



# The Ultimate Visualization Guide

Create an Exciting eCommerce Experience  
with Visual Configuration





# A Quick Intro

Manufacturing is changing faster than ever. Meeting new challenges such as a remote workforce, increased competition, and customer scarcity leaves manufacturers scrambling for ways to stay competitive. While we continue to learn how to work in the new normal one thing is certain for manufacturers. Change is a constant and leveraging the right technology is crucial to improving operational efficiency and the customer experience. The solution that many manufacturers are missing in their product portfolio is Visual Configuration. It is a necessity for manufacturers looking to grow their business and enable customers to do more. Offering a visual product configuration will help you stay ahead of the competition by becoming a market leader with a one-of-a-kind customer buying experience.



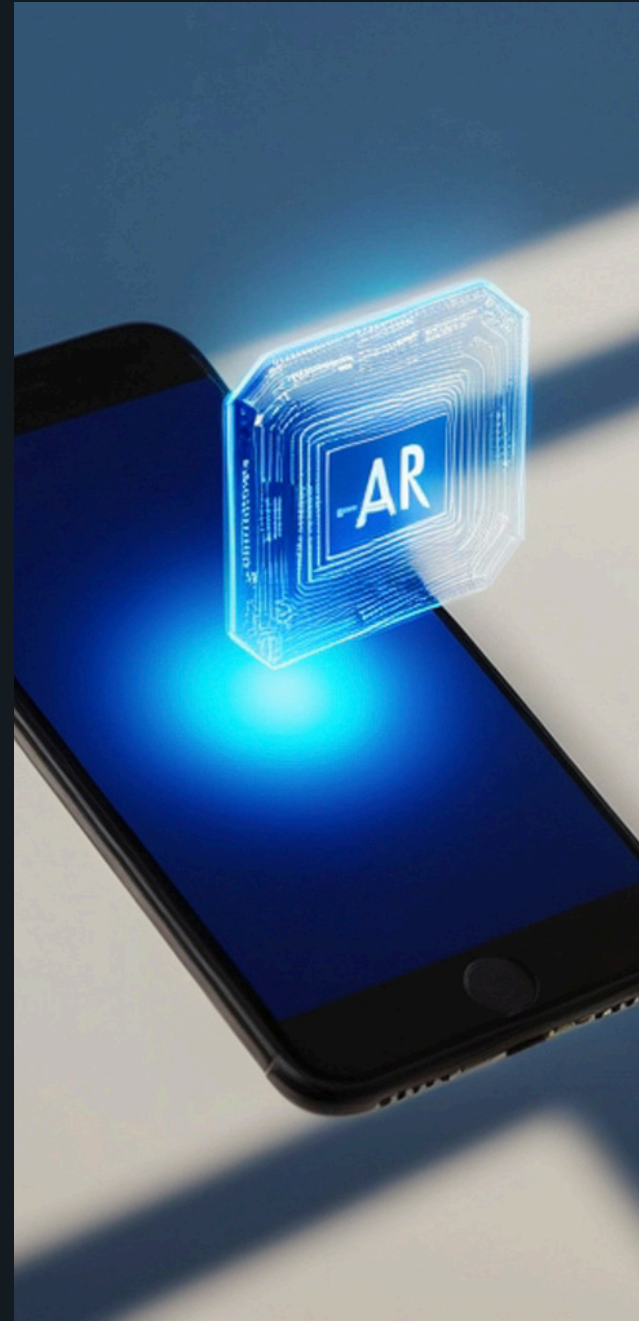


# What is Visual Configuration?

Visual product configuration (also known as Visual Configuration, or 3D product configuration) is the combined use of digital technologies (Augmented Reality, 2D and 3D visualization software) to configure products directly in a three-dimensional visual representation. Visual Configuration software enables your sales team and customers to configure their 3D products quickly and accurately from anywhere.

## What are some advantages of Visual Configuration for manufacturing?

- Buyers see with their own eyes how a product is made.
- Customers can understand how product customization decisions (choosing a specific product variant or product option) impacts the final product.
- Companies can showcase unique selling points and special product functions.
- Simplify complexities using product options and functionalities that can be tested instead of describing them with text-based descriptions.





# How can visualization be utilized for my team?

**Giving your sales team visual configuration software can be a key component of an exciting and interactive sales journey.**

Visualization is not only supporting the buyer in the sales process. Depending on the products to be sold individuals selling benefit from visualization as well. In general, it is much easier and faster to train sales representatives on a continuously evolving product portfolio with the help of visualization, independent of the sales channel the products are sold. And if the product configuration includes design and aesthetic configuration choices a visualization solution is a must-have for an error-free configuration process. Finally, products with geometrical constraints components with more than one valid position or the product itself being part and placed in a bigger layout, require visualization to finalize the configuration.





# What are the types of visual configurations?

**Today's manufacturing customers have greater expectations than ever. Making sure your team is able to give the best product visuals is critical to success, so what are common options?**

## **2D Visuals**

When referring to visualization as 2D, you are typically stating that the result of the visualization is a static two-dimensional image (width and height). 2D visuals are often referred to as Computer Generated Images (CGI) and are produced in a process like a real photoshoot, just with everything being digital. Another example of 2D visualizations is CAD drawings.

## **3D Visuals**

In contrast to 2D visualization, 3D visualization is referring to real-time and interactive 3D visualization. The resulting visualization is produced in real-time while viewing it and not up-front and that it is possible to freely explore and interact with the created 3D world. 3D real-time visualization is a better fit for dynamically visualizing highly configurable products, compared to static 2D visualizations.





# What are some visualization trends?

## Augmented Reality

Augmented Reality extends the real-world with virtual content. By overlaying virtual objects on top of the image captured with a camera, the real world becomes enhanced. These photo-realistic renderings can even be extended into the buyer's real-world environment. For example, showing how a heavy vehicle would fit into a garage or a medical device in the doctor's office.

## Virtual Reality

Virtual reality has quite a long history and describes a type of visualization that is completely digital and does not include anything directly captured from the real world. On top of the content, the other important characteristic of this approach is that it is experienced by using special head-mounted devices (HMD or Headset) to look at the visualization. Augmented Reality is easier to access and to use compared to Virtual Reality when used in the field by unknown users. Tacton's Augmented Reality capabilities allow confirming final product configurations proposed via a quote in real-life environments. Additionally, it is possible to utilize AR directly during the configuration process by live linking the visualization to a running configuration session and validating configuration choices right away, even further reducing time-consuming feedback-loops.





# Benefits of Visual Configuration and CPQ

Many visualization tools are teamed with powerful Configure, Price, Quote solutions, sometimes noted as visual CPQ. Working together these solutions can provide up to date pricing information that keeps quotes moving smoothly by removing the potential for inaccurate quotes which harm the buying experience. The visualization is available within all sales channels, from lead generation to customer self-service and even direct sales. Every major browser, platform, and native mobile apps on iOS are supported for technical delivery.

## **Combining Tacton CPQ with visualization removes any third-party software**

On the other side, everything is integrated into one offering without the need for integrating a 3rd party software from different vendors (such as Game Engines). Providing a seamless experience, with one common language and mindset and dedicated connection points to share information and data is another step towards a successful customer journey.

The connection and communication between the configurator and the visualization are working bi-directionally. In addition to sending configuration changes from the configurator to the visualization to be displayed, the visualization can send information back to the configurator as well. With this, it is possible to change options or positions in the visualization and send these changes back to the configurator for evaluation and final approval.

Besides the Creation & Maintenance Environment, CPQ also provides a 3D real-time Rendering Engine providing all that is necessary to create exceptional experiences and allowing real-time visual configuration by utilizing concepts like Drag & Drop, displaying live measurements and annotations.





# Visual Configuration workflow

**At the heart of our Visual Configuration solution is your product offering. Visuals of your unique, customized product are what will help your business stand out. But how are these assets created, updated, and maintained?**

The Visual Asset Creation Pipeline defines the workflow to produce Visual Assets usable for 3D real-time visualization of highly configurable products.

The pipeline consists of different steps whose existence and scope highly depend on the input of the pipeline (quality and completeness) and the desired output (intended use case and corresponding constraints and goals).

The Visual Logic Creation defines the workflow to translate configuration changes into visualization commands to assemble the corresponding product visualization and steer the 3D real-time visualization. This workflow consists of different steps as well to set up and prepare the visualization and to define the dictionary to translate between the configurator and the 3D visualization.

Finally, the output of those two workflow steps (all Visual Assets and the Visual Logic) are integrated into the CPQ system to create an extraordinary multi-channel sales and user experience.





# Why do Manufacturers Choose Tacton for Visualization?

With many manufacturers trying to replicate a B2C buying experience for their customers, Visual Configuration is a top priority. With over 20 years' experience with manufacturing visual configuration, we're considered a pioneer by customers and analysts. "Gartner recognizes Tacton as a 'Visionary' in the 2020 Gartner Magic Quadrant for CPQ Application Suites based on its Ability to Execute and Completeness of Vision.

For our customers, this means regular updates, information, support, and thus the smooth operation of our solutions. Above all, these functions of our powerful visual product configurator offer industrial companies with a highly variable product portfolio real added value:

- Integrated software tools specially developed for visual configuration (without dependencies on 3rd party software, such as games engines or open-source JavaScript renderer)
- Bi-directional communication between visualization and configuration logic to visualize the entire product variance on all devices in the highest quality in real-time for an interactive experience
- Clear navigation options and orientation aids through the provision of various viewpoints
- Automatic QR code generation in order to call up the configured and offered product using an AR-compatible app and to be able to embed it in the actual usage environment using a smartphone camera





# What are some examples of Visual Configuration for manufacturing?

Visualization is suitable for many different industries. Medical devices, heavy vehicles, elevators, and lifts are just a few that are using visualization to fundamentally change how they sell. Our development of tech started with a 2D visualization, like our customers below. But over time we began to realize that 3D visualization was suited better to deal with high product complexity. The shift to 3D also enabled our product to become even more visually appealing, faster, and easier to use.





# Still not sure if Visualization is right for your business?

**If these challenges sound familiar it's time to reconsider**

## **The Challenge:**

Selling highly configurable manufacturing products fast, and accurately hasn't always been easy for manufacturers. This leads to lost time, money, and disappointed customers. Not to mention, many manufacturers are still relying on text-based descriptions for their products. In many cases, manufacturers are looking to find new ways to shorten the sales cycle, while also working with scarce customer demand.

## **The Solution:**

Visualization paired with CPQ makes the quoting process correct, optimized, and visually appealing every time. Instead of relying on text-based descriptions, it's possible to show products in real-time to potential buyers. This helps make choices faster, remove costly miscommunications, and enables sales from anywhere, even remote visualizations are possible.

## **The Challenge:**

74% of industrial B2B buyers now research at least half their purchases online (Accenture). With customers doing more shopping online than ever it's important to be able to showcase products anywhere any time. While many manufacturers' have started the process of creating an omnichannel sales experience, some still rely on the old sales pitch complete with text-based descriptions.

## **The Solution:**

Creating an exciting buying journey complete with visualization embedded directly onto a website can make all the difference. Letting customers create their own products with self-service not only shows your base product options but can also show your complete portfolio. This enables manufacturers to showcase additional options for upselling and cross-selling. As a bonus, customers who visualize and configure their products are more likely to purchase them.





# More common challenges

## **The Challenge:**

The field is crowded, no matter which manufacturing sector you work in. With so much competition it's critical for your brand to stand out in a way that makes potential customers connect with your products.

## **The Solution:**

Creating that wow effect with visuals of products enables you to create a connection that many manufacturers are missing, genuine excitement for the product. Visualization shows off all the investments in product design and innovations, creating a stunning brand perception. It even creates a transparent buying process, what the customer sees on the screen is guaranteed to be the product that comes off the assembly line.

## **The Challenge:**

Customers aren't waiting for your sales pitch anymore. They want visuals of your products, fast and online. Without a solution, they will look to your competition who can provide photo-realistic images of their products.

## **The Solution:**

3D visualization is the natural way of experiencing a product in real life, with AR it's possible to show customers how a product will fit in their space, eliminating guesswork. Creating an immersive experience is easier than ever with real-time interactions of your products. It also creates a configuration process they can do on their own time, or with your sales staff, bringing them closer to the product they want.





# Common visualization benefits

Visualization users	Benefits
Your customer	Configure complex custom products online, in real-time
Your marketing team	Generate high-quality leads and deliver an immersive customer experience
Your sales team	Reduce miscommunications, gather instant feedback, and shorten the sales cycle
Your engineering team	Reduce misunderstandings, errors, and reworks
Your factory operations	Build exactly what customer imagined





# In Closing

With rapid changes in the market and a focus on customer satisfaction, manufacturers must leverage new solutions to enable the customer to do more while also improving internal operations. Today's modern manufacturers need to transform their sales pitch to gain the attention and purchasing power of potential customers. That all begins with Visual configuration and CPQ for manufacturers. Visualization enables manufacturers to focus on the customer, enabling them to build their own product from anywhere, while allowing their sales and engineering teams to offer not only an accurate product but the optimized product. Creating confidence with an engaging experience will bring your customers back for future purchases and make you the envy of the industry. If you're ready to take the next step with Tacton schedule a demo with our product experts. Learn more today by visiting [www.tacton.com](http://www.tacton.com) or scheduling your personalized demo.

