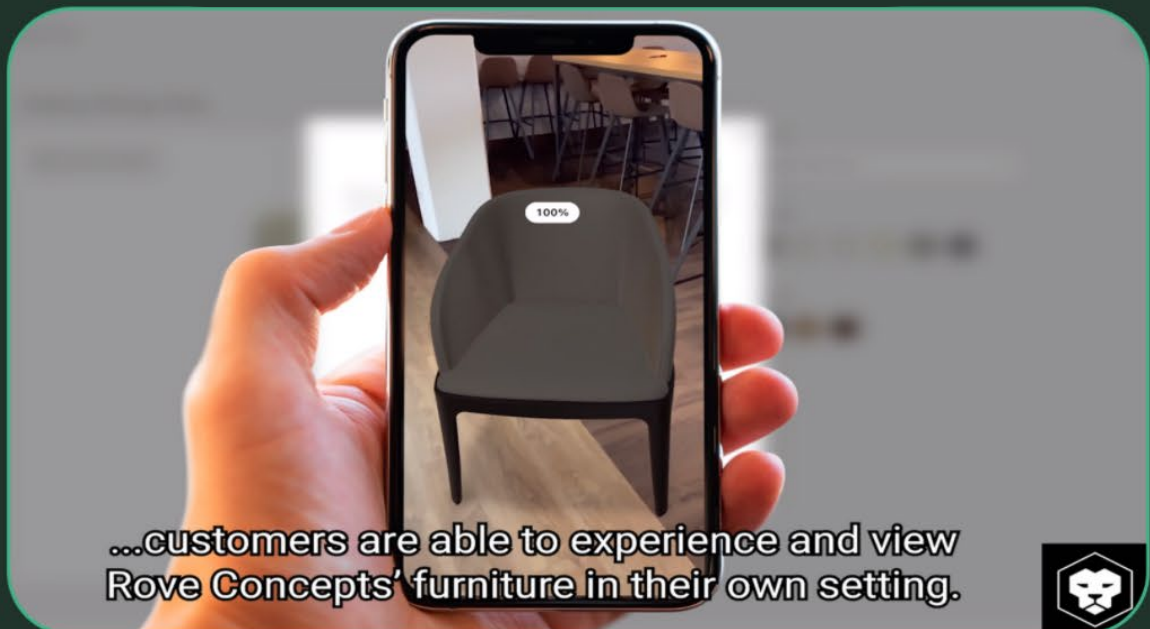# Essential CX-Tech
Expivi – 3D & AR/VR Commerce
putting **the customer in control**

In this report CX-Create examines Expivi which goes beyond simple 3D rendering enabling the customer to co-create value and drive the supply chain

...customers are able to experience and view Rove Concepts' furniture in their own setting.

Jeremy Cox, Founder CX-Create

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CX-Create

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More personalization, but the customer remains a passive actor

Personalization has long been a common aim in the customer experience (CX) domain. It is fundamentally a challenge of customer relevance. However, most personalizing efforts rely on crude segmentation, a hit-or-miss approach to customer relevance. Even recent advances in customer engagement platforms with real-time abilities to synthesize behavioral and transactional data and AI to trigger relevant content, guidance, or offers still have the customer as a passive participant. Their choice is limited to in-store or online product availability.

Customers increasingly expect more from their online shopping experience. Many want to shift from passive to active participants in the products they want to buy. 'Try-before-you-buy' offers a veneer of active participation, but it is limited in scope to fashion or spectacles and lacks creative involvement. If they can't touch it online, they want to see it, or more precisely, see what the product would look like in their context before making any commitment.

Technology advances and mass-customization can empower customers

Advances in 3D visualization and augmented/mixed reality (AR/MR) supported by configure-price-quote engines (CPQ) connected to modern production and distribution systems can empower customers. An increasing range of both B2C and B2B companies have turned to immersive technologies to present their products and solutions to customers:

- Architects have used immersive technologies for a decade or more, enabling planners, designers, and buyers to walk through the virtual buildings to get a visceral sense of the finished construction.
- Automotive manufacturers led the way with online customization several years ago, virtually putting the customer in the driver's seat, enabling them to configure their cars from a broad array of features, options, and colors.
- Plant and machinery manufacturers have also joined the immersive throng, providing virtual tours of their products in-situ of the prospective buyer's production line or factory.
- The online games industry has taken the idea of co-creation to the extreme through immersive technologies. It is enabling players to create entirely new virtual worlds with almost infinite permutations.

Immersive technologies are also finding their way into e-commerce as consumers and business buyers hunger for higher resolution of images and the ability to examine them from multiple angles and configurations before making their decisions to buy.

Expivi has elevated e-commerce 3D and AR product configuration to a higher level

Expivi, with its gaming industry heritage, has created a platform for interactive 3D and AR product configuration that is pushing the boundaries in e-commerce. It has turned the value chain on its head, with the customer as the active participant driving design and production. This report examines how and the value that all product-based businesses can potentially gain from integrating Expivi with their existing e-commerce platforms.

CX-Create's viewpoint

Expivi's background in the immersive world of the games industry gives the company a distinct advantage in the design of its 3D & AR configuration platform for e-commerce. This ensures that the online customer experience is intuitive and easy to use on any device.

The company could have stopped at rendering and configuring products, but it has gone much further. It has placed the customer at the center as an active actor driving the highly customized product design based on whatever features, options, or styles the manufacturer can produce.

The configuration platform drives the supply chain, even across multi-tier distribution models – manufacturer to distributor, reseller, or retailer. Everyone benefits:

- The customer gets a genuinely personalized product and can buy with greater confidence.
- As a result, the producer gains higher conversion rates, minimizes stock holding improving margins, and eliminates order errors as the Expivi 3D & AR configurator integrates directly with production systems.
- Partners in the distribution network can offer more choice without the costs associated with carrying a wide range of finished products to meet idiosyncratic demand.

Although the company has only been in existence since 2017, it has already attracted several major brands and enterprises in B2C and B2B industries. We expect it to grow rapidly and consider it a highly relevant addition to the Essential CX-Tech portfolio that any product producer with e-commerce capabilities should examine.

Key observations

- Expivi puts the end-customer in control
- Solution overview – how the 3D & AR CPQ platform works
- The Expivi platform supports multi-tier value chains
- Company information – background, current situation, and outlook

Guidance

Guidance for enterprises

The two engines of growth are customer experience (when positive and the customer is in control) and continuous innovation. The Expivi platform has a positive impact on both.

Customer experience is today's competitive battleground. The Expivi 3D & AR CPQ Configurator Platform offers any product producer that sells online an opportunity to enhance the customer's buying experience. Customers increasingly want control of their shopping experience, and mass customization provides this. The benefits to existing Expivi clients are typically growth at lower cost, order accuracy, and an enhanced reputation. Producers who sell through channels – distributors, resellers, dealers, and/or retailers can also benefit from the product integrated with the entire value chain. Valuable insights can also be gleaned from the platform's analytics, providing further input to product design, development and continuous innovation.

Guidance for Expivi

- Continue to develop APIs for more e-commerce and ERP vendors to expand the addressable market – vendors such as Oracle, Microsoft, and Salesforce are the obvious candidates.

- Expand the Expivi Partner Program to attract independent ISVs and software developers to create extensions and integrations to the platform and establish it as the de facto standard. Consider major services providers with industry-specific skills and global reach.

Why Expivi qualifies as essential CX-tech

Expivi provides an essential e-commerce solution that puts the end-customer in control of product customization to meet their specific needs. This enhances the customer experience significantly and drives more sales, creating a symbiotic relationship between the customer and the producer. Any technology that creates a genuine win-win, like the Expivi 3D & AR Platform, qualifies as essential CX-tech.

Solution overview – how the 3D & AR CPQ platform works

The Expivi 3D and AR CPQ configurator enables businesses to add 3D visual representations of their products online and add variable options that automatically recalculate the price. The end customer can then order the desired product online. The specification, including the complete bill of materials (BOM), is automatically sent to production and logistics systems to fulfill the order.

Virtually any product, however simple or complex, can be added. Product marketers only need to create 3D files. Expivi also provides services if clients lack the time or confidence to digitize product images. Any existing 3D images from CAD or production systems can be uploaded and ingested by the Expivi platform. Digital images can be used as a reference to create a 3D file.

Core elements of the Expivi Platform

The platform consists of four main elements:

- A 3D scene editor – to render products in the best light when viewed from any browser, allowing potential buyers to zoom in and rotate the product. Physically based rendering (PBR) and Glass Shader techniques can provide photo-realistic images in different lighting scenarios.
- AR tools to provide an even more immersive view of the product. Buyers can use their smartphone's AR viewers to 'walk-around the product or download an image and blend it with their own environment. This allows the customer to see how the product might suit their environment. This could be a consumer product like a new computer desk for their home office, and even more complex products, such as plant and machinery for use on the factory shop floor.
- A material library – where all the images are stored and accessed in the online shop
- A visual rules designer – that provides an intuitive drag-and-drop method for creating business rules without the need for any coding.
- An automated flow engine takes product decision trees and automatically generates the desired customization features and associated pricing. The client must create the product decision trees, which is easy to do using the decision tree editor provided.
- Behavioral analytics – provides analysis of the customer's buying experience that helps businesses optimize how their products are offered, including the complete end-to-end process.
- The underlying SaaS model is supported by a globally recognized content delivery network (CDN): Cloudflare. This ensures that high-definition 3D and AR images render quickly as customers view and customize products. CDNs provide a distributed network so that servers nearer the customer are used to minimize latency, ensuring a fast load speed.

- Workflow automation and integration across the supply chain – as orders are placed, a client's sales, production, and inventory systems are automatically updated. Existing BOMs in production systems can be ingested so that orders taken automatically update the necessary components to make the product. It also ensures accuracy and correct pricing of the complete item. Stock levels of parts are then automatically updated.
- A library of APIs to connect leading e-commerce and back-office systems.

The Expivi Platform supports multi-tier value chains

While direct-to-consumer business models have increased in recent years, with the advent of e-commerce, many producers rely on downstream distributors, resellers, dealers, and retailers. The Expivi Platform provides support for partner portals so that downstream sellers can use the platform for larger commercial orders or individual end-customer orders. Figure 1. Provides a diagram for illustration.
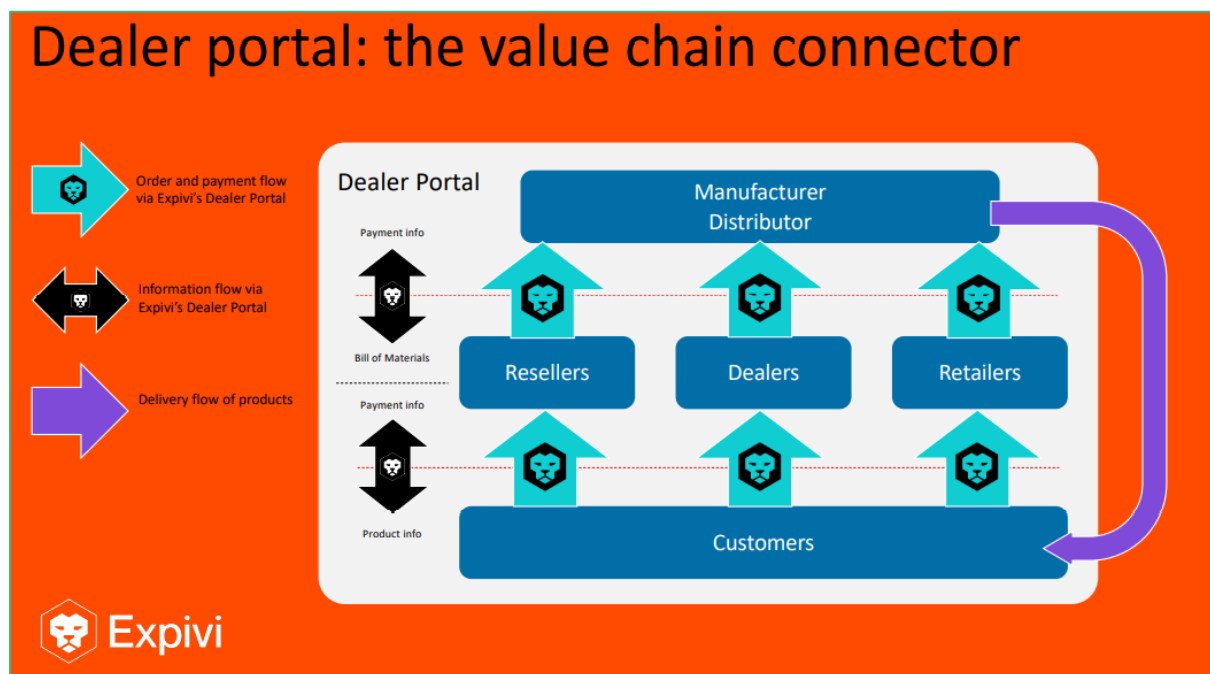

Figure 1: Expivi Dealer Portal - Source: Expivi

Company information

Background

Expivi was founded in 2017 in Eindhoven, Netherlands, by two brothers: Babak Mirzaie, (CEO) and Siamak Mirzaie, (CTO). They had a strong background in advanced visualization technologies as former online game developers. Both had been inspired by how architects use 3D and AR rendering to showcase their designs as virtual finished products. While some e-commerce sites already used advanced visualizations, most used expensive bespoke systems or farmed out the work to creative agencies equipped to generate 3D product images that could be incorporated into their e-commerce sites. There was no cost-effective standard platform on the market that could be used on a subscription basis. The brothers decided to develop a SaaS-based platform that has rapidly evolved into a platform supporting 3D & AR visualizations for e-commerce, automating the ordering process, and updating production, sales, stock, and logistics systems.

Current position

Currently, Expivi has 40 employees, and in addition to its HQ in Eindhoven, it has sales offices in Paris, France, Munich, Germany, and Salt Lake City in the US.

Expivi has grown rapidly and now has several leading brands as customers, including L'Oréal that used Expivi services and the platform to develop a customizable shopping experience. Customers of their Viktor & Rolf online boutique can create a personalized bottle of perfume. Expivi created the 3D models and has since added a host of new options to bring customers into the design process.

On the B2B side, Eduard Trailers have adopted Expivi, enabling customers to explore and order trailers with multiple configurations and options. The Expivi platform is integrated with the company's e-commerce systems and production systems, allowing customers to configure complex products with ease.

Broad integration options

Expivi already has a range of partnerships to integrate its platform into several e-commerce and ERP systems:

- Adobe Commerce (Magento)
- BIGCOMMERCE
- lightspeed
- SAP, as a product extension to SAP CPQ, SAP Commerce Cloud, and SAP Upscale Commerce
- Shopify
- Woo Commerce

These partnerships provide a solid foundation for growth. However, we recommend expanding the partner program to include major vendors like Microsoft, Oracle, and Salesforce and major industry-specific SIs to increase the addressable market.

Future outlook

Unsurprisingly, Expivi is attracting significant interest from potential investors and on October 5th, 2021, secured a €3.2m investment round led by the Dutch bank, Rabobank. The funds will mainly be used for further expansion in the US, UK and Germany.

We also expect Expivi to increase its reach with further partnerships in the coming months.

About Expivi
Table 1: Fact sheet

Solution name	Expivi 3D & AR CPQ Configurator Platform	Solution category	E-commerce 3D & AR CPQ Configurator
Key industries	B2B, B2C and B2B2C Any industry that produces products to sell online	Geographies	Global
Deployment model	SaaS + advisory services	Licensing basis	Subscription

Size of organizations served	Large and medium	Go-to-market model	Direct & reseller partners
URL	https://www.expivi.com/	HQ	Eindhoven, The Netherlands

Appendix

About CX-Create

Jeremy Cox founded CX-Create Limited in January 2021, a former principal analyst at Omdia (formerly Ovum) focused on customer engagement strategies and platforms.

He is recognized by major CX vendors, clients, and former colleagues as a leading thinker in customer experience and engagement. Formative experiences in the 1990s at IBM convinced him of the critical importance of understanding the business world from the outside-in. These insights were put to practical use in his former roles as a principal CRM consultant at KPMG Consulting and as an independent consultant supporting public and private sector organizations.

CX-Create's mission is to help enterprises and the vendors that serve them remain relevant. The company's primary focus is to track and understand the constantly evolving customer experience world and share those insights with clients.

Further reading

- New value disciplines must be mastered for the digital age

CONTACT US

Jeremy.cox@cxcreate.io

CX-Create Limited