

DigiPrec – Digitalisierungsvorhaben

Entwicklung und Auswertung eines Fragebogens zur Umsetzung von Digitalisierungsvorhaben

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Introduction

In the era of rapid technological advancements, the digitalization of businesses has become a crucial driver of economic growth and competitiveness. The European Union (EU) has recognized the importance of digital transformation and has initiated several efforts to support businesses on this journey. This handout aims to provide an overview of current EU-wide efforts, the technical possibilities available for businesses through Innovation Hubs, and an analysis of the sentiments of Austrian businesses towards digitalization. We will explore what motivates these businesses, the challenges they face, and their current efforts towards achieving digital transformation.

The EU has launched several initiatives to foster digital transformation across member states. The Digital Europe Program is a cornerstone of these efforts, aiming to enhance digital capabilities in key areas such as artificial intelligence (AI), cybersecurity, and advanced computing. A critical component of this program is the establishment of European Digital Innovation Hubs (EDIHs), which provide access to technology testing, training, and support for both private and public organizations.

Innovation Hubs, like AI5production in Austria, offer businesses a unique opportunity to engage with cutting-edge technologies and expertise. These hubs support companies in various domains including digital design, digital manufacturing, cybersecurity, and AI for Industry 5.0. For instance, AI5production provides access to 26 laboratory infrastructures with scientific support, ranging from pilot factories for digital production to human-centered AI labs. This enables businesses to test new technologies and processes in a controlled environment before making significant investments, thereby reducing risk and fostering innovation.

The process

To understand how Austrian businesses perceive digitalization, we created a survey for companies with up to 3.000 employees. The survey aims to identify the prerequisites for successful digital transformation and the reasons behind the success or failure of digitalization projects.

Before being able to come up with apt questions we had to establish a literary base. This base was structured into three main areas. First, we laid the foundations with general information about digitalization projects. Afterwards, we examined how the size and industry of a company influences their digitalization efforts. Last, we worked out the reasons for implementing digitalization projects.



Our findings can be categorized into motivations and challenges

Motivations

- Future Investment Businesses view digitalization as an essential investment for future competitiveness. The potential to enhance efficiency, improve product quality, and streamline processes are primary motivators.
- Regulatory Compliance: Adherence to regulatory requirements, such as the NIS2 Directive and the AI Act, also drives digitalization efforts.
- Market Positioning: Maintaining or achieving a competitive edge in the market is a significant driver for adopting digital technologies.

Challenges

- Resource Constraints: Lack of time, financial resources, and digital expertise are major barriers. Many businesses struggle to allocate sufficient resources towards digitalization projects.
- Personnel and Training: Insufficient qualified personnel and inadequate employee training programs hinder digital transformation. Companies need more structured training initiatives to build digital competencies within their workforce.
- High Costs: The high initial costs of digitalization projects deter many businesses from fully committing to these initiatives.

Current Efforts and Strategies

After our literature review, we investigated the current efforts and strategies. Well, Austrian businesses are actively engaged in various digitalization projects, focusing on enhancing their technological infrastructure and integrating digital tools into their processes. Therefore, the "Test before Invest" initiative by AI5production is a notable example, providing financial support and expertise to help companies test digital solutions before full-scale implementation. This initiative has proven effective in mitigating risks and fostering a culture of innovation.

Questionnaire

Initially, we had to lay out some design guidelines for each question. We achieved this through several best practice guidelines from our literary base. In the next step, we got together and discussed each possible question. Afterwards, we discussed those questions with our professors, which prompted us to rewrite significant portions of our questionnaire. This cycle of writing, discussing and rewriting of questions took place several times. Sometimes we adjusted the scope of a question, sometimes we adjusted the way the question was asked.

Last steps

Well, we are now at a point where the questionnaire is finished and has been tested by sending it to some companies. For later use, we established a Proof of Concept. Furthermore, we included some suggested improvements as well as some of our expected correlations between the questions themselves.

