

# Honeywell Technology Solutions Czech Republic Achieves 60% Reduction in Defects and Sees Predictable, Repeatable Performance Using CMMI®

## Company Background

Honeywell Technology Solutions Czech Republic (HTS CZ) is a division of Honeywell's global network of research, development, and engineering centers. Its 1,600 professionals provide product development, research, and IT support to several of the company's business sectors, including aerospace, automation and control solutions (ACS), and transportation systems.

“The CMMI model has taught us to think in favor of the customer and be very thorough in terms of delivering our development projects. We work to improve performance from task to task, decision to decision, and project to project.”

—JIRI TOMICEK, VICE PRESIDENT AND GENERAL  
MANAGER, HTS CZ

## THE BUSINESS NEED

Honeywell Technology Solutions Czech Republic (HTS CZ) strives to be the company's leading global research and development center, providing technology products, solutions, and services that set the standard for world-class performance. To fulfill this mission, HTS CZ sought to improve software-development quality and increase customer satisfaction in the ACS and Aerospace divisions by implementing CMMI® to build strong internal capabilities.

HTS CZ faced different challenges within each of the business units it served. The ACS division faced a high volume of products and needed its cycle time reduced. In the Aerospace division, processes and tools differed by product line due to the long life cycle of products and programs. As a result, HTS CZ needed to improve its software quality, reduce product backlog, and raise customer satisfaction levels. To address these issues, HTS CZ established multiple process performance models to analyze and address these improvement targets.

## THE SOLUTION

HTS CZ identified CMMI as the capability improvement model that could address its needs. The work done by the team in 2010 to improve performance was compatible with a CMMI maturity level 3 rating. The next goal was to increase its capabilities and performance levels to reach a CMMI maturity level 4 or 5 rating. To do this, it needed the components in place to conduct statistical evaluations of outcomes and process performance models to achieve predictable, repeatable performance.

To establish common processes necessary for statistical control of design and development processes, HTS CZ implemented CMMI for Development, version 1.3 (CMMI-DEV, V1.3).

The CMMI model helped HTS CZ establish process performance models for the ACS division related to these three areas:

- Cycle time (speed of delivering ideas to market)
- Milestone fidelity (difference between planned and actual implementation date of milestone)
- System Integration Testing (SIT) defect density

The Aerospace division established process performance models based on customer satisfaction (VOC) that provided metrics to analyze improvement of cost of poor quality (COPQ), milestone fidelity (MF), test defect density (TDD), and cycle time index (CT).

HTS CZ partnered with mentors from company locations in India, Switzerland, and the United States that had already earned CMMI maturity level 5 ratings. Personnel certified in Six Sigma processes assisted with process baselining, analysis of statistically significant sub-processes, and coached projects in application of Six Sigma methodologies according to the CMMI model to achieve required improvements (e.g., application of control charts for project management).

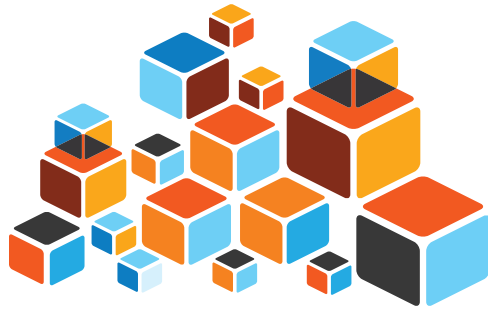
A cross-functional team was also established internally at HTS CZ to improve capabilities. This team included engineers from the disciplines of quality, project management, operating system, and health, safety, and the environment. Their collaboration not only facilitated better communication, but it also encouraged swift agreement on proposed changes in processes and application of high maturity tools between functions of the organization.

## RESULTS

HTS CZ earned a CMMI maturity level 5 rating in June 2015. By implementing CMMI, HTS CZ was able to analyze and quantify areas for improvement that ultimately helped it manage process design and development in a structured way.

### **The ACS division saw the following results:**

- 10 percent reduced cycle time
- Up to 77 percent improvement in milestone fidelity
- Up to 45 percent improvement in reduced SIT defect density



**The Aerospace division achieved the following results:**

- Up to 50 percent improvement in cost of poor quality
- Up to 100 percent milestone fidelity (all milestones met on time)
- Up to 60 percent improvement in test defect density
- Up to 6 percent improvement in cycle time

“We learned that the starting point for any project is the process,” said Jiri Tomicek, vice president and general manager, HTS CZ. “And people are part of the process. The key to success is appointing the right people to learn the model and disseminate it throughout the organization. We know that the real benefits are seen after the CMMI appraisal, so we must focus on continuous improvement based on data and facts. We look forward to shaping future projects within our organization around this model.”

**BUSINESS BENEFITS**

With CMMI in place, company personnel are in the routine of basing decisions on data rather than gut feeling. The team mindset went from “what we can do” to “what we will do,” based on quantitative analysis of capacity, capability, and customer expectations.



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Institute

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