



DIGITAL TRANSFORMATION MANAGER



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What skills and knowledge does the furniture industry need to implement digital transformation? Who within the companies has to imagine this transformation? And what do they need to know to drive it?

The DITRAMA project asked more than 144 experts from across Europe to gather the needs of all types of stakeholders, from businesses to the world of professional training and to digital technology and information experts.

DITRAMA - Article #5

DIGITAL TRANSFORMATION MANAGER: DIGITAL TRANSFORMATION IN A CHANGING WORLD

The pandemic we are currently experiencing has accelerated and spread the process of digital transformation that has been underway for some time.

Never before, in the furniture industry as well, has technology become so indispensable as it is now, and the need to integrate it organically into companies has become an irreversible driver of development for the years to come.

To remain competitive in a world of increasingly rapid changes, companies must be able to imagine and implement innovative and efficient digital solutions along their entire value chain, with a cohesive strategy and a synergistic vision.

However, there is often a lack of professional figures and specific skills within companies to carry out a real digital transformation, which is not limited to a specific business division.

This shortage was also noted and emphasised by the more than 140 industry experts who were asked an opinion by the DITRAMA project on the skills and expertise needed and currently missing within the furniture sector.



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Starting from the results of the research carried out by the DIGIT FUR¹ project, where it is stated that "*By 2025, with a massively **connected and globalised economy**, the wood furniture manufacturing industry will offer **personalised smart products and services** based on **digital manufacturing, logistics and sales systems** supplied by **resource-efficient and sustainable industries** with an immense need for enough **digitization talents and skills** securing a competitive transformation of the industry*", the experts imagined what "technological" implications for the future of the furniture sector and its companies this vision might entail. The results are contained in the general report *D2.4a "Skills fine-tune final report"* and *D2.4b "Skill Digital Transformation Manager Occupational profile final report"*, available in ten languages and [available for download from the official DITRAMA project website](#).

New business models, new ways of relating to customers, new solutions for production and management processes within the company. And in addition, the challenge of remote work and remote quality control and risk monitoring.

From this, several needs were identified, both technical and transversal, to be met in order to project the sector into the future.

The pandemic, for example, has highlighted the importance of investing in augmented reality technologies, meaning an indirect but 'live' view of a real-world physical environment whose elements are presented in digital form, with sound, video or graphics. These technologies are increasingly being considered also in the design, development and production phases through to marketing and sales, including for customer education on smart products as a new way of visualising products. Examples such as virtual rooms for the correct configuration of a product by the customer will be widely used by companies of all sizes in the future, but they have also been getting a lot of attention with shops being shut down in these past few months. According to experts, anyway, by 2025 the main technologies that make augmented reality effects possible, such as computer processing power, will allow such good results that they can hardly be distinguished from the 'in-person' experience.

Another development driver that has been identified for the future and that is already starting to be very important is the aspect of sustainability and efficient use of resources.

Furniture manufacturing, being a sector with large products, will increasingly have to focus on the use of resources and energy from sustainable sources, very similar to very different manufacturing industries such as

¹ DIGIT-FUR project, www.digit-fur.eu



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automotive, wind turbines and even large-scale electronics. Growing concern about climate change, among other environmental impacts, and the lack of available sustainable natural resources require new ways of meeting the challenges of being able to produce enough in a sustainable way. Both factors will have a considerable impact on all manufacturing industries, including the furniture industry, both in terms of the cost of materials and certain types of energy, but also because of growing environmental and social concern.

Here, too, technological transformation seems more necessary than ever.

As natural resources become scarcer, suppliers will need to be more technologically advanced and specialised in order to make the most of the remaining key natural resources. This evolution will continue in the coming years and companies will increasingly invest in the development of new replacement materials. Research within or between companies in the field of sustainability will focus on innovations in materials used, products and internal processes, and this is where digital transformation will play a key role.

To make this possible, it will also be necessary to evolve digitally, to allow these and other emerging challenges to be met.

For this reason, the DITRAMA project wanted to highlight what concrete knowledge and skills are needed in the future in the digital field in order to be prepared.

But what does 'digital transformation' mean?

This is how the innovation centre I-Scoop² defines it:

"The "Digital transformation is the profound and accelerating transformation of business activities, processes, competencies and models to fully leverage on the changes and opportunities of digital technologies and their impact across society in a strategic and prioritised way, with present and future shifts in mind. Digital transformation in the integrated and connected sense requires, among others, the transformation of:

- *Business activities/functions;*
- *Business processes;*
- *Business models;*
- *Business ecosystems;*
- *Business asset management;*
- *Organisational culture;*

² https://www.i-scoop.eu/digital-transformation/#Digital_business_transformation_8211_a_holistic_approach



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- *Ecosystem and partnership models;*
- *Customer, worker and partner approaches... ”*

In this context, the training curriculum for the Digital Transformation Manager for the furniture sector is based on solid technical skills, developed in particular around disruptive technologies, which today represent the frontier of the digital evolution of companies.

Of these technologies, a first group relates to design and production processes, with a particular focus on the protection of data and corporate networks, recognised as one of the most vulnerable factors for companies.

1. **Industrial internet of things**
2. **Cybersecurity**
3. **Cloud computing**
4. **Additive manufacturing**
5. **Autonomous robots**

In addition to these, there is also expertise dedicated to technologies aimed at product quality, protection of product identity and relations with customers.

6. **Big data analytics**
7. **Blockchain**
8. **Simulation**
9. **Augmented reality**

And finally, a final group of skills necessary to organically maintain digitalisation within the company, so that all company processes and divisions are harmoniously integrated into the innovation process.

10. **Technical general competences**
11. **Horizontal and vertical system integration**

Through these 11 Units the training curriculum developed by DITRAMA is developed and the content of the MOOC developed and available for free online [upon registration at this link](#).

The research carried out by DITRAMA does not hide the difficulties and barriers in implementing these technologies in companies in the sector (especially SMEs).

The cost of new technologies, insufficient development resources, lack of skills and knowledge among staff and lack of technological solutions from suppliers are the main obstacles to be faced, even by large companies.



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This is why an in-depth focus is placed on 'non-technical' skills, which are essential to prevent new technologies from remaining exclusive to insiders or individual company divisions, without bringing about a real transformation.

The non-technical skills identified as crucial are:

1. **Innovation**
2. **Communication**
3. **Management and entrepreneurship**
4. **Emotional intelligence**
5. **Quality, risk and safety**
6. **Ethics**

These transversal skills are attracting a lot of attention in all fields of industry and economics, because they seem to be the appropriate response to the challenges of a rapidly changing world.

This is precisely why the DTM will also need to make use of these features, which allow to adapt to and better manage the problems and contingencies that such a major transformation will inevitably bring.

In conclusion, the proposed Digital Transformation Manager role will be ready to design, implement, maintain, and improve the company's digitalisation strategy using appropriate technologies, tools and methodologies. They will ensure that the company's organisation and its products comply with the digitalisation requirements envisaged and defined in the company's digitalisation strategy. They will facilitate continuous improvement in the field of Digitalisation of the organisation, in accordance with customer satisfaction. They will encourage and lead the company's digitalisation improvement projects in the field of digitalisation. They will implement actions to monitor the performance of the digital transformation, in order to allow the company's management to make the best decisions for business development.

Project leader:

CENFIM - Centre de Difusió Tecnològica de la Fusta i del Moble de Catalunya (La Sénia - Spain)

Project Consortium

Aarhus Universitet (Aarhus - Denmark)

Woodwize (Brussels - Belgium)

CETEM - Centro Tecnológico del Mueble y la Madeira de la Region de Murcia (Murcia - Spain)



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U.E.A. - European Furniture Manufacturers Federation based in Prague (Czech Republic)
AMIC - Associacio Agrupacio Moble Innovador de Catalunya (Barcelona - Spain)
CFPIMM - Centro de Formação Profissional das Indústrias da Madeira e Mobiliário (Lordelo - Portugal)
FederlegnoArredo - Italian federation of wood, cork, furniture, lighting and furnishing industries (Milan - Italy)
OIGPM - Ogólnopolska Izba Gospodarcza Producentów Mebli (Warsaw - Poland)
Método Estudio Consultores - (Vigo - Spain)
HOGENT - (Gent - Belgium)
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For more information:

<http://ditrama.eu/>
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