



Tips to improve your organization's software development life cycle

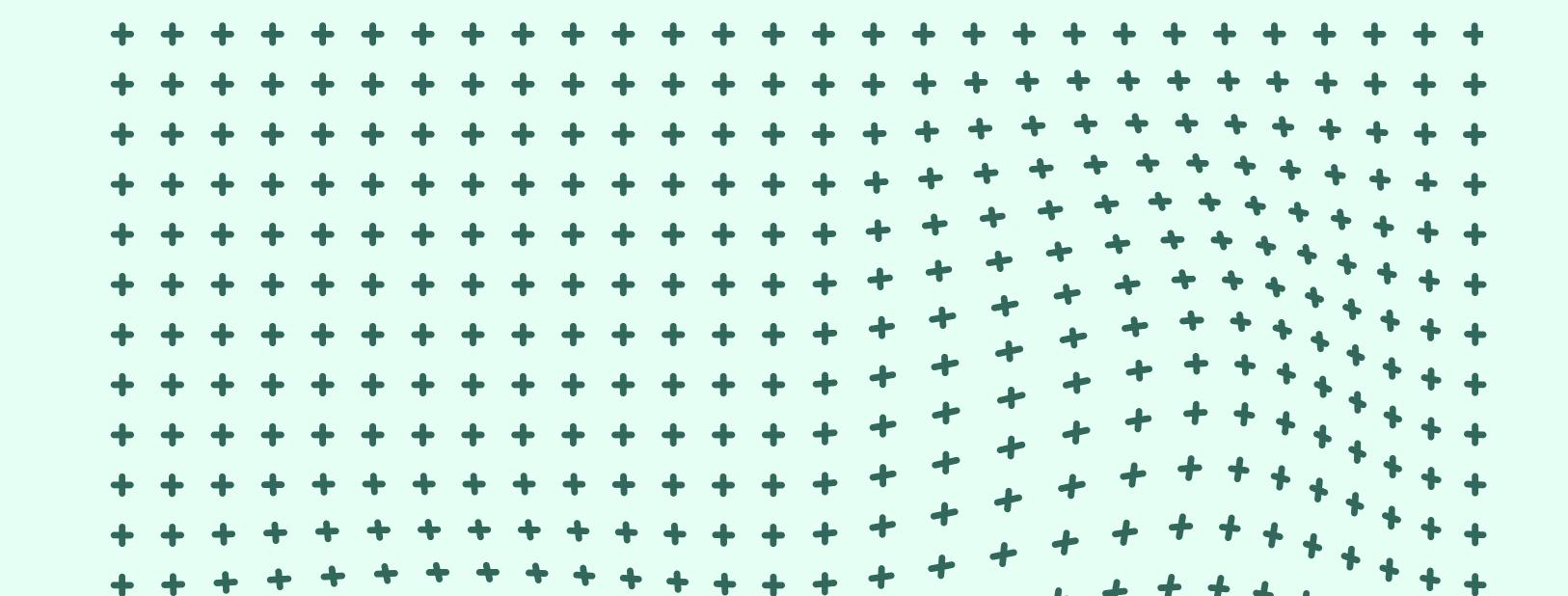
Software development is constantly evolving. While most developers are familiar with the Software Development Life Cycle (SDLC), recent advancements in technology and methodologies have led to an updated model, the Secure Software Development Life Cycle (SSDLC). The SSDLC emphasizes security at every stage, ensuring robust and resilient software products.

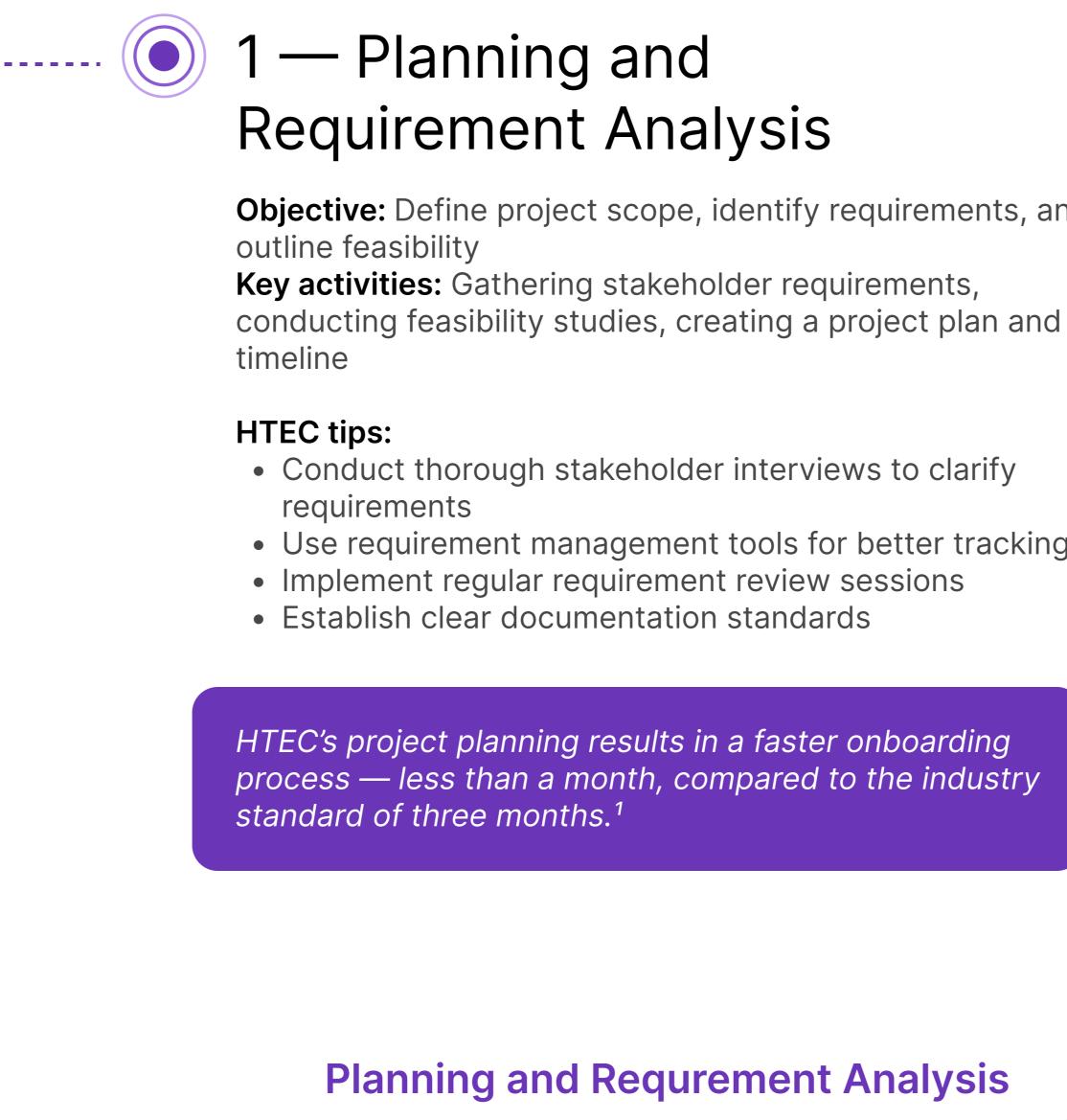
As a global provider of sophisticated software engineering services, HTEC embraces a holistic approach to software development. We optimize each stage to deliver quality software quickly. Let's explore the SSDLC with HTEC tips to enhance operational efficiency.

We've also included data from two recent reports to illustrate how our approach makes a difference.

Are you looking to reduce costs, accelerate software rollouts, and capitalize on reliable, modern digital engineering practices?

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Maintenance

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Objective: Define project scope, identify requirements, and conducting feasibility studies, creating a project plan and Use requirement management tools for better tracking

System Design



2 — System Design

Objective: Translate requirements into a detailed system

Key activities: Designing system architecture and the tech stack, choosing a development methodology, identifying high-level technical risks

- Use modular design principles to manage complexity
- Conduct design reviews with cross-functional teams
- Apply AWS's 6 Pillars of the Well-Architected Framework
- Standardize design templates and documentation
- Incorporate a security-first approach

HTEC experiences up to 10X fewer blocker issues compared to industry counterparts. 1



6 — Maintenance

Objective: Provide ongoing support and enhancements. Key activities: Monitoring system performance, addressing bugs and issues, implementing updates and improvements

HTEC tips:

- Establish a robust incident management process
- Use monitoring tools to detect issues proactively
- Introduce incident management process Create a detailed maintenance schedule
- Regularly review and update maintenance processes

HTEC's monthly average of zero to low single-digit defects across the lifecycle significantly decreases maintenance

SSDLC

Secure Software Development Life Cycle



3 — Implementation (Coding)

Objective: Convert the system design into executable code Key activities: Writing and compiling code, unit testing, implementing version control practices, performing code

- Implement pair programming and code reviews
- Use static code analysis tools to detect issues early
- Automate build and deployment processes
- Ensure continuous integration and continuous deployment (CI/CD) pipelines are in place

HTEC reduces technical debt by up to 50X compared to industry counterparts.1

Deployment



5 — Deployment

Objective: Release the software to the production

Key activities: Planning a deployment strategy, configuring the production environment, monitoring the deployment

- Use blue-green deployment strategies to reduce
- Conduct pre-deployment checklists and rehearsals
- Leverage observability techniques (monitoring, logging,
- Implement deployment automation Continuously monitor post-deployment performance

HTEC decreased the time required for a new product release by 12 months across three-year engagements.²





Implementation (Coding)

4 — Testing

Objective: Identify and fix defects to ensure the software

Key activities: Software and security testing (unit, integration, system, acceptance, regression, performance), defect tracking and management

HTEC tips:

- Automate repetitive testing tasks
- Use test management tools to streamline the testing
- Integrate security testing in all testing phases
- Continuously update test cases based on feedback and changing requirements

HTEC reduces testing and maintenance costs by up to 10X by identifying and fixing defects in production.1

1 - SonarQube code analysis report

2 - Total Economic ImpactTM study commissioned by HTEC and conducted by Forrester Consulting. Study results are based on a composite organization.