

Predictive and Adaptive model

 	Section
 	Status 1

Predictive (plan-driven)

1) Waterfall

- Linear phases; upfront, stable requirements.
- Heavy documentation; late changes are costly.
- Suits regulated/low-volatility projects and structured teams.

2) V-Model

- Each dev phase has a matching test phase (traceability).
- High reliability via early test planning; low flexibility.
- Fits safety/quality-critical work with strict QA.

Adaptive (change-embracing)

3) Scrum

- Short sprints; backlog reprioritized frequently.
- High stakeholder interaction (Product Owner); small cross-functional teams.
- Great for complex, evolving requirements.

4) Kanban

- Flow-based; limit WIP; add work anytime.
- No fixed iterations; optimize throughput and lead time.
- Ideal for maintenance/support/continuous delivery.

5) Extreme Programming (XP)

- Very short cycles; on-site customer collaboration.

- Strong engineering practices: TDD, pair programming, refactoring, CI.
- Best for small teams needing rapid change with high code quality.