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Situation in uganda und Südsudan beschreiben, evtl. als Einleitung

User groups

„Um Usage Centered Software erfolgreich gestalten zu können müssen eine Reihe von Schlüsselfragen beantwortet werden:
Wer sind die Nutzer und wie werden sie mit dem System in Verbindung stehen?“[1]

Das Tool ASKtraining soll genutzt werden um Workshops und Trainings zu planen, um zu dokumentieren und um Lehr- und Lernmaterialien zu teilen. Die Website der r0g_agency gibt Antworten in welchem Umfeld die zu entwickelnde Applikation vorerst eingesetzt werden soll, nämlich den „five community-based, youth-led innovation hubs in South Sudan and Uganda.“ Die Hubs sind in Regionen mit mangelnder Infrastruktur angesiedelt.

Die ASKnet Community hat den Zweck: „Providing access to skills and knowledge through ToT (Training of Trainers) workshops. These workshops include open source hardware and software using ASKotec [- a kit that work as a mobile training set -], entrepreneurship, media production, gender equality awareness, trauma healing, and financial literacy.“[2]
Aus der Vielfalt der Themen lässt sich erkennen, dass zukünftige Nutzer aus allerlei verschiedener Felder und Bereiche sind.

Target groups

Um Software gestalten zu können ist es wichtig bestimmte Informationen im Vorfeld zu erfragen. Constantine schlägt folgende Fragen vor, um den Designprozess zu beginnen:

- „Was werden die Nutzer der Software machen?
- Was werden sie versuchen zu erreichen?
- Was brauchen sie vom System um ihr Ziel zu erreichen?

[1] Larry Constantine, Lucy Lockwood, 1999 S. 30 - Übersetzung d. Verfassers

[2] *#ASKnet access to skills and Knowledge Network*. (2019, November 27). R0g Agency; r0g_agency for open culture and critical transformation gGmbH. https://openculture.agency/asknet-access-to-skills-and-knowledge-network/
Zugriff: 16.06.2022

- Wie soll das System das Benötigte zur Verfügung stellen?“[3]

Um einen Überblick zu diesen Fragen zu bekommen werden im Vorfeld verschiedenen Personen befragt. Dabei wird angenommen die Personen in zwei Gruppen unterteilen zu können, Trainer und Teilnehmer von Workshops / Trainings. Nach der Empfehlung „Endanwender sind die vorrangige und ultimative Quelle für Informationen, um Usage Centered Design zu lenken“[4], soll vor allem mit Personen gesprochen werden, welche dem kulturellen Kontext, des vorläufigen Einsatzgebietes der Applikation - Refugee Resettlements in Uganda und dem Südsudan - , nahe stehen, oder diesem angehören.

Somit werden zwei verschiedene Target Gruppen definiert und folgenden Bereiche festgelegt zu denen Fragen formuliert werden sollen:

TRAINER

Ein Trainer ist eine Person die Workshops / Trainings plant und hält (5 - 10 Personen). Die Fragen beinhalten folgende Felder:

- Informationen zur Person, Beruf / Tätigkeit
- Informationen zu Teilnehmer:innen
- Informationen zu den Veranstaltungsorten
- Informationen zu den Trainings
- Organisation innerhalb der Hubs
- Finanzierung

PARTICIPANT

Ein Participant ist eine Person, die an einem Workshop / Training teilnimmt (2 - 5 Personen). Die Fragen beinhalten folgende Felder:

- Informationen zur Person, Beruf / Tätigkeit
- Informationen zu den Lehrmaterialien
- Anwendung erlernter Fähigkeiten
- Informationen zur Infrastruktur

[3] Larry Constantine, Lucy Lockwood, 1999 S. 69 - Übersetzung d. Verfassers

[4] Larry Constantine, Lucy Lockwood, 1999 S. 70 - Übersetzung d. Verfassers

Role Modeling

„The relationships between users and the system“[5]

Das Role Model beschreibt die unterschiedlichen User Roles eines Systems die in der User Role Map mit ihren verschiedenen Wechselbeziehungen und Abhängigkeiten zueinander dargestellt werden.[6]

USER ROLE

„A user role is an abstract collection of needs, interests, expectations, behaviors, and responsibilities characterizing a relationship between [..] users and a system.“[7] Bei der Gestaltung von User Roles ist einerseits zu beachten, welches Verhalten für einen User sehr charakteristisch ist und anderseits, welche User zudem notwendig sind, um die Applikation zu betreuen, beziehungsweise mit Inhalt zu befüllen. In einer ersten Analyse ergeben sich folgenden Roles:

TRAINER:

- Gibt Informationen in System ein
- Ordnet Informationen logisch
- Verlinkt ausgelagerte Informationen mit dem System
- Erhält Informationen aus dem System

PARTICIPANT:

- Liest Informationen aus dem System

Auf Basis dieser Definition werden Interviews geplant, das heißt es werden verschiedene Fragenkataloge erstellt, die sich mit Trainern und Teilnehmern an Trainings beschäftigen.

INTERVIEWS

Hier müssen Interviews beschrieben werden:
Erklärung zu Trainer(sind / waren auch Participants) und (erst) Participant (nicht wirklich erreichbar, Leute auf dem Land, wenig Möglichkeit der Kommunikation, Sprach Barriere)

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[5] Larry Constantine, Lucy Lockwood, 1999 S. 30

[6] Larry Constantine, Lucy Lockwood, 1999 S. 30

[7] Larry Constantine, Lucy Lockwood, 1999 S. 79

Interviews über telegram und bbb

—> allgemeiner Eindruck zur situation vor Ort

LIST OF SERVICES ()

Die Aussagen aus interviews werden in einem Dokument zusammengefasst, dabei wird nach Überschneidungen und Unterschieden gesucht.

Bei Unterschieden —> warum ist das so? oder bestehen die Unterschiede gar nicht, sondern es wird nicht immer gleichermaßen berichtet?

Daraus wird dann eine Liste mit potentiellen Funktionen der Applikation generiert

Aus interviews —> list of services provided by app —> Tasks

Die aus den Interviews abgeleiteten Einsatzmöglichkeiten der Applikation werden in Tasks umformuliert, die wiederum benutzt werden um die User Roles zu definieren. Abbildung 1 stellt den Prozess dar, wie aus den einzelnen grob gegliederten Anforderungen Roles abgeleitet werden.

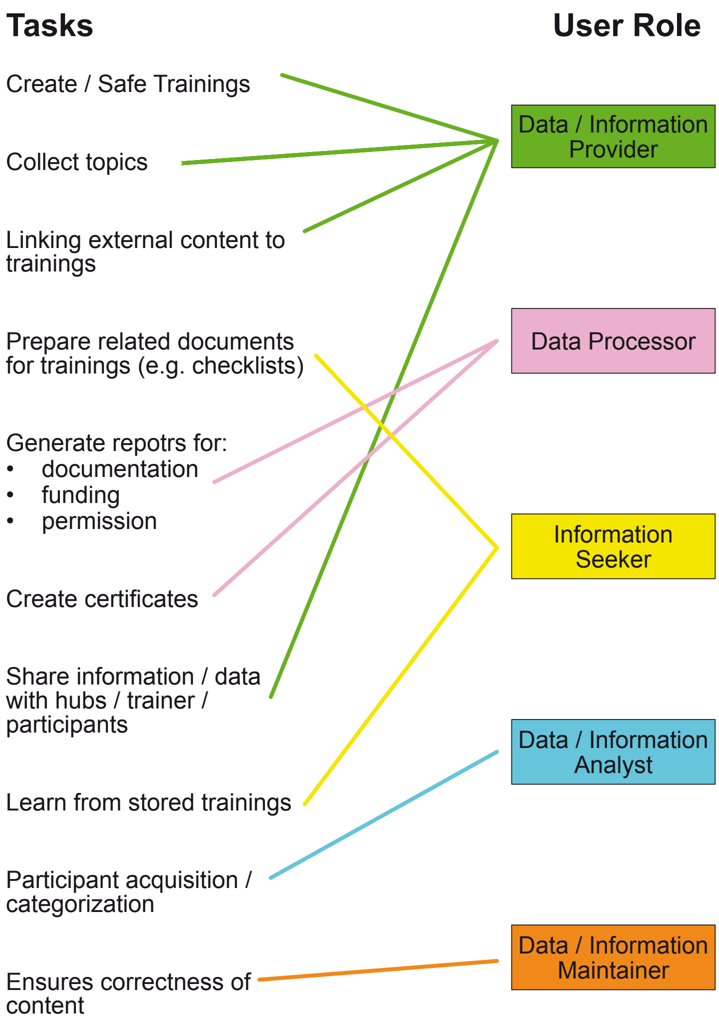

Abbildung 1: User Roles und Tasks

Abbildung1: User Roles und Tasks

Aus den Interviews ist ersichtlich, dass vor allem Trainer unterschiedliche Anforderungen für bestimmte Zwecke an die Applikation haben. Daraufhin werden mehrere, näher zum System orientierte User Roles entwickelt, welche den unterschiedlichen Tasks aus der Anforderungsanalyse entsprechen. Dabei wird für die Wahl der Bezeichnung der Rollen folgender Grundsatz berücksichtigt: „Each role is given a name that typifies the relationship of such users to the system.“[8] Zu beachten ist bei der Wahl der Bezeichnung, dass deutlich ist, wie die Rolle mit dem System interagiert. Dabei empfiehlt Constantine „the right name is less important than getting the right idea“[9].
Folgende User Roles sind somit festgehalten:

- **Data / Information Provider:** Person die Inhalte erstellt und speichert (z. B. Training erstellt und plant)
- **Data Processor:** Person die Daten aus dem System erhält und weiterverarbeitet (z. B. zu Zwecken der Dokumentation, generieren von Zertifikaten)
- **Information Seeker:** Person die Inhalte vom System erhält (z. B. Participants, oder Trainer eines anderen Hubs die vergleichbare Trainings anbieten wollen)
- **Data / Information Analyst:** Person die Daten aus dem System analysiert (z. B. Teilnehmerakquise, Kategorisierung)
- **Data / Information Maintainer:** Spezialist:in auf einem Gebiet die Informationen, Inhalte überprüft und Korrektheit garantiert

FOCAL ROLES

„Focal user roles play a special part in helping to shape and define the user interface.“[10] Deswegen ist es wichtig die Rollen zu bestimmen, da man davon ausgehen kann, dass sie „die häufigsten oder typischsten [sind], oder dass sie aus einer anderen Perspektive heraus als besonders wichtig erachtet werden“[11]. Die Focal User Role ist in diesem Fall die, des **Data / Information Provider**, da sie auf Grund ihrer Aufgaben als Hauptakteur

[8] Larry Constantine, Lucy Lockwood, 1999 S. 81

[9] Larry Constantine, Lucy Lockwood, 1999 S. 81

[10] Larry Constantine, Lucy Lockwood, 1999 S. 82

[11] Larry Constantine, Lucy Lockwood, 1999 S. 83 - Übersetzung d. Verfassers

für die Nutzung der Applikation betrachtet wird. Zudem beinhaltet die Focal Role, wie auch die User Role Map zeigt (Abbildung 2), einen Großteil der übrigen User Roles.

USER ROLE MAP

Die User Role Map ist ein Tool zur übersichtlichen Darstellung der verschiedenen Rollen im System. Rollen werden nach Ähnlichkeiten, Gruppenzugehörigkeit oder der Zusammensetzung ihrer Eigenschaften zueinander in Bezug gebracht.[12] „The user role map is a way of capturing the big picture; it reveals how all the various roles fit together in defining who will use the system and how."[13]

Wie die Map zeigt leiten sich mehrere Rollen aus der Focal Role des **Data / Information Providers** ab. Eine Besonderheit ist die Rolle des **Data / Information Maintainer,** was sozusagen eine höher geordnete, beziehungsweise spezialisierte Form des **Data / Information Providers** ist. Diese Rolle kann beispielsweise von Bildungsinstitutionen, oder sonstigen, staatlichen Einrichtungen eingenommen werden, um Lerninhalte zu verifizieren und den Abschluss eines Trainings staatlich anzuerkennen.

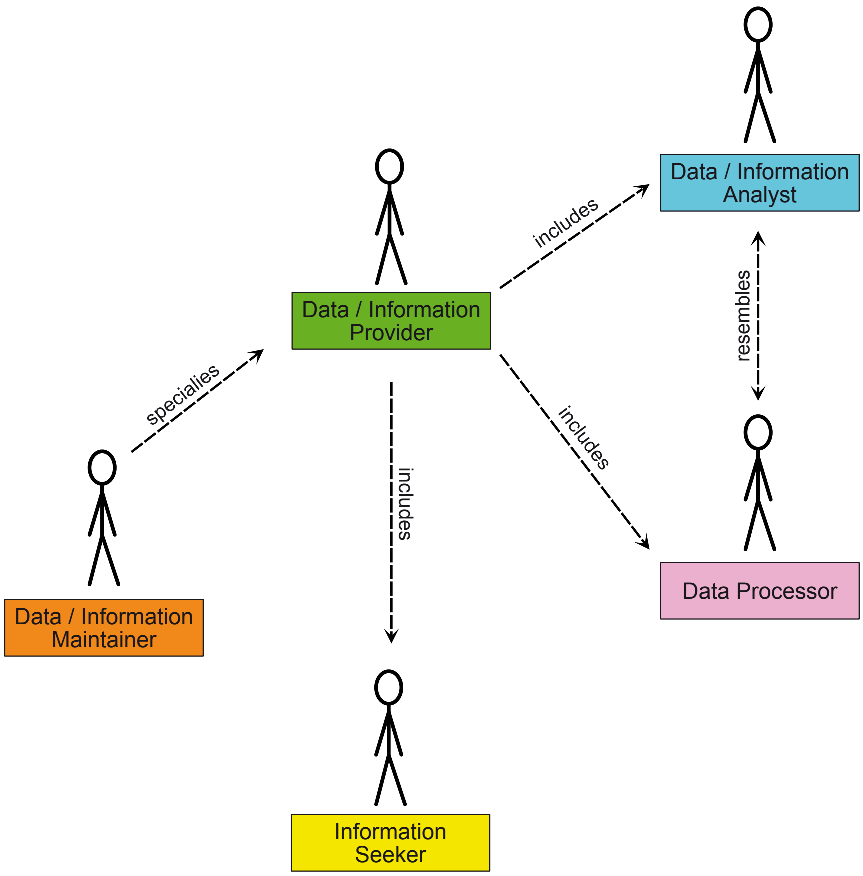

Abbildung 2: User Role Map

[12] Larry Constantine, Lucy Lockwood, 1999 S. 84 f.

[13] Larry Constantine, Lucy Lockwood, 1999 S. 84

Abbildung 2: User Role Map

Task Modeling

Aus den Interviews ist ersichtlich, was die Aufgaben der User sind. Um die einzelnen Arbeitsschritte für das Task Modeling besser verstehen zu können werden erneut Personen zu verschiedenen, bestimmten Bereichen befragt, welche für die Entwicklung des Tools als besonders beachtenswert gelten. „To give people better, more useful tools with which to work, we must understand what they are doing and what they are trying to do.“[14]

Der Fokus wird nun auf eine detailreiche Schilderung der folgender Vorgänge gelegt:

- Teilnehmerakquise
- Ausstellung von Zertifikaten
- Erreichen und Festlegen von Trainingszielen
- Vereinbarungen mit Behörden aus dem Sektor Bildung
- Projektdokumentation
- Finanzierung durch zusätzliche Geldgeber (meist sind Projekte nur mit den finanziellen Mitteln, welche durch die r0g_agency zur Verfügung gestellt werden, finanziert)

Befragt wird jeweils ein Mitglied aus den Hubs **Plattform Africa** und **GoGirls ICT**. Beide Hubs gelten als besonders etabliert. Die befragten Personen bekleiden zudem Schlüsselpositionen in ihrem Hub. Zusätzlich liefern die befragten Personen Dokumente, die sie während der Planung von Trainings und Workshops benutzen.

PERSONAS

Um die zukünftige Nutzer im Blick zu behalten werden Personas entwickelt. Diese sollen typische Nutzer repräsentieren und deren Bedürfnisse und Erwartungen spiegeln. Dabei fördern sie das detektieren von universellen Funktionalitäten. „The purpose of personas is to create reliable and realistic representations of your key audience segments for reference.“[15] Dabei helfen Personas beim Testen und Priorisieren von Optionen und

[14] Larry Constantine, Lucy Lockwood, 1999 S. 97

[15] Assistant Secretary for Public Affairs. (2013). *Personas*. https://www.usability.gov/how-to-and-tools/methods/personas.html Zugriff: 03.08.2022

Eigenschaften der zu entwickelnden Applikationen, indem sie immer wieder einen Bezug zur Praxis, beziehungsweise dem Kontext der Applikation bieten. Dabei besitzen die Personas einen Namen, Alter, Familienstand, Beruf, ein Foto, etc., um einen möglichst genauen Eindruck von dieser fiktiven Person zu bekommen.[16]

Um die Personas möglichst realistisch zu gestalten werden für die Entwicklung größtenteils die Eindrücke aus den Interviews verarbeitet. Zudem sind aber auch Elemente aus den Personenbeschreibungen des ASKnet LEAD (Local - Expert - Action - Directory) übernommen. „LEAD is a directory of #ASKnet experts in your area who are there to provide guidance and assistance.“[17] Diese Webplattform ist Teil des ASKnets, welche Mitglieder der verschiedenen Hubs verwenden um sich zu vernetzten. Meist geschieht dies mit einer kurzen Biographie und der Beschreibung ihrer persönlichen Fähigkeiten und Kenntnissen.

SCENARIOS

„Ein Szenario im Allgemeinen ist eine episodische Beschreibung von Aufgaben und Tätigkeiten in ihrem Kontext. Szenarien werden als Hilfsmittel eingesetzt. Durch sie sollen Sachverhalte besser veranschaulicht werden.“[18] Die Szenarien werden von mir somit als Hilfsmittel verwendet, um daraus die später folgenden Use Cases abzuleiten. Bei der Gestaltung der Szenarien wird darauf geachtet, möglichst nahe der Alltagssituation der Menschen in den Refugee Resettlements gerecht zu werden. Hierbei werden auch viele Erzählungen aus den Interviews eingearbeitet. Die Szenarien werden dabei mit den beiden erdachten Personen aus den Personas beschrieben.

„Scenarios for user interface design narrate the interaction between a user or type of user and a system.“[19] Aus diesem Grund wird in den Berichten auch die technische Komponente mitbedacht.

Die Beschreibung der technischen Komponente gestaltet sich teilweise, bei der Ausarbeitung von Details zu bestimmten Arbeitsabläufen, als schwierig. Denn aus denn Interviews ist nicht immer eindeutig erkenntlich, wie bei bestimmten Tätigkeiten präzise vorgegangen wird. Deswegen werden zur vollständigen Beschreibung noch zusätzlich

[16] Assistant Secretary for Public Affairs. (2013). *Personas*. https://www.usability.gov/how-to-and-tools/methods/personas.html Zugriff: 03.08.2022

[17] *Home*. (n.d.). Asknet.comMunity. from https://lead.asknet.community/ Zugriff: 21.07.2022

[18] Brigitte Eller, 2009 S. 74

[19] Larry Constantine, Lucy Lockwood, 1999 S. 101

Dokumente aus den verschieden Hubs mit einbezogen. Unteranderem werden zur Ausarbeitung der Szenarien Templates für Projekt Dokumentationen und Proposals von der r0g_agency, Zertifikate von GoGirl ICT und Google Formulare, mit denen sich Teilnehmer bewerben, von CC4D verwendet.

CONVENTIONAL USE CASES

„Eine Schwäche von Szenarien als integratives Konstrukt ist es, dass sie als informelle Darstellungen üblicherweise in natürlicher Sprache verfasst und oft unzulänglich bzw. mangelhaft sind und für die schwierige Diskussion zwischen Benutzern, Entwicklern, Usability Experten und anderen Beteiligten mit jeweils unterschiedlichen Motiven und Hintergründen nicht ausreichen.“[20] Trotzdem sind laut DATechs Leitfaden Usability die Szenarien notwendig, um daraus die Use Cases abzuleiten. „Im Design-Projekt ist das Nutzungsszenario die wichtigste Voraussetzung für den Entwurf eines Use Case, der Spezifikation funktionaler Anforderungen. Erst Nutzungsszenario, dann Use Case. Diese Reihenfolge ist zwingend, wenn die funktionalen Anforderungen aus der Nutzungsperspektive spezifiziert werden sollen.“[21] Somit werden aus den zuvor entwickelten Scenarios die Conventional Use Cases abgeleitet.

Die Methode der Use Cases wurde von Jacobson bereits 1992 entwickelt, sie sind seit dem ein sehr beliebtes Tool in der Softwareentwicklung. Die Use Cases sind dabei in einzelne Dialogschritte unterteilt und werden in **User Action Model** und **System Response Model** gegliedert. Der Nutzer interagiert also mit dem System und dieses Antwortet darauf entsprechend. Somit kann klar zwischen den Interessen und den Aufgaben des Systems zu seinem User unterschieden werden. Dabei ist es egal um was für eine Tätigkeit es sich handelt. Die Use Cases sind dabei lineare gestaltet, also beginnen mit der ersten Handlung und Enden mit dem Erfüllen der Aufgabe. Dabei ist darauf zu achten, dass die Interaktion komplett, ausführlich und aussagekräftig beschrieben wird.[22]
Die Use Cases sind mit den, für eine Bearbeitung bestimmter Aufgaben, üblichen Tools beschrieben, wie zum Beispiel Google Formulare, GitHub via Webbrowser, Tabellenkalkulationsprogrammen, etc..

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20 Brigitte Eller, 2009 S. 75

21 DATech, 2009, S. 167

22 Larry Constantine, Lucy Lockwood, 1999 S. 101 f

ESSENTIAL USE CASES

„Conventional use cases typically contain too many built-in, premature assumptions, often hidden or implicit, about the form of the user interface do be designed.“[23] Somit ist es nötig die detailreiche Schilderungen der Conventional Use Cases auf das Wesentliche zu reduzieren. Dies geschieht mit dem Wechsel der beiden Modelle, das User Action Model ist im Essential Use Case das **User Intention Model** und das System Response Model ist das **System Responsibilities Model.** Dadurch beschreibt der Essential Use Case die Intention des Nutzers und dessen Erwartungen an das System, während der Benutzung. In der darauf folgenden Entwicklung des Interfaces ist dies von essentieller Bedeutung, da mit dem Wechsel, von der mechanischen, beziehungsweise technischen Beschreibung hin zur Beschreibung der Intention des Nutzers, vermieden wird, dass Designentscheidungen mit übertragen werden. Denn der Conventional Use Case wird unter der Verwendung einer bestimmten Software, Tools, Gerätes, etc. entwickelt und beschreibt deshalb auch indirekt die Barrieren, Eigenschaften und Verhaltensweisen der Software, des Tools, oder Gerätes innerhalb dessen der Use Case entwickelt wurde.[24]

Constantine definiert den Essential Use Case folgendermaßen:

„An essential use case is a structured narrative, expressed in the simplified, generalized, abstract, technology-free and implementation-independent description of one task or interaction that is complete, meaningful, and well-defined from the point of view of users in some role or roles in relation to a system and that embodies the purpose or intentions underlying the interaction.“[25]

Hier Benennung von UCs kurz und prägnant, auf den Punkt gebracht!!

USE CASE MAP

Die Use Case Map stellt die Beziehungen der verschiedenen Use Cases zueinander graphisch dar und ermöglicht es auf diese Weise den Gesamtumfang der Aufgaben, welche mit der Applikation bearbeitet werden, zu beschreiben. Dabei werden verwandte Use Cases - hier auch **Subcases** genannt - in sogenannten **Supercases** gegliedert.

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[23] Larry Constantine, Lucy Lockwood, 1999 S. 103

[24] Larry Constantine, Lucy Lockwood, 1999 S. 103 f

[25] Larry Constantine, Lucy Lockwood, 1999 S. 103

Mittels dieser generischen Zusammenfassung der Use Cases gelingt es den generellen Zweck der Applikation vereinfacht darzustellen. Die Subcases sind hierbei eine Spezifikation des jeweiligen Supercases und entsprechen den zuvor ausgearbeiteten Essential Use Cases. Somit ist es nicht notwendig alle Use Cases in der Use Case Map darzustellen, es reicht eine angemessene Anzahl von sinnvollen Use Cases zu verwenden.[26]

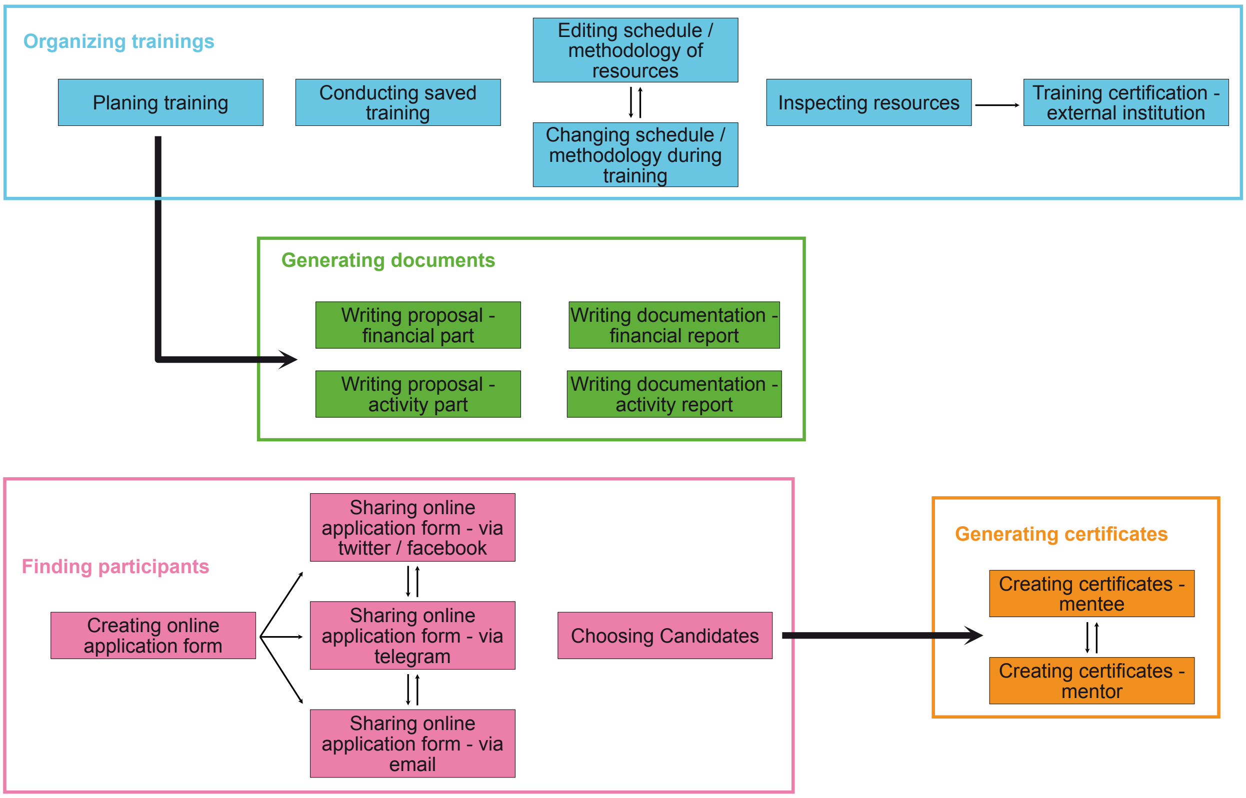

Abbildung 3: Use Case Map

Abbildung 3: Use Case Map

Die Use Cases wurden in den folgenden vier Supercases gegliedert:

- Organizing trainings: Hierbei handelt es sich um alle Tasks die auf die Erstellung, Bearbeitung, Änderung, etc. von Trainings Bezug nehmen
- Generating documents: Dieser Supercase behandelt die Erstellung von Dokumenten für die Dokumentation, sowie für Angebote / Vorhaben (proposal)
- Finding Participants: beschreibt die Suche nach geeigneten Teilnehmer:innen für Trainings
- Generating certificates: Erstellung für Zertifikate für Teilnehmer:innen von Trainings

[26] Larry Constantine, Lucy Lockwood, 1999 S. 109 f

FOCAL USE CASE

Die Focal Use Cases werden gewählt um zu bestimmen, worauf sich zunächst die Entwicklung konzentriert. Dabei helfen sie das Design des Interfaces der Reihe nach zu organisieren, denn sie dienen als Ausgangsposition für den Prozess. Bei der Wahl wird berücksichtigt was die Anforderung zu Beginn des Projekts ist und was die zukünftigen Nutzerbefragung als besonders sinnvoll benennt. So ergeben sich für die Focal Use Cases die Supercases „Organizing trainings“ und „Generating documents“. Die Focal Use Cases sind zudem mit den Focal User Roles verknüpft, für diese wurde die Rolle des Data / Information Provider gewählt, welche als Hauptakteur in den Focal Use Cases anzusehen ist.[27]

Interface Contents and Navigation

INTERACTION CONTEXT

Als Interaction Context werden die verschiednen Bereiche bezeichnet, in denen User jeweils mit dem User Interface und all seinen Elementen und Informationen interagieren.
Inhalte der verschiedenen Interaction Contexts sind Funktionen und Daten, welche die Applikation benutzt um die Tasks der Use Cases zu erfüllen. Der Interaction Context dient auch als Grundstein für das Interface Design.[28]
In Abbildung 4 ist die Interaction Context Map zu sehen. Dabei sind die verschiedenen Use Cases erstmals in einer Form arrangiert, welche einerseits dem Arbeitsfluss der Nutzer entspricht und andererseits sind sie, wie innerhalb der Use Case Map, in Klassen strukturiert. Die Map stellt zudem dar, welche Use Cases sich von anderen ableiten, zum Beispiel „Planing training“ beinhaltet „Creating resources“ und „Selecting existing resources“.

[27] Larry Constantine, Lucy Lockwood, 1999 S. 115

[28] Larry Constantine, Lucy Lockwood, 1999 S. 125 ff

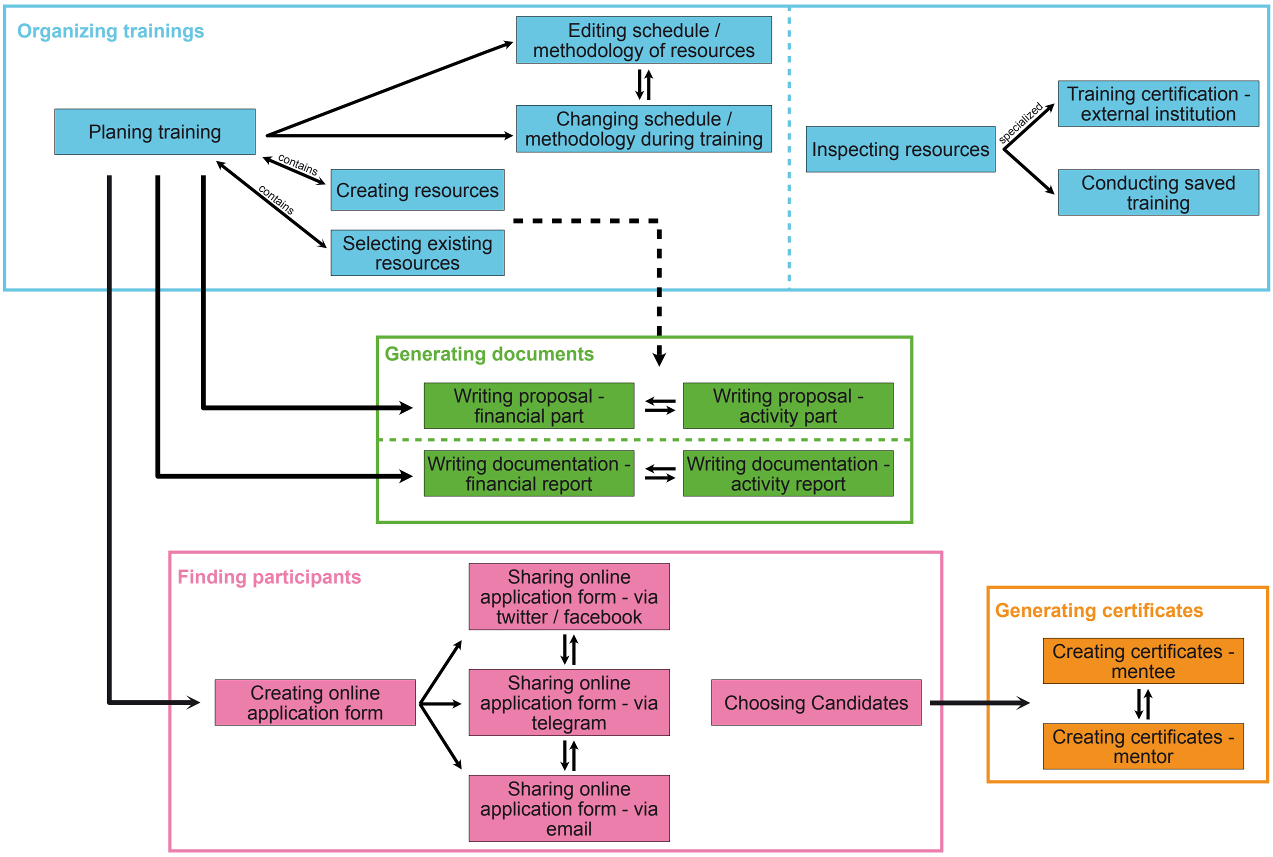

Abbildung 4: Interaction Context Map

Abbildung 4: Interaction Context Map

TOOLS AND MATERIALS

Der nächste Schritt beinhaltet die Definition der **Tools and Materials**. Dabei sind die Tools vergleichbar mit Funktionen und Fähigkeiten, welche der Erfüllung einer bestimmten Task dienen. Bei den Materials handelt es sich um Daten und Bereiche, die wiederum von den Funktionen, also den Tools, verarbeitet werden. Diese abstrakten Komponenten dienen als Platzhalter für visuelle Attribute des Interfaces und sind somit hilfreich bei der Gestaltung der Interaktion.[29] Für die Entwicklung der Tools and Materials werden die Essential Use Cases verwendet, welche in ihrer verkürzten Form die Essenz der Arbeitsabläufe beschreiben. Gepaart mit den abstrakten Komponenten der Tools and Materials bietet dies somit einen weiteren Grundstein - frei von Einflüssen jener Software aus den Conventual Use Cases - für die Gestaltung des Interfaces. Dabei sind die Bezeichnung so gewählt, dass sie den jeweiligen Zweck erklären. Die Farbwahl ist wie

[29] Larry Constantine, Lucy Lockwood, 1999 S. 133 f

Constantine sie empfiehlt in „hot colors“[30] für Tools und in „cool colors“[31] für Materials. Abbildung 5 zeigt die unterschiedlichen Komponenten für den Interaction Context **Generating Documents.**

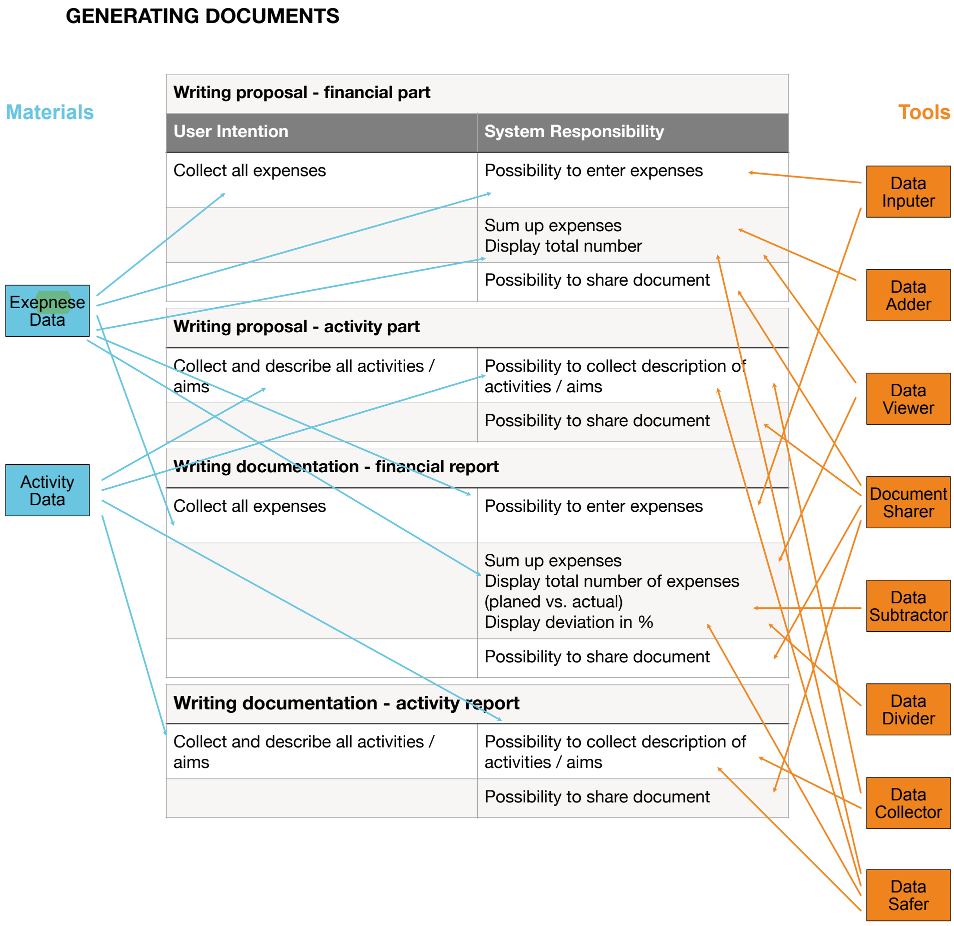

Abbildung 5: Tools and Materials

Abbildung 5: Tools and Materials

CONTEXT NAVIGATION MAP

Die Context Navigation Map repräsentiert die vollständige Interface Architektur und besteht aus Elementen, welche mittels Pfeilen zueinander in Bezug gebracht sind. Die Map beschreibt zudem die Beziehungen der Interaction Contexts und wurde aus selbigen, unter Berücksichtigung der Tools and Materials, angefertigt. Die Pfeile beschreiben dabei Wechsel zwischen verschiedenen Bereichen und sind vergleichbar mit der Navigation durch eine Applikation mittels Buttons, Menüs und Ähnlichem.

[30] Larry Constantine, Lucy Lockwood, 1999 S. 133

[31] Larry Constantine, Lucy Lockwood, 1999 S. 133

Die Context Navigation Map stellt den groben Umfang der Komplexität des Systems dar. Des Weitern lässt sich anhand ihrer kontrollieren, ob alle definierten Use Cases mit der zu entwickelnden Applikation und deren Interaction Contexts, bearbeitet werden können. Dabei ist es ratsam jeden Use Case Schritt für Schritt an der Map durchzuexerzieren. Falls währenddessen auf der Map zwischen den verschiedenen Ebenen hin und her gesprungen werden muss, sind vermutlich die verschiedenen Interaction Contexts nicht ideal angeordnet.[32]

Bei der Gestaltung der Context Navigation Map steht zu Beginn die Entscheidung zur Tiefe der Strukturierung einzelner Interaction Contexts an. „One of the most important trade-offs is whether to keep each interaction context small and simple, thereby proliferating the number of contexts, or to reduce the number of separate contexts, thereby increasing the complexity of each one.“[33]
Somit lässt sich sagen, dass kleinere, übersichtliche Interaction Contexts, mit einer überschaubaren Anzahl an Funktionen, unerfahrenen Nutzern helfen, sich intuitiv in das Tool ein zu finden. Dabei soll aber auf eine gewisse Gruppierung von ähnlichen Funktionen nicht verzichtet werden, um eine unnötig tiefe Verschachtelung der Applikation zu vermeiden. Zudem ist darauf zu achten, dass ähnliche Elemente und Funktionen in den unterschiedlichen Interaction Contexts, immer dem selben logischen Aufbau entsprechen. In der Context Navigation Map ist beispielsweise zu erkennen, dass beim Durchsuchen von Inhalten auch immer die Möglichkeit besteht, sich diese im Detail anzusehen, zu editieren und gegebenenfalls zu teilen (Browse … —> Display / Edit /..). Solch ein sich wiederholender Aufbau trägt nicht nur dazu bei, die Applikation in ihrer Bedienung simpel zu halten, da erlernte Arbeitsabläufe an unterschiedlichen Stellen im System immer wieder gleich ablaufen, sonder bewirkt auch, im Bezug auf die Gestaltung von User Interface Attributen wie Buttons, Menüs, etc., dass diese stets gleichbleibend strukturiert werden können.

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[32] Larry Constantine, Lucy Lockwood, 1999 S. 135 ff

[33] Larry Constantine, Lucy Lockwood, 1999 S. 135

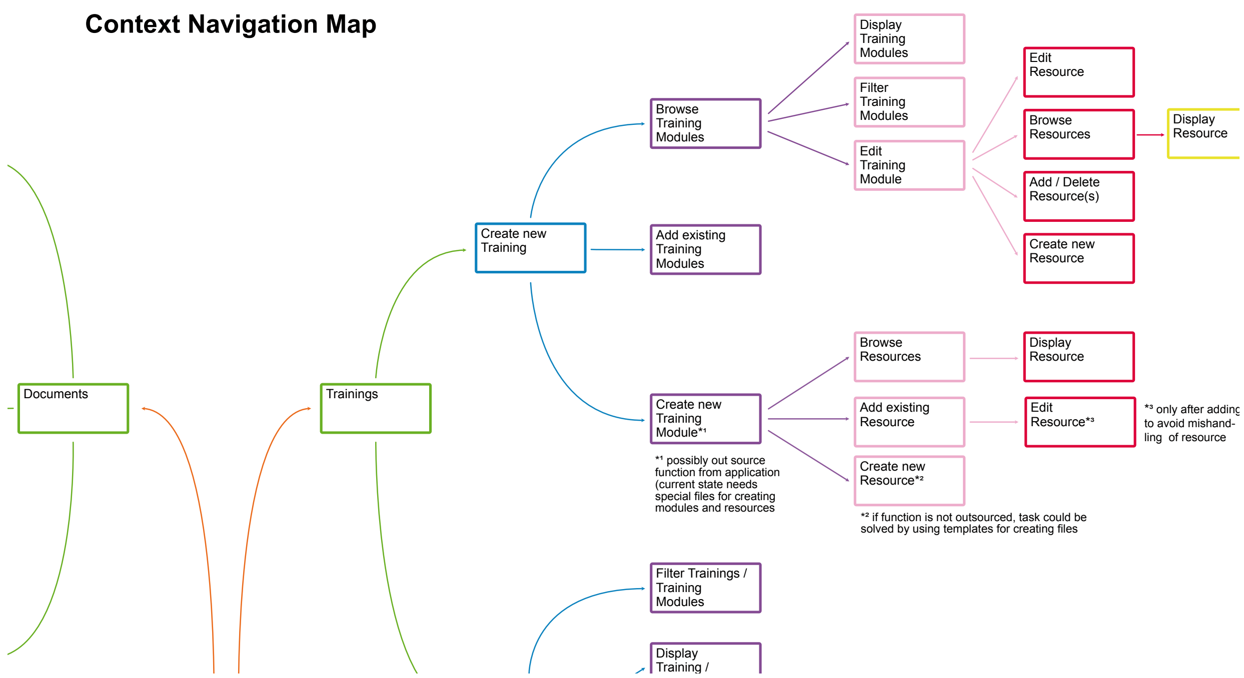

Abbildung 6: Ausschnitt Context Navigation Map

Abbildung 6: Ausschnitt Context Navigation Map

Da es bereits einen funktionsfähigen Prototypen[34] gibt, welcher sich mit der Organisation von Trainings auseinandersetzt, wird im Zuge der Entwicklung dieser Applikation auch auf dessen Architektur, Struktur und Funktionsweise Rücksicht genommen.

Die Struktur des Prototypen ist vor allem im Bereich „Trainings“ wiederzufinden. Ein Training besteht aus „Training Modules“, welche wiederum „Resources“ beinhalten. Ein Training Module ist sozusagen eine Lehreinheit zu einem bestimmten Thema, wie zum Beispiel „OpenTech Basics“ (Training Module, welches sich mit öffentlich zugänglichen Technologien beschäftigt). Ein Element dieses Blocks ist der „Open Hardware Guide“, ein Poster, dass „Beispiele für praktische Möglichkeiten und Projekte gibt, welche Open

[34] Prototypisches online tool: *#ASKtraining*. (n.d.) from https://training.asknet.community/training/ Zugriff: 22.09.2022

Hardware Methoden anwenden“[35]. Diese Poster ist eine Resource des Training Modules. Solche Resources Dateien werden innerhalb des ersten Prototypen auf GitHub angelegt und können mehrere Einträge enthalten. Abbildung 7 zeigt die Datei zur Resource des „Open Hardware Guide“. Die Resource hat dabei mehrere Einträge wie Name, Id, eine URL welche auf das Poster verweist, Dauer, Kosten, etc.. Das Beachten dieser Strukturen ist insbesondere notwendig, um das Backend des existierenden Prototypen mit den neu entstehenden Frontend Entwicklungen zusammen zu führen.

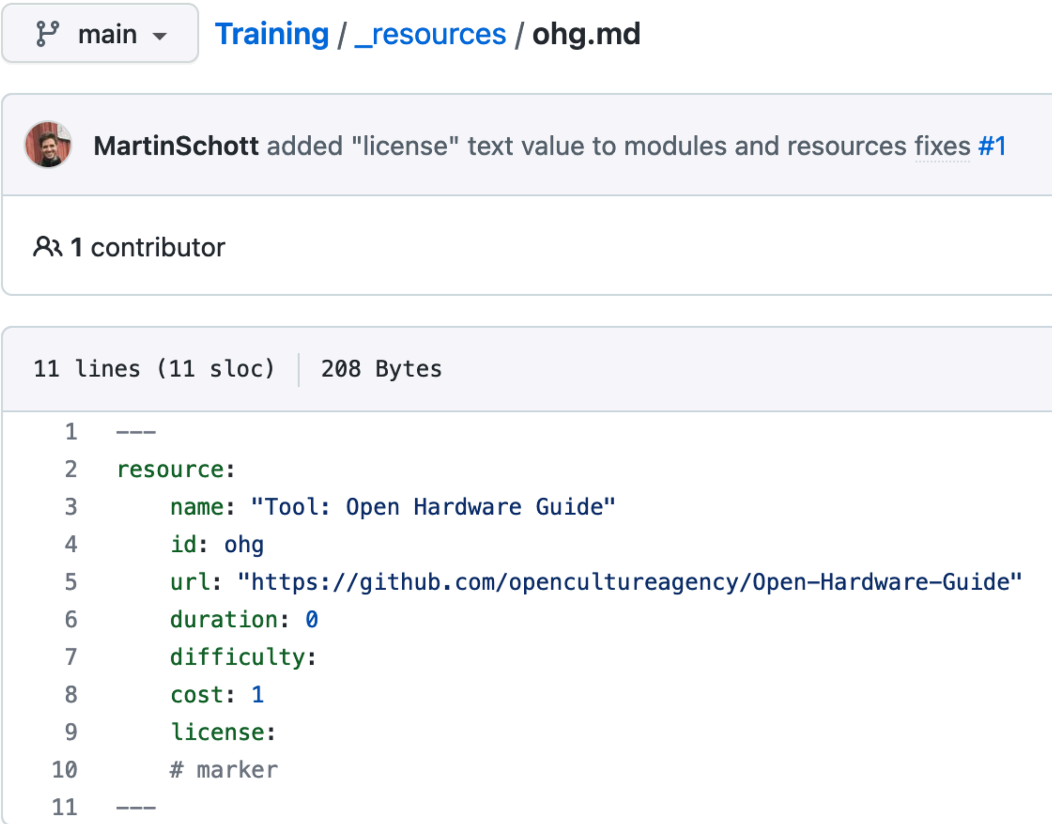

Abbildung 7: Resource aus dem aktuellen Tool

Abbildung 7: Resource aus dem aktuellen Tool

Visual Design

Rapid prototyping —> scribbling / sketching

[35] Open-Hardware-Guide: The Open Hardware Guide gives examples of hands-on skills possibilities and projects applying open hardware methodologies. (n.d.). - Übersetzung d. Verfassers
Zugriff: 22.09.2022

SKETCHING

Zu Beginn der Design Phase werden die ersten visuellen Konzepte in Form von Sketches, also einfachen Zeichnungen auf Papier, angefertigt. Diese Form des Prototyping zeichnet sich durch seine Einfachheit aus. Es können schnell viele, unterschiedliche Variationen angefertigt werden. Diese Entwürfe werden des Öfteren auch als **Low Fidelity Prototypes** bezeichnet.[36] Aus der so gewonnen Vielzahl von Designvorschlägen ist der geeignetste auszuwählen, welcher als Vorlage für die nächste Stufe des Design Prozesses verwendet wird.[37]

Orientierung am Material Design von Google auch open source verfügbar

Besonders für interaktionselemente und deren Empfehlung zur Verwendung -> Research ergab welche Elemente auch unpassend sind -> z.b. Bottom navigation in ersten scribbles

Google Weil weit verbreitet -> Zahlen!! Elemente sind vielen Usern bekannt. Zahlen android in Afrika / Uganda

Elemente sind:

Bottom App Bar inkl. Navigation menu

Top App Bar ink. Overflow Menu

Time picker / Time input

Swipe geste

Checkboxes (Checkboxes have been in user interfaces for a long time and should be used as expected.)

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[36] Carla Viviana Coleman, 2018, S. 51 ff

[37] Kantamneni, P. *Rapid prototyping*. Medium. https://medium.com/@kprasad_88078/rapid-prototyping-db44fefd464f
Zugriff: 23.09.2022

Visual experience:

The earliest stage of prototyping involves making a quick sketch of thoughts and ideas on a piece of paper, board, tablet, or napkin. The surface does not matter. As long as the designer or concept designer starts putting the ideas together somewhere, it will help him or her move to the next step.

Overall, the early sketching process of prototyping is quick due to its low fidelity, which makes it faster to place ideas down and change and move things around.

Sketching is the *most important* part of the UI process. Once you are through with sketching, you *cannot* turn back, especially if your prototype has become high fidelity, meaning it has already been programmed with a prototyping tool. If the project returns to sketching at any point, it is going back to t

Simulating Interactivity in Paper Prototyping

When creating prototypes, it is important to represent some type of interactivity, such as linking, search, and pop-up windows. There are many ways to create this interaction through layers that overlap the prototype with the change compared with the previous function. In addition, you can use highlighters, markers of various colors, or colored paper. The tools you use do not matter, as long as you get the point across to the user during direct testing.

Designing the user experience begins with visualizing the identity of the app and creating a skeleton or structure for the interactivity: create and add icons, windows, menus, and many other design patterns, as needed. It is very important to fix all errors during this stage. A paper prototype without a user experience is not a paper UI prototype.

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  Zugriff: 23.09.2022

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Anhang

Interview Trainer

INTRODUCTION:

I'm a master student and for my final thesis I want to continue the development of the online tool ASKtraining. A tool to plan and conceive workshops and trainings and to share materials regarding the topic of the workshop or the training. To ensure a highly usable application, I would like to start the design process by talking to potential future users who are skilled in conceiving, designing and organizing workshops.

QUESTIONS ABOUT THE TRAINER:

- What is your professional background?
- Which topics have your workshops?
- Do you prepare yourself in the topic of the workshop or do you rely on your experience?

QUESTIONS REGARDING THE PARTICIPANTS:

- How are the participants (e.g. school kids, adults, etc.)?
- What are the numbers of participants?
- Is assistant needed (e.g. a lot of attendance)?
- How do you find / invite participants?

QUESTIONS REGARDING THE VENUE:

- In which venues, or places does the workshop take place?
- Which materials do they use (e.g. tools, wood, etc.)?
- Is an internet connection needed and is it possible?
- Which kind of media (projector, flip-chart, whiteboard, handouts, etc.) is used?
- Are there snacks and beverages provided?

QUESTIONS REGARDING THE WORKSHOP / TRAINING

- Can you describe how your last workshop / training was planed, step by step?
- What were the challenges?
- What would it make easier for you to plan a workshop / training?
- Do you provide material about the workshop for the participants (e.g. handouts, blueprints, summaries tables / charts with specific informations, etc.)?
- If you provide material, in which form do you provide it (e.g. printed on paper, online, participants have to make their own nodes)?
- How long does a workshop usually take?
- Is there a certificate for participating the workshop / training?
- Do you use games or similar things before and in between the lessons? (e.g. to find out about other participants, loosening technics, etc.)

QUESTIONS REGARDING THE HUBS

- How ist the training organized inside the hub?
- Are the trainings related to each other, or do they build on each other?

QUESTIONS REGARDING THE FUNDING:

- How is the workshop / training financed?
- How are the materials for the workshop / training financed (e.g. Participants have to pay for their own)?
- If there is any funding, does it require documentation and how do you do that?

VORSTELLUNG:

In meiner Masterarbeit beschäftige ich mich mit der Weiterentwicklung des Online Tools ASKtraining, ein Tool zur Konzeption und Planung von Workshops und Trainings und zum Teilen von Lerninhalten. Um das Design des Tools möglichst benutzungsorientiert zu gestalten möchte ich in der Anfangsphase mit Menschen sprechen die bereits Erfahrungen mit der Realisierung von Workshops und Trainings besitzen.

FRAGEN ZUM TRAINER:

- Was ist Ihr professioneller Hintergrund?
- Welche Themen werden in Ihren Workshops behandelt?
- Bereiten Sie sich zur Thematik des Workshops vor, oder verlassen Sie sich auf ihre Erfahrungen?

FRAGEN ZU DEN TEILNEHMER:INNEN:

- Wer sind die Teilnehmer:innen (z. B. Schulkinder, Erwachsene, etc.)?
- Wie hoch sind die Teilnehmerzahlen?
- Wird Unterstützung benötigt (z. B. bei hohen Teilnehmerzahlen)?
- Wie werden Teilnehmer gefunden / eingeladen?

FRAGEN BEZÜGLICH DER AUSSTATTUNG:

- Wo finden die Workshops normalerweise statt?
- Welche Materialien (z. B. Werkzeuge, Holz, etc.) werden benötigt?
- Wird eine Internetverbindung benötigt und ist diese auch möglich?
- Welche Medien (z. B. Projektor, Flipchart, Whiteboard, Handouts, etc) werden verwendet?
- Gibt es Snacks und Getränke?

FRAGEN BEZÜGLICH DES WORKSHOPS:

- Können Sie Schritt für Schritt beschreiben wie Sie ihren letzten Workshop / Training planten?
- Was waren die Herausforderungen?
- Was könnte die Planung eines Workshops / Trainings vereinfachen?
- Erhalten Teilnehmer:innen Begleitmaterial zum Workshop (z. B. Handouts, Baupläne, Zusammenfassungen, Tabellen mit spezifischen Informationen, etc.)?
- Falls es Begleitmaterial zum Workshop gibt, in welcher Form wird dieses zur Verfügung gestellt (z. B. in Papierform, online, Teilnehmer:innen sind angehalten Notizen zu machen)
- Wie lange dauert ein Workshop üblicherweise?
- Gibt es ein Zertifikat für die Teilnahme am Workshop / Training?

- Werden vor und zwischen den Lerneinheiten Spiele oder ähnliches gespielt (z. B. Kennenlernspiele, Auflockerungstechniken, etc.)?

FRAGEN BEZÜGLICH DES HUBS

- Wie sind die Trainings im Hub organisiert?
- Bauen die Trainings aufeinander auf, oder sind sie miteinander verwandt?

FRAGEN BEZÜGLICH DER FINANZIERUNG:

- Wie wird der Workshop finanziert?
- Wie werden die benötigten Materialien finanziert (z. B. Teilnehmer kommen dafür selbst auf)?
- Falls der Workshop / das Training gefördert wird, ist eine Dokumentation notwendig und wie wird dokumentiert?

Interview Participant

INTRODUCTION:

I'm a master student and for my final thesis I want to continue the development of the online tool ASKtraining. A tool to plan and conceive workshops and trainings and to share materials regarding the workshop topic. To ensure a highly usable application, I would like to start the design process by talking to potential future users who are skilled in conceiving, designing and organizing workshops and trainings.

QUESTIONS ABOUT THE PARTICIPANT:

- What is your background?
- Did you have any preparatory training about the workshop topic before attending?

QUESTIONS ABOUT THE LEARNING MATERIAL:

- How do you keep records of the skills you learned at the workshop / training?
- Did you get any documents about the workshop / training (e.g. summaries, blueprints, tables / charts with specific informations, etc.)?
- Is there any material about the workshop topic available online (e.g. summaries, blueprints, tables / charts with specific informations, etc.), which you can check by any time?

QUESTIONS ABOUT APPLYING THE LEARNED KNOWLEDGE:

- Did you apply the things you learned in the workshop / training?
- Did you train people of your environment (friends, family) in the topic of the workshop / training?

QUESTIONS ABOUT THE INFRASTRUCTURE:

- Do you have access to the materials you used during the workshop / training?
- Do you have access to internet?
- If yes, how is the connection (in terms of downloading documents, etc.)?

Potentielle Interview Partner Participant:
Jaiksana, Romeo, Edina, Richard, Vuga, Lobijo, **Bior**
Wafela, Joyce, Ayom, Yaro, Ghai

Potentielle Interview Partner Trainer:
Jaiksana, **Romeo**, **Edina**, **Richard**, **Vuga**, **Eva**, Yine Y., Yine B., Lobijo, Bior, **Vicy**, Clemens, Timm, GIG, **Jörn**, >> ASKnet_2021/2022 telegram group

VORSTELLUNG:

In meiner Masterarbeit beschäftige ich mich mit der Weiterentwicklung des Online Tools ASKtraining, ein Tool zur Konzeption und Planung von Workshops und Trainings und zum Teilen von Lerninhalten. Um das Design des Tools möglichst benutzungsorientiert zu gestalten möchte ich in der Anfangsphase mit Menschen sprechen die bereits Erfahrungen mit der Realisierung von Workshops und Trainings besitzen.

FRAGEN ZUM TEILNEHMER:

- Was ist ihr Hintergrund
- Hatten Sie Vorwissen zum Thema des Workshops?

FRAGEN ZU LEHRMATERIALIEN

- Führen Sie Aufzeichnungen zu den im Workshop / Training erlernten Fähigkeiten?
- Bekommen Sie Begleitmaterial zum Workshop / Training (z. B. Zusammenfassungen, Baupläne, Tabellen mit spezifischen Informationen, etc.)?
- Gibt es online Begleitmaterial zum Workshop (z. B. Zusammenfassungen, Baupläne, Tabellen mit spezifischen Informationen, etc.), welches Sie jederzeit abrufen können?

FRAGEN ZUR ANWENDUNG DES ERLERNTEN:

- Haben Sie das Erlernte bereits angewendet?
- Haben Sie das Erlernte an Personen aus ihrem Umfeld (Freunde, Familie) weiter gegeben bzw. diese ausgebildet?

FRAGEN ZUR INFRASTRUKTUR:

- Haben Sie Zugang zu den Materialien, welche Sie im Workshop / Training benutzten?
- Haben Sie Zugang zu Internet?
- Falls ja, wie ist die Verbindung (in Bezug auf das Herunterladen von Dokumenten, etc.)?

TELEGRAM INTRODUCTION TO FIND SUITABLE INTERVIEW PARTNERS:

Hey guys,
my name is Bastian, I'm a master student and for my final thesis I want to continue the development of the online tool ASKtraining. A tool to plan workshops and trainings. Therefore I would love to talk to people who already conducted a training on the one hand and also to people who attended a training on the other hand.
Your answers will help me to design an usable application, which satisfies the needs of its users.

Interviews - II

INTRODUCTION

I'm a master student and for my final thesis I want to continue the development of the online tool ASKtraining. A tool to plan and conceive workshops and trainings and to share materials regarding the topic of the workshop or the training.
I already interviewed some members of the YEF, CC4D and the Ataka hub to get a general impression of how everything is organized.

From my point of view a major issue is the documentation duty and a very important topic is the participant acquisition. In the second round of interviews I want to get a closer look at this specific points.

WICHITIG —> EINDRUCK FÜR DIE USER STORIES BEKOMMEN!!!

QUESTIONS ABOUT THE TRAINER:

- Which organization in the ASKnet is yours?
- What is your position in the hub?

QUESTIONS ABOUT THE PARTICIPANTS:

- Please describe me how you select participants step by step?
- Where do you get informations about possible participants?
- Do community leaders or RWCs help you with finding participants? What are they doing exactly?
- In which categories do you arrange the participants? (e.g. education, motivation, language, ability to transfer knowledge)
- Do you use any spreadsheet program (e.g. excel, or google sheets) for the acquisition? If yes, how do you organize it?

QUESTIONS ABOUT THE TRAININGS:

- When do you provide a certificate? (e.g. for certain trainings like skill, after a certain duration, for certain achievements)

- Do the participants have to reach some specific goals or levels? (How do you define this goals / levels?)

- Do the certificates have value? (e.g. participants use the certificate to prove their skills)

- Is there any instance / authority who verifies the correctness of the learning content? How is it done?

- When you organize a training and you need permission for it from community leaders or RWCs, how do you get it? Is there something like proposal, or some figures or anything needed?

QUESTIONS ABOUT THE DOCUMENTATION

- Do you write a report?

- What is in the report (e.g. landmark achievements, failures, number and acquisition of participants, expenses etc.)?

- Is the report related or similar to a proposal for fundings?

QUESTIONS REGARDING FUNDING

- Do you get funding besides r0g agency?

- How did you apply for it?

- Did you write a proposal?

- Is the proposal similar to the documentary report? What are the overlaps?

- What would help you to get additional fundings?

Personas

AMANYARA WILLIAM

Age:	24
Nationality:	South Sudanese
Marital Status:	Single
Hub:	Community Creativity for Development (CC4D)
School Education:	no graduation or degree
Languages:	English, Arabic, Kakwa, Pojulu, Kiswahili
Mobile Phone:	Smartphone with access to internet

Amanyara William is a 24 years old South Sudanese male, living in Eden at Rhino Camp Refugee Settlement, Uganda. He left South Sudan due to the civil war that erupted back in 2016.

This negatively affected his education, he couldn't graduate high school. Hence he was quite happy when he found out about the #ASKnet trainings in his settlement. He became very interested in informatics, open source projects and repairing broken mechanical and electronic devices.
Soon after his first trainings he became a member of the CC4D hub and they started to organize a community repair cafe event, where participants are able to fix broken devices. Amanyara also planed and organized trainings for women only. This training consists of two different parts: empowerment and hands-on training on repairing.
Furthermore Amanyara is developing technical devices with the open source hardware and software project Arduino.

The trainings gave him the opportunity to compensate his missed graduation, for which Amanyara is very thankful. Becoming a trainer was only logical for him, because in his opinion the trainings and workshops contribute to improve the living conditions in his community. Moreover he wants to give young people the same perspective like he was given too.

These days Amanyara keeps his eyes open to spot the next problem to be solved and to transfer the knowledge about to his community members in an adequate way.

Personas

JOYCE LEGELA

Age:	35
Nationality:	South Sudanese
Marital Status:	Single
Hub:	Youth Empowerment Foundation (YEF)
School Education:	Diploma in Information Technology
Languages:	English, Arabic, Kakwa Lugbara
Mobile Phone:	Smartphone with access to internet

Joyce Legela is a South Sudanese citizen and a second time refugee in Uganda. She was born in Rhino Camp Refugee Settlement in Uganda, and started her education journey in Uganda after completing her O - level (Senior four) in 2010. Afterwards she decided to return home to Yei - South Sudan but unfortunately the tribal war started in 2013, so she had no option than to become a refugee again. In 2015 Joyce joined Bugema University in Kampala and graduated three years later with a diploma in information technology.

She worked together with the UNHCR in the field of data management. Since 2021 she is the Monitoring and Evaluation Officer of CTEN (Community Technology Empowerment Network) a non-governmental organization, who aim to connect their community members to available resources through creating information and communication technology and community information centers.

She joined University in 2015 and graduated in 2018 with Diploma in information Technology. Her areas expertise are: Data management, electronic repair and maintenance, Video editing, Web development and basic programming (coding) skills.

She is also on of the founder of the YEF and since March she is working there as the Director of Finance and Administration. At YEF she is also responsible for organizing the repair cafe events which comes naturally with a lot of skills in repairing and maintain electronic and mechanical devices.

If you ask Joyce about her jobs the answer shoots out: Above all I love what I do and I do what I love.

Scenarios

WRITING A PROPOSAL (TO RECEIVE FUNDING) - FINANCIAL PART

Joyce wants to organize a training, therefore her hub needs to get some fundings for paying the employees, buy materials, etc.. She is planing to get some fundings from the institution she is usually getting some. For that reason she has to write a proposal which consists different topics, one of them is the financial report.
The organization offers a spreadsheet software template for this proposal. She has to fill in the estimated sums which will be expend. They are categorized into four points:

- Investments (e.g. Tools, Materials)
- Operating Expenses (e.g. Electricity, Internet, Catering, Transport for Participants)
- Personnel Expenses (e.g. staff, external mentors, trainers)
- Travel Costs (only travel costs for personnel)

After filling in all the expenses the spreadsheet software adds everything together. Joyce prints the finished document out, sings it and adds it to the other documents of the proposal. A copy of the template can be found under `/Materialien/task modeling/documents hubs/Proposal/Proposal_Template_Budget_ASKnet2021 - Tabelle1.pdf` in the project folder) **Different organizations have different proposal templates!**

WRITING A PROPOSAL (TO RECEIVE FUNDING) - ACTIVITY PART

Joyce wants to organize a training, therefore her hub needs to get some fundings for paying the employees, buy materials, etc.. She is planing to get some fundings from the institution she is usually getting some. For that reason she has to write a proposal which consists different topics, one of them is the activity report. The organization offers a template for this report which has to filled out. It starts with asking brief questions about the conducted training:

- number of participants and duration
- category of the training
- name of the project
- The organization and possible partners
- location of the venue
- Target group
- Implementation period
- Brief project description (½ page)
- Contact data
- Requested grant sum

After this overview questions the template continues with the „Detailed Project Description“ and wants to have more detailed answers for following points:

- Description of initial situation (max. 1 page)
- Direct and indirect target groups / audience (max. ½ page)
- Logframe: Impact, Outcomes, Output (max. 1 page)
- Planned Activities (categorized into some subitems)
- Risk factors and risk mitigating measures (max. ½ page)
- Sustainability (max. ½ page)
- Public Relations (max. ½ page)
- Feedback / Impact (max. ½ page)

Joyce uses a text processing program installed on the computer, which is located at the hub, for writing the report. (A copy of the template can be found under `/Materialien/task modeling/documents hubs/Proposal/Proposal_Template_Project_Description_ASKnet2021.pdf` in the project folder)

Different organizations have different proposal templates!

PARTICIPANT ACQUISITION (IF NOT DONE BY RCWS OR COMMUNITY LEADERS)

Amanyara and his colleges are planing a training about awareness in social media with solutions to the problem of hate speech, disinformation and misinformation. They already received a funding, now they need the right participants.

Usually therefore they talk to community leaders or the RWCs of the refugee resettlement, but this time they want to seek participants with access to internet. The community leaders and the RWCs know a lot about their people, but they don't know who has access to and experience with internet. So Amanyara and his colleges decide to start an online application process to find already experienced participants.

Therefore they create a google form which they share via email, Facebook, telegram, etc. They ask about:

- Name
- Adress / location
- Status of residency (refugee / host community)
- Contact (email address / telephone number)
- Whats there background / qualifications
- Work experience / skills
- Previous workshops or trainings attended
- Experience with social media
- How they access internet
- What is there motivation / aspiration (long answer)
- What they expect from the training (long answer)

The last two questions are particularly for the team. According to the answers they decide who gets an invitation for an interview. After they made their choice they talk to the applicants and decide who fits best. Another important point besides the motivation and experience is the location of the participant, because they aim to spread the participants

as much as possible in the region of the training location. Hence the participant can share their knowledge with a large number of different people.
A copy of the template Amanyara and his team used can be found under `/Materialien/task modeling/documents hubs/participants/Women Inclusion in Repair Culture Training Application Form.pdf`
Besides that, the use posters on which the print the message of the training and display it in public places. Or they „walk and talk“, walking while talking by using a megaphone in the targeted location mostly during evening hours when almost everyone is at home.

PLANING A TRAINING FROM SCRATCH (SCENARIO NOCHMAL AUFDRÜßELN!)

Training starts tomorrow, Amanyara wants to send an email reminder to all the participants

Organize food and drinks
We made invitation cards and sent SMS
one day before the training we did phone calls as a reminder
Recap what worked what not
Fragen zur Themenfindung:
What are the challenges and what new things we bring on board?
What helped the participants
What is the training aiming for?

CONDUCTING AN OLDER SAVED TRAINING

Amanyaras friend told him, that he is very annoyed by the recently, very often appearing power cuts in his area and that it is impossible for him and his family to charge mobile phones, etc. So Amanyara remembers that there was a training about building a „DIY Solar Generator“ and he decides to conduct this training. His college told him that the training was the last time two years ago. So he opens the home directory of his hubs gitHub account on his web browser and searches for it. After finding it, he oversees the content and checks if it’s still up to date.
(Wie geht es jetzt weiter? Ausdrucken? Merken?)
He prints out the material list and checks what is in the storage and what needs to be bought. He also checks if the needed tools are available.
He writes funding proposal.
He finds the participants.
He does the training.

USING THE RESOURCES OF A SAVED TRAINING FOR EDUCATIONAL PURPOSE

Amanyara is working on creating a new training, on part of it is about soldering. A kind of work Amanyara never did so far by his own, but he knows that soldering was part in a few different trainings. So he opens the home directory of his hubs gitHub account on his web browser and searches for the learning resource soldering. After finding it he prints it out, reads it and after a while he knows what to do.

EDITING THE SCHEDULE / METHODOLOGY OF AN OLDER SAVED TRAINING

Amanyaras friend told him, that he is very annoyed by the recently, very often appearing power cuts in his area and that it is impossible for him and his family to charge mobile phones, etc. So Amanyara remembers that there was a training about building a „DIY Solar Generator“ and he decides to conduct this training. His college told him that the training was the last time two years ago. So he opens the home directory of his hubs gitHub account with his web browser and searches for it. After finding it, he oversees the content and checks if it’s still up to date. He finds a few flaws in one document, so he wants to improve this file.
He opens the file by clicking on the document name, than he clicks on the „Edit this file“ - button (pencil icon on the right side), he changes the specific points by deleting them and writing it new, he scrolls to the end of the site, selects the bullet „`Commit directly to the main branch`“ and clicks on the „Commit changes“ - button. Now the website shows the changed document, the methodology of the old training is updated.

CHANGING THE SCHEDULE / METHODOLOGY DURING THE TRAINING

Amanyara wants to do a training about the use of media in problem solving and handling situations locally in the refugee camp. The participants were selected by the community leader and should have some experience in the use of online media. When the team arrived there, they had to find out the audience was completely different. They planed to discuss certain topics with media advanced participants, but instead they talked to media newbies. So they have to change the methodology, because if they would continue with their schedule the team probably could not achieved a single result.
The team decided to do a basic computer training (how to use google, what is a mouse, what is a text processing program, etc.). So he opens the home directory of his hubs gitHub account in his web browser and searches for the learning resource for a basic computer training. They have a quick look at it and continue the training with the changed methodology.

WRITING A DOCUMENTATION - FINANCIAL REPORT

After a conducted training Joyce needs to write a report for the organization who sponsored it. The report consists different topics, one of them is the financial report. Therefore she starts to collect all the bills for the things they spent on money like beverages and food, materials, copy costs, transportation, etc and adds them together. She also needs to scan the bills for the document. For collecting and adding all the different things she uses a spreadsheet software. The following screenshot shows parts of the sheet Joyce is using and what is important for the financial report:

Expenses		BUDGET Amount: Planned Expenses	REPORT Amount: Actual Expenses	received amount via bank transfer	receipt number	receipt date	payee	description	Deviation in %
1.	Investments (e.g. Tools, Materials)								
1.1									0,0 %
1.2									0,0 %
1.3									0,0 %

Following topics are in the sheet, with the same properties as seen above:

- Investments (e.g. Tools, Materials)
- Operating Expenses (e.g. Electricity, Internet, Catering, Transport for Participants)
- Personnel Expenses (e.g. staff, external mentors, trainers)
- Travel Costs (only travel costs for personnel)

When she is finished with collecting and filling in the different things, the spreadsheet software adds everything together. Joyce prints the finished document out, sings it and adds it to the other documents of the report. A copy of the template can be found under `/Materialien/task modeling/documents hubs/Report/Report_Template Financial Report.xlsx` in the project folder)

WRITING A DOCUMENTATION - ACTIVITY REPORT

After a conducted training Joyce needs to write a report for the organization who sponsored it. The report consists different topics, one of them is the activity report. The organization offers a template for this report which has to filled out. It starts with asking brief questions about the conducted training:

- number of participants and duration
- category of the training
- name of the project
- Possible partners
- location of the venue
- Target group
- Implementation period
- Brief overall assessment (½ page)
- Contact data

After this overview questions the template continues with the „Project Self-Assesment“ and wants to have more detailed answers for following points:

- Comparison: What did the project aim to achieve vs. What did the project actually achieve? (max. 1 page)
- Logframe: Impact, Outcomes, Output (max. 1 page)
- Sustainability (max. ½ page)
- Public Relations (max. ½ page)

- Lessons Learned (max. 1 page)

Joyce uses a text processing program installed on the computer ,which is located at the hub, for writing the report. (A copy of the template can be found under `/Materialien/task modeling/documents hubs/Report/Report_Template Project Report.doc` in the project folder)

Different organizations have different documentation / report templates!

CREATING CERTIFICATES - MENTEE

After a two weeks training Joyce wants to create certificates for the participants (mentees). This is the common practice at her hub for trainings that take at least four days.

For creating the certificates she opens the PDF file certificate_mentee.pdf and fills out the basic informations:

- Name of the participate
- Name of the training
- Location, starting and ending date
- Name of the Project director
- Names of the mentors

Then she prints out the certificate and hand it out to the related participant.

CREATING CERTIFICATES - MENTOR

After a two weeks training Joyce wants to create certificates for the mentors (Wer sind die Mentoren genau? Mitglieder des Hubs? Former Participants?). This is the common practice at her hub for trainings that take at least four days.

For creating the certificates she opens the PDF file certificate_mentee.pdf and fills out the basic informations:

- Name of the mentor
- Name of the training
- Location, starting and ending date
- Name of the Project director

Then she prints out the certificate and hand it out to the related mentor.

[EVALUATING THE PERFORMANCE OF THE PARTICIPANTS]

CERTIFICATION OF TRAININGS BY EXTERNAL INSTITUTIONS

Joyce created a web development training for female students. It’s a three weeks course with a focus on HTML programming. Joyce knows a lot about this topic, she has a university diploma in Information Technology. The course should help the students to apply for universities, but therefore the training must be verified by the national ministry of educational and cultural affairs. She gets in contact with the institution and sends them all her materials regarding the training via email.

EVALUATION OF CONDUCTED TRAININGS (FOLLOW UP / FEEDBACK FROM PARTICIPANTS TOO)

Wird noch nicht gemacht!! Soll aber auf Wunsch der r0g agency mitgedacht werden (impact nachweisen für zukünftige Fördergerlder)

Mögliche fragen für ein follow up interview mit Participants:

- Did you have any preparatory training about the workshop topic before attending?
- How do you keep records of the skills you learned at the workshop / training?
- Did you apply the things you learned in the workshop / training?
- Did you train people of your environment (friends, family) in the topic of the workshop / training?
- Do you have access to the materials you used during the workshop / training?

Use Cases

USE CASE: WRITING PROPOSAL - FINANCIAL PART

User Action	System Response
Click on spreadsheet software	Open software Asking which kind of document should be opened (empty, special type, etc.
Click on empty document	Open empty document
Click on „File“ in the top menu	Display options
click on „used documents“	Display options
click on „proposal template budget“	Open document
Enter content into corresponding fields	Display contend in corresponding field Add up the sums
Continue the procedure until end	display contend in corresponding field Add up the sums display total expenses
Click on „File“ in the top menu	Display options
Click on „Print“	Display print option menu
Click on „Print“	Print document
Click on „Save"	Save document

USE CASE: WRITING PROPOSAL - ACTIVITY PART

User Action	System Response
Click on text processing software	Open software Asking which kind of document should be opened (empty, special type, etc.
Click on empty document	Open empty document
Click on „File“ in the top menu	Display options
click on „used documents“	Display options
click on „proposal template Project Description“	Open document
Enter content into corresponding fields	Display contend in corresponding field
Continue the procedure until end	Display contend in corresponding field
Click on „File“ in the top menu	Display options
Click on „Print“	Display print option menu
Click on „Print“	Print document

User Action	System Response
Click on „Save"	Save document

PARTICIPANT ACQUISITION (IF NOT DONE BY RCWS OR COMMUNITY LEADERS)

USE CASE: CREATING ONLINE APPLICATION FORM

User Action	System Response
Click on web browser	Open web browser
Enter „https://docs.google.com/forms“	Display website
Click on „`empty`“ under „`create new form`“	Create new empty form
Click on title „`undefined form`“	Show flashing cursor for text editing on the click location
Type in title „Application for the awareness in social media training“	Display edited content
Click in the textfield „`undefined question`“	Show flashing cursor for text editing on the click location
Type in first question	Display edited content
Click on „`Multiple Choice Question`“	Display options for answering questions
Click on choosen type of question	Display edited content
Click on „+“ - Button (add question)	Add another question Display edited content
Continue the procedure until end	Display complete form

USE CASE: SHARING ONLINE APPLICATION FORM VIA FACEBOOK / TWITTER

This use case starts where the use case „Creating online application form“ ends

User Action	System Response
Click on „`share`“ - button in the top menu	Display „`form share`“ menu
Click on „`Facebook`“ - button / „`Twitter`“-button	Open new browser tab Display Facebook / Twitter website
Continue on social media website	Share form with followers

USE CASE: SHARING ONLINE APPLICATION FORM VIA TELEGRAM

This use case starts where the use case „Creating online application form“ ends

User Action	System Response
Click on „`share`“ - button in the top menu	Display „`form share`“ menu

User Action	System Response
Click on „‹ – ›"- button (link)	Display link
Click on „`copy`"- button (link)	Copy link
Continue in Telegram app	Share form with followers in Telegram via link

USE CASE: SHARING ONLINE APPLICATION FORM VIA EMAIL

This use case starts where the use case „Creating online application form" ends

User Action	System Response
Click on „`share`" - button in the top menu	Display „`form share`" menu
Click on „‹ – ›"- button (link)	Display link
Click on „`copy`"- button (link)	Copy link
Continue in email client	Share form with contacts via email by sending link

USE CASE: CHOOSING CANDIDATES

This use case starts where the use case „Creating online application form" ends

User Action	System Response
Click on „`replies`" in the top menu	Display „`replays`" site Show overview
Click on „`question`"	Display answers to first question
Select question „location" in the dropdown menu (Ocea Zone / Eden Zone / Other)	Display all the three answers
Select answer „Ocea Zone" Click on „`n answers`" - button	Display candidates who gave answer „Ocea Zone"
Continue the procedure until end	Display requested content

USE CASE: PLANING TRAINING

User Action	System Response
Click on web browser	Open web browser
Enter „github.com"	Display website
Click on „Sign in"	Display login page Request username / email adress Request password
Enter Username Enter Password Click „Sign in"	Verify login data Display dashboard

User Action	System Response
Click on „`new`“ - button	Display „`create a new repository`“ site
Click on text Feld beneath „`Repository name`“	Show flashing cursor for text writing
Enter repository name Choose bullet „`Public`“ Click „`Create repository`“ - Button	Display „`Quick setup`“ site
Click on "`creating a new file`“ - link	Display new unnamed document
Enter document name Enter content of document	Display contend in corresponding fields
Click on „`Commit new file`“ - button	Display updated document
Continue the procedure until all documents are in the repository	Display contend in corresponding field

Use Case: Organize catering
Use Case: Recap
Use Case: Reminding participants

USE CASE: CONDUCTING SAVED TRAINING

User Action	System Response
Click on web browser	Open web browser
Enter „github.com“	Display website
Click on „Sign in“	Display login page Request username / email adress Request password
Enter Username Enter Password Click „Sign in“	Verify login data Display dashboard
Click on „DIY Solar Generator“ repository	Display repository
Click on „materials.md“	Display „materials.md“
Press „Ctrl + P“ for printing	Print document
Navigate back to „DIY Solar Generator“ repository	Display repository
Click on „tools.md“	Display „tools.md“
Press „Ctrl + P“ for printing	Print document

USE CASE: INSPECTING RESOURCES

User Action	System Response
Click on web browser	Open web browser
Enter „github.com“	Display website
Click on „Sign in“	Display login page Request username / email adress Request password
Enter Username Enter Password Click „Sign in“	Verify login data Display dashboard
Click on requested repository	Display repository
Click on „soldering.md“	Display „soldering.md“

USE CASE: EDITING SCHEDULE / METHODOLOGY OF RESOURCES

User Action	System Response
Click on web browser	Open web browser
Enter „github.com“	Display website
Click on „Sign in“	Display login page Request username / email adress Request password
Enter Username Enter Password Click „Sign in“	Verify login data Display dashboard
Click on requested repository	Display repository
Click on requested document	Display requested document
Click on „`Edit this file`“ - button	Display „Edit file“ mode
Click inside text field	Show flashing cursor for text editing on the click location
Edit parts of content	Display edited content
Select the bullet „`Commit directly to the` **`main`** `branch`“	Show that bullet is selected
Click on „`Commit changes`“ - button	Display updated document

USE CASE: CHANGING SCHEDULE / METHODOLOGY DURING TRAINING

User Action	System Response
Click on web browser	Open web browser
Enter „github.com“	Display website

User Action	System Response
Click on „Sign in“	Display login page Request username / email adress Request password
Enter Username Enter Password Click „Sign in“	Verify login data Display dashboard
Click on „basic computer training“ repository	Display repository
Click on requested document	Display requested document

USE CASE: WRITING DOCUMENTATION - FINANCIAL REPORT

User Action	System Response
Click on spreadsheet software	Open software Asking which kind of document should be opened (empty, special type, etc.
Click on empty document	Open empty document
Click on „File“ in the top menu	Display options
click on „used documents“	Display options
click on „proposal template budget“	Open document
Enter content into corresponding fields	Display contend in corresponding field Add up the sums
Continue the procedure until end	Display contend in corresponding field Add up the sums Display total expenses (planed vs. actual) Display deviation in %
Click on „File“ in the top menu	Display options
Click on „Print“	Display print option menu
Click on „Print“	Print document
Click on „Save"	Save document

USE CASE: WRITING DOCUMENTATION - ACTIVITY REPORT

User Action	System Response
Click on text processing software	Open software Asking which kind of document should be opened (empty, special type, etc.
Click on empty document	Open empty document
Click on „File“ in the top menu	Display options

User Action	System Response
click on „used documents“	Display options
click on „proposal template Project Description“	Open document
Enter content into corresponding fields	Display contend in corresponding field
Continue the procedure until end	Display contend in corresponding field
Click on „File“ in the top menu	Display options
Click on „Print“	Display print option menu
Click on „Print“	Print document
Click on „Save"	Save document

USE CASE: CREATING CERTIFICATES - MENTEE

User Action	System Response
Click on „certificate_mentee.pdf“	Open PDF editor software Display document
Click inside text field	Show flashing cursor for text editing on the click location
Typ in „Name of participant / training / project director / etc.“	Display edited content
Continue the procedure until end	Display contend in corresponding field
Click on „File“ in the top menu	Display options
Click on „Print“	Display print option menu
Click on „Print“	Print document
Sign document	-

USE CASE: CREATING CERTIFICATES - MENTOR

User Action	System Response
Click on „certificate_mentee.pdf“	Open PDF editor software Display document
Click inside text field	Show flashing cursor for text editing on the click location
Typ in „Name of participant / training / project director / etc.“	Display edited content
Continue the procedure until end	Display contend in corresponding field
Click on „File“ in the top menu	Display options
Click on „Print“	Display print option menu

User Action	System Response
Click on „Print“	Print document
Sign document	-

USE CASE: TRAINING CERTIFICATION - EXTERNAL INSTITUTION

User Action	System Response
Click on web browser	Open web browser
Enter „github.com“	Display website
Click on „`Sign in`“	Display login page Request username / email adress Request password
Enter Username Enter Password Click „`Sign in`“	Verify login data Display dashboard
Click on „HTML programming“ repository	Display repository
Click on requested document	Display requested document
Click on „`Download`“ - button	Download requested document Save in download folder
Continue the procedure until end	Download requested document Save in download repository
Open download repository	Display repository
Right click on document	Display right click menu
Select „`share`“ Click „`Email`“	Display „`share`“ menu Open email client Display empty email with attached file Cursor flashing in the „`To`“ textfield
Type email adress of „national ministry of educational and cultural affairs“	Display email adress
Click on „`Sent email`“ - button	Sent email

USE CASE: WRITING PROPOSAL - FINANCIAL PART

Conventional Use Case		Essential Use Case	
User Action	**System Response**	**User Intention**	**System Responsibility**
Click on spreadsheet software	Open software Asking which kind of document should be opened (empty, special type, etc.		
Click on empty document	Open empty document		
Click on „File“ in the top menu	Display options		
click on „used documents“	Display options		
click on „proposal template budget“	Open document		
Enter content into corresponding fields	Display contend in corresponding field Add up the sums	Collect all expenses	Possibility to enter expenses
Continue the procedure until end	display contend in corresponding field Add up the sums display total expenses		Sum up expenses Display total number
Click on „File“ in the top menu	Display options		
Click on „Print“	Display print option menu		
Click on „Print“	Print document		Possibility to share document
Click on „Save"	Save document		

USE CASE: WRITING PROPOSAL - ACTIVITY PART

Conventional Use Case		**Essential Use Case**	
User Action	**System Response**	**User Intention**	**System Responsibility**
Click on text processing software	Open software Asking which kind of document should be opened (empty, special type, etc.		
Click on empty document	Open empty document		
Click on „File“ in the top menu	Display options		
click on „used documents“	Display options		
click on „proposal template Project Description“	Open document		
Enter content into corresponding fields	Display contend in corresponding field	Collect and describe all activities / aims	Possibility to collect description of activities / aims
Continue the procedure until end	Display contend in corresponding field		
Click on „File“ in the top menu	Display options		
Click on „Print“	Display print option menu		
Click on „Print“	Print document		Possibility to share document
Click on „Save"	Save document		

USE CASE: CREATING ONLINE APPLICATION FORM

Extends: Sharing online application form via Facebook / Twitter
Sharing online application form via telegram
Sharing online application form via email
Choosing Candidates

Conventional Use Case		**Essential Use Case**	
User Action	**System Response**	**User Intention**	**System Responsibility**
Click on web browser	Open web browser		
Enter „https://docs.google.com/forms“	Display website		
Click on „`empty`“ under „`create new form`“	Create new empty form		
Click on title „`undefined form`“	Show flashing cursor for text editing on the click location		
Type in title „Application for the awareness in social media training“	Display edited content	Label the application form	Possibility to label application form
Click in the textfield „`undefined question`“	Show flashing cursor for text editing on the click location		
Type in first question	Display edited content	Ask candidates questions	Possibilities to create questions
Click on „`Multiple Choice Question`“	Display options for answering questions		Possibilities to answer questions
Click on chosen type of question	Display edited content		
Click on „+“ - Button (add question)	Add another question Display edited content		
Continue the procedure until end	Display complete form		Display complete form

USE CASE: SHARING ONLINE APPLICATION FORM VIA FACEBOOK / TWITTER

This use case starts where the use case „Creating online application form“ ends

Conventional Use Case		**Essential Use Case**	
User Action	**System Response**	**User Intention**	**System Responsibility**
Click on „share“ - button in the top menu	Display „form share“ menu	Share application form via Facebook / Twitter	Share application form on Facebook / Twitter
Click on „Facebook‟ - button / „Twitter“- button	Open new browser tab Display Facebook / Twitter website		
Continue on social media website	Share form with followers		

USE CASE: SHARING ONLINE APPLICATION FORM VIA TELEGRAM

This use case starts where the use case „Creating online application form“ ends

Conventional Use Case		**Essential Use Case**	
User Action	**System Response**	**User Intention**	**System Responsibility**
Click on „share“ - button in the top menu	Display „form share“ menu	Share application form via Telegram	Share application form on Telegram
Click on „‹ – ›“- button (link)	Display link		
Click on „copy“- button (link)	Copy link		
Continue in telegram app	Share form with followers in telegram via link		

USE CASE: SHARING ONLINE APPLICATION FORM VIA EMAIL

This use case starts where the use case „Creating online application form“ ends

Conventional Use Case		Essential Use Case	
User Action	**System Response**	**User Intention**	**System Responsibility**
Click on „`share`“ - button in the top menu	Display „`form share`“ menu	Share application form via email	Share application form via email
Click on „‹ – ›“- button (link)	Display link		
Click on „`copy`“- button (link)	Copy link		
Continue in email client	Share form with contacts via email by sending link		

USE CASE: CHOOSING CANDIDATES

This use case starts where the use case „Creating online application form“ ends

Conventional Use Case		Essential Use Case	
User Action	**System Response**	**User Intention**	**System Responsibility**
Click on „`replies`“ in the top menu	Display „`replays`“ site Show overview		
Click on „`question`“	Display answers to first question	See answers to question	Display answers of candidates
Select question „location“ in the dropdown menu (Ocea Zone / Eden Zone / Other)	Display all the three answers	Filter candidates after certain question	Display answers of different candidates
Select answer „Ocea Zone“ Click on „`n answers`“ - button	Display candidates who gave answer „Ocea Zone“		
Continue the procedure until end	Display requested content	Filter certain questions after candidates	Display candidates
Click on „`replies`“ in the top menu	Display „`replays`“ site Show overview		

This essential use case refers highly to Scenario: Participant acquisition.

USE CASE: PLANING TRAINING

Extends: Creating Resources
Selecting existing Resources

Conventional Use Case		**Essential Use Case**	
User Action	**System Response**	**User Intention**	**System Responsibility**
Click on web browser	Open web browser		
Enter „github.com“	Display website		
Click on „Sign in“	Display login page Request username / email adress Request password		
Enter Username Enter Password Click „Sign in“	Verify login data Display dashboard		
Click on „`new`“ - button	Display „`create a new repository`“ site	Creating new content	Possibility to create new content
Click on text Feld beneath „`Repository name`“	Show flashing cursor for text writing		
Enter repository name Choose bullet „`Public`“ Click „`Create repository`“ - Button	Display „`Quick setup`“ site	Label the content Make it public	Possibility to name new content Provide public access to content

Continues on this point with Use Case: Creating Resources and Use Case: Selecting existing resources

USE CASE: CREATING RESOURCES

This use case starts where the use case „Planing training“ ends

Conventional Use Case		Essential Use Case	
User Action	**System Response**	**User Intention**	**System Responsibility**
Click on "`creating a new file`“ - link	Display new unnamed document	Subdivide content into different classes	Possibility to create subclasses
Enter document name Enter content of document	Display contend in corresponding fields		
Click on „`Commit new file`“ - button	Display updated document		
Continue the procedure until all documents are in the repository	Display contend in corresponding field		

USE CASE: SELECTING EXISTING RESOURCES

This use case starts where the use case „Planing training“ ends

Conventional Use Case		Essential Use Case	
User Action	**System Response**	**User Intention**	**System Responsibility**
Click on main repository link	Display all repositories		
Browsing repositories Click on chosen repository	Display content of repository		
Navigate to requested file	display requested file	Select existing resource	Display different resources
Click on download	Display file in webbrowser		
Click on download	Open „`Save as`“ window		
Click on „`Save`"	Download file		
Navigate to newly created repository (Use Case: Planing training)	Display repository		
Click on „`Add File`“ - button Choose „`Upload Files`“	Display upload possibilities		
Click on „choose your files“ - link	Display local download folder		
Click on requested, downloaded file Click on „Open“	Upload file into repository	Adding existing resource to training	Possibility to add resource to training

USE CASE: CONDUCTING SAVED TRAINING

Conventional Use Case		**Essential Use Case**	
User Action	**System Response**	**User Intention**	**System Responsibility**
Click on web browser	Open web browser		
Enter „github.com“	Display website		
Click on „Sign in“	Display login page Request username / email adress Request password		
Enter Username Enter Password Click „Sign in“	Verify login data Display dashboard		
Click on „DIY Solar Generator“ repository	Display repository	Choose „DIY Solar Generator“ repository	Display repository
Click on „materials.md“	Display „materials.md“	Check needed materials and tools	Display materials and tools
Press „Ctrl + P“ for printing	Print document		
Navigate back to „DIY Solar Generator“ repository	Display repository		
Click on „tools.md“	Display „tools.md“		
Press „Ctrl + P“ for printing	Print document		

USE CASE: INSPECTING RESOURCES

Conventional Use Case		Essential Use Case	
User Action	**System Response**	**User Intention**	**System Responsibility**
Click on web browser	Open web browser		
Enter „github.com“	Display website		
Click on „Sign in“	Display login page Request username / email adress Request password		
Enter Username Enter Password Click „Sign in“	Verify login data Display dashboard		
Click on requested repository	Display repository		
Click on „soldering.md“	Display „soldering.md“	Reading certain content	Display certain content

USE CASE: EDITING SCHEDULE / METHODOLOGY OF RESOURCES

Conventional Use Case		Essential Use Case	
User Action	**System Response**	**User Intention**	**System Responsibility**
Click on web browser	Open web browser		
Enter „github.com“	Display website		
Click on „Sign in“	Display login page Request username / email adress Request password		
Enter Username Enter Password Click „Sign in“	Verify login data Display dashboard		
Click on requested repository	Display repository		
Click on requested document	Display requested document	Reading certain content	Display certain content
Click on „`Edit this file`“ - button	Display „Edit file“ mode		
Click inside text field	Show flashing cursor for text editing on the click location		
Edit parts of content	Display edited content	Edit content	Possibility to edit content
Select the bullet „`Commit directly to the` **`main`** `branch`“	Show that bullet is selected		
Click on „`Commit changes`“ - button	Display updated document		

USE CASE: CHANGING SCHEDULE / METHODOLOGY DURING TRAINING

Conventional Use Case		Essential Use Case	
User Action	**System Response**	**User Intention**	**System Responsibility**
Click on web browser	Open web browser		
Enter „github.com“	Display website		
Click on „Sign in“	Display login page Request username / email adress Request password		
Enter Username Enter Password Click „Sign in“	Verify login data Display dashboard		
Click on „basic computer training“ repository	Display repository		
Click on requested document	Display requested document	Show certain content	Display certain content

USE CASE: WRITING DOCUMENTATION - FINANCIAL REPORT

Conventional Use Case		**Essential Use Case**	
User Action	**System Response**	**User Intention**	**System Responsibility**
Click on spreadsheet software	Open software Asking which kind of document should be opened (empty, special type, etc.		
Click on empty document	Open empty document		
Click on „File“ in the top menu	Display options		
click on „used documents“	Display options		
click on „proposal template budget“	Open document		
Enter content into corresponding fields	Display contend in corresponding field Add up the sums	Collect all expenses	Possibility to enter expenses
Continue the procedure until end	Display contend in corresponding field Add up the sums Display total expenses (planed vs. actual) Display deviation in %		Sum up expenses Display total number of expenses (planed vs. actual) Display deviation in %
Click on „File“ in the top menu	Display options		
Click on „Print“	Display print option menu		
Click on „Print“	Print document		Possibility to share document
Click on „Save"	Save document		

USE CASE: WRITING DOCUMENTATION - ACTIVITY REPORT

Conventional Use Case		Essential Use Case	
User Action	**System Response**	**User Intention**	**System Responsibility**
Click on text processing software	Open software Asking which kind of document should be opened (empty, special type, etc.		
Click on empty document	Open empty document		
Click on „File“ in the top menu	Display options		
click on „used documents“	Display options		
click on „proposal template Project Description“	Open document		
Enter content into corresponding fields	Display contend in corresponding field	Collect and describe all activities / aims	Possibility to collect description of activities / aims
Continue the procedure until end	Display contend in corresponding field		
Click on „File“ in the top menu	Display options		
Click on „Print“	Display print option menu		
Click on „Print“	Print document		Possibility to share document
Click on „Save"	Save document		

USE CASE: CREATING CERTIFICATES - MENTEE

Conventional Use Case		**Essential Use Case**	
User Action	**System Response**	**User Intention**	**System Responsibility**
Click on „certificate_mentee.pdf“	Open PDF editor software Display document		
Click inside text field	Show flashing cursor for text editing on the click location		
Typ in „Name of participant / training / project director / etc.“	Display edited content	Create certificate for certain participant	Possibility to create personalized certificate
Continue the procedure until end	Display contend in corresponding field		
Click on „File“ in the top menu	Display options		
Click on „Print“	Display print option menu		
Click on „Print“	Print document	commit certificate to participant	Possibility to issue certificate to participant
Sign document	-	Certify authenticity	Possibility to verify authenticity

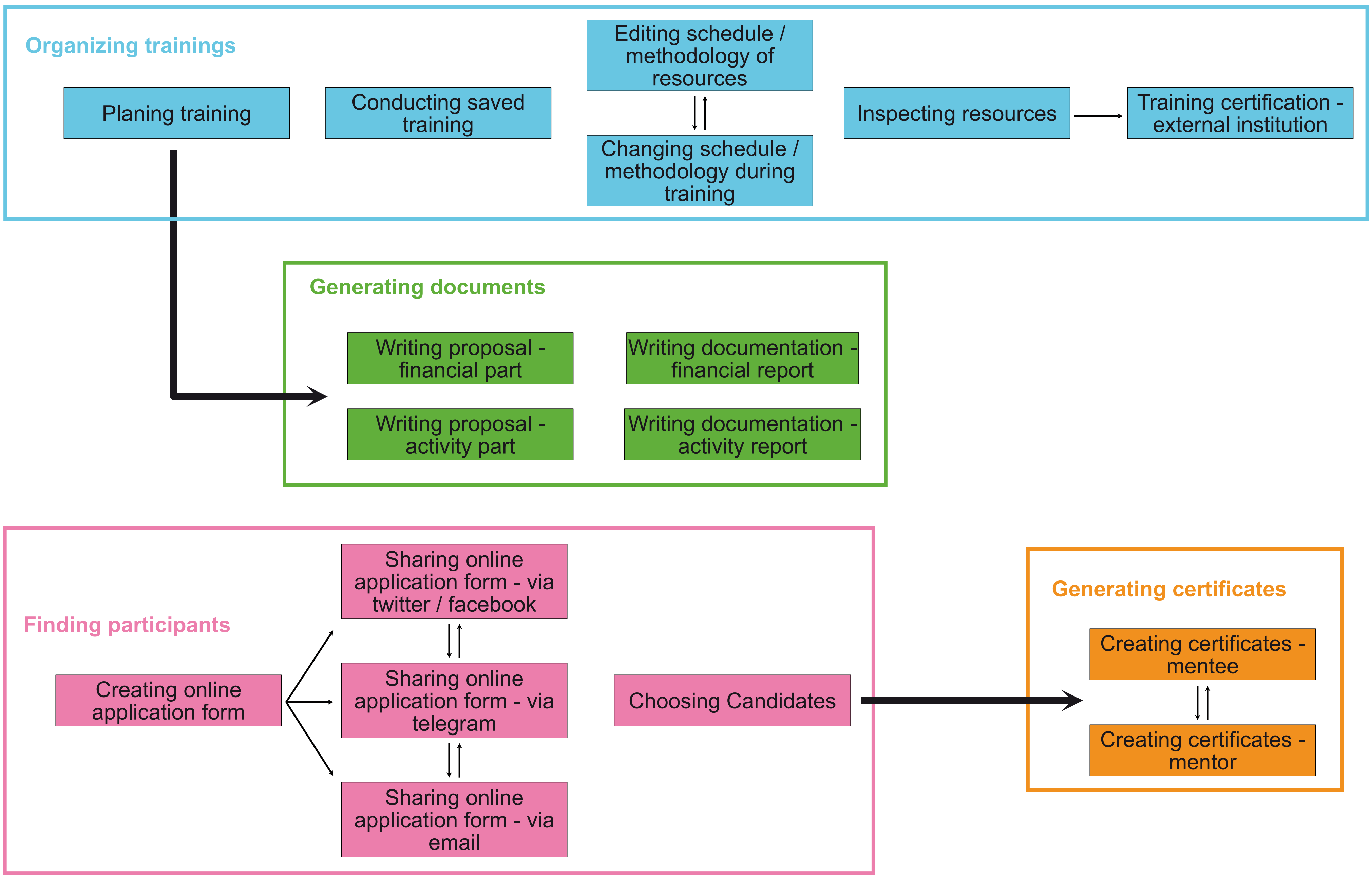
USE CASE: CREATING CERTIFICATES - MENTOR

Conventional Use Case		**Essential Use Case**	
User Action	**System Response**	**User Intention**	**System Responsibility**
Click on „certificate_mentee.pdf“	Open PDF editor software Display document		
Click inside text field	Show flashing cursor for text editing on the click location		
Typ in „Name of participant / training / project director / etc.“	Display edited content	Create certificate for certain participant	Possibility to create personalized certificate
Continue the procedure until end	Display contend in corresponding field		
Click on „File“ in the top menu	Display options		
Click on „Print“	Display print option menu		
Click on „Print“	Print document	commit certificate to participant	Possibility to issue certificate to participant
Sign document	-	Certify authenticity	Possibility to verify authenticity

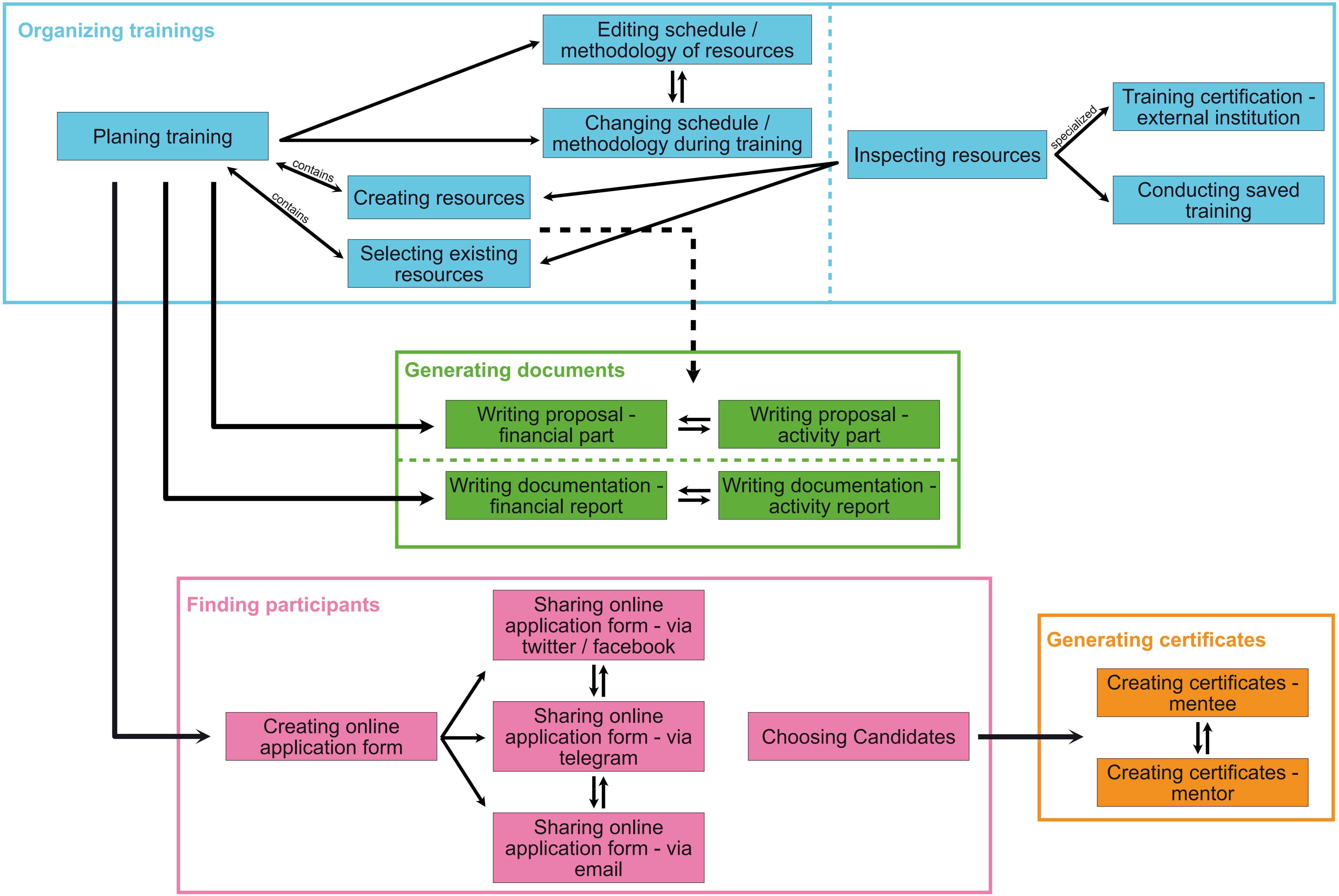
USE CASE: TRAINING CERTIFICATION - EXTERNAL INSTITUTION

Conventional Use Case		**Essential Use Case**	
User Action	**System Response**	**User Intention**	**System Responsibility**
Click on web browser	Click on web browser		
Enter „github.com“	Enter „github.com“		
Click on „`Sign in`“	Click on „`Sign in`“		
Enter Username Enter Password Click „`Sign in`“	Enter Username Enter Password Click „`Sign in`“		
Click on „HTML programming“ repository	Click on „HTML programming“ repository	Select certain training	Display trainings
Click on requested document	Click on requested document		
Click on „`Download`“ - button	Click on „`Download`“ - button		
Continue the procedure until end	Continue the procedure until end		
Open download repository	Open download repository		
Right click on document	Right click on document		
Select „`share`“ Click „`Email`“	Select „`share`“ Click „`Email`“	Share selected training with „national ministry of educational and cultural affairs“	Possibility to share training with „national ministry of educational and cultural affairs“
Type email address of „national ministry of educational and cultural affairs“	Type email address of „national ministry of educational and cultural affairs“		
Click on „`Sent email`“ - button	Sent email		

Use Case Map


Organizing trainings
Planing training
Conducting saved training
Editing schedule / methodology of resources
Changing schedule / methodology during training
Inspecting resources
Training certification - external institution
Generating documents
Writing proposal - financial part
Writing documentation - financial report
Writing proposal - activity part
Writing documentation - activity report
Finding participants
Creating online application form
Sharing online application form - via twitter / facebook
Sharing online application form - via telegram
Sharing online application form - via email
Choosing Candidates
Generating certificates
Creating certificates - mentee
Creating certificates - mentor

Interaction Context



Tools & Materials

GENERATING DOCUMENTS

Materials

Exepnese Data

Activity Data

Content Label

Writing proposal - financial part	
User Intention	**System Responsibility**
Collect all expenses	Possibility to enter expenses
	Sum up expenses Display total number
	Possibility to share document
Writing proposal - activity part	
Collect and describe all activities / aims	Possibility to collect description of activities / aims
	Possibility to share document
Writing documentation - financial report	
Collect all expenses	Possibility to enter expenses
	Sum up expenses Display total number of expenses (planed vs. actual) Display deviation in %
	Possibility to share document
Writing documentation - activity report	
Collect and describe all activities / aims	Possibility to collect description of activities / aims
	Possibility to share document

Tools

Data Inputer

Data Adder

Data Viewer

Document Sharer

Data Subtractor

Data Divider

Data Collector

Data Safer

ORGANIZING TRAININGS

Materials

- Content Label
- Resource Data
- Resource Label
- Content Label
- Resource Data
- Resource Label

Tools

- Content Publisher
- Content Creator
- Content Structure
- Resource Browser
- Resource Linker
- Data Safer
- Data Viewer
- Document Sharer
- Data Inputer

Organizing Training
Extends: Creating Resources / Selecting existing Resources

User Intention	System Responsibility
Creating new content	Possibility to create new content
Label the content Make it public	Possibility to name new content Provide public access to content
Creating Resources	
Subdivide content into different classes	Possibility to create subclasses
Selecting existing resources	
Select existing resource	Display different resources
Adding existing resource to training	Possibility to add resource to training
Inspecting resources	
Reading certain content	Display certain content
Training Certification - External institution	
Select certain training	Display trainings
Share selected training with „national ministry of educational and cultural affairs“	Possibility to share training with „national ministry of educational and cultural affairs“
Conducting saved training	
Choose „DIY Solar Generator“ repository	Display repository
Check needed materials and tools	Display materials and tools
Editing schedule / methodology of resources	
Reading certain content	Display certain content
Edit content	Possibility to edit content
Changing schedule / methodology during training	
Show certain content	Display certain content

FINDING PARTICIPANTS

Materials

Application Label

Question Data

Answer Data

Candidate Label

Creating online application form	
User Intention	**System Responsibility**
Label the application form	Possibility to label application form
Ask candidates questions	Possibilities to create questions
	Possibilities to answer questions
	Display complete form
Sharing online application form via Facebook / Twitter	
Share application form via Facebook / Twitter	Share application form on Facebook / Twitter
Sharing online application form via telegram	
Share application form via Facebook / Twitter	Share application form on telegram
Sharing online application form via email	
Share application form via Facebook / Twitter	Share application form via email
Choosing Candidates	
See answers to question	Display answers of candidates
Filter candidates after certain question	Display answers of different candidates
Filter certain questions after candidates	Display candidates

Tools

Data Inputer

Data Safer

Data Viewer

Document Sharer

Candidate Fiilter

Question Fiilter

GENERATING CERTIFICATES

Materials

- Candidate Label
- Hub ID Data
- Activity Data

Creating certificates - Mentor	
User Intention	**System Responsibility**
Create certificate for certain participant	Possibility to create personalized certificate
commit certificate to participant	Possibility to issue certificate to participant
Certify authenticity	Possibility to verify authenticity
Creating certificates - Mentee	
Create certificate for certain participant	Possibility to create personalized certificate
commit certificate to participant	Possibility to issue certificate to participant
Certify authenticity	Possibility to verify authenticity

Tools

- Data Inputer
- Data Safer
- Data Viewer
- Authenti-cator
- Document Sharer

Context Navigation Map