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Agaile is a project management methodology that emphasizes flexibility collaboration and customer satisfaction through iterative development and continous improvement. Below is a comparative analysis of common agail approaches in terms of how they work, their applicability and cost effectiveness.

1. Scrum:

How it works:
→ Uses fixed-length iterations called "sprints"
→ Includes roles like Scrum master, product owner, and development team.
→ Work is tracked via artifacts like product Backlog, sprint Backlog and Burndow chart.
→ Focuses on daily standups, sprint planning, sprint reviews, and retrospectives.

Applicability:-
→ Best for projects with clear deliverables but evolving requirments.
→ Suitable for cross-functionality teams.
→ Works well in software development, product design. and Research.

→ Effectiveness in terms of costs:-

(i) Moderate cost, requires training for roles and tools.

(ii) cost-effective for projects with high adaptability needs, as it reduces rework through iterative reviews.

2: Kanbon:

How it works:

(i) Visualizes workflow using a Kanbon board.

(ii) Focuses on limiting work In-progress (WIP) to improve flow effecency.

(iii) Continous delivery without fixed timeboxes.

Applicability:

(i) Ideal for operational tasks or projects with frequent changes.

(ii) used in software maintance, support teams, or marketing.

Effectiveness in terms of costs:

(i) Low cost minimal setup and training ~~requir~~ required.

(ii) Highly cost-effective for teams with fluctuating priorities and no fixed deadline.

3. Extreme programming (XP):

How it works:

(i) Emphasizes engineering practices like pair programming, test-driven development (TDD), and continous integration.

(ii) Promotes frequent releases to improve feedback loops.

Applicability:

(i) Suited for small to medium-sized teams.

(ii) Effective in environments where quality is critical and Requirements change frequently.

Effectiveness in terms of costs:

(i) High initial costs due to rigorous practices and tool investments.

(ii) cost-effective in the long term for high-quality deliverable, reducing defect costs.

4. Leam Software Development:-

How it works:

(i) Focuses on eliminating waste, amplifying learning and delivering as fast as possible.

(ii) Encourages decisions based on real-time feedback and simplicity.

Applicability:-

(i) Suitable for startups and projects requiring rapid delivery with limited resources.
(ii) Effective in manufacturing and software development.

Effectiveness in terms of costs:

(i) cost-effective for lean budgets, minimizes waste and overproduction.
(ii) Risk of higher costs if team lacks discip

5. Crystal:

How it works:

(i) offers a family of methodologies tailored to team size and project criticality.
(ii) Encourage frequent communication automated testing and reflective improvement.

Applicability:

(iii) Works best in smaller teams with co-located members.
(iv) flexible for various industries beyond software.

Effectiveness in terms of costs:

(i) Moderate costs, adaptable to team needs and minimize overhead.
(ii) cost-effective due to its tailored approach

but not ideal for distributed teams.

## 6. Feature-Driven Development (FDD):

### How it works:

(i) Focuses on creating a list of feature and delivering them incrementally.

(ii) Involves five main activities: Develop overall model, Build feature list, plan by feature, Design by feature, Build by feature.

### Applicability:

(i) Best for large-scale projects with structured teams.

(ii) Often used in enterprise software development

### Effectiveness in terms of costs:

(i) High initial costs due to up front modeling and planning.

(ii) cost-effective for large, complex projects with predictable requirements.