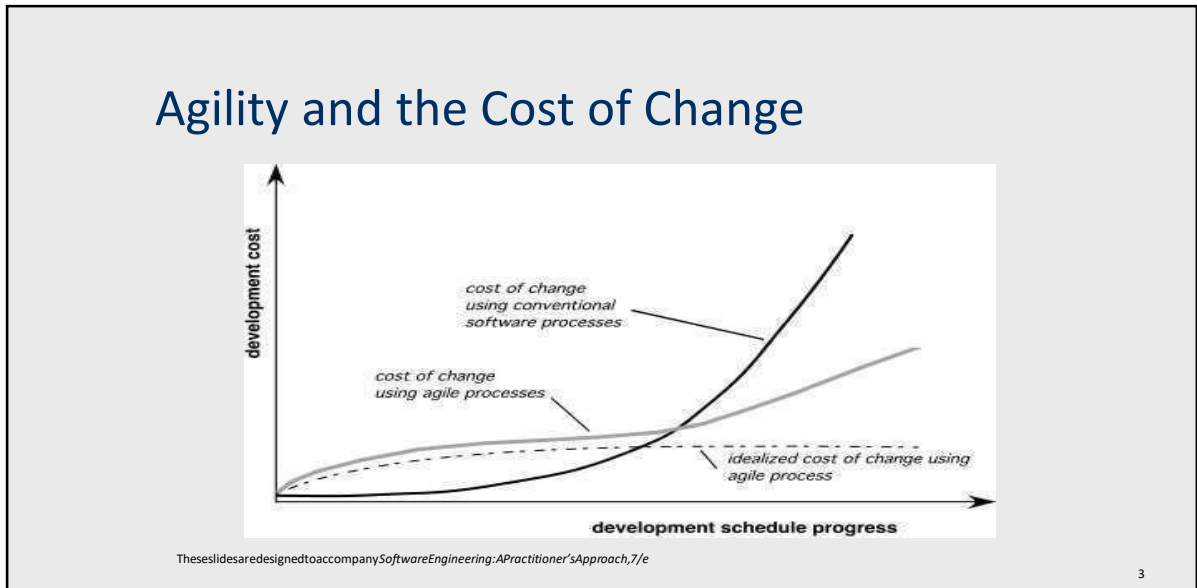


**INTRODUCTION TO AGILITY:**

- Agility is the ability to **respond quickly to changing needs**. It encourage steam structures and attitude sthat make **effective communication among all stakeholders**.
- It emphasizes **rapid delivery of operational of tware** and deemphasizes the importance of intermediate work products.
- It adopts the **customer as a part of the development team**.
- It helps in **organizing a teams of habits in control of the work performed**.Yielding
- Agility results in **rapid, incremental delivery of software**.

**Agility and the Cost of Change:**

- The cost of change in software development increases nonlinearly as a project progresses (Figure1.13, solidblackcurve).
- It is relatively easy to accommodate a change when software team gathered its requirements.
- The costs of doing this work are minimal, and the time required will not affect the outcome of the project.
- Cost varies quickly, and the cost and time required ensuring that the change is made without any side effects is non trivial.
- **An agile process reduces the cost of change because software is released in increments and changes can be better controlled with in an increment.**
- Agile process “flattens” the cost of change curve (Figure 1.11, shaded, solid curve), allowing a software team to accommodate changes late in a software project without dramatic cost and time impact.
- When incremental delivery is coupled with other agile practices such as continuous unit testing and pair programming, the cost of making a change is attenuated.



**Figure 1.13** Change costs as a function of time in development

#### 4. AN AGILE PROCESS

An Agile Process is characterized in a manner that addresses a number of key assumptions about the majority of software project:

1. It is difficult to predict which software requirements will persist and which will change.
2. It is difficult to predict those customer priorities will change.
3. It is difficult to predict them much design is necessary before construction.
4. Analysis, design, construction, and testing are not as predictable.

#### AGILITY PRINCIPLES:

1. To **satisfy the customer through early and continuous delivery of software.**
2. **Welcome changing requirements, even late in development.**
3. **Deliver working software frequently, from a couple of weeks to a couple of months.**
4. **'Customers and developers must work together daily throughout the project.**
5. **Build projects around motivated individuals.**
6. **Emphasis on face-to-face communication.**
7. **Workings of tware are the primary measure of progress.**
8. Agile processes promote **sustainable development.**
9. Continuous attention to **technical excellence and good design enhances agility.**

**10. Simplicity**—the art of maximizing the amount of work not done—is **essential**.

**11. Self-organizing teams produce the best architectures/requirements/design.**

**12. The team reflects on how to become more effective** at regular intervals.

**13. Human Factors:**

- Agile development focuses on **the talents and skills of individuals, molding the process to specific people and teams.**
- *The process molds to the needs of the people and team*, not the other way around.
- A number of key traits must exist among the people on an agile team and the team itself:
  - ✓ Competence.
  - ✓ Common focus.
  - ✓ Collaboration.
  - ✓ Decision-making ability.
  - ✓ Fuzzy problem-solving ability.
  - ✓ Mutual trust and respect.
  - ✓ Self-organization.

