D.T3.1.4 PILOT REPORT

Deliverable D.T3.1.4

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Contents

The Pilot actions of CNA Emilia-Romagna: a combination of synergies and change

The Emilia Romagna region, which has been in full 4.0 revolution for years, is called to face change in a unique industrial context, made up of a multiplicity of SMEs that constitute the backbone of the production system and that require strategic policies of real support.

At the center of the change are the choices regarding corporate innovation processes that can be acted on on several fronts: investments in research and development, knowledge of technological opportunities, processing systems, automation and robotics, ICT and logistics management tools, investments in human capital both in terms of training and introducing new figures and new skills into the company.

From this premise it is clear how the challenge of innovation and competitiveness on global scenarios is won with managerial figures able to manage these steps. The synergy between SMEs and management represents, once again, the key through which the economic system can not only withstand the impact of the revolution in progress, but rather ride the wave to reaffirm its excellence and distinctiveness.

For these reasons and to be alongside companies in a more proactive way and in support of their innovative strategies, CNA Emilia-Romagna has organized for its DIHs a path consisting of 3 pilot actions (D.T3.1.1 and D.T3.1.2 and DT3.1.3) which had the objective (DT3111 and DT312) to provide tools to support companies in the scenarios dictated by change and identify new solutions that could bring an innovation in the development of processes, products and services.

For the realization of this path 3 Professors were involved: Carmelo di Bartolo, Camilla Fecchio and Valentina De Matteo.

The path was built on the Design Thinking methodology, a valid tool that allows you to work and propose new ideas to companies. Thanks to this solution, DIHs will be able to support SMEs and accelerate their digital transformation. Pilot Action 3 (D.T3.1.3) was created with the collaboration of the RELAB partner and had two parts.

The first part consisted in the presentation of a tool to analyze the positioning, from a 4.0 perspective, of SMEs in Emilia Romagna and the impact of digitization on businesses and supply chains with respect to the 9 dimensions of the "Technology Maturity Level".

Thanks to this tool it is possible to investigate the state of health of companies and the distribution of technologies in the manufacturing sectors of companies in order to be able to make assessments.

The data taken into consideration derive from the companies that participated in the pilot actions, selected on the basis of their knowledge of specific sectors and the SME supply chains that compose them.

The activity continued with the intervention of Alex Zanon who explained how learning of new knowledge can also take place through new tools and enabling technologies.

The second part consists in the activity of Mackaton aimed at disseminating digital content to companies for a transition to a new business model 4.0. It is developed in collaboration with RE: Lab s.r.l

Thanks to the pilots described, CNA ER obtained various feedbacks in terms of service and, with summary graphs, represented the strengths and weaknesses of the companies directly and indirectly involved. Here are some summaries:
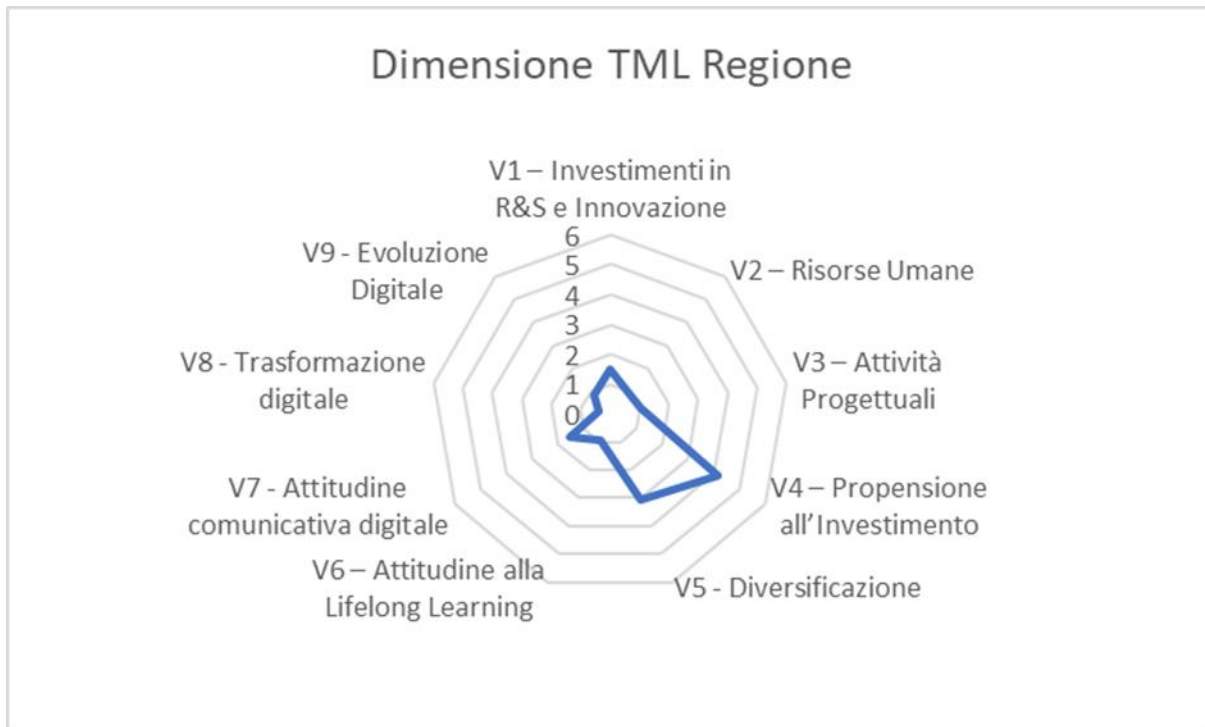
Figure 1 TML dimension of the Emilia-Romagna Region

TML dimension of the Emilia-Romagna Region (Graphic Legend)
V1: Investments in R&D and Innovation
V2: Human resources
V3: Project design activities
V4: Propensity to invest
V5: Diversification
V6: Aptitude for lifelong learning
V7: Aptitude for digital communication
V8: Digital transformation
V9: Digital evolution

This report explores the level of companies with respect to the various variables: digital transformation, propensity to invest, human resources, etc. This analysis derives from the involvement of companies obtained through the subjects who participated in the pilot actions, selected on the basis of their knowledge of specific sectors and the SME supply chains that compose them. What emerges from the radar chart is that the companies involved in the pilot actions have critical issues related to the digital transition and high levels of propensity to invest and diversify. If we enter into the merits of the individual supply chains, the following different behaviors emerge, depicted in the various radars.
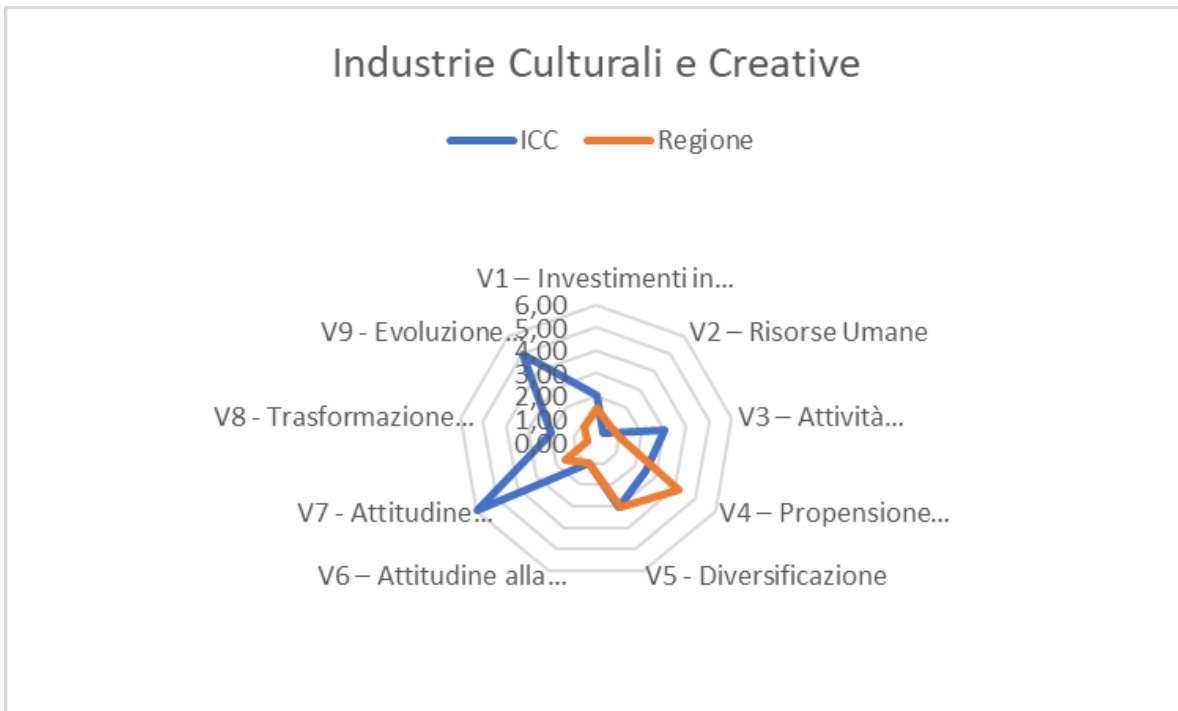
Figure 2 Acatech Score of the sample companies in the cultural and creative industries involved in the pilot actions compared with the rest of the Region

Creative cultural industries (Graphic Legend)
V1: Investments in R&D and Innovation
V2: Human resources
V3: Project design activities
V4: Propensity to invest
V5: Diversification
V6: Aptitude for lifelong learning
V7: Aptitude for digital communication
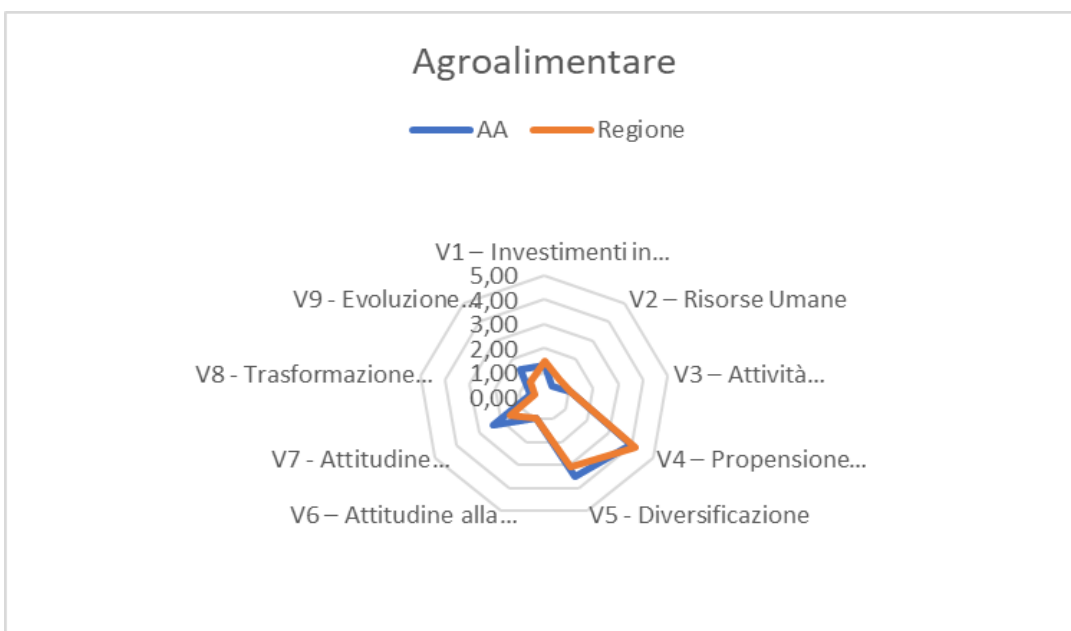V8: Digital transformation
V9: Digital evolution

Figure 3 Acatech Score of the sample companies of the agrifood sector involved in the pilot actions compared with the rest of the Region

Agrifood (Graphic Legend)
V1: Investments in R&D and Innovation
V2: Human resources
V3: Project design activities
V4: Propensity to invest
V5: Diversification
V6: Aptitude for lifelong learning
V7: Aptitude for digital communication
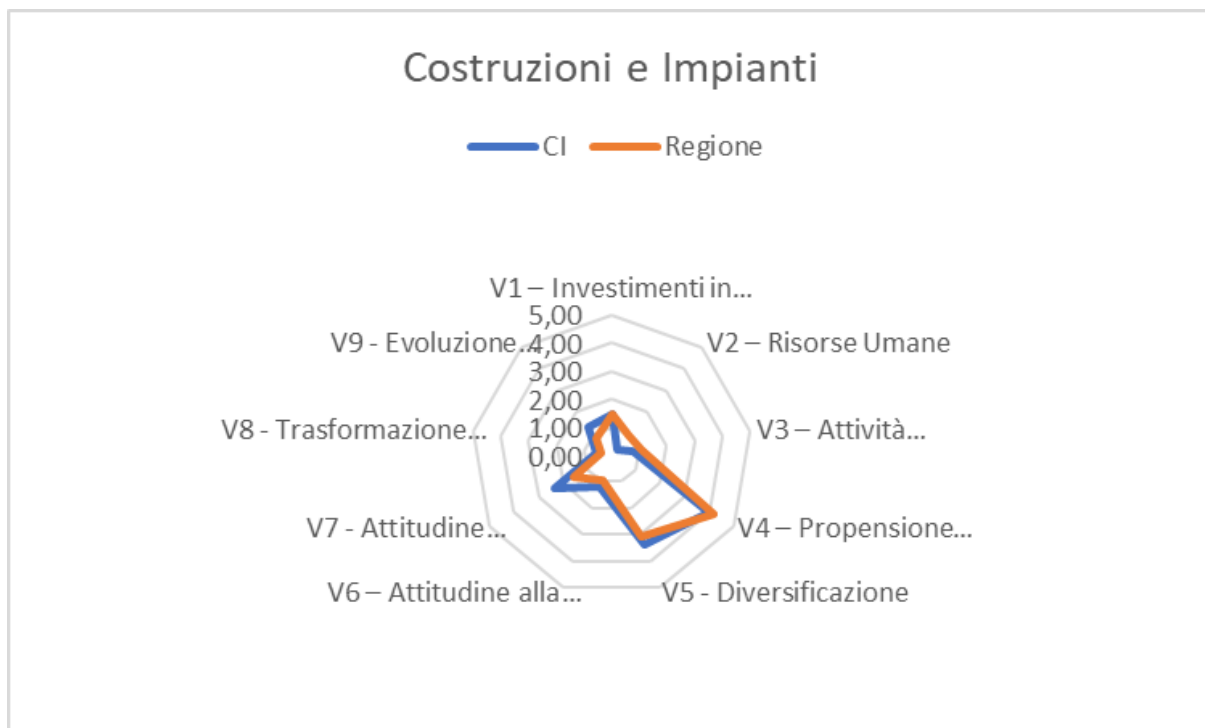V8: Digital transformation
V9: Digital evolution

Figure 4 Acatech Score of the sample companies in constructions and plants engineering compared with the rest of the Region

Constructions and plants (Graphic Legend)
V1: Investments in R&D and Innovation
V2: Human resources
V3: Project design activities
V4: Propensity to invest
V5: Diversification
V6: Aptitude for lifelong learning
V7: Aptitude for digital communication
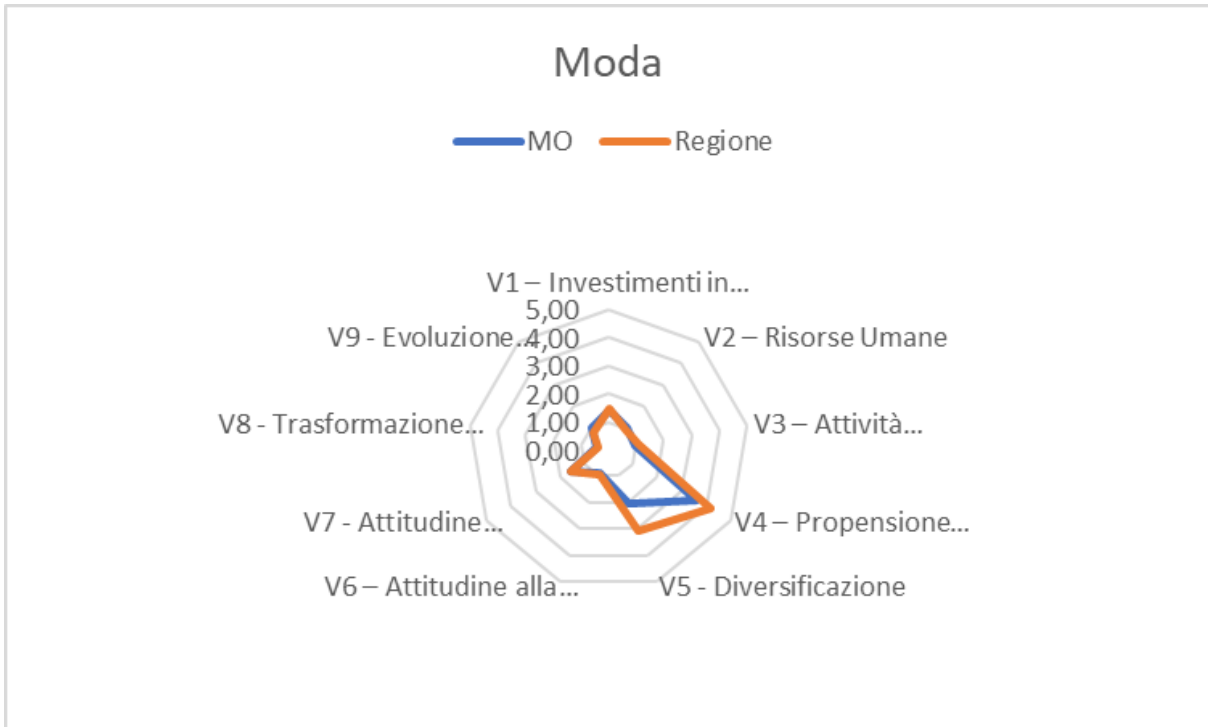V8: Digital transformation
V9: Digital evolution

Figure 5 Acatech score of the sample companies in the fashion sector compared with the rest and the Region

Fashion (Graphic Legend)
V1: Investments in R&D and Innovation
V2: Human resources
V3: Project design activities
V4: Propensity to invest
V5: Diversification
V6: Aptitude for lifelong learning
V7: Aptitude for digital communication
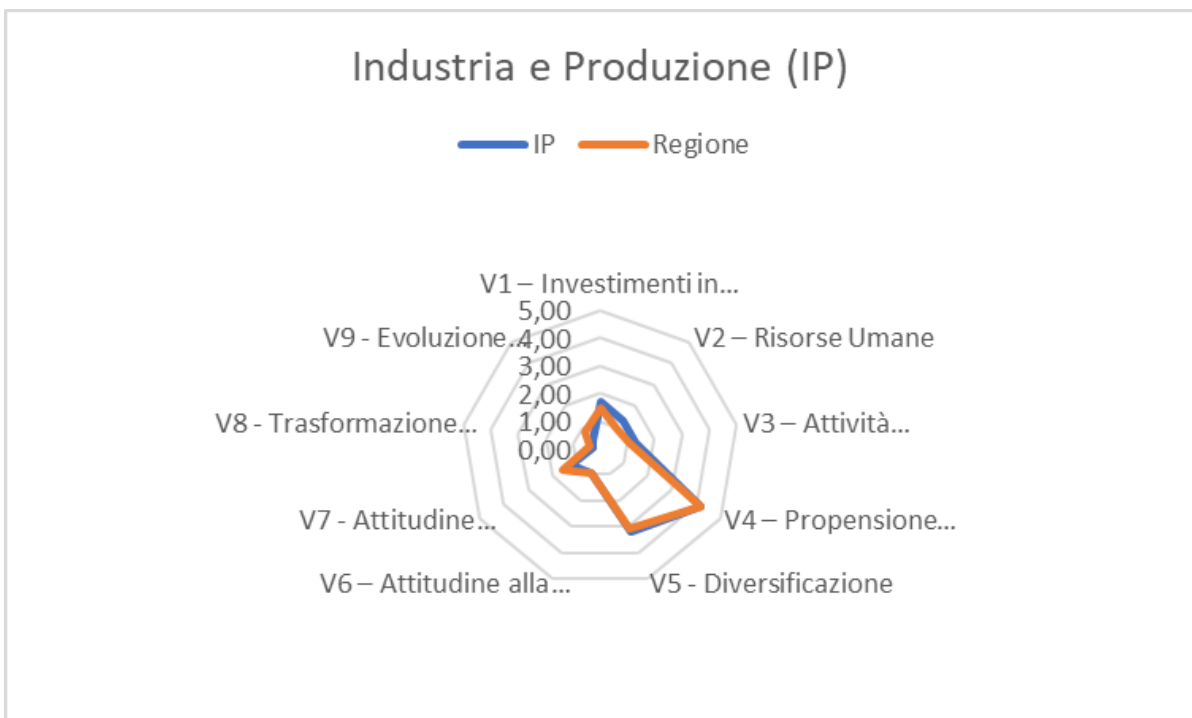V8: Digital transformation
V9: Digital evolution

Figure 6 Acatech Score of the manufacturing companies in the sample compared with the rest of the Region

Manufacturing (Graphic Legend)
V1: Investments in R&D and Innovation
V2: Human resources
V3: Project design activities
V4: Propensity to invest
V5: Diversification
V6: Aptitude for lifelong learning
V7: Aptitude for digital communication
V8: Digital transformation
V9: Digital evolution

Figure 7 Acatech score of Parma companies operating in tourism and catering compared with the rest of the Province and the Region

Tourism and catering (Graphic Legend)
V1: Investments in R&D and Innovation
V2: Human resources
V3: Project design activities
V4: Propensity to invest
V5: Diversification
V6: Aptitude for lifelong learning
V7: Aptitude for digital communication
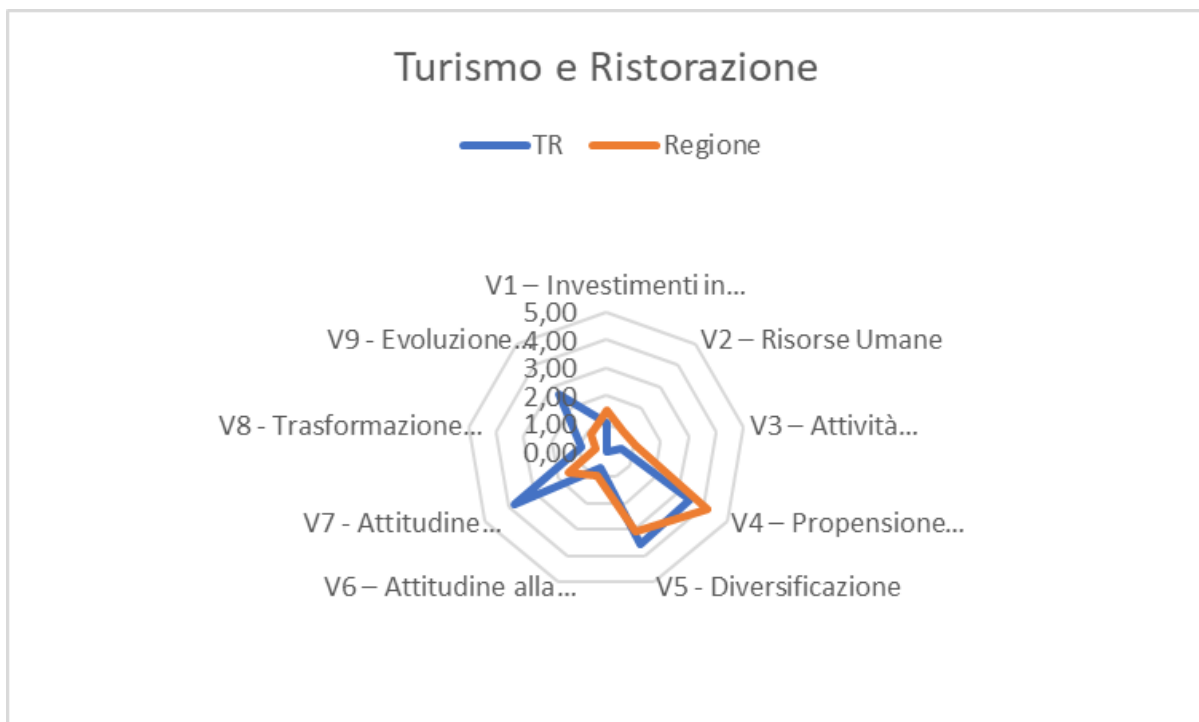V8: Digital transformation
V9: Digital evolution
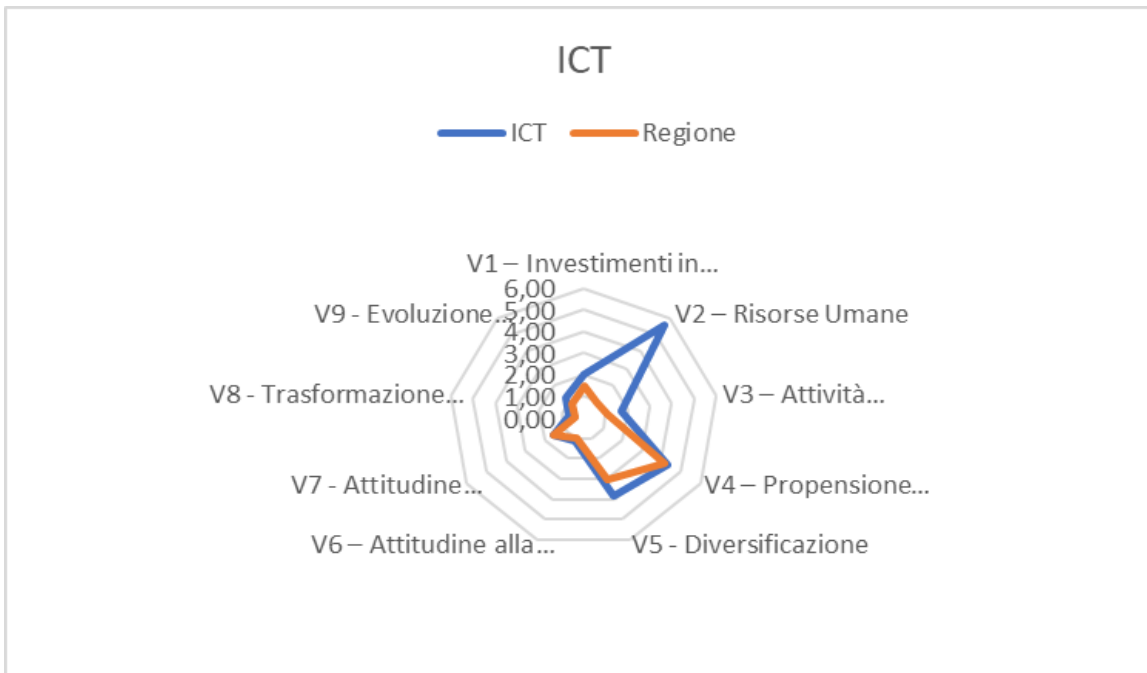
Figure 8 Acatech Score of the sample companies in ICT compared with the rest of the Region

ICT (Graphic Legend)
V1: Investments in R&D and Innovation
V2: Human resources
V3: Project design activities
V4: Propensity to invest
V5: Diversification
V6: Aptitude for lifelong learning
V7: Aptitude for digital communication
V8: Digital transformation
V9: Digital evolution

Figure 9 Acatech Score of the sample companies operating in services and logistic (including wellness) compared with the rest of the Region

Services and logistic (Graphic Legend)
V1: Investments in R&D and Innovation
V2: Human resources
V3: Project design activities
V4: Propensity to invest
V5: Diversification
V6: Aptitude for lifelong learning
V7: Aptitude for digital communication
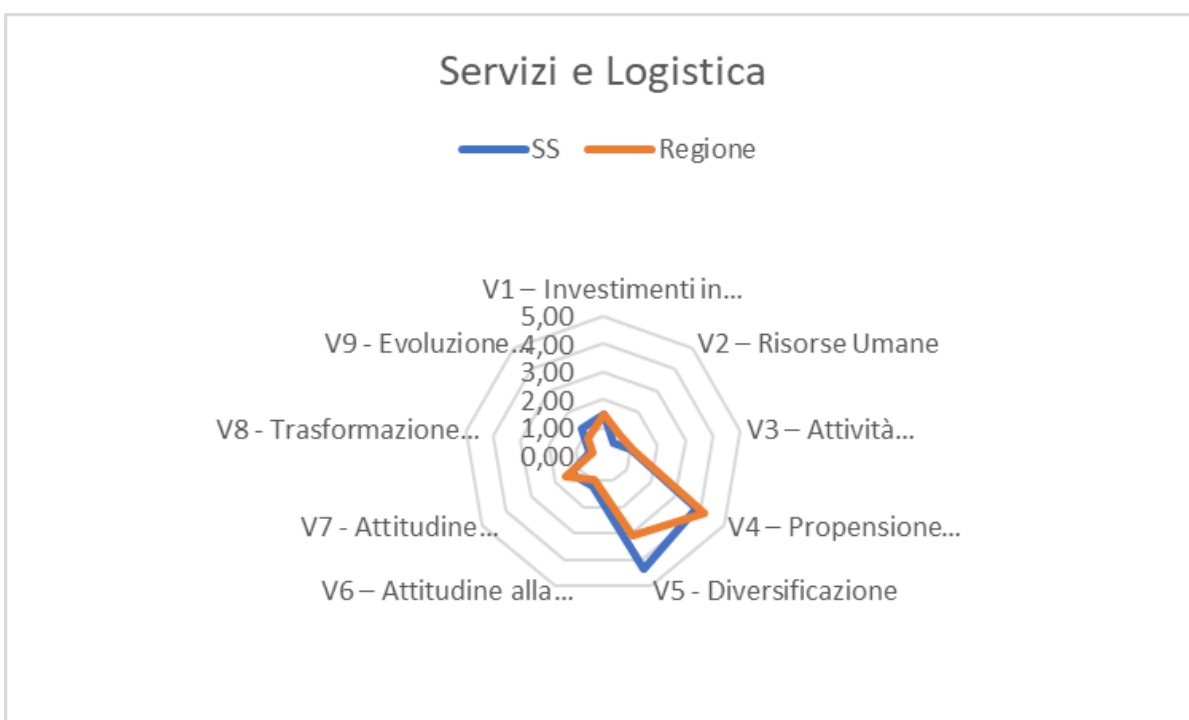V8: Digital transformation
V9: Digital evolution

The services most requested by companies

Tables 1 and 2 report data relating to the services most requested by the companies involved in the pilots by the DIH in absolute terms and by sector of economic activity, respectively. In particular, more than half of the companies focus their requests on the identification of targeted financing, research and assistance on tax breaks and financing for training. Furthermore, a good percentage of companies in the sample require services related to digitization (41%) and training courses managed by experts (41%). These services reveal an orientation towards internal growth of companies which are evidently aware of the limits highlighted in the analysis concerning the attitudes to the digital transition, where critical issues related to investment in physical and human capital had emerged.

Service	%
Identification of targeted funding	67.71%
Research and assistance on tax breaks	59.64%
Funding for training	52.34%
Digitization	41.02%
Training courses managed by experts	41.02%
Organizational innovation	33.33%
Access to new markets	28.26%
Credit plan	24.22%
Scouting and funding opportunities	21.88%
Insertion of highly qualified profiles	20.83%
Patents and certifications	18.23%
Management consulting	18.10%
Commercial action planning	17.32%
Matching between the business world and high-level skills	14.84%
Technology transfer	12.63%

Table 1 The services most requested by companies

Furthermore, analyzing the different sectors (Table 2) we can see that there is a general propensity for the request for services that is homogeneous for some sectors and uneven in others. In general, for almost all sectors we find a predisposition for services relating to targeted financing and tax breaks. Unlike the other sectors, the agricultural sector has few requests and mainly concentrated in the field of funding for training and organizational innovation.

Services most requested by the sectors	Agrifood	Trasformation/food	Manufacturing	Repairs, Energy Public Services	Construcctions	Transport/tourism	ICT	Services companies	Other services	Artistic and sporting activities
Organizational innovation	16.67%	7.10%	7.37%	5.52%	7.88%	3.51%	3.55%	4.04%	11.54%	4.79%
Digitization	8.33%	9.46%	8.45%	8.44%	8.59%	7.02%	4.57%	6.57%	3.85%	7.53%
Management consulting	0.00%	3.94%	3.36%	2.27%	4.30%	5.26%	6.60%	2.53%	3.85%	3.42%
Matching between the business world and high-level skills	0.00%	3.68%	2.58%	2.92%	1.91%	0.00%	4.06%	6.06%	3.85%	3.42%
Technology transfer	0.00%	1.71%	2.52%	2.27%	3.10%	0.00%	3.55%	5.05%	3.85%	2.74%
Patents and certifications	0.00%	3.55%	4.07%	4.22%	1.91%	0.00%	5.58%	4.04%	3.85%	2.05%
Development of training courses together with companies	0.00%	5.26%	4.55%	3.57%	5.25%	5.26%	4.57%	7.58%	3.85%	7.53%
Training courses managed by experts	16.67%	7.49%	8.39%	6.49%	11.46%	7.02%	6.60%	7.58%	11.54%	8.22%
Funding for training	25.00%	9.72%	10.55%	10.39%	12.17%	12.28%	11.68%	8.08%	7.69%	11.64%
Insertion of highly qualified profiles	0.00%	3.42%	4.25%	4.55%	3.10%	3.51%	6.60%	6.06%	3.85%	4.11%
Identification of targeted funding	16.67%	12.75%	13.72%	15.58%	14.32%	15.79%	13.20%	12.12%	11.54%	14.38%
Research and assistance on tax breaks	8.33%	11.30%	12.16%	12.99%	13.60%	15.79%	10.66%	10.61%	7.69%	10.27%
Credit plan	8.33%	5.78%	4.73%	3.25%	4.06%	10.53%	3.05%	6.06%	0.00%	5.48%
Scouting and funding opportunities	0.00%	4.47%	4.25%	5.84%	2.15%	7.02%	7.11%	5.56%	3.85%	4.11%
Commercial action planning	0.00%	4.07%	3.48%	3.90%	2.15%	3.51%	3.55%	3.03%	7.69%	3.42%
Access to new markets	0.00%	6.31%	5.57%	7.79%	4.06%	3.51%	5.08%	5.05%	11.54%	6.85%

Table 2 Services most in demand by the enterprises in the regional sample divided by sector