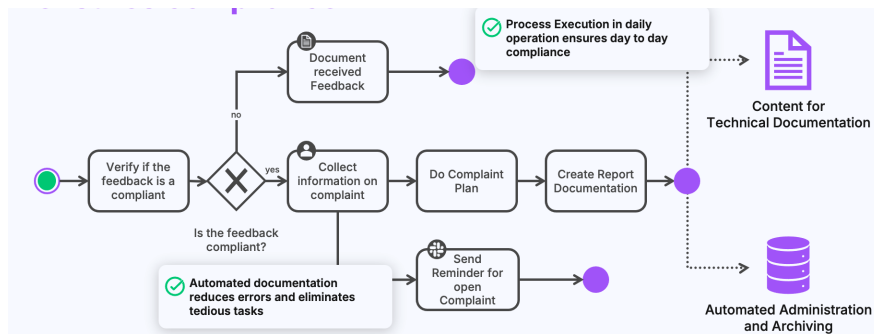


IDP / Project Study Proposal : Workflow Automation utilizing Business Process Engine

We are a tech startup based in Munich building an end-to-end platform for the continuous certification of medical products and thus improving the healthcare provision for patients. The CertHub software helps to bring medical products years faster and easier to patients by digitizing and automating regulatory processes of manufacturers with our AI-fueled software, based on our +10 years of experience in regulated industries. Founded by an highly motivated team from TUM, LMU and UnternehmerTUM that values curiosity in our everyday work, we're committed to create a tangible real world impact and shape the future of the healthcare industry.


Project Goals

The main objective of the IDP Project is to improve and implement a Process Engine based on BPMN which assist our users to execute and automate repetitive manual day-to-day work. We already have a proof of concept leveraging the power of Process Automation und digitalized Compliance Management. The IDP should focus on integration the concept into our production system and improving the orchistration, storing and logging functionalities as well as generating actionable data for technical documentation, ultimately digital transforming the entire business of our MedTech customers.




- **WP 1 Improve existing Proof of concept:** Prepare and clean an example workflow and dataset from our pilot customers to test and improve the current proof of concept
- **WP 2 Methods & Concept Evaluation:** We defined a concept and preselect several suitable algorithms for the process steps founded on BPMN and several process engines. We expect the students to challenge the approach, evaluate qualitatively and decide for a approach based on the requirements and current academic literature.
- **WP 3 Dynamic Forms Editor** Filling of pre-selected forms for users and automated filling of reports and forms not requiring user interactions with Java Springboot
- **WP 4 Orchestration:** Sending of notifications, reminders, form links etc. via the process engine
- **WP 5 Documentation and Storying:** Generated Content will be derived and distributed to the relevant

Your benefits

 **Secure TUM supervisor & ECTS:** thanks to our university network your academic supervisor at ERI is already assured, which grants you the ECTS for your project study



Vibrant and dynamic teams: Thriving in an environment that encourages collaboration and values each contribution

 **Hands-on experience:** Apply your knowledge in LLM, data structures, Machine & Deep Learning and business informatics to create a real world impact

Your Profile



You'll fit perfectly if you study a technical subject such as Business Informatics, Informatics, Robotics & AI, Electrical Engineering, MedTech, etc. and are already experienced with Python (or JavaScript) and optionally BPMN



We are searching for highly motivated, innovation-minded students who prefer to work in a structured and proactive way, who have a growth mindset and an intrinsic motivation for learning.



Software/IT: DataBases: MongoDB; Analytics and Backend: Python and Django; Frontend: Next.Js and Vercel

Who are we & how to reach us



StartUp **Certhub**, connected to TUM Entrepreneurship Research Institute, Chair of Biomedical Electronics Prof. Oliver Hayden (TUM CIT School) and UnternehmerTUM



Project Advisors: We already supervised several student projects and final theses. We are very much aware of the IDPs and practical courses formats since we have done them ourselves during our TUM study times. We want to offer a great learning experience to current students



The project study is offered in a **full-time or part-time** format for **2-4 students** with regular check-in meetings and milestones to track your progress.

If you are interested in pursuing this project study with us, we would love to hear what's your **motivation** and how your **skills** & background make you a suitable candidate (2-3 sentences or 1min video). Please contact **Leon** via leon.kobinger@certhub.de.

We look forward to working with talented and motivated students who are eager to tackle this exciting challenge!