Stage Gate Plan

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**Bicycle Stage-Gate Plan**

**Begin Research Gate Detail Gate Development Gate Test Gate Release Gate Completion**

Decide if idea of Pro Bike Review required Receive parts and Test each com- Make sure product Ensure Project is

Should be investigated. parts. Inspect. ponent Is safe completed

Decide if project is good Review budget Integrate components Test Product Confirm launch date Lessons learned

fit. Customer Approval Team reassigned

Test Gate

Completion Gate

Development Gate

Detail Gate

Research Gate

Launch & Closure

Test Stage

Develop Stage

Procure / Requisitions

Design Stage

**Stages**

Stages are sections of a project where certain aspects of a project are completed, like an assembly line. Objectives are reached as each stage is completed. As each stage is completed, information is gathered which allows the opportunity to decide whether the project makes monetary sense to continue. Evaluating the project at each stage gives the company flexibility and control on a project, as opposed to the possibility of losing assets by continuing a project which does not make sense.

**Gates**

Gates are points in a project which allow decisions to be made about continuing with a project. A set of criteria are established, which is used to judge the stage as to its completion, delay, return or stop the project completely. Each gate has quantitative and qualitative set of standards which must be achieved to move forward to the next stage. An evaluation of the project as its stages are being completed must be made, to determine if continuation is warranted for the company. Questions must be answered on whether this project is on schedule and within budget and is the concept still meeting the company goals and strategies. These criteria and questions must be answered appropriately to move through the gate to the next stage of the project. If it has met the criteria, then the budget for the next stage is confirmed and the project can proceed.

**Criteria**

**Research Gate:**

Does the bike project make sense to take on for the company? Yes/No

If the answer is Yes, then proceed to the next stage.

**Detail Gate:**

Plan-out the bike and make required parts list, research the costs, create budget, and get customer approval. If bid is approved, then proceed to next stage. If this is approved, then proceed.

**Development Gate:**

As each part is received, they should have no defects. As the components are assembled they should perform as they were designed and fix securely and safely together. Appearance must be without flaws. Also, they all must conform to the rules and regulations. If all things perform as required, then proceed. (U.S. Dept. of Energy)

**Test Gate:**

Components must operate as intended, safely, structurally sound, fluidly and quickly. If all things perform as needed, then proceed.

**Launch Gate:**

Make sure everything has been completed as required. Recheck that all deliverables have been achieved. If everything has been completed, then proceed. Confirm delivery date.

**Completion Gate:**

Perform the wrap-up here, return equipment, reassign personnel, clean-up shop. Complete lessons learned and evaluate performances and communicate with personnel. Deliver product.

**Stage-Gate Review Decisions**

Gate decisions must be clear and understood criteria for the gatekeepers to determine if each stage is completed before they are permitted to proceed to the next stage of the project. The criteria must be specific enough to make the decision to move to the next stage, without causing risks.

**Proceed:** Goals have been met for this stage, all functions are completed i.e. technical, market analysis, financial, and information has met expectations. Funding has been approved to start the next phase of the project.

**Stop:** Project is not going well, idea is wrong, market has changed, part is not available, design is too weak, technology is old, the parts are not the proper quality.

**Hold:** Project has been put on pause for a limited time due to parts being reconfigured or rebuilt to specifications. Customer needs to be contacted for a decision. Schedule from some uncontrolled situation must catch up to current schedule.

**Return:** Goals have not been completed for this stage, team will return to complete deliverables due to the importance of project.

These gate reviews are used to help evaluate the progress of each stage to further create a quality product from this project. Work finished during each stage gives information, through evaluation, required for continued funding for the project. (U.S. Dept. of Energy)

**Gatekeepers:**

Company owner and upper management are the gate keepers for our project. They ensure that the guidelines established are followed and that the project continues to follow the company’s strategic goals. They also approve the assets for each stage of a project, if it meets their approval for each stage. They may also guide the project team to better their performance with suggestions and input to certain aspects of the project during meetings and project reviews.

**Principle Investigator:**

The principle investigator is the person responsible for leading the team, planning, and running the gate review meetings. Among these tasks, they are to gather the information, document results, and progress of the project. The investigator must monitor the budget and communicate with upper management as the project progresses. The investigator is to distribute the stage plans to team members develop materials for the review meetings and present stage accomplishments during those meetings. The investigator must also document the gatekeeper comments and suggestions. (U.S. Dept. of Energy)

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