



## **Smart SME's**

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# **Communication factsheet to the report “Mapping of actual state of play and needs”**

**Work package 2 (WP2), Action 2.4**

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Prepared by BIOPRO Baden-Württemberg GmbH (WP2 lead)



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This communication factsheet summarizes the main conclusions from the report “Mapping of actual state of play and needs” in the frame of the project “Smart SME's” (work package 2) funded by the Alpine Region Preparatory Action Fund (ARPAF II). The document was prepared by Olga Boyarintseva, BIOPRO Baden-Württemberg GmbH (Germany).

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Digitalization is a present topic in the Alpine regions, which participate in the project “Smart SME’s”, namely Baden-Württemberg (Germany), Lower Austria, Slovenia and Trento (Italy), and access to such knowledge is available for small and medium-sized enterprises (SMEs) in various ways.

However, in spite of the fact that SMEs strongly prevail in the economy of the selected regions, reaching more than 99% in Baden-Württemberg, Lower Austria, and Slovenia and about 89% in Trento, they still do not “rule” the economy. Strong industrial actors make the major contribution to the economy. Thus, the input of SMEs in the entire digitalization expenditure is still low.

In Slovenia and Trento, more than a half of the territory is covered with forest, and natural fibers come mainly from the forestry and wood processing industry. In Lower Austria, the main source of the bio-based fibers is the agricultural sector. In Baden-Württemberg, natural fibers come almost equally from wood and agriculture. In terms of processing of natural fibers, the lack of knowledge transfer between research and academia, where usually new technologies are born, does not let SMEs benefit fully from technological achievements, especially from newly elaborated digitalization tools.

A survey for SMEs, which are part of value chains based on natural fibers (coming from the agricultural and wood sectors), was performed in the frame of the project and showed that additional big obstacles and challenges, which companies face on the way to digitalization, are lack of qualified personnel and lack of financial resources for conducting such changes. From 0,002% to 13% of the operational budget per year is invested in the digitalization activities. Partly because of the financial issues, the digitalization “strategy” is in the hands of the management. Only four respondents mentioned that they have an IT-department.

The most popular tools that the SMEs use to exchange information with clients or partners are traditionally a phone and corporate website. Newer services, e.g. online file sharing platforms and messengers, are not spread that widely in their business communication. Being asked whether the companies have an account in the social media to promote their products/services, most of them use Facebook; fewer respondents have an account on LinkedIn, Instagram, Twitter or YouTube.

The main goals which the SMEs associate with the advancing digitalization are attracting new customers/new markets, increasing the productivity and level of innovation as well as the reduction of costs. The respondents also mentioned that the digitalization helps in particular sell and promote products/services and thus increases competitiveness, offers consulting services of a higher quality to customers and also reduces mistakes and bureaucracy. Several companies underlined though that human skills and expertise are still more important than machinery and digital tools.



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The interviewees from Baden-Württemberg organize IT-trainings for their employees at least once a year. A half of the Slovenian respondents have the same approach. The companies of Lower Austria mentioned that IT-trainings depend on the needs of staff and are not offered on a regular basis. The SMEs from Trento also do not conduct specific trainings; employees are usually informed by the management about the relevant changes with regard to the digitalization and innovation.

The project survey shows the high interest of companies to collaborate with each other as well as with research and education institutions. Due to the heterogeneous economic structure differentiated approaches and support offers are necessary.

There are manifold funding opportunities for SMEs with regard to high-tech and digitalization in the Alpine regions, both at the regional and federal level (federal funding is usually available for companies coming from all regions): grants and innovation premiums, incentives (e.g. subsidies) and other schemes. Companies mention though that it is sometimes quite complicated to obtain such support due to various bureaucratic procedures.

In order to support SMEs in Baden-Württemberg, the Ministry of Economic Affairs, Employment and Housing of the state has launched the initiative "Industry 4.0"<sup>1</sup>. Furthermore, several cross-industry projects have already been launched within the framework of the initiative "Wirtschaft 4.0"<sup>2</sup>: digital hubs, digitalization premium, innovation voucher "Hightech Digital"<sup>3</sup>, and the contest of ideas for knowledge and technology transfer.

The interdisciplinary digitalization strategy of Baden-Württemberg "digital@bw"<sup>4</sup>, which was presented in 2017, contains a large number of innovative projects and measures. The state government provides around 1 billion euros for their implementation by 2021. The strategy is focused on the population of Baden-Württemberg and demonstrates concrete benefits of modern digitalization technologies to people with the help of innovation projects and pilot schemes. Provision of excellent training for junior staff and support of local authorities in shaping central policy areas, such as mobility, education or health in urban and rural areas in a future-oriented and sustainable manner, are among main goals of the strategy.<sup>5</sup>

In Lower Austria, SMEs see the digitalization process as a chance for future business opportunities<sup>6</sup>. The region already features a diverse and broad ecosystem to foster innovation. For example, the House of Digitization<sup>7</sup> is the lighthouse project of the Lower Austrian digitalization strategy, which addresses the needs for digitalization of SMEs. It is a

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<sup>1</sup> <https://wm.baden-wuerttemberg.de/de/innovation/schluesseltechnologien/industrie-40/allianz-industrie-40-bw/>

<sup>2</sup> <https://wm.baden-wuerttemberg.de/de/innovation/initiative-wirtschaft-40/>

<sup>3</sup> <https://wm.baden-wuerttemberg.de/de/innovation/innovationsgutscheine/innovationsgutschein-hightech-digital/>

<sup>4</sup> <https://www.digital-bw.de/-/alles-beim-neuen>

<sup>5</sup> <https://www.digital-bw.de/ziele-und-aufgaben>

<sup>6</sup> Digitale Transformation von KMUs in Österreich 2019. Erfassung des Digitalisierungsindex 2019. Arthur D. Little.

<sup>7</sup> Operated by "ecoplus. The business agency of Lower Austria", <https://www.ecoplus.at/interessiert-an/haus-der-digitalisierung/>



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platform that offers companies and researchers the connection of their interests, digital skills, expertise, and it also provides knowledge and networks customized to the local setting.

Lower Austria has also introduced its Digitalization Strategy, which includes three main goals: securing and creating new jobs, strengthening rural regions and improving life quality<sup>8</sup>.

In Slovenia, aspects of the digitalization enter different business domains and become a part of everyday work, also for SMEs. However, the degree of digital technologies used by business actors differs from sector to sector.<sup>9</sup> Companies can access digitalization knowledge through different paths. Technology parks, innovation hubs, university incubators, grants, innovation vouchers, tax incentives and supportive coaching services address the Small Business Act (SBA) recommendations in the skills and innovation area<sup>10</sup>.

In 2016, Slovenia adopted a strategic document related to the development of information society until 2020. Digital Slovenia 2020 – Development Strategy for the Information Society until 2020<sup>11</sup> presents a commitment for acceleration of development of the digital society.

In comparison to the majority of companies in Italy (about 55%), which have low investments in digital technologies often having just a simple website and a few computers<sup>12</sup>, the digital transformation potential of Trento is remarkable considering the push of innovations. The province puts forward specialization in a number of sectors related to advanced manufacturing and Industry 4.0 and counts on the strong research capacity of public and semi-public research institutions to innovate, as well as on the capacity of local SMEs. There are several institutions that support transfer of knowledge and technology from R&D<sup>13</sup> to economy as well as acceleration and education to entrepreneurship and strategic projects. These institutions include business and innovation hubs, foundations, universities, trade associations, etc.

Piano Industria 4.0 (I4.0) is the Italian plan for companies to benefit from a wide range of measures in order to help them win the challenge set by the digital revolution. The core activities<sup>14</sup> comprise innovative investment, stimulating private investment in the uptake of I4.0 technology, expenditures in R&D, and development of skills. The measures imply tax incentives, access to finances, development of skills related to new technologies and innovative processes stemming Industry 4.0. As part of the strategy, 22 Digital Innovation Hubs are already active providing Italian SMEs with services to facilitate their digital transformation and networking in larger digital value chains.

The main driver of innovation in digitalization in the Alpine space is the ability to significantly improve the visibility of SMEs and directly reach global customers. Communication, mobility,

<sup>8</sup> [http://www.noe.gv.at/noe/Topics-in-English/Digitalization\\_Strategy.html](http://www.noe.gv.at/noe/Topics-in-English/Digitalization_Strategy.html)

<sup>9</sup> Digital Economy and Society Index (DESI). Country Report Slovenia. (2019). European Commission.

<sup>10</sup> 2018 SBA Fact Sheet Slovenia. (2018). European Commission.

<sup>11</sup> <https://www.gov.si/assets/ministrstva/MJU/DI/7df0f756bc/Strategija-razvoja-ID.pdf>

<sup>12</sup> Digital Economy and Society Index (DESI). Country Report Italy. (2019). European Commission.

<sup>13</sup> Research and development

<sup>14</sup> Source: Digital Transformation Monitor: Italy, Industry 4.0. (2017).



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efficiency improvement, smart information, smart technologies, services, payment systems, crypto currencies, block chain. Especially in agriculture, the available satellite observation opens up completely new possibilities. Optimization of crop rotation, fertilizer application, pest control, self-propelled working machines, remote control of work processes in the field, optimization of feed application, early detection of diseases through evaluation of movement profiles. Direct marketing of the produced products to the consumer through online shops, and many more fields of application are seen as a chance for further business model development.

In order to spread digital technologies more widely in practice in the industries producing and applying natural bio-based fibers, the following hurdles must be overcome resp. the requirements must be met:

- Sustainable expansion of the digital infrastructure, e.g. broadband mobile communications, reliable internet connection, especially in rural and mountain areas;
- Increase of the reliability of technologies;
- Training and consulting (e.g. farmers are usually not very well educated in the IT field and need a good knowledge basis for taking decisions on investments in such technologies);
- Further regulation of the data protection, security and sovereignty, as well as establishment of further starting conditions (e.g. air traffic regulations for the use of drones);
- Improving the data flow between products from different manufacturers;
- Diminishing the lack of knowledge about biobased products or recycling opportunities outside networks of stakeholders of the biobased industries;
- Increase of the awareness about the topic of digitalization, especially among SMEs, which sometimes consist of only one-two persons who have to deal with a number of daily-basis business activities and simply do not have time to learn about new digital opportunities;
- Further research on benefits of the digital farming<sup>15</sup>;
- Active participation in national funding programmes for R&D on the digitalization;
- Improvement of the existent and development of new programs on incentives for SMEs willing to accept and undergo new digitalization technologies – this is a task mainly for policy makers.

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<sup>15</sup> Digitalisierung in der Landwirtschaft. Chancen nutzen – Risiken minimieren. (2018). Federal Ministry for Food and Agriculture.