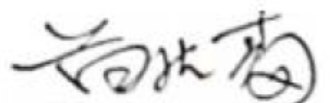# HNAC 华自科技

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华 自 科 技 股 份 有 限 公 司

Sponsor Feedback from Executive Session
高层会议的发起人反馈

发起人反馈

　　作为华自科技股份有限公司的发起人，很荣幸能够代表华自科技股份有限公司进行这次发发言，感谢这次 CMMI5 级的主要评估人员，翻译人员，ATM 成员，EPG 过程评估小组，项目经理及项目成员，及其他关键成员在最近几天的辛苦付出。

　　发现会的结果十分全面，可以反应出当前公司软件工程管理 95% 的现况。分别从组织级管理、项目级的项目计划、需求、研发、测试及产品投运、产品售后的全生命流程数据可以看到，公司管理团队以及项目团队均做到了量化管理，实现了全面的监控。
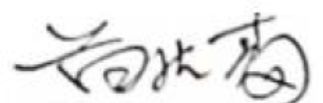
　　但 CMMI 工作仍有不足，需要持续优化改进，非常感谢评估师以及 ATM 成员为我们找出现存公司中存在的一些弱项和改进建议，为公司后续的改进提供了一些思考和方向。

经验教训

1. 项目度量和组织度量工作还存在一些缺陷，例如评审过程中评审前所花费的时间和评审问题解决时间未记录，组织度量库应该尽可能的夯实度量基础。

2. 改进项的后续评估和分析存在不足。在以往的 CMMI 改进工作中，改进项从 15 个变成 2 个，有许多成功的改进经验，应当有效的利用这些改进经验，指导今后的工作。

3. 在实际实施过程中不够灵活，例如对于风险识别、异常数据处理、项目度量检查项等工作灵活程度不够。应当实事求是，依据实际情况做出一些精简工作。

4. 对于文档中的数据来源未进行清晰的标注，例如压力测试和性能测试的测试指标未标注清楚相应测试来源。可能导致一些潜在的指标错误风险。

5. 培训缺乏针对性，培训效果有提升空间，培训之后未及时更新相关文档至组织库并发布；提高培训参与度，使被培训人员有更多的收获。

6. 针对项目过程中的积极影响，未能有效的进行二次利用，应当对项目过程中的积极影响进行原因分析，找出关键点，以便把有效的部分推广到其他项目中。

7. 职责划分还存在一些重叠部分，应当区分各个岗位的权利与义务，一方面能够清晰职责范围，提高工作效率，另一方面能够专人专职，提高在岗人员对于相应业务领域的理解。

如何提高

1. 在度量工作上，要源源不断持续提升，创造核心竞争力。将已有的改进项进行详细的过程记录，一方面有助于我们能针对过去改进的成果进行分析，进行量化评估，回顾过去长时间公司的改进力度，后续可以进行改进曲线分析。另一方面有助于我们以史为镜，能够为未来的改进工作进行指导，使得软件产品在开发效率，开发过程，成品质量都能有持续提升。

2. 稳中求进，要具备强大的评审基础能力。更加精细化评审过程，不断持续优化评审项，能够找出评审要点，提高评审效率，降低 QA 以及相关人员的成本，在未来市场规模扩大情况下需要具备强大的支持能力，具备实现更高项目生产率的基础能力。

3. 严格规范管理，在测试工作，风险管理过程，同行评审过程中需要严格把控，依据 CMMI 过程中发现的弱项，更新过程和指南，及时发布，规范化文档管理，让各个管理过程有序可查，也可以追溯项目变更过程，也便于 QA 人员进行相关检查。

4. 强化量化能力，可以落实派遣相关人员进行六西格玛培训，建立更加完善的异常数据处理机制，尤其是在 PPM 模型建立的过程中，需要利用散点图等各种新的统计分析技术进行有效的异常数据处理，建立更贴近真实环境的有效 PPM，形成正确的模型基线。
5. 形成培训内循环机制，持续提高被培训人员的工作能力，在培训上游，通过有效的激励机制，提高讲师讲课能力，选择和商业目标以及实际业务强相关的培训内容，在培训下游，通过收集被培训人员意见，不断反馈到培训组织人员。

华自科技股份有限公司
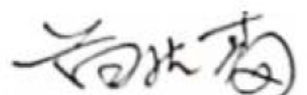
职位：院长

签名：尚治寿

时间：2022 年 8 月 8 日

Sponsor Feedback

As the sponsor, I am honored to deliver this message on behalf of HNAC Technology Co., Ltd. I would like to thank the lead appraiser, the interpreter, the ATM members, the EPG process assessment team, the project manager and project members, and other key members for their hard work over the last few days in this CMMI Level 5 appraisal.

The findings show a comprehensive picture reflecting 95% of the current status of the company's software engineering practices. The data includes organization-level management, project-level project planning, requirements, R&D, testing, product launch, and after-sales services, which shows that the company's management team and project team have quantitatively managed and comprehensively monitored the project.

However, there are still gaps in the CMMI program that need to be continuously optimized and improved. Thus, it is very grateful to the appraiser and ATM members for bringing out some weaknesses and suggestions for improvement to the existing system, and offering some food for thought and directives for the subsequent improvements.
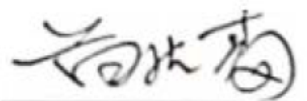
experience

1. There are some gaps in the project measurement and organizational measurement work, for example, the time spent before the review and the time to solve the review problems are not recorded during the review process, and the organizational metrics library should be as solid as possible to strengthen the measurement infrastructure.

2. The follow-up evaluation and analysis of improvement items are not sufficient. In the past CMMI improvement exercise, the number of improvement items was reduced from 15 to 2. But we should have summarized what we did as there are many successful improvement experiences, which should be effectively used to guide the future work.

3. There is not enough flexibility in the actual execution process, for example, for risk identification, handling of outlier data, project measurement check items, etc. We should be down to earth and make some streamlined actions according to the reality.

4. The data sources in the document are not clearly marked, for example, the test indicators of stress and performance tests are not clearly labelled with the corresponding test sources. This may lead to some potential risks of misleading performance indicators.

5. The training is not focused, and there is room to improve the training effectiveness, and the relevant documents are not updated to the organization library and released in time after the training; and the training participation should be improved to enable the trainees to gain more.

6. For the positive influence of the project process, which is not effectively utilized for secondary exploitation, the causes of the positive influence of the project process should be analyzed and the key points should be identified so that the effective part can be extended to other projects.

7. There are still some overlapping duties, and the rights and obligations of each position that should be separated, so that on the one hand the scope of duties can be clarified and the efficiency can be improved, and on the other there can be dedicated personnel and improve the understanding of the staff in the corresponding business domains.

how to improve

1. On the metric works, it is necessary to continuously upgrade the core competitiveness. The detailed process record of the existing improvement items will, on the one hand, help us analyze the results of past improvements, make quantitative assessments, review the improvement efforts of the company over a long period of time, and subsequently conduct improvement curve analysis. On the other hand, it helps us to use history as a mirror to guide future improvement work, enabling continuous improvement of software products in terms of development efficiency, development process, and quality of finished products.

2. Steady progress is needed to have strong fundamental review capabilities. It is necessary to refine the review process and continuously and continuously optimize the review items to be able to identify the review key points, improve the review efficiency, reduce the cost of QA and related personnel, and have a strong support capability in the future market scaling scenarios, and provide the basic capability to achieve higher project productivity.

3. 3. The rigorous regulatory process needs to be strictly enforced in the testing process, risk management process, and peer review process, and based on the weaknesses identified in the CMMI process, the process and guidelines should be updated and released in a timely manner to regulate the documentation management, so that each management process can be checked in an orderly manner and the project change process can be traced, which also facilitates QA personnel to perform inspections.

4. The quantitative capability can be strengthened by putting in place training on Six Sigma by dispatching relevant staff to receive the training and setting up a more complete mechanism for dealing with outlier data. During PPM model building, various new statistical analysis techniques are needed such as scatter diagrams for effective outlier data processing to establish effective PPM that is closer to the real environment and form a correct model baseline.

5. An internal training cycle mechanism can be developed to continue increasing the working skills of trainees. Within the upstream of training, through an effective incentive mechanism, lecturers can improve their lecturing skills and select training contents that are strongly related to business objectives and actual business, and in the downstream of training, through collecting feedback from trainees and feeding back to the training organizers over time.

6. To make progress while maintaining stability, it is necessary to have a strong basic evaluation ability. A more refined review process and continuous optimization of review items can identify review points, improve review efficiency, and reduce costs for QA and related personnel. In the case of future market expansion, it needs to have strong support capabilities and achieve higher project productivity. basic ability.

7. Strict and standardized management, strict control is required in the testing work, risk management process, and peer review process. According to the weaknesses found in the CMMI process, update the process and guidelines, release them in a timely manner, and standardize document management, so that each management process can be checked in an orderly manner. The project change process can also be traced, and it is also convenient for QA personnel to conduct relevant inspections.

8. Strengthening quantification capabilities can implement the dispatch of relevant personnel for Six Sigma training, and establish a more complete abnormal data processing mechanism. Especially in the process of establishing the PPM model, it is necessary to use various new statistical analysis techniques such as scatter plots to carry out effective abnormal data. process, establish an effective PPM that is closer to the real environment, and form a correct model baseline.

9. Form a training internal circulation mechanism to continuously improve the working ability of the trainees. In the upstream of the training, through an effective incentive mechanism, improve the lecturer's ability to give lectures, and select the training content that is strongly related to business goals and actual business. The opinions of the trainers are continuously fed back to the training organization staff.

HNAC Technology Co., Ltd.

Position:

SIGN:

DATE: 2022. 9. 8