Agile vs. Waterfall:

Choosing the Right Approach for ChadaTech

”Presentation for Leadership Decision-Making”

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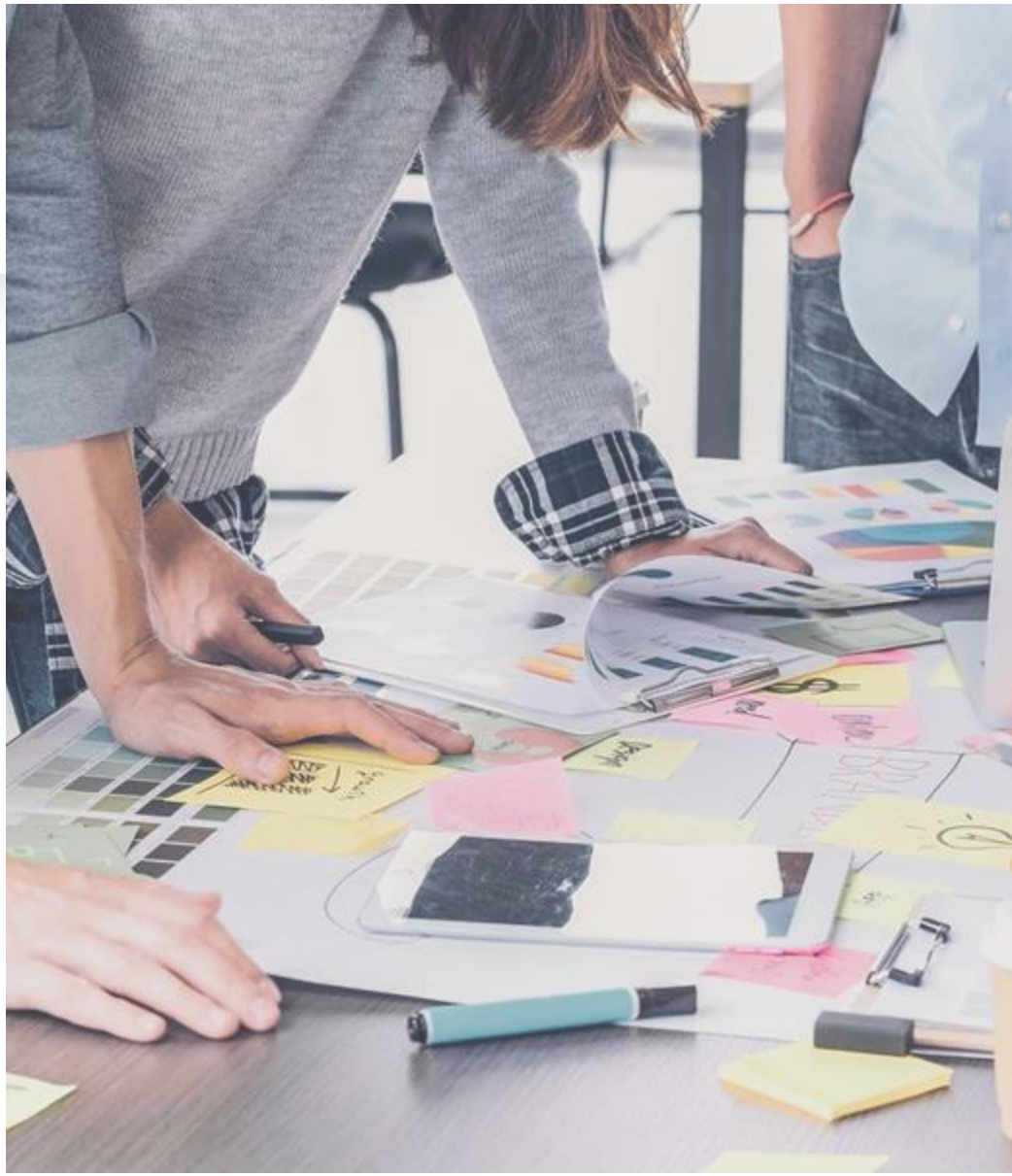
Explaining Agile Roles

Scrum-Agile Team Roles and Their Importance:

- **Product Owner:** Defines and prioritizes the product backlog to ensure business value.
- **Scrum Master:** Facilitates Scrum events, removes roadblocks, and supports Agile adoption.
- **Developers:** Build, test, and iterate on features based on user stories and feedback.
- **Testers:** Ensure quality by verifying acceptance criteria and identifying defects.
- **Stakeholders:** Provide feedback to align development with business needs.

Why it matters: Agile fosters **collaboration, flexibility, and faster feedback loops**, leading to higher-quality products.

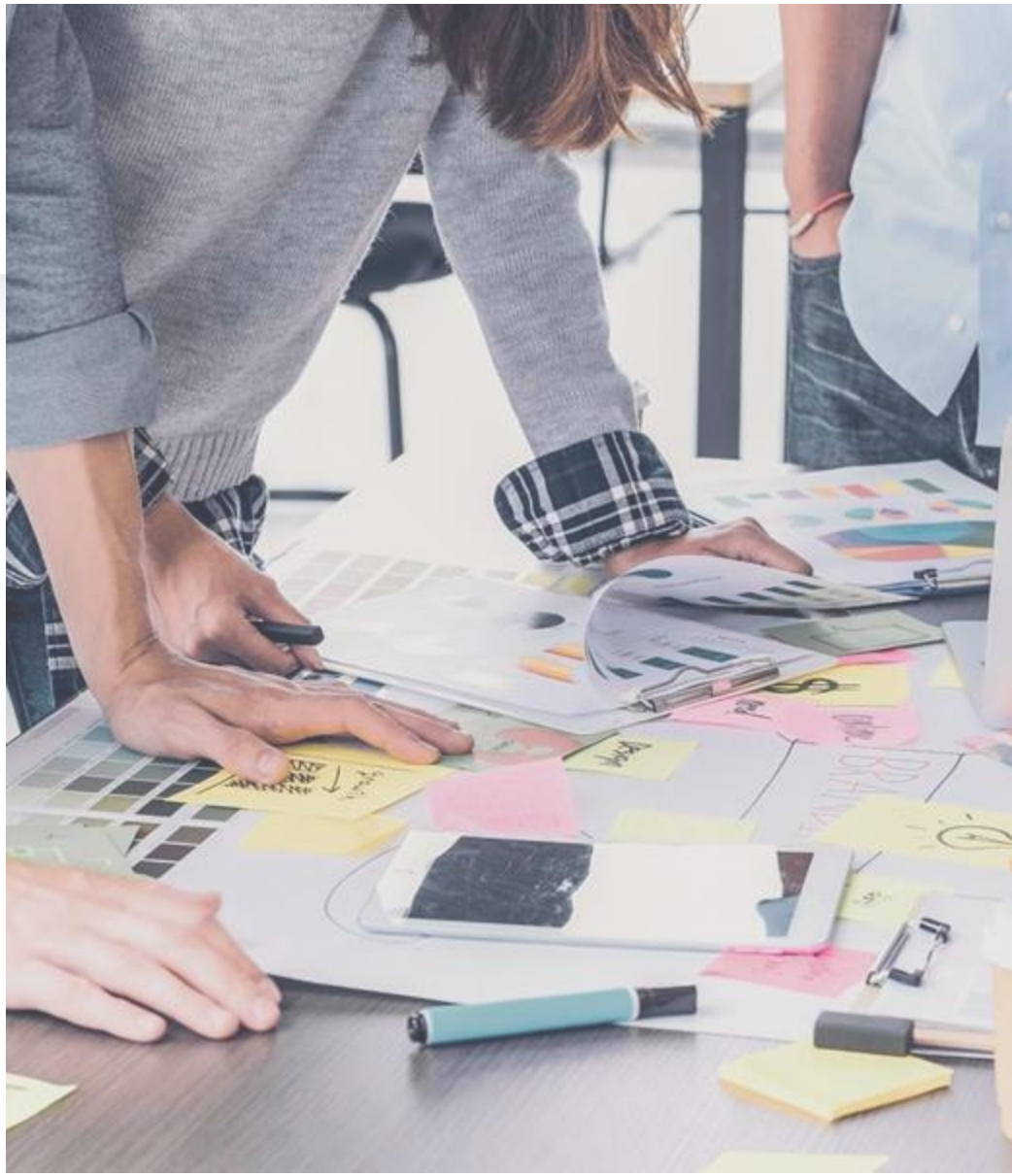


Explaining Agile Phases

How the Software Development Life Cycle Works in Agile:

- **Concept & Initiation:** Define business needs and create a high-level product backlog.
- **Sprint Planning:** Select and refine user stories for development.
- **Development & Testing:** Implement features in short sprints, integrating testing continuously.
- **Sprint Review:** Demonstrate completed work, gather feedback, and improve processes.
- **Release & Maintenance:** Deploy working software in iterations and refine based on user input.

Why it matters: Agile's **iterative** nature ensures continuous improvement, faster time-to-market, and better risk management.



Waterfall vs. Agile Comparison

How Waterfall Would Have Changed the Process:

Feature	Waterfall	Agile
Development Approach	Sequential (Phases: Requirements → Design → Implementation → Testing → Deployment)	Iterative (Continuous development and feedback loops)
Flexibility	Rigid; changes are difficult to implement mid-project	Adaptable; allows modifications at any stage
Testing	Performed at the end of development	Continuous, integrated within each sprint
User Feedback	Limited; feedback is gathered after project completion	Frequent; users provide input during each sprint
Risk Management	Higher risk due to late-stage testing	Lower risk due to early issue detection

Example: If user story requirements changed mid-project, Waterfall would require redoing documentation and delaying progress, whereas Agile allows quick backlog adjustments.

Waterfall or Agile?

Choosing the Right Approach

Key Factors to Consider:

- **Project Scope & Complexity:** Agile is ideal for complex, evolving projects, while Waterfall suits well-defined requirements.
- **Flexibility Needs:** Agile is best for projects requiring frequent changes.
- **Stakeholder Involvement:** Agile works well when continuous feedback is needed.
- **Risk Tolerance:** Agile mitigates risk through iterative improvements.

Conclusion:

”Based on our experience, Agile was the best choice for the SNHU Travel project because it enabled faster delivery, flexibility, and collaboration. ChadaTech should consider Agile company-wide to improve efficiency.”

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