zensciences®

Design Disclosures 2023 edition

What's turning heads and catching eyes in the world of design?

Curiosity turns the page.

Tapping into what’s steering the way ahead
in design and its impact on businesses.


/ imagine: Design
2023


Hey, did you guys hear about the new design trends report for designers and marketers by Zensciences? It's out.
What? A design trends report for marketers!
I don't understand. Why would a marketer need a design trends report?
Well, design reports are not just about design, they are also about new-age technologies, ideas, and much more. These reports, for us marketers are a treasure trove.


Hmm...that's an interesting take and actually makes sense. It will help us in campaigns and marketing our future-ready solutions in the best possible way...now that is cool.
Seems like I am sorted with how I am going to spend my day tomorrow. We are going to have one awesome year folks.
Cheers to 2023!

Foreword

When you combine the best of functionality and technology, you can really elevate your UX/UI and graphic design. And design is the very crux of good storytelling. With design evolving at a rapid pace matching that of technology, we're on the cusp of a future we've never seen before — and although that is true, to a certain extent every year, this one's different.

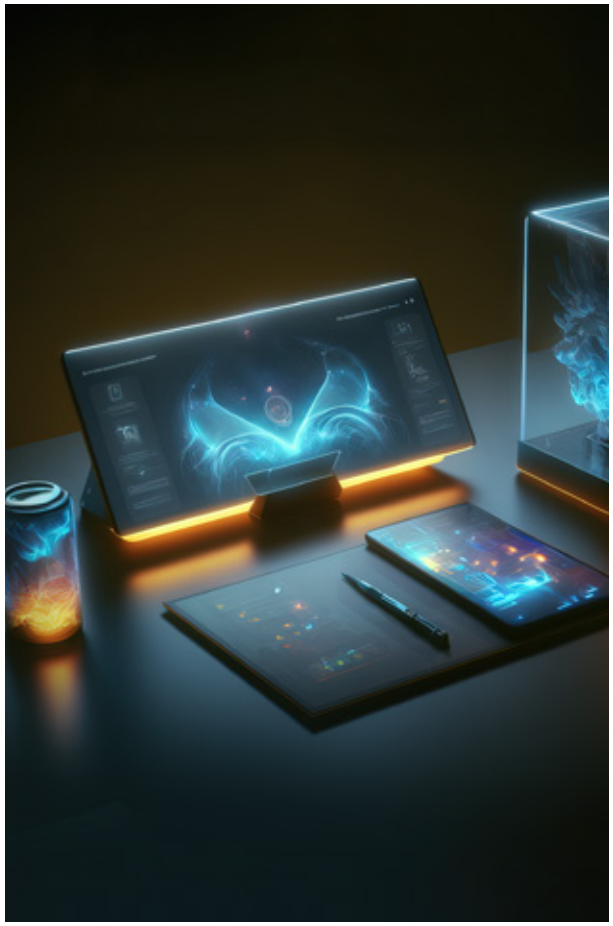
While the characteristics of a good story aren't going to change — design and technology are enabling us to tell stories that have a much deeper impact. The rise of technologies like spatial computing, artificial intelligence, machine learning, blockchain etc, is fundamentally setting a new direction for design. Design has never been about just the aesthetics. It is about functionality and problem-solving.

And 2023 is looking absolutely wonderful, almost magical, for storytelling through design.

No matter which industry, everyone could do with a good design. A good story. Unprecedented experiences are the future of storytelling and we're looking to own the future of storytelling. Want to be a part of it?

Then, let's start.

Contents



02. *Powered by ‘combined intelligence’*

03. *Creating surreal realities*

01

THE GREAT MERGING OF EXPERIENCES

An integrated ecosystem beckons

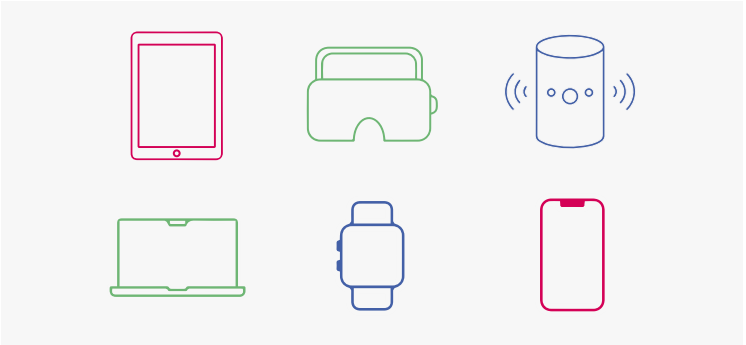
Browse through items on your laptop, add them to your cart on your phone, and finally place the order through voice assistant. Isn't it amazing when technology truly understands you and shifts base as and when you do? Multi-experience across different touchpoints is like synchronized swimming – an absolute treat to the senses!

Many devices. One experience.

With more and more digital hardware being used and becoming connected every day, the interfaces on these devices are bound to merge as well. We have already seen it happen with phones emulating a desktop experience. However, now there is an entire ecosystem of connected devices to consider, including tablets, wearable trackers, smartwatches, smart TVs, TV-based gaming consoles, portable gaming consoles, gaming input and feedback hardware, audio equipment, AR glasses, VR glasses, and the list goes on (phew!)

From hardware to software to applications, transitions are expected to be smooth like butter. And nothing less will do.

Like the Apple of the 'Walled Garden'

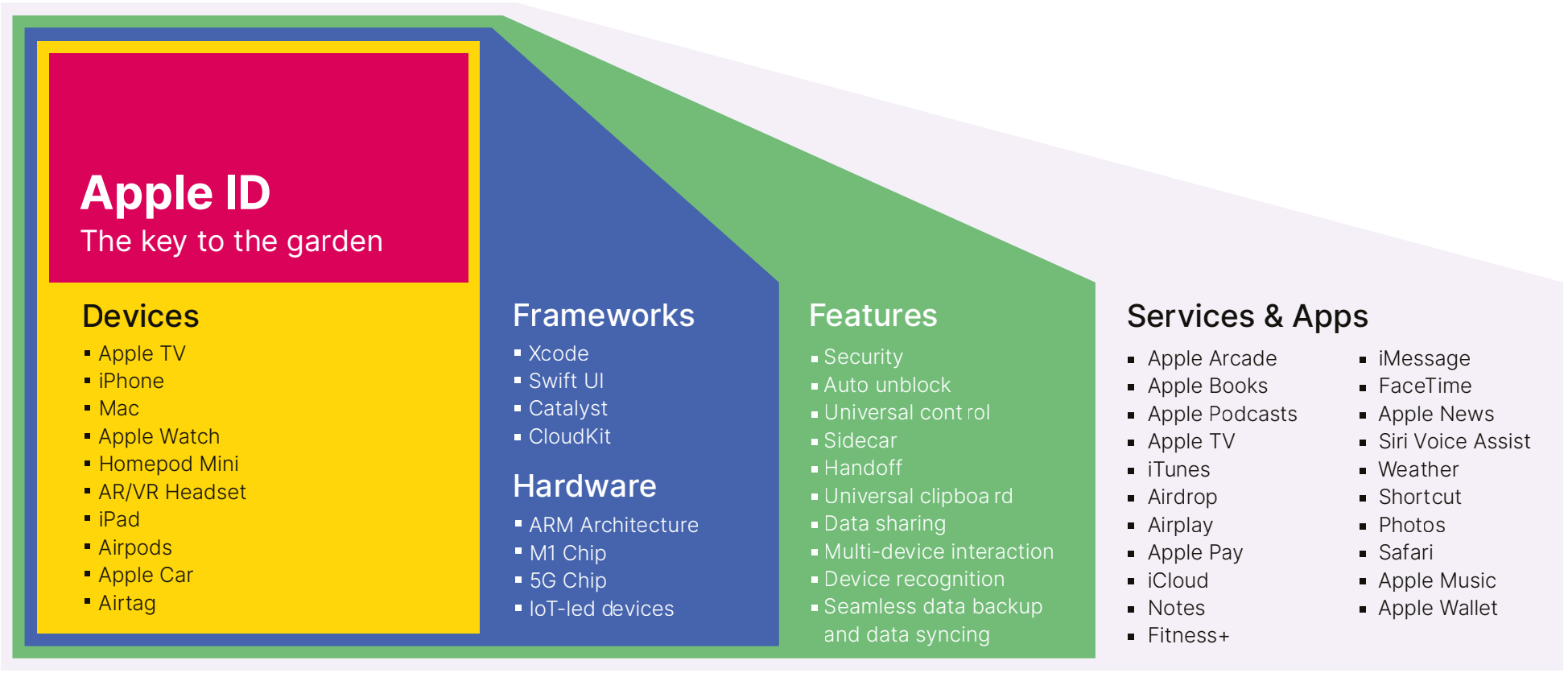


And taking a bite is not forbidden here. Use your Apple watch to unlock your Mac, use your Mac to answer calls, tap your iPhone to the HomePod Mini and listen to music, and so on. Each device works well on its own, but together, they orchestrate a great symphony.

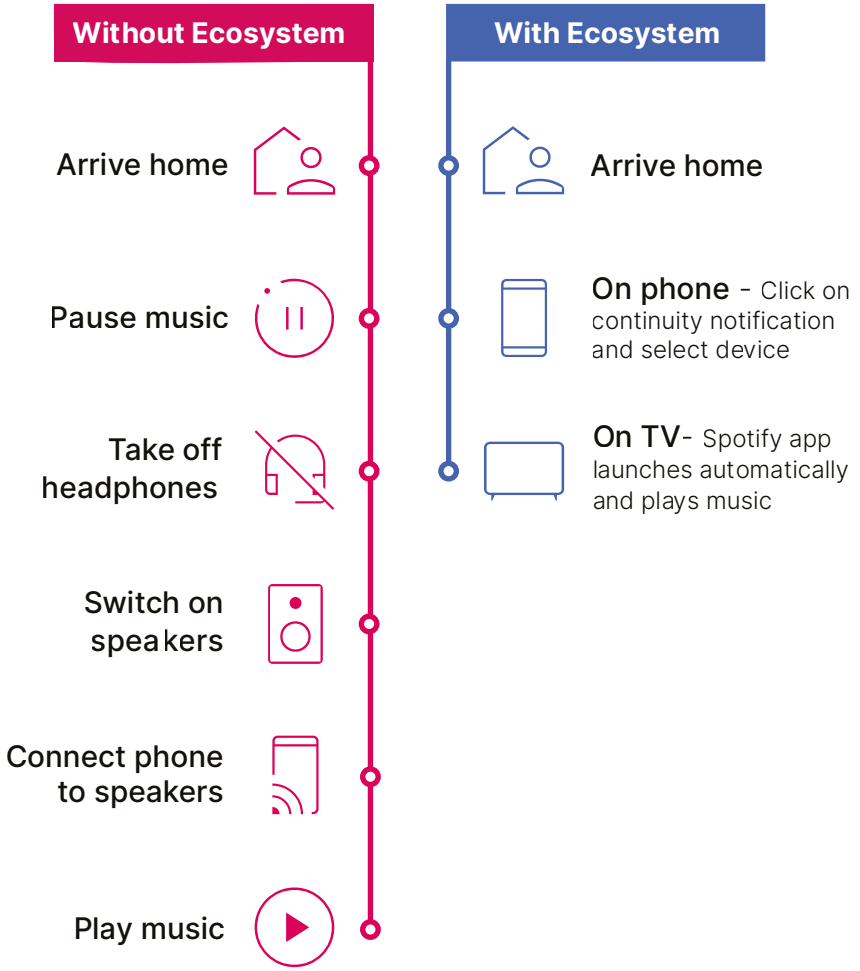
The biggest challenge and achievement was to give the Apple experience across these touchpoints and make it possible for users to jump within the ecosystem with minimal resistance. Largely, Apple has had great success with this, and they continue to build more hardware – the much-awaited XR glasses. The level of interconnectedness and interoperability is what makes Apple, well, Apple. To the point that this could probably be your closing argument in the next 'Android vs Apple' debate.

Apple ecosystem – creating a seamless experience

The enormity behind the subtlety



Move your music with a tap



Amazon, Google, and Microsoft are trying to replicate experiences across devices, but none have come close to the Apple ecosystem. Yet.

However, Samsung has proven to be quite Apple-esque in the Android world. The Galaxy Buds can seamlessly shift between the Galaxy Tab and Fold4 in case you are listening to music on the former and get a call on the latter. Cut the call and you are back to Spotify. In a matter of few seconds. No manual intervention required.

But, what about services outside of these elite ecosystems? Products like Gmail, Zoom, and WhatsApp transcend them, giving you a similar experience across devices and ecosystems. These outliers will have to ensure seamlessness across not just devices, but ecosystems as well.

A design perspective

Don't design around one or two devices

Design for entire ecosystems

While thinking design, designers need to think in terms of ecosystems, and not just a single hardware interface. While building a design system, designers need to keep in mind how the elements of the design system work together and whether the entire experience is easily adaptable to another device or platform.

While user journeys become the foundation, the way we elevate the experience and surprise users beyond the expected will set your storytelling apart!

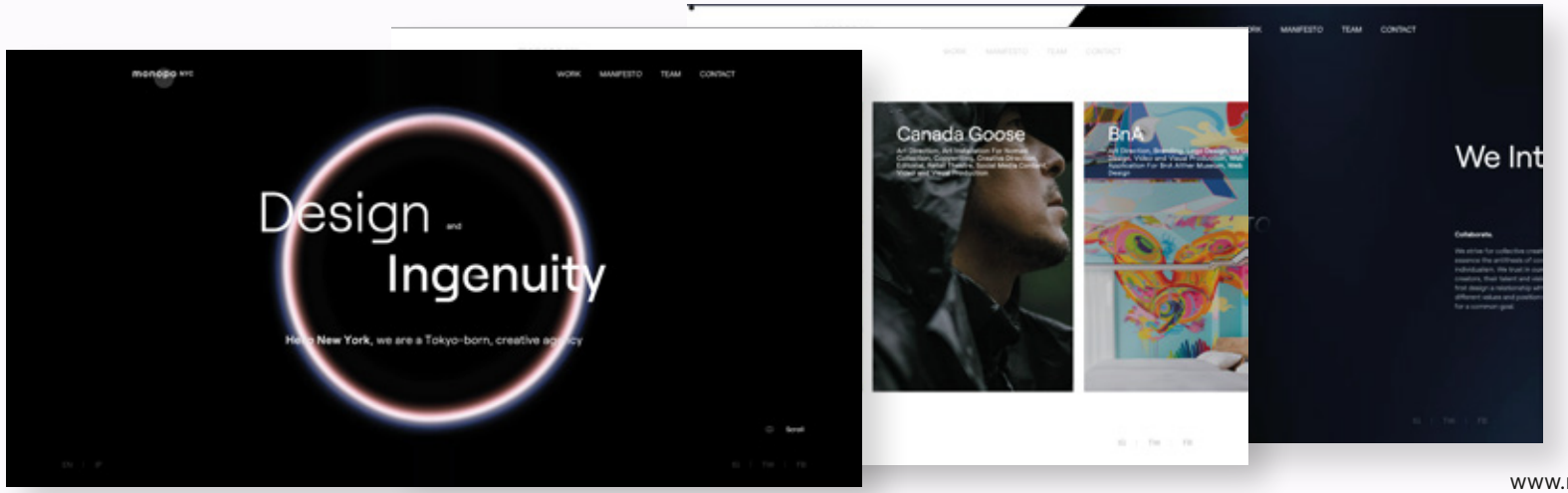
Consumers are unpredictable and user-journeys are outdated

Although not all elements and interactions are possible across devices, there are a few fundamental things that we can expect to see more of, this year.

Horizontal scrolling is primarily targeted at bigger displays and virtual reality. This is a trend that we expect to see pick up again. This feature is often used to display long lists of items, such as images or text, or to allow users to access additional content that does not fit within the constraints of the screen.

In the past, horizontal scroll was used to showcase large amounts of information, but it slowly decreased in popularity due to difficulties users faced while navigating. For instance, users may have difficulty finding the beginning or end of the scrollable content or accurately judging the amount of content available. However, design optimizations have made horizontal scroll UX marginally better.

As design continues to become more visual with the abundant use of 3D and 2D visuals, and with content being created for virtual reality, we will see horizontal scroll making a comeback.



www.monopo.nyc

Intuitive, mobile-first designs are becoming increasingly important as mobile devices continue to set the direction for design across other hardware options. It is crucial for businesses to prioritize the design of their websites for mobile devices, as it is estimated that around 62% of website traffic will come from mobile devices in 2023.

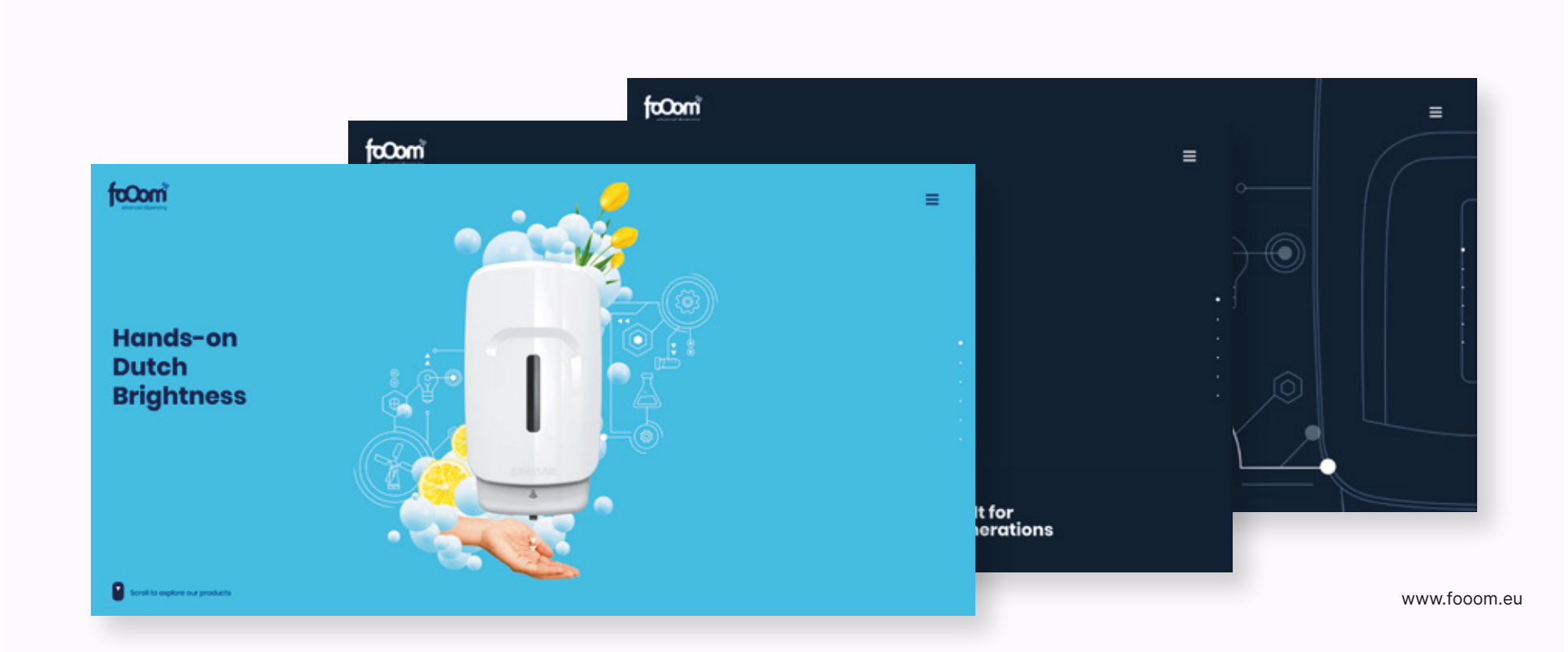
To ensure the best user experience, designers should focus on responsive design that can adapt to a variety of screen sizes and devices. In addition, they should consider the context in which the device is being used, such as ambient noises or lighting conditions, when making design decisions.

This approach, known as **context-first design**, is expected to become more widespread in the future. Once businesses have designed for mobile devices, they can then use the same toolkit to adapt the design to other platforms, such as tablets and maybe even smart watches in the future.

www.fooom.eu

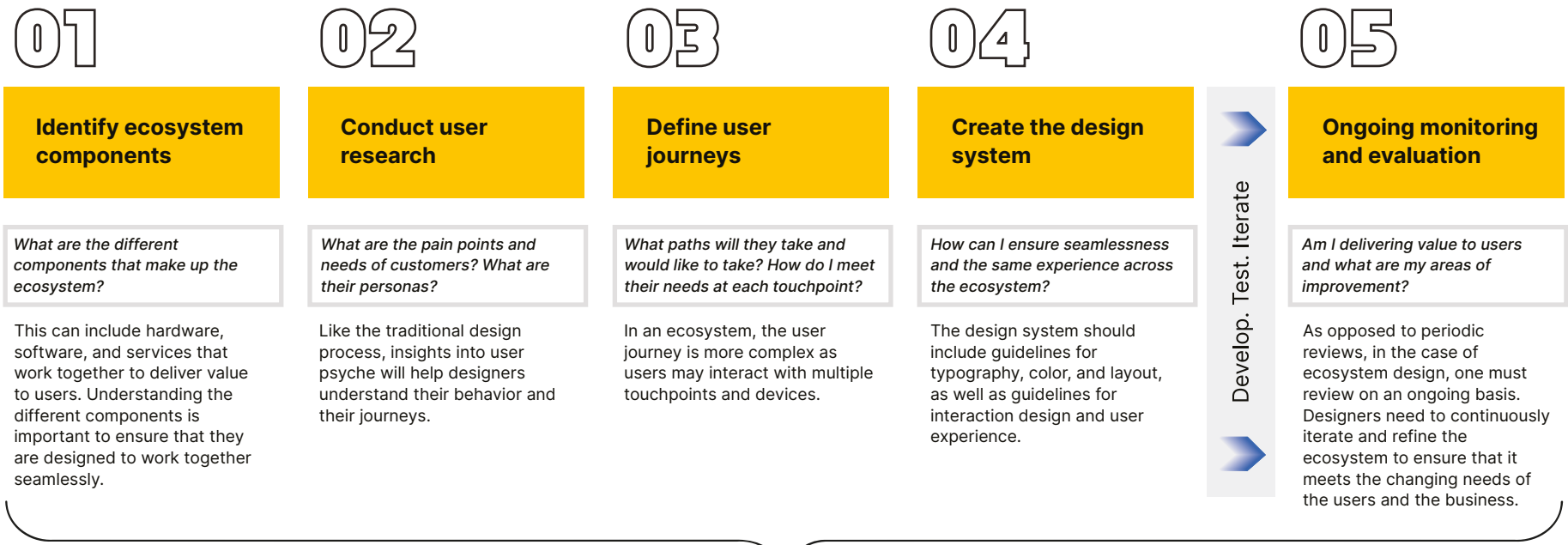
Storyscrolling or scrollytelling is a design trend that we predicted for 2022, and it is set to grow in popularity in website design. One of the key aspects of this trend is scroll-initiated effects. The overall purpose of storyscrolling is to create captivating and immersive brand experiences, which will become increasingly prominent in enhancing the interaction between messaging and the intended audience.

Immersive scrolling allows designs to come to life even with limited content. With minimal effort on the design front, this approach, which works equally well with 2D and 3D designs, uses scroll animations to tell stories and elevate the quality of content. This, in turn, can improve brand perception and drive more attention to the content.



A similar, yet different formula

While the process for ecosystem design follows the same old formula, the focus shifts from just a single product or service to a comprehensive and integrated experience that spans across different touchpoints, channels, and devices. This involves a broader and more strategic approach compared to traditional design processes. Needless to say, it is then, more complicated.



A more collaborative approach

Designing for an ecosystem requires collaboration between different teams and stakeholders, as various components of the ecosystem may be developed by diverse teams (or even companies).

A business perspective

Making businesses great again

With interconnected services that lead to one integrated experience

This one is a no-brainer. By now, we know this will lead to improved user experience, which is always a good thing. Add to it, increased efficiency and effectiveness, which then equals cost savings, improved operational performance, and faster time-to-market for new products and services.

Enhanced brand differentiation

Increased brand recognition, preference, and loyalty, as well as a stronger brand identity and reputation.

Increased revenue and profitability

Increased revenue and profitability by providing new revenue streams, cross-selling opportunities, and upselling potential. This can result in higher customer lifetime value, as well as increased market share and revenue growth.

Better data management and insights

Better data management and insights by integrating data from different touchpoints and devices, which can lead to better decision-making, targeted marketing, and personalized experiences. This can result in improved customer engagement and satisfaction, as well as increased revenue and profitability.

Ward off threats

Increased agility, scalability, security, and collaboration. By having a comprehensive and integrated ecosystem in place, businesses can quickly adapt to changes in the market and consumer preferences, easily extend their offerings to new customers and channels, prevent data breaches and cyber attacks, and foster cross-functional teams and partnerships for innovation and value creation.

02

WHEN IT'S POWERED BY 'COMBINED INTELLIGENCE'

It is pixel perfect

The possibilities of the 'prompts' have all of us at the edge of our seats in anticipation of how the world of design will change and by how much. AI is the partner in crime that creative minds have been looking for.

Humans create AI

A Pikachu pug or Darth Vader ice fishing – they said creativity has no bounds, and boy, has AI truly unleashed it! It's making tech enthusiasts, designers, and businesses giddy with anticipation. Everyone wants to try their hands on it for fun or functionality. Yes, it has been a buzzword for a while now, yet it still manages to turn our heads with a new outfit every season.

Evolution of Generative AI →

1960s - 1970s	1990s - 2000s	2010s	2014	2020 - 2021	2021 - 2023
Early AI research	**Beginning of Artificial Design Intelligence (ADI)**	**Deep learning & neutral networks**	**Generative adversarial networks**	**Increased integration of AI in design**	**Advancements in AI-based design tools**
▪ Experimenting using computers for design process	▪ Automating and optimizing different aspects of the design process	▪ Generating new logos, illustrations and graphics	▪ A significant breakthrough – generating new images, videos, and other types of media based on what it has been trained on	▪ Evolution continues with tools like variational autoencoders (VAEs) and transformer-based models. ▪ Introduction of Adobe's Generative Design for XD, to automate and optimize different aspects of the design process. ▪ Release of Dall-E	▪ Popularity increases, tools becoming more user-friendly ▪ Release of more platforms like Midjourney, ChatGPT

AI and design through the years

With rapid infiltration into various industries, the world of design has not been left out. From AI-assisted design (ADI) to generative AI, the possibilities of what AI can do for web and graphic design are endless. Though thought synonymous, with overlapping objectives and use cases, there are some major differences between the two.

	ADI	GENERATIVE AI
What	This is a form of AI that helps designers with tasks such as image recognition, color matching, and layout suggestions	This is a form of AI that can create new content, designs, and layouts without human intervention
Great for	Designers to speed up their workflow and make the design process more efficient	Generating new ideas, experimenting with different design elements, and creating unique visuals
Purpose	Assistance	Creation
Techniques	Uses machine learning and computational techniques	Uses deep learning and neural networks
Examples	Adobe Experience Design, Gravit, Sketch, Figma, InVision Studio*	DeepArt, Dall-E, Midjourney, Stable Diffusion, Ostagram

* These are primarily graphic and web design tools that have some level of integration with AI-based technologies that are built to assist designers

ADI

ADI uses computational methods and algorithms to assist in the design process, but it doesn't generate new output that is different from what it has been trained on.

For example, ADI can be used to automate and optimize different aspects of the design process such as wireframing, prototyping, and testing, but it does not generate new designs or layouts. The output of ADI is based on the input it has been trained on and the rules it has been programmed with.

Generative AI

Generative AI uses deep learning and neural networks to generate new output that is different from what it has been trained on.

For example, a generative AI model that has been trained on a dataset of images of houses can be prompted with a text description such as "*a two-story pink house with a white fence*" and it will generate an image that corresponds to that description. The output in this case is different from what the model has been trained on.

Created with Midjourney - Prompt: a two-story pink house with a white fence

AI creates wonders

Let's talk a little bit more about consumer AI that has given 2023 a lot of technology chatter – like **OpenAI, Midjourney and Stable Diffusion.**

ICMYI👇🏻

OpenAI is a research laboratory that focuses on the development of AI and its applications. OpenAI conducts research in a wide range of areas, including machine learning, robotics, economics, and computer science, and it has developed a number of influential AI technologies and tools, such as the famed GPT (Generative Pre-trained Transformer) language model and the DALL-E image generation system.

Prompt: **‘Brad pitt in tutu dress dancing on stage’**

AI in the Wild

ChatGPT is a language model based on GPT3, designed to have a conversational interface. It can respond to follow-up questions, recognize and correct its own mistakes, challenge incorrect information, and reject inappropriate requests.

DALL-E is capable of generating high-quality images from text descriptions by using a variant of the GPT (Generative Pre-trained Transformer) language model. It has been demonstrated to be a powerful tool for tasks such as image generation, style transfer, and text-to-image synthesis.

Both Midjourney and Stable Diffusion work on the principle of prompts being inputs, with the visuals being generated based on the exact specifications of these prompts.

We saw public previews of all these technologies towards the end of 2022. The initial reaction was surprise and fascination with the immense potential of these tools that could enrich creative processes. Then, of course, dawned fear of these platforms as threats to people, more specifically designers.

It soon became a 😍 and 😳 relationship with AI.

I and AI

In their current state, the visual tools are able to create imagery based on visuals that the system has learned from the work of humans so far. The same principle applies to ChatGPT, where anything it writes is based on something that's already been written. ChatGPT is great at structure, but still has a long way to go when it comes to accuracy. The image-based AI systems also have a lot of limitations in creativity and imagination – they cannot produce fresh ideas.

The kings and queens of intelligence remains us – HUMANS.

A design perspective

In its very essence, there can't be a strict formula to creativity

And AI is solely based on data and algorithms

Think about it. AI can only generate a Picasso-inspired artwork, only because Picasso (a human) created art in the first place. Human intervention is still needed.

01. Fine-tuning needs a human touch

Making subjective changes based on personal taste, design principles, and feedback.

02. Composition needs the human eye

AI lacks creative intuitions on colors, shapes, textures – things that come together to create a balance and intended effect.

03. Works on prompts, not perspectives

AI takes everything literally. So, it has a very superficial and not contextual understanding of what you say.

Designer

Human will THINK.

Prompt: **'Healthy Eating'**

A designer will think of creative ways to represent this – it could be cute, silly, punny, sarcastic, and imbibe curiosity.

AI

A tool will EXECUTE.

Prompt: **'Healthy Eating'**

AI can be very literal. But it can be used as a starting point and prompted to create what a designer thinks.

04. Limited imagination

As depicted in the image and highlighted in the above point, AI's imagination needs to be fed, ultimately, by a human.

05. Neural, not neutral

We checked for biases, and it delivered.

Prompt: **Pilot**

Prompt: Flight Attendant

Not cool AI. Not cool.

06. This is what nightmares are made of

The AI system may not have seen enough data or variations to generate a realistic image, leading to flawed pixels and noise in the final image. Or distorted imagery.

And in some cases, HER.

Remember Loab? Hard to forget, isn't she?
You can read all about her on Wikipedia.

07. Unique may not always be a good thing

Every image produced is truly unique, no two images even with the same prompts are similar. So, when there is a need to recreate designs, AI fails.

A business perspective

01. Machines don't understand emotions

Emotional needs of customers or cultural context are important while creating designs for businesses.

02. Creativity is not AI's cup of tea

AI can (to some extent) implement your vision, but it can't produce unique and innovative ideas.

03. AI walks a straight line

Designers are able to solve complex design problems by thinking outside the box and coming up with creative solutions. AI can only solve problems within its programmed parameters.

04. AI knows no ethics

Consumer protection, privacy, and responsible advertising — a human touch is important to make these kind of ethical decisions.

05. Watch out for that copyright

It's a two-fold conundrum, really.

a. These tools permit users to create work in a certain person's style, leading to violation of their rights as artists.

b. AI-generated designs cannot (yet) be copyrighted, as copyright laws identify works that "must be created by a human being."

06. Lack of empathy, human touch, and personalization

But you gotta ❤ AI

Image automation to image personalization has designers, marketers, and brands scream with joy. In a matter of minutes, one can get on-brand visuals for multiple channels of advertising and marketing – social media, e-mailers, print, GDNs...the list is exhaustive. And yet, we can't get enough!

To a great extent, a lot of designers have already introduced AI into their workflow. Here's how we see AI expanding itself in the design process:

Automating repetitive tasks: AI can automate repetitive tasks such as resizing images or generating code. This would be particularly useful for tasks that involve multiple files or pages.

Generating design ideas: Currently, AI can generate design ideas and concepts based on certain criteria or preferences. For example, a designer could input design elements like color palette, typography, and layout, and the AI could generate a range of design options based on those prompts.

Optimizing design: AI can be used to optimize website design for different devices and screen sizes. It will also be effective in improving website performance by identifying and fixing issues like slow load times or broken links.

Improving UX: AI can analyze user behavior and preferences on a website and make recommendations for improving the overall user experience. For instance, AI can identify the most popular pages or features with users and suggest ways to optimize or enhance those pages or features. AI can also personalize the user experience by displaying content or recommendations based on the user's past behavior or preferences.

BUT TOGETHER, THEY CREATE MASTERPIECES
It's the future for 'Combined Intelligence'

Garry Kasparov, the world's greatest-ever chess player (who lost to a machine way back in 1997) said, ***"Using computers for the more menial aspects of reasoning will free us, elevating our cognition towards creativity, curiosity, beauty, and joy."***

Like opposite forces, though on the same team, humans and AI complement each other by making the other more effective and efficient, while making up for their respective shortcomings. One makes manual labor easier and faster, while the other brings creativity to the table.

The present and future of AI in design

AI is able to assist designers in creating millions of unique products and unique versions of packaging while maintaining the brand style and design integrity.

Through facial recognition and computer vision, AI is able to determine gender, age, location cotext, and the current mood of the user. UX designers can deliver more personalized experiences based on this information.

In analyzing vast amounts of data, AI helps designers design higher-performing products based on the best-converting designs, UX best practices, conventions and standards, and known usability metrics.

AI helps designers personalize e-commerce sites as well as desian more effectively overall. A branded baseline design is created by a designer, and AI personalizes the experience for shoppers on the fly based on their profile and billions of data points.

Based on thousands of previous studies, AI co-creating with designers predicts how users look at/read content on a screen, so designers can direct attention towards important dates.

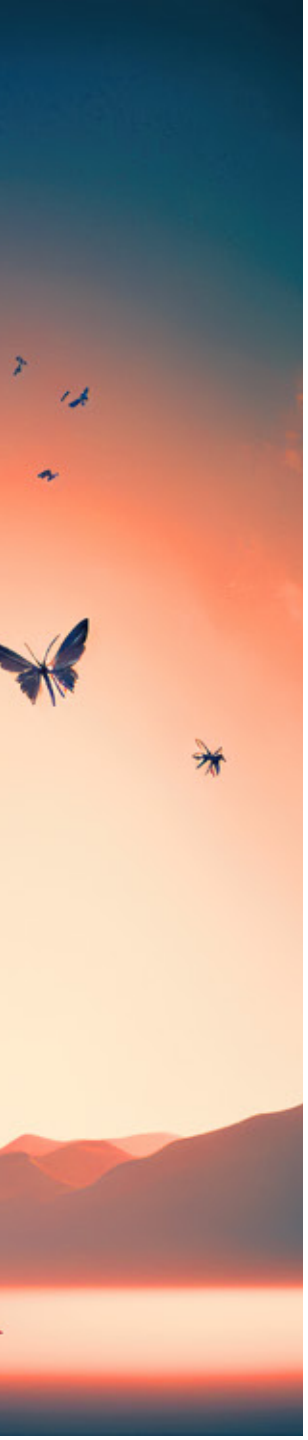
Coupling AI with voice recognition and chatbots enables UX desianers to create speedier, more convenient, and personalized experiences. It is projected that the number of people using digital assistants will rise from 700M to over 1.8B by 2021.

AI design tools help designers create winning designs more quickly by automatically refining a product's design based on millions of other sucessful ones. It can also suggest entirely new design alternatives and report how and why these would improve user engagement.

AI generates millions of unique versions of homepages and landing pages for news sites and media brands based on user profiles, preferences, and tracking data.

AI generative design: designers co-creating with AI are able to produce multiple design solutions by simply putting in a goal or defined problem.

Source: https://www.toptal.com/designers/product-design/infographic-ai-in-design



03

CREATING SURREAL REALITIES

Immersive experiences by design, not by accident

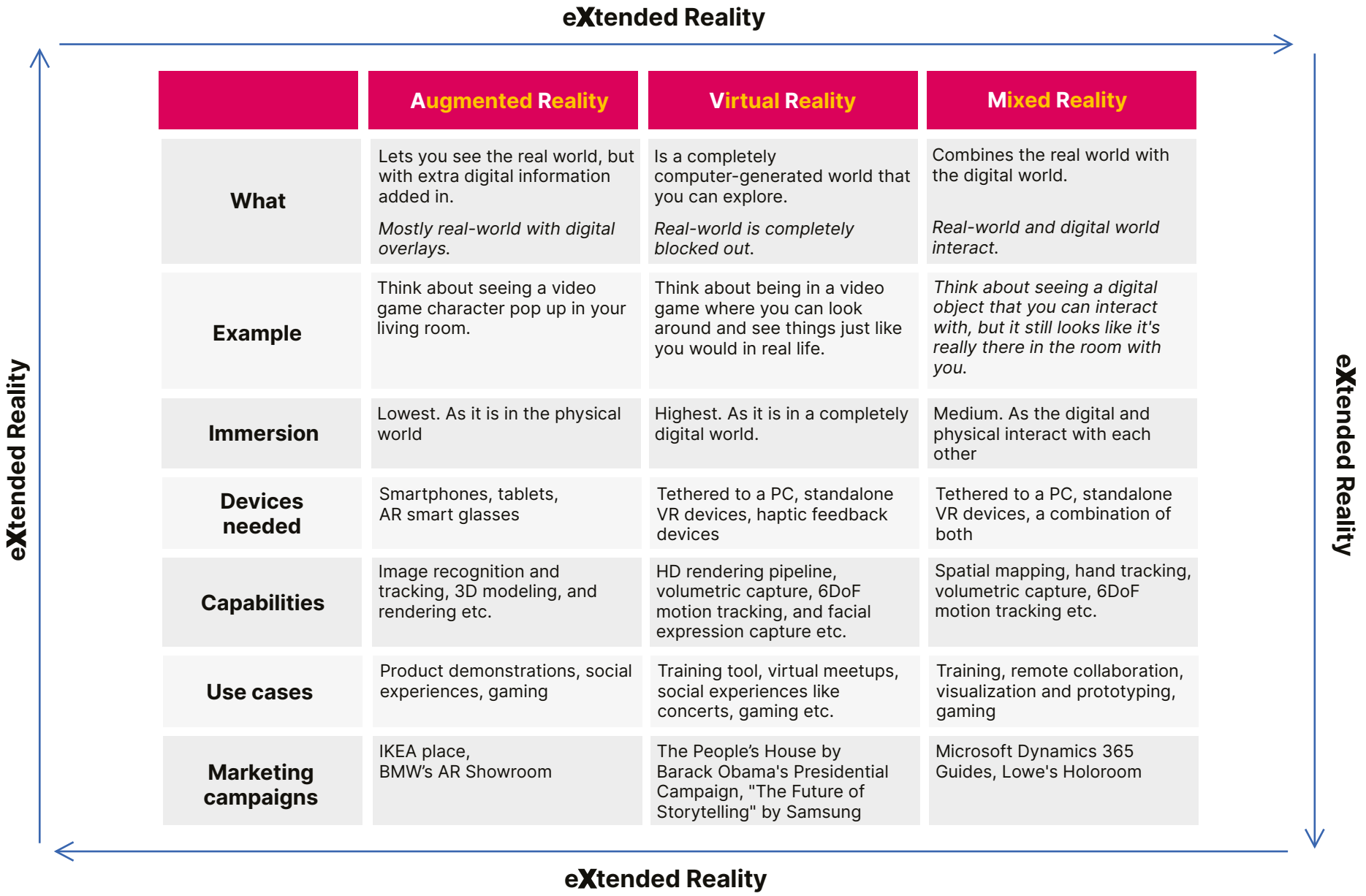
Reality in its essence is something that always changes and adapts to a new era. Today, we are able to not just change but also create realities. Any reality that we fancy. Imagine changing history and the present with futuristic technologies – the level of coolness on this one is extra-terrestrial. How well you design these realties is directly proportional to how delighted your customers will be.

Roll your realities

Imagine you come across a cottage with four walls and a ceiling which becomes a new reality for you. But what makes it cozy and inviting? It’s the decorations and furnishings, the tinsels and trinkets – that’s immersive design for you. New Reality or Extended Reality, in simple terms, refers to experiences created using technology, like virtual reality or augmented reality, that provide a sense of presence in a different environment or context. These environments can range from entirely computer-generated virtual worlds to real-world environments with digital elements added in.

It's like playing make-believe, but with really cool technology! Different types of technology.

Where there’s Extended Reality, there’s immersive design.



	Augmented Reality	Virtual Reality	Mixed Reality
What	Lets you see the real world, but with extra digital information added in. *Mostly real-world with digital overlays.*	Is a completely computer-generated world that you can explore. *Real-world is completely blocked out.*	Combines the real world with the digital world. *Real-world and digital world interact.*
Example	Think about seeing a video game character pop up in your living room.	Think about being in a video game where you can look around and see things just like you would in real life.	*Think about seeing a digital object that you can interact with, but it still looks like it's really there in the room with you.*
Immersion	Lowest. As it is in the physical world	Highest. As it is in a completely digital world.	Medium. As the digital and physical interact with each other
Devices needed	Smartphones, tablets, AR smart glasses	Tethered to a PC, standalone VR devices, haptic feedback devices	Tethered to a PC, standalone VR devices, a combination of both
Capabilities	Image recognition and tracking, 3D modeling, and rendering etc.	HD rendering pipeline, volumetric capture, 6DoF motion tracking, and facial expression capture etc.	Spatial mapping, hand tracking, volumetric capture, 6DoF motion tracking etc.
Use cases	Product demonstrations, social experiences, gaming	Training tool, virtual meetups, social experiences like concerts, gaming etc.	Training, remote collaboration, visualization and prototyping, gaming
Marketing campaigns	IKEA place, BMW's AR Showroom	The People's House by Barack Obama's Presidential Campaign, "The Future of Storytelling" by Samsung	Microsoft Dynamics 365 Guides, Lowe's Holoroom

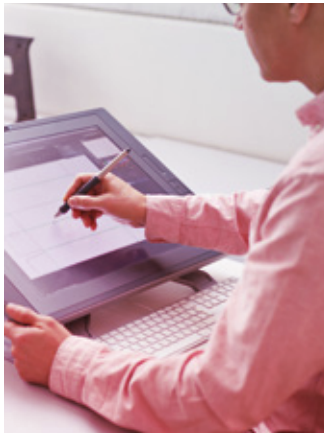
Keep evolving, keep designing

The ‘what next’ in a designer’s world is like a rollercoaster ride. Lots of twists and turns with unexpected loops that push the boundaries of what is possible. The minute one craft is mastered, there is yet another one (or two) to grasp. Scary? Yes. Exciting? You said the word.

Never a dull moment.

Evolution of Design

- Emergence of desktop publishing software, such as Adobe Illustrator and Photoshop, enabling designers to create digital designs
- Key figures: Jacob Cass, Shweta Malhotra, David Airey

Traditional Graphic Design	Digital Graphic Design	Web Design
• Emphasis on print-based design such as brochures, posters, and packaging • Key figures: Paul Rand, Saul Bass, Satyajit Ray		• Development of the World Wide Web and the need for designers to create websites and web graphics • Key figures: Jeffrey Zeldman, Suhasini Ayer, Dan Cederholm

- Recognition of the importance of considering the user's experience when designing websites and digital products.
- Key figures: Don Norman, Rajesh K Narang, Jared Spool

- Shift towards designing for a range of devices, from desktops to smartphones, and the need to create flexible, adaptable designs
- Key figures: Ethan Marcotte, Brad Frost, Rishab Kashal

- Emergence of AI-powered design tools and the integration of machine learning into the design process
- Key figures: Danny Yeung, Ravi Teja, Mark Hammond

User Experience Design

Interaction Design

- Focus on creating engaging and interactive experiences through the design of interfaces, animations, and micro interactions
- Key figures: Dan Saffer, Vaibhav Agarwal, Alan Cooper

Responsive Design

Design Systems

- Emphasis on creating a consistent, scalable design language across multiple products and platforms
- Key figures: Nathan Curtis, Alla Kholmatova, Chaitanya Sathe

AI in Design

Immersive Design

- A relatively new field, this involves creation of interactive and engaging experiences that fully immerse the user in a digital environment
- Key figures: Timony West, Aaron Kisner, Jonna Breitenhuber

It's not all games

Contrary to popular belief and usage, XR experiences don't pertain just to gaming, but, as seen above, to successful marketing campaigns as well. Where there are campaigns, there is content and without doubt, design.

It is time designers evolve again. Be it graphic or web or UX/UI, immersive design is making tremendous headway in the space of realistic user interfaces, designs around experiences that are not only clutter-breaking different, but also, personal. One experience still does not fit all.

This requires a shift in thinking.

01. The web ain't flat anymore – from 2D to 3D

When you are designing for a virtual or augmented space, you are thinking not what you can see on the computer screen, rather what you can see and experience inside the computer screen. A shift in this perspective implies implementation of objects and environments in three dimensions.

Designers must consider spatial relationships, depth, and dimension, as well as user interface design, navigation, and the user's physical movement within the environment. Technical limitations and possibilities must also be taken into account.

02. Look but don't touch is outdated – from static to dynamic

In this world, the user should be able to move or manipulate objects. Designers must consider different levels of interaction, technical capabilities of the platform, and how the design will respond to user input.

03. The ball is in the user's court – from passive to active

Creating designs that allow for user interaction and agency. This includes designing interactive objects, incorporating user interface and sound design, and allowing the user to shape the direction of the experience. Designers must also consider the user's physical movement within the virtual or augmented space and their overall comfort.

*Design plays an integral part in shifting storytelling from incidental to instrumental**

Making someone a part of your story, rather than just telling them the story, has a deeper impact and will leave a lasting impression. Imagine a website that doesn't just look great visually, but actually pulls people in.

Incidental	Instrumental
Design as an accessory or as an afterthought	Design with intention and purpose
Interactions that occur accidentally or without purpose. For e.g.: clicking on a button and accidentally triggering an animation or sound effect that doesn't contribute to the user's experience.	Interactions that have a clear purpose and essential to user's experience. For e.g.: using voice commands to trigger specific actions.
Considers only prompted moves, guiding a user through the website in a predictable manner	Unprompted moves let the user explore on their own and lets the user choose the path they take

For designers, the implications of immersive design are significant. Designers must have a deep understanding of user behavior, psychology, and technology to create effective immersive designs. They also need to consider issues such as accessibility, user experience, and the ethical implications of creating immersive environments. Additionally, designers must be able to collaborate effectively with other disciplines such as developers, sound designers, and writers to create an integrated and seamless experience.

*Source: https://www.youtube.com/watch?v=gSTqcouG5JU

A design perspective

There is a lot to learn and unlearn when it comes to immersive designing. It can get overwhelming, but the trick is to start it simple — designing one micro-interaction at a time, leveraging one technology at a time.

Creating an AirBnB experience

What are we talking about? You are not just creating an interface anymore, you are architecting an experiential space — physical or digital or both. It's time to stop thinking about your audience as 'users,' rather as 'tenants.' They are visiting this world that you have created with the intention of staying and beyond — sightseeing, networking, buying...even complaining (customer feedback is important after all).

Side note: Some experts suggest using the term 'players,' rather than 'users.' While the essence remains mostly the same, for the pure purpose of marketing and design strategies, we will stay away from terminologies that have gaming implications.

So, how do you create this wondrous world?

For the purpose of easy understanding, and as an interesting read to bookmark, we have created an A-Z formula on everything you need to know about 'Design and Extended Reality.' This will help designers, marketers, and brands understand this world better by grasping the *Immersive Design Vocabulary*.

Immersive design dictionary

Designing for Extended Reality

A

Augmented Reality

An overlay of digital information or virtual objects onto the real-world environment. Designers should consider device capabilities and design for the affordances of the technology, such as tracking physical objects and gestures. Explore the use of AI to enhance the user experience by creating personalized and context-aware AR content.

Affordances

Refers to the properties of a technology that enable certain actions or interactions. So, while designing an XR experience, designers need to acclimatize themselves to what the technology allows, like using hand gestures or interacting with objects.

Animojis

Animojis are animated emojis that use facial recognition technology to mimic the user's facial expressions and movements. Animojis can be a useful tool for designers to add personality and emotion to their designs.

AI

Ability of machines to learn and perform tasks that would typically require human intelligence. Designers can leverage AI to create personalized and context-aware experiences for users.

B Boundary system

Designers can use a boundary system to create a virtual boundary that corresponds to the physical space where the user is located, helping them stay oriented and avoid running into physical objects. This can enhance the overall experience and prevent users from getting hurt or disoriented while using immersive technologies.

C Collision detection

Refers to the process of detecting when a user's virtual object comes into contact with another object in the virtual environment. This can be used to simulate real-world interactions and provide haptic feedback to the user, enhancing the learning experience. Designers can use a variety of techniques to implement collision detection in XR, such as defining object boundaries, using physics simulations, and writing code to detect collisions.

Control

Or how the user's hands should look. Designers need to address things like realism, functionality, physical sensation (refer to affordances), customization of color or size of controls or different gestures for different functions etc.

D Diegetic experience

When the user's experience is seamlessly integrated into their real-world environment and appears to be a natural part of it. Usage of AR and VR technology enables this.

Depth sensing

Perceiving and measuring the distance between objects in a given environment. By using depth sensing technology, designers can create virtual objects that appear to be in the same physical space as the user, allowing for more natural and intuitive interactions.

E

Entertainment

While functionality is a key point to web and graphic design, it is important to remember that immersive experiences should also be entertaining to ensure user engagement. The way to do it is to incorporate storytelling into design. Users should want to return to your virtual world.

Environment

The digital space an XR experience will take place in. Includes lighting, sound, and other environmental effects to create the right atmosphere and tonality.

F

Feedback

Response that a user receives when they interact with an XR experience such as visual, audio, or haptic feedback, and is used to inform the user that their actions have been recognized and registered by the system. Example – visual, audio cues or animations etc.

Field of View

Refers to the extent of the user's visual field that is covered by the XR device they are using. Designers can use techniques like foveated rendering to improve the resolution of the image in the user's central field of vision.

G

Good performance

Ability of an XR experience to run smoothly and responsively, without lag or other performance issues. Designers must consider factors like complexity of the virtual environment, the number of objects on the screen, and the capabilities of the user's device in this case.

Gimbal lock

A 3D graphics and computer animation term that can also be relevant to immersive design and XR. It occurs when a three-dimensional object or camera's rotational axes align and cause a loss of one degree of freedom. This can result in unpredictable or incorrect rotations in the object or camera's movements. In immersive design, gimbal lock can be avoided by using quaternions or other rotation representations that do not

suffer from this limitation. Designers can also use careful planning and testing of rotational movements to minimize the risk of gimbal lock occurring.

H

Haptic feedback

Use of physical feedback to enhance the user's sense of immersion in an XR experience. Designers can use devices such as haptic gloves or vests to provide physical feedback to the user or use vibration motors or other feedback mechanisms built into smartphones and tablets.

I

Interactivity

Enhances user's sense of presence in virtual environment, hence making it more engaging. Designers can create interactive objects/interfaces, design user controls, user feedback, etc.

Image/video processing

From color correction to image filtering to using depth sensing and image-based lighting techniques to create more compelling and realistic visual content for XR experiences.

J

Judder

Refers to the visual stuttering or jerky motion that can occur in a virtual environment, especially during fast movements or camera rotations. It can be caused by factors such as low frame rates, slow rendering, or insufficient graphics processing power. Designers can mitigate judder by optimizing performance and reducing the workload on the graphics card, such as by minimizing the number of objects on screen or using simpler textures.

K

Kinematics

Movement and behavior of virtual objects and characters in a simulated environment.
By applying the principles of kinematics to the movement and behavior of virtual objects, designers can create more natural and intuitive interactions for users.

L

Location

Physical environment in which a virtual reality or augmented reality experience takes place.
Designers need to take into account factors such as lighting conditions, physical obstacles, and the size and shape of the experience area.

LiDAR

(Light Detection and Ranging) is a technology that uses laser light to measure distances and create detailed 3D maps of physical spaces.
This can be used to create more accurate and detailed virtual environments.

M

Music

Designers should also consider how the music will be experienced by the user.
For example, in virtual reality experiences, the music may be spatialized, so that the sound appears to come from different locations in the virtual environment.

Movement

Animations and visual effects can be used to draw the user's attention to important elements of the experience, or to create a sense of flow and continuity as the user moves through the environment.

Manipulating

Ability to interact with virtual objects and environments with controllers or hand gestures.

N

Navigating

Refers to the way users move through virtual or augmented environments. Designers need to think about the layout of the space, how objects and interactive elements are positioned, and what kind of navigation controls or input devices will be used.

O

Oculus

A brand of virtual reality devices, including headsets and hand controllers, developed by Meta, also known as Meta Quest 2. By designing VR content specifically for the Oculus platform, designers can take advantage of its unique features and capabilities, such as its high-quality display, 3D spatial audio, and precise hand tracking.

Object detection and tracking

Designing a virtual character that could respond to a user's movements or the presence of real-world objects, making the experience more immersive and personalized.

P

Personalization

Designing with the user's preferences, interests, and behavior in mind. Needless to say, this golden rule applies to the virtual world as well.

Prototyping

Test. Test. Test. Test for feasibility and gather feedback.

Presence design

Usage of spatial audio, haptic feedback, and realistic graphics, that work together to create a sense of immersion and presence.

Q

Quaternions

Quaternions are a mathematical notation system used to represent the orientation and rotation of objects in three-dimensional space. They are commonly used in computer graphics, including XR design, because they offer a more efficient and stable way to represent rotations. This can help create smoother and more realistic motion and animations within immersive experiences.

R

Reality capture

Process of capturing real-world objects or scenes in digital form using technologies such as photogrammetry, 3D scanning, LiDAR, or depth sensors.

S

Signifiers

Visual or auditory cues that provide information about the function or purpose of a particular object or interface, helping users understand how to interact with virtual objects or environments. Designers can use signifiers such as icons, text labels, colors, shapes, or sounds to guide users through an experience and provide feedback on their actions.

Spatial computing

Refers to the use of digital technologies to interact with physical spaces and objects in real time. Designers can use spatial computing to create experiences that respond to users' movements and actions, allowing them to explore and interact with digital content in a more natural and intuitive way.

Selection

Designers need to consider various factors when designing for selection, such as the types of input devices used, the precision and accuracy of the interactions, and the visual and auditory feedback provided to the user.

Sound design

Designing sound effects, ambient noises, and music to create a sense of presence and reinforce the virtual environment. Good sound design can also help guide the user's attention to specific areas or objects within the environment.

T

Tracking and positioning

Used to track the position and movement of the user, allowing for the creation of interactive and engaging experiences.

Time of Flight (ToF)

A common depth-sensing technology used in XR which uses infrared light to measure the distance between the device and surrounding objects.

U

User psychology

Designers need to consider the cognitive and perceptual processes involved in interacting with immersive technologies to ensure that the experience is not overwhelming or confusing for the user. They need to design with empathy, taking into account the user's goals, motivations, and limitations, to create experiences that are not only functional but also emotionally meaningful.

V

Voice directions

Refers to audio instructions provided to users as they navigate through a virtual or augmented reality environment. Used to provide contextual information and guidance, enhancing their experience and making it more interactive.

W

WebXR

A web API that allows developers to create immersive experiences using virtual and augmented reality within web browsers. It allows for easy distribution of XR experiences without the need to install a standalone app and is beneficial for designers in creating immersive experiences accessible through a web browser.

X *XR*

XR is an umbrella term that includes all immersive technologies that are capable of blending the real and virtual worlds.

Y *Yaw, Pitch, Roll*

Yaw, pitch, and roll are terms used to describe the movement of an object in 3D space. Yaw refers to rotation around the vertical axis, pitch refers to rotation around the horizontal axis, and roll refers to rotation around the forward-facing axis. These terms are commonly used in immersive design and XR to describe the movement of the user's head or the orientation of objects in virtual space.

Z *Z-axis/Z depth*

In immersive design and XR, the Z-axis is often used to represent depth or distance in a 3D scene, with objects closer to the viewer having lower Z-depth values and objects farther away having higher Z-depth values. This information is used to create the illusion of depth and to determine the order in which objects should be rendered, so that objects that are closer to the viewer appear in front of objects that are farther away.

3D elements

Elements that can be manipulated, moved, or interacted with, adding depth and realism to the environment.

A business perspective

Make believe made for businesses

The B2C sector has seen an aggressive adoption of XR, with some use cases in the B2B space. But it has a wonderful future if implemented with the core of storytelling still intact. The human brain is visual. It likes to see things, and not just one-way. It remembers more when it does more than just seeing. Experiencing something in more than just two dimensions is what sets XR apart.

01. Powerful presentations

Most pitches are done with Slideware. There's a host who talks through the story while slides change on the screen. The quality of the presentation largely depends on the slides and the storytelling skills of the presenter.

Imagine doing your presentations either completely in VR or by using XR as immersive assists. You aren't just looking at slides, you're seeing a story in 360°. And of course, you aren't just seeing. You're hearing, you're interacting, you're making real-time choices, and watching the impact of those choices move the story forward.

02. Immersive advertising

Largely implemented using Augmented Reality, this is a use-case we've seen the most in 2022. Brands have built micro-to-large experiences to promote their products and services, either as standalone apps or mobile-led browser experiences. You scan a quick code on the phone or click on a link, and it sets you into a new, hybrid experience where you can interact with 3D objects and media on your phone.

03. Experiential demos

Consider the example of an oil & gas related software service offering that cuts down the costs of operations and production time by 25%. The way to demo this offering would be to show a prototype of the tool – most likely the dashboard. In the next few slides, or as we progress into the demo, this would list the impact.

What if you could build the entire digital twin of the oil rig control room? What if your customer could just put on VR glasses and actually be present in this digital twin of the oil rig control room? The customer can use the VR controllers or just hand tracking to interact with the control panel of the tool and visually see the impact of their interactions as outcomes of using the tool. A user is more likely to remember immersive feedback, and a good story makes all the difference!

04. The new blended realities events

It's a challenge to stand out in an event where you have dozens to hundreds of brands competing for the memory space of the audience. The most significant challenge is to make your brand and your story stand out from the noise ***(a Zensciences classic!)***.

With the use of social media, we now live in a world with short attention spans. It's tough when, as an event attendee, I pass through multiple booths, and everyone's trying to tell a story. Whom do I listen to? Who would even manage to capture enough of my attention so that I wouldn't just pass through a brand's booth-space, but actually pause for a bit and take some time to see what their story is?

Move over one-sided interaction touchpoints – LED screens, flyers, standees, etc. How about a 360° video that lets me make my own decisions on a VR setup? Or if there's a standee talking about a particular service offering, how about pulling out your mobile device to quickly see what the product is and how it works through Augmented Reality?

Something that users can touch, see (in three dimensions), feel, hear, and interact with – something that is an all-round multi-sensory experience – is what people remember. And that's where XR is headed.

Source: https://www.creativereview.co.uk/nike-air-max-day-3d-billboard-campaign/

Yes, the world of XR and its limitless possibilities are thrilling, but unfortunately, conditions always do apply. So, here is a list of things to consider before you dive in head first.

User-facing

Technology: Avoid designing experiences that require specialized hardware, as not all users will have access to it.

Functionality: Prioritize usability over aesthetics, to ensure that your designs are easy to navigate and use.

Optimization: Check your designs for speed and performance, to prevent slow load times and poor performance.

Inclusivity: Ensure that your designs are accessible to users with a range of abilities and disabilities.

User feedback: Use it to improve your designs and ensure they meet user needs and expectations.

Business-facing

Budget constraints

Technology limitations

Brand guidelines and messaging

Regulatory compliances

Time constraints

YOU HAVE BEEN WARNED ;)

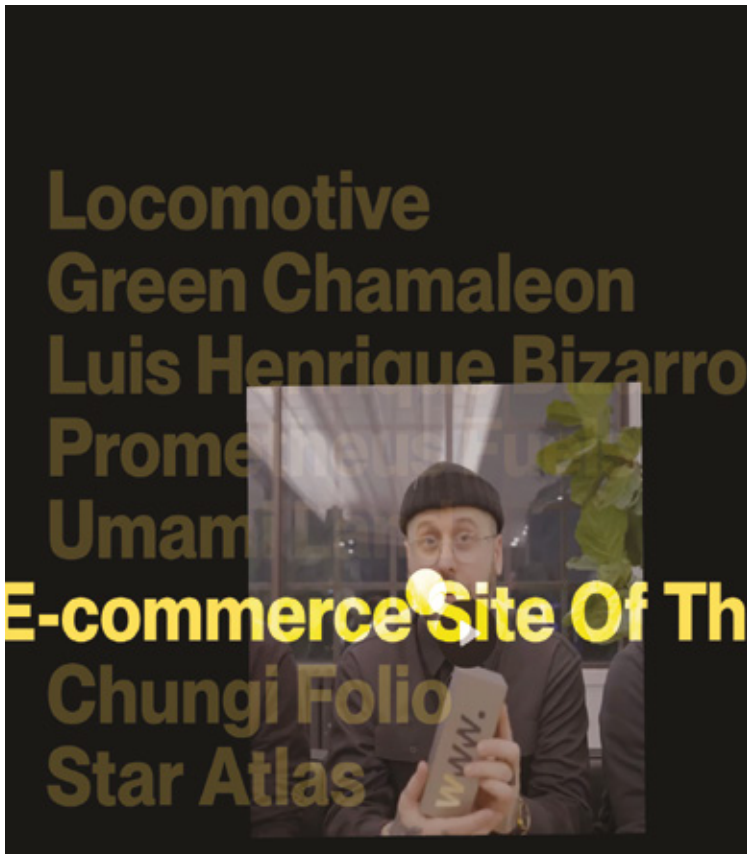
While those are some big cats to bell, the way ahead for the design world is undoubtedly not boring. On that note, we would like to end with a bite-sized section that we call...

BIG 5s

5 design techniques that we 😍

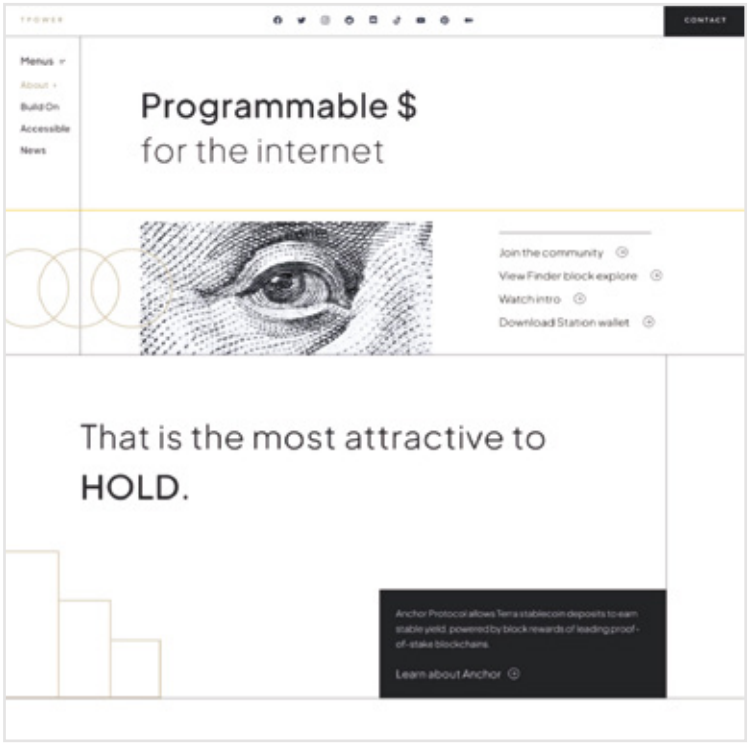
Creative typography

- Experimentations with typography will be among the prominent web design trends in 2023. From staying on the sidelines in designs for years, typography will come to the limelight in 2023.
- This can be read together with the growing focus on quality microcopy and its impact on improving the user experience



Micro interactions

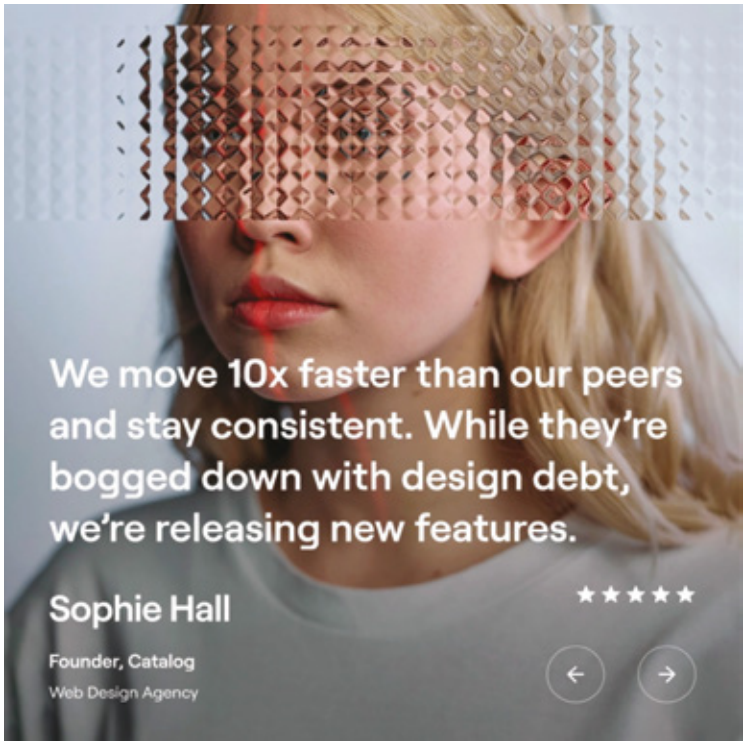
- Micro interactions add extra delight to web designs in 2023. Rather than being used in an ornamental way, micro interactions will be used to add value to designs such as to give a hovering effect to logos or inform users about action completions
- They will be less superfluous and more organic



Line work

- A trend that feels in some ways both modern and throwback is linework. Designers can use lines to delineate sections, headers, paragraphs, and product galleries, or create a dynamic grid for the entire webpage.

- Add linework illustrations (abstract or representational) to bring this style even further. With this type of design, line weight is going to have the biggest impact on the final effect. The effect is technical, sharp, and minimalist.

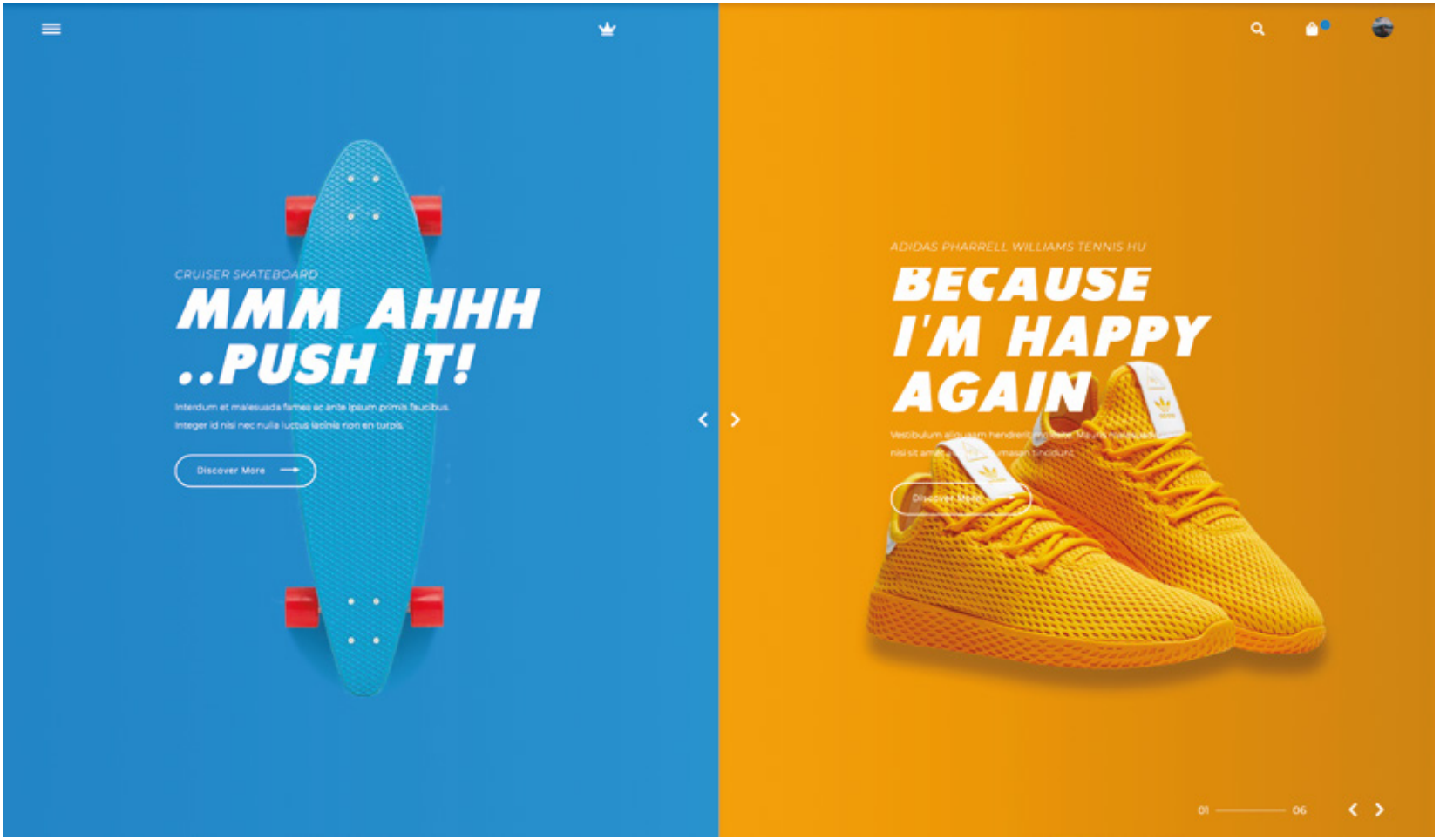


More glassmorphism

- A combination of transparency, blur, and movement can make elements of pages behave visually like glass. You can use this technique in illustrations, or even full sections.

- The key to this style is diffusion, reflection, and shadow, which create the optical illusion. Combined with subtle movement, the glass effect can make a site feel 3D.

- The diffusion of the "frosted glass" within the image allows you to incorporate transparency into your design without it feeling too visually messy



Split screen

- An interesting way to break up a design is with a split-screen layout, which we have been noticing more recently. The dual layout gives your design contrast, visual interest, and natural separation of content.

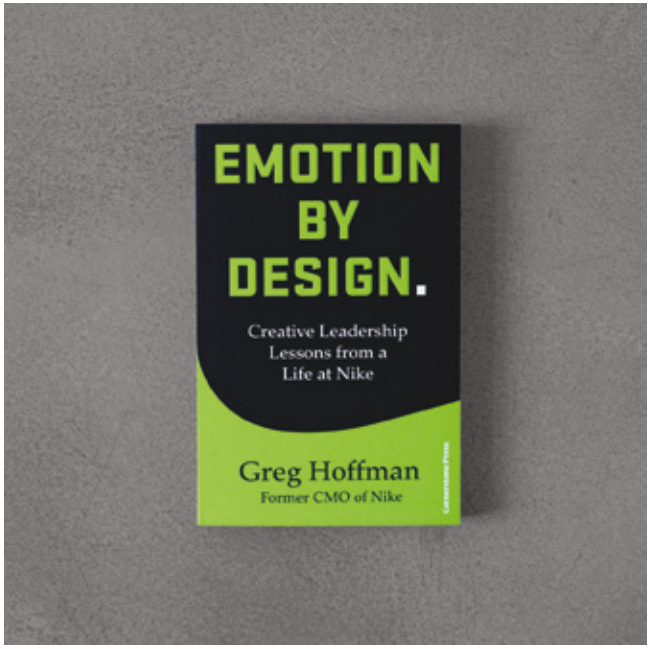
- It's also a great excuse to play with color

5 design books 🤓

Nike: Better is Temporary

Sam Grawe

This book chronicles Nike's design process and philosophy through the company's history. It emphasizes the importance of iteration and experimentation in design, as well as the need to constantly strive for improvement — an important trait for any designer.



Emotion By Design

Greg Hoffman

How can a designer develop a deeper understanding of the role emotions play in the design process and how to leverage them to create more impactful designs — this book explores the topic and includes case studies and examples from a range of industries, including tech, fashion, and healthcare.

Designing Human-Centric AI Experiences
Akshay Kore

How to create AI-driven experiences that are not only effective but also ethical and empathetic towards users. This book addresses the potential impact of AI on society and the importance of designing with a human-centric approach.

The Design of Everyday Things
Don Norman

This is a classic book that explores the principles of good design and usability, with a focus on everyday objects and systems. It covers topics such as affordances, signifiers, and feedback, and provides numerous examples of good and bad design from everyday life.

Don't Make me Think
Steve Krug

A classic in the UX/UI field, this book provides practical and straightforward advice on designing user-friendly interfaces. It covers topics such as usability testing, navigation design, and the importance of clear communication in design. It is one of the most recommended books of this genre.

5 immersive websites 😌

Yuri Gagarin
https://gagarin.life

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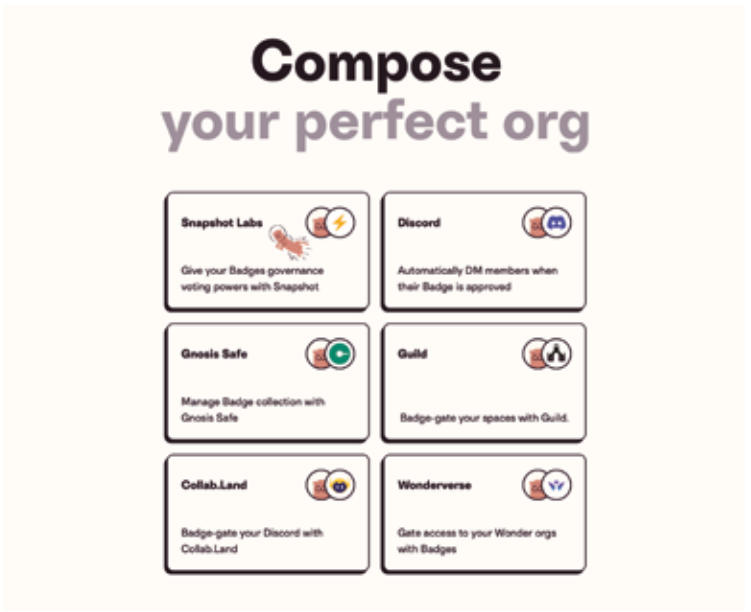
https://gagarin.life



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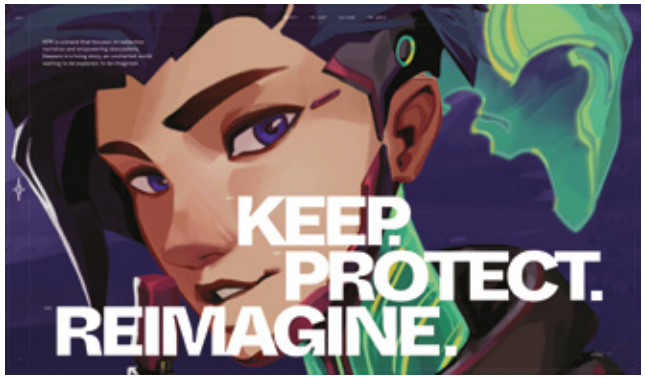
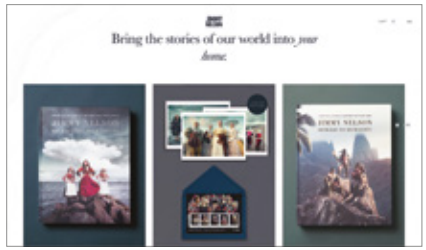
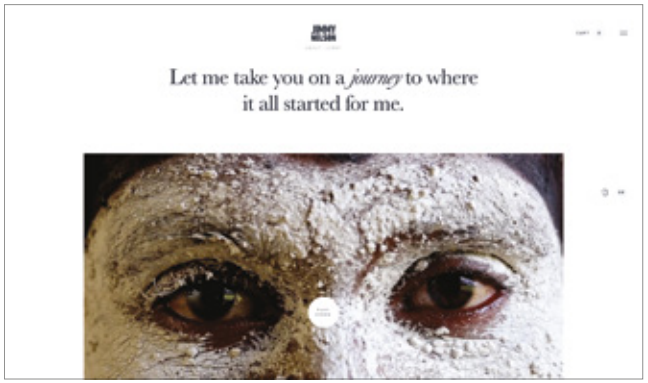
https://www.otterspace.xyz/



KPS - https://kprverse.com

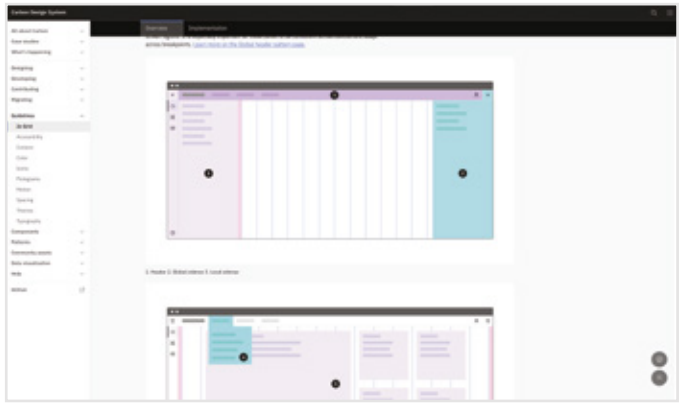


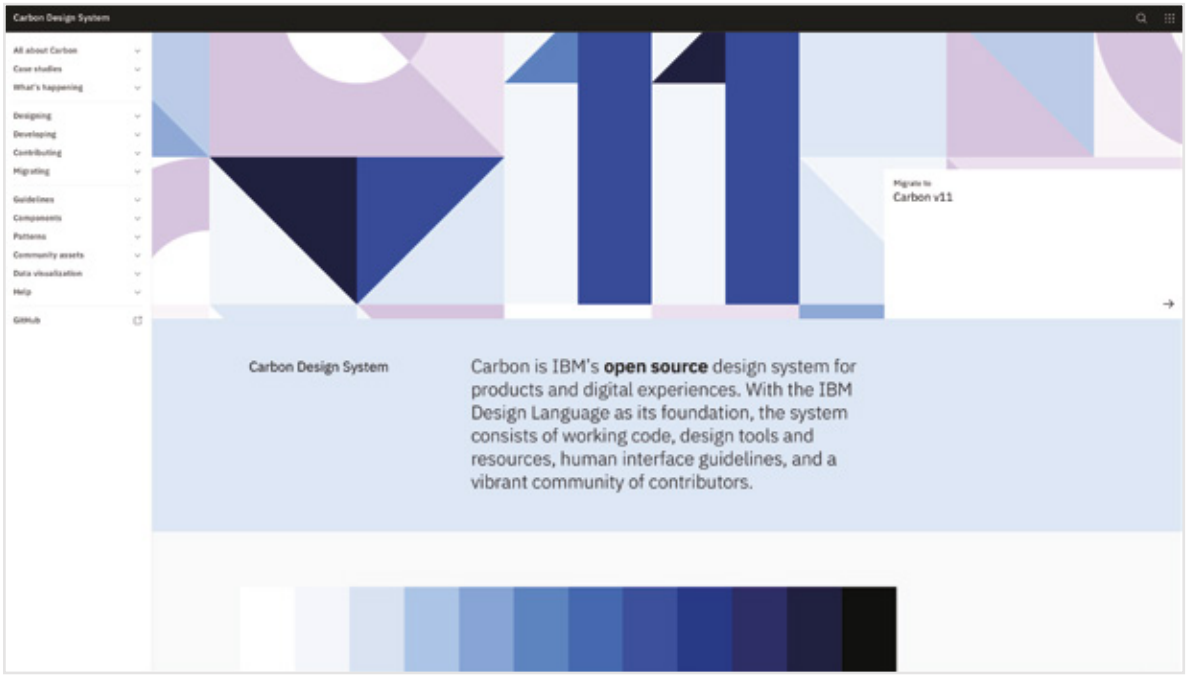


Jimmy Nelson - https://www.jimmynelson.com/

Panasonic Connect - https://technology.panasonic.eu/av-digital-world/

5 design systems 😎





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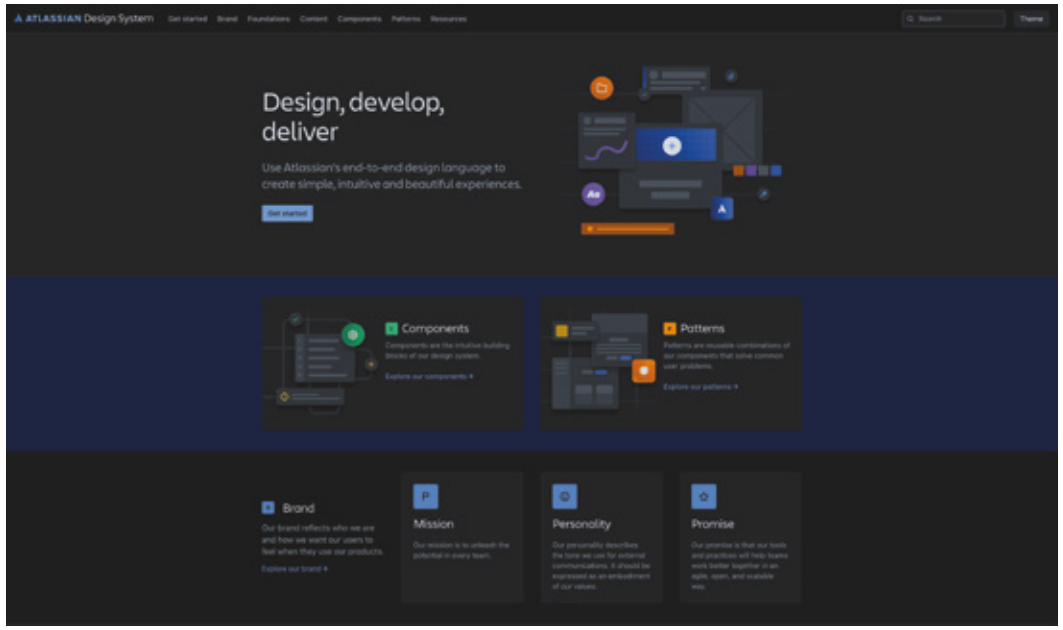
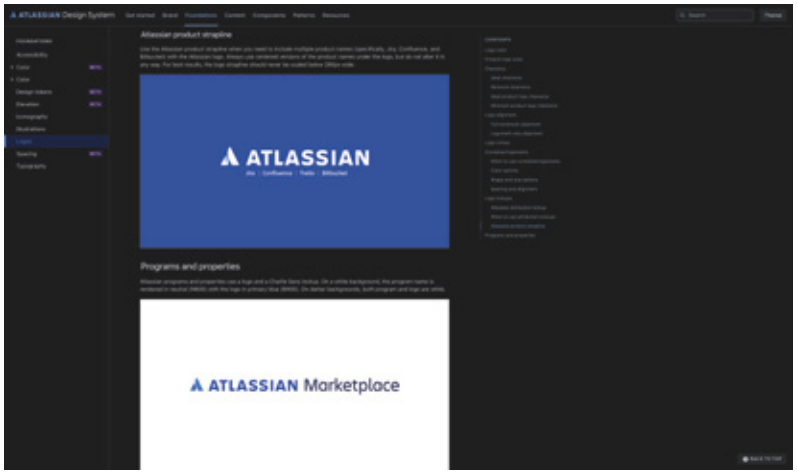
https://carbondesignsystem.com/





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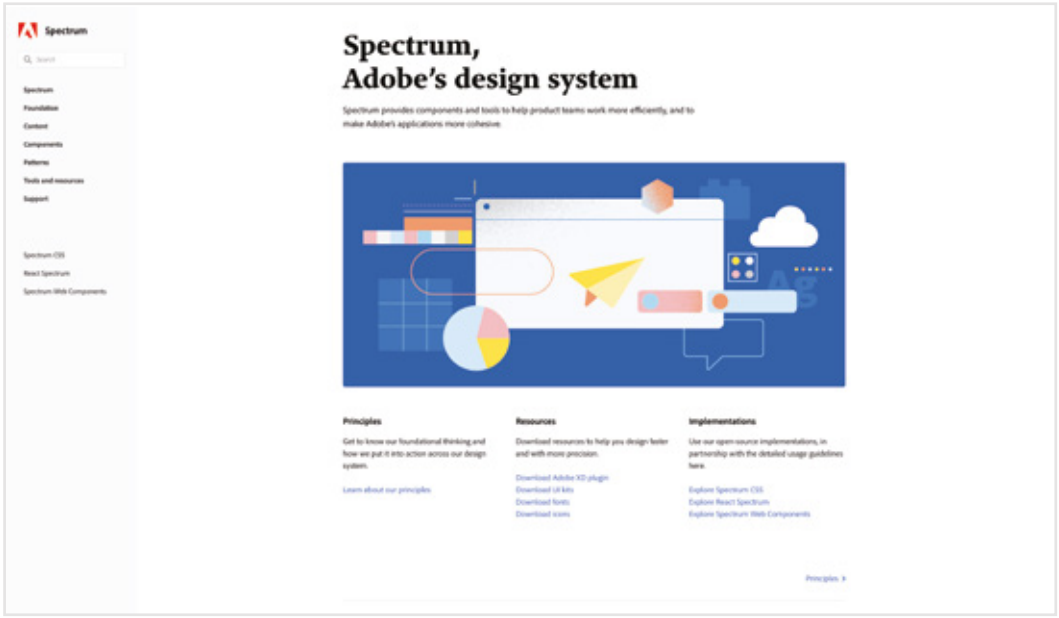

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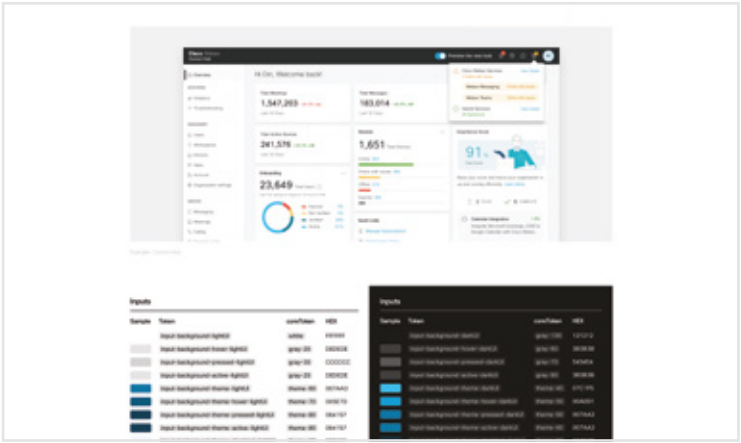
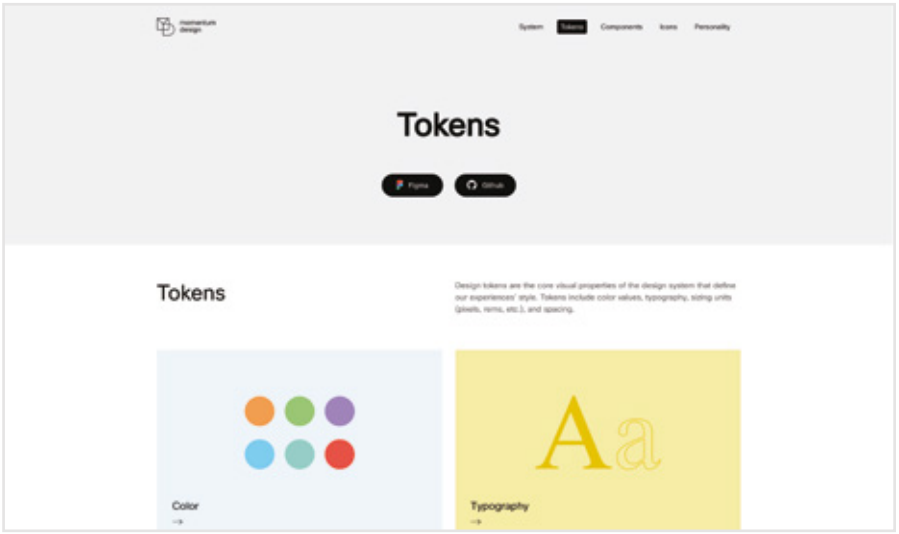
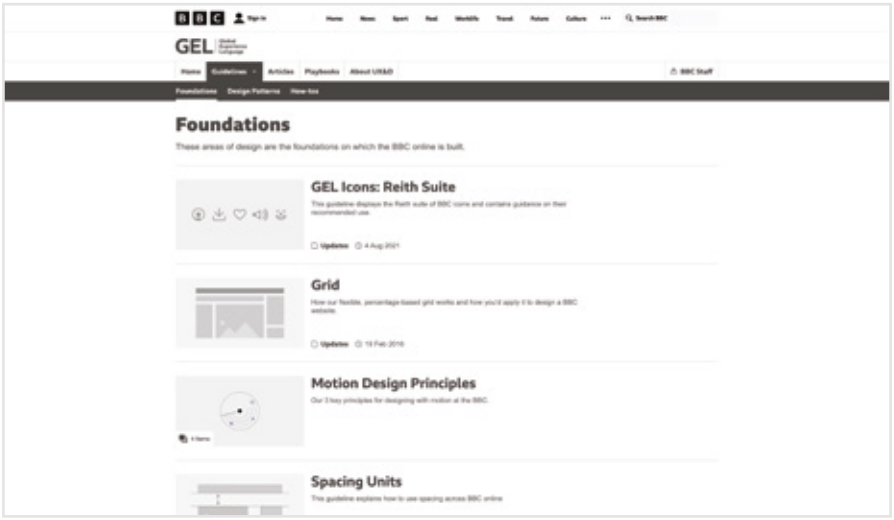






BBC GEL

https://www.bbc.co.uk/gel/guidelines/category/foundations

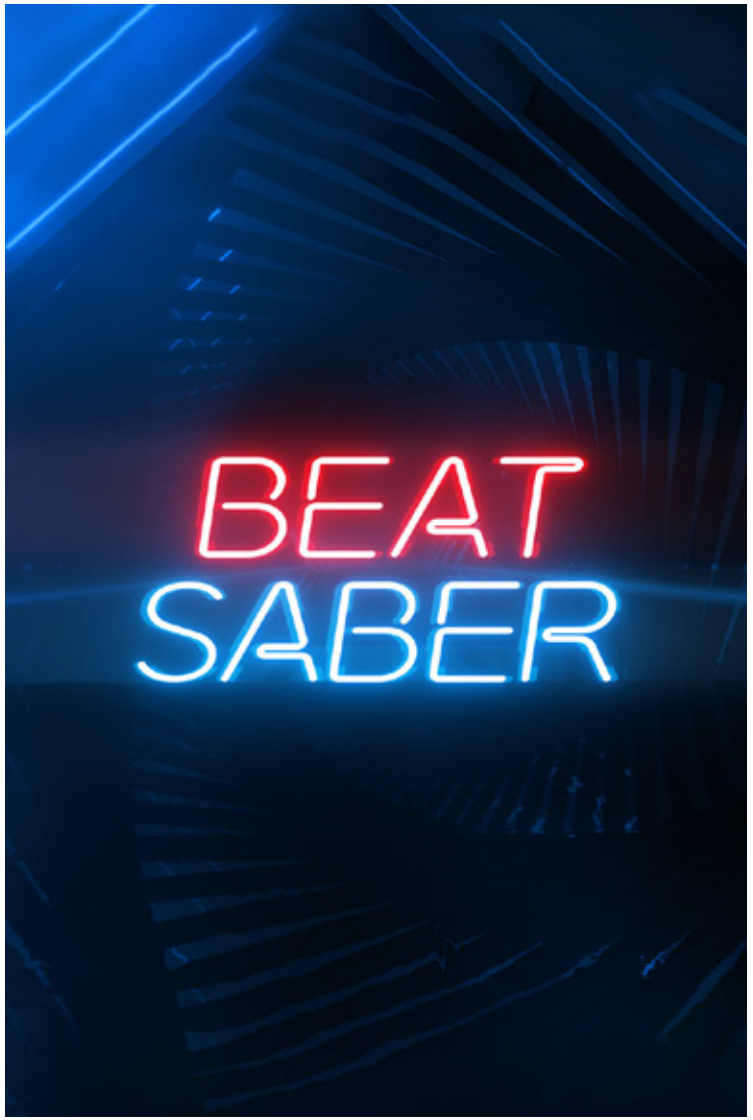
5 virtual reality games and experiences 😊

Half-life Alyx

Bone Lab

VTOLVR

Kayak VR Mirage



Beat Saber

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