

**Digital Innovation Hub development - template**

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| Deliverable D.T2.3.2  Digital Innovation Hub development | Draft VERISON  01/2022 |

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| Project Number | CE1492 |
| Project Name | Towards the application of Industry 4.0 in SMEs |
| Project Acronym | 4STEPS |
| Work package | WPT2 - From catalogue to action: local implementation of an intervention plan |
| Activity | Activity 2.3 - Digital Innovation Hub development |
| Deliverable | **Deliverable D.T2.3.2 Digital innovation Hub development** |
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| This document must be referred to as | **DIH development** |
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1. Structure of DIH

Digital Innovation Hubs (DIHs) are one-stop-shops that help companies to become more competitive with regard to their business/production processes, products or services using digital technologies. They are based upon technology infrastructure and provide access to the latest knowledge, expertise and technology to support their customers with piloting, testing and experimenting with digital innovations. DIHs also provide business and financing support to implement these innovations, if needed across the value chain.

DIH’s, facilitated in framework of 4Steps project are composed of 3 boards with specific tasks: 1) Strategic Board, 2) Scientific Board and 3) Stakeholder’s Board.

* 1. Strategic Board

Strategic board is focused on DIH’s governance. The board's key roles include strategic direction, oversight, policy setting, and fund-raising.

Please explain how the Strategic board of your DIH is structured (who are the strategic board members, how often does it meet, what are its main competences, etc).

The strategic board of FHV’s Digital Innovation Hub on Business Intelligence & Innovation is composed of Prof. (FH) Dr-Ing. Jens Schumacher and Dr. Florian Maurer. Prof. (FH) Dr-Ing. Schumacher is the head of FHV’s research department of Business Informatics and research professor. Dr. Maurer is senior researcher and operational manager of the FHV’s DIH on Business Intelligence & Innovation. He is responsible for the management and maintenance of the DIH. He leads the key services: Resilience Engineering, Innovation Research & Management, Methods & Tools. Further members of the DIH are: Dr. Steffen Finck, senior researcher within the field of Artificial Intelligence (key service), Dr. Michael Hellwig, senior researcher within the field of Artificial Intelligence (key service) & head of FHV’s Josef Ressel Zentrum, David Hutter, MSc. research assistant within the field of system collaboration (key service) and Viktoriia Simakova, research assistant. This board meets on continuous base (every second week) to discuss upcoming projects and challenges as well as emergent trends and technologies.

* 1. Scientific Board

Scientific board is focused on the scientific and research activities of DIH.

Please explain how the Scientific board of your DIH is structured (who are the board members, how often or on what occasion does it meet, what are its main competences, etc).

The scientific board is composed of the research department of Business Informatics (head: Prof. (FH) Dr-Ing. Jens Schumacher) and the department of Business & Management (head: Prof. (FH) Dr. Markus Ilg. These departments are in close collaboration and cooperatively works on innovation and innovative projects (to be submitted in regional, national and international funding schemes to improve the Hub). An example is the collaborative design and development of the project DiamondS, submitted to the European Innovation and Technology Institute. The project’s aim is to strengthen the partners infrastructures and resources to provide best support to internal and external Hub stakeholders and University stakeholders (especially students).

Further collaborations are with the faculty Digital Innovation and Business Engineers (WING). Staff of the departments are invited to lecture and educate the students of particular study program (Bachelor, Master). This cooperation helps to transfer the research and project results from academia to practice. In this regard, Dr. Florian Maurer gave three key note presentations to WING students (part-time) – the managers of the future (2020, 2021, 2022).

* 1. Stakeholder’s Board

Main aim of the Stakeholder’s board is to disseminate the latest knowledge among the key stakeholders and also it is a platform for communication between DIH and companies.

Please explain how the Stakeholder’s board of your DIH is structured (who are the board members (SMEs, public administration actores, UNIs, etc..), how it operates, etc

FHV’s DIH on Business Intelligence & Innovation is open for all organizations and institutions within in the region of Vorarlberg and beyond. The aim is to collaboratively share and gain knowledge as well as transform business needs and requirements into concrete project ideas. However, to reach these stakeholders, members of FHV’s DIH collaborates with the Wirtschaftsstandort Vorarlberg GmbH (WISTO; to regional innovation agency in Vorarlberg), Wirtschaftskammer Vorarlberg/Junge Wirtschaft Vorarlberg (Vorarlberg chamber of commerce, Ms. Bianca Van Dellen) and the Junge Industry Vorarlberg. These three stakeholders form the main board of stakeholders of the Hub’s. This board supports to establish access into regional and national business and industry (and beyond). During the project, several actions have been performed. For example, key account mangers of WISTO acted as key-note presenters of regional 4Steps events; the Vorarlberg chamber of commerce and the Junge Industry Vorarlberg supported the design and development of the project idea: New Work Lab – Design- & Experimentierräume für ein “Human Valley Bodensee”, submitted to Interreg IBH. This project idea advances the approach of the 4Steps project (Digital Transformation, Industry 4.0) and puts human-centricity and sustainability into the centre of investigation.

1. Main services of the DIH

The services from 2.3.1 should be briefly summarized. Feel free to add some pictures!

FHV’s DIH on Business Intelligence & Innovation provides five main services that are Artificial Intelligence, Innovation Management & Research, Methods & Tools, Resilience Engineering and System Collaboration/Eco-System Collaboration.

* Artificial Intelligence: In the field of Artificial Intelligence, Hub members develop, analyze and investigate algorithms for Machine Learning and data-driven problems. This include, for example, system modelling, system simulation and system optimization; additionally, members of this service concentrate on the design and development of evolutionary algorithms and natural language processing.
* Innovation Management & Research: this service is addressing the challenge to make regional systems within businesses, industry, society and government more innovative and competitive, especially by maximizing their innovation potential.
* Methods & Tools: As experienced within the execution of the survey in WP1, SME’s are innovative but lack in structured methods to launch innovation project. With this service, the members of the Hub provide (scientific) methods and tools for management, engineering and design of innovation.
* Resilience Engineering: Centre to this service is the Strategic Management Framework to Engineer Organizational Robustness and Resilience (Maurer, 2020). This framework supports in design, development and engineering of VRIN resources, organizational-, responsiveness-, cognitive- and dynamic capabilities.
* System Collaboration / Ecosystem Collaboration: Centre to this service is the cooperation and collaboration of human and technique: human-machine interaction, human-robots interaction, cobots, digital twin technology.

Additionally, FHV’s DIH on Business Intelligence & Innovation in designed to be a “living system”. In this regard, members of the Hub launched a digital identity (the Hub’s homepage with interaction mechanisms; https://biih.labs.fhv.at) and created a physical Open Innovation Lab in the facilities of the Vorarlberg University of Applied Sciences. This OI Lab will be occupied after the completion of the construction work at the main building of the FHV (approx. May 2022). This OI Lab is designed for the Hub stakeholders to meet physically and to discuss trends and challenges, e.g. emergent trends and technologies in the field of digital transformation, Industry 4.0 and Industry 5.0.