Cross-cutting Concepts

Development Concepts

Development Process

This chapter outlines our tailored development process. After realizing that Scrum did not fully meet our needs, we adopted an agile, iterative, and incremental approach. This process allows us to respond flexibly to changes and continuously improve.

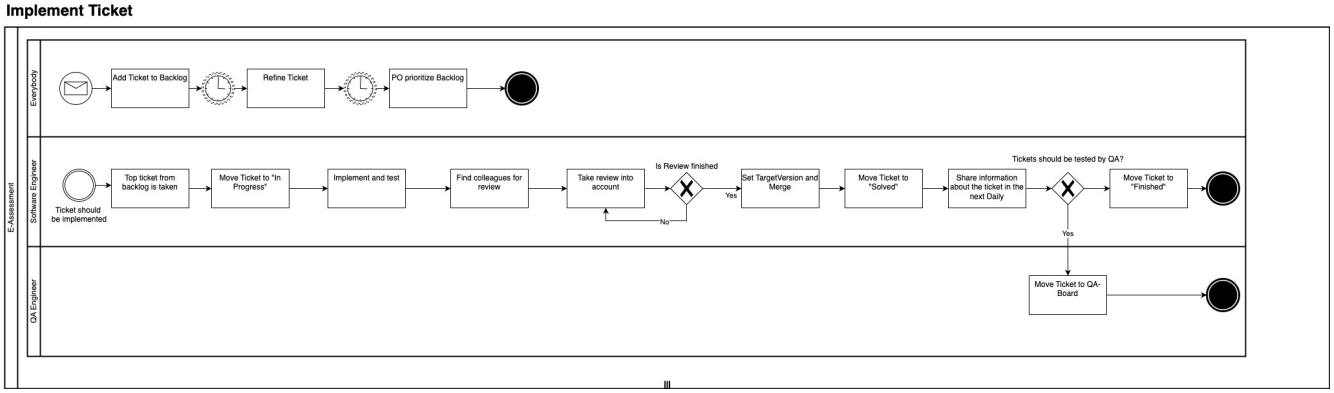
Framework Conditions

- Release Cycle
  - Monthly release cycle to ensure regular updates and improvements.
- Definition of Done
  - A change is considered done when it is deployed to the master branch.
  - This helps reduce dependencies on other teams.
- Ticket Management
  - Tickets should be completed within a few days.
  - Maintain the target version for each ticket.
- Developer Responsibility
  - Strengthening developer responsibility as they are accountable for the ticket from `New` to `Solved`.
  - This includes:
    - Refinement of the ticket
    - Clarification of questions
    - Implementation
    - Testing
    - Organizing reviewers

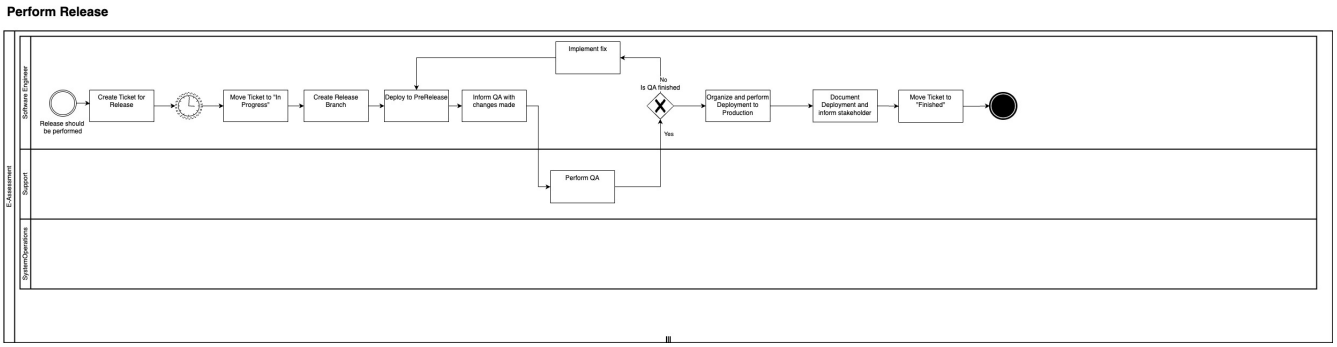
Process Workflow

This chapter describes the detailed workflow of our development process. To illustrate the implementation process and the “Perform Release” procedure, we have created corresponding diagrams.

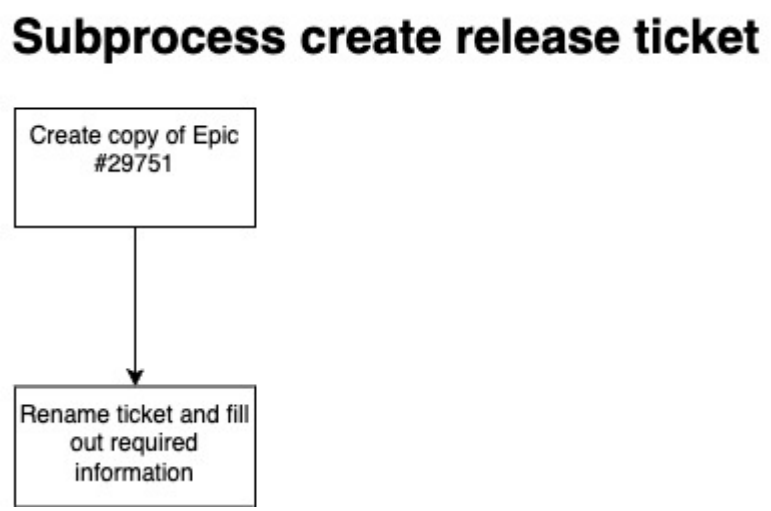
Implement Ticket



Perform Release



Subprocess Create Release Ticket



Preparing a release on GitHub

This describes the current valid step for preparing a release. The process uses GitHub Release Drafts to prepare the release notes and artifacts over a longer period of time: Between when the release-branch is ccreated (now) and when the release is actually deployed on production.

Given you decide that the current master branch is ready to be deployed on production sometime in the near future, you can initiate the release process by creating a release branch. In order to make sure deployables are being produced in the pipeline, some manual steps are required at the moment. In short, this involves

- deciding what the release version should be, we use 5.4.5 as an example.

- creating a branch like release /5.4.5 from master
- Prepare the next development version which might be 5.4.6 in this case:
- create the release draft in github via commandline:
- `gh release create 5.4.6 --title "5.4.6" --target master`
- update the following files in master:
  - hts-version.txt file to 5.4.6.
  - hts-scoring/application.xml to 5.4.6
- the just created release branch will build 5.4.5 (replacing artifacts upon every change of that branch)
- you will find the release artifacts for 5.4.5 at https://github.com/Hogrefe-Tech/hts-lts/releases/tag/5.4.5
- and the master build artifacts at https://github.com/Hogrefe-Tech/hts-lts/releases/tag/5.4.6

Change API-Keys for LinkMobility

To change the API-Keys for the SMS Provider LinkMobility the following parameter has to be changed:

`-Dcom.hogrefe.hts.security.service.2fa_sms_vendor.user_token`

Data Structures

Person

The `Person` class models a human individual. It inherits from `ModelUtilObject`.

It contains the following fields:

Field	Type	Constraints	Notes
person_id	Integer		
individual_code	String	Unique, mandatory if no lastname	Non-technical unique identifier, additional RegEx for allowed characters
lastname	String	Mandatory if no individual_code, max length 40 characters	Additional RegEx for allowed characters
firstname	String	Max length 40 characters	
phone	String		
years	Integer		

Field	Type	Constraints	Notes
years_months	String		
birthday	String		
is_fictive_birthday	Boolean	See Interchangeability of Age and Date of Birth	
sex	Integer	See Mapping of Person's Sex	
address	String		
comment	String		
dt	String		

Since the `Person` class follows the Repository pattern, it must be instantiated with a db connection. Thus, the Person constructor receives the `CurrentConfiguration`.

Mapping of Person's Sex

The sex of a `Person` is mapped as follows:

Integer Value	Meaning
0	Male
1	Female
2	Not set, assume male
3	Not set, assume female

Interchangeability of Age and Date of Birth

For a valid `Person` that does not have the option "Do not enter date of birth / age" set, only one of the following two is set:

- `age`
- `birthday`

Whichever of the two is not set is calculated on the fly.
If `age` is set,`is_fictive_birthday` is set to `true`.

Client

The `Client` class models a test taker. It inherits from Person.

`Client` contains the following additional fields:

Field	Type	Constraints	Notes
group_id	Integer		
clientcategory_id	Integer		

Field	Type	Constraints	Notes
clientcategory_color	String		
clientcategory_is_private	Boolean		
is_auto_created	Boolean		`true` for anonymous testing and import of test results.
tan	String		
group_name	String		
owner_id	Integer		
customFields	HashMap		Collection of optional, custom fields.

Like the `Person` class, the `Client` constructor receives the `CurrentConfiguration`.