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D2.3 Updated Version of the Agenda and Outline of the Online Mentoring Sessions

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Abstract	DIGILOGIC creates a knowledge base on logistics value chain and latest digital technologies enabling competitive and sustainable logistics processes to be used to foster digital innovation in Africa through online mentoring. This mentoring applies three different formats. The first consists of a series of talks on innovative logistics technologies and business models. The second format are one-company workshops to develop new approaches for specific issues in respect to logistics and digitalization. Coaching sessions are the third format of WP2. Through a series of online meetings, a company employee is coached by a DIGILOGIC coach in the implementation of innovative digitalization solutions for logistics.
Keywords	Online sessions, mentoring and coaching, eLearning

Document Revision History

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PU	Public, fully open, e.g., web	✓
CL	Classified, information as referred to in Commission Decision 2001/844/EC	
CO	Confidential to DIGILOGIC project and Commission Services	

*** R:** Document, report (excluding the periodic and final reports)
DEM: Demonstrator, pilot, prototype, plan designs
DEC: Websites, patents filing, press & media actions, videos, etc.
OTHER: Software, technical diagram, etc.

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EXECUTIVE SUMMARY

DIGILOGIC is a project funded by the European Union for the cooperation of European and African Digital Innovation Hubs (DIHs). These DIHs aim to support innovators, start-ups, and SMEs to jointly develop smart logistics solutions in close cooperation with industries and ventures. DIGILOGIC sees the horizontally connecting logistics industry at the converging point of interest and priorities for digital innovation for social and business development, a crucial node for Europe's and Africa's sustainable prosperity.

Therefore, a common knowledge base on the logistics value chain and latest digital technologies enabling competitive and sustainable logistics processes is established which is used to foster digital innovation in Africa through online mentoring. A first version of DIGILOGIC's approach for this online mentoring was published in August 2021 with the deliverable D2.2 Agenda and outline of online mentoring sessions. Since then, the DIGILOGIC consortium has further elaborated the approach for the online mentoring in a sequence of internal workshops as well as through discussions with the High-Level Advisory Board (2nd HLAB meeting on 20th October 2021) and the Impact and Innovation Board (2nd IIB meeting on 17th November 2021).

This mentoring applies three different formats. The first consists of a series of tech talks – live online sessions that should also be recorded - on innovative logistics technologies and business models. Topics of these tech talks include data security, Internet-of-Things, big data analytics, artificial intelligence, 3D printing, digital twins, blockchain / distributed ledger technology, augmented and virtual reality, next generation wireless as well as platforms and marketplaces. Due to the on-going innovation pace this list of topics will be permanently updated during the DIGILOGIC project.

The second format are company specific workshops in which participants from a company together with a coach develop new approaches or generate new solutions for company-specific issues in respect to logistics and digitalization. A typical result of such a workshop is an implementation strategy and/or an implementation plan for a specific logistics innovation for the company.

One-to-one coaching sessions are the third format of WP2. Through a series of online sessions, a company employee is coached by a coach in the implementation of innovative digitalization solutions for logistics. These solutions encompass a technological as well as business model related perspective.

The implementation of the online mentoring will begin with the first tech talk in March 2022 and will last until the end of the DIGILOGIC project in December 2023. Marketing activities to promote the online tech talks, company workshops and coaching sessions will be closely coordinated with WP5 Boost and will to a large extent rely on the DIGILOGIC website and community platform. An initial list of tech talk speakers and coaches is provided by Fraunhofer IML. Additional speakers and coaches may be added to the list along the way after being validated against their experience and background.

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SUMMARY OF CHANGES FROM D2.2

This deliverable (D2.3) is an update of the deliverable D2.2 that was submitted to the EU by end of August 2021. The discussion within the DIGILOGIC consortium as well as with the members of the High-Level Advisory Board and the Impact and Innovation Board has shown, that the overall approach as presented in D2.2 is sound. Consequently, some parts of D2.2 have been adopted word for word. However, major changes have been made concerning the management aspects and the relationship between the online sessions and the challenges (WP4). The following lists the changes from D2.2 to D2.3:

- Change of the notion mentor to coach. The internal discussion has shown, that the DIGILOGIC experts taking part in the company workshops and coaching sessions should better be called coaches instead of mentors. This is done to avoid any potential confusion with the mentorship approach in WP4. For the same reason the notion mentee was changed in this deliverable to company employee.

- The description of the different formats for the knowledge exchange and online mentoring sessions has been elaborated further to contain a description of a stage model for digital transformation of companies.

- Section 6 has been completely rewritten to include management for time planning, marketing, management of experts and coaches as well as reporting procedures.

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TABLE OF CONTENT

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LIST OF FIGURES

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LIST OF TABLES

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ABBREVIATIONS

5G	Fifth generation of broadband cellular networks
AGV	Automated Guided Vehicles
AI	Artificial Intelligence
AR	Augmented Reality
CIA	Confidentiality – Integrity - Availability
DOS	Denial of Service
DIH	Digital Innovation Hub
DLT	Distributed Ledger Technology
HLAB	High Level Advisory Board
ICT	Information and Communication Technology
IIB	Impact and Innovation Board
ML	Machine Learning
Q&A	Questions and Answers
VR	Virtual Reality
Wi-Fi	Wireless network protocol for local area computer networks

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1 CONTEXT OF THE AGENDA AND OUTLINE OF THE ONLINE MENTORING SESSIONS

The purpose of this introduction is to enable readers to understand the context and objectives of this deliverable. Therefore, a short description of the objectives and approach of the DIGILOGIC project is given first. This is followed by a description of the objectives of work package 2 of which this deliverable is part of. Subsequently the structure of this deliverable is presented.

1.1 OBJECTIVES AND OVERALL APPROACH OF THE DIGILOGIC PROJECT

DIGILOGIC is a project funded by the European Union for the cooperation of European and African Digital Innovation Hubs (DIHs). These DIHs aim to support innovators, start-ups, and SMEs to jointly develop smart logistics solutions in close cooperation with industries and ventures. DIGILOGIC sees the horizontally connecting logistics industry at the converging point of interest and priorities for digital innovation for social and business development, a crucial node for Europe's and Africa's sustainable prosperity.

DIGILOGIC will foster the adoption of emerging technologies such as: Cloud Computing, Big Data, AR/VR, Machine Learning, Blockchain, Artificial Intelligence (AI), Smart Devices, IoT and ITS for smart logistic solutions, through the deployment of a dynamic and impactful knowledge transfer and implementation programme.

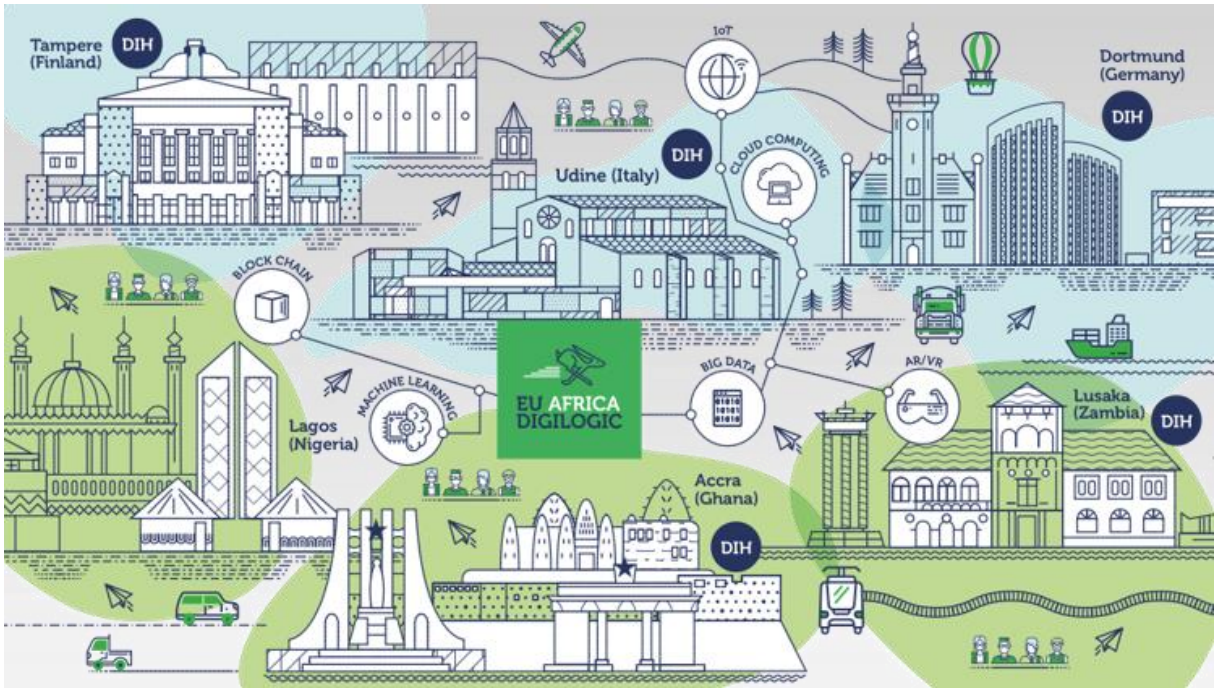

FIGURE 1: PROJECT VISION

The objectives of the DIGILOGIC Project are (cf. also figure 1):

- To establish a Pan EU-Africa network of initially 5 DIHs focused on the topic of smart logistic and achieve seamless collaboration between the hubs and their pool of emerging technology innovators.
- To strengthen the DIHs technology transfer capabilities to advance African innovators and ICT professionals for better job opportunities.

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- To empower African youth, especially women and vulnerable groups with entrepreneurial and digital literacy skills to significantly increase good quality employment opportunities, including self-employment.

- To demonstrate the market relevance of DIGILOGIC network of DIHs engaging at least 200 innovators in the call for Challenges, to participate in the collaborative projects, and value creation in different use cases suggested by stakeholders needs.

- To ensure post project sustainability and growth of the DIGILOGIC ecosystem

The DIGILOGIC project is structured into six work packages (cf. figure 2) and WP7 that covers ethics requirements. The objective of WP1 CONNECT is to create long-lasting partnerships between the engaged EU-AU DIHs to achieve concrete, tangible, and sustainable impact on digital innovation in Africa. WP2 GROUND aims to establish a common knowledge base on logistics value chain as well as to transfer knowledge on digitization for the logistics cases addressed by DIGILOGIC. The goal of WP3 LEARN is to develop an enabling environment managed by EU-AU DIHs for digital start-ups in Africa. These start-ups are to be supported by market driven peer learning and consequent upskilling in digital and entrepreneurship domains. WP4 IMPLEMENT objective is to develop an enabling environment for digital start-ups as well as to establish networks between European and African innovative entrepreneurs and potential investors. WP5 BOOST covers the planning and implementation of the project's dissemination, communication, and exploitation activities. WP6 MANAGE is the project management work package of the DIGILOGIC project.

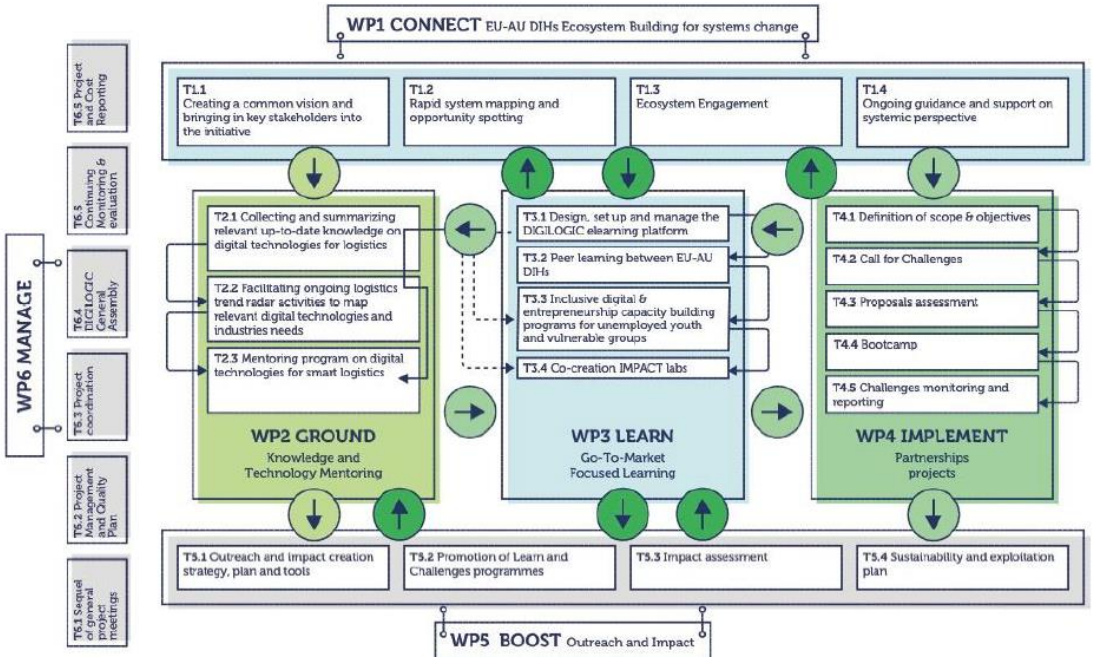

FIGURE 2: WORK BREAK DOWN STRUCTURE OF THE DIGILOGIC PROJECT

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1.2 OBJECTIVES OF WP2 GROUND

The overall objective of the work package WP2 is to establish a common knowledge base on the logistics value chain and latest digital technologies enabling competitive and sustainable logistics processes. The specific objectives of this work package are:

- To investigate and assemble up-to-date knowledge on digital technologies for logistics.
- To prepare and edit information on latest knowledge on digital technologies for logistics.
- To structure and continuously enrich information on latest logistics technologies in a strategic innovation agenda as a knowledge and technology framework.
- To run a sequel of technology mentoring sessions and webinars.

Main outcomes of WP2 are:

- The strategic research and innovation agenda for logistics (D2.1).
- A sequel of technology mentoring sessions and webinars planned according to Agenda and outline of online mentoring (D2.2 and D2.3).
- The logistics trend radar (D2.4).

It is hereby of particular importance that these outcomes are tailored to the needs of digital innovation in Africa. This means for the online mentoring, that both technology and business aspects must be addressed and that the constraints of the respective African regions must be considered.

1.3 STRUCTURE OF DELIVERABLE D2.3

This deliverable, the “Updated Version of the agenda and outline of online mentoring sessions”, describes the approach for the mentoring sessions and webinars. Therefore, it contains a section on three different formats used for the knowledge exchange and mentoring sessions. This is followed by a description of these formats. Section 6 concludes D2.3 with a description of the management aspects for the online mentoring and coaching.

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2 FORMATS FOR THE KNOWLEDGE EXCHANGE AND MENTORING SESSIONS

DIGILOGIC's knowledge exchange on smart logistics and the online coaching session within WP2 have the aim to support African companies in the digital transformation of their businesses. Process models can support the operational stakeholders in the definition, introduction, and successful implementation of the respective digitization measures. This process can be divided into several stages and the online coaching sessions must be adapted to these various stages. A literature review[1] on such stage models for digital transformation has been conducted by the public funded German research project APRIDO[2]. This research work resulted in a stage model of the APRIDO project which has been selected as a reference for the DIGILOGIC project (cf. figure 3).

FIGURE 3: STAGES FOR THE DIGITAL TRANSFORMATION OF COMPANIES

Based on this stage model, the DIGILOGIC project will offer its mentoring and coaching services with three different formats. These formats differ according to the objective and expected results, the number and "diversity" of participants and the duration.

Format Stakeholders	Tech Talk	Company Workshop	Coaching Session
Description Stakeholder Involvement	• A logistics expert gives an online presentation on innovative technologies followed by a Q&A section • To create awareness on new logistics technology and application cases	• Online workshop on smart logistics topics between a single company / entrepreneur and a DIGILOGIC coach • To discuss and develop an implementation plan for the company	• Telephone or video conference between a single company / entrepreneur and a DIGILOGIC coach • To further discuss technological topics in the follow-up of the company workshop
Users	• Primary target audience	• Target participants: Focus on application of smart logistics for existing business as well as start-ups and companies in formation	• Target participants: Focus on application of smart logistics for existing business as well as start-ups and companies in formation
Solution Providers	• Primary target audience	• Target Participants: Focus on developing new solutions	• Target participants: Focus on developing new solutions
Innovation Hubs	• Additional target audience	• Participation of local DIH recommended	• Optional participation
Facilitators	• Could also give tech talks	• Optional participation	• Could be involved on a case-by-case basis

FIGURE 4: DIGILOGIC'S FORMATS FOR THE ONLINE SESSIONS

[1] Terstegen, S., Hennegriff, S., Dander, H., & Adler, P. (2019). Vergleichsstudie über Vorgehensmodelle zur Einführung und Umsetzung von Digitalisierungsmaßnahmen in der produzierenden Industrie. *Frühjahrskongress der Gesellschaft für Arbeitswissenschaften-Arbeit interdisziplinär analysieren–bewerten–gestalten*, *65*.

[2] https://www.aprodi-projekt.de/

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Table 1 gives an overview of these formats which will be described in the following text in detail.

TABLE 1 : DIFFERENCES BETWEEN THE MENTORING AND COACHING FORMATS

	Description	Objectives and expected results	Participants	Duration
Tech Talk	• A speaker gives an online presentation on a technology/ business model topic followed by a Q&A section	• Create awareness on new technology and business models • Inspire current and future entrepreneurs and employees from different companies • "Advertise" the open consultation and company workshop formats	• Ca. 30 to 70 from different companies, start-ups, or entrepreneurs • One DIGILOGIC tech talk speaker • Optional participation from the ecosystem of local DIHs	45 to 60 minutes
Company Workshop	• Open discussion on DIGILOGIC topics on smart logistics between a single company / entrepreneur and a DIGILOGIC coach • Topics to be defined before the workshop by the company/ entrepreneur • Preparation by the coach	• The coach gathers an initial understanding of the participant's demands • The participant gets reference to solutions • Generate solution approaches for a specific company	• 1 to 5 participants from a single company • One DIGILOGIC coach • One representative from a local DIH	2 to 4 hours
Coaching Session	• Telephone or video conference • It is a follow-up of the company workshop	• On demand support • A company can ask for a coaching session after they had a workshop to deepen a specific aspect related to the implementation stage of the selected technology	• 1 to 5 participants from a single company • One DIGILOGIC coach • One representative from a local DIH	30 to 60 minutes

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3 TECH TALKS

3.1 FORMAT OF TECH TALKS

A tech talk is an online video presentation given by a speaker to an audience of several participants from different companies/start-ups. The aim of the tech talks is to raise awareness for current logistics trends and topics and thereby inspire (future) entrepreneurs and company employees. Furthermore, the tech talks serve as an entrance point for company employees and entrepreneurs to engage in the DIGILOGIC company workshops and coaching sessions and to promote the challenges approached in WP4.

Figure 5 shows examples of DIGOLOGIC tech talk topics on logistics. The tech talk should cover the uptake of new technologies within a business as well as implications on the business strategy, especially in relation to start-ups in Africa or specific African regions / countries.

Participation in the tech talks requires registration on the DIGILOGIC community platform (cf. https://community.digilogic.africa/). This means, that the tech talk is cost free but not freely available. Optionally, representatives from the DIH's ecosystems can take part in the tech talk as well. A tech talk should last between 45 and 60 minutes. It will be performed through common video conference solutions used for webinars such as Zoom or Microsoft Teams and has the following generic agenda:

- Introduction to the tech talk and introduction to speaker (5 minutes)
- The speaker presents the topic (25 to 40 minutes)
- Questions and answers (up to 15 minutes)

Tech talks may be recorded so that they can be made available on the DIGILOGIC's community platform for members who couldn't join the tech talk or would like to watch it several times (cf. https://community.digilogic.africa/). It is further advised that participants register for a tech talk to manage the number of participants. If there are many (e.g., more than 100) participants registering for a tech talk, it should be either considered to give the tech talk several times to have sufficient time for the questions and answers or to have several experts available so that parallel Q&A sessions can be performed.

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3.2 TOPICS OF TECH TALKS

The topics for the tech talks should relate to the WP4 Challenges. The following is a *first list of possible topics* for tech talks. It is the nature of technological innovation that it is fast-paced and requires a constant update depending on needs for digital innovation in the various African regions as well as to reflect changes in the technology. The topics may therefore be changed, edited or supplemented over time.

FIGURE 5: CHALLENGES ACCORDING TO WP4 AS TOPICS FOR TECH TALKS

Please note further that these topics are independent from each other. This means, that the order in which participants attend these talks is not relevant. Also, it is very likely that participants will only attend a subset of these tech talks.

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3.2.1 Secure data exchange and data Sovereignty

All digital innovations require the exchange of data between the involved participants. The security of this data is of key importance. Breaches in the data security could lead to problems as described by the well-established CIA[3] triad of computer security:

- Confidentiality
  The majority of business data exchanged between a company and its customers is of a private nature. Consequently, the privacy of this data is of key importance. Companies offering new digital services must ensure the data privacy is always enforced.
- Integrity
  The protection against data corruption is the second topic in the CIA triad. This applies not only to the data exchanged but also to the digital systems of the company and its customers. Corrupted data could lead, e.g., to so-called ransomware attacks.
- Availability
  Customers expect a high availability of digital services, meaning that downtimes are kept as low as possible. Therefore, companies must especially prepare against malicious attacks, also called DOS (Denial of Service) attacks.

3.2.2 Internet of things

Embedded systems are systems based on small computers that perform autonomous and independent outputs. With the Internet of Things (IoT), these are, for example, the monitoring of urban processes, such as the movement of assets, the monitoring of load carriers regarding shock, temperature, light exposure, humidity or temperature, or the monitoring of supply and filling levels of containers through image and non-image-generating sensor technology.

The added value lies in the energy and cost efficiency of the embedded systems. The latest semiconductor technologies in both processor technology and sensor technology allow the development of devices that function for up to 10 years without needing maintenance. Production costs of just a few euros mean that sensor technology can be used across the board even for the simplest processes.

3.2.3 Big Data Analytics

Big Data is defined by the rapid growth of digital data volumes, which are generated from different sources in different data structures by a constantly increasing number of users, sensors, processes, and other sources and can be analyzed using methods from the Big Data Analytics area. Innovative big data analytics methods play a decisive role in generating added value, e.g., in decision support or forecasts.

Due to the close linking of processes in logistics with IT systems and the simultaneous increase in the complexity of logistics, the existing IT systems must manage ever more complex tasks and ever-increasing amounts of data and the most diverse data structures. In addition to the large amounts of data, the complexity and the various data structures, the need for real-time decision-making is increasing. Due to this development in logistics, current IT systems are reaching their limits and will have to be expanded in the future to include methods and systems from the field of big data analytics.

[3] Please note the CIA triad has no affiliation to the intelligence service of the USA.

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3.2.4 Artificial Intelligence

Artificial intelligence (AI) has become one of the top topics in a variety of forums, newspaper articles, expert panels and in the business community in recent years. The importance of this technology is also growing rapidly in the logistics industry.

The use of AI and especially machine learning (ML) methods is strongly supported by the development of ICT infrastructure. With new communication technologies, such as 5G networks, data generated by IoT technologies can be transferred quickly and from anywhere to cloud systems. There, large amounts of computing power can be used to train ML models based on the data, and the insights can either be sent back to the technologies or used for further analysis.

The possible applications of AI in logistics are as diverse as the tasks of logistics. The opportunities to use resources more efficiently, improve logistics services and enable new business models through AI in logistics are considerable.

3.2.5 3D Printing

The application of 3D printing technology has continued to accelerate over the course of the last few years. More and more materials can be printed faster and in significantly better quality. This type of manufacturing can be used for both individual pieces and series - and around the clock. Shorter supply chains, the avoidance of overproduction and spare parts warehouses, the use of recyclable materials in a closed-loop system can all be realized. Additive manufacturing, as 3D printing is called in an industrial context, can also be used to produce customized parts in large quantities.

3.2.6 Digital Twins

Logistics systems are hard to comprehend by the human mind. Many distributed actors must coordinate with each other, and the variety of processes has greatly increased due to individualization of products and services. Under the notion digital twin different ICT approaches have been propagated to better cope with this complexity. A digital twin is a digital representation of the real world in the digital world. It is possible to model both the current situation and to simulate future states. Consequently, digital twins are used in logistics for the supply chain event management as an early warning system as well as to perform what-if analyses for a better decision making.

3.2.7 Distributed Ledger Technology

The blockchain or distributed ledger technology (DLT) offer high innovation potential for logistics. Transactions can take place without delay, operational trading risks are minimized, manual errors and coordination problems are reduced. Nowadays, reconciliations between customers and companies had to take place manually or semi-automatically; the blockchain could automate this process in the long term. DLT can improve transparency and reduce costs in the interactions between companies, individuals, and public organizations. Blockchain-enabled IoT devices enable real-time data collection and autonomous real-time control of supply chains. The secure integration of physical and monetarily relevant processes into a blockchain-based ecosystem ensures horizontal and vertical networking.

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3.2.8 Augmented and Virtual Reality

Augmented and virtual reality is used in many different logistics processes, such as incoming goods receipt, order picking or packaging. For example, the order picker receives certain product information about the product during the picking process. In addition, the coordinates of the product location and the quantity to be picked are visually displayed. The use of Augmented Reality (AR) technologies is not limited to the AR glasses but works just as well with a smartphone or tablet.

Virtual reality (VR) is frequently used in the development of new logistics technology as well as for training purposes. Processes and workplaces can be designed and tested in the VR environment regarding evaluation parameters such as performance or physical and cognitive ergonomics. A coupling with motion capturing suits is possible. The virtually designed workplaces and processes can be transferred into a training environment for the employees. By embedding them in a game concept, employees can be trained in a motivating and immersive way on the laptops, tablets, or mobile devices.

3.2.9 Next Generation Wireless

Wireless communication with so-called 5G and Wi-Fi 6 promises significant gains in respect to data rates, extremely low latency along with maximum reliability, and countless numbers of connected devices. Wi-Fi technologies are designed to provide devices with exceptional signal coverage and high-speed data transmission for indoor or local activities. Next generation wireless communication techniques thus are enabling technologies for many new logistics services.

3.2.10 Platforms and Market places

Many of the most successful and largest companies such as Amazon, Google, Alibaba, Netflix, Facebook, or Apple operate from internet platforms. This kind of business model is implemented in the logistics domain as well. Logistics companies may have no own fleets of trucks, ships or aircraft and offer their logistics services via platforms and marketplaces.

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4 COMPANY WORKSHOPS

A company workshop is a format through which companies / entrepreneurs can discuss logistics digitization topics with a coach. Participants can receive direct and personal initial advice on questions related to the logistics topics of DIGILOGIC. The discussion is between a coach and participants from a single company or a current or future entrepreneur. Furthermore, it is advised that representatives from a local DIH take part as well.

DIGILOGIC Coaches are experts on digital innovation in logistics. Fraunhofer IML has identified experts with an appropriate background for this role (cf. chapter 6.3). The DIGILOGIC project aims for representatives of local DIH's to become experts as well to improve the sustainability of these coaching and mentoring formats and enable the DIHs to provide similar offers even after the DIGILOGIC project is completed. However, the knowledge transfer should start only after the company formats and coaching sessions have been established. Furthermore, members of DIGILOGIC's High Level Advisory Board (HLAB) and Impact and Innovation Board (IIB) can become DIGILOGIC coaches. Since the DIGILOGIC project has no budget to pay these additional experts, coaches will not be compensated for their contribution.

DIGILOGIC has two major approaches to support companies – both existing business and enterprises in formation – for improving their businesses with smart logistics approaches: The online sessions of WP2 as covered in this deliverable as well as the challenges of WP4. For the latter the DIGILOGIC consortiums aims to provide mentoring in the form of subject-matter and team support to the 12 tech start-ups selected for the challenges and that will be part of the DIGILOGIC implementation programme. The WP4 challenges will be published in Mai 2022 and the proposal deadline is October 2022. Please note, that the procedures of DIGILOGIC's challenges programme are described in D4.1 Challenges Scope and Objectives.

Due to the fact that the Online Mentoring (WP2) and the Challenges (WP4) are running parallel, an ethical issue could arise when a start-up that applies for one of the challenges in WP4 also gets advice through a company workshop or coaching session within WP2 from DIGILOGIC coaches that are also involved in the selection procedure for the challenges. In this case, the applicant could have an alleged unfair advantage. In order to minimize the implications of this without having to exclude recipients of the online mentoring program from the challenges, we will ensure that all company workshop and coaching activities with an individual start-up/company/entrepreneur will be put to a temporary rest immediately as soon as it becomes clear that they intend to participate in the challenges. The activities may be proceeded after the application of the start-up/company/entrepreneur for the challenges did not succeed or after the challenges have been completed. All applicants who have successfully been admitted to the challenges will furthermore receive intensive mentoring within WP4. Note that this type of mentoring is not covered in this deliverable. It is our intention to provide utmost transparency about this to all recipients of the online mentoring and challenges applicants.

The DIGILOGIC project does not have the resources to provide an unlimited number of WP2 company workshops to all who are interested. The workshops will therefore be given on a first come, first serve basis.

The outcome of such a WP2 company workshop could be:

- The company receives generic advice (on technology, support measures, additional resources, business partners, …).
- Companies / entrepreneurs can discuss a specific digitization topic and/or use case with a DIGILOGIC coach in more detail. The main result of such a workshop is typically an action plan for the company.

The duration of a company workshop highly depends on the topics to be covered and could last between 2 and 4 hours. Workshops with a longer duration (more than 2 hours) should have a longer break (e.g., 30 minutes).

The workshop is prepared and moderated by the DIGILOGIC coach. Before the workshop it is required to perform a test of the computer / video conference solution applied to address (and better eliminate) issues such as low bandwidth as well as problems with the hardware (camera, loudspeakers, microphone) and the ambience (background noise, poor lighting) with all involved participants (company employees, DIGILOGIC coach, local DIH).

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5 COACHING SESSIONS

Coaching sessions are held after a company workshop. In these sessions a company employee is coached by a DIGILOGIC coach. The employees can belong to established companies as well as entrepreneurs who are creating a start-up. Coaching sessions are agreed between a DIGILOGIC coach and company employee to support the company employee in the implementation of digital innovation. The company employee can discuss with the DIGILOGIC coach issues related to the digitization approach of his/her company. The topic of a coaching session is specified by the company employee in advance of the coaching session so that the DIGILOGIC coach can prepare the session accordingly.

These sessions are scheduled virtually via video / computer conference – Zoom, MS Teams, etc. – between a DIGILOGIC coach and a company employee. Ideally a representative from a local DIH should take part as well. Again, technological issues regarding the internet connection, the equipment, and the ambience (see above) should be resolved before the coaching session.

Similar to the company workshops, the coaching activities with company employees will be put to a temporary rest immediately as soon as it becomes clear that they intend to participate in the challenges. The activities may be proceeded after the application of the start-up/company/entrepreneur for the challenges did not succeed or after the challenges have been completed.

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6 MANAGEMENT ASPECTS OF THE ONLINE MENTORING PROGRAMME

One of DIGILOGIC's overall goals is to strengthen the DIHs technology transfer capabilities to advance African innovators and ICT professionals for better job opportunities. For a successful deployment in respect to this objective, it is necessary that the DIGILOGIC project establishes management procedures that can operate during and even after the duration of the DIGILOGIC project. Therefore, the following text addresses management aspects for the online seminars and coaching sessions.

6.1 OVERALL PLANNING OF THE ONLINE MENTORING PROGRAMME

The overall planning of WP2 is as follows:

Tech talks

The tech talks will commence in March 2022 and will be given until the end of the DIGILOGIC project (December 2023). In total at least 25 tech talk sessions will be performed. We aim to have most of these session performed by the end of 2022.

Company workshops followed by coaching sessions

DIGILOGIC will perform at least 24 company workshops – 12 for the MEST region and 12 for the BONGOHIVE region. Each company workshop is followed by up to two coaching sessions. The admission to these workshops is on a first come, first serve base.

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6.2 MARKETING OF TECH TALKS, COMPANY WORKSHOPS AND COACHING SESSIONS

One of the main difficulties in the digital transformation of companies is reaching these companies in the first place. This means, that firstly potential participants of the DIGILOGIC formats must know that services for online coaching on smart logistics are available and secondly, they must be interested in the topics addressed. These requirements are particularly addressed in WP5, T5.2 Promotion of DIGILOGIC Learn and Implement programme. Consequently, the activities of WP2 will be coordinated with T5.2. This means, for instance, that information on future and past tech talks and profiles on DIGILOGIC coaches will be available on the DIGILOGIC's website (cf. figure 6).

FIGURE 6: DIGILOGIC'S WEBSITE CONTAINS INFORMATION ON TECH TALKS AND DIGILOGIC COACHES

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6.3 MANAGEMENT OF TECH TALK SPEAKERS AND COACHES

Fraunhofer IML will provide an initial list of tech talk speakers and coaches with proven experience and appropriate technological background. Also, DIGILOGIC consortium members and IIB and HLAB members can add names to the list. IML will validate coaching candidates against their experience and background. All those aspiring a coaching role shall register in the DIGILOGIC community as an expert and complete their profile with the relevant information (cf. figure 7). Afterwards they will be appointed as tech talk speakers and/or coaches of the WP2 mentorship programme and this label will be publicly visible for all DIGILOGIC Community members.

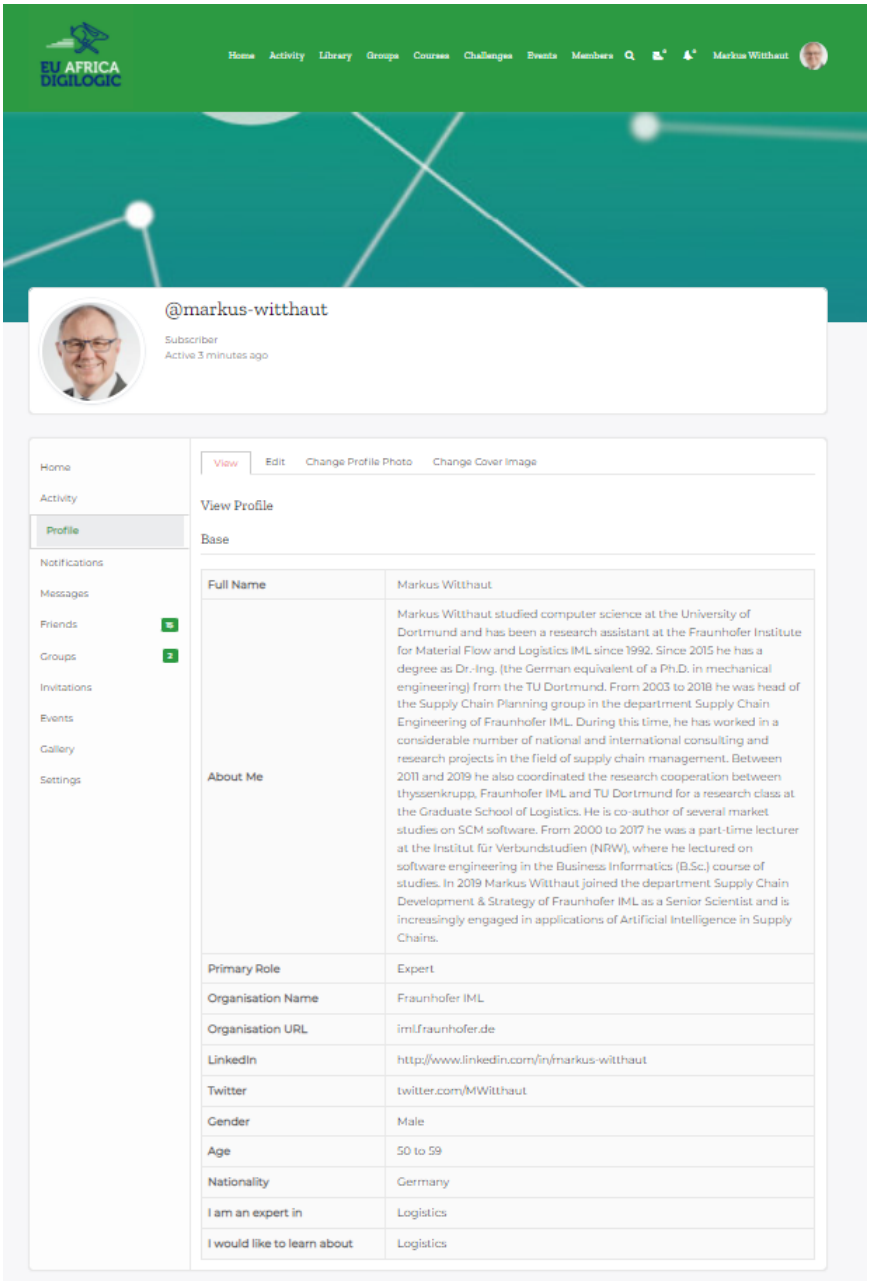

FIGURE 7: EXAMPLE OF A MEMBER PROFILE OF THE DIGILOGIC COMMUNITY

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So far, the following experts have been appointed as a tech talk speaker and/or coach:

Alexander Grünwald, Fraunhofer IML
Alexander Grünewald is a research associate at the Fraunhofer Institute for Material Flow and Logistics IML in the department Supply Chain Development & Strategy. Previously, he studied industrial engineering at the Technical University of Dortmund. As a part of the research initiative "Blockchain Europe", his research focus evolves around business model development in the context of blockchain applications in Supply Chain Management.

Andreas Nettsträter, Fraunhofer IML
Andreas is responsible for strategic initiates and European cooperation at the Fraunhofer Institute for Material Flow and Logistics in Dortmund. His focus is on innovative ICT solutions for logistics and manufacturing, like Internet of Things, artificial intelligence, and autonomous systems. He has a background in Computer Science and Mechanical Engineering and is vice-chair for innovative ICT systems in ALICE, the European Technology Platform on Logistics.

Anke Wiezzorek, Fraunhofer IML
Anke studied Industrial Engineering with a focus on Production Management and Logistics at the Technical University of Dortmund and the University of Iowa, USA. In 2012, she started working at Fraunhofer IML for the department "Company Development International" while being enrolled in a PhD-program at the Graduate School of Logistics at the Technical University of Dortmund, holding a scholarship from a logistics consultancy. During this time, she worked as a consultant in industrial projects with focus on the Asian market (China, South Korea), in the field of factory planning and Supply Chain Management. After finishing Graduate School, Anke was a visiting researcher at Princeton University, USA, at the Mechanical and Aerospace Department during summer 2015.

Carina Culotta, Fraunhofer IML
Carina joined the Fraunhofer Institute for Material Flow and Logistics IML as a research associate in 2019. She is involved in topics of business model development within the Silicon Economy project (cf. https://www.silicon-economy.com/en/homepage/)

Joseph Kamphues, Fraunhofer IML
Josef Kamphues studied mechanical engineering at the Leibniz University in Hannover and has been a research assistant at the Fraunhofer Institute for Material Flow and Logistics IML since 2012. Since 2018 he is head of the Supply Chain Management team in the department Supply Chain Engineering of Fraunhofer IML and became deputy head of department in 2019. His fields of work are the design and planning of supply chains with a focus on the application of AI, simulation and blockchain technologies. Since 2020 Josef Kamphues is project manager of Blockchain Europe, a project for establishing the European Blockchain Institute in NRW. In a complement to his work at Fraunhofer IML, Josef Kamphues is lecturer for Supply Chain Management at the University of Applied Sciences Niederrhein.

Maik Hausmann, Fraunhofer IML
Prior to his position as a research associate at the Fraunhofer Institute for Material Flow and Logistics IML, Maik Hausmann has been part of the master's program of business administration and engineering at RWTH Aachen University. As a part of the research initiative "Blockchain Europe", his research focus evolves around business model development in the context of blockchain applications in Supply Chain Management.

Maria Beck, Digital Hub Management GmbH
Maria Beck is Member of the Executive Board and Head of Qualification and Knowledge Transfer of Digital Hub Management GmbH (DHM). Maria holds a Master in Logistics Engineering from Technical University of Dortmund, Germany. From 2013 – 2016 she was Co-Founder and Member of the Executive Board of GlobalGate GmbH, a corporate learning and development service provider. From 2006 – 2013 she worked as a research fellow at the chair of Materials Handling and Warehousing of Prof. Michael ten Hompel at the Technical University of Dortmund. Maria focuses her work on guiding organizations to drive innovation and digitization. In addition, her focus lies on developing qualification especially blended learning programs for companies and institutions in logistics and engineering topics as a tool to drive innovations. Maria is Managing Director of Digital Hub Logistics Dortmund since 2017.

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Markus Witthaut, Fraunhofer IML
His biographical information is shown in figure 7.

Thorsten Hülsmann, Digital Hub Management GmbH
Thorsten Hülsmann holds a Master of Science in Economic Geography, Organisation Sociology and Political Sciences from University of Bonn. He was announced as CEO of Digital Hub Management GmbH in May 2010 and since 2018 he is also the CEO of International Data Spaces Association and Head of Unit at Fraunhofer-Institute of Material Flow and Logistics. Thorsten was an invited expert within UNESCO-WTA cooperative project on science city development and gave consultancy to Inwent GmbH, GIZ, TechnologyCenter Dortmund, the Economic Development Agency of the Region Ruhr and the Basque Regional Innovation Agency SPRI in various projects. Since 2017 Thorsten co-leads the Digital Hub Logistics Dortmund which was awarded as one of 12 digital hubs within the German dehub-initiative and recognized by the European Commission as one of the examples of good practice within the Digital Innovation Hub initiative DIH.

The following table maps the experts to the tech talk topics (cf. chapter 3).

TABLE 2: MAPPING OF EXPERTS TO TECH TALK TOPICS

Tech Talk Topic	experts
Secure Data Exchange and Data Sovereignty	To be defined
Internet of Things	Andreas Nettsträter
Big Data Analytics	Markus Witthaut
Artificial Intelligence	Markus Witthaut
3D Printing	To be defined
Digital Twins	Joseph Kamphues, Markus Witthaut
Distributed Ledger Technology	Alexander Grünwald, Maik Hausmann, Joseph Kamphues
Augmented and Virtual Reality	To be defined
Next Generation Wireless	To be defined
Platform and Market Places	Carina Culotta

Please note, that Fraunhofer IML and DHM is contacting further experts to cover all of the above topics.

In order to ensure a standard quality level for the whole series of tech talks, workshops and coaching sessions, it is necessary to implement management practices:

- A short information packages for the lecturers that contains information about the DIGILOGIC project, the purpose of the tech talks and recommendations regarding equipment needed for the online sessions.

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- Each DIGILOGIC coach must have a member profile within the DIGILOGIC community (cf. figure 7). This is desirable for external tech talk speakers as well.
- The scheduling of tech talks will be done in close cooperation with the team operating the DIGILOGIC community.

6.4 REPORTING ON COMPANY WORKSHOPS AND COACHING SESSIONS

The DIGILOGIC coaches must report to the DIGILOGIC project office and/or the respective DIH (BONGOHIVE and MEST) about the company workshops and the coaching sessions. These reports should contain the following information:

- Name of the DIGILOGIC coach
- Name of the company that has been coached
- Date of the coaching session
- Brief description (one to two sentences) of the topic of the coaching session

The purpose of these light-weight measurements is to collect data on the coaching sessions that could be used for marketing purposes.

Please note that the impact measuring is covered in WP5 of the DIGILOGIC project.

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