Project handbook
Smart-Wand
1

Version 1
Project manager: Thomas
Date: 17/11/25

Content

Document versions

Versionno.	Date	Change	Author
1	17.11.2025	Inital Entries	Toferer

Distribution list

Name	Organisational Unit	Role in project	Telephone	E-mail
Thomas Toferer	PM	PM and Hardware Design		Thomas.toferer@htl-wels.at
Laurenz Durkowitch	TM	Comunictaion between Devices		Laurenz.durkowitch@htl-wels.at
Codoban Simon	TM	Setting up Hardware, Documentation		Simon.Codoban@htl-wels.at

1 Project plans

1.1 Project Assignment

<table>
<tr>
<td colspan="2">Smart-Wand
<Project no.></td>
<td colspan="3">PROJECT-
ASSIGNMENT</td>
</tr>
<tr>
<td colspan="2">Project start event:
• 2.12.2025</td>
<td colspan="3">Project start date:
• 3.12.2025</td>
</tr>
<tr>
<td colspan="2">project close down event in terms of content:
• End of Mai
Formal project close down event:
• End of Mai</td>
<td colspan="3">Project close down dates:
• End of Mai
•</td>
</tr>
<tr>
<td colspan="2">Project objectives:
• Creating usuable Wand for Smart Devices
• send commands to Home Assist
• Distinguish different Spells by Movement</td>
<td colspan="3">Non-objectives:
• Expanding support for other Smart-Home management Systems (Google Home,)
•
•</td>
</tr>
</table>

Main tasks (Project phases):
- **Detecting Spells (Gyro)**
- **Send commands to Home-Assist**
- Refine spell detection
-

Project resources and costs*:

resource/type of cost	unit	Costs (€)
ESP 32	1	7€
RasperryPi 5	1	75€
MPU6050	1	7,55€

Project owner:
- **HTL-Wels**

Project manager:
- **Toferer**

Project team members:
- Codoban Simon
- Durkowitch Laurenz
-

HTL Wels _____   Toferer Thomas _____
   <Name>, (Project owner)   Thomas Toferer (Project manager)

* Possible categories of total Project budget:
Category A: up to 0,3 million Euro
Category B: up to 1 million Euro
Category C: up to 10 million Euro
Category D: more than 10 million Euro

1.2 Project Objectives (objectives, non-objectives)

Smart Wand	PROJECT OBJECTIVES	
Type of objective	**Project objectives**	**Adjusted project objectives as of…**
objectives: • **Main objectives** • **Additional objectives**	• **Getting Sensor Input** • **Detect Spells** • **Communicate with HomeAssist** • • Add Support for other microcontroller • Webinterface to manage Spells	
Non-objectives	• Add Support for other IOT Management Solutions • • •	• Time left for comple

1.3 Description of Pre- and Post Project Phase

Smart Wand 1	DESCRIPTION OF PRE- AND POST- PROJECT PHASE

1) Pre-project phase

What triggered the project?
- ITP
- Inspiration from other students
-
-

Relevant documents for the project („Minutes", … ONLY documents and no content necessary)
-
-
-
-

Experience from similar projects
- xdj100s
- FPV drone (Laurenz)
-
-

2) Post-project phase
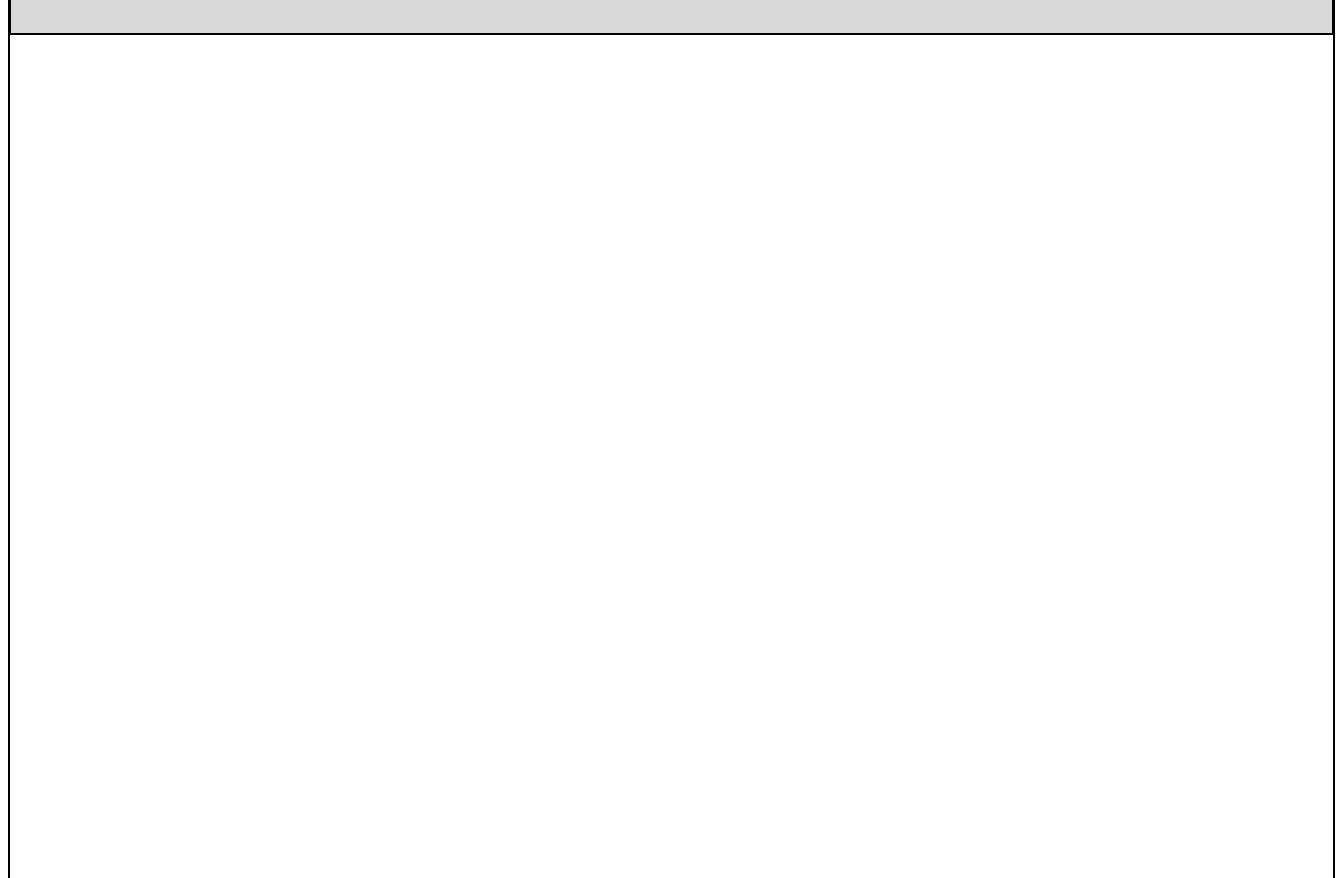
What will happen after the project has ended? (follow-up activities, further projects, …)?
- Demonstration of the project on "open day" of HTL Wels
-
-
-

1.4   Project Environment Analysis

<Project name> <Project no.>	PROJECT ENVIRONMENT GRAPHIC

<Project name> <Project no.>	PROJECT ENVIRONMENT TABLE		
Environment	**Relationship** (potential/conflict)	**Measures**	**Who / when** **PSP Code**
Arduino Framework	Dependent on Framework		
HTL Wels	Project investor		

1.5 Relationship to Other Projects and the Organisations´s Strategy

<Project name> <Project no.>	RELATIONSHIP TO OTHER PROJECTS		
Programs/ Projects/	**Relationship** (potential/conflict)	**Sanctions**	**Who / when** **WBS Code**
Arduino Framework	We need Libarys to get sensor data.	**If these libarys get prohibit**	
Home Assist			

<Project name> <Project no.>	CONNECTION TO THE ORGANISATION´S STRATEGY	
Strategy	**Description of connection/relationship**	

1.6 Project Organisation Chart

<Project name> <Project no.>	PROJECT- ORGANISATION	
Role in Project	**Field of duties/Skills**	**Name**
Project owner	Advisor	HTL Wels
Project manager	Coordination, Developement of Spell Detection	Toferer Thomas
Project team members	Developement of Rest API	Laurenz Durkowitsch
Project members		

1.7 Plan of Objects of Consideration of the Project

<Project name> <Project no.>	PLAN OF OBJECTS OF CONSIDERATION

1.8   Work Breakdown Structure (WBS)

1.9   Project Work-Package Specification

<table>
<tr>
<td colspan="2"><Project name>
<Project no.></td>
<td>PROJECT WORK-PACKAGE
SPECIFICATION</td>
</tr>
<tr>
<td rowspan="4">WBS-Code, 1
Spell detection</td>
<td colspan="2">WP Content (What shall be done?)
•   Detect Spells from wand movement
•
•
•
•</td>
</tr>
<tr>
<td colspan="2">Non-WP Content (What shall not be done? optional)
•   Add acoustical Input to spell detection
•
•
•
•</td>
</tr>
<tr>
<td colspan="2">WP Result (What is achieved after WP was finished?)
•   Reliable Spell detection
•
•
•
•</td>
</tr>
<tr>
<td colspan="2">Progress Measurement (How is progress measured?)
•   Detection of spell 4 out of 5 times performing the m
•
•
•
•</td>
</tr>
</table>

1.10 Project Responsibility Matrix

| SmartWand / <Project no.> | | PROJECT-RESPONSIBILITY-MATRIX | | | | | | | | | | | | |

WBS-Code	WP-Title	External project owner	Project owner	Project manager	Project assistant	Project team member 1	Project team member 2	Project team member 3	Project team member 4	Project team member 5	Project member 1	Project member 2	Project member 3	Project coach
1.1	**Project management**													
1.1.1														
1.1.2														
1.1.3														
1.1.4														
1.1.5														
1.1.6														
1.1.7														
1.2	**Phase 2**													
1.2.1														
1.2.2														
1.2.3														
1.2.4														
1.2.5														
1.2.6														
1.2.7														
1.3	**Phase 3**													
1.3.1														
1.3.2														
1.3.3														
1.3.4														
1.3.5														
1.3.6														
1.3.7														

Functions
R ....Responsible
C ....Contribution
I ....has to be informed

1.11 Milestoneplan

<Project name> <Project no.>	MILESTONEPLAN			
WBS-Code	**Milestone**	**Plan date**	**Revised date**	**Actual date**
	Setup of HomeAssist and addinional Hardeware	15 January		
	Spell Detection	**1 Feburary**		
	Communication from wand to HomeAssist	20 Feburary		
	Preperation for first Demo	1 March		

*In order of plan dates.

1.12 Project Bar Chart

1.13 Resource Plan

<Project name> <Project no.>	Resource Plan					
WBS-Code	**Phase/Work-package**	**Type of resource**	**Planned quantity (days)**	**Revised quantity (days)**	**Actual quantity (days)**	**Deviation (days)**

1.14 Project Cost Plan

<table>
<tr><td colspan="2"><Project name>
<Project no.></td><td colspan="4">PROJECT COST PLAN</td></tr>
<tr><td>WBS-Code, WP-Title</td><td>Type of Cost</td><td>Planned cost</td><td>Revised cost</td><td>Actual cost</td><td>Deviation</td></tr>
<tr><td rowspan="5"></td><td>• Personnel</td><td>0</td><td>0</td><td>0</td><td></td></tr>
<tr><td>• Material</td><td>< 90€</td><td></td><td></td><td></td></tr>
<tr><td>• External services</td><td>0</td><td>0</td><td>0</td><td></td></tr>
<tr><td>• Other</td><td>0</td><td>0</td><td>0</td><td></td></tr>
<tr><td>Total</td><td>< 90€</td><td></td><td></td><td></td></tr>
<tr><td rowspan="5"></td><td>• Personnel</td><td></td><td></td><td></td><td></td></tr>
<tr><td>• Material</td><td></td><td></td><td></td><td></td></tr>
<tr><td>• External services</td><td></td><td></td><td></td><td></td></tr>
<tr><td>• Other</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Total</td><td></td><td></td><td></td><td></td></tr>
<tr><td rowspan="5"></td><td>• Personnel</td><td></td><td></td><td></td><td></td></tr>
<tr><td>• Material</td><td></td><td></td><td></td><td></td></tr>
<tr><td>• External services</td><td></td><td></td><td></td><td></td></tr>
<tr><td>• Other</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Total</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Project cost</td><td></td><td></td><td></td><td></td><td></td></tr>
</table>

1.15 Project Communication

<Project name> <Project no.>	PROJECT-COMMUNICATION			
Title	**Objectives, Content**	**Participants**	**Schedule**	**Location**
Project owner meeting	• project status • decisions • acceptance of progress report	Project owner, Project manager		
Project controlling meeting	• project status • controlling of tasks, schedule, resources, costs • controlling of project environments • social controlling • prepare proposal for decision	Project manager, Project team, Project coach		
Subteam meeting	• Coordination of subteams • Discussion of problems	Subteam		
	•			

1.16 Project „Rules"

1.17 Project Risk Analysis

		PROJECT RISK ANALYSIS							
WBS-Code	WBS-description	Risk-description	Priority	Benefit/Cost	Probability	Risk-value	Delay	Avoiding action	Cost for minimizing risk
(Code)	(Text)	(Text)	(Range)	(iuro)	(Percentage)	(iuro)	(iWeeks)	(Text)	(Euro)
Project total									

1.18 Project Documentation

Area	Description
File	
Access Authorisation	
Naming convention	
Rules	

2 Project Start

2.1   Minutes– Project Start

2.1.1 Project Start Workshop

2.1.2 Follow-up Workshop

2.1.3 Project Owner Meeting

# 3 Project Co-ordination

3.1   Approval of Work-packages
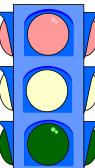
<Project name> <Project no.>	APPROVAL OF WORK-PACKAGES				
WBS-Code	**Work-package**	**WP-Owner**	**Date**	**Approval by**	**Signature**

3.2   Minutes – Project Co-ordination

4 Project Controlling

4.1   Project Status Report

<table>
<tr>
<td colspan="2"><Project name>
<Project no.></td>
<td colspan="2">PROJECT STATUS REPORT
as of ....</td>
</tr>
<tr>
<td colspan="2">Project crisis
Project in difficulties
Project according to plan ✔</td>
<td colspan="2">1) Overall Status:
•</td>
</tr>
<tr>
<td colspan="2">2) Status Project objectives
•
•</td>
<td colspan="2">Activities:
•
•</td>
</tr>
<tr>
<td colspan="2">3) Status Project progress
•
•</td>
<td colspan="2">Activities:
•
•</td>
</tr>
<tr>
<td colspan="2">4) Status Schedule
•
•</td>
<td colspan="2">Activities:
•
•</td>
</tr>
<tr>
<td colspan="2">5) Status Resources/costs
•
•</td>
<td colspan="2">Activities:
•
•</td>
</tr>
<tr>
<td colspan="2">6) Status Context
•
•</td>
<td colspan="2">Activities:
•
•</td>
</tr>
<tr>
<td colspan="2">7) Status Organisation/culture
•
•</td>
<td colspan="2">Activities:
•
•</td>
</tr>
</table>

4.2 Additional Project Status Reports

4.3 Minutes – Project controlling

4.3.1 Project Controlling Meetings

4.3.2 Project Owner Meetings

5 Project Close Down

5.1   Project Close Down Report

<table>
<tr>
<td colspan="2"><Project name>
<Project no.></td>
<td colspan="2" align="center">PROJECT CLOSE DOWN
REPORT</td>
</tr>
<tr>
<td colspan="2">1) Overall impression</td>
<td colspan="2">2) Reflection: Fulfilment of objectives</td>
</tr>
<tr>
<td colspan="4">3) Reflection: Deliverables / Schedule</td>
</tr>
<tr>
<td colspan="4">4) Reflection: Resources / Costs</td>
</tr>
<tr>
<td colspan="4">5) Reflection: Internal Organisation / Environmental Relationships</td>
</tr>
<tr>
<td colspan="2">6) Performance appraisal (Project owner, Project manager, Project member)</td>
<td colspan="2">7) Lessons learned (Summary of Experiences and suggestions for improvement)</td>
</tr>
<tr>
<td colspan="4">

8) Post-Project Phase Planning, Additional Tasks

To-Do	Owner	Schedule

</td>
</tr>
<tr>
<td colspan="4">

9) Project Close Down

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　　　<Name> (Project owner)　　　　　　　　　　*<Name>* (Project manager)

</td>
</tr>
</table>

5.2 Minutes – Project Close Down

5.2.1 Project Close Down Workshop