Establishing a Laboratory

Case Study: Reorganization a Research and Development Organization

Mountain View Energy

Introduction

One client was going through a restructuring caused by external financial distress that had a severe impact on one site, the realignment caused a 70% staff reduction. We were engaged to take most of the remaining staff and establish a new research laboratory, with a new technological focus and scope. We were engaged because of our consensus and positive based management approach and record in delivering results on time and budget.

Challenge

The team had been structured to delivery a manufacturing-scale demonstration; the organizational structure, mindset, and toolset needed to be changed. Therefore, the mission was to transition from a manufacturing-based organization into a fundamental R&D team.

Action

We set our goals: 1) develop a new organization based on the capabilities of the remaining staff and equipment, 2) define strategic technical goals, 3) convert operations from manufacturing to research and development, and 4) have the organization contributing to corporate research results within a year. The company allotted $10 million to achieve the conversion and organization start.

To define the plan, we worked with the remaining internal research organization to gain an understanding of their needs, and external industrial experts on the fundamental materials science to identify fundamental materials challenges. We also engaged local team members to get their perspectives on what they considered their strengths and how they could approach the gaps. This served three purposes, gaining alignment from the local team, quickly engaging them to motivate them with the new goals and challenges that lay ahead, and giving them ownership of the organizational success from the beginning.

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Mountain View Energy: +1-650-996-1243, mvwenergy@gmail.com

We developed a plan that encompassed demolition of a portion of the current facility, construction of a new facility, acquisition of required capital equipment, creation of new research protocols and business processes. To provide a framework for the technical staff, we developed a high-level research flow, assigned each portion to staff engineers based on their experience, and empowered them to come up with process specification and equipment selection. The complete ownership of the plan, gave the staff the motivation to drive their section of the program, and to do so effectively as they realized it was a team effort.

Throughout the process, we maintained execution to plan, with frequent high-level review to maintain focus and allow readjustments as necessary to keep the overall plan on task (using a similar philosophy to Agile management practices.) It also permitted timely interactions with all parts of the organization (research, facilities, failure analysis); enabling informed decision making on schedule, and eliminated construction delays. We also needed to backfill a few positions, so in the hiring process, we solicited staff input in the requisition and interviewing process, and included motivation, curiosity, and interpersonal skills in hiring.

Progress went according to plan and team member performance was high. Enough equipment came in on time so experiments started on schedule; but delays in other equipment meant program goals had to be shuffled. Working with team members to reprioritize their original goals, we obtained partially manufactured samples from another location as a starting substrate to speed development.

Results

Through about 9 months of work, we were able to turn on our R&D line with working samples. Within 12 months, our samples were performing well enough that we could contribute to the overall corporate research effort. By carefully defining the specifications, we were able to stay below projections on capital equipment and came in $4 million under budget.

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