

Rational Unified Process

- RUP is a software (development | design) process that is:
 - Use case-driven
 - Architecture-centric
 - Iterative and incremental

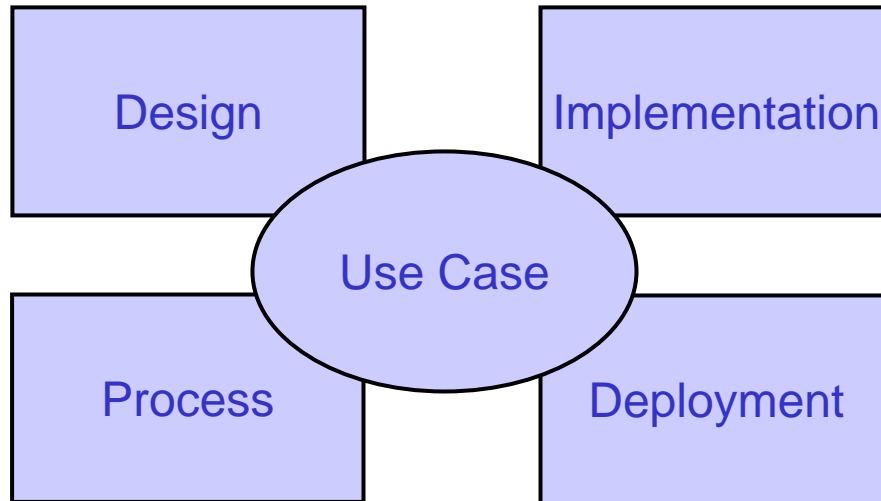
Use Case Driven

- *Use cases* are the primary artifact for establishing the behavior of the system, verifying and validating the system's architecture, testing, and communicating with stakeholders.
- Start with use cases.
- Talk to users to find out what the system is supposed to do.

Architecture–centric

- *Architecture–centric* means that a system's architecture is used as the primary artifact for conceptualizing, constructing, managing, and evolving the system under development.
- Create a big picture of the system first.
- Then add details.

4+1 Architectural Views

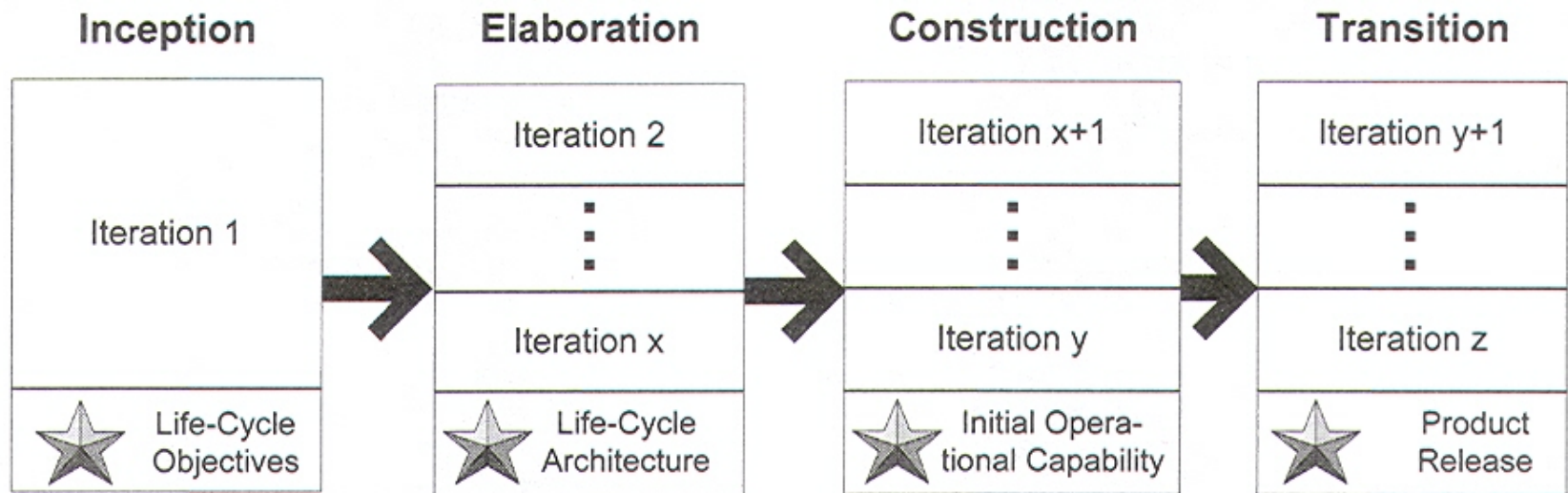


- Use case– interactions with the system
- Design view– components that constitute the system
- Process view– aspects that involve timing and flow of control
- Implementation view– things assembled and realized to form the system
- Deployment view– geographic distribution of SW and HW

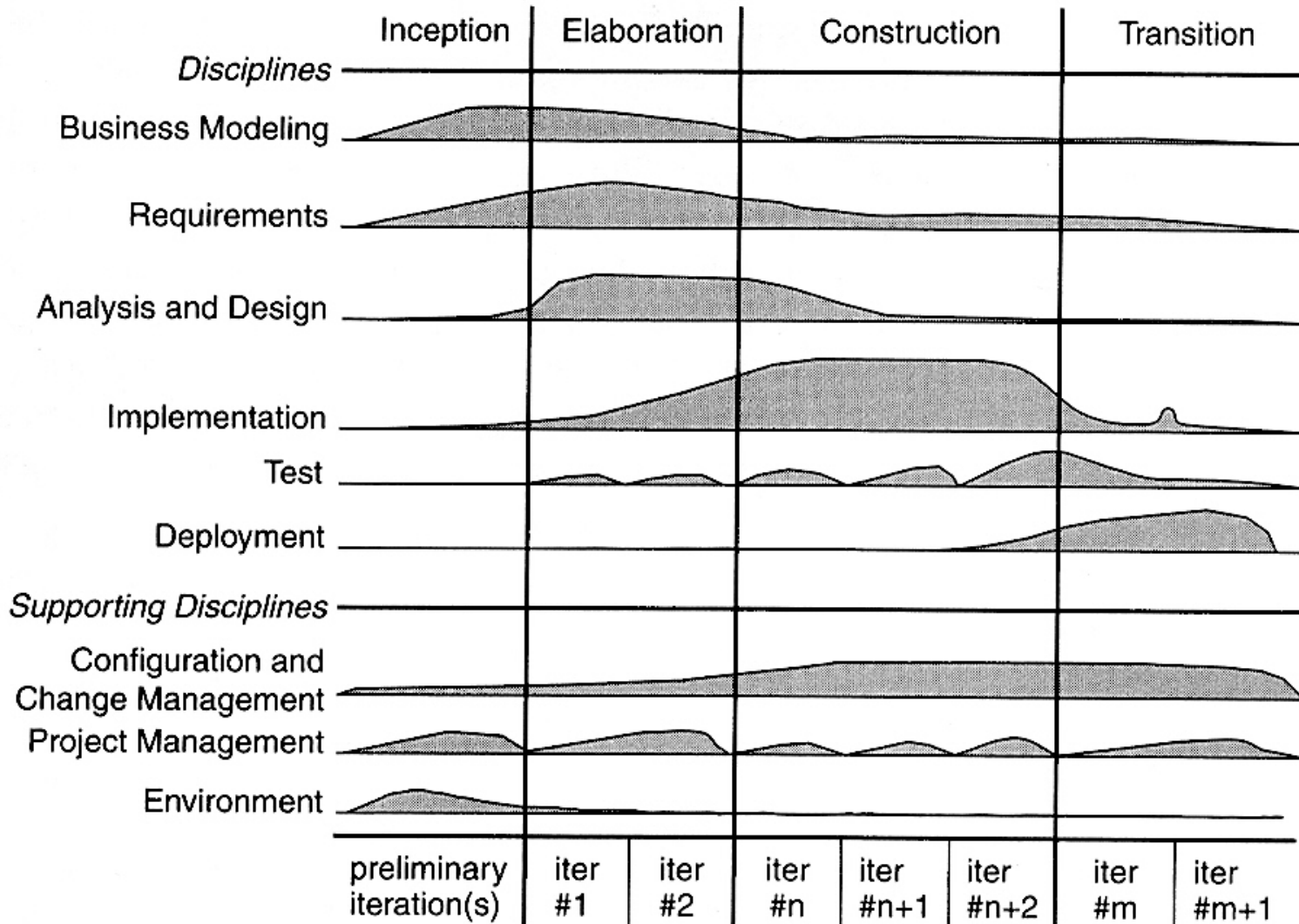
Iterative and Incremental

- An *iterative process* is one that involves managing a stream of executable releases. An *incremental* process is one that involves the continuous integration of the system's architecture to produce the releases. Together, the result is a *risk-driven process*.
- Lots of small improvements.
- Build on previous work.
- Focus on the reducing the most significant risks.

Four Phases



Putting It Together



Example: Video Store

Check out a video

1. Clerk scans customer card
2. Clerk scans videos
3. Monitor displays price and rental period

Check in a video

1. Clerk scans video
2. System calculates late fees

Register new customer

1. Clerk enters customer data
2. Clerk swipes credit card
3. System prints customer card

What conceptual classes do we have?

- Video
- Customer
- CustomerCard
- Clerk
- Price
- RentalPeriod
- Fee
- CreditCard

- Others?