



SNS COLLEGE OF ENGINEERING



Kurumbapalayam(Po), Coimbatore – 641 107

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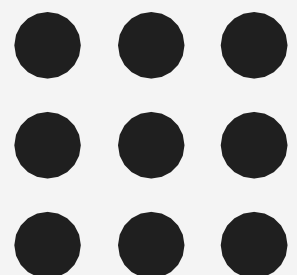
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Department of Information Technology

Course Name – Software Engineering

II Year / III Semester

System Engineering





Systems Engineering

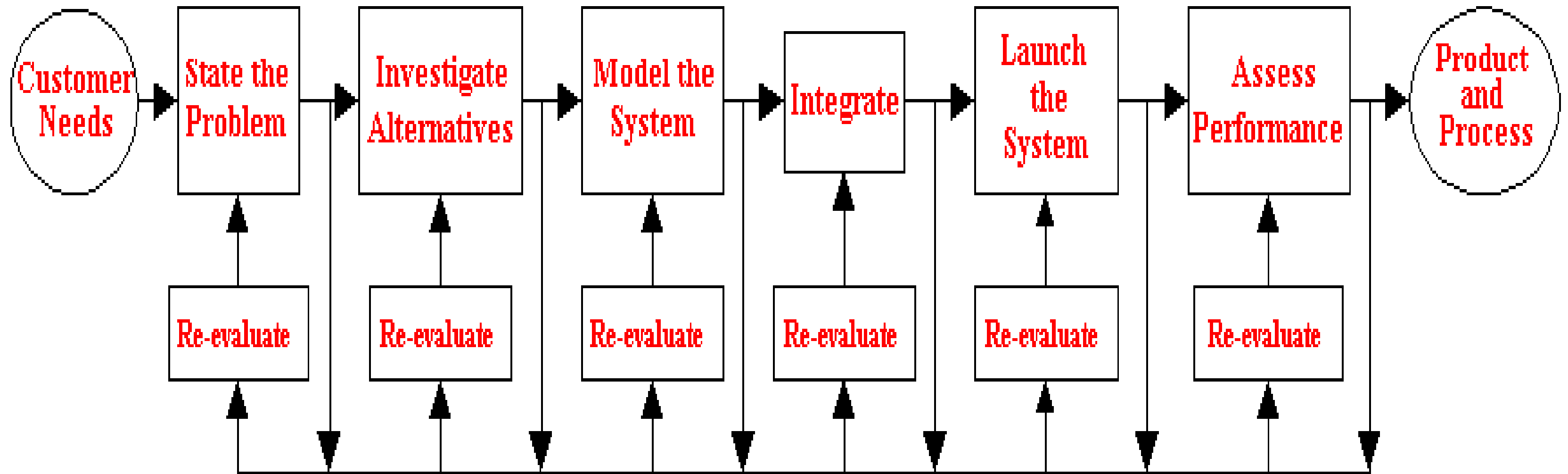
- Systems Engineering is an interdisciplinary process that ensures that the customer's needs are satisfied throughout a system's entire life cycle.
- Systems Engineering provides facilitation, guidance and leadership to that proceeds from concept to production, operation, evolution and eventual disposal.
- Systems Engineering considers both the business and the technical needs of customers with the goal of providing a quality solution that meets the needs of users and other stakeholders.
- The goal of all Systems Engineering activities is to manage risk, including the risk of not delivering what the customer wants and needs, the risk of late delivery, the risk of excess cost, and the risk of negative unintended consequences.



System Engineering consists of the following seven tasks.

- 1.State the problem
- 2.Investigate alternatives
- 3.Model the system
- 4.Integrate
- 5.Launch the system
- 6.Assess performance
- 7.Re-evaluation

The Systems Engineering Process





1.State the problem. Stating the problem is the most important systems engineering task. It entails identifying customers, understanding customer needs, establishing the need for change, discovering requirements and defining system functions.

2.Investigate alternatives. Alternatives are investigated and evaluated based on performance, cost and risk.

3.Model the system. Running models clarifies requirements, reveals bottlenecks and fragmented activities, reduces cost and exposes duplication of efforts.

4.Integrate. Integration means designing interfaces and bringing system elements together so they work as a whole. This requires extensive communication and coordination.

5.Launch the system. Launching the system means running the system and producing outputs -- making the system do what it was intended to do.

6.Assess performance. Performance is assessed using evaluation criteria, technical performance measures and measures -- measurement is the key. If you cannot measure it, you cannot control it. If you cannot control it, you cannot improve it.

7.Re-evaluation. Re-evaluation should be a continual and iterative process with many parallel loops.



THANK YOU

