

Analysis and recommendation for the mod iv product development team

[Business](#)



Background/ Introduction The Heating, ventilating, and air-conditioning controls (HVAC) is one of the Honeywell Building Controls (BCD)'s four product areas. In 1989 HVAC controls was pitching a multimillion project on the Mod IV— an advanced motor used in HVAC applications. It was envisioned as “ Golden Egg” by a senior manager because it was a main pitch of the company, and once it was ready to produce and successfully introduced into the market, it would account for 30% of the division's profits. The central issue revolved around the division's product development team and their commitment to meet the schedule. This led to multiple lower-level issues, such as communication disparity among various groups, mistiming in changing the team format, technical difficulties in designing and manufacturing the Mod IV.

All these problems, along with external pressure from competitors, rippled out and created challenges for the division's goal to stay on schedule and continue to profit in the industry in a long run. Analysis Traditionally, BCD has been a Mechanic Structure, which means it was a bureaucratic model with formal and concrete hierarchy. Control, authority, and division of labor, and thus delegation of responsibility, as well as product development, were achieved in a sequential manner. The communication and interaction in between was minimal. Sometimes (most of the time), project was segregated into multiple stages, each of which encountered problems created by work done in earlier stages. People in each stage did not have visibility upstream nor downstream, neither did they care to communicate or correct the problem.

The process became a game of “tossing the bear over the wall”. As a result, small problems tended to snowball into bigger ones as project progresses.

The process was slow and costly, and worst, the lack of communication and visibility created animosity among functional areas. While the problems with the Mechanic Structure did not create much trouble in BCD’s smaller projects, Mod IV definitely put them on the edge of improving their development structure. Fortunately, the General Manager, John Bailey was well aware of the essence and benefit of the Contingency Theory.

He soon realized the necessity to reform his structure in response to the unprecedented challenge. They started to embrace what they called the “Parallel Development” structure. Basically it was a more organic structure with cross-functional team. The core team consisted of people from three critical functional areas— manufacturing, marketing/sales, and engineering. It was basically a Project Organization assembled specifically for the Mod IV. While this change absorbed some benefits, such as better communication and teamwork, some substantial problems such as perspective disparity among functional areas remained unsolved.

In addition, it created new issues for BCD as friction arose when workers were reluctant to adopt change. They grumbled that the team was overloaded and management involvement and support was lacking. Therefore, the change was only partially successful. There are several reasons why the change could not achieve its full strength. One of them is mistiming.

Even John Bailey admitted it was his mistake to implement a new organizational structure and new product simultaneously. This did not mean

BCD did not have the right people for the job nor their people were not enough to implement the change. It was just that they were too overwhelmed by the complexity of the sudden change and Mod IV's design and pressing schedule. Sufficient implementation and transition from Mechanic Structure to Project Organization takes time and real-life practice. Apparently, they chose to practice in a wrong project. They should have implemented the change phase by phase, from small project to bigger project.

Even though this seemed unrealistic considering the tremendous pressure faced by BCD from production and competitors, this should be considered the "right way to do it". Another reason was marketing/sales groups lagged in pace in Mod IV development. The marketing people were not involved in the initial project conception and thus were not enthusiastic about the product. It was not until later stage of the product development they were brought on board and forced to catch up. The negative effect was that marketing was in different page from manufacturing and engineering. Marketing decisions changed every time the marketing people changed.

Friction and doubt were not uncommon. It would have been effective if the same marketing group stayed throughout the whole project. Marketing lagging in pace was only a part of the bigger issue— the perspective disparity between marketing and engineering/manufacturing. This was inevitable since they came from different background and conceived the project from different standpoints. One typical example is their values and priorities. While engineering/manufacturing's priority is on designing and

producing the product with lower cost and faster speed, marketing focuses on quality and meeting customer's expectation, even though this might come across being costly and longer.

In this case, an experienced project manager was valuable. All conflicts require a mediator and this was no different than others. A good project manager, with his superb interpersonal and political skill, should be able to communicate and reconcile the disparity. One last reason was interdependence. It seemed like the bulk of the work body in BCD is under Pooled and Sequential interdependency, which means cooperation and interaction level was low.

While upper management was enthusiastic about transitioning to Project Organization structure, employees remained clueless on how to achieve it. Upper management did not convey their vision and thus did a poor job communicating what they want. Like John Bailey said, it's his fault.

Recommendation Firstly, a better timing should be considered for the parallel development implementation. As mentioned above, it should be done phase by phase, from small projects to bigger ones.

For Mod IV, it is better to focus on coming up with the best design. Produce it if they have the technology in house. If not, off-shore or subcontract it to leverage others' expertise. Even though this might mean a higher cost up front, everything will pay off once the product successfully and rapidly penetrates the market and Mod IV builds up its reputation. The next suggestion is engaging a project manager.

He will be the catalyst throughout all project stages. I learnt the value of a good project manager to a project in ISE 515 (Engineering Project Management). He should be able to engage employees from all background to the same objective. They are also good at promoting good teamwork and mediating conflicts. In other words, a project manager should save a lot of meeting minutes from John Bailey. Lastly, upper management should exhibit the correct leadership style.

John Bailey admitted he was “ a dictator and was pretty good about it”. Sometimes a good project manager is insufficient if upper management does not involve nor support. They should change from dictators to team players. Even though a Horizontal Corporation is not realistic in this case, they should at least strive to achieve that direction. Manager should also learn to lead by example and action. Do not just provide solid goals and objectives, provide the environment and empowerment.

Conclusion This study has first investigated the background of BCD and then presented a detailed analysis of the issues that were presenting the challenges. BCD projected a correct pitch on Mod IV and they have been traditionally good with it. However, with the pressure from pressing schedule, technical difficulty, and competitors, they implemented the “ Parallel Development” at a wrong time and with a wrong strategy. The latter section of this study suggested some approaches to remedy their issues. Engagement of an experienced project manager is one of them. This should be the most effective way to solve BCD’s current dilemma.

In long run, correct leadership style from upper management is what sustains workforce harmony and sustains profit. If management “ does it right”, the whole company will go a long way and “ make it happen”.