



Virtual Coaching Activities for Rehabilitation in Elderly

Call: H2020-SC1-2016-2017

Grant Agreement Number: 769807



D6.7 Report on pathway models and technical implementation

Extended Summary

During all testing phases (TechLab, Living Lab, Pilot) the clinical pathways were put into a central role for the overall government of the treatment chain. Both the clinical pathway templates are used for graphically overviewing the rehabilitation care (to efficiently discuss the optimal sequence with the clinicians) and for feeding the technical process execution (AIT components to transform FHIR PlanDefinitions to FHIR CarePlans; FZI's knowledge layer components to start the pathway execution) to trigger for example the patient user interface interactions (avatar).

The present deliverable D6.7 is meant to be a concluding deliverable for WP6 summarising all adjustments made with regard to the clinical pathway models/templates, the modelling language itself and the related technical implementation since the first set of WP6 deliverables (esp. D6.1, D6.2, D6.4). Overall, it became clear that the pathways (used as synonym for the clinical pathway templates and the related methodology) work well as intended. The methodical changes are limited. This shows that the initial requirements analysis has been thoroughly conducted and is still valid. Partially, particular templates have been reworked to a greater extent. Still, this is due to the fact that the first set of pathway templates was derived primarily from paper work (esp. D1.3, D1.4) without having an actually working system available during the first project stages. According to the overall project methodology, we gradually increased the available function range for clinical testing. Given these insights, also some reworks of the pathway templates were needed. This was fully in line with the expectations; and this is why WP6 accompanied all the testing phases so far. The expertise of TUD will stay in order to further support the partners in any matter related to the pathways that might occur even after closing WP6. This will continually ensure a high accordance with the clinical needs.

Updating vCare's clinical pathway layer component - for adaptations

The basis for the work and further refinements were the initial pathway templates as derived from the information given by the clinical workpackage as described and as documented in D6.1. The procedure for needed adaptations from there on is outlined in the following sections and summarised in Figure 1.

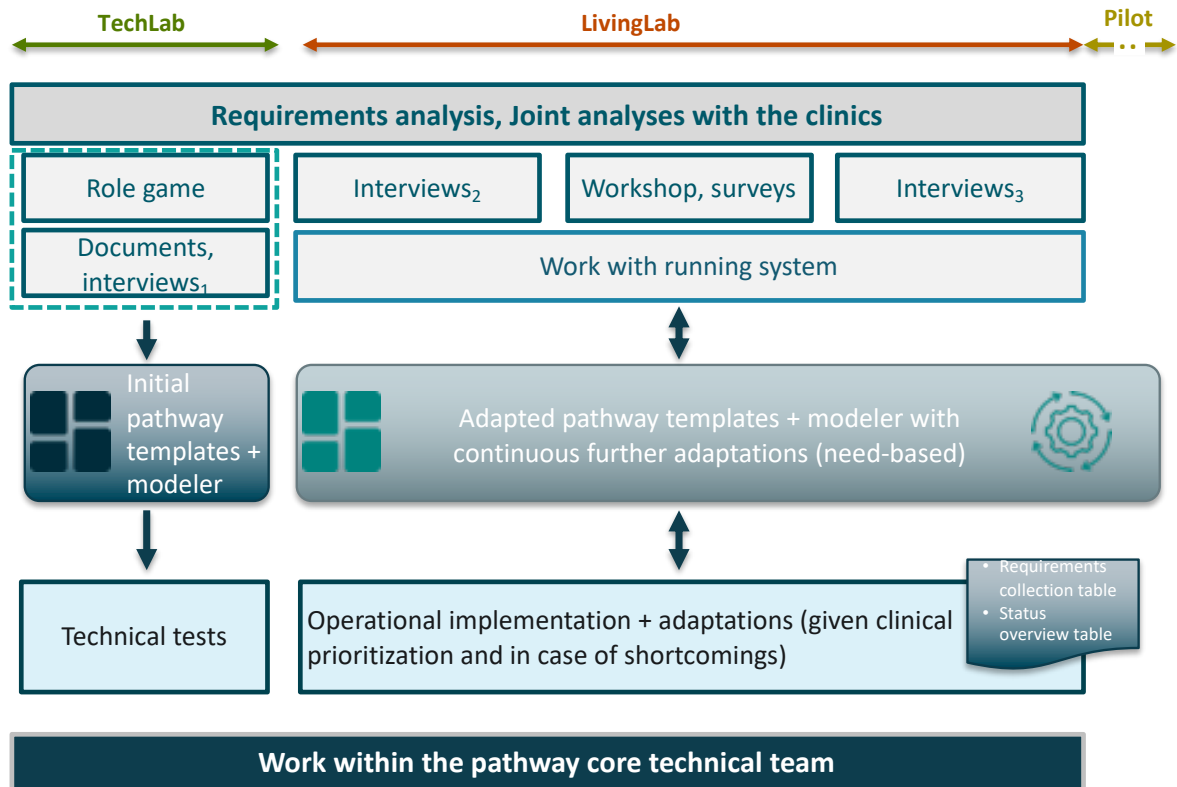


Figure 1: Overview of the procedure for adaptations

Final assessment

Also, it has to be noted that the overall methodical approach to systematically derive requirements for and design of the pathway templates, modeler and modelling language has been already synthesised in an academic paper¹. In this paper, TUD put the vCare project as a case study on using clinical pathways to set the procedural precepts for integrating diverse technologies and stakeholders for home rehabilitation. We also abstract from this case by systemizing requirements that help to design further modelling languages for modelling clinical pathways, derive further clinical pathways, or integrate further technologies or stakeholders in supervised care in general. Overall, the acceptance of the paper at the comparatively high-level conference/proceedings reinforced our belief in the usefulness of our approach outlined here. References between the paper and deliverable exist in both directions.

¹ Publication in press: Gand, Kai; Stark, Jeannette; Schlieter, Hannes; Gißke, Carola; Burwitz, Martin (2021): Using Clinical Pathways To Virtual Coach Patients For Home Rehabilitation. In: *Proceedings of the International Conference on Information Systems (ICIS2021)*