

IS Project (Bachelor & Master)

IS:link Website & Workflow Management System: an Ethnographic Study of Virtual Project Teamwork

Project scope

A team of Master and Bachelor students is expected to develop a website and workflow management system of IS:link as part of an ethnography research on how (cultural) diversity influence virtual project teamwork and team creativity, which includes the following tasks:

- 1) IS:link website and workflow management system.
 - a. Redesign and improve the IS:link website, which should, at least, cover the following activities/deliverables:
 - i. [As-Is Phase] Carry out a short requirement gathering, and/or analyze the existing website (both currently online version and another version which was produced by the previous project).
 - ii. [Design Phase] Create a **“Mockup Design”** to improve the existing website using an approved freely available template.
 - iii. [Development Phase] Once the mockup design is approved, the team can start building the Website, incl. bilingual text (English-German) and images.
 - iv. [Testing Phase] Team should conduct **Testing** that includes 1) internal testing (among team members), 2) technical test (with IS:link technical team).
 - v. [Testing Phase] Team uses excel file or bug tracking tool (e.g. Mantis) to track the bugs/change requests when fixing bugs/implementing changes.

- vi. [Training Phase] (Hands-on) **Training** to the IS:link technical team (administrator) on how to update the website.
 - vii. [Deployment Phase] **Deployment of the new IS:link website** and two weeks baby-sitting period (bugs fixing)
- b. Build a workflow management system (WMS) for IS:link application process, which should, at least, cover the following activities/deliverables:
- i. [As-Is Phase] Verify and update the “**As-is analysis**” document produced by previous project team (redo the requirement gathering might be required)
 - ii. [Design Phase] Compare the workflow management system tools available in the marketplace and outline their suitability for IS:link process.
 - iii. [Design Phase] Develop a condensed “**Blueprint**”, which includes the (1) required key functionalities (2) list of compared tools, incl. the proposed two alternatives of tools that meet all (if not, most) of functionalities.
 - iv. [Development Phase] Once the “Blueprint” document is approved, start building/customizing the tool to fulfill the required functionalities.
 - v. [Testing Phase] Develop a “**Test Plan**”, that includes the 1) testing criteria, 2) testing use-case scenarios.
 - vi. [Testing Phase] Team should conduct **Testing** that includes 1) internal testing (among team members), 2) technical test (with IS:link technical team) and 3) functionality test (with IS:link key users).
 - vii. [Testing Phase] Team could use excel file or bug tracking tool (e.g. Mantis) to track the bugs/change requests when implementing them.
 - viii. [Training Phase] (Hands-on) **Training** to the IS:link team, both key users and administrator, using at the minimum five key process-scenarios

- ix. [Training Phase] Develop a **“User Manual”** that entails steps on how to administer items (both workflow and admin sections) including snapshots and easy-to-follow instructions for each step, at least for ten key processes.
- x. [Deployment Phase] **Deployment of the “IS:link Workflow management system”** and two weeks babysitting period (bugs fixing).
- xi. [Closing Phase] Create a simple **“Lesson learned”** report that entails what worked well and what did not work well throughout the project.

2) Organizational ethnography study

- a. Master students will conduct an organizational ethnographic study to investigate how (cultural) diversity influences project teamwork in a virtual setting.
- b. Master students are expected to take notes while doing the project work and structure them according to data collection methods in an ethnographic study (e.g. participant observation, unstructured/conversational interview)
- c. Together with the Master students, bachelor students can support the data analysis process. It is highly recommended to use the CAQDAS tool (e.g. Atlas.ti)
- d. The result of this study will be an **“Ethnographic Research Report”** (10-15 pages, excl. cover, TOC, References) that follows the IMRaD structure of an academic paper (introduction, foundation, method, result, discussion, and conclusion).

Project team

- All the participating students (Bachelor and Master) will be grouped into a single project team:

- The students will, however, be further divided into sub-teams, which allows the accountability and responsibility for the given tasks to be clearly defined.
 - Master students will have a larger number of tasks (than Bachelor students) and will take leadership roles in managing the sub-teams and conducting the quality assurance of the deliverables.
- All participating students would need to sign a consent letter that they are willing to be part of a research project.

Quality of Deliverables

- The students are expected to deliver all of the deliverables in English, such as website materials (html/php files, images, scripts, etc) and documents/report (xls, word, ppt, PDF)
- As for the textual content for website, should be prepared bilingual in English and German.
- The goal is to launch the website and workflow management system. Therefore, the key users and administrators must also be trained.
- By means of the ethnography study, the students are supposed to develop a conceptual model based on the literature review prior to the data collection, which should be embedded in the research report document.
- The quality of the deliverables must meet scientific standards:
- References should not be cited manually, always use reference management tools (e.g. Zotero, Citavi) and follow the latest APA style
 - Students are expected to use suitable and scientifically adequate design and sources to develop the deliverables. Failing to do so will result in a lower grade.
 - Only use the free materials from sources, and always indicate the sources.
 - Language style should be consistent and free from grammatical errors.
 - In order to increase the results' quality, the team members will be subject to a peer-review approach. In other words, individual students will review the work of their colleagues (including their active participation) and provide feedback. This will be done twice throughout the IS project.

- All group deliverables must be delivered to a designated Cloud platform (e.g. Sciebo). The students are expected to upload those as requested by their supervisors.
- Team is recommended to use the free-version of supporting tools (e.g. Mantis for bug tracking, Asana for project management, Atlas.ti for data analysis).
- The IS Project credits are 6 ECTS for Bachelor students (equal to 180 hours) and 12 ECTS for Master students (equal to 360 hours). On average, students need to allocate around 9 hours/week (Bachelor) and 18 hours/week (Master) over five months for this project.

Project Deliverables & Milestones

- Project duration would be five months (May – September)
- Below table highlight the expected deliverables from the project team

Area	Activities	Deliverables
IS:link website	<ul style="list-style-type: none"> i. As-is analysis ii. Mockup design iii. Development of website iv. Testing with website admin v. Training to website admin vi. Deployment & baby-sitting 	<ul style="list-style-type: none"> (1) Website Mockup-Design (15-20 slides) (2) (Updated) Website (go-live)
IS:link workflow management system	<ul style="list-style-type: none"> i. As-is analysis ii. To-Be design iii. Development of the workflow management system iv. Testing with IS:link teams (key users and administrator) v. Training to website admin vi. Deployment & baby-sitting 	<ul style="list-style-type: none"> (1) As-Is Analysis (5-8 pages word doc). Additional excel list(s) might be required as appendix. (2) WMS Blueprint (10-20 pages word doc). Additional excel list(s) might be required as appendix. (3) WMS Test Plan (3-5 pages word doc), with detailed Excel list for each test use case

		<p>(4) WMS Training materials (word/excel) with min. 5 key scenarios</p> <p>(5) WMS User Manual (20-25 pages), with min. 10 workflow scenarios</p> <p>(6) Workflow management system (go-live)</p>
Organizational ethnography	<p>i. Literature review</p> <p>ii. Data collection</p> <p>iii. Data analysis</p> <p>iv. Report writing</p>	<p>(1) Ethnographic Research Report (10-15 pages word doc). Additional excel list(s) might be required as appendix (e.g. literature list, data analysis result)</p>

- There will be 5 (five) **graded** project milestone meetings with the project sponsors (lecturers, IS:link team) and the participating students (see the section below):
- Attendance is mandatory; as well as submitting the results in advance (at least one week prior to the milestone's scheduled date).
 - Students are strongly recommended to actively participate in these milestone meetings (not just simply presenting their parts separately, but students should share and discuss the progress as a whole team).
 - Students will receive immediate feedback on whether their task is being carried out as expected and the anticipated good quality. Team is expected to note and implement these feedbacks latest in two weeks' time after the milestone meeting.
 - Missing the milestones and/or providing poor quality results will affect individuals' grading and, in extreme cases, result in failing the entire project.
 - Students do not need to prepare a comprehensive set of slides for each Milestone meeting; few simple summary slides are sufficient. However, they are required to

present all of the major deliverables so that it is visible that the team is making progress and that they will be able to deliver the whole deliverables in high quality on time.

1st Milestone: As-Is	2nd Milestone: Design	3rd Milestone: Testing	4th Milestone: Training	5th Milestone: Final Submission
<ul style="list-style-type: none"> • ca. 2-3 weeks after the Kick-Off Meeting • As-is Analysis (website and WMS) • Ethnographic study- Literature list • RACI matrix • Project timeline • Project tools setup (for collaboration, website dev. etc) 	<ul style="list-style-type: none"> • ca. 3-4 weeks after 1st Milestone meeting • Website mockup design • WMS Blueprint • Live Demo of proposed WMS tool(s) • Ethnographic conceptual model • Ethnographic data collection templates 	<ul style="list-style-type: none"> • ca. 6-8 weeks after 2nd Milestone meeting • WMS Test Plan • 1 hour technical testing (WMS & website) • 1.5 - 2 hours functional testing of WMS • team continue developing website & WMS based on test result • Ethnographic data analysis 	<ul style="list-style-type: none"> • ca. 4-5 weeks after 3rd Milestone meeting • WMS Training materials • 1 hour training to website admin • 1 hour training to WMS admin • 2-3 hours training to WMS users • Ethnographic report draft 	<ul style="list-style-type: none"> • Final presentation of the project results • New Website Go-Live • WMS Go-Live • User Manual • Ethnographic Research Report • Baby-sitting period (2 weeks) • Project lesson learned after two weeks

Project Evaluation

The final grading will be based on the sum of performance across the individual milestones:

- 1) Milestone-01: As-Is (10%)
- 2) Milestone-02: Design (10%)
- 3) Milestone-03: Testing (15%)
- 4) Milestone-04: Training (15%)
- 5) Milestone-05: Final Submission (50%)

Project Registration

Interested Bachelor and Master students can apply for this project by submitting a) a *current grade transcript* and b) a *brief motivational letter* before **Friday, 07.05.2021, 23:59**. Please send your application, including the relevant documents (in PDF format), via email to **Anna Khodijah** (anna.khodijah@uni-due.de), using the subject line **IS Project SS21 Application**. Shortly after the submission deadline, you will receive information via email about your acceptance and the date of the initial kick-off meeting for this project.

Recommended Literature

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