HOW

Audaces360

DRIVES **DIGITAL TRANSFORMATION** IN GLOBAL APPAREL MANUFACTURING

SUMMARY

Audaces360

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INTRODUCTION: NEW PERSPECTIVES ON INDUSTRY – TRANSFORMATION TRENDS

We are in a time of rapid technological changes reshaping our lives, from our homes and workplaces to the products and services we use. Understanding this movement is vital to navigate our personal routines and the evolving market challenges and trends.

Digital transformation goes beyond new lifestyles and communication patterns. It promotes a fresh way of thinking and a shift towards the digital realm – which involves digitizing physical processes or adapting them to virtual realities using technologies like Artificial Intelligence (AI), virtual systems, and cloud computing.

Consequently, digital alignment emerges as a potent strategy for meeting today's consumer demands.

The solution lies in leveraging technology to optimize production processes and achieve peak performance and operational efficiency.

Want to know how?

Explore this content by Audaces' digital experts to embark on your organization's transformation journey and align with the future of industry.

ENJOY YOUR READING!

1.1 What defines the industry of the future: Key features

Industry 4.0, or the Fourth Industrial Revolution, marked a pivotal **stage in industrial evolution** driven by the convergence of physical, biological, and digital technologies.

This intersection aims to **automate and enhance production processes** for increased efficiency, intelligence, connectivity, and digitization.

Industry 4.0 promises enhancements in quality, cost-efficiency, resource conservation, error reduction, minimized rework, improved data transparency, and more informed decision-making.

In other words: after centuries of **technological advancements in diverse sectors**, the world is now seamlessly integrating fields like Computing, Engineering, Biology, and Robotics, among others.

Industry 5.0, on the other hand, builds upon Industry 4.0 by emphasizing human-robot collaboration and the benefits of cutting-edge technology.

SOME TECHNOLOGIES IN THESE INDUSTRIAL STAGES INCLUDE:

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1.1 What defines the industry of the future: Key features

ARTIFICIAL INTELLIGENCE (AI)

Artificial Intelligence (AI) has evolved significantly from its early developments in Industry 3.0 to reach a highly advanced level in Industry 4.0.

AI is employed in machines and computers to analyze extensive data, learn through processes like machine learning, and make autonomous decisions.

In Industry 5.0, AI continues to progress and integrates into industrial processes with new aspects like cognitive AI, AI ethics and governance, AI-powered predictive maintenance, and AI in supply chain optimization.

CLOUD COMPUTING

Often referred to as data storage in the cloud, cloud computing presents a solution to the challenges associated with physical files or insecure virtual spaces.

This technology empowers industries and clothing manufacturers to access their computing resources remotely and across multiple devices, ensuring essential security and encryption measures are in place.

1.1 What defines the industry of the future: Key features

BIG DATA

Big Data, initially embraced in the Fourth Industrial Revolution, involves managing large and detailed data for production needs. It enables strategic insights through statistics and processing, improving decision-making.

In Industry 5.0, Big Data continues to play its role, enhancing human potential, productivity, and innovation in industrial ecosystems.

THE INTERNET OF THINGS (IOT)

The Internet of Things (IoT) is a key component of Industry 4.0, along with Big Data, which enables the connection of devices and machinery through both physical structures and software.

In the clothing industry, IoT provides benefits like sensors and software that improve production efficiency and reduce waste.

In Industry 5.0, IoT is used to promote user and human-centered innovation by incorporating customer-focused methodologies like **design thinking.**

1.1 What defines the industry of the future: Key features

ADVANCED ROBOTICS

In Industry 4.0, robotics represents highly intelligent machines that can automate processes and interact autonomously with their surroundings.

This advanced robotics technology has revolutionized industries, including the apparel sector, by introducing high-performance equipment such as cutting machines, and spreaders.

DIGITAL AND ADDITIVE MANUFACTURING

Digital manufacturing involves simulation and virtual reality systems, while additive manufacturing uses 3D printers and bio-synthetic materials.

Both methods rely on simulation software, Computer-Aided Design (CAD) systems, and specialized tools in a virtual environment. They offer precision, agility, and added value through technology integration.

1.1 What defines the industry of the future: Key features

DIGITIZATION

In a traditional clothing factory, pattern making is typically a manual process.

However, to improve process efficiency, reduce expenses, and increase profitability, the factories need to embrace digitization.

In a “fashion-forward" world, this transition occurs seamlessly and precisely in a virtual setting.

DISCOVER THE DIGITIZATION OF PATTERNS WITH SPEED AND PRECISION

1.2 The impact of industrial shifts on the apparel sector

The apparel sector, along with the broader textile industry, gained advantages from the adoption of Industry 4.0 and the subsequent Industry 5.0.

This is attributed to cost reduction and the ability to tailor production to accommodate each customer's specific requirements.

The initial crucial step toward shaping a forward-looking industry is the **automation of production.** Most of these technologies are applied to streamline the production chain, with only a small fraction dedicated to the **development of new products and ventures.**

But, in the realm of clothing, the foundational stride toward a more advanced industry involves production processes using machines and systems already equipped to carry out these innovative tasks.

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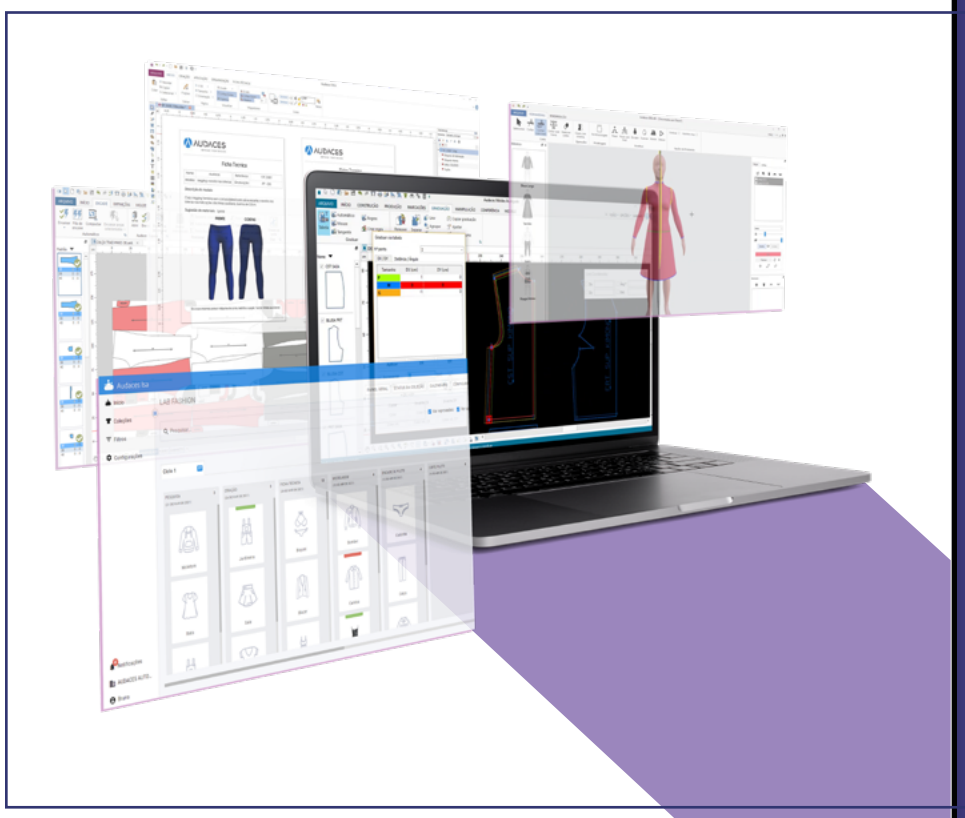
POSSIBILITIES FOR INDUSTRY IN CLOTHING MANUFACTURING

The adoption of future industry practices holds the prospect of significant benefits, particularly within specific stages of clothing production such as **cutting, sewing, and dyeing.**

A prime example is the **Internet of Things (IoT)**, where machines can communicate with each other, resulting in higher levels of productivity and the generation of key performance indicators.

"The apparel industry relies heavily on performance indicators. The new industry offers an efficient approach to optimizing machine synchronization, reducing bottlenecks, and enabling self-management to facilitate customizations," emphasizes André Pavilionis, Engineering Manager at Audaces and head of the company's IoT department.



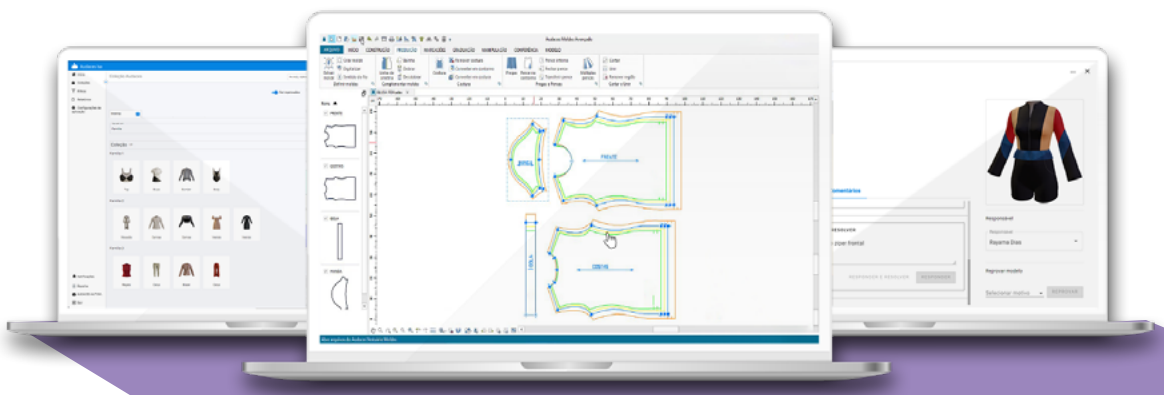
In practical terms, the application of Industry 4.0 and 5.0 principles within certain sections of a factory can enable machines to autonomously detect the shortage of specific fabrics and initiate orders with suppliers.

Another possibility is that, when **assessing a factory's productivity,** the required logistics for distribution can be autonomously requested, without the need for human managerial approval.

A third potential enhancement pertains to the field of pattern making.

Currently, machines can create optimized digital patterns that are subsequently transferred to the fabric during the cutting process. But what if machines could recognize that the remaining fabric from a particular piece could be utilized in another design, thereby optimizing fabric utilization?

Thanks to Audaces technology, this is now a reality! Another facet is the machines' ability to monitor, diagnose, and alert when equipment in the production process requires maintenance. Within this framework, the production process can be reorganized to ensure that temporary interruptions do not impede final deliveries.



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INDUSTRY'S CONTRIBUTION TO APPAREL MANUFACTURERS

Recent technological advancements have enabled the fashion industry to shift from manual to digital and automated systems.

Embracing this **technology** yields tangible benefits in terms of production process agility, safety, and overall performance.

A computerized environment streamlines multiple sequential procedures, enhancing communication between departments and reducing errors.

For those seeking a comprehensive solution for their fashion company, Audaces360 offers a multi-faceted system that integrates all creative and production stages.

This intelligent platform is aligned with the industry of the future, catering to the demands of creativity and style while maintaining a sharp focus on **industrial efficiency and commercial strategies.**

In the following sections, we'll explain how Audaces360, designed by fashion experts, can be employed in the evolution of your apparel manufacturing endeavors!

3.1 Ensuring synergy with other organizational phases

The journey begins in the fashion sector, and with the utilization of the innovative **Audaces Fashion Studio** technology, stylists gain the freedom to unleash their creativity. They can design garments and entire collections directly on the computer, visualizing the clothing's fit on a three-dimensional mannequin and conducting various simulations. Plus, with just a few clicks, users can alter colors, fabrics, shapes, prints and patterns.

Subsequently, a Fashion PLM tool like **Audaces Isa** becomes indispensable for overseeing the entire collection through an intuitive control panel, integrated with other solutions. It also facilitates collaborative work with different teams online, streamlining adjustments and approvals.

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Fashion Studio

Audaces ISA

Audaces Idea

Audaces Pattern

Audaces Marker

Audaces ICF

3.1 Ensuring synergy with other organizational phases

From a systemic perspective, the benefit of this **digital creation** lies in the automatic generation of technical sheets through **Audaces Idea**. As creative work progresses, the system provides information for pattern making and production sectors, enhancing communication between stylists, pattern makers, collection managers, and sales representatives.

In the development of a new collection, Audaces Idea aids in establishing pre-production costs. This calculation allows the company to assess the product's viability. It enables a decision to be made, before producing a pilot piece, whether to proceed with development, resulting in **time and resource savings and a dependable forecast of the desired profitability.**

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- Fashion Studio
- Audaces ISA
- **Audaces Idea**
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3.2 Balancing development with security and agility

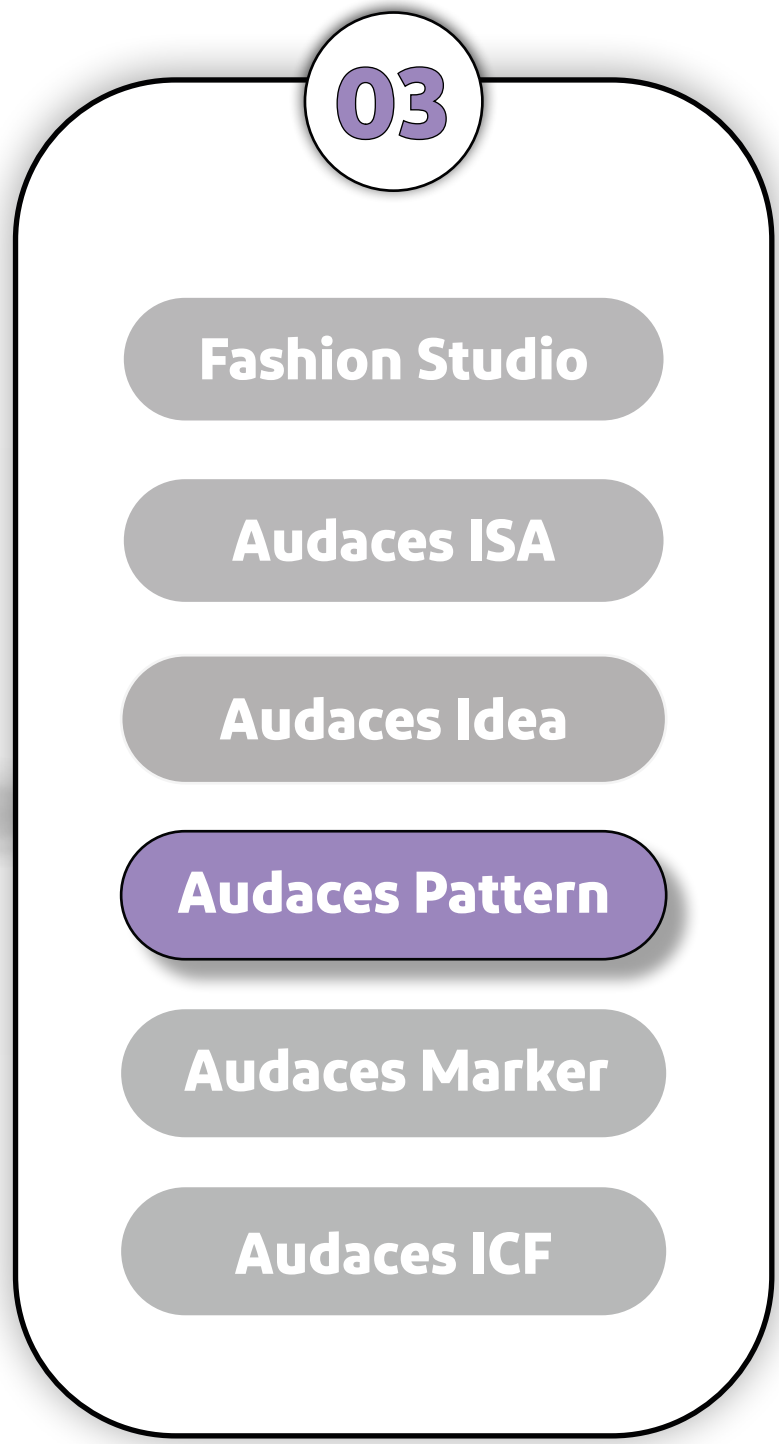
In a manufacturing system that integrates creation with subsequent phases, precise garment development and modeling are easier. Using 3D virtual mannequins and detailed technical sheets streamlines coordination between pattern makers and designers, boosting efficiency in the entire textile industry production process.

Audaces Pattern simplifies pattern creation and size grading based on CAD principles. It also calculates fabric consumption for different garment sizes, saving time and materials and improving profitability.

A digital patternmaking system yields time and material savings that resonate throughout the entire production process, ultimately impacting the company's profitability.

Precision in millimeter measurements, establishing perfect symmetry, and conducting virtual tests significantly reduce errors that might otherwise only become apparent during the fabric cutting or marking stages.

When discrepancies are identified, adjustments can be quickly made on the computer, eliminating the need for new paper patterns.

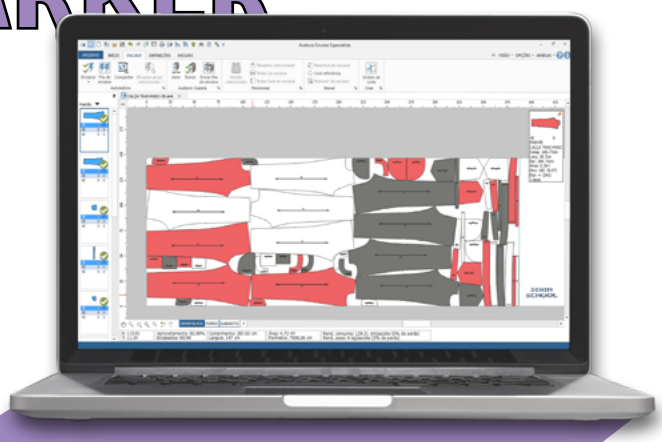


3.3 Enabling smart and automated production

Upon completing the stages of creation and development within a manufacturing system, we transition to the production phase.

With the assistance of **Audaces Marker,** patterns are automatically marked onto the fabric, leaving no spacing between pieces to optimize material use, reducing cutting errors.

MARKER



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3.3 Enabling smart and automated production

The **Audaces Intelligent Cutting Flow (ICF)** system integrates all processes, personnel, and equipment in the cutting room, ensuring the efficient management of spreads and other machines. Collections are imported for production orders, allowing for prioritization and adjustments.

Additionally, comprehensive control of the entire collection is facilitated through **Fashion PLM Audaces Isa**, granting oversight of each piece produced in the clothing factory.

Did you appreciate the underlying logic of the most comprehensive manufacturing system on the market, **Audaces360**? So how about implementing it in your company to boost productivity, efficiency, and profitability?

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3.3 Enabling smart and automated production

Click here to request contact from one of our expert consultants and learn how you can integrate the Audaces360 multi-solution into your company!

04 AUDACES360: WE HAVE THE PERFECT PLAN FOR YOUR BUSINESS

With Audaces360, you can automate design, cutting, and production processes, saving time and eliminating errors.

Whether you're an emerging fashion designer or an industry veteran, Audaces has the ideal solution for you! Discover your options:

AUDACES360 BASIC	An exclusive plan for microentrepreneurs and startups.
This plan grants access to all the tools you need for digital innovation in 3D.	**AUDACES360 CREATIVE**
AUDACES360 CLASSIC	Tailored to meet all your pattern making and marking needs.
This comprehensive plan encompasses all stages, from planning to production.	**AUDACES360 PRO**
AUDACES360 ENTERPRISE	Offering advanced features like customized consulting and account management.

EXPLORE OUR PLANS AND PRICING

4.1 In the words of Audaces360 technology adopters

Audaces technologies, built on the foundations of the Industry of the Future, empower clothing manufacturers to enhance their efficiency and productivity.

As you've observed in this content, our solutions span every aspect of new collection development and profoundly transform the daily work of fashion industry professionals.

Check out the testimonial from those already embracing the future of fashion production!

IZ TÊXTIL

Based in Santa Catarina, Brazil, **IZ Têxtil** entered the clothing industry back in 2015, initially offering manufacturing services to third-party companies.

As time passed, IZ Têxtil recognized the potential for expansion by integrating various manufacturing processes. It was during this transformative phase that the company turned to technology to enhance its production processes.

The introduction of Audaces Isa, for instance, marked a turning point for IZ Têxtil's productivity. The company's operations became **more efficient and agile, yielding impressive results.**

According to Product Analyst Jussara, the implementation of Audaces significantly improved communication within the organization, leading to positive changes in production.

"Previously, our communication was verbal, which often resulted in errors and oversights due to forgetfulness. Today, even if a manager leaves a meeting and I'm not present, she can access crucial information such as ongoing demands and the reasons behind any production delays. Now Audaces Isa works for us, providing essential information to everyone".

For a more in-depth look at the productivity improvements achieved by IZ Têxtil, we invite you to watch their success story on Audaces' YouTube channel, where you can also find other testimonials of our clients!

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CONCLUSION

Industry 4.0 and 5.0 have revolutionized production, and apparel manufacturing has also undergone **modernization and reinvention due to technological advancements.**

Audaces solutions align with this tech-driven, eco-conscious consumption model, enabling end-to-end production management, cost insights, and raw material optimization from the outset.

A unique feature of our products is **machine autonomy**, thanks to our continuously updated technology. Audaces' mission is to connect clothing manufacturers with the creative potential and readily available technology, just one click away.

At Audaces, the future is already here and can be part of your daily reality now!

INTERESTED IN LEARNING MORE? CLICK HERE

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ABOUT AUDACES

Audaces is an Italian-Brazilian company that has been at the forefront of technological innovation in the fashion industry.

For over 30 years, our mission has been to provide user-friendly solutions that accelerate fashion creation, development, and production, revolutionizing the way you work.

We are **audacious, partners, global and facilitators!** We offer expertise and solutions applicable to companies of all sizes across diverse industries, such as fashion, furniture, upholstery, nautical, automotive, and aerospace.

And our presence extends **to over 70 countries worldwide,** with more than 40,000 textile and fashion professionals relying on our solutions daily.

Stay up to date with the latest Audaces solutions by following our social media channels and visiting our website and blog:

audaces.com/en