

AGILE SOFTWARE DEVELOPMENT PROCESS

CASE STUDY ANALYSIS

Submitted by: Khushi Gupta, Rahi Agarwal

CASE STUDY

The consumer finance company faced challenges due to changing state and federal regulatory compliance requirements, resulting in the need to reinvent their custom-built storefront and home office systems. The IT and PMO teams were not equipped to handle the complexities of developing new systems, leading to schedule overruns, turnover of staff and technologies, and the need to restart projects multiple times.



ADAPTED WATERFALL

Extensive and Phased Requirements Analysis

- Deep Dive Regulatory Analysis
- Business Process Mapping
- Iterative Stakeholder Workshops
- Preliminary Technical Feasibility
- Living Requirements Specification Document

High-Level and Modular Design

- Modular Architectural Design
- Regulatory-Compliant Data Modeling
- Iterative UI Wireframing/Mockups
- Expert-Consulted Technology Stack Selection
- Integration Planning

Phased and Incremental Implementation

- Prioritized Modular Development
- Strict Coding Standards and Documentation
- Regular Internal Builds and Integration Testing
- Dedicated (Potentially Augmented) QA Team

Rigorous and Independent Testing

- Unit Testing
- Integration Testing
- System Testing
- Heavy UAT with Business and Compliance
- Independent Verification and Validation (IV&V)

Phased Deployment and Rollout

- Pilot Deployment
- Gradual Rollout
- Comprehensive Training and Support
- Careful Data Migration and Cutover Planning

Maintenance and Compliance Monitoring

- Ongoing System Monitoring
- Regular Maintenance and Bug Fixes
- Continuous Regulatory Change Monitoring
- Proactive Compliance Updates
- Robust Change Management Process

Analysis



BENEFITS

- Structured Framework for Compliance
- Emphasis on Upfront Planning
- Modular Design for Maintainability
- Rigorous Testing and Validation
- Phased Rollout for Risk Mitigation



CHALLENGES

- Inherent Inflexibility to Regulatory Changes
- Potential for Late and Costly Rework
- Limited Early User Feedback and Buy-in
- Reliance on Initial Expertise and Analysis
- Risk of Team Turnover Impact



DRAWBACKS

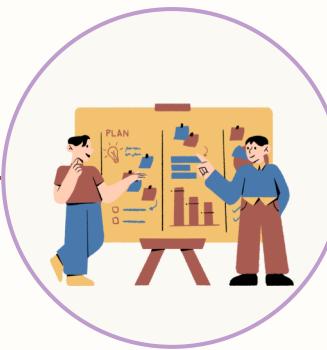
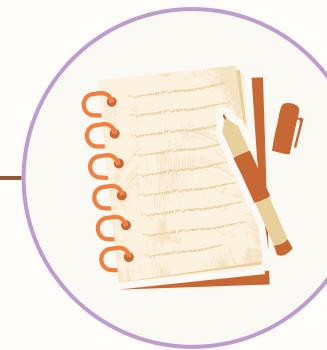
- High Risk of Repeating Past Failures
- Delayed Value Delivery and ROI
- Increased Potential for Non-Compliance
- Lower Team Morale and Increased Turnover Risk
- Missed Opportunities for Early Learning and Adaptation



SCRUM



The Phases



Regulatory-Driven Product Backlog Emergence

- In-Depth Regulatory Workshops
- User Story Mapping with Compliance Overlay
- Technical Requirements Definition for Compliance
- Risk Assessment and Prioritization
- Initial Estimation by the Development Team
- Definition of "Ready"

Short, Compliance-Focused Sprints

- Sprint Planning Meeting
- Task Breakdown
- Sprint Backlog Creation
- Commitment and Transparency

Transparent Daily Scrums

- Daily Scrum (Stand-up)
- Scrum Master Facilitation

Iterative Development with Built-in Quality and Compliance

- Collaborative Development
- Test-Driven Development (TDD) or Behavior-Driven Development (BDD)
- Pair Programming and Code Reviews
- Continuous Integration and Continuous Delivery (CI/CD)



Frequent Compliance Validation and Adaptation

- Sprint Review Meeting
- Compliance Stakeholder Feedback
- Product Backlog Refinement



Empirical Process Improvement for Team Effectiveness

- Sprint Retrospective Meeting
- Action Planning



Analysis

BENEFITS

- Enhanced Adaptability to Regulatory Changes
- Improved Compliance through Continuous Feedback
- Increased Transparency and Reduced Risk
- Empowered and Collaborative Teams
- Faster Delivery of Compliant Functionality
- Better Alignment Between Business, IT, and Compliance

CHALLENGES

- Requires Strong Product Ownership with Regulatory Acumen
- Overcoming Resistance to Agile Principles
- Ensuring Rigorous Documentation for Compliance
- Managing Scope in a Dynamic Regulatory Landscape
- Building Trust and Collaboration Across Teams

DRAWBACKS

- Risk of Non-Compliance
- Ineffective Implementation ("Agile Fall")
- Difficulty in Long-Term Planning
- Increased Communication Overhead
- Potential for Team Burnout
- Risk of Technical Debt

CONCLUSION

While an adapted Waterfall methodology offers a structured approach, its inherent inflexibility poses a significant risk for the consumer finance company grappling with evolving regulations and a history of project failures; conversely, Scrum's iterative and adaptive nature, with its emphasis on continuous feedback and team empowerment, presents a more promising path by enabling quicker responses to regulatory changes and fostering a collaborative environment for delivering compliant and valuable systems, though its success hinges on strong Agile leadership, team buy-in, and a strategic approach to compliance documentation.

THANK YOU