No.	Commentator	Comment Date	Comment	Reply Date	Reply
1	Martin	13-Dec-2023	Too much attention has been given to the state of the art. I think for a report this could be narrowed down and more references defined. If you think it would be appropriate for a thesis. But this is not the case.	23-Dec-2023	Your observation regarding the detailed exploration of the state of the art is well-noted. The intention was to provide a thorough background, ensuring a comprehensive understanding of the project's foundation within its academic and industrial context
2	Martin	13-Dec-2023	Section 2.2 - Notation: The author is using the same examples of the STD DIN SPEC 91345. I think the appropriate thing to do is to include quotation marks or redirect to the standard.	16-Dec-2023	this commened is amended, author included citation and mentioned STD DIN SPEC 91345, where the example is being used
3	Martin	13-Dec-2023	Reference Sch16. It should be referenced to the STD DIN SPEC 91345:	16-Dec-2023	this commened is amended, author reference STD DIN SPEC 91345, instead of Ref. Sch16
4	Martin	13-Dec-2023	Section 2.6, At the beginning of the section "C" should be in capital letters,	23-Dec-2023	this comment is amended, author make sure the beginning of the section is capital letters
5	Martin	13-Dec-2023	Section 2.6, AAS represent the digital twin of an object". What is an object? From where are you extracting this definition?	16-Dec-2023	As author extracted this definiation from **"B. Boss et al., "Digital twin and asset administration shell concepts and application in the industrial internet and industrie 4.0: An industrial internet consortium and plattform industrie 4.0 joint whitepaper," 2020, accessed: 2023-08-02"** And The object is an asset. However, this comment is amended, author change object to asset to avoid the confusion.
6	Martin	13-Dec-2023	Why are you comparing the RAMI 4.0 and the IIRA. The IIRA was not presented before in the document and the author is presenting the Figure 2.12 making a comparison between the two references architectures.	23-Dec-2023	Author compare RAMI 4.0 and IIRA to showcase their distinct methods and priorities in driving industrial digital transformation. Its enhances understanding of digital twin use in Industry 4.0 according to "**S. -W. Lin et al., "An industrial internet consortium and plattform industrie 4.0 joint whitepaper," Dec. 2017**" However, this comment is amended, author added section of IIRA in the backgroud chapter
7	Martin	13-Dec-2023	Page 13. The author is introducing a lot of different objects of the AAS, like submodels, assets, concept descriptions and also submodel elements. If the author do this, a definition of each object of the AAS is required. If not, it will be better to reference the corresponding references in order to provide the corresponding definitions.	23-Dec-2023	This comment is amended, author provide the corresponding references to "**S. Bader et al., "Details of the asset administration shell - part 1, version 3.0rc02," Federal Ministry for Economic Affairs and Climate Action (BMWK), Tech. Rep., 2022"**
8	Martin	13-Dec-2023	The AAS is not offering a standardized framework. The AAS is used to address specific vertical Layers of the RAMI 4.0 (Function, Information and Communication) in order to ensure the required interoperability to create and I4.0-Ecosystem (Composed by I4.0-Components)	23-Dec-2023	This comment is amended, author edit and rewrite the summary of section 2.7 Asset Administration Shell (AAS)
9	Martin	13-Dec-2023	Section 3.1: What is the definition of Functional, non-Functional and connectivity requirements?	6-Jan-2024	This comment is amended, author added the definition of Business, Functional, non-Functional, connectivity, document requirment into section 3.1. Requirements
10	Martin	13-Dec-2023	Section 3.1: Why the author is only addressing connectivity requirements. What about the Technical Requirements? What about the "Business Requirements"?	6-Jan-2024	This comment is amended. The addition of Business Requirements to the report is based on Section 4.3 RAMI 4.0 Positioning Specification. Concerning Technical Requirements, these are encompassed within the Functional and Non-Functional Requirements already detailed in the report. Therefore, a separate section on Technical Requirements is not included to maintain conciseness and focus.
11	Martin	13-Dec-2023	"Documentation Requirements" were not previously defined. What is the goal of the definition of these requirements?	6-Jan-2024	The goal of this requirement aim to provides an overview of the essential documentation elements necessary for the project, emphasizing their role in conveying the project's background within the Industry 4.0 framework. However, this comment is amended, author edit the introduction paragraph of section 3.1 Requirement to include the documentation requirment
12	Martin	13-Dec-2023	Why the author is using the CP notation? What is the goal to define this after the definition of the Asset in section 4.2?	16-Dec-2023	this comment is amended, author added the paragraph explain the goal of using CP notation after defined asset. It can summarise as follow 1. Assessment of Current State 2. Benchmarking for Progress 3. Identification of Developmental Needs
13	Martin	13-Dec-2023	In Figure 4.2 the author is showing a transition from CP43 to CP44. What precisely does the author do to change this?	16-Dec-2023	this comment is amended, author added the conclusion paragraph explain that the AAS shall be used to trasnfer the defnied asset from CP43 to CP44

14	Martin	13-Dec-2023	Suggestion: Section 4.4 could be part of an annex, or at least, keep in this section a reduced version of all the defined information (explaining them in the annex).	6-Jan-2024	this comment is amended, author write the reduced version of all the defined information for section 4.4, and moved the whole existing section to annex
15	Martin	13-Dec-2023	How the different stakeholders interact "harmoniously" within the communication network exhibited in Figure 4.6?	16-Dec-2023	this comment is amended, author added the explanation regarding harmoniously. the report now details the critical role of the OPC UA protocol in ensuring seamless communication. The updated content clarifies how this standard protocol facilitates the cohesive functioning of various modules by providing a uniform data exchange framework. Additionally, the reference to X. Ye et al.'s work reinforces the significance of interoperability in enhancing the collective efficiency of Industry 4.0 components.
16	Martin	13-Dec-2023	Section 5.2: The used version of the AASX PE should be detailed and specified using a reference.	16-Dec-2023	this comment is amended, author added the used version of the AASX PE and referenced also
17	Martin	13-Dec-2023	Section 5.2.1 and 5.2.2: What does the author mean with the "creation of the asset"?	16-Dec-2023	this comment is ammended, in section 5.2.1 and 5.2.2, author changed the word "creation of the asset" to "selection of the asset" to avoid confusion.
18	Martin	13-Dec-2023	Section 5.2.3: The sources of the used submodels of the IDTA should be referenced. (Not a general reference)	23-Dec-2023	this comment is amended, author added the specific source of used submodels from the IDTA and referenced also
19	Martin	13-Dec-2023	Figure 5.5 is not clear. It should be focused on the elements of the submodels rather than the details of the fields of the selected object of the image.	6-Jan-2024	this comment is amended, author focus on ManufacturerProductFamily Submodel Element (MultiLanguageProperty) as an example
20	Martin	13-Dec-2023	Section 5.2.4: The AAS can be exported in XML and ALSO in the OPC UA Nodeset model (which is also a xml file at the end). This distinction if important to remark. If the AAS is exported in xml the internal structure of the information is not the same as if the file is exported as an OPA UA Nodeset model	23-Dec-2023	this comment is amended, author provide information in this subsection to hightlight that the AAS can be exported in XML and also in OPC UA Nodeset model.
21	Martin	13-Dec-2023	Section 5.2.4: It is important to remark that the exported file contains all the required nodes information in order to populate the namespace of the OPC UA Server instance.	23-Dec-2023	this comment is amended, author remark the key points of choosing option "Export OPC UA Nodeset2.xml (via UA Server plug-in)" which are as follow 1. Structured for OPC UA Integration 2. Representation of AAS 3. Populating the Namespace
22	Martin	13-Dec-2023	Free OPC UA Modeler: Reference to the github repository.	23-Dec-2023	this comment is amended, author reference the github repository of Free OPC UA Modeler
23	Martin	13-Dec-2023	A general schema to define the connection of the Rev-Pi with the robot would be interesting to show.	7-Jan-2024	this comment is amended, author added subsection 5.4.5 General Connection Schema in report
24	Martin	13-Dec-2023	Section 5.2.4 - SSH Access: The user credentials of the Rev Pi should not be exposed within the report nor the IP address.	23-Dec-2023	this comment is amended, author concealed all the user credentials and IP adress in report
25	Martin	13-Dec-2023	Section 5.5 should be renamed: Instead of "Manual" maybe would be better "Execution procedure" or something similar.	16-Dec-2023	this comment is amended, author renamed section 5.5 to be Execution procedure
26	Martin	13-Dec-2023	Size of Figures 6.5, 6.6, 6.11,6.12 and 6.13 should be increased. The Information cannot be clearly distinguished.	6-Jan-2024	this comment is amended, author increase size of the figures
27	Martin	13-Dec-2023	Section 6.1.2: UA Expert App should be referenced.	23-Dec-2023	this comment is amended, author added the used version of Ua Expert and referenced also
28	Martin	13-Dec-2023	Reference NM23. Visited on 06/06/2023?	16-Dec-2023	this comment is amended, author removed "Visited on 06/06/2023" to avoid confusion in bibliography
29	Martin	13-Dec-2023	A repository of the development source code should be provided within a section of the report (Example, Annex).	23-Dec-2023	this comment is amended, author added more annex section regard "Repository Structure and Contents"
30	Martin	13-Dec-2023	Section A and B could be inside a Section "Annex".	16-Dec-2023	this comment is amended, author structured every section to be under "Annex"
31	Jeffrey	13-Dec-2023	section 1.1 Intriductin and motivation, The introduction should also introduce the environment of your work (the Digital Factory) and the Workpiece Transfer Unit a little bit more. It is good that you position your work within the scope of the Master, but the reader wants to know more about your specific task	13-Jan-2024	This comment is ammend, author has revised and included more detailed information about the Digital Factory and the Workpiece Transfer Unit to provide a clearer context and understanding of specific task within this environment.

32	Jeffrey	13-Dec-2023	section 1.2 Previous Summer Semester Project, Previous Work?	14-Jan-2024	This comment is ammend, the section titled "Previous Summer Semester Project" has been elaborated to detail the objectives, methodologies, and outcomes of the prior work. This includes a explanation of the workpiece transfer unit's development and its subsequent role in facilitating a digital manufacturing environment.
33	Jeffrey	13-Dec-2023	section 1.2 Previous Summer Semester Project, Previous Work? What is a Workpiece Transfer unit? What is the environment it is embedded in? What role does it play? You could add images etc from your previous project here to allow the reader a better understanding of what has been done before.	14-Jan-2024	This comment is ammend, the section on the previous summer semester project has been revised to incorporate a clear definition of the workpiece transfer unit, its operational environment, and functional role. Figures 1.1 and 1.2 have been added to visually depict the unit's application within a simulated digital factory setting.
34	Jeffrey	13-Dec-2023	section 1.2 Previous Summer Semester Project, digitalization solution, What does this mean? Which digitalization solutions? For which purpose?	13-Jan-2024	The author has revised the section on 'digitalization solutions', detailing the technologies in the workpiece transfer unit. This includes using the UR5e robot's sensors for data collection, implementing the OPC UA protocol for factory communication, and developing a modular software framework for flexibility. These improvements clarify the solutions' role in enhancing the unit's functionality in the Industry 4.0 context
35	Jeffrey	13-Dec-2023	section 1.2 Previous Summer Semester Project, operation in a simulated environment, This sounds like your solution was just simulated, which it wasn't at all.	14-Jan-2024	The term 'simulated environment' was initially used to reflect the constraints due to the ongoing construction of the digital factory. However, the section has been revised for more clarity. Visuals have been added to illustrate the project's practical aspects, addressing the comment on the use of 'simulated environment.
36	Jeffrey	13-Dec-2023	section 1.4 Project's Key Requirment, Operate All Six Direction, What does this mean? Which directions?	14-Jan-2024	This comment is ammend, author added more detail regarding on this matter in every section related to this matter as follow: - section 3.1.2. Functional Requirements - section 3.2.2. Functional Specification - section 6.2.2. Functional Requirements Verification also author change the name of "Operate All Six Direction" to be "Multidirectional Operation in Hexagonal Factory Layout" in order to avoid the confusion and for more clarity
37	Jeffrey	13-Dec-2023	section 2.1 Digital Factory in Technikum, captital S for science	13-Jan-2024	This comment is ammend, author make sure the beginning of science is Capital "S"
38	Jeffrey	13-Dec-2023	section 2.1 Digital Factory in Technikum, Reference to previous work	13-Jan-2024	This comment is ammend, author added reference to **"K. Kanaan, "Development and implementation of industry 4.0 laser cutter module: Digitalization of the module," Hochschule Emden/Leer, Semester Project Report, Jul. 29, 2022"** and also **"P. Noonurak and H. Meyer, "Workpiece transfer unit: Semester project report - ws22/23," HS Emden Leer, Semester Project Report, Mar. 26, 2023."**
39	Jeffrey	13-Dec-2023	section 2.4.1. Overview, Reference missing	13-Jan-2024	This comment is ammend, author added reference to **"Plattform Industrie 4.0 et al., Reference architecture model industrie 4.0 (rami4.0), DIN SPEC 91345, English translation of DIN SPEC 91345:2016-04,accessed: 2023-06-06, 2016."**
40	Jeffrey	13-Dec-2023	section 2.4.5. System Composition and Functionality, Reference missing	14-Jan-2024	This comment is ammend, author added reference to **"Plattform Industrie 4.0 et al., Reference architecture model industrie 4.0 (rami4.0), DIN SPEC 91345, English translation of DIN SPEC 91345:2016-04,accessed: 2023-06-06, 2016."**
41	Jeffrey	13-Dec-2023	section 2.4.6. Administration Shell of I4.0 Components, Reference missing	14-Jan-2024	This comment is ammend, author added reference to **"Plattform Industrie 4.0 et al., Reference architecture model industrie 4.0 (rami4.0), DIN SPEC 91345, English translation of DIN SPEC 91345:2016-04,accessed: 2023-06-06, 2016."**
42	Jeffrey	13-Dec-2023	section 2.5.1. The Concept and History, Reference missing	14-Jan-2024	This comment is ammend, author added reference to **"B. Boss et al., "Digital twin and asset administration shell concepts and application in the industrial internet and industrie 4.0: An industrial internet consortium and plattform industrie 4.0 joint whitepaper," 2020, accessed: 2023-08-02"**

43	Jeffrey	13-Dec-2023	section 2.5.2. Relations Among Digital Twins in System, Reference missing	13-Jan-2024	This comment is ammend, author added reference to **"B. Boss et al., "Digital twin and asset administration shell concepts and application in the industrial internet and industrie 4.0: An industrial internet consortium and plattform industrie 4.0 joint whitepaper," 2020, accessed: 2023-08-02"**
44	Jeffrey	13-Dec-2023	section 2.6. Asset Administation Shell (AAS), what is checked?	13-Jan-2024	This comment is ammend, author removed "checked" to avoid confusion
45	Jeffrey	13-Dec-2023	section 2.6. Asset Administation Shell (AAS), Reference missing	14-Jan-2024	This comment is ammend, author added reference to **"B. Boss et al., "Digital twin and asset administration shell concepts and application in the industrial internet and industrie 4.0: An industrial internet consortium and plattform industrie 4.0 joint whitepaper," 2020, accessed: 2023-08-02"**
46	Jeffrey	13-Dec-2023	section 2.6. Asset Administation Shell (AAS), Reference missing	14-Jan-2024	This comment is ammend, author added reference to **"S. -W. Lin et al., "An industrial internet consortium and plattform industrie 4.0 joint whitepa- per," Dec. 2017. "**
47	Jeffrey	13-Dec-2023	section 2.7. RevPi Core S, It is debatable if it is necessary to dedicate a full section of chapter 2 to this device, with 5 subsections. The device with its core specifications could easily be described in one paragraph. More important would be a justification about why this system has been used and maybe even a comparison to other alternatives. But this would already dive into design and implementation specific questions	13-Jan-2024	Thank you for the feedback. I appreciate the suggestion to streamline the section on RevPi Core S. While the detailed explanation aimed to highlight its importance in the project, I acknowledge the need for conciseness and will consider this in future reports.
48	Jeffrey	13-Dec-2023	section 2.7. RevPi Core S, what is checked?	14-Jan-2024	This comment is ammend, author removed "checked" to avoid confusion
49	Jeffrey	13-Dec-2023	2.7.2. Integration of IoT and Industrial Automation, reads like advertisement	13-Jan-2024	This comment is ammend, author revised it to focus more on the technical integration of IoT and industrial automation, avoiding any promotional tone.
50	Jeffrey	13-Dec-2023	2.7.4. Future Implications, how is this shown in Figure 2.15? It only shows the device and not its capabilities.	13-Jan-2024	This comment is ammend, author remove the reference sentence to Figure RevPi Core S to avoid confusion
51	Jeffrey	13-Dec-2023	2.7.5. Features, Often? When does it not?	14-Jan-2024	This comment is ammend, author remove "often" to avoid confusion
52	Jeffrey	13-Dec-2023	2.7.5. Features, Often? advertisement language	13-Jan-2024	This comment is ammend, author revised it to avoiding any promotional tone.
53	Jeffrey	13-Dec-2023	3.1.1. Functional Requirements, Operate in All Six Directions, You need to explain what these directions are	14-Jan-2024	This comment is ammend, author added more detail regarding on this matter in section 1.4 and also change the name to be "Multidirectional Operation in Hexagonal Factory Layout" in order to avoid the confusion and for more clarity
54	Jeffrey	13-Dec-2023	3.1.2. Non-Functional Requirements, CP Notation Positioning, Where did this requirement come from?	14-Jan-2024	This requirement is included to prepare the workpiece transfer unit for digitalization, specifically within the Classification of Presentation and Communication (CP) framework. Establishing its CP position prior to implementing the Asset Administration Shell (AAS) provides a clear roadmap for the digitalization process, ensuring alignment with Industry 4.0 standards.