# Digital Maturity and Digital Transformation Strategy in Furniture Manufacturing Companies

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# Content

# Leveraging Maturity Models to promote Digital Transformation in the Furniture Industry

Many companies within the furniture manufacturing industry are transitioning to new Industry 4.0 models to adapt to increasingly fierce competition and changing customer preferences. However, these companies must first evaluate their own level of digital maturity to identify the digital strengths they already have, and the systems and business processes that they need to change or integrate into their digital solutions to embrace Industry 4.0.

A **Digital Transformation Maturity Model (DTMM)** is a method to measure the key dimensions and variables that indicate the degree to which a company is implementing digital technologies across the whole organization, including its corporate values and culture, manufacturing processes, business operations and marketing strategy. A higher level of digital maturity means the company has a better potential for growth in digital capabilities to develop new products and services.

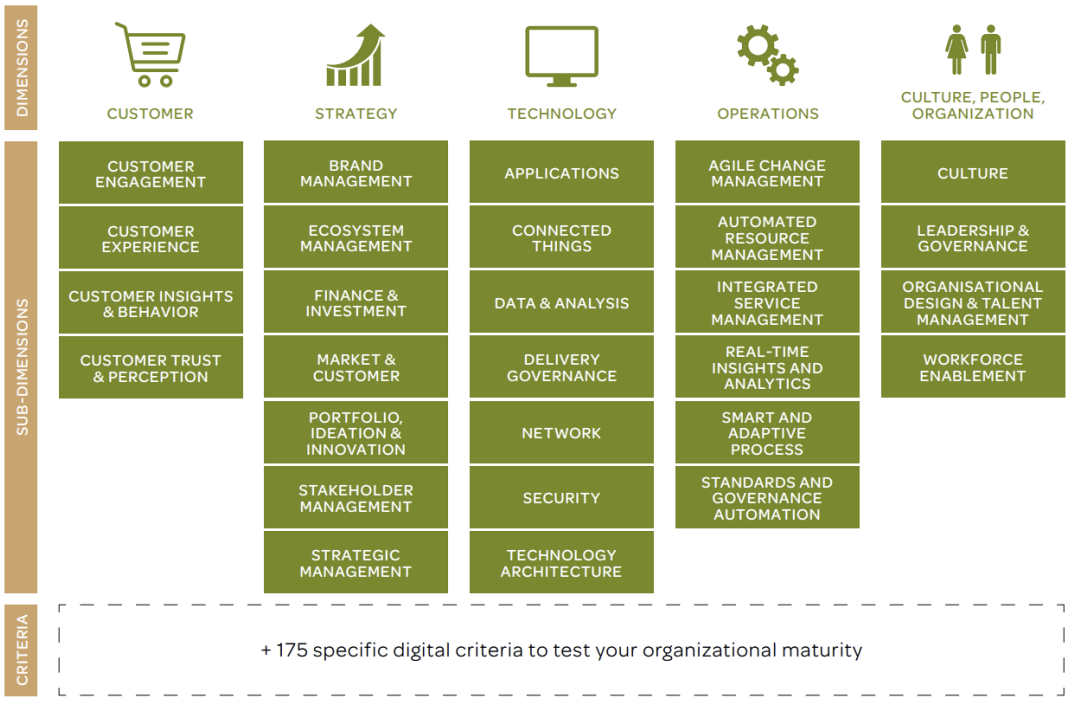



*Figure 1. Digital Maturity Model Dimensions and Sub-dimensions. Source: TM Forum (2017)* [1]

When talking about Digital Transformation, it is important to understand the differences between digitization, digitalization, and digital transformation:

[1] Digital Maturity Model (DMM): A Blueprint for Digital Transformation

- **Digitization** describes the process of converting analogic or non-digital information (in a physical format) into a digital format, e.g. scanning physical papers into digital files, converting typewritten text into a digital form, transforming audio from tapes to MP3 files, or photos from film to .tiff or .jpeg digital formats.

- **Digitalization** is the use of digital technologies and digitized data to transform how work gets done, and how customers and companies engage and interact to create new digital revenue streams, e.g. automating manual processes like completing paper application forms by hand to entering data directly into form in a web page or mobile app.

- **Digital Transformation** is the process of changing existing business models with new digital technologies, and involves a broad, cultural, and organizational change across the company, supported by a strong leadership, that empowers and enables employees to do things faster, easier, and smoother. Digital Transformation **is not a one-time action, but a continuous process** means by the adopting digital technologies to create new strategies, processes and business models which lead to new and better ways of providing value to end customers.

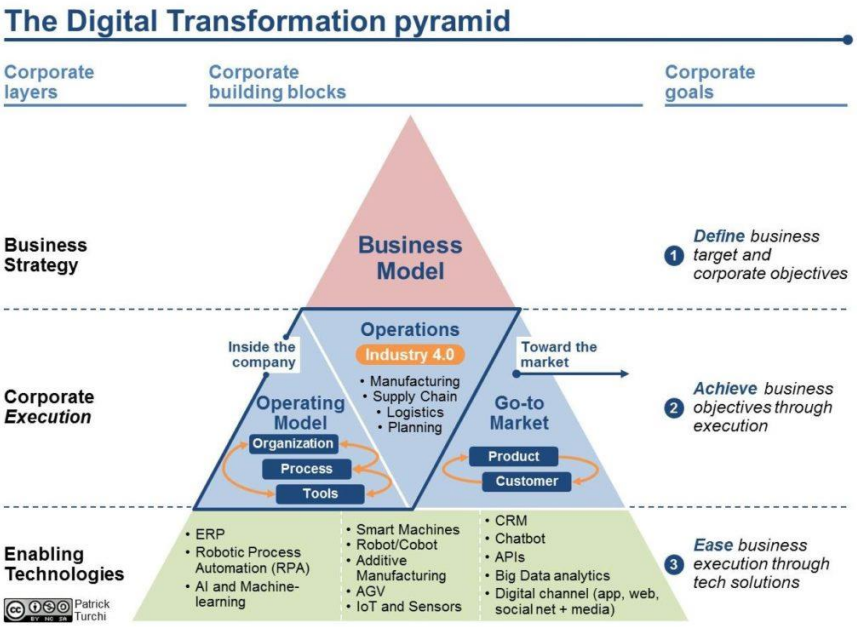



*Figure 2. The Digital Transformation Pyramid. Source: The Digital Transformation People (2018)* [2]

It is also important to understand that a Digital Transformation Maturity Model is not a "roadmap" for a manufacturing company to follow, as it does not consist of a sequence of phases to go through. A DTMM is a practical tool **to help companies structure and execute an all-encompassing digital transformation program**, by evaluating a company's current status within its digital transformation journey and **identify where it needs to improve before becoming a digital manufacturing company.**

[2] The Digital Transformation Pyramid: A Business-driven Approach for Corporate Initiatives

There are 5 levels of digital maturity that measure a company's degree of adoption of digital technologies:

1) At the **Initial or Ad hoc level**, the company lacks a digital transformation strategy and clear goals

2) In the **second level, called Managed or Opportunistic**, the company does have some digital transformation capabilities, but initiatives and efforts mainly are reactive.

3) In the third level, called **Defined and Repeatable**, the company does have well defined and documented goals, standards, and procedures, but actions have a limited scope.

4) In the fourth level, called **Quantitative and Managed**, digital capabilities and strategy are well defined and aligned, actions are strategically planned, and results are monitored and measured through metrics.

5) Finally, in the fifth level, called **Optimized**, digital technologies are at the core of the company's business model and are used aggressively and proactively to constantly create new innovative products and services.

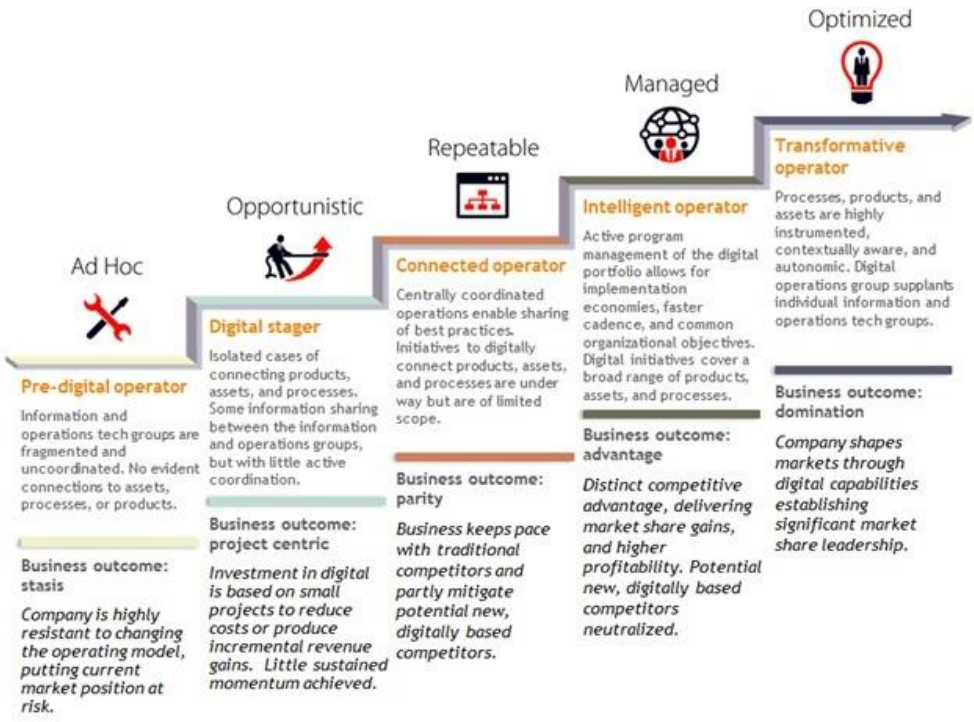



*Figure 3. IDC's MaturityScape Operating Model Digital Transformation Stage Overview. Source: Business Wire* [3]

[3] Business Wire

# Strategy, Organizational Culture and People

In the current business environment characterized by constant, rapid change, and fierce competition, how can a small or medium furniture manufacturing company adapt to stay afloat, turn its strengths into **competitive advantages** and grow? Certainly, companies should transition to Industry 4.0 digital business models that leverage technology and data collected from different sources to create increasingly better and more competitive products and services that meet the customer's needs and preferences in an increasingly precise and consistent way.

However, how can a company know it is on track and advancing in its Digital Transformation process? Companies should use metrics to **measure and evaluate** their performance to determine if they are on the right path in their digital transformation process. A structured approach is needed to measure and evaluate the key aspects that portray those corporate values and culture that are the key pillars of your Digital Transformation process, and this is what we call a Digital Maturity Model.

To apply a Digital Maturity Model, it is necessary to identify, among others those dimensions and variables that represent the culture and corporate values, and measure them to evaluate:

- How the company is building internal awareness of the digital culture and corporate values.
- How these values are being adopted and assumed.
- Whether the company is on schedule in training its staff in the digital skills they will need.

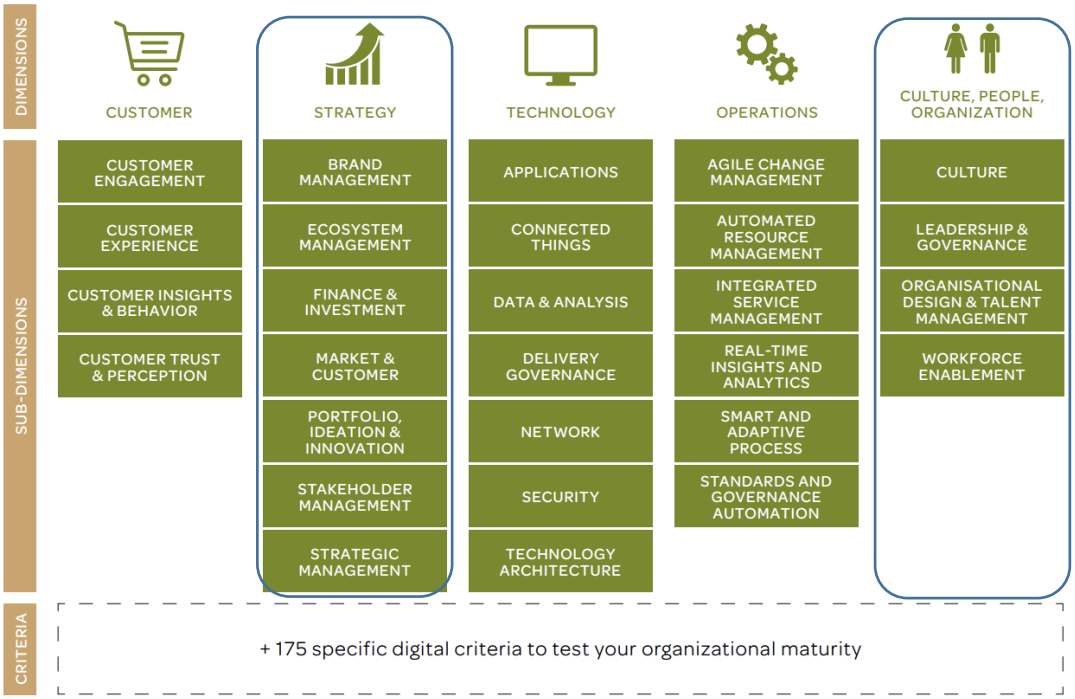



*Figure 1. Digital Maturity Model Dimensions and Sub-dimensions. Source: TM Forum (2017)*

To transition to an Industry 4.0 model, companies need to define and launch their **Digital Transformation Strategy**, that should include with clear-cut goals, timelines, action plan, and budget. To define a Strategy, a good starting point could be to ask themselves: how advanced (mature) is the company to embrace digital initiatives to gain competitive advantage?

Research indicates that Strategy is "the strongest differentiator of the digitally maturing companies" compared to less digitally mature ones, and that digital leaders distinguish themselves from the others in having a clear digital strategy combined with an organizational culture and leadership that drives transformation. A successful digital transformation can only be achieved if the company's strategy, technology, operations, organization, and culture are aligned.[4]

## Strategy: Lectra Case Study

Lectra, an upholstery technology company founded in 1973, launched a digital transformation strategy in 2017 by adopting the Industrial Internet of Things and since then has managed real-time monitoring, thanks to hundreds of sensors embedded in cutting-room solutions for which Lectra designed and developed the electronics. Lectra combines machines, software, services and data, essential to deploy Industry 4.0. By adopting 4.0 solutions and technologies, manufacturers can deploy several production models simultaneously. Without abandoning mass production, they can now start manufacturing **small series** or roll out a **customized offer**, while preserving

[4] Vuksanovic Herceg, I., Kuc, V., Mijuškovic, V., Herceg, T. (2020, 21 May). MDPI. Challenges and Driving Forces for Industry 4.0 Implementation. Retrieved from https://www.mdpi.com/2071-1050/12/10/4208/pdf

the productivity and profitability of their operations.[5] Furniture industry players are forced to adapt without delay to the demands of younger generations yearning for configurable and personalized furniture, changing lifestyles, and the challenges of digital technology. In 2019 Lectra consolidated its position in Industry 4.0 by launching "Furniture on Demand", an initiative that offers furniture brands and manufacturers the ability to customize their products by providing a new way of cutting fabric.[6]


*Figure 4. Lectra Industry 4.0. Source: Lectra 4.0. Empowering customers through industrial intelligence* [7]

[5] DeFeo, J.A. (2019, August 21). Industry 4.0 in Action: The Impact on Furniture, Pharma and Automotive. Retrieved from https://www.juran.com/blog/industry-4-0-in-action-the-impact-on-furniture-pharma-and-automotive/

[6] Retrieved from https://www.lectra.com/sites/lectra.com/files/industry-4.0-statement.pdf

[7] Lectra 4.0. Empowering customers through industrial intelligence


*Video 1. Lectra Cutting Room 4.0 for Made-to-Order Furniture: Vilmers customer story. Source: Lectra* [8]

However, in a Digital Transformation process the leading role will not necessarily rely on technology, but rather on people and culture. New corporate culture and values will become the key drivers of a company's Digital Transformation Strategy and making sure the digital culture and corporate values are shared among all employees to get buy-in from them will be critical. A change in corporate culture is key for a digital transformation process to be completed successfully. Changing beliefs, values, habits, and experiences that define a company through its workers is one of the greatest challenges in the digital age.

[8] Lectra


*Figure 5. Barriers to digitalizing organizational culture. Source: Iberdrola (2020). Corporate culture in the digital era* [9]

A global survey conducted by Capgemini in 2017 to measure the significance of corporate culture in a digital transformation process indicated that 62% of executives and employees interviewed pointed at corporate culture as the main barrier companies face in the digitalization process. The underlaying reason is that the corporate culture reflects the company's spirit, values, ethics, and corporate purpose. Unless all these factors experience a shift towards embracing and adopting

[9] Iberdrola (2020). Corporate culture in the digital era

technological innovation, a digital transformation process will have little chance of succeeding.[10]

Changing the culture is usually the most overlooked component in a Digital Transformation's strategy. Culture is an intangible element that you cannot see, touch, or feel, and therefore the impact on a company's overall digital transformation is difficult to understand.

The bottom line is that culture change should be considered from day one of the key dimensions of a digital transformation process.


*Video 2. Why Culture is the Secret to Successful Digital Transformations. Source: Eric Kimberling - Digital Transformation* [11]

## Organization, Culture and People. M Moser's "Living Lab" Case Study

M Moser, founded in 1981 and with 1,000 employees in 20 offices globally, creates workplaces for global business by focusing on the delivery of unparalleled work

[10] Iberdrola (2020). Digital transformation in corporate culture, the key to success. Corporate Digital Transformation. Corporate Culture in the Digital Era. Retrieved from https://www.iberdrola.com/social-commitment/digital-transformation-and-corporate-culture

[11] Eric Kimberling - Digital Transformation

environments, optimized to leverage clients' resources and support the business activities of their staff.

M Moser sought to relocate its New York office to a new environment to enhance the brand identity, empower employees and to transform ways of working. The new environment was expected to adopt the best attributes from the existing culture and operating systems while retaining the heritage of the global business.

M Moser relocated its New York office to the Woolworth Building, considered a landmark and one of the oldest skyscrapers in the city, envisioning the new space as an agile, future-proofed "living lab" for ongoing adaption and change. The goal was to create a workplace that reflected the **cultural and business transformation capabilities** of M Moser - addressing individual needs and translating this methodology into new digital strategies, space planning, flexible furniture, and technology to achieve a high-performing workplace.

The M Moser Living Lab explores new ways of working with an entirely new workspace that speaks to its dedicated focus on post-occupancy research, putting evidence-based design into action through a flexible, agile workspace that continually accommodates for client and employee needs. The Living Lab workspace embodies a spirit of **freedom and experimentation**, encouraging and empowering users to innovate and adapt areas based on their unique requirements, without restrictions. Teams can test out and trial design solutions within their own workspace for clients.

*Figure 6. M Moser Living Lab. Source: M Moser* [12]

[12] M Moser

The move to the new space was meant to trigger a change in the way people worked, including the adoption of a completely agile workplace, shifting from assigned seating to free address, switching desk phones for mobile devices and swapping desktop computers for laptops for the entire team. These changes, coupled with employee workshops, an orientation of the new space types and a mobile app, facilitating a shift in habits. This steady transition helped the team to resolve small issues one by one, enabling people to gradually adapt to what day-to-day life would be like in the space and **start working differently before design and construction began.**

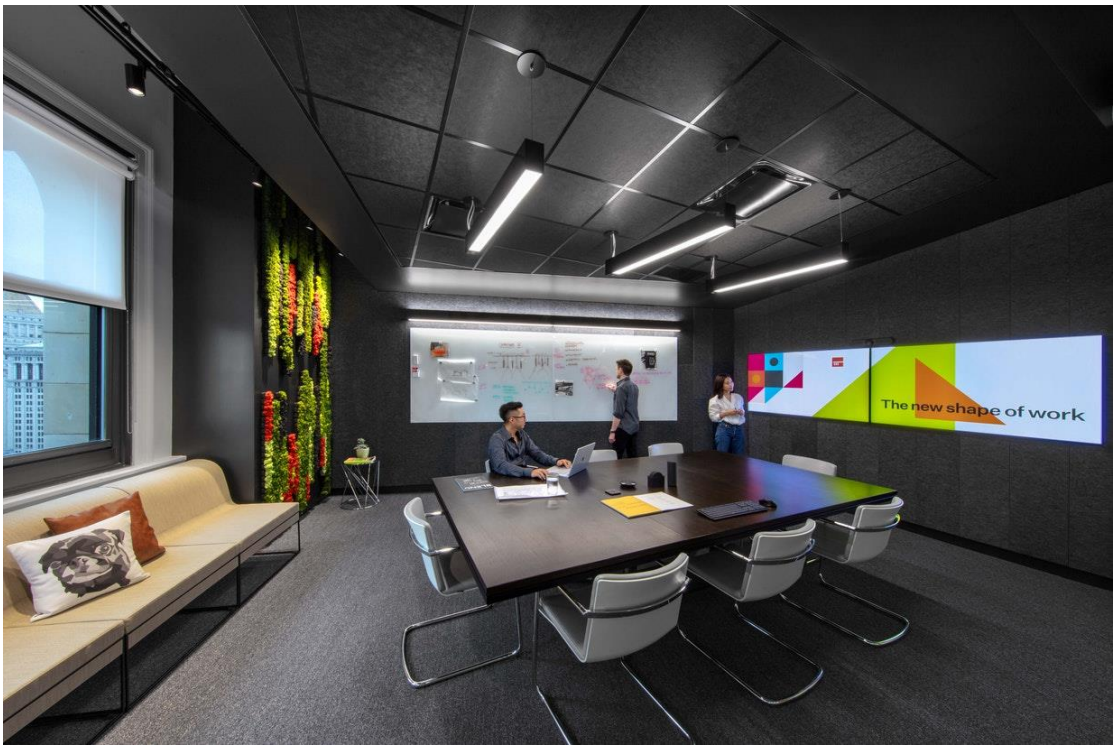



*Figure 7. M Moser Living Lab. Source: M Moser*

By adopting a dynamic workshop approach, the workspace embodies the spirit of freedom and experimentation, empowering people to adapt and innovate. The design team engineered flexible desk furniture and incorporated additional moveable furniture to enable the space to change for various needs and events. Users are encouraged to adapt areas based on their unique requirements, without restrictions.

The new office is equipped with high speed, trading-level Wi-Fi to encourage staff mobility, a Virtual Reality (VR) Lab to work through design solutions, a 3D printer to prototype architectural elements, and an Innovation Lab to strategize with design teams and clients. Other technology features include a fully cloud-based network, a U Rack server for space optimisation and a biometric fingerprint reader to mitigate key card entrance.

The space fosters the innovative and integrated nature of the M Moser business culture and enhances accessibility, collaboration and **cultural identity**. By embracing organisational change and growth, the new space reimagines ways of working as an “office of the future” that encourages movement and flexibility to meet the needs of each person, team or task. This “living lab” serves as a co-working space and enables M

Moser to test and develop a broad range of workplace strategies to ensure the best results for clients.[13]

*Figure 8. M Moser Living Lab. Source: M Moser*

[13] M Moser Associates. A "living lab" to innovate future workplaces.

# Underpinning execution: ICT, Standards and Processes

When adopting a Digital Transformation strategy, for a small and medium furniture manufacturer to evaluate how digitally mature it is becoming, it is important that it measures whether it has the right IT architecture to integrate, structure and manage the data coming from different sources from across the company, its customers, and the supply chain.

The company should also measure the extent to which it is applying technical standards and governance procedures and thus, determine the best decisions to take to improve its business processes, automate critical processes and develop innovative products and services.

The goal is to **deliver increased value to its customers** through a better execution and a more effective management of aspects such as: data security, ethics and legal risk and interoperability of devices and software systems in a more effective way. The foundations of a successful digital transformation strategy should include corporate values and culture, insofar as they are embedded in processes, operations and the IT infrastructure information and communication technologies, and standards and governance procedures.

These dimensions and variables play a key role in generating, processing, storing, securing, and sharing data internally and across the value chain to ensure the needs of customers are met, to improve the execution of business processes while lowering costs, and to enhance business efficiency and effectiveness.

When evaluating the **level of digital maturity** of a company, two important additional aspects to consider are:

1) Which interoperability standards are being used to scaling up processes.

2) How these standards can help small and medium furniture manufacturers automate processes, ensure devices and software can talk to each other, and manage data more effectively.

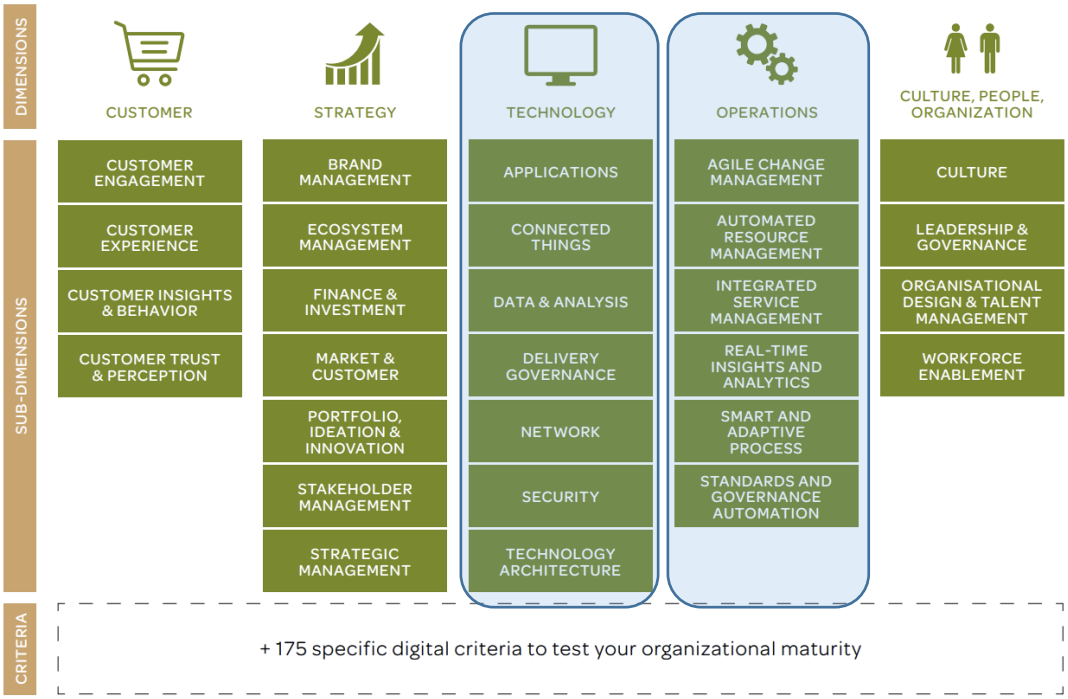



*Figure 1. Digital Maturity Model Dimensions and Sub-dimensions. Source: TM Forum (2017)*

## ICT: Actiu Case Study

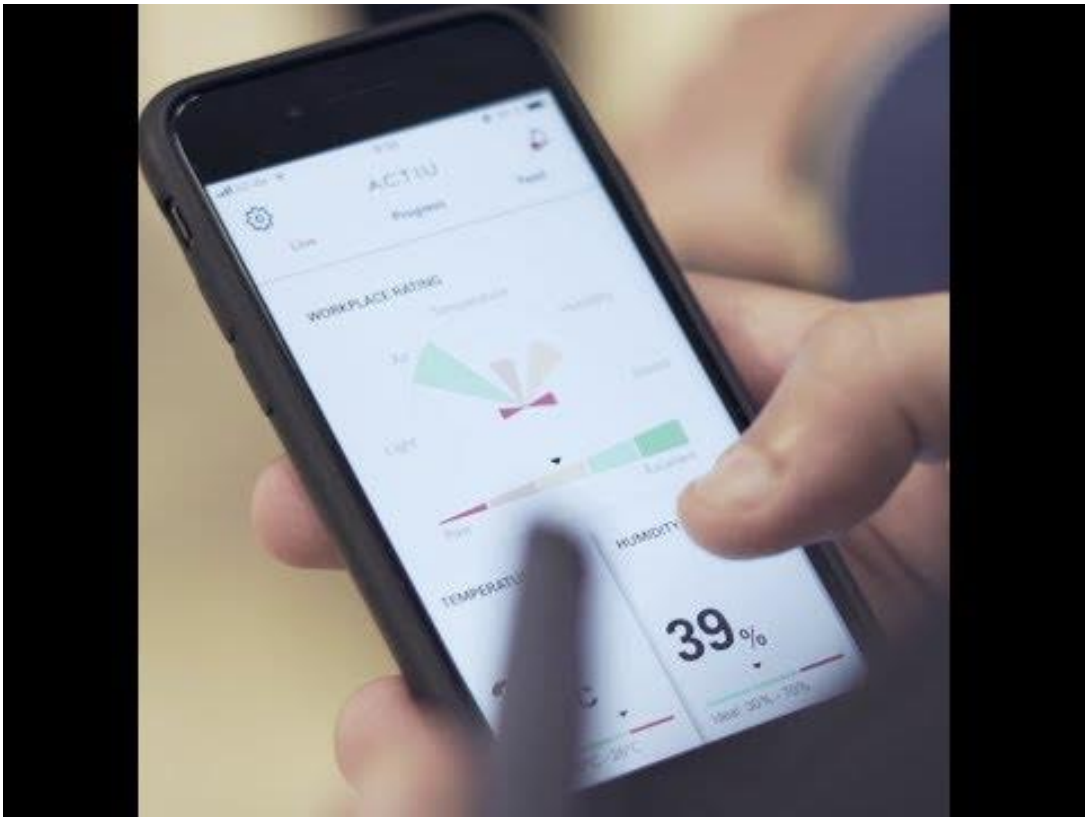
Actiu is a Spain-based family-owned company specialized in designing and producing furniture for working spaces and contract with a presence in more than 70 countries. Actiu adopted a digital transformation process years ago with the goal to constantly innovate in products and solutions including chairs and tables equipped with intelligent IoT sensors connected to the Internet. As a result of this constant innovation, Actiu partnered with the Institute of Biomechanics of Valencia (IBV) to develop Cool Working by Actiu, a **management methodology** that combines design, ergonomics and technology to create solutions for each person and each style of work.

Within Cool Working by Actiu, in 2018 the company launched Actiu Next, a technological solution that combines **innovative furniture with smart sensors** and allows to monitor and collect information anonymously about the condition and use of the workspace, encouraging the adoption of healthy habits. In particular, the implementation of this technology in furniture provides the user information about factors that could affect him such as posture, air quality, temperature, humidity, lighting and noise.


*Figure 9. Actiu Next. Source: Construnario* [14]

Actiu Next not only focuses on the individual use of each operational position; by combining technology and home automation, Actiu Next is a practical tool to manage spaces by providing organizations and facility managers with **quantifiable information on how certain areas are used**, providing valuable data for decision-making aimed to improve the productivity and usability of spaces.

[14] Construnario




*Video 3. Actiu Next. Source: Actiu* [15]

## ICT: Kimball Hospitality Case Study

Kimball Hospitality is an office furniture design and manufacturing company founded 1970 with facilities in Asia, the United States, and Mexico and 3,000 employees worldwide.

Kimball recognized that office furniture and hospitality markets have changed dramatically in the last 25 years and **Digital transformation is not just a preference** – it's a matter of survival and something that Kimball had to do to differentiate itself from the competition.[16]

[15] Actiu

[16] Johnson, A. (2020, March 9). Siemens. Leading Furniture Manufacturer Embraces Digital Transformation. Retrieved from https://blogs.sw.siemens.com/solidedge/leading-furniture-company-embraces-digital-transformation/

*Figure 10. Rendering by Kimball International.*

Therefore, Kimball has aggressively embraced Digital Transformation to face changing customer demands and market requirements. Kimball has adopted a series of software tools to advance all phases of the product development process: mechanical and electrical design, simulation, manufacturing, technical documentation, data management, and cloud-based collaboration.

*Video 4. Kimball: Driving Digital Transformation in the Hospitality and Office furniture industry. Source: Siemens Software* [17]

[17] Siemens Software

# Reorienting the company around the Customer Experience to generate business value

For a furniture manufacturing company that has embarked on a digital transformation journey, it is of the foremost importance to assess how well it is doing in applying digital technologies to improve its business-to-business customer relationship channels and in making use of the **vast amount of data** from interactions with customers.

These volumes of data can help gain insights into what customers prefer and want, and then figure out ways to improve customer experience. To do this, the company needs to constantly measure those enablers involved in advancing towards becoming a digitally mature company.

Using a digital maturity model methodology to evaluate all those digital variables related to the interactions with customers can provide an indication of how well a company is progressing in its digital transformation process. Improving the customer experience is one of the key opportunities that a company's digital transformation process may bring about by leveraging the potential of digital technologies.

There is a widespread belief that digital technologies only apply to Business-to-Consumer (B2C) types of customer relationships and do not offer any business potential to, for instance, furniture manufacturing companies in their Business-to-Business (B2B) customer facing. However, applying digital technologies to the B2B customer relationships has a huge potential for furniture manufacturing companies, for instance, in marketing, sales, and service activities, through personalized interactions, cross-channel experience, or social media integration.

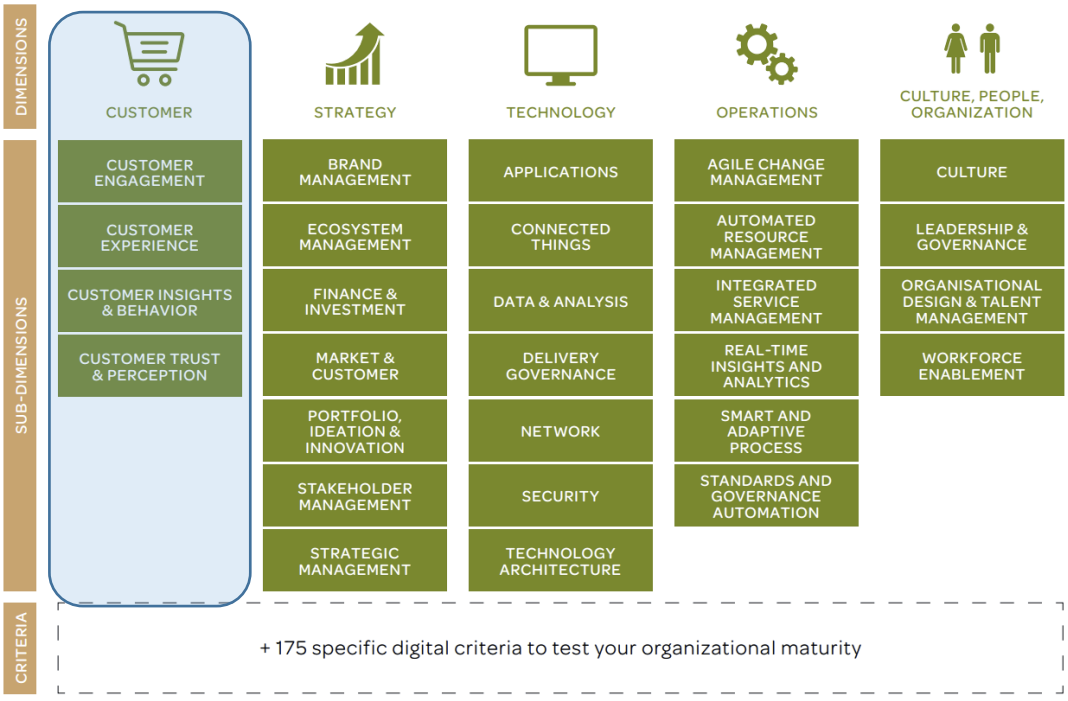



*Figure 1. Digital Maturity Model Dimensions and Sub-dimensions. Source: TM Forum (2017)*

This data will help gain insights into what our customers like and want, including: the web, social media, mobile services, devices embedded in products, living labs and analytics.

Some digital enablers that may help us gain insights into what our customers like and want include:

- The web
- Social media
- Mobile services
- IoT sensors and wireless adapters embedded in pieces of furniture (e.g. sofas that track user's heart rate, dressing tables with sensors in a touchscreen, mattresses with sensors and voice recognition features)
- Living labs
- Analytics

All these elements offer numerous innovative functionalities to homeowners or interior space designers. However, companies must assess how well they are doing in applying and leveraging digital technologies to improve their customer relationships. Using a Digital Maturity Model is by far the most effective way to measure all those digital variables and help companies make the best decisions.

## Customer Experience: Herman Miller's Live OS Case Study

Launched in 2017, the Live OS system is an intelligent office system based on the concept of **Internet of Things (IoT)**, consisting of furnishings, an app and dashboard to connect your furniture to the cloud. A series of sensors added to fixed-height desks or sit-to-stand desks as well as chairs and connected to the cloud on a secure cellular network collect data about the amount of time users stand and sit over the course of the day. A smartphone app is paired to the connected desk and information is used as a guide to remind the user to stand and stretch his legs or change his position if he has been in it for too long.

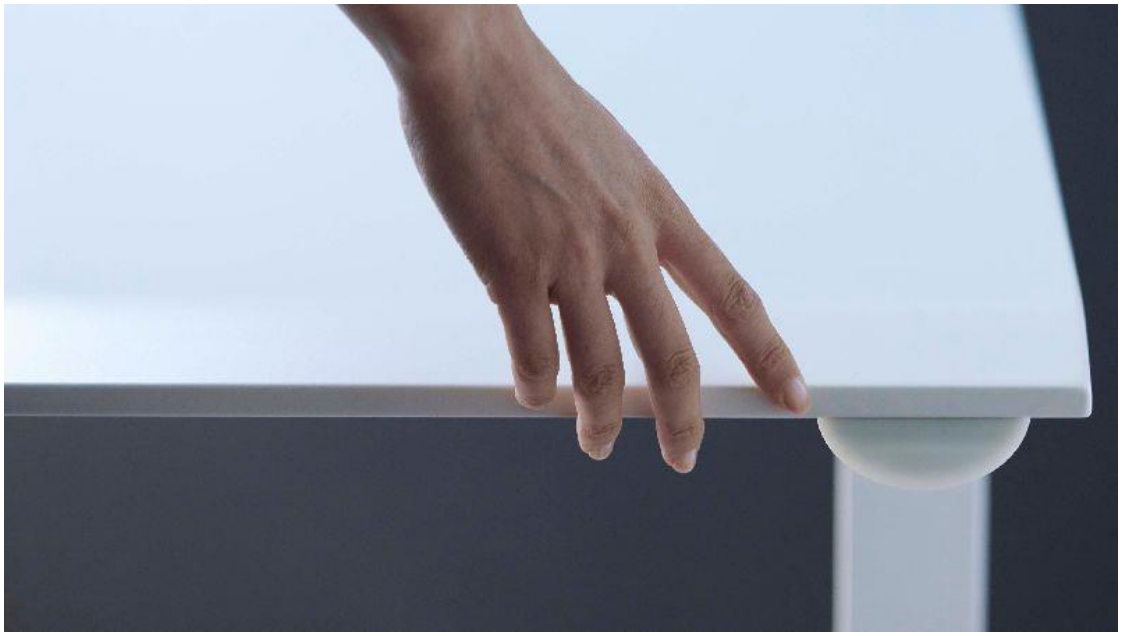


*Figure 11. Herman Miller rolls out IoT furniture "Live OS". Source: Designbuzz*

Live OS may also send the user suggestions via email, the module or the app to improve the posture or the chair may recline and adjust to the user's preferences. The app memorizes a user's preferred sit-to-stand desk position and one only needs to tap the module to switch it to the alternate position. Hence, the internet-connected furnishings can also change positions to make sure the employees are more productive, engaged, and efficient.

*Figure 12. Herman Miller rolls out IoT furniture "Live OS". Source: Designbuzz*

For administrators, the Live OS system provides information on how much of a desk is being used and how the staff use their desks orientation-wise, ultimately helping them to utilize the office space efficiently. It will also help the administrators to discover peak work periods or where an unused desk is available to be allocated when needed.[18]

## Customer Experience: Actiu 360° Virtual Tour

As result of Cool Working by Actiu, the company created 360° Virtual Tour, a Virtual Reality (VR) tool that allows customers to visualize future workspace projects in an immersive and interactive way through a fully customized experience that offers a hyperreal vision of their project in a dynamic, innovative and up-close way for better decision making and user experience.

Actiu's Immersive 360° Virtual Reality is the closest way to project a space, visualize the solutions and make more conscious and accurate decisions. With this technology, customers can delve into a virtual world which has been designed specifically for them, with the aim of **living experiences and sensations** even before the construction and physical realization of the project.

[18] Designbuzz. Herman Miller rolls out IoT furniture "Live OS"


*Figure 13. Actiu Virtual Tour 360°. Source: Actiu*

Virtual Tour 360° allows customers to envisage the layout of the furniture, the finishes, the design of the environment and even the general feeling of the space designed for us. It also allows customers to modify the environment in case it does not match their expectations.[19]

*Figure 14. Actiu Virtual Tour 360°. Source: Actiu*

[19] Actiu. Virtual Tour 360°

## Interiors Living Lab by CENFIM Furnishings Cluster

Interiors Living Lab is an initiative by CENFIM Furnishings Cluster Co-create aimed at creating significant interior designs tailored to optimize user experiences. Space efficiency is measured by placing persons at the centre of space design and evaluating what is the effect on them and how they use the space. By using "evidence-based design" (collecting data as **empirical evidence of the space performance**), co-creation and exploration in real-life settings is leveraged to create more meaningful spaces according to new lifestyle trends.

CENFIM leverages co-creation and exploration in real-life settings leading to more meaningful spaces according to new lifestyle trends, by bringing together producers, interior designers, the habitat space itself and improved experiences of end-user by:

- Fostering business model innovation through interiors design
- Measuring interior design efficiency in collective spaces
- Supporting the decision-making process before making large investments
- Shortening time-to-market of new furnishings solutions

How does the Interiors Living Lab work?

1. We run co-creation activities in which we watch trends concerning the needs and requirements of different consumer lifestyles in the habitat sector, e.g. using different **consumer persona profiles** or prospective archetypes to explore interiors design trends and build upon them specific design challenges in co-creation with space managers.

   Co-creation tools and methods used include:

   - Face-to-face **Design Thinking workshops** with hotel chains to design ideas around customer trends.
   - Co-design of **Concept Rooms** used to explore and make more visible new interior design opportunities and solutions based on new challenges and trends.

- **Customer Journey workshops** with materials and product manufacturers to design new innovative attributes in their product offering.
- Remote online workshops for space managers, interior designers, product manufacturers, using **virtual collaboration platforms** like Mural and Miro.

2. We do validation & experimentation activities to measure experiences created. These activities include:

   - Analysing the **effect of space** on the emotional response and the user behaviour, by detecting certain human parameters using Artificial Intelligence (computer vision or images recognition algorithms) and Big Data.
   - Measuring **environment parameters** by combining the use of wearable technologies (e.g. smartbands) with other traditional research methods like surveys to analyse specific space properties that may induce reactions and stimuli on the person perception, emotion and behavior, e.g., using a luxmeter to measure lighting conditions, sound level meters, measuring material features like textures, forms, colors, also scents, air quality conditions, etc.

*Figure 15. Using a luxmeter to measure lighting conditions*

We use the Interiors Living Lab Dashboard, a web platform that provides all metrics and KPIs (Key Performance Indicators) through a visual and very intuitive interface to help analyse results, add changes and carry out re-measuring (e.g. through A/B testing).

3. Finally, Validation & Experimentation activities include:

   - **Living Lab spaces** and real-life settings.

- **Immersive habitat exhibition spaces** built according to the designs of our previous Concept Rooms, thus adapted to the needs and preferences of different target profiles.
- **Co-creation activities** with space managers and interior designers in hotels and other hospitality environments, with the collaboration of our furnishing companies.

*Figure 16. Concept Room-based immersive habitat exhibition space*

# Embracing constant change and rapid adaption to generate business value

As described before, to stay competitive and to keep generating value in the current economy, small and medium furniture manufacturing companies should transition from traditional business practices focused exclusively in producing physical products to **providing customers with value and quality digital experiences**. These include physical products bundled together with highly automated digital services delivered through multiple online and offline interaction channels.

This transition means embarking on a Digital Transformation strategy that involves adopting technologies that will support it, including:

- The Industrial Internet of Things (IIoT)
- Social media
- E-commerce tools
- Big data
- Cloud integration

When defining a digital transformation strategy, companies must define a **customer-centric vision**, setting goals and priorities that will impact the key strategic areas affecting the whole company, that is, the business model, the people and the technology. As mentioned before, to evaluate the level of digital maturity of a small and medium furniture manufacturing company, it is essential to measure the dimensions and variables that represent key strategic areas of the company that are impacted by the digital transformation process.

Once a company has diagnosed its level of digital maturity, we must define and execute **action plans** to move to the next level in different areas. Plans should include investing in specific projects that will be gradually executed within a given timeframe. Ideally, projects should focus on key dimensions like:

- Building relevant digital skills and competencies among employees
- Developing a digital culture within the company
- Improving the customer experience
- Reviewing the business model (products and services)
- Digitalizing business processes

Investments might include implementing digital platforms to:

- Manage omni-channel communications with customers

- Monitor manufacturing and business processes
- Collect data from manufacturing and business processes and from interactions with customers along the customer journey

The use of metrics will help companies monitor and measure the results and the **Return on the Investment (RoI)** in the digital transformation process. The digital transformation process must be considered a succession of linked projects within different areas of action whose implementation will gradually lead the company towards a new level of digital maturity.

Therefore, once again it is important to stress that achieving a certain Digital Maturity level is not a project, but an ongoing process pursuing organizational, business, and product and service improvement goals.

# Self-assessment Exploratory Questions

We have reviewed the key dimensions and variables/enablers considered to evaluate how digitally mature a small and medium furniture manufacturer is becoming when it adopts a Digital Transformation strategy towards adopting an Industry 4.0 model. These **key dimensions** include strategy, operations, organization and culture, technology, and the customer experience.

Variables or **enablers** include technologies, the company's workforce's skills, attitudes and culture and the organization's ability to systematically extract, manage and analyse relevant data in each of the processes using the right technology.

Taking into account the digital maturity model that has been described in this module, it is important to build a set of **key exploratory questions** per each of the company's key dimensions, that will help determine the relevant aspects to consider to determine the level of maturity of our company. The goal of these questions is to help determine the overall digital maturity level of the company by reviewing the degree to which variables or enablers under each dimension are contributing to the company's digital transformation process.

On the other hand, just as important as asking the right questions to determine the level of digital maturity of the company, it is also essential to provide evidence demonstrating that the company's maturity level is actually the one the answers to the exploratory questions seem to indicate.

Specific pieces of evidence are called **Artifacts** and can include any documents, published information or software application. For instance, for the dimension "Strategy", an example of an artifact would be any documentation indicating that the company has a Digital Transformation Strategy aimed to adopt an Industry 4.0 model. Also, for the dimension "Infrastructure and Technology", an example of artifact could be licenses and implementations of digital platforms that manage omni-channel interaction with customers.

# Tables and figures

## Figures



## Videos

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