

A close-up, shallow depth-of-field photograph of a person's hands typing on a silver laptop keyboard. The hands are positioned in the center-left of the frame, with fingers pressing down on the keys. The laptop is open, and the keyboard is clearly visible. The background is dark and out of focus, showing parts of the laptop's body and the person's arms. A solid blue horizontal band is overlaid across the middle of the image, containing white text.

AN ILLUSTRATED GUIDE TO **VISUAL TESTING** AND HOW IT CAN BENEFIT YOUR ECOMMERCE

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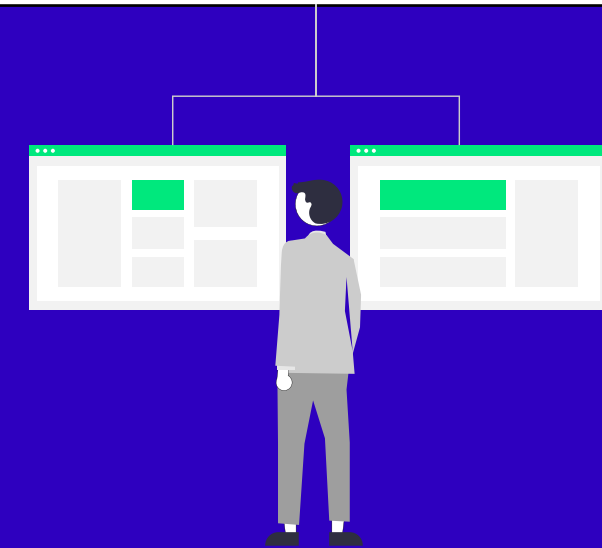
You may have heard or read about visual testing before, but are still unsure what is it for and how it can help your business. It may sometimes be referred to as visual validation, user interface (UI) testing, or another similar sounding name.

COMMONLY ASKED QUESTIONS ABOUT VISUAL TESTING

What is it exactly?

How is it performed?

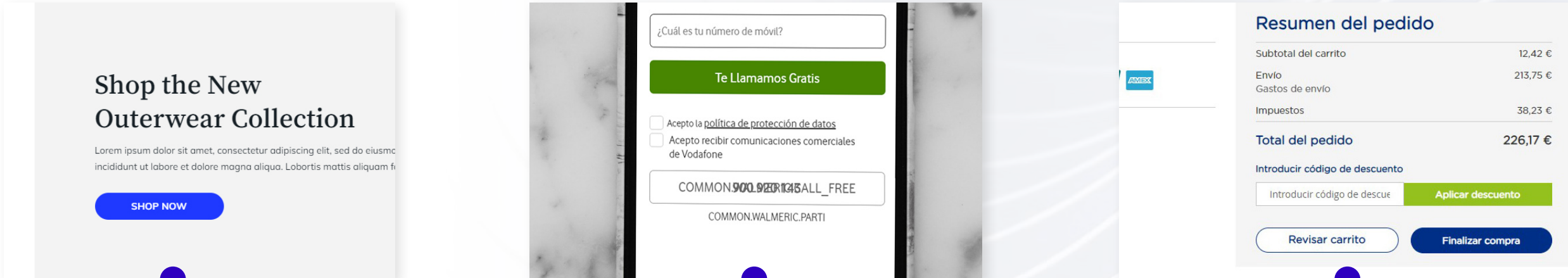
How can it benefit a company's brand or online business?



In this book, we will shed light to the world of visual testing. We will discuss its key aspects and its application in ecommerce. Once we understand the basic concepts of visual testing and how it is performed, we can then start to see its **true value not only to the business,** but also to the **overall end user experience.**

✓ What is Visual Testing?

Visual testing, in simplest terms, is verifying that everything appears correct, or as intended. “Appear” is an important thing to note here, because visual testing is all about **verifying what the user sees**. If we wanted to expand the definition for more clarity, it is:



The image displays three mobile application screens, each with a blue dot below it, illustrating different aspects of visual testing:

- Screen 1:** A promotional banner for "Shop the New Outerwear Collection". It features a blue "SHOP NOW" button. Below the screen is a blue dot.
- Screen 2:** A registration or login screen. It includes a form for a mobile number, a green "Te Llamamos Gratis" button, and checkboxes for terms and conditions. Below the screen is a blue dot.
- Screen 3:** A "Resumen del pedido" (Order Summary) screen. It shows a table of order details, a discount code input field, and buttons for "Revisar carrito" and "Finalizar compra". Below the screen is a blue dot.

Making sure that everything that we want on all the pages of a website is actually there.

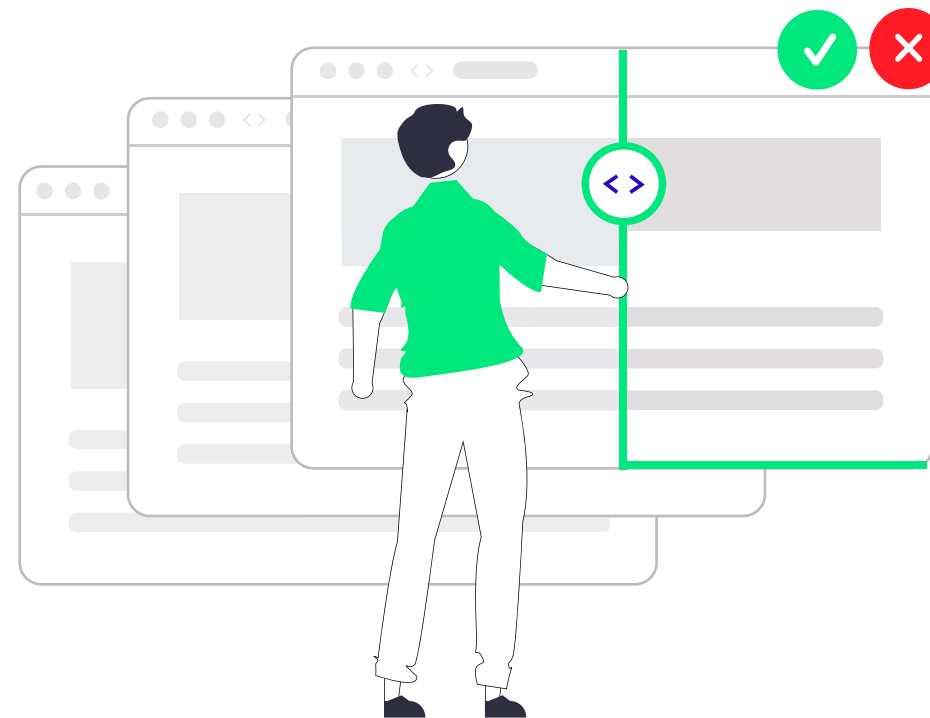
Making sure that everything we don't want to be there is not.

Making sure that the visible output of the website is as intended by the businesses and for the user.

✓ What is Visual Testing?

In ecommerce, visual testing is the process of **detecting and reviewing visual UI changes** of an online store. It is a quality assurance activity that specifically focuses on ensuring that an online store's UI **appears as intended** for the end user, whether he/she is browsing a product listing on a desktop computer or completing a mobile purchase.

There are a few things that visual testing does in order to evaluate the appearance of an ecommerce site and to compare that against the intended / expected UI. We will get into more detail on how visual testing works, but let's first find out why it is so important for online businesses.





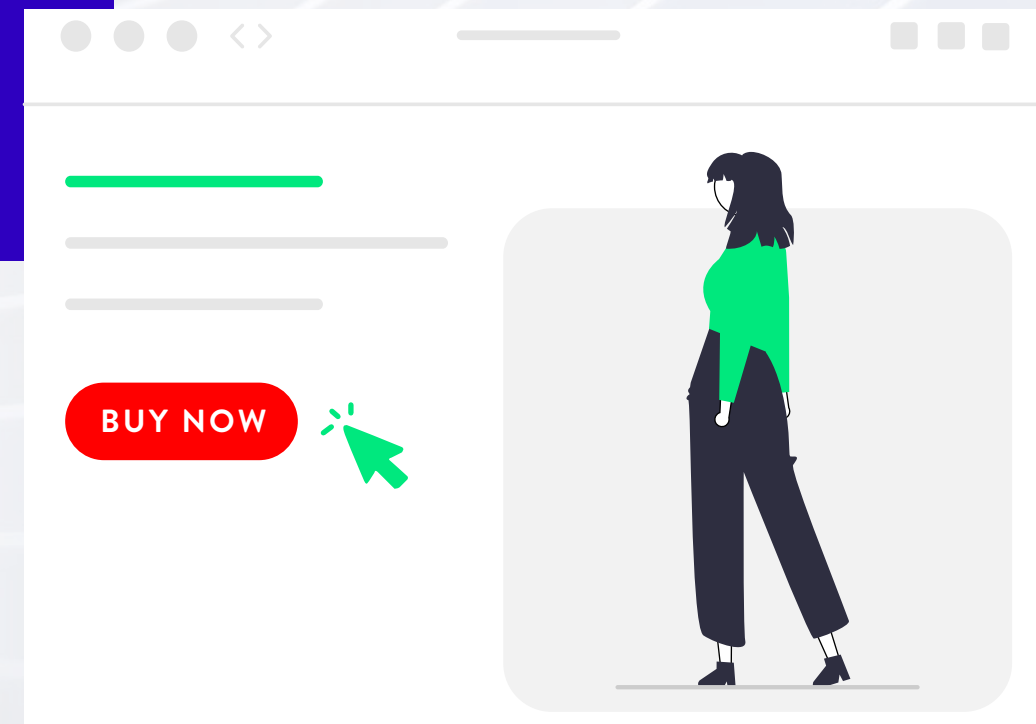
Why is Visual Testing necessary for ecommerce?

Why is Visual Testing necessary for ecommerce?

In this age of digital commerce, we all know the important role that the online user experience (UX) plays. A big part of this experience is what the user sees.

Great visuals and a well-functioning UI help to **build trust and credibility** within an online customer base. It reinforces a brand's image. It **guides users** towards actions that are desirable for **positive business outcomes**. We judge a product, a brand, or a company just by exploring their website and its features. Often, we make a purchase decision of a product based on **how it is displayed** and described online.

When an online customer encounters a visual error on a website, there are many different ways that this can impact his or her decision-making process and opinion of a brand's trustworthiness.



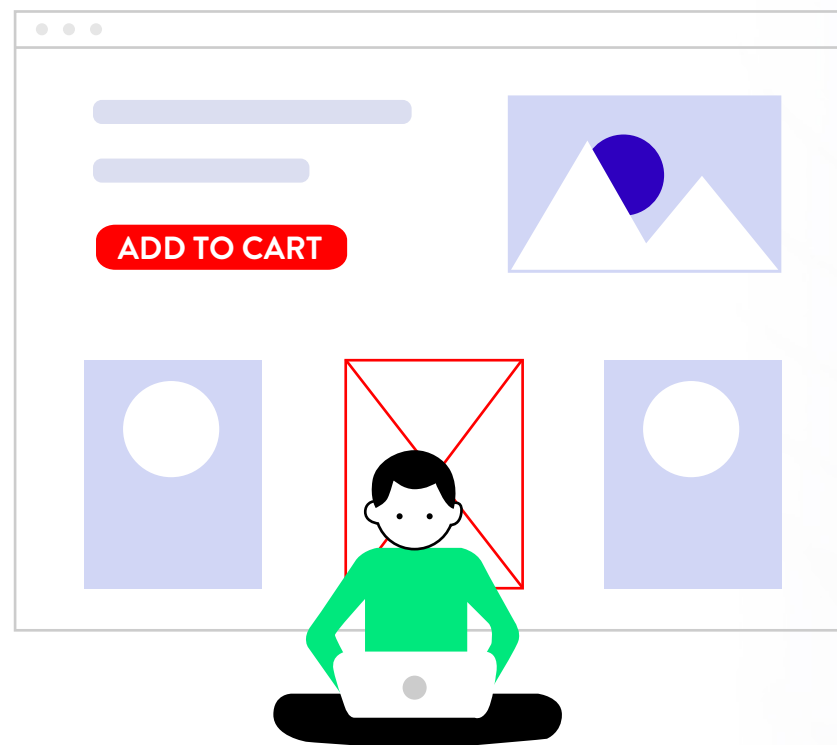


Visual errors and its impact to ecommerce businesses

Visual errors and its impact to ecommerce businesses

First of all, what constitutes a visual error?

A visual error or visual bug is a UI or UX issue that impacts the responsiveness, usability, findability, credibility or the enjoyability of an ecommerce site. Visual errors come in many forms. It can be:

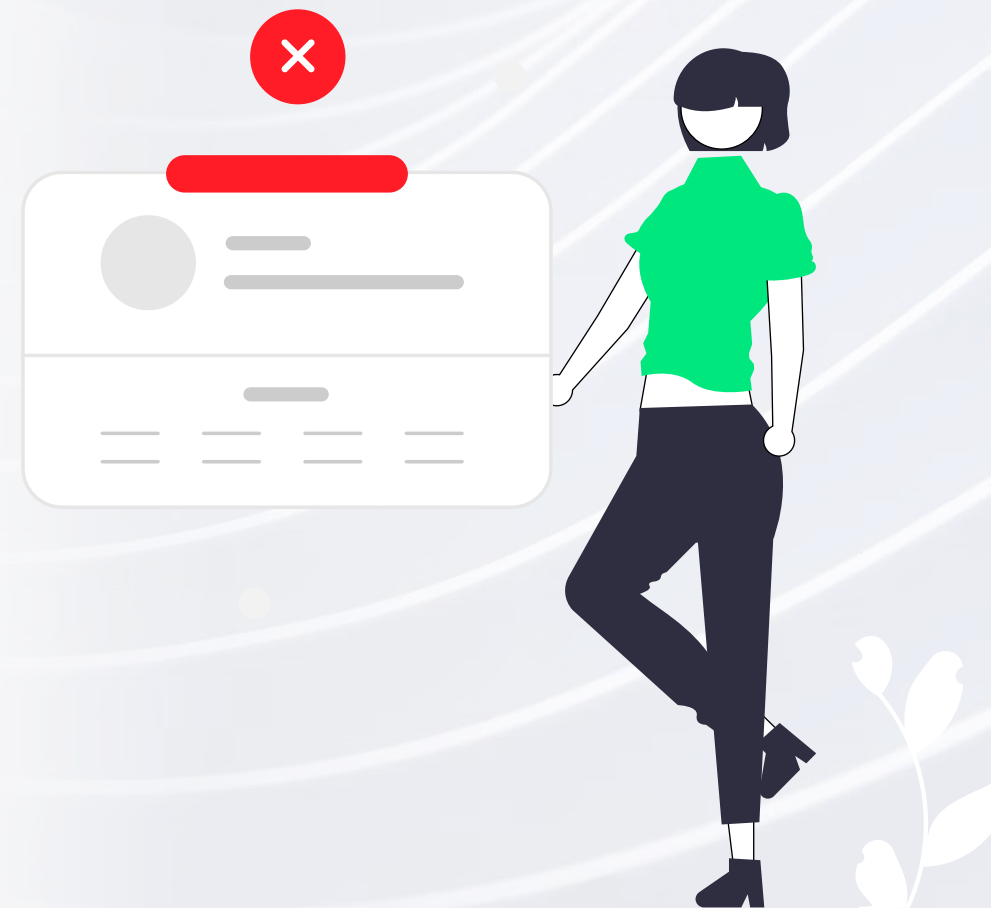


- › A website's dropdown menu that is not clickable in mobile browsers (**responsiveness**)
- › A missing button that prevents the user from completing the purchase process (**usability**)
- › A text that is partially hidden by an image (**findability**)
- › An inaccurate display of product information which makes the potential buyer distrust the viability of the product (**credibility**)
- › A misplaced UI element that obscures the viewport while the user is navigating the product listings (**enjoyability**)

Visual errors and its impact to ecommerce businesses

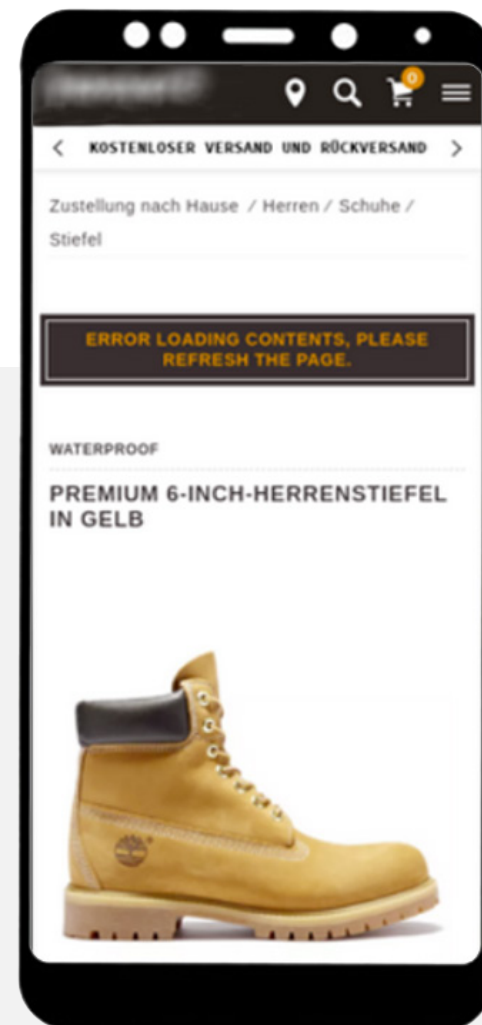
Clearly, there are many different ways that visual errors can negatively affect the online user experience. If not detected immediately, most of these errors would lead to **high bounce rates, low conversion rates, loss of credibility** and **the trust of the customer**, and eventually resulting in a significant impact on the **ROI** of the businesses.

Let's look at some real world examples of visual errors.



Visual errors and its impact to ecommerce businesses

As you can see in this example, the content is not loaded on a product page. This error discourages the user from taking further action. As a result of certain product information not being available, **the sale is likely lost**, as he/she is unable to make an informed decision or progress further in the purchase.



➤ CONTENT NOT LOADED



Visual errors and its impact to ecommerce businesses

In this example, the formatting of the website is broken, causing the header text to be partially hidden from view. It is evident that something is wrong with the layout of UI elements of the mobile web page. The fact that it is not aesthetically pleasing can cause the user **to doubt the site's credibility**, and turn to a competing online retailer that can offer a better purchase experience.

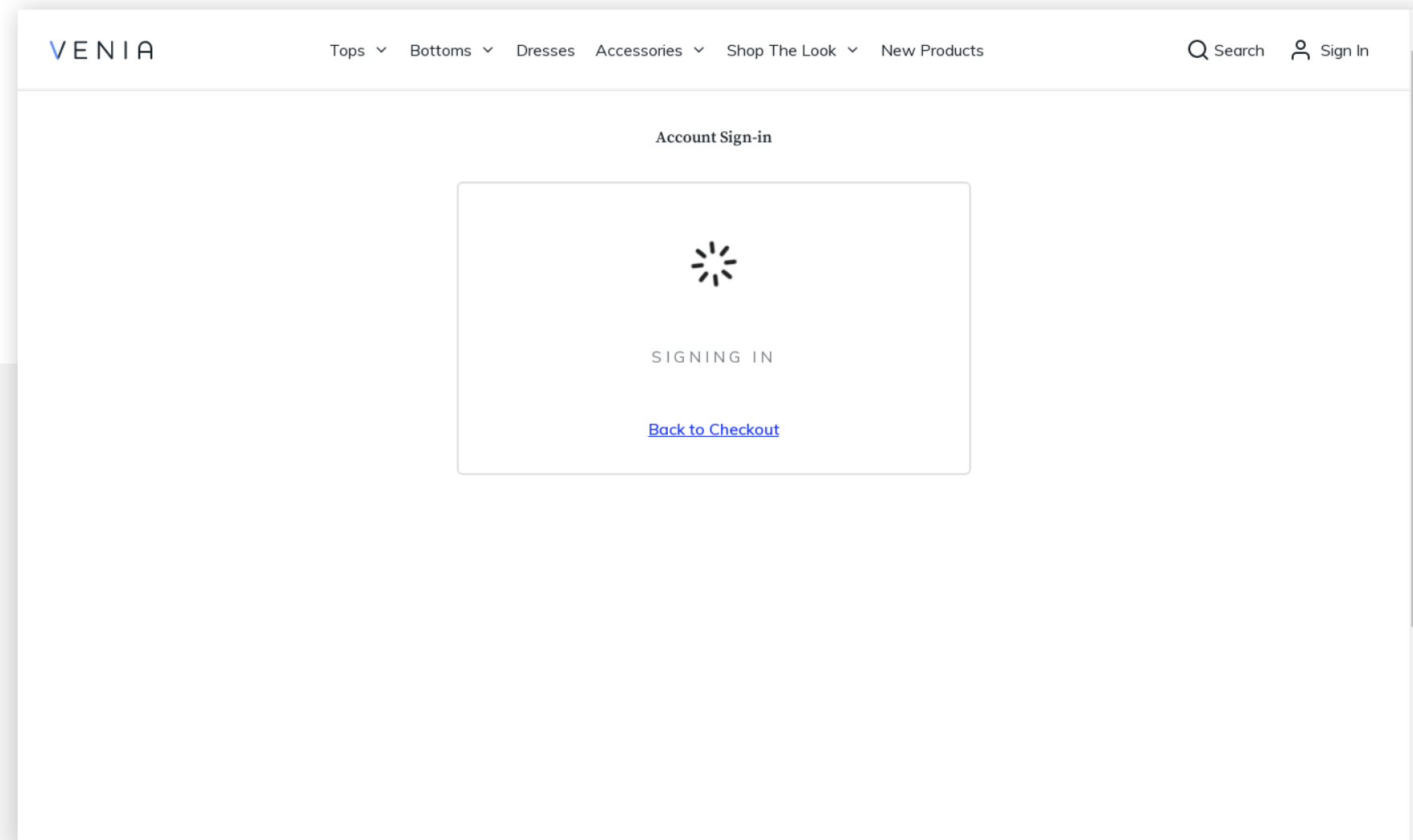


➤ BROKEN WEB FORMATTING



Visual errors and its impact to ecommerce businesses

A page loading error is a common problem found in web browsing. It is a visual error that not only impacts the appearance of the site, but also interrupts the customer's journey of the site. A **conversion path is blocked**, thus having severe consequences to the online retailer's ROI.

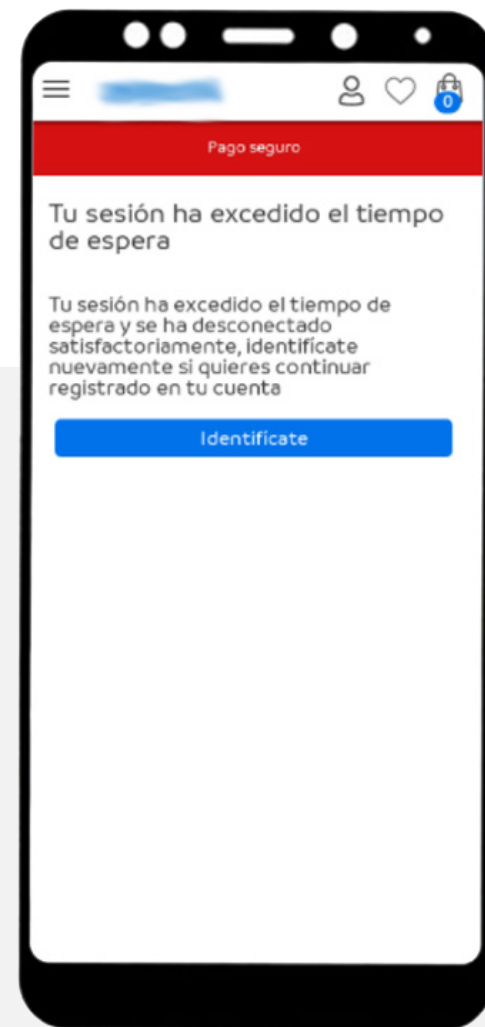


➤ PAGE LOADING ERROR



Visual errors and its impact to ecommerce businesses

In the example shown below, the user is interrupted from completing a secure payment process due to an unexpected session expiration. Similar to the page loading error, this error interferes with the customer journey, and will likely lead to **frustration**, **cart abandonment**, and an **unsuccessful sales conversion** for the businesses.



► UNEXPECTED SESSION EXPIRATION



Functional Testing vs Visual Testing

↔ Functional Testing vs Visual Testing

An online store can work perfectly and have all the functionalities for the user to purchase a product. However, its **functionality only covers one aspect of the overall user experience**. If an online store is not intuitively designed or easy to navigate, it risks losing customers to comparable competition which can offer better online services.

UI errors, such as the broken web formatting example we looked at earlier, may not impact the functionality of a site, but can adversely affect online sales and the customer experience in an indirect and intangible way.

Why can't we just use functional testing to validate the visual appearance of our website?

Quality assurance and development teams are becoming aware that functional testing, whether automated or manual, is **poorly suited for detecting visual issues**.

While it is possible to use functional testing tools & scripts to validate the font, size, color and position of UI elements, it is **extremely tedious** and **not feasible** to create and maintain the corresponding assertion code for visual testing across different browsers, O/S, device types, etc. Also, functional testing does not guarantee **full test coverage**, especially if the objective is to detect visual errors as well.





Solving problems for the business and the customer

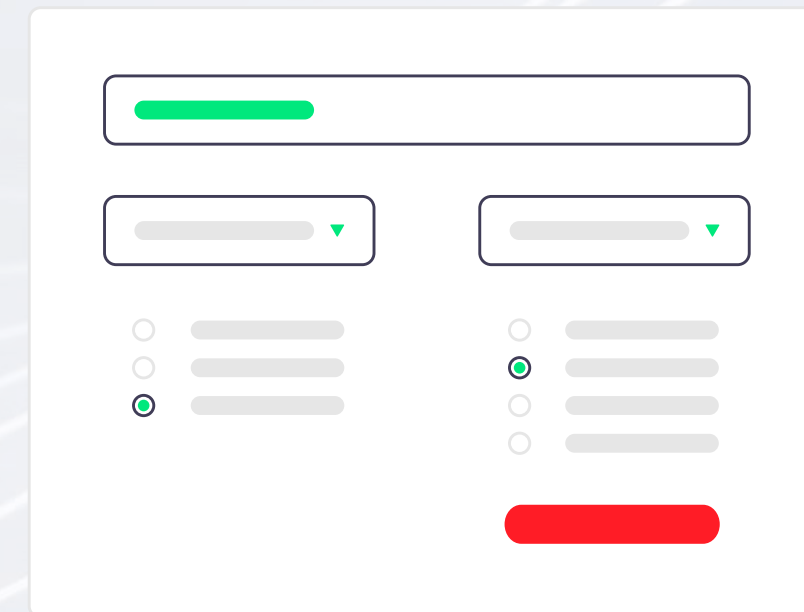
Solving problems for the business and the customer

There are two main goals of **visual testing**:

- It helps identify visual errors that can negatively impact online sales.
- It helps online brands deliver a consistent and optimal visual experience to their online customers.

We can already start to see how frustrating a visual error can be, from the perspectives of both the businesses and the customer. Imagine if a visual error causes the purchase button to be invisible, and is left undetected for days. The end user is unable to make the purchase, and the businesses is unable to sell its product. Everybody loses out in this situation.

Now that we have seen some of the impact of visual errors, let's take a look at how visual testing can not only help **solve problems affecting the user experience**, but also give businesses **better control** of their ecommerce.





How Visual Testing helps online businesses


How Visual Testing helps online businesses

Catching visual errors before they affect sales & the customer experience

Imagine that there was an error with the applied shipping charges on an ecommerce site, causing the total purchase amount to increase ten-folds. Users abandon the site, the conversion rate drops, and that ecommerce loses the trust of its customer base in its ability to perform transactions. **A single visual error can lead to a permanent and devastating impact to the business.**

Visual testing provides online brands a way to **proactively monitor UI / UX** functionality and accuracy. It helps to quickly identify and isolate visual errors, so that the necessary improvements can be made to prevent future occurrences.





► ERROR WITH THE APPLIED SHIPPING CHARGES

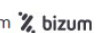


Envío gratis a partir de 20€ de compra

Resumen

Método de pago

☐ Pago con tarjeta     

☐ Bizum 

Resumen del pedido

Subtotal del carrito	12,42 €
Envío	213,75 €
Gastos de envío	
Impuestos	38,23 €
Total del pedido	226,17 €

Introducir código de descuento

Introducir código de descue

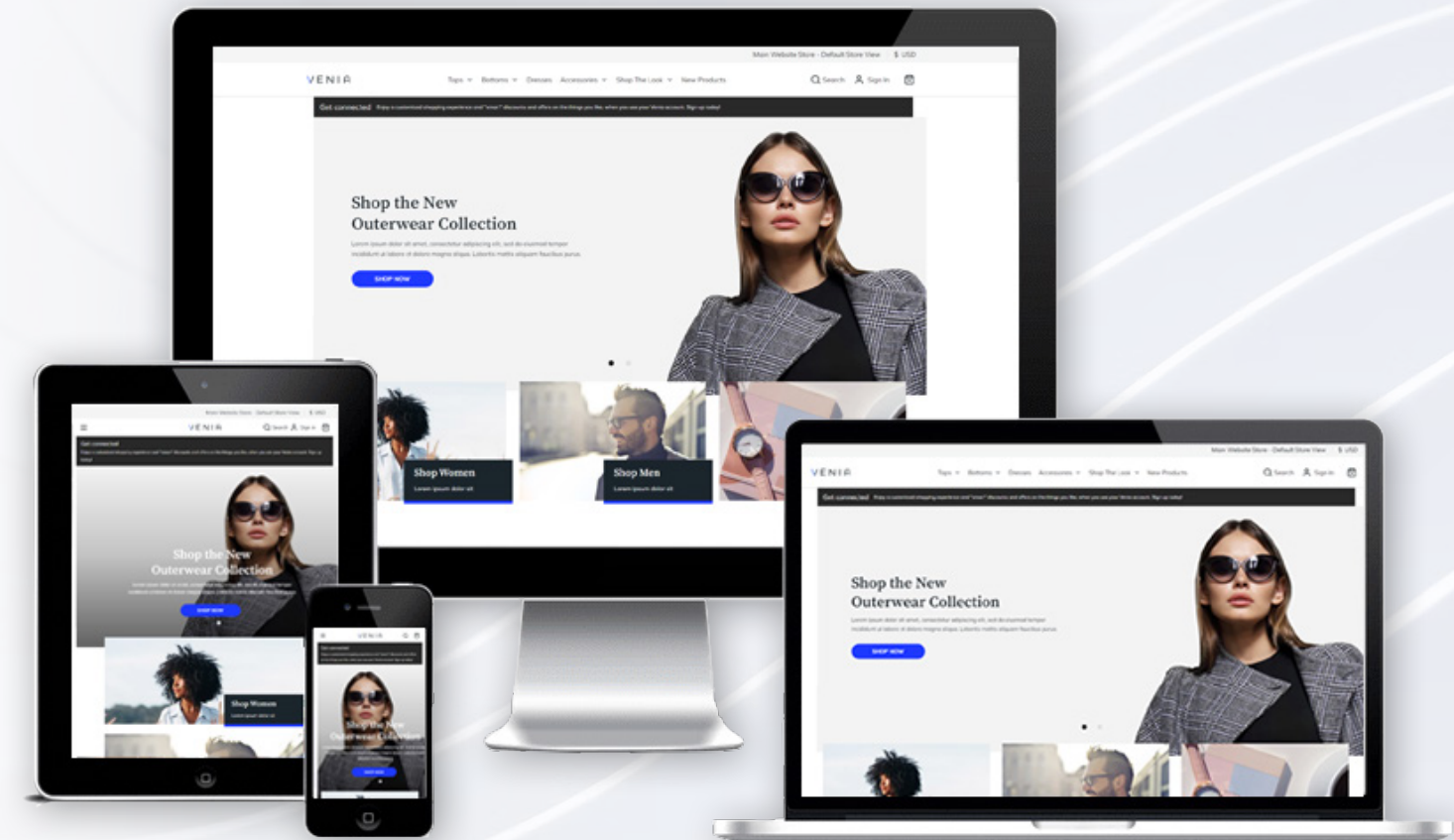
How Visual Testing helps online businesses

Being able to verify the complete UI/UX experience across every software deploy

Part and parcel of running an online store is performing regular maintenance and updates, especially for an ecommerce with complex infrastructure, integrations, and interactions with multiple external services. In the agile world of incremental development and regular release cycles, a lot of **undesired UI effects** can occur as a result.

Visual testing allows QA testers and developers to comprehensively **verify the real user experience** with **every code change**. It provides full test coverage outside of functionality tests and detects visual regressions. Visual testing ensures that an ecommerce site behaves as expected after every release, across **different countries, operating systems, browsers, devices**.

► REAL USER EXPERIENCE ACROSS DIFFERENT DEVICES

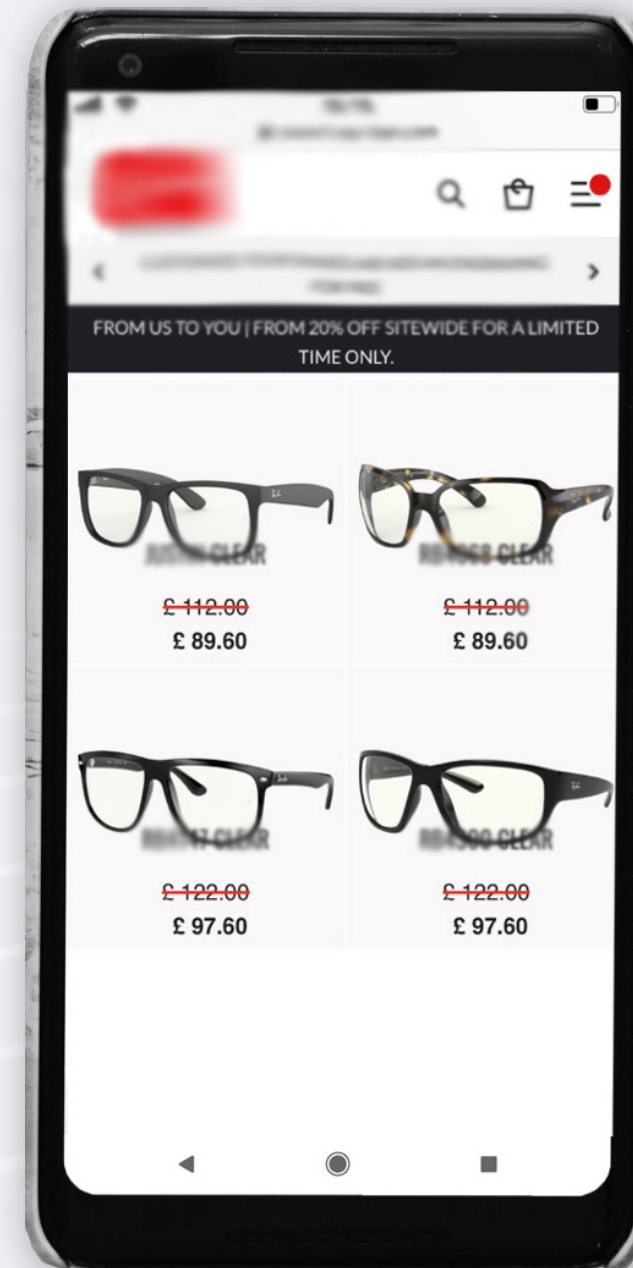


How Visual Testing helps online businesses

Better oversight of sales & marketing campaign executions

Most ecommerce stores also go through **frequent changes** to its content, due to sales and marketing campaigns affecting the prices, catalog listings, product details, stock availability, etc. These changes may present themselves in multiple pages, and possibly across different languages and country sites.

Visual testing gives online businesses **better oversight of UI/UX changes**, by verifying that such campaigns are displayed to the user as intended. Visual testing also ensures that they are able to interact with changes, for example, being able to redeem a promotion code that is displayed.

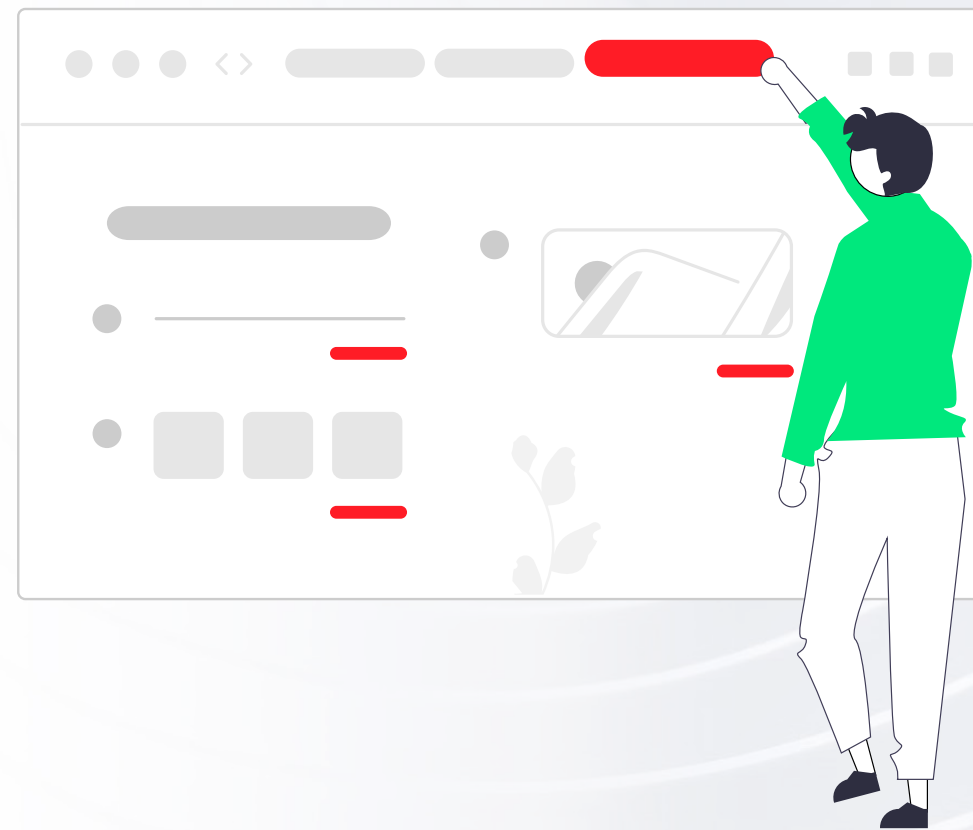




How is Visual Testing performed?

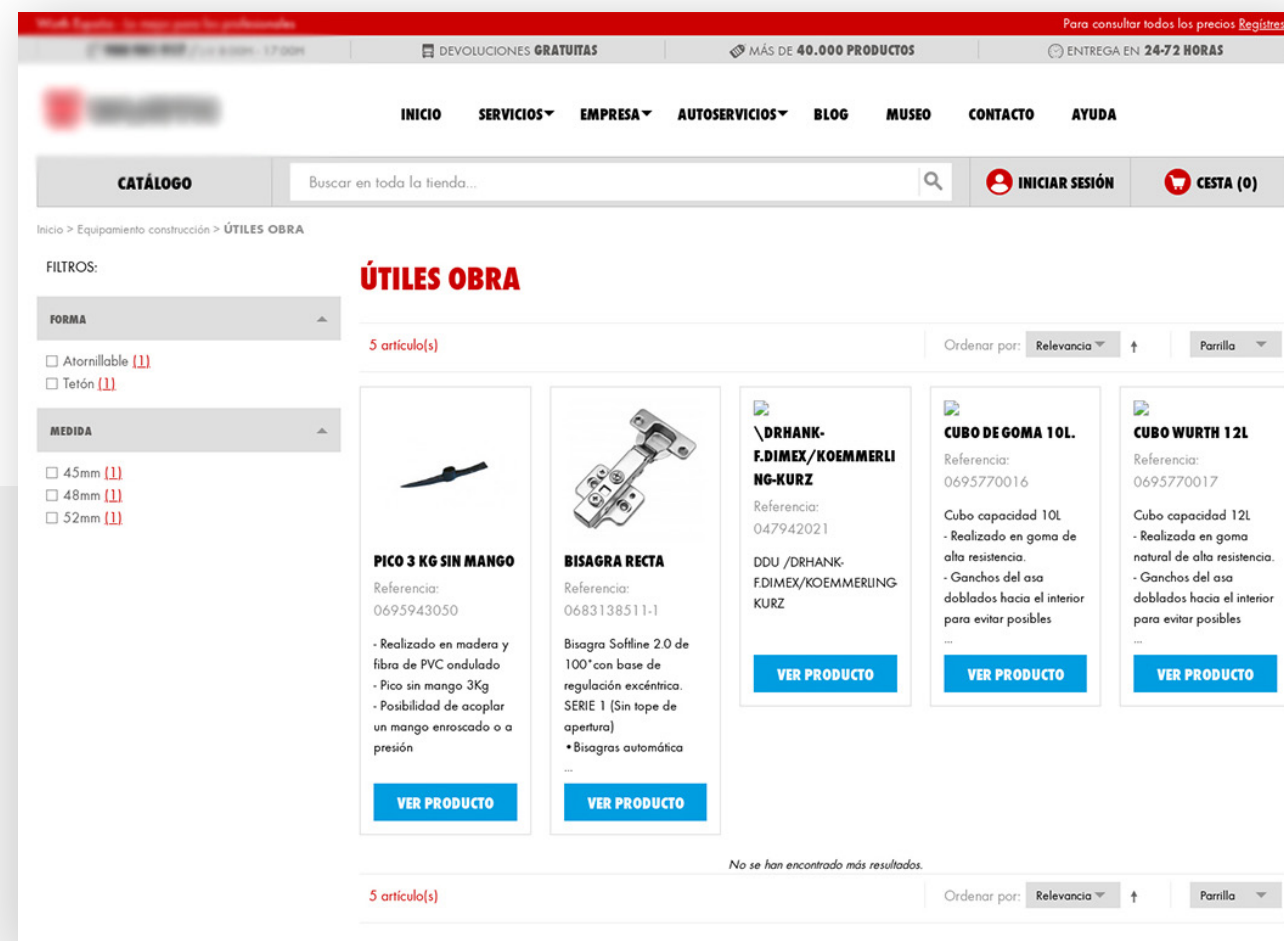
🔍 How is Visual Testing performed?

Before we go into the details of a visual testing activity, let's first establish some common terms that are used. A visual element can refer to an image, text, video, visible space, etc. Basically anything that is intended to be presented to the user.



How is Visual Testing performed?

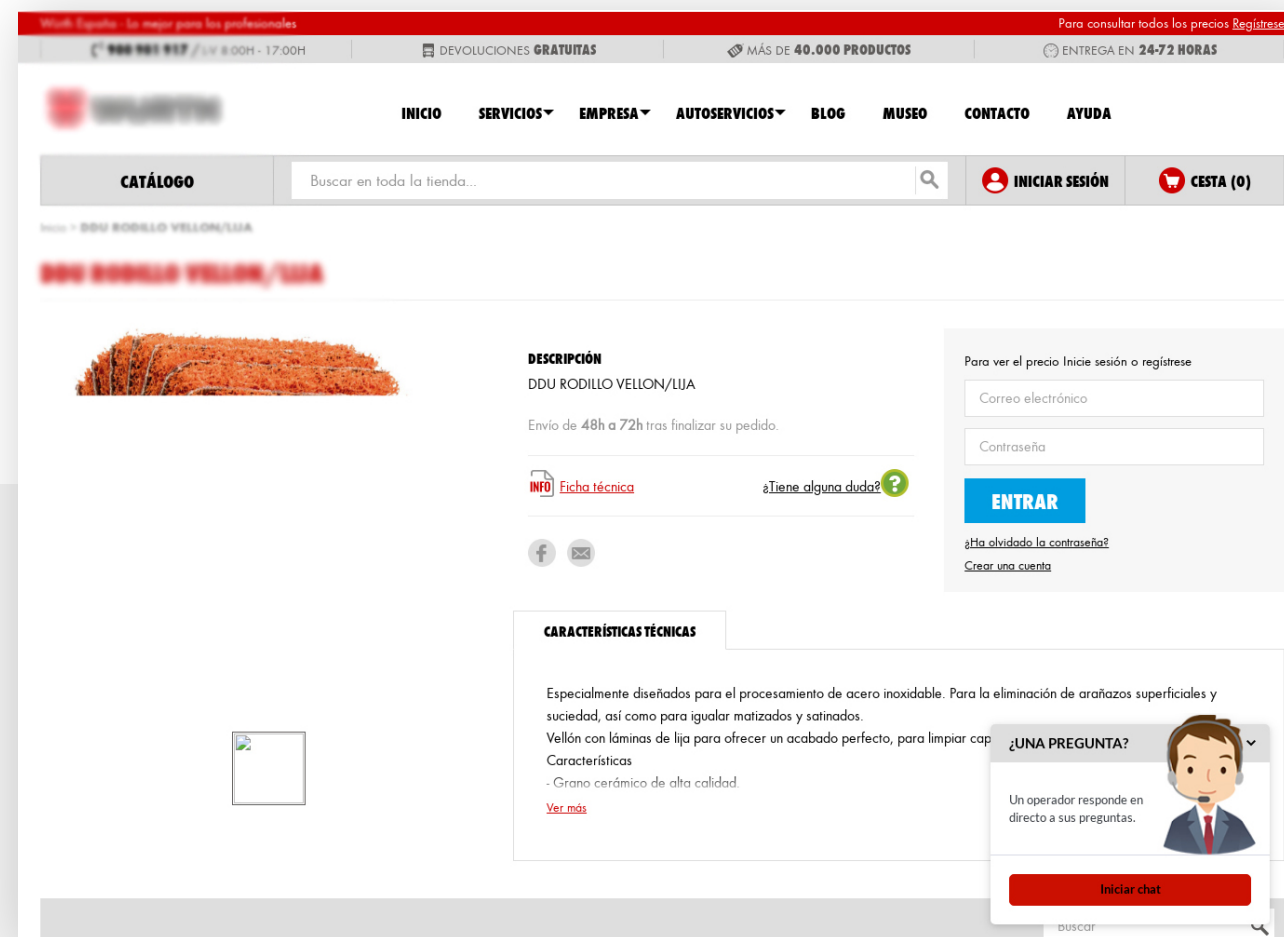
When we talk about visual testing and visual validation, we are checking that visual elements that belong to a page are visible, and undesired visual elements are not (example: technical error messages not intended for the user) are not visible.



► IMAGES NOT VISIBLE

How is Visual Testing performed?

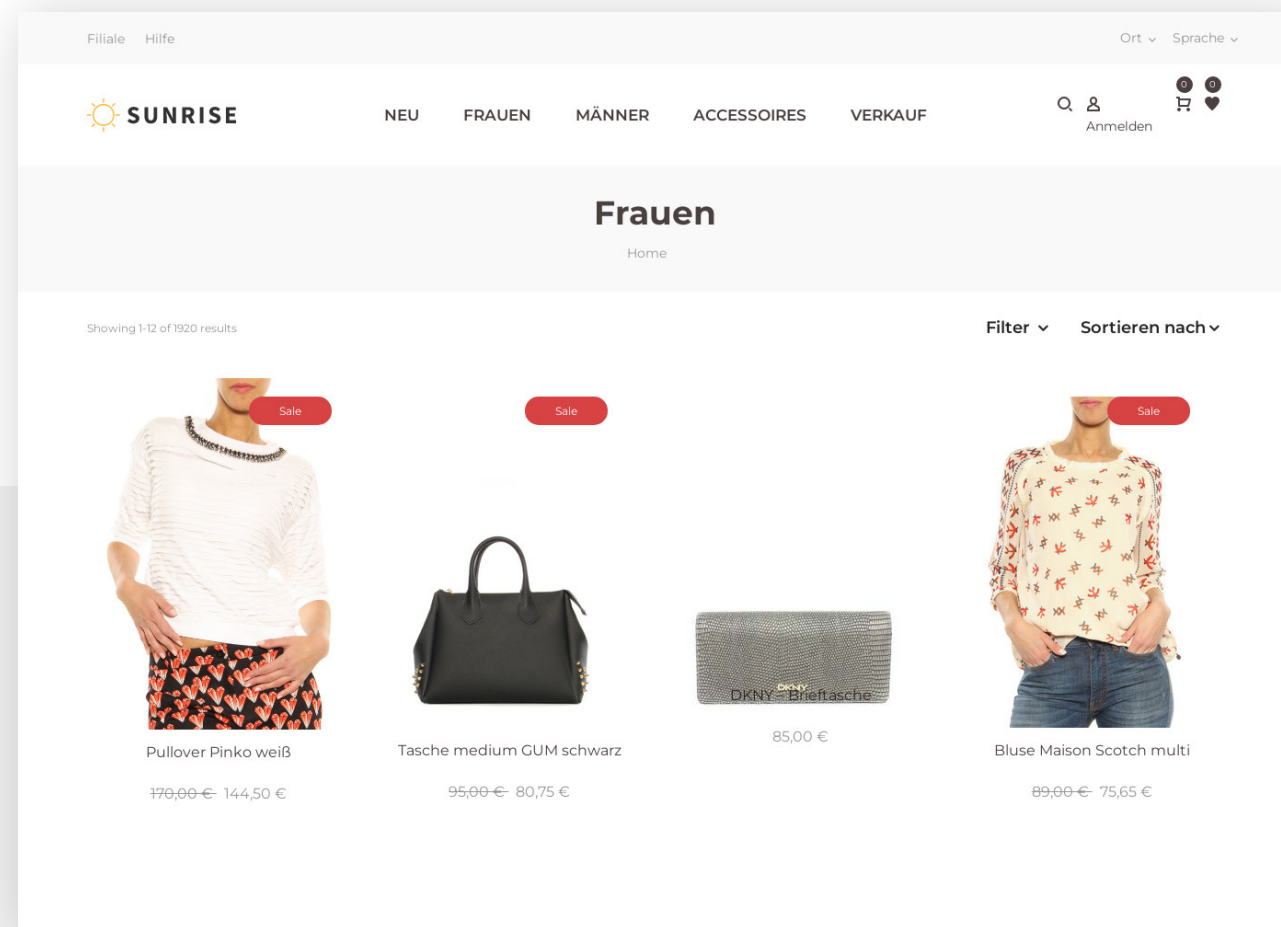
Visual testing is also about verifying that the visual elements on a webpage appears correctly, in terms of its size, color, brightness, contrast, density, texture, weight, shape and position in relation to the user viewport.



➤ PRODUCT IMAGE
PARTIALLY LOADED

How is Visual Testing performed?

In addition, visual testing is about making sure that visual elements are not overlapping one another, causing them to be hidden or poorly visible. It is also to verify that the visual experience is consistent across all users.



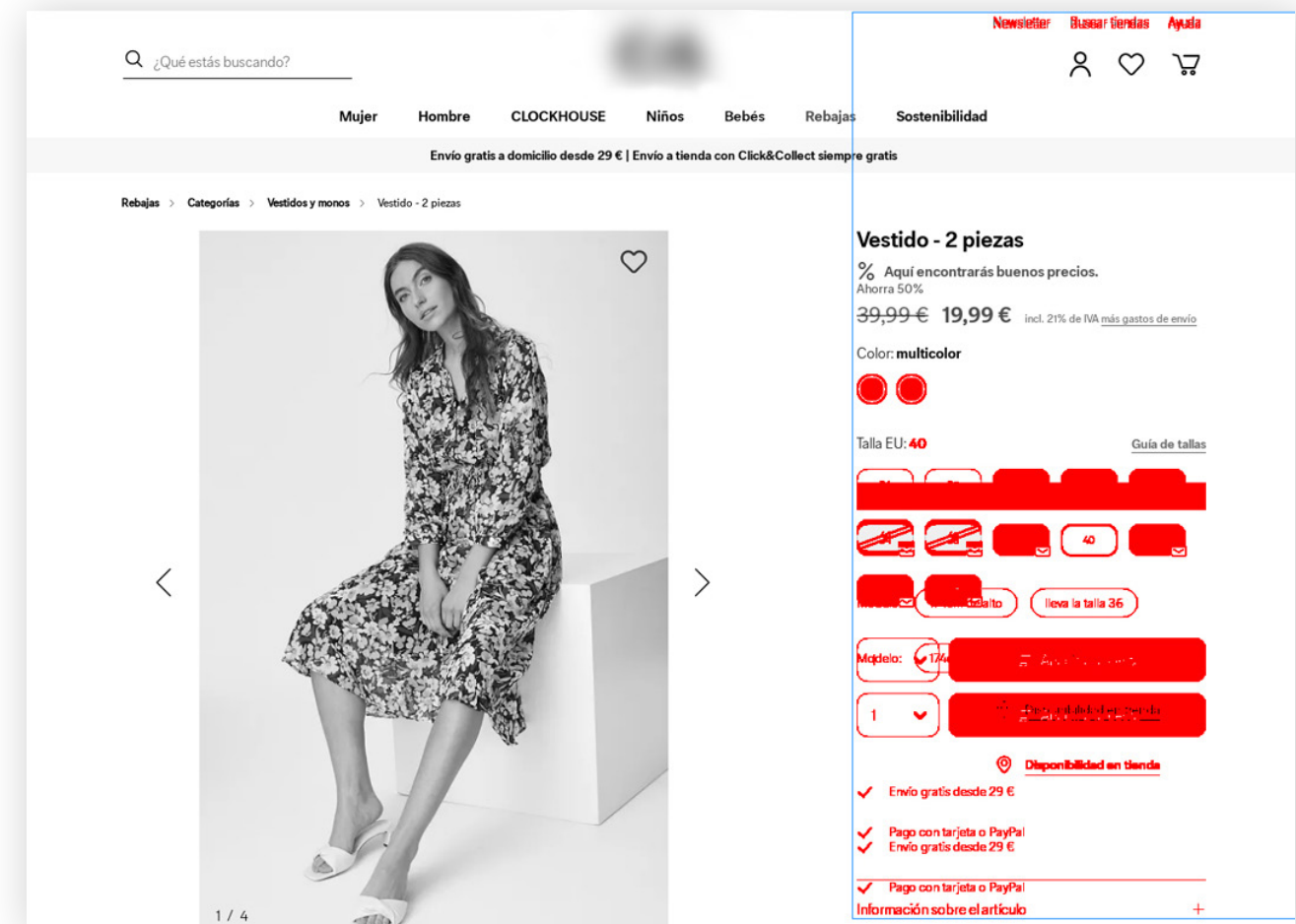
► INCORRECTLY
POSITIONED ELEMENTS



How is Visual Testing performed?

However, it is important to note that visual testing is not merely about checking the UI. In particular for online stores, it is also necessary to verify that **user interactions** with the site **return the expected results** from both a **functional and visual perspective**.

Visual testing tools scan for visual changes and inform the reviewer whether the changes were intentional or bugs, ensuring that errors are not seen or experienced by users.





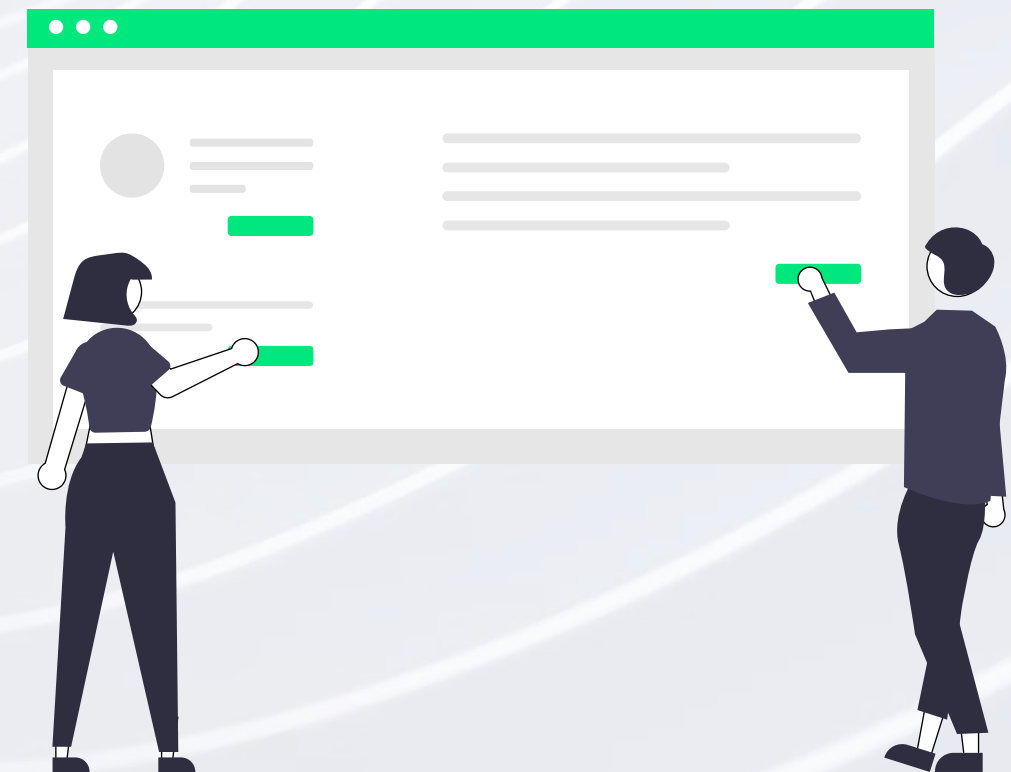
Challenges of Manual Testing

Challenges of Manual Testing

Prior to automated tools, visual testing was often performed manually by web developers themselves. In recent times, QA teams have started incorporating visual regression testing into their test plans, but only to a limited degree.

With the manual method, testers would manually perform actions and interact on every page of an ecommerce site while inspecting for visual errors. Evidently this is a very resource-intensive process, not only due to the number of visual elements that need to be scanned, but also because of the different operating systems, browser dimensions, screen orientations and device configurations involved.

Manual testing is generally regarded as a necessary evil for most organizations due to the **excessive time** and **effort needed**. With all the test variables and permutations involved, it is almost impossible to have full test coverage. The manual testing process itself is also prone to **human error**. Nevertheless, we are now seeing an increase in the use of automated visual testing tools, which offer speed, repeatability, and reliability in execution across a wide range of test scenarios.





**Visual Testing tools in the market:
Do they address the needs
of online businesses?**

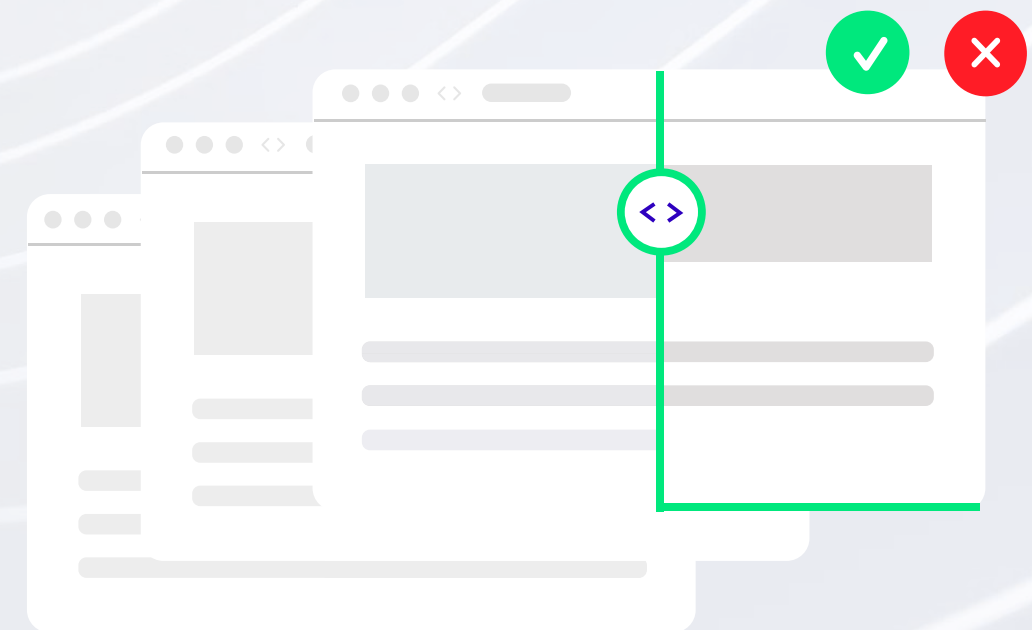
Visual Testing tools in the market: Do they address the needs of online businesses?

We have seen how necessary automation is to visual testing, and testing in general. So it is almost implied that any visual testing tool is automated (else it would not make it very far in businesses).

Before we talk further about the visual testing tools out there in the market, what exactly is automated visual testing?

Automated visual testing uses software to **automate the process of identifying visual errors**, through comparison of visual elements across various screen and test configurations. The comparison is done by capturing the visual appearance of an entire screen or parts of it, and reviewing it against a baseline or intended appearance.

Automated visual testing eliminates the man-hours needed for manual checking of UI/UX defects, thus **increasing business productivity**. It is also much **less prone to errors** in the testing process, compared to manual testing.



Visual Testing tools in the market: Do they address the needs of online businesses?

The above are some of the essential features of a visual testing tool. And then there are others that provide even more features, such as:

- ▶ The ability to execute tests at a high volume and frequency, in some cases offering unlimited testing
- ▶ The ability to run tests on real devices and browser
- ▶ The use of Artificial intelligence (AI) in visual comparisons

However, there are noticeable deficiencies in the present market.

- ▶ **Not fit for ecommerce:** Current visual testing tools are not suitable for use by ecommerce businesses. This can be because their features are not focused on verifying ecommerce UX/UI functionality, or that the tools do not have the flexibility to be adapted to the needs of ecommerce testing.
- ▶ **Not comprehensive:** Most tools, while having best-in-class testing features, are only built for just that - testing. They do not provide a comprehensive solution that takes into importance the monitoring and management of test results, or the use of analytics.
- ▶ **Not user friendly:** A large number of visual testing applications involve test scripts or code to replicate user actions. Such tools isolate the wider audience, especially businesses users who are looking for simplicity in executing, managing, and monitoring visual tests by themselves.



VALIDO

Automated Visual Testing Built for Ecommerce

✓ Valido, Automated Visual Testing Built for Ecommerce

Valido is the pioneer visual testing platform for ecommerce which addresses the challenges faced by most visual testing solutions.

What sets Valido apart is the **flexibility** it offers online businesses to create **personalized tests** for important ecommerce functionalities, such as catalog navigation, login, user registration, checkout, keyword search, and more.

Not only does Valido allow testing across **various device, browser and screen sizes**, it also takes into consideration the testing needs for **multi-country** ecommerce sites. Its ability to test websites in **different geographical locations** allows quick detection of unintentional UI errors that may occur during campaign executions or catalog changes for multiple markets.



✓ Valido, Automated Visual Testing Built for Ecommerce

Valido is a **Software-as-a-Service (SaaS) solution**, which means that it is cloud-based with no need for installation of test infrastructure on-premise. Ease-of-use is an important aspect of Valido; the visual tests and simulation of online user actions are **simple to configure, customize** and to **get up and running**.

In addition to its visual testing features, Valido's dashboard and visualization features enable online businesses to actively **monitor their web UI/UX in real-time**. With Valido, visual error detection and alerting can be easily incorporated into service level management workflows, a critical aspect in ecommerce businesses operations. Built as a **fully-functional Progressive Web App**, businesses and technical users alike are able to access it anytime and anywhere to monitor and view test results.



Q Wrapping things up

Ecommerce businesses have started to recognize the importance of visual testing. It is no longer seen as a luxury, but a necessity both in delivering **optimal user experience** and **online sales growth**.

Development and QA teams have long realized that functional testing is poorly suited for identifying visual bugs. However it is evident that the manual method of visual validation is a tedious and time-consuming process, with no guarantees of **comprehensive test coverage**.

Automated visual testing tools eliminates the man-hours needed for manual checking of UI errors, evidently increasing productivity for the businesses. Automated cloud-based visual testing tools for ecommerce is becoming an **essential QA practice for online businesses** for now and years to come.

Valido acknowledges the importance of **validating the correctness of ecommerce behavior** from a functional point of view, in addition to verifying the UI appearance. In particular for online stores, it is important to verify that user interactions on the site return the expected visual results.

Visual testing should also create value to the entire businesses. A visual validation solution focused on ecommerce needs, such as Valido, can deliver significant benefits not just for technical teams, but also for commercial teams in campaign monitoring efforts and in **identifying UX inconsistencies that can affect online revenue**.

✓ Want to boost your ecommerce performance? Get a free assessment

We are currently providing online retailers a **free assessment** of their visual testing needs. Find out how you could **maximize** the **ROI** of your ecommerce with Valido.

Test configuration	Test validation	Results
<ul style="list-style-type: none">✓ No commitment required.✓ We will configure key tests for your ecommerce to validate crucial ecommerce flows, such as checkout, PLP and PDP navigation.	<ul style="list-style-type: none">✓ We will validate the results gained through testing and analyze the pain points of your ecommerce.✓ We will see what areas of your ecommerce are most affected in terms of ROI.	<ul style="list-style-type: none">✓ We will share the results with you within 2 working days, so you can immediately start taking action on the issues detected. All of this with no cost or commitment.

Get your Free Assessment



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valido

Build a better ecommerce for your businesses today

