together, they reflect where leadership is focusing measurement efforts and resource investment to drive measurable change.



Top 14 Subcategories	Category	Category Description Summary
Defect DensityDelivered Solution QualityDefect Containment	Quality Performance	Delivered solution performs as expected
Customer Satisfaction	Operational Performance	How well core business activities are performed
Schedule VarianceOn Time DeliveryRequirement Volatility	Technical Performance	Activities for solution creation, delivery, performance
ProductivityProject or Solution Productivity	Productivity Performance	Evaluation of resource efficiency for delivering solutions
 Effort Variance Cost Variance Cost Management	Financial Performance	Financial management, revenue, and profitability targets
Process Compliance	Process Performance	An indication of activities based on standard procedures
Staff Development	Workforce Management	Human resources with knowledge and skills, at capacity

Learn More: For details about categories and subcategories, refer to Appendix Terminology on page 29.

Measuring Improvement within Each Category

In each category, users have selected the following subcategories of improvement corresponding to their priorities, aligned with their business objectives. The following list of categories highlights which subcategories are being used the most.

Quality Performance (27%)



Productivity Performance (21%)



Technical Performance (19%)



Financial Performance (15%)



Operational Performance (11%)



Supplier Quality		98.2%
Supply Chain Activities	1.8%	

Safety Management (< 0.1%)



"Our pursuit of CMMI Level 3 has reinvigorated our SOPs in such a way that our productivity is now mapped out with superior gains in efficiency as it compels our processes to mature into service delivery best practices."

-B.K. Moody, Cayuse, Director of Quality

CMMI's Consistency in Driving Performance

This chart demonstrates that the adoption of the CMMI Model consistently yields significant improvements, regardless of the specific performance objectives that organizations opt to address.

Comparing Category Improvements: Analysis* for this performance report has identified that when companies target specific enhancements—such as defect reductions, productivity increments, or leveraging CMMI to improve their processes; organizations experience substantial advancements across the board, with improvements of up to 42%.

Furthermore, these interrelated enhancements exhibit synergy, where improvements in one area often positively influence others. For instance, elevating quality standards can bolster customer satisfaction, while enhanced staffing can result in heightened productivity.

Key Takeaways

- CMMI proves to be effective in driving significant growth for organizations, regardless of the specific performance objectives they choose to focus on.
- By targeting both specific enhancements and comprehensive improvements, organizations using CMMI can expect a wide range of advancements.



2019 to 2024 Cumulative Data Results

Comparing Timeframes: The chart on the previous page includes cumulative data spanning from 2019 to 2024, offering a comprehensive view of trends and patterns over a six-year period, while the chart below specifically focuses on data from the year 2024, providing a tighter analysis for just that year.

Key Takeaways

When analyzed alone, 2024 results show a much smaller variation and better consistency in performance results, with the exception of the early adoption of the domains of Safety and Security. This is a result of improvements and more consistent and accurate reported data from submitted Performance Reports.



2024 Data Results

"When you (ask) me why I persist to adopt CMMI throughout my organization, the facts will convince you.

- 1. The net profit reached 8 million last year
- 2. The on-time delivery rate increased to 90%...
- 3. We earned 20% market in my area"

—Nie Weian Beijing Systomtc Technology Co. LTD "Adopting CMMI has been a game-changer for our organization. It has led to significant performance improvements across the board, enhancing our competitiveness and assisting in positioning us as a market leader."

> -Al Funderburk, Chief Executive Officer, *Phoenix Defense*

* During the data quality analysis of the 2024 Performance Report data, 2.2% of the reported information was unusable due to incomplete, inaccurate, or inconsistent data, or lack of clear measurement definitions and objectives. The above information and all the analysis results in this report are based on the clean data, with 2.2% excluded from the remaining analysis results.

* The statistics provided in this section are based on the 95th percentile of the distribution of the improvement data in each subcategory. Data above the 95th percentile was excluded to remove the effect of significant outliers.

Section Two

Performance Objective Category Details

While the previous section focused on objective category improvements, this section takes a deeper look at the subcategories of performance objectives where organizations had the most improvements.

This section highlights the performance objectives' subcategories where organizations have achieved the most significant improvements.

Context: The initial review of the large volume of data examined the top five performance objective categories. Subsequently, the following pages explore their leading performance objective subcategories. These subcategories represent areas in which organizations frequently measured and experienced notable enhancements after implementing or using CMMI. All calculations are from cumulative 2019 to 2024 data, unless otherwise specified.

Approach: In prior years, reports predominantly featured raw data figures with great attention to detail. However, responding to valuable feedback, the approach was refined to emphasize percentages and averages in more simplified charts, which tend to convey more profound insights and significance to discerning readers.

Application: While reviewing the pages in this section, think about how these numbers might correlate to you or your client organization's top challenges. Consider sharing related pages from this report with influential decision makers to help them better understand the substantial prospects for improvement, as clearly identified and quantified in similar organizations.

For category and subcategory information, refer to the Appendix Terminology section, page <u>29</u>.

In the spirit of performance improvement, last year, CMMI Institute renamed and realigned the categories and subcategories and clarified the corresponding descriptions for ease of use, simplicity, and technical accuracy. Historical data has been realigned to the corresponding changes.

High level changes include:

- Combining Cost Management and Organizational Finance into a new Financial Performance category
- Realigning the Customer Satisfaction category and some Process subcategories to a new Operational Performance category
- Realigning the Functionality and Schedule categories into a new Technical Performance category
- Renaming the following categories:
 - o Process to Process Performance
 - o Productivity to Productivity Performance
 - o Quality to Quality Performance
 - o Security to Security Management
 - o Staffing to Workforce Management
 - o Supplier to Supplier Performance
- Simplification of overlapping or similar subcategories into a single subcategory
- Removal of unused subcategories with no historical data

Performance Category: Quality Performance

Objectives

Quality Performance-related objectives represent the biggest target area for performance improvement, with significant reductions in defect rate or density, delivered solution or service quality, and defect containment. Not only did delivered solution quality improve, but the ability to detect and prevent defects also improved consistently for those organizations that targeted this area.



Subcategory Improvements

Quality Performance-related

improvements include these highlights.

Defect Density

- Range Up To 35%
- Median 16%
- Mean 22%

Delivered Solution Quality

- Range Up To 25%
- Median 9%
- Mean 16%

Defect Containment

- Range Up To 18%
- Median 7%
- Mean 14%

Quality

- Range Up To 30%
- Median 10%
- Mean 20%



Performance Category: Productivity Performance

Objectives

These **Productivity Performance** objectives are directly related to streamlining critical development process performance and process automation, e.g., automated testing and development processes, DevSecOps.



Subcategory Improvements

Productivity Performance-

related improvements include these highlights.

Workload Variance

- Range Up To 9%
- Median 6%
- Mean 9%

Productivity

- Range Up To 19%
- Median 11%
- Mean 15%

Project or Solution Productivity

- Range Up To 16%
- Median 9%
- Mean 12%

Development Productivity

- Range Up To 20%
- Median 10%
- Mean 14%

Peer Review Efficiency

- Range Up To 36%
- Median 17%
- Mean 26%



Performance Category: Technical Performance

Objectives

Results from appraised organizations show an average achievement of 76% of **Technical Performance** objectives (combining schedule variance and on time delivery)—an impressive accomplishment that would make any organization envious.



Subcategory Improvements

Technical Performance-related improvements include these highlights.

On Time Delivery

- Range Up To 10%
- Median 6%
- Mean 9%

Schedule Variance

- Range Up To 9%
- Median 5%
- Mean 8%

Requirement Volatility

- Range Up To 10%
- Median 6%
- Mean 9%



Performance Category: Financial Performance

Objectives

Regarding **Financial Performance**, 55% of objectives included effort variance/deviation and cost variance deviation. The objectives include various types of cost management performance improvements, including reduced cost and effort variance, efficiency, and reduction. High predictability and consistency of cost management results make CMMI a differentiator for any organization.



Subcategory Improvements

Financial Performance-related

improvements include these highlights.

Cost Variance

- Range Up To 9%
- Median 5%
- Mean 9%

Cost Management

- Range Up To 15%
- Median 6%
- Mean 11%

Effort Variance

- Range Up To 10%
- Median 5%
- Mean 9%

Market Growth

- Range Up To 34%
- Median 11%
- Mean 26%



Performance Category: Operational Performance

Objectives

Operational Performance is an essential metric for assessing the overall success of a project or product. Impact Areas include brand reputation, customer retention, market share, and overall business success. Common methods for improving may involve enhancing product or service quality, improving customer support, addressing customer feedback, and delivering on time.



Subcategory Improvements

Operational Performance-related

improvements include these highlights.

Customer Satisfaction

- Range Up To 11%
- Median 6%
- Mean 9%

Service Level Agreement

- Range Up To 8%
- Median 3%
- Mean 6%

Contract Compliance

- Range Up To 38%
- Median 1%
- Mean 21%



Section Three

Appraisal Demographics

For more than 30 years, thousands of highperforming organizations have achieved sustainable business success through CMMI adoption and demonstrated their ability as capable business partners and suppliers.

Demographics Data

Appraisal Data Sources

The CMMI framework for performance improvement has gained momentum across a wide array of industries and international demographics, establishing itself as a leading authority in driving organizational excellence. With over 17,000 organizations spanning aerospace, defense, healthcare, IT, and finance sectors, CMMI serves as a pivotal tool for enhancing performance, mitigating risks, and delivering consistent, high-quality results.

This section highlights the demographics of those who adopt CMMI, shedding light on the various sectors, regions, and entities that have successfully embraced this influential framework to drive sustainable growth and achieve their strategic objectives.

By exploring metrics that reflect the success stories and unique applications of CMMI among diverse organizations, this showcases its adaptability and value in addressing complex challenges in today's dynamic business landscape. "Our journey with CMMI has taught us that process improvement is not just a milestone to be achieved, but a continuous path to excellence. With the unwavering support of our senior management and the invaluable contributions of our team members, we have been able to measure and showcase real improvements. This strategic approach has not just enhanced our competitiveness; it has redefined it, proving that the best way to predict the future is to create it ourselves."

–Marina Nicolaescu, Executive Director and Process Improvement Leader, *dotGov Solutions*

"Our small company was on the verge of rapid growth in business and personnel, enlisting the support of a CMMI Partner provided us with a faster approach to gaining the value of CMMI implementation. We have gained the support and ability to quickly achieve productivity, quality, and efficiency gains in our engineering departments and processes."

-CSI Software Quality Assurance Engineer

Enterprise Size

Adopting Organizations: Small, Medium, and Large Businesses

Nearly 90% of appraisals were conducted on Organizational Units (OUs) with less than 100 Full-Time Employees (FTEs).

A frequent misconception about CMMI is that it can only be seriously adopted by large organizations. However, as the graph shows, the vast majority of organizations conducting appraisals can be described as Small or Medium sized Enterprises^{*}. In fact, 96% of the organizations appraised had OUs smaller than 250 employees, and 97% of the appraised organizations had OUs with less than 500 employees.

Key Takeaways

- CMMI is flexible, useful, and suitable for small, medium, and large enterprises
- CMMI usage is relevant to organizations of all sizes and is especially popular with smaller OUs



Impact

The Global Impact of CMMI?

Adoption Spectrum: CMMI Performance Solutions is a globally recognized model for process improvement. CMMI is adopted by a diverse range of entities, including corporations, organizations, and governments. Spanning multiple languages and facilitated by numerous partners, CMMI continues to shape the landscape of performance excellence worldwide. The global impact of CMMI since the release of CMMI Performance Solutions in 2019 is listed below.



Corporate Users: Prominent, nationally recognized companies are increasingly leveraging CMMI to drive process improvement and elevate performance standards. By embracing CMMI, these industry leaders set an example in pursuing excellence and fostering a culture of continuous growth and innovation.



Section Four

Appendix

The concepts of CMMI are rooted in proven industry best practices gathered over the last 30+ years. These practices are organized into a flexible, open, and integrated architecture that enables broad geographical and industry application and adoption with consistent performance results.

Locations: Country/Region Breakdown

ano



Purpose

Assess, Capture, and Corroborate: CMMI Capability and Performance Results

As an integral component of CMMI, the Performance Report is completed by each appraisal team during the appraisal based on the organization objectives and measurement data—and is corroborated with the organization being appraised.

This report is NOT just an appraisal artifact; it is a tool for performance planning, data collection, and cross-checking performance improvement—all to verify business performance improvement before, during, and after the appraisal.

- While it cannot be used alone to determine a maturity or capability level rating, the Performance Report is used to verify if the appraisal findings and performance improvement results are consistent with the Performance Report
- Helps to identify critical performance weaknesses and improvement opportunity "anchor points" and makes performance improvement clear, transparent, intentional, and consistent
- The Performance Report provides a mechanism to assess tangible and measurable improvement along with meeting model Practice Area intent and value statements
- Enables the "self-raising bar" in the model and appraisal method for performance and High Maturity; appraisal teams must see and corroborate the performance improvements; this also becomes critical to understand previous performance improvement when doing re-appraisals
- For organizations pursuing High Maturity or who have already attained High Maturity, populating the Performance Report is the "Easy" button

The CMMI Performance Report:

- The key to unlocking continuous improvement and High Maturity
- The path to identifying and addressing critical performance weaknesses for optimal growth
- A critical tool to measuring increased capability and enabling High Maturity and consistent, continuous improvement



Performance Perspective

Compliance vs. Continual Performance Improvement

CMMI adoption has successfully shifted the framework and product ecosystem from a process compliance model to a business performance improvement model. A compliance-only focus typically assumes that quality of performance is a guaranteed outcome, which is typically NOT true.

Performance practices and expected outcomes emphasize and focus on improving organizational performance to recognize a more visible Return on Investment (ROI). This reflects the modern business climate where performance is key to the success of every organization—no matter their maturity level. With performance built in at every level, organizations can plan a more methodical and step-by-step path to achieve better performance and High Maturity.

Governance by senior management is critical for consistent improvement and innovation; and it must be clearly directed and purposeful. While there should always be a balance between performance improvement and compliance, **performance should drive compliance**.



Balanced Approach

"Adopting CMMI has improved our R&D processes. We have strengthened our Management Capabilities and are able to improve our service delivery, which has increased our overall Customer Satisfaction. This is now bringing more opportunities for our organization."

> -Xie Muhan GM in Hangzhou Honest Tech. Corp., Ltd.

"We are currently adopting CMMI, which has benefitted us in multiple ways including Maintenance Cost Savings, Improved Team Performance, Preventive Maintenance Scheduling, Increased Asset Lifecycle, and Streamlined Tracking & Reporting."

—Abhay Kini, CEO, *Phalanx Consultancy*

Terminology

Category and Subcategory Descriptions

This table is an overview of subcategories and their corresponding descriptions, grouped by category. This organized layout offers a concise understanding of the relationships and distinctions among these elements, enabling quick reference for the statistical charts and diagrams in this report. Descriptions below are paraphrased from the Performance Report template.

Category	Definition	Related Subcategories	Description				
Financial	Financial management, revenue, and profitability targets.	Budget Related	Budgeting activities.				
Performance		Cost Management	Actual costs compared to estimated or budgeted costs or general cost related objective or reduction.				
			Cost Variance	Difference in estimated or planned and actual costs.			
		Effort Variance	Difference between a planned and actual effort for various phases. within the project.				
		Finance	General finance related measure, that is not reflected by other subcategories.				
		First Time Right	Process is followed so that resulting solution is correct the first time and every time.				
		Gross Revenue Growth	Amount of money made over time.				
		Margins	The degree to which a business activity makes money.				
		Market Growth	Change in market share.				
						Net Income Growth	How much net income has increased over a period.
		On Time Payment or Invoicing	Payments or invoices that are sent or received on time.				
		Sales Growth	Increase in sales as compared to the previous period.				
Operational Performance		Contract Compliance	Monitoring and controlling the procedures and norms outlined by a contract with another entity.				
		Customer Satisfaction	General customer satisfaction and expectations related measures, that is not reflected by other subcategories.				
		Operational Activities	General operational efficiencies and activities, that is not reflected by other subcategories.				
		Risk Management	Identification and management of various types of risks and opportunities.				

Category	Definition	Related Subcategories	Description
		Service Level Agreement	Agreed to measure of service expected between a customer and a supplier.
Process Performance	erformance activities based	Process	General process related measures, that is not reflected by other subcategories.
	on standard procedures.	Process Compliance	Objective evaluation of process performance and outcomes including resolving issues, non-compliances, or to meet regulatory requirements.
		Process Cycle Time	Time taken to perform processes.
		Process Improvement	Measures of improving solutions or processes.
Productivity Performance	An evaluation of resource	Code Coverage	Amount of all code covered by test cases including both manual and automated.
	efficiency for delivering solutions.	Defect Removal Efficiency	Measure of the ability to remove defects prior to release.
		Development Productivity	Ability to efficiently write software during a specific period.
		Peer Review Efficiency	Defects detected compared to time spent.
		Productivity	General productivity related measure or objective, that is not reflected by other subcategories.
		Project or Solution Productivity	Amount of work completed during a specific period.
		Resource Utilization	Measures the actual usage or consumption of resources in relation to their availability.
		Reuse Rate	Existing software, hardware, or other materials or resources that are reused for new solutions.
		Rework	Time or effort spent making changes to the prior version because of issues.
		Solution Availability	Duration of time the solution is available for use.
		Sprint Efficiency	Work completed versus work committed per sprint.
		Testing Productivity	Ability to effectively perform testing activities in a specific period.
		Velocity	Amount of work completed in a given iteration.
		Workload Variance	Difference between estimated or planned, and actual workload.

Category	Definition	Related Subcategories	Description
Quality Performance	Delivered solution performs as expected.	Data Quality	General data quality related measure or objective.
		Defect Containment	Measure of the ability to minimize defects that escape to downstream activities.
		Defect Density	Measures the number of defects per unit of output.
		Defect Detection	Rate defects are discovered.
		Defect Injection Rate	Rate defects are introduced into a solution.
		Delivered Solution Quality	Ability to design, develop, validate, and deploy solutions that effectively address requirements.
		Mean Time Between Failures	A measure of the reliability of a system or component.
		Quality	General quality related measure, that is not reflected by other subcategories.
Safety Management	-	Lost Time Injury	An injury sustained on the job that results in the loss of productive work time.
		Safety Activities	General safety related activities, that is not reflected by other subcategories.
		Safety Incidents	Number of unplanned events that can cause injury, damage, or disrupt normal operations.
		Safety Violations	Number of safety policies or procedures violated.
Security Management	Systematic identification,	Devices Running Unauthorized Software	Devices running unsanctioned software.
	assessment, control, and resolution of	Mean Time to Contain (MTTC)	Time to secure all compromised endpoints and attack vectors.
	security needs and threats.	Mean Time to Detect (MTTD)	Average time between when an incident occurs and it is detected.
		Mean Time to Response (MTTR)	Average time to neutralize a threat and regain control of compromised systems.
		Privileged Account Access	Number of users with privileged account access.
		Recovery Point Objective	Measure of how much data can be lost after a disruption before it exceeds an organization's acceptable level.
		Recovery Time Objective	Maximum amount of time a business can tolerate before resuming normal operations after a disruption.

Category	Definition	Related Subcategories	Description
		Security	General security related measures or controls, that is not reflected by other subcategories.
		Security Incidents	Occurrence of security related events.
		Security Patch Management	Time from when the patch is available until it is deployed in production.
		Security Training Coverage	Measure of personnel compliant with current security training.
Supplier Performance	Supply chain management	Supply Chain Activities	General supply chain measures, that is not reflected by other subcategories.
	activities.	Supplier Defect Containment	Measure of the ability to minimize supplier defects that escape to downstream activities.
		Supplier Defect Density	Defects delivered in a supplier solution.
		Supplier Peer Reviews	Review of a project's artifacts including documentation, requirements, code, design, test cases, etc.
		Supplier Peer Review Efficiency	Supplier defects detected compared to time spent.
		Supplier Quality	Supplier's ability to deliver goods or services that satisfy customers' needs.
		Supplier Test Coverage	Measurement used to describe the degree to which the supplier source code or requirements of a solution are tested by test cases.
		Supplier Testing Effectiveness	Supplier defects detected during a testing period.
Technical	Activities related	On Time Delivery	Measure of target dates achieved.
Performance	ance to the creation, delivery, or performance of solutions.	Requirements Achievement	General functionality related measure or number of requirements completed.
		Requirements Volatility	Percent requirements change from their baselined state.
		Schedule Activities	General schedule related measure or objective.
		Schedule Performance Index	An earned value measure of the conformance of actual progress to the planned progress.
		Schedule Variance	Difference in estimated or planned and actual schedule.
		Technical Activities	General technical related activities, that is not reflected by other subcategories.
		Test Automation	Extent to which automated tests cover different aspects of the solution.

Category	Definition	Related Subcategories	Description	
		Test Coverage	Measurement used to describe the degree to which the source code or requirements of a solution are tested by test cases.	
		Testing Effectiveness	Defects detected during a testing period.	
Workforce Management	Having the right human resources with	Diversity, Equity, and Inclusion	Tracking of Diversity, Equity, and Inclusion (DEI) efforts of the organization based on DEI goals, initiatives, or targets.	
	the needed knowledge and skills, and the	Employee Attendance	Amount of time employees are absent from work.	
	capacity to deliver the organization's	Employee Retention	Measures the number of employees who remain employed at an organization over a specific period.	
	solutions.	Employee Satisfaction	Level of employee contentment of an organization's employees.	
		Headcount	Total number of employees.	
		Key Employee Turnover	Turnover rate in key positions in the organization.	
		Length of Service	Time spent in a particular position.	
			Organizational Development	Organization wide activity to increase effectiveness and culture.
		Staff Development	Activities to increase workforce knowledge, skills, capacity, and readiness to deliver solutions.	
		Time to Fill	Time to find and hire a new candidate into the role.	
		Time to Proficiency	Time for employees to reach performance expectations once they are in a new role.	
		Virtual or Hybrid Workforce	Measure of the workforce that includes use of virtual, remote, or hybrid methods to manage personnel, work efforts, communication, and collaboration.	
		Workforce Activities	General workforce related activities, that is not reflected by other subcategories.	
		Workforce Opportunity Costs	Measure of work loss due to lack of skilled resources or their availability.	

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Unleash Potential: CMMI Performance Solutions

CMMI Performance Solutions helps organizations quickly understand their current level of capability and performance in the context of their own business objectives and compared to similar organizations.

CMMI's performance improvement model has helped thousands of globally recognized companies—including many Fortune 500 organizations. CMMI Performance Solutions has been designed as an integrated product suite to address all the components of the CMMI ecosystem.

Integrated Product Suite

The CMMI Performance Solutions Ecosystem provides an integrated product suite consisting of five components, that when used together provide a clear and proven path to achieving your business objectives.

- **Training and Certification:** Training has modular components with virtual and in-person models. Provides performance-focused content and exercises. More learner-focused and learning objective oriented.
- Appraisal Method: The appraisal method helps to increase reliability while reducing overall cost and disruption to the organization appraised. Standard Performance Report template integrated into the appraisal method.
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