Expert Judgment: Stage-Gate Process

Benjamin Srock

Embry-Riddle Aeronautical University Worldwide Campus

Capstone Project

PMGT 690

Stephen Onu, Ph.D.

The stage-gate or phase-gate process of establishing a roadmap of stages and gates to take a project from idea to launch (PDI, 2015). Stages are the portions of the project where work occurs, and gates are those checkpoints where performance is evaluated against expected output. At a minimum, each gate should include three components, (1) required deliverables, (2) gate criteria and specific outputs, and (3) a clear yes/no decision on whether to proceed (Larson & Gray, 2014, p. 578).

The bicycle project consists of (9) different Work Breakdown Structures (WBS). *Figure 1* represents the existing WBS with the addition of the training wheels task introduced this week.

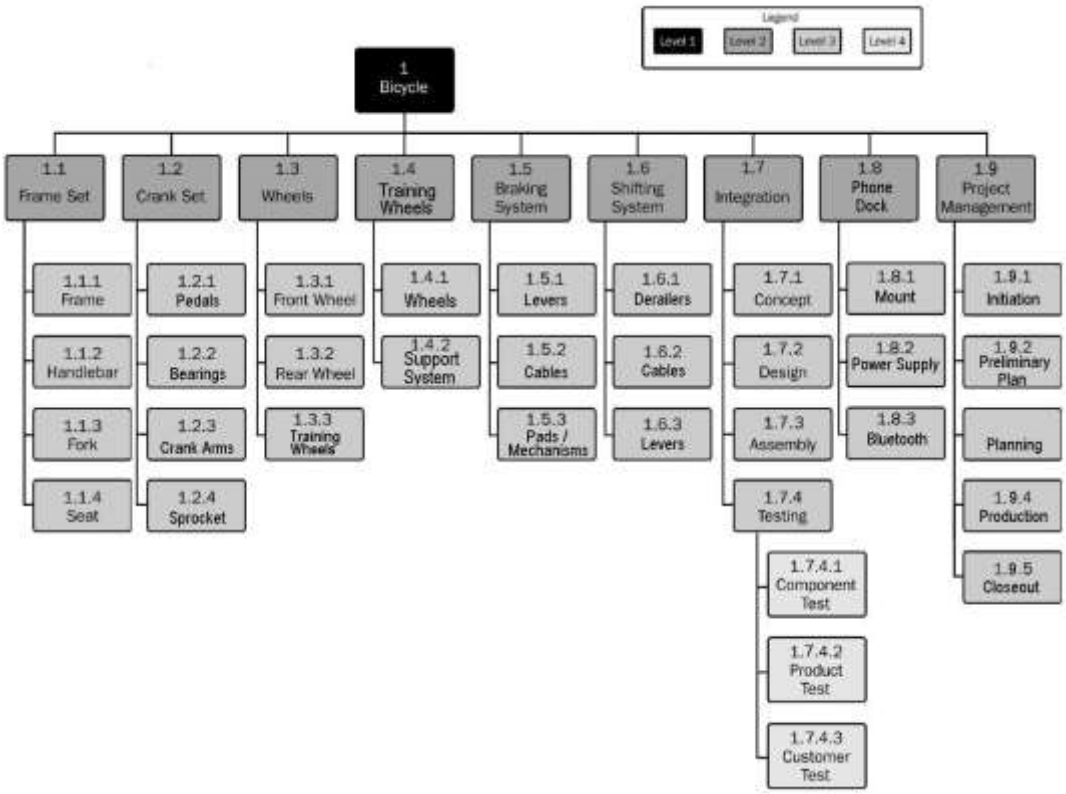

Figure 1: Group 4 Bicycle WBS Week 5

Figure 2 represents the basic stage-gate diagram and an explanation of each phase.

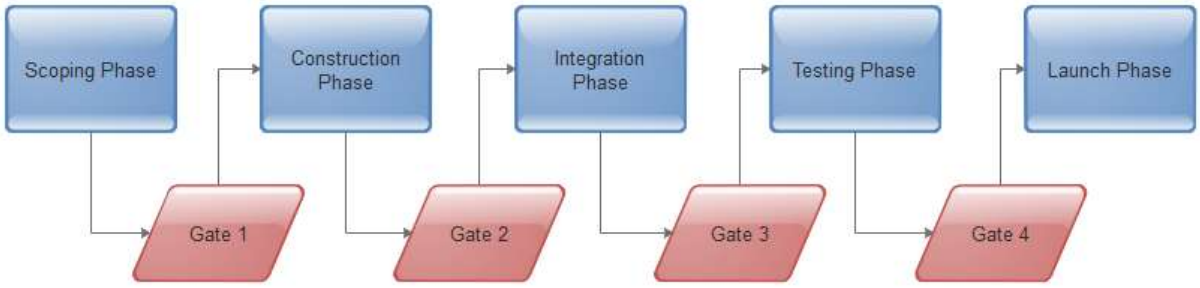

Figure 2: Stage-Gate Diagram

- **Scoping Phase**: This is where the project begins. 1.9 and 1.7 begin in this stage by initiating, planning, conceptualizing, and designing the bicycle to be built.
- Gate 1: Evaluation of the design and planning against the expectations of the customer. Acceptance criteria are: Design Approval from Customer, Identification and procurement of required material, within budget and timeline.
- **Construction Phase**: During this phase, each subsection of the bicycle is constructed. WBS 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, and 1.8 are included here.
- Gate 2: Quality control inspections are performed to ensure each subassembly meets the project design and is ready for integration. Acceptance criteria are: On time, on budget, subassemblies meet approved design.
- **Integration Phase**: This phase is where each subassembly is formed into a functioning bicycle ready for testing. The frame set, crank set, wheels, brakes, shifting system, training wheels, and phone dock are assembled for inspection in preparation for the testing phase.
- Gate 3: Quality control inspections are performed to ensure the final assembly meets the project design, and the expectations of the customer. Acceptance criteria include: On time, on budget, and final assembly meets design and customer expectations.
- **Testing Phase**: during this phase 1.7.4 and associated sub-tasks, such as component, product, and customer testing is performed.

- Gate 4: This gate is where the final quality assurance check is performed. Acceptance criteria includes: On-time, On-budget, and final assembly meets final quality assurance checks.
- **Launch Phase**: The bicycle is prepared for delivery to the customer, Project management 1.8 processes and documentation are completed, and final acceptance is received from the customer.

Should any phase fail to meet gate criteria, the project management team will meet to discuss the failed item(s) and move to implement changes necessary to rectify the situation and repeat the gate evaluation procedure.

Reference:

Larson, E. & Gray, C. (2014), *Project Management The Managerial Process* (Sixth Ed.), New York, NY, McGraw-Hill

Product Development Institute, Inc. (PDI) (2015), Stage-Gate – Your Roadmap to New Product Development. Retrieved 28 June 2017 from http://www.prod-dev.com/stage-gate.php