

CASE STUDY

China Merchant Bank Reduces Appraised Preparation Time by 50% across 90% of their Projects



COMPANY PROFILE

Established in 1987 as the first joint-stock commercial bank in China, China Merchants Bank (CMB) has created dozens of first's in our industry. The landmark of innovated "All-in-One Card" is China's first debit card based on client's number management. "All-in-One Net" is China's first, real online banking solution. CMB took the lead in the domestic banking industry by launching many new businesses like offshore business, buyer's credit, domestic letter of credit, enterprise annuity, etc. CMB's mobile banking APP created a new mode of integration service with regard to "human and machine" and "online and offline."

CMB has become one of the most influential commercial banks in the world; it is ranked 13th in the Top 500 banks in the world by authoritative British magazine Banker. CMB has been recognized in the Fortune 500 for five consecutive years, ranked 189 in 2016. CMB was listed number one in comprehensive development capability among national commercial banks in Gyroscope's 2016 evaluation. The Banker also awarded China Merchants Bank as China Bank of the Year 2016. In 2016, CMB had more than 1900 branches home and abroad with nearly 70,000 employees.

PROJECT SCOPE AND DETAILS

Budget and Size of Organization

- Annual project budget for CMMI Maturity Level 3 re-appraisal: 1,600,000 RMB.
- Size of organization: 4100 staff, consisting of two R&D centers in Shenzhen and Hangzhou

Capabilities Targeted

- Reduce response times for IT requests.
- Improve quality to ensure no major failure in launched systems.
- Improve planning and managing product to best meet clients' needs with limited resources.
- Improve the transition from business-to-software-development and software-to-operation.



GOALS FOR THIS IMPLEMENTATION

CMB passed the CMMI Maturity Level 3 for the first time in 2013. Early in 2017, we wanted to review the status of the current development process, consolidate capabilities of software engineering management, and lay a solid foundation for Lean development transformation. So the bank decided to conduct a CMMI Maturity Level 3 re-appraisal.

CONTACT & SPONSOR FOR CMMI ADOPTION

Tianhong Zhou, General Manager
Information Technology Department,
China Merchants Bank Head Office

PROJECT MANAGER

Hong Ou, Head of EPG Group
Information Technology Department,
China Merchants Bank Head Office

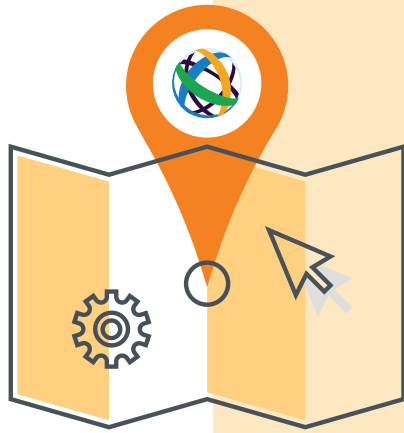
Re-appraisal Goals

- Assess Organizational Unit's (OU) development process capability and provide an accurate overall picture to CMB's management team, particularly the areas with potential quality risks, by randomly selecting an adequate number of projects to be included in the appraisal scope.
- The appraisal team shall provide specific and feasible recommendations based on findings to improve process bottlenecks.
- Review OU's progress in adapting Scrum, Kanban, DevOps, and other improvement initiatives since last appraisal. Provide suggestions for how to integrate the result into the current process.
- Help to develop a process improvement roadmap for the next three years. The sponsor wants a recommendation on when to adapt CMMI High Maturity practices.
- Promote organizational buy-in for process improvement among staff and improve OU's quality culture by conducting value added appraisal.
- Verify CMMI Level 3 rating for OU.

Challenges:

- Not familiar with the new CMMI V2.0 assessment method
- Heavy workload of participating projects
- Large number of projects involved
- Communication inconvenience due to numerous interviewees in Shenzhen and Hangzhou
- The V2.0 assessment method helped us to address many problems.





“The 28 process improvement actions this year cover all aspects of quality and efficiency improvement. After years of incessant efforts, we recognize the positive effect of process improvement on software production. More importantly, we will put the 28 improvement actions into practice, making continuous improvement on the basis of measurements, with focus on quality and efficiency, and striving to be at the forefront of the IT industry. Centers and team leaders will pay close attention to carefully understand the 28 actions, and make comments and suggestions in their daily work. The business function description template that the Testing Center is popularizing is significant, and it will propel building up distinctive testing competitiveness of China Merchants Bank.”

Tianhong Zhou
General Manager, IT Department
China Merchants Bank

CMMI model(s) used

- CMMI DEV V1.3
(using the CMMI V2.0 Appraisal method)

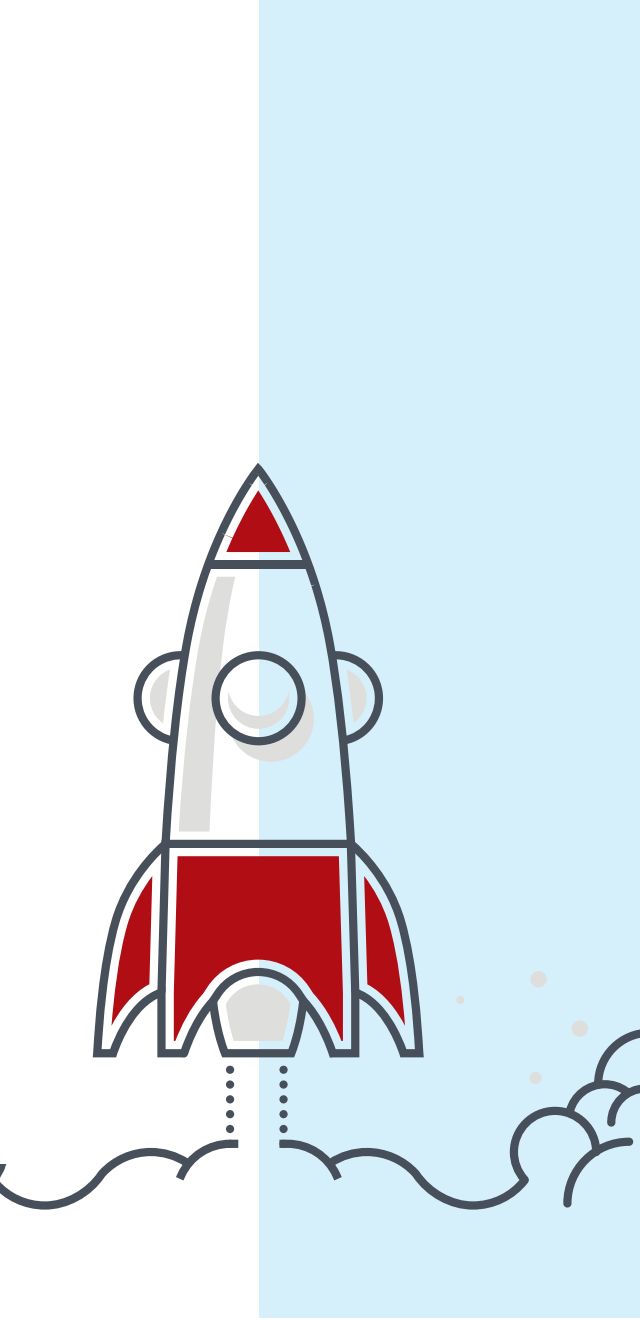
How CMMI Helped Achieve Desired Results

- Overall, we benefit greatly by utilizing CMMI to guide our efforts to improve. Our clients have been much happier with our work. The user experience of CMB is the best among banks in China.
- CMMI has helped us to establish a software development process framework, which helps us to achieve our required quality. Even though we implement 4000 new releases to our system each year, there have been no major production issues and we have a declining number of overall production issues year-over-year.
- CMMI helped us to build an organizational measurement system, and measurement data is presented from multiple dimensions for decision-making by all levels of leadership.
- Under the guidance of the CMMI model and, taking the project's contexts' into consideration, several development approaches have been established, and project quality is managed more effectively.
- An effective mechanism of training is established to train technical professionals on the development team.
- CMMI guided us to continuously improve the processes and adopt new industry practices like Agile, Lean, DevOps, etc.

Processes Before CMMI was Deployed

- There were some guidelines, but no comprehensive processes were in place.
- To management, process was a black box.
- The success depended solely on the great effort of a devoted team and individual skills (heros).
- The clients always complained about our response time and the quality of what we delivered.





Lessons Learned & Competitive Advantage

- Do not doubt, listen to others, set up the framework, and continue to improve.
- Devote needed resources and it will pay off.
- Consider the uniqueness of your context, and carefully categorize project types to ensure you have resources for higher audit intensity, especially for high-risk projects.
- Introduce Lean, Agile, Kanban, DevOps, and other superior management and engineering practices under CMMI model structure.
- The model has played an important role to make us one of the best bank IT departments.

Deployment Successes

- China Merchants Bank was able to successfully use the CMMI V2.0 assessment method and included all internal 82 development units, involving 82 projects in Shenzhen and Hangzhou. A good number of internal people took part in the appraisal.
- It helped us to be more determined to continue on the CMMI path.
- The senior management team now has an accurate picture for our current process.

Effectiveness

- The reappraisal shows over 90% of the projects covered do not have major issues based on CMMI requirements.
- The effort to prepare for the appraisal was reduced by more than 50% compared to the past appraisal for similar scope.
- CMB senior management will provide more resources to OU's future improvement in Lean, DevOps, and others, based on the finding of the appraisal.
- The appraisal provided excellent recommendations for future work.
- About 1/4 of the overall staff directly or indirectly had a chance to learn new things in the appraisal.

“The new assessment method made it possible for us to have a successful appraisal and made it much easier for us to adopt other methods such as Agile”

Hong Ou
EPG Leader

HIGHLIGHTS

The following are demonstrated with this re-appraisal using CMMI V2.0 assessment method.

Engineering Process Group continues to drive process improvement to effectively solve common problems in project operation, to ensure the effectiveness of the overall system operation, and to ensure compliance with regulation. They will explore new R&D management practices and implement on pilot projects

Categorizing project management mechanisms as high-risk, low-risk, and different scales enable us to cut down on the project process.

Effective, persistent, and objective QA counseling and audit propels irreplaceable support and assistance for project operation.

Commit to continuous measurement analysis on current problems and determine improvement measures through monthly communication meetings.

We will not be able to meet CMB senior management's request to conduct an appraisal to cover all teams without using 2.0 assessment method. Overall, we like the method and it helped to produce a better assessment.

"First of all we applaud the 2016 management improvement by our IT Department, whose persistent exploration and dedication resulted in a reduction of production accidents, shortened lead times, reduced staff turnover and increased efficiency. These results have validated our decision to apply CMMI to our goals for process improvement since 2008. With rapidly-changing IT technologies, our IT Department is freed up to apply mature tools, try out cutting-edge technology, and make more informed decisions in a more timely manner."

Hao, Li
Executive Vice President,
IT Department
China Merchants Bank

