Proactive Business Planning With Policy Deployment

Delphi Chassis’ comprehensive approach takes time, but pays off down the line.

Gerald Jewson and David Edwards

Have you ever looked back at the end of the year and found that you did not achieve the goals of the business plan? Too often business executives evaluate performance to goals at year end and wonder what should have been done differently. Looking backward adds little value; at this point nothing can be done to improve the performance.

We used Policy Deployment (PD) to resolve these and other planning problems. Proactive solutions to important and difficult business planning concerns, include: finding out today, instead of at the end of the next planning period, whether the targets can be achieved; getting everyone in the company to understand their roles and responsibilities for achieving the business plan; and putting in place a follow-up system that assures the business plan is on track and can be effectively developed using PD methodology.

Our experience has shown that most companies do a fairly good job of preparing mission and vision statements and developing annual business objectives. However, few companies determine whether their goals can be realistically achieved or if the resources necessary to achieve the business plan are in place prior to the launch.

Moreover, at many levels of the organization, individuals often have difficulty relating their work to high-level goals identified in a business plan and do not know their role in achieving the company objectives. This lack of understanding reduces the business plan to slogans and exhortations that have little meaning in day to day work. Approaching the business planning process this way may work fine in a business environment where competitive pressures are low, but to meet the challenges facing most businesses today, incorrect individual interpretation of the business plan objectives is unacceptable and may certainly lead to suboptimal attainment of objectives, and in many cases, the loss of business.

Policy Deployment is a specific application of Quality Function Deployment (QFD). QFD is a means of translating customer desires into the appropriate technical requirements for new products at each stage of the product development process. Using the same methodology, PD is a means of translating company policies into specific actionable elements at each level of the organization.

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<th>Delphi Chassis Locations</th>
<th>PD Implementation</th>
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<tr>
<td>Location</td>
<td>Application</td>
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<tr>
<td>Delmex plant, Juarez, Mexico</td>
<td>JIT implementation plan</td>
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<td>Electrical Components, Dunstable, United Kingdom</td>
<td>Business plan</td>
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<td>DeCarbon plant, Ande, France</td>
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<td>Delredo plant, Nuevo Laredo, Mexico</td>
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<td>Vandalia plant, Dayton, Ohio</td>
<td>JIT implementation plan</td>
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<td>Saginaw plant, Saginaw, Michigan</td>
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<td>GM Components, St. Catharines, Ontario, Canada</td>
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<td>Livonia plant, Livonia, Michigan</td>
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<td>Livonia plant, Livonia, Michigan</td>
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<tr>
<td>Oshawa plant, Oshawa, Ontario, Canada</td>
<td>JIT implementation plan</td>
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Figure 1. PD has been used at these Delphi Chassis locations starting in March 1991.
The PD process begins by taking the defined company business plan and identifying the strategies needed to attain those objectives. These strategies are prioritized during the process and then translated into more meaningful action plans at the operational level of the organization. This process continues until everyone in the company has an action plan with measurable projects directly tied to the business plan. Throughout the process, feedback to the company leadership is provided. This way, company management learns quickly whether the goals and objectives in the business plan can be met with current resources, whether resources beyond current levels are required to meet the goals, or whether the goals are not attainable and the business plan needs revision. A primary benefit from this process is that everyone in the company has an assigned role and responsibility to meet the business plan objectives.

During the PD process, we develop matrices to determine relationships between business objectives and the strategies used to accomplish them. This article will not delve deeply into the mathematical relationships used to quantify this information. At first glance, the PD matrix (see Figure 4) developed during the process may look very complicated; however, by using available commercial computer software, the matrix development is relatively easy. The most valuable piece, although sometimes difficult, is the dialog that occurs during the process. This discussion forces different areas of the organization to reach consensus on the trade-offs and compromises that are necessary in every company. This process contributes to team building and develops a common set of goals and objectives.

For a better understanding of how the process is developed, we will illustrate PD using examples from our experiences at several Delphi Chassis plants. The timeline for this process is shown in Figure 2 and typically takes eight weeks to complete. Using the timeline as a map, we will describe the process.

**Plant Assessment**

During the first two weeks, a questionnaire is distributed to a 15-20 person cross-functional group at the location where the PD is to be performed. The purpose of this step is to understand the current performance in various business strategies. Another important part of the survey is to assess the plant environment which includes the top leadership support for the change process and the current state of labor/management relations. In addition to the survey, a one-week plant visit by a divisional team is conducted to interview manufacturing, maintenance, engineering, and materials personnel to understand the current plans and validate the survey results. The results of a typical survey are shown in Figure 3.
During the third week the Level 1 workshop is conducted with the executive staff and involves all the functional discipline managers and the CEO. The purpose of this activity is to determine which business objectives are critical to the success of the business, which strategies could be used to meet the goals, which strategies will have the greatest impact on the goals, and which strategies will be deployed to the operational or organizational level. Once the strategies to be deployed are determined, this group must identify measurable objectives for the next 12 to 18 months and specify the level of implementation required for each of the strategies.

The following ten steps define the process: Steps 1 through 3 define the goals, steps 4 through 8 develop the strategies, and steps 9 and 10 provide the direction. Our experience shows that steps 1 through 4 require about 8 hours and steps 5 through 10 require an additional 8 hours (See Figure 4 for steps 1-8).

**Step 1:** Determine the Critical Success Factors (CSF) and their measurements. The CSF are the “Whats” of the PD model. In Level 1, they are expressed in terms that reflect customer satisfaction, usually quality, cost, and delivery (other CSFs can be added as required for different businesses). Each CSF must be defined by a performance metric. If not already defined, arriving at the list of CSFs in terms of Quality, Cost, and Delivery is an important part of this step.

**Step 2:** CSF Plan

**Step 3:** Weight of CSF

**Step 4:** Gap to Benchmark

**Step 5:** Strategies

**Step 6:** Impact of Strategies of CSFs

**Step 7:** Current Status of Strategy Implementation

**Step 8:** Rank of Strategies Based on QFD Formula

**Step 9:** Performance vs. World Class

**Step 10:**messages

### Policy Deployment Level 1

<table>
<thead>
<tr>
<th>WHATs vs. HOWs</th>
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<td>Define CSF in terms of Quality, Cost, and Delivery</td>
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### QUALITY

| Warranty IPTV * |  |
| Parts Per Million Defects |  |
| First Time Through (FTT) |  |
| Supplier PPM * |  |
| Parts Certification |  |

### COST

| Material Cost Reduction |  |
| Direct Labor Productivity |  |
| Burden Expense Reduction |  |

### DELIVERY

| Schedule Compliance |  |
| Inventory Turns |  |
| Supplier Delivery Compliance |  |

### INITIATIVE ASSESSMENT

<table>
<thead>
<tr>
<th>OVERALL IMPORTANCE</th>
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<td>IMPORTANCE RANKING</td>
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### Figure 4

The following table shows the impact of strategies on CSFs, with the following notations: * Warranty IPTV: Warranty incidents (defects recorded) per thousand vehicles. PPM: Customer returned material stated in terms of parts per million.

<table>
<thead>
<tr>
<th>CSF</th>
<th>Impact of Strategies of CSFs</th>
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The table also includes a scale for JIT Initiative Assessment, with the following levels:

1. Initiative never practiced.
2. Marginal or rarely used initiative; a few pilots in place.
3. Training in place; implemented in 50% of plant operations.
4. Initiative widely used; impacting 75% of the plant's operations.
5. Initiative fully implemented throughout the plant; world class.
of CSF metrics is accomplished through a brainstorming session. It is important that consensus be reached on these CSF metrics among all functional areas. For this process to be effective these measurements must be the ones used by the leadership on a day-to-day basis to track performance.

**Step 2:** Record benchmark or world-class performance data for each of the CSF metrics. This step is fairly straightforward and will call attention to areas where performance goals are lacking or benchmark data do not exist. At this point, a consensus must be reached that the goal is to reach these world-class levels and that the staff is committed to leading the organization through the process.

**Step 3:** In order to develop a ranking of strategies based on impact on the CSF, an importance weight of 10 to 50 is assigned to the major categories of CSF metrics such as cost, quality, and delivery. It is possible that all of the metrics have equal importance, but by reviewing the mission and vision statements, it is likely that improving quality, driving cost down, or increasing delivery service will surface as having more strategic business importance. By screening each measurement in terms of the basic business direction, the relationship and importance of the metrics will evolve. In addition to the mission and vision statements, the group should process questions such as, “What must improve in order for us to be competitive,” or “What performance goal(s) are essential for us to expand our business?” Discussions on questions such as these will help the group reach agreement on the importance ranking of the CSF. After the determination of the weight given to each major category, these points are divided among the metrics under it; in the example shown in Figure 4, 50 points were allocated to Quality, five points were given to Warranty IPTV, 15 points to Parts per Million Defects, etc.

**Step 4:** The next step in the process is to make a somewhat subjective judgment on the current business performance in each CSF versus a world-class target or benchmark. Each metric is given a rating of 1 (low attainment) to 5 (world-class performance) rating. Metrics given a low rating in this step will have a higher influence on the priority of a strategy than one with a high rating. The effect of this is to weight a CSF more heavily when it exhibits poor performance. This step determines the relative weight, which is the weight given the metric divided by this “performance versus world-class” rating.

**Step 5:** The strategies define the “how(s),” they are the techniques, tools, and systems that will result in achieving the performance goals of the CSF. The starting point is the list of strategies used in the initial plant assessment. In addition, this group needs to brainstorm other possible business strategies that could be implemented to improve performance. Strategy examples are total planned maintenance, total employee involvement, pull systems, and value analysis. Care should be taken at this level to think in terms of strategies, not projects.

**Step 6:** Strategies are now related to each CSF metric to establish an influence relationship. For each strategy, the question is asked, “By implementing this strategy, will there be strong impact ( ), medium impact ( ), weak impact ( ), or no impact (blank space) on the CSF?” Depending on the number of CSF(s), strategies, and the discussion, this can be a time-consuming step. During the process, start with each CSF and discuss the impact of all of the available strategies before going on to the next CSF.

**Step 7:** Establish the state of implementation by giving a rating to each strategy. This rating is fairly subjective, ranging from 1 for no activity to 5 for full implementation throughout the organization. At this point the results of the initial plant assessment are reviewed with the
group. During this discussion, both the degree of progress and the range of responses is reviewed. The range of responses provides an indication of the level of understanding of the strategy in various areas of the plant.

**Step 8:** The strategies are ranked based on their impact on the CSF. This importance ranking for each strategy is determined using the priorities, weights, and influence developed in previous steps. In order to quantify the data, the relative weight for the metric is multiplied by 5 for a strong relationship, by 3 for a medium relationship and by 1 for a weak relationship. Each strategy column is then totaled to determine the overall importance. This importance ranking lists the strategies from highest to lowest based on their influence on the CSF. Sometimes strategies thought to have low importance turn up high and vice versa. Therefore, discussion at this step will naturally help resolve and clarify the logic of the rankings.

**Step 9:** Following the agreement of strategy importance, the group determines which strategies will be deployed for implementation in the next 12 to 18 months. Based on the discussions, the staff will select strategies to deploy to the operational areas of the organization. The group must also determine measurable implementation goals (how much) for the strategies being deployed. For example, if machine capability is selected, the target may be to have 90 percent of the plant's machines measured and capable at the end of the 18-month period. With this direction, the operational areas of the organization will develop projects and resources to accomplish this. After strategies being deployed have been determined, the
matrix is again reviewed to assure that at least one strategy with a strong impact on each CSF has been identified. If a strong impact is not found it is necessary to select other or additional strategies to assure that a particular CSF will be accomplished.

**Step 10:** Next, responsibility for each strategy is determined and agreed upon. This is particularly important when strategies have cross-functional implications. A matrix (see Figure 5) is suggested to determine the staff areas assigned responsibility [R] for coordination, detailed plan development, resource requirements and implementation. Staff areas designated as support [S] will be assigned duties and must work with the responsible staff area to develop projects.

With the completion of the Level 1 exercise, the team has accomplished:

1. The critical success factors for the business have been identified.
2. The measurable goals for the business have been defined for both the short and long term.
3. The strategies to be deployed during the next 12 to 18 months have been determined.
4. The implementation goals for the strategies have been established.
5. The staff area responsibility for developing an implementation plan has been established.

Each staff with responsibility for implementation of a strategy must continue the deployment process (Level 2) until specific projects and resources are identified for each strategy.

**Level 2**

Whereas the Level 1 process included only the top staff, the Level 2 process involves many different groups with operational responsibility. The process for Level 2 (see Figure 6) uses the same procedure to develop a matrix as Level 1.

**Step 1:** The CSF developed in Level 1 are divided into metrics that are meaningful to a specific area of the organization. For example, an inventory turn objective in Level 1 represents the entire company. In Level 2, the objective should be split into components and assigned to the responsible area manager: finished and raw material to material control, work in process to manufacturing, non-product stores to the purchasing area, etc. The total of these parts must equal the objective established in Level 1, so it is important that the “responsible” functional group reach consensus with all “support” groups on assigned responsibilities.

**Step 2:** Define the performance improvement goals for the next 12 to 18 months based on the direction from the staff.

**Step 3:** The weighting of the CSF in most cases will follow the pattern established in Level 1. However, it is necessary to validate the CSF weights prior to moving to the next steps because the challenges in specific areas of the plant may be slightly different from those in the overall facility.

**Step 4:** Rating the current performance versus a world-class level requires another subjective evaluation. As in Step 1, due to the difference in local areas of the plant, the performance attainment could be different from the overall plant rating and may require some changes. Again, the relative weight is determined by dividing the weight by this “performance versus world-class.”

**Step 5:** A brainstorming session is used to develop a list of potential projects for each strategy. From this broad list, projects are selected that will be feasible to implement in the next 12 to 18 months and will help the area reach the objectives as defined in Level 1. At a later step the projects are summarized; if there is not enough performance improvement to meet the business objectives (CSF), then this step must be revisited to develop more projects.

**Step 6:** In a similar manner to Step 8 in the Level 1 PD exercise, each project within a strategy is compared to the CSF and a judgment is made on the impact that the project will have on the attainment of the CSF; again using the symbols of strong impact (■), medium impact (□), weak impact (△), or no impact (blank space) are used.

**Step 7:** In order to arrive at a prioritized listing of projects, the relative weight is multiplied by a 1, 3, or 5 depending on the impact on the CSF and the project column is totaled to provide the importance ranking. This listing of projects from highest to lowest based on their impact on the objectives can now be used as a basis of discussion. Sometimes projects thought to have low importance may have a high impact on goals and vice versa. Group dialogue will help clarify the logic of the project ranking in order to arrive at a consensus that the ranking is realistic.
Step 8: Following the agreement on project importance, if not already defined, the group must determine measurable implementation goals (how much) for the projects being deployed. For example, the “Quick Setup: SMED Training project” target might be set at having four work groups trained within six months. With this direction, the detail and resource requirements necessary to accomplish the projects must be determined. Since this list represents the best thinking of what is necessary to meet the plant’s objectives it should not be reduced at this point even if it appears to represent more resources than available. During the feedback step, if resources are not available to accomplish all of the projects, then the staff will have an opportunity to redeploy resources to accomplish them, obtain additional resources, or change the business plan to match the resource constraint.

Step 9: The group decides on a team leader who will have responsibility for the development of each project.

Project Implementation Teams

Now that the strategies, projects, and measurable targets have been determined, working groups are established to develop detailed project plans (see Figure 7). Matrices are no longer required, since the strategies have been converted into projects and the deployment process continues with employee involvement in the projects.

Step 1: The team leader is responsible for identifying team members, including those in other staff areas that have a support role for the project. The plan for the project must ensure that necessary resources from all staff areas are considered in their overall resource plan.

Step 2: The team will develop the tasks and timing necessary for the project.

Step 3: The team must identify additional resources: capital, employees, expense, or training required to implement the project beyond current budget levels.

Step 4: The team must determine the impact of the project on the CSF measurements. This determination should be made in quantitative results if possible. Where quantitative results cannot be estimated, subjective results are assigned using the same symbols employed in the matrix to show no, weak, medium, or high impact of the CSF.

The determination to implement specific projects will be made by the Level 1 group following the feedback session.
Management Review and Feedback

Each functional staff or plant area outlines their projects on a summary chart (see Figure 8). At this level detailed plans are reviewed, noting for each project additional resource requirements and impact on the CSFs. Following this review, a project summary chart is developed for all of the projects in that area. This bottom-up feedback process provides each functional staff or plant area with information on whether the assigned goals in their area can be met, and at what cost.

Using the detail from each staff area chart, the anticipated project results are compiled on an overall plant summary chart (see Figure 9). This combined summary chart is reviewed with the executive staff (Level 1 group). First, the total expected results in the CSF metrics are reviewed and, at this point, the Level 1 group learns how realistic the deployed goals are for the organization, and where changes or modifications must be made.

Next, the total resources required to implement the plan are reviewed. If the necessary resources are avail-
If resource constraints are identified that cannot be eliminated, then the staff must revise the business plan, and reduce the project list to match available resources.

If resource constraints are identified that cannot be eliminated, then the staff must revise the business plan and reduce the project list to match available resources. When this is done the Level 2 matrices should be reviewed to abandon projects with the least impact on the CSF or projects that require the most resources. On the other hand, if the existing resource constraints can be eliminated, each staff functional area must now direct the implementation process. Process check points or regular status reviews can now be established.

The results of the staff review are then communicated to the organization, indicating which projects will be pursued and how any constraints will be overcome. The previously-established project teams will proceed to implement the projects selected. The staff's responsibility is to regularly review progress and remove obstacles to completion as they arise.

Once the regular project review and feedback systems are established, it may be necessary for the staff to adjust or change strategic direction; this process makes the business plan a more dynamic activity, not a once-a-year event. It now serves as a constant check of resources and business direction. As the business changes and objectives change, so will the associated employee objectives. Therefore, all employee activity supports the business plan. Each employee also understands his responsibility in the attainment of the business plan.

Summary

Our experience with PD at nine different Delphi Chassis locations has shown that results are very dependent on the time invested by the plant personnel. The one- and two-day meetings where the matrices are developed are a small part of time necessary to develop a good plan. In addition, time must be made available for team members to develop project detail. If individuals are fighting day-to-day problems, the development of longer-range plans is not a priority. The plants that have been the most successful are the ones who assure that the working groups have time available to develop meaningful project detail. Any organization contemplating the use of this process must assure that individuals responsible for plan development will have the necessary time available.

PD requires a change in standard business planning. It fills a gap in our current planning process by providing a process to develop strategies and detailed supporting plans, using resources to the best advantage, and providing a forum for resolution of organizational conflict surrounding the achievement of the business plan.

Successful businesses need to make frequent adjustments to their operating policies in order to meet the challenges of the marketplace. Policy Deployment coupled with a disciplined measurement and feedback system, and rigorous communications will provide the best opportunity for making those adjustments.


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Copies of the "PD Implementation Survey" used to initiate this process are available from the authors.

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