

STT	Người ký	Đơn vị	Thời gian ký	Ý kiến
1	ĐẶNG TRUNG ANH	Deputy General Director In Charge Of It - Viettel Peru S.A.C - Tổng công ty CP Đầu tư Quốc tế Viettel	10/01/2023 06:19:32	
2	NGUYỄN HỮU THUẬN	Head Of Business Process Department - Department Head - Process Department - IT Division - Viettel Peru - Viettel Peru S.A.C	06/01/2023 02:56:16	



**SOFTWARE DEVELOPMENT
PROCESS BY AGILE METHOD**




Effective date: 05/01/2023

Times issue: 01

TRACKING TABLE

STT	Page	Amendments	Effective date
		First issued	05/01/2023

DO NOT COPY

	Editor	Review	Approve
Signature	 Nguyen Thi Mai	 Nguyễn Hữu Thuận	 Đặng Trung Anh



**SOFTWARE DEVELOPMENT
PROCESS BY AGILE METHOD**

Effective date: 05/01/2023

Times issue: 01

SUMMARY

1. Purpose

Describing steps software development according to Agile method based on the project characteristics of Viettel Peru.

2. Applied object

Apply for all software development projects at all Departments if have software development activities.

3. Responsibility

- All Departments are responsible for compliance and correct implementation of the steps in the process.
- The Process Department periodically checks the compliance regulations and instructions of all Departments.

4. Related document

No	Document	Effective date
1	Statement about using BPMN language to draw process 11698/TTr-Process	28/11/2022
2	PROCESS.VTP.IT.01 Receiving and developing software requirements process in Viettel Peru	15/12/2022

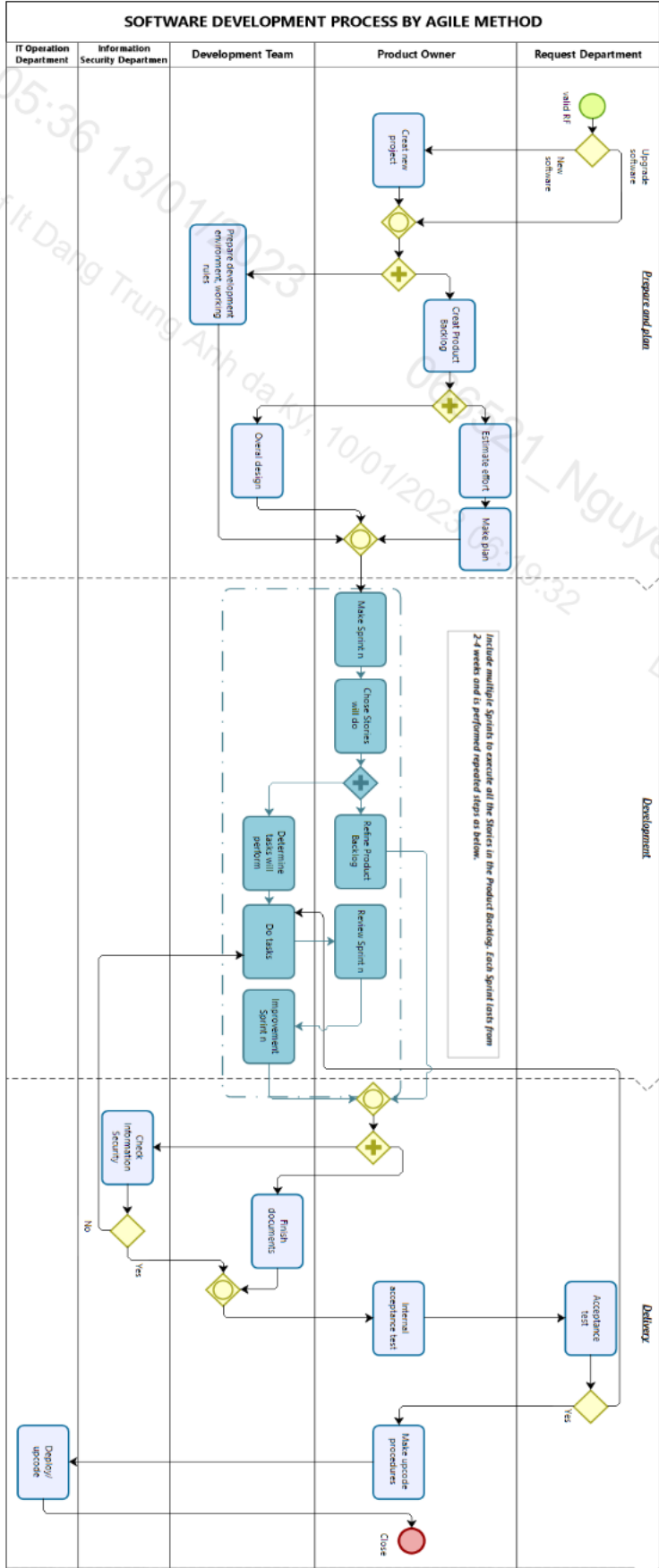


SOFTWARE DEVELOPMENT PROCESS BY
AGILE METHOD

Effective date: 05/01/2023

Times issue: 01

5. Flow chart



Flowchart, detailed description of each Step, Input, Output, Templates of this Process at:
http://process.bitel.com.pe/bitel-process/bizagi/PROCESS.VTP.IT.02_Software%20development%20process%20by%20Agile%20method%20in%20Viettel_Peru



VIETTEL PERU S.A.C
SOFTWARE DEVELOPMENT PROCESS BY
AGILE METHOD

Code: PROCESS.VTP.IT.02
Effective date: 05/01/2022
Times issue: 01

6. Brief description

No	Step	Detailed description
1.	Creat new project	PO make new project on REQUIREMENT SYSTEM if RF about new software
2.	Creat Product Backlog	- PO initiates Product Backlog, lists the epic/story lists with priority rating and preliminary estimate effort of Stories. (see Instructions for writing user stories Guide.01)
3.	Estimate effort	- PO cooperates with SM and DT to estimate effort according to instructions Guide.02 .
4.	Overall Design	- DT creat Overall Design according to form F.03 and get approve overall design document by Head of Department. - DT designed high-level database for the project according to F.04 .
5.	Make plan	- PO cooperates with SM, DT evaluate the workload and speed of the project to make a release plan . Time for each Release plan is not more than 06 months for new products, not more than 3 months for upgraded products.
6.	Prepare development environment and working rules	- DT determines length of Sprint (in agreement with PO, SM) in a time frame of 2-4 weeks . - Set up internal regulations of DT: daily meeting time, development, testing, work coordination, team interaction
7.	Make Sprint n	At start of the Sprint: SM held a Sprint Planning meeting to determine 2 contents of What - Story and How - Task with meeting time \leq (weeks in a Sprint * 2 hours).
8.	Choose Story will do	- PO, SM, DT define purpose of the Sprint, define completion of Sprint and define completion of each Story - PO performs priority assessment of items (Epic, Story) in Product Backlog.
9.	Determine task will perform	- DT discuss and determine estimated effort for Stories, make sure to divide Story with total execution effort $\leq 1MM$. - DT focuses on completing Sprint Backlog Stories with software construction activities (Analysis, Design, Programming, Testing) performed concurrently. - At the beginning of each day, DT conducts a Daily Meeting within 15 minutes at the specified time and place. - After BA finish Requirement analyst according to Description of change request_F.01 or Requirement Analysis_F.02 . - PO must get approve Requirement analyst by Request Department and IT Operation (or VTNet) before programming.
10.	Do tasks	



VIETTEL PERU S.A.C

Code: PROCESS.VTP.IT.02

SOFTWARE DEVELOPMENT PROCESS BY AGILE METHOD

Effective date: 05/01/2022

Times issue: 01

		+ Source code according to Guide to avoid potential errors_Guide.03 + Use the tool to help scan the source code SonarQ according to Guide 04 – Guide to check by SonarQ to scan the source code weekly.
		- A meeting to review the completed outputs of the sprint (unfinished stories are not presented). Encourage customer engagement to directly comment on the product. In Viettel Peru: The output of each sprint is a finished product that can be run in a Pre - Product environment.
11.	Review Sprint	- The meeting takes place right after the Sprint Review meeting. QA, SM, DT give ideas to improve and agree on the optimal plan for improvement for DT in the next Sprint. - The maximum time for a 1 Sprint improvement meeting with a length of 2–4 weeks is 3 hours.
12.	Sprint improvement	- During the execution of Sprints, all customer upgrade requests or improvement/optimization suggestions made by the PO and the project team are recorded in the Product Backlog.
13.	Refine Backlog	- DT sends source code, snapshot, change solution document to Information Security Department to evaluate and record errors on the system.
14.	Check information security	- DT get confirmation of Information Security Engineer by sign on record or email according to Guide to avoid potential errors_Guide.03 and Guide 04 – Guide to check by SonarQ - DT completes the necessary documents including: Overall Design F.03, Requirement Analysis F.02, Change Requirements Description F.01, Detailed Design F.03, Database Design F.04, User guide F.05 consistent with program.
15.	Finish documents	- Documents for operation: follow process of VTNet or IT Operation - PO, DT must perform internal acceptance testing: <ul style="list-style-type: none"> Source code according to source code quality standards Guide to avoid potential errors_Guide.03 Performance: as required in Technical Specifications document. Documents: Overall Design F.03, Requirement Analysis F.02, Change Requirements Description F.01, Detailed Design F.03, Database Design F.04, User guide F.05 consistent with program. UI/UX (according to How to Assess and Ensure UX criteria_Guide.05). If upgrade affects more than 10% of system load)
16.	Internal acceptance test	



VIETTEL PERU S.A.C		Code: PROCESS.VTP.IT.02
SOFTWARE DEVELOPMENT PROCESS BY AGILE METHOD		Effective date: 05/01/2022
		Times issue: 01

	- DT makes an internal acceptance record according to form F.06 sign by PO, SM, QA, Head of Department.
17. Acceptance test	- DT is responsible for sending test case to Request Department and IT Operation before 02 working days of acceptance according to the upcode plan. - Perform the system acceptance test and sign the Acceptance Minute with the Request Department and IT Operation according to Acceptance test_F.07 .
18. Make procedures upcode	- PO make all procedures for upcode/ deploying and handover related document for Customer care Center for supporting customer after deploying.
19. Deploy/ upcode	IT Operation Department deploying/ upcode follow regulation Process.VTP.IT.04.

7. Appendix

Form:

- Description of change request_F.01
- Requirement Analysis_F.02
- Overall Design_F.03
- Database Design_F.04
- Detail Design_F.05
- Internal Acceptance test_F.06
- Acceptance test_F.07

Guide

- How to write Story_Guide.01
- ESTIMATE EFFORT_Guide.02
- How to avoid potential errors when program_Guide.03
- How to use SonarQ for checking source code_Guide.04
- How to Assess and Ensure UX criteria_Guide.05.

8. Definitions and Terms

No	Term	Explain
1.	Software development project	<p>A project organized by a working group to build one/a group of software products and maintaining transparently product life cycle from start to finish. Development project soft has 2 stages:</p> <ul style="list-style-type: none"> • New stage: is developing and and not yet handover to Operation Department • Maintain stage: project's products have been officially operated for end users, and project continues to upgrade



SOFTWARE DEVELOPMENT PROCESS BY
AGILE METHOD

Effective date: 05/01/2022

Times issue: 01

No	Term	Explain
		product.
		Agile software development (Agile) is a philosophy that combines software development methodologies based on the principles of iterative and incremental . Accordingly, the needs and solutions are improved through the cooperation of the development team (Autonomous and Cross-functional Teams). Agile often uses adaptive planning, evolutionary development and delivery, and uses short and flexible time frames to easily respond and improve with changes in the process. product development.
3.	Scrum	As the most popular Agile framework, focusing on how to organize activities and roles of software development projects to ensure that the values and philosophy of the Agile method are realized.
4.	Product Owner - PO	A defined role in Scrum, the Product Owner (PO) is responsible for maximizing product value, managing product requirements, defines the items in the Product Backlog. PO responsible for the entire process. PO manages product requirements, defines items in the Product Backlog, sets performance goals for each Sprint, and evaluates product results by the Development Team (DT) before acceptance with the customer.
5.	Development Team – DT	As a defined role in Scrum, the Development Team consists of members directly involved in building the product, each member having at least 1 major expertise and possibly supporting expertise, taking the initiative to work, self-manage the progress and quality of personal work. Directly involved in building software and documentation through analysis, design, programming, and testing activities.
6.	Scrum Master – SM	As a defined role in Scrum, the SM follows the project throughout its implementation, has the role of guiding and ensuring that the ST executes in accordance with Scrum, uncovering problems, and assisting the project team to work effectively... Follow up the project team throughout the sprint implementation. Coordinate meetings, observe the project team to detect problems, assist in solving arising problems, guide and coordinate the work of the project team.
7.	Scrum Team (ST)	Includes Product Owner (PO), Scrum Master (SM) and Development Team (each member has at least 1 main expertise and may have supporting expertise), actively taking jobs, self-managing progress and quality individual workload.
8.	QA	Quality Assurance is responsible for monitoring and supporting Support the project in terms of the process, ensuring that the project outputs are evaluated according to the specified quality standards. Monitoring, consulting, supporting the project to follow the right process. Confirm that the project's output



SOFTWARE DEVELOPMENT PROCESS BY
AGILE METHOD

Effective date: 05/01/2022

Times issue: 01

No	Term	Explain
		products are evaluated according to the issued quality standards.
9.	Product Backlog	List of tasks that the project team needs to do is arranged in order of priority by objects such as: feature requests (story), bug fixes (bugs), tasks to be done in the project (chore)), big stories (epic), prototypes. Product Backlog is updated throughout the product development lifecycle. Each project has only one Product Backlog.
10.	Epic	As the basis for making product roadmap and Sprint planning, release plan.
11.	Story (User Story)	A set of features, requirements, or business requirements at a general level.
12.	Sprint	The work cycle to create increments for the product. Sprint lasts from 1-4 week and is performed continuously without interruption. During the project, the time for Sprint development is fixed. In Viettel Peru: The output of each sprint is a finished product that can be run in a Pre - Product environment.
13.	Sprint Backlog	List of features, customer requirements (story) with priority is done first during the Sprint, updated with the content throughout the implementation.
14.	Release Plan	Product release plan: is the roadmap for implementing sprints to deliver release to customers.
15.	Burndown Chart	Graph showing the amount of work and time remaining in a Sprint, a release plan (Release), or product. Development Team Speed. Time frame: is the maximum amount of time spent on an activity that follows the Agile process.
16.	Velocity	Development Team Speed.
17.	Timebox	Time frame: is the maximum amount of time spent on an activity that follows Agile process.
18.	Major error	Is a data binding error, a business function error of the system, a progress error Programs, web services, information security errors have not caused system crashes.
19.	Critical Error	It is a professional function error of the system that causes the system to hang, not to be handled Continued, the errors that affect the test cannot be continued
20.	RF	Requirement Form
21.	Requirement system	System to receive and manage requests for new construction and software upgrade of Bitel