

CHAPTER 3

PROJECT MANAGEMENT AND QUALITY

Dr. Abdul Aziz A. Bubshait

CEM – 515
Construction Quality Assurance

Introduction



- Many excellent organizations seek to define the customers' project requirements rather than determining customers' needs and expectations.
- This frequently results in an isolation from the customer, with the ultimate consequence of leaving the deliverable on the doorstep for the customer. Such organizations do not keep close to their customers.

Introduction



- The project team must represent both supplier and customer.
- CDPM uses the total quality management emphasis on continuous process improvement, people involvement through teams, quantitative methods, and customer focus, and it stresses the project management methods for planning, controlling, and delivering successful deliverables.

Introduction



- *Customer-driven project management* (CDPM) is a management approach that focuses on producing deliverables that achieve total customer satisfaction.
- In many of today's organizations, the total quality management and project management approaches are separated. This restrains the organization's ability to achieve *total customer satisfaction*.

Introduction



Customer- driven project management applies in any activity where:

- **A project deliverable can be defined.**
- **A customer or customer's voice can be identified.**

Introduction



- *Projects* include three kinds of planned, short-term activities:
 - ✓ Those producing complex technical products
 - ✓ Those producing quality improvements of any kind from teamwork, and
 - ✓ Those resulting from natural work teams

Why Customer-Driven Project Management?



- Customer-driven project management expands both *project management* and *total quality management* approaches to meet the challenges of the global economic environment.
- Customer-driven project management provides an approach to confront the challenges today and in the future.

Today's world



| Yesterday's world | Today's world |
|-------------------------------------|---|
| Paper world | Internet |
| United States as top economic power | United States as one of players |
| Make it, it sells | Rabid competition |
| Certainty | Uncertainty |
| Reasonable cost | Lowest possible cost |
| Large budgets | Optimizing budgets |
| Stable technology | Rapidly changing technology |
| Waste: many resources | Conservation: limited resources |
| Quality is supplier-driven | Quality is customer-driven |
| Reasonable time to market | Accelerated time to market |
| Hard copy/space/distance controlled | Telecommunications/information controlled |

Today's world demands change



- Adapting to today's economic world with an eye to the future requires an organization to be totally responsive to customers.
- Continuous improvement of processes, people, and products aimed at customer satisfaction is essential.
- The "if it's not broke, don't fix it" attitude does not promote the critical thinking necessary for growth. Continuous improvement is the only way to survive.

Focus on the future

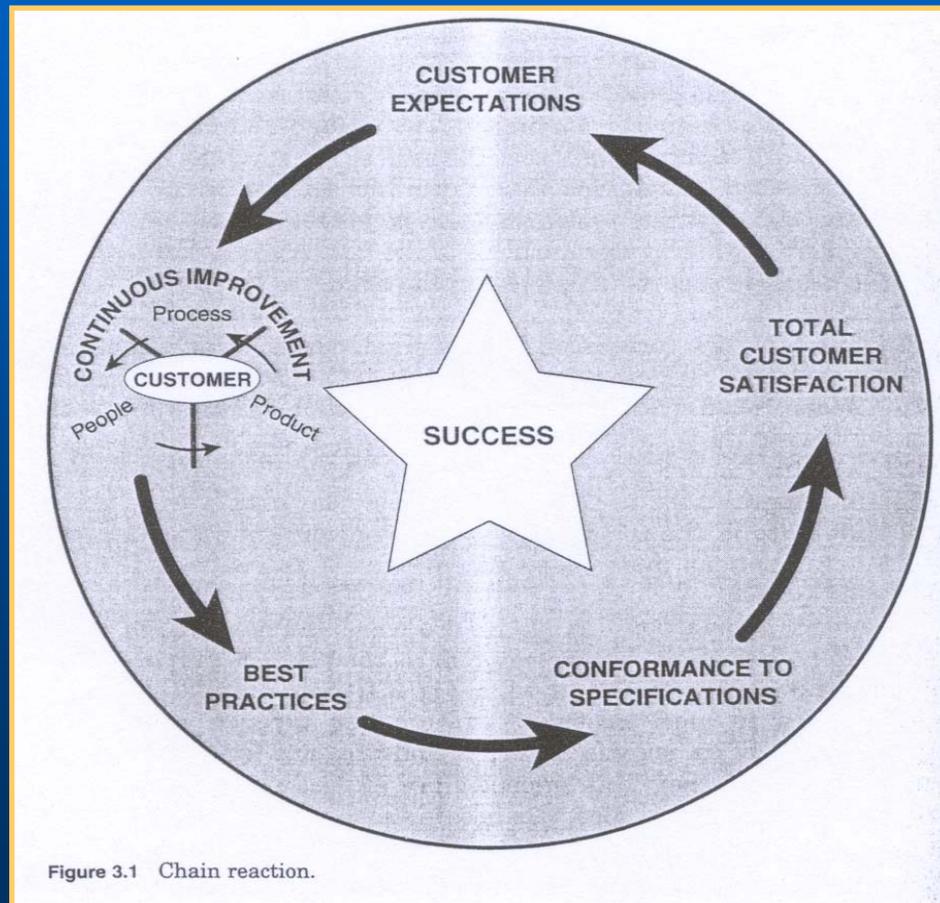


- Customer-driven project management focuses on the future.
- The vision is always aimed toward excellence. The objective is total customer satisfaction, both internal and external.
- This means meeting or exceeding customer expectations, and requires establishing and maintaining a customer-driven organizational culture focused on doing whatever it takes to add value for the customer.

Focus on the future



Chain Reaction



Focus on the future



Vision, Mission, Strategy, Tactics, Operations



Customer-Driven Project Management



- Customer-driven approach focuses an organization on determining and acting on the internal and external forces that influence the customer.
- CDPM gears an organization to improving quality, increasing productivity, and reducing costs to satisfy its customers.

Customer-Driven Project Management



- Customer-driven project management stresses:
 - Constant training and education,
 - Right-sized and team-based organizations, and
 - Use of people's full capabilities to add value while maximizing the human resource

CDPM- Background



- Scientific approach to management was derived and promoted by Frederick Taylor, Henry Fayol, and Max Weber to support the concept of efficiency and control.
- The *management* of things was the emphasis, and the production output was the major focus. Project management grew out of this kind of thinking.
- The psychologists concluded that it was not the monotony of the work that caused employee dissatisfaction, but rather management's lack of interest in the workers.

CDPM- Background



- Dr. Walter Shewhart's statistical approach, called *statistical quality/process control*, is the foundation for the *quality* management approach.
- Total quality management (TQM) includes a wide range of management practices, methods, tools, and techniques.

CDPM- Background



- Some of the major contributors include W. Edwards Deming, Joseph M. Juran, Armand v: Feigenbaum, Kaoru Ishikawa, Genichi Taguchi, Philip B. Crosby, Peter Drucker, Tom Peters, H. James Harrington, A. Richard Shores, and many others.
- The new millennium has introduced a new stage in the development of project management-we call it "*Embedded Project Quality.*"

CDPM- Background



- Project management became necessary because traditional organizations structured around functional activities, such as *engineering, manufacturing, support, finance*, and human resources, could not meet the demands of complex projects.
- As technology increasingly became the basis for economic development, project management prospered as the dominant mode of organization

CDPM- Background



- According to project management standards, a successful project is one that is completed on *time* and within *cost* and meets *performance criteria*.

CDPM- Definition



- Customer-driven project management is a management philosophy, a set of guiding principles, a methodology, and a set of tools and techniques that stress *customer-driven deliverables*, including products and services.
- It applies the proven techniques of *project management, continuous improvement, measurement, people involvement, and technology*.

CDPM- Definition

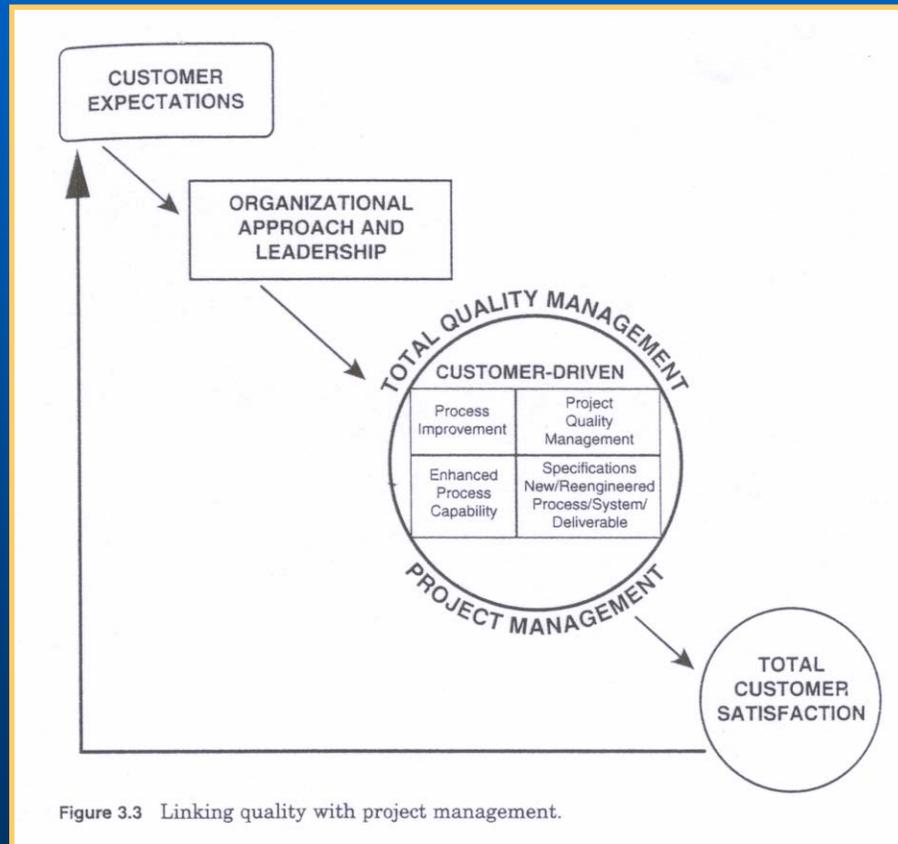


- It integrates *project management*, *total quality management*, and a *customer-driven structure*.
- CDPM is a process that is wholly driven by the customer at every turn and which places the customer in the role of project leader from start to finish.
- The essence of CDPM is that quality is defined by the customer's total satisfaction.

CDPM- Definition



Linking Quality with Project Management



CDPM- Definition



- Customer-driven project management involves the following:
 - The project is determined by cooperation between customer and supplier through a structured process.
 - The customer drives the project.
 - Customer-driven teams link the customer, process owners, and suppliers.
 - Customer-driven teams are fully empowered to perform and improve the project.
 - A disciplined customer-driven project management methodology is used.

CDPM- Definition



- A further understanding of customer-driven project management :

Customer-driven means the customer or customer's voice is the primary focus.

Project is any series of activities that has a specific end or objective.

Management involves optimizing resources, that is, getting the most out of both technology and people.

CDPM- Philosophy



- CDPM- Philosophy requires a confidence in the development of a joint understanding of customer needs and expectations along with internal processes of the supplier's organization.
- The philosophy stresses a systematic, integrated, consistent, disciplined approach involving customers, process owners, and suppliers through all the phases of the project.

CDPM- Philosophy



- There must be a basic belief in cooperation as the primary means to success. Also, *rewards* and *recognition* must be acknowledged as essential elements.
- Involvement of everyone, creativity and innovation, Vision and leadership are the essentials.

CDPM- Principles



- CDPM requires the creation and maintenance of an environment of integrity, ethics, trust, open communications, teamwork, empowerment, pride of accomplishment, and commitment.
- Everyone is empowered to perform and improve the project. Everyone is focused on prevention of defects, reduction of variability, and elimination of waste and losses.
- Optimal life-cycle cost is the goal.

CDPM- Uniqueness



- The unique aspects of customer-driven project management include:

| Traditional project management | Customer-driven project management |
|---|---|
| Selected by customer and bid out | Selected by structured cooperation between customer and project supplier |
| Customer is an outsider to the project team | Customer is driver-leader of project team |
| Concept phase defines project details | Concept phase performs quality improvement analysis; project details specified in design phase |
| Project teams perform tasks in functional organizations and "handoff" | Customer-driven teams fully empowered to perform tasks and improve processes to satisfy customers |
| Project manager has role of controller | Customer has role of leader |
| Improvements target one-shot modifications of deliverables | Continuous improvement of processes and the deliverable by customer-driven teams |

CDPM- Process

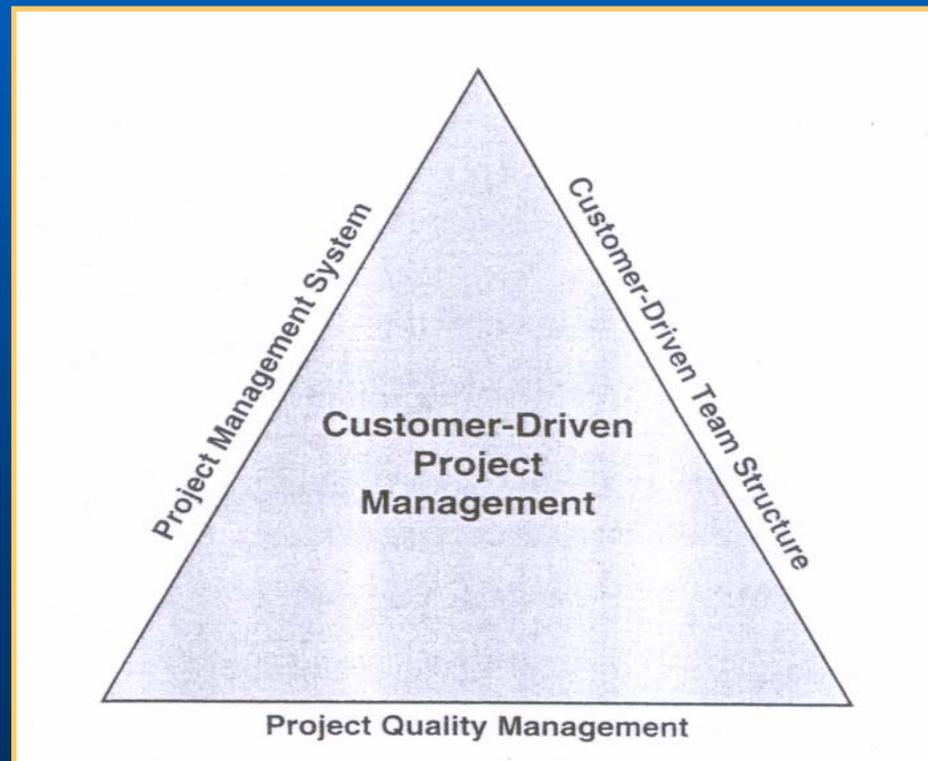


- The customer-driven project management process involves the following:
 - A total quality management environment .A project management system
 - A customer-driven management team structure

CDPM- Process



Elements of the Customer-driven project management process



CDPM- Life Cycle



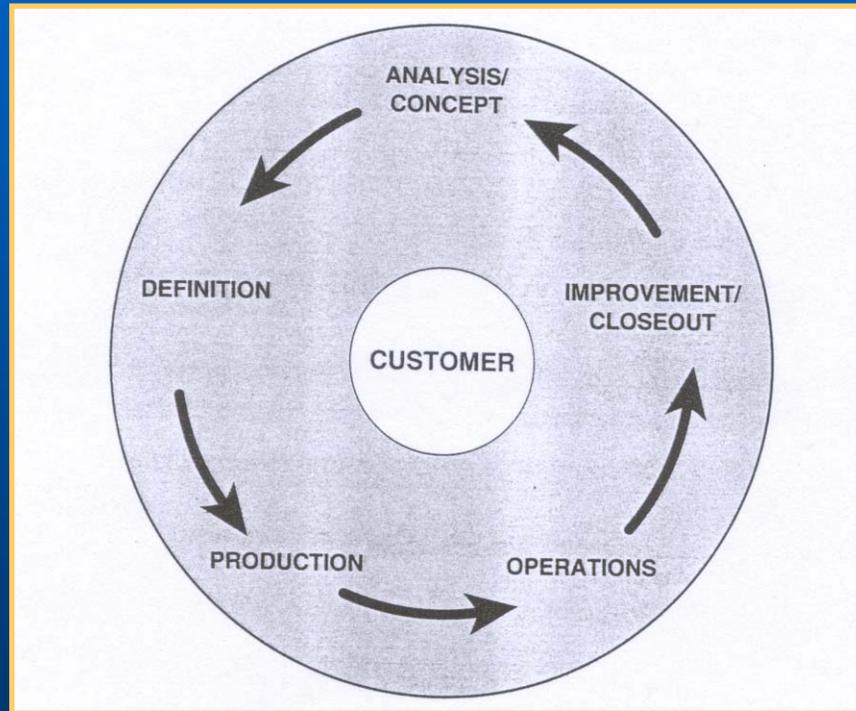
- The customer-driven project management life cycle includes:
 - **Concept**
 - **Definition**
 - **Production**
 - **Operations**
 - **Continuous improvement/closeout**

- In customer-driven project management, the aim is to avoid closeout as long as possible through continuous improvement.

CDPM- Life Cycle



Customer-driven project management life cycle



CDPM- Methodology



- The customer-driven project management improvement methodology forms the disciplined, structured process for ensuring that a deliverable totally satisfies the customer.

CDPM- Methodology

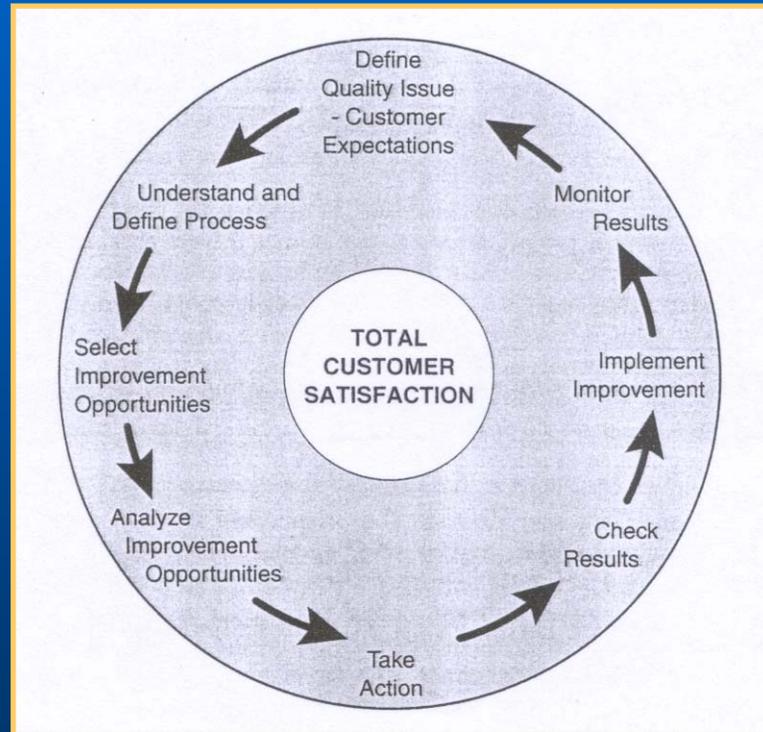


- The CDPM improvement methodology consists of the following eight steps:
 - 1 Define quality issues.
 - 2 Understand the process.
 - 3 Select improvement opportunities.
 - 4 Analyze the improvement opportunities.
 - 5 Take action.
 - 6 Check results.
 - 7 Implement the . improvement.
 - 8 Monitor the results for continuous improvement.

CDPM- Methodology



The CDPM continuous improvement methodology





Chapter 4

Historical Perspective on Project Quality Management