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**WHITEPAPER**

**7 Ways that Native Touchscreen Software trumps Common Web Technologies Every Time**

# INTRODUCTION

Special multitouch software is designed to deliver a smooth and seamless customer experience across a range of large-scale interactive digital signage – from self-checkout kiosks and touch tables to touch video walls.

Specialized software is tailored to take advantage of the larger screen size and higher resolution that such hardware offers, while also providing additional features that empower multiple shoppers to interact with touchscreens in a manner that is intuitive, enjoyable and protective of their personal and private data.

In this whitepaper, we explore why native touchscreen software is a much stronger solution than browser-based technologies or apps designed for smart phones and tablets.

# THE RISE OF SMART INTERACTIVE TOUCH-SCREEN TECHNOLOGIES & SOLUTIONS

Large-scale touchscreen systems have become more affordable over the years and are now a common sight in retail stores, restaurants, educational institutes and museums, financial institutes and public spaces. They come in various formats from wall-mounted screens, interactive tables, kiosk terminals and steles to huge video walls, and are used to accomplish a variety of functions – wayfinding, ticketing, ordering food, checking out, conducting product discovery, collaborating with multiple individuals and so on.

Valued at USD 21.49 billion in 2020, the global digital signage market is projected to grow at a compound annual growth rate of 7.5% from 2021 to 2028[1]. This technology is clearly here to stay, and savvy marketers are already testing new technologies to achieve even greater results.

[1] Digital Signage Market Share & Growth Report, 2021-2028 / *Grand View Research*

# CUSTOMERS WANT SPEED, CONVENIENCE AND CONSISTENCY

Customers have become increasingly demanding in recent years and expect the in-store shopping experience to offer the same speed, convenience and consistency that they experience at other brand touch points, including ecommerce. In-store digital signage helps achieve this level of customer experience in-store.

> *4 out of 5 retailers say that digital signage has been important and essential to their customers' in-store experience.*[2]

Fast food giant McDonald's turned to large-scale touchscreen systems in 2018 with tremendous success. Available at stores around the world, McDonald's self-checkout kiosks allow customers to skip the line for the cashier, interact with visual menus, place their orders and make mobile payments by themselves. These self-service kiosks are extremely popular amongst customers and make up over 50% of transactions in markets such as France, Italy and Spain[3].

They are great for business too. According to one study, the kiosks contributed to a 30% increase in average order size for McDonald's[4] – a trend that other quick service restaurants have reported as well.

[2] Reasons why your restaurant needs self-service kiosks / *appetize.com*
[3] The Customer-Facing Digital Signage Market in Retail Through 2021 / *Future Stores*
[4] Digital and delivery – McDonald's growth accelerators that are paying off / *Diginomica*

# A NEW MARKETPLACE HAS EMERGED FOR NATIVE XXL TOUCHSCREEN SOFTWARE

The popularity of touchscreens and their measurable impact on business objectives have paved the way for the creation of a new marketplace. The interactive digital signage software industry has strengthened in recent years, with robust solutions like eyefactive's proprietary multitouch software and first-in-world B2B app platform[5].



This industry is poised to be a gamechanger for many marget segments such as smart retail, much like the Apple App Store was for the mobile industry. Launched in 2008 with only 500 apps, Apple's App Store opened up a new ecosystem and innovative business model for app developers. The App Store now features over 2 million apps, 20 million registered software developers and annual billings of $643 billion in 2020.[6] Google's Play Store has grown at a similar pace.

One of the reasons that smartphone apps have grown in popularity is that they bypassed browser restrictions to offer the best possible user experience and functionality – albeit for a smaller device size. Similarly, native touchscreen software that has been custom-built for larger professional screens leverages the inherent features of this hardware to deliver a better experience for users.

By customising ready-to-use XXL touchscreen apps from existing app stores such as the one provided by eyefactive, businesses can go to market quicker and in a more cost-effective manner than by designing and developing new interactive multitouch software from scratch.

5 Touchscreen app platform / *multitouch-appstore.com*
6 Meeting pandemic challenges, Apple developers grow total billings and sales in the App Store ecosystem by 24 percent to $643 billion in 2020 / *Apple*

# FINDING THE RIGHT SOFTWARE FOR YOUR TOUCHSCREEN SYSTEMS

This whitepaper provides answers to some of the common questions we hear from our customers and partners about the touchscreen industry, such as:

## WHY ARE LARGE-SCALE TOUCHSCREENS CONSIDERED A NEW TYPE OF DEVICE? DON'T THEY WORK IN A SIMILAR FASHION TO SMALLER MOBILE SMARTPHONES AND TABLETS?

As you will see in this section, the key difference in size is simply one of many differentiating factors between professional touchscreens and consumer smartphones. Business customers expect different features on larger screen types, users may use different gestures while physically interacting with larger interactive displays.

## WHY HAS EYEFACTIVE DEVELOPED A PROPRIETARY SOFTWARE TECHNOLOGY FOR XXL TOUCHSCREENS? CAN'T WE USE COMMON WEB TECHNOLOGIES INSTEAD?

There was no standard software platform available in the early years of the digital signage industry. As a pioneer in interactive digital signage, eyefactive saw the opportunity to develop a stronger software solution that addressed the specific requirements of larger multitouch hardware as well as the needs of clients who are seeking to provide the best user experience.

eyefactive's existing software platform, technologies and customizable apps ensure a better experience, quicker production and cost-efficient implementation of interactive digital signage solutions that are well suited for a broad variety of industries and applications. For 7 reasons listed below, we recommend using professional business software solutions designed for large-scale multitouch touchscreens, instead of common web technologies.

## WHY ARE SMARTPHONE APPS INCOMPATIBLE WITH LARGER SCREENS? SHOULDN'T THEY WORK ON ALL TOUCH INTERFACES?

Smartphone apps have been designed for a more private, one-to-one intimate experience that is offered only on smaller handheld devices. Smartphone apps are generally unsuitable for XXL touchscreens which are often used by multiple people at the same time in very public settings.

Larger touchscreens are already propped up as kiosks, walls or tables, and it is sometimes more intuitive to use the entire hand or even two hands to engage with content on the screen. For instance, an entire hand can be used to move around virtual images on the display. The index fingers of both hands can be used to zoom in or out on the larger

# 7 KEY REASONS FOR NATIVE SOFTWARE

Here are 7 key reasons that native software for XXL touchscreens are superior to common web and mobile technologies.

## 1. PUBLIC VS PRIVATE USE

Consumers use smartphone apps for private browsing and personal activities where they share confidential login details, messages, photos, videos, medical data and payment information to name a few. These activities are better suited to smaller private devices. In comparison, larger-scale touchscreens are used publicly to access information and media content, often by multiple users at the same time.

**KEY TAKEAWAY:** Special XXL touchscreen software solutions take into consideration the public nature of large-screen interactions and create a more suitable interface for engagement.

## 2. ADVANCED GESTURES: INTERACTING WITH ENTIRE HANDS VS. SINGLE FINGERS ONLY

Smartphones generally support single-finger interactions such as single taps, swipes or slide gestures. The number of touch points are usually limited, and two-finger gestures are supported on a few occasions as users pinch the screen to zoom in or zoom out. These gestures make sense considering the form factor of smartphones – one hand is typically used to hold the phone and the other to interact with it.

Larger touchscreens are already propped up as kiosks, walls or tables, and it is sometimes more intuitive to use the entire hand or even two hands to engage with content on the screen. For instance, an entire hand can be used to move around virtual images on the display. The index fingers of both hands can be used to zoom in or out on the larger

screen.

In cases where objects are tagged with NFC, RFID or other smart markers, consumers can even engage with the touchscreen by holding the physical object next to a scanner or by placing it directly on the touchscreen table. In yet other cases where augmented reality may be involved, consumers can interact with screens by moving their face or entire body.

**KEY TAKEAWAY:** Native XXL touchscreen software offers proper gesture support that is more practical for large-scale interactive digital signage – which is exactly what it has been designed for in the first place.

## 3. MULTI-USER VS. SINGE-USER SCENARIOS

Another unique feature of large-scale touchscreens is that multiple users can engage with the interface simultaneously. Each user can have their very own virtual window within the screen with respective apps running for each user. Or they might interact with the same app at the same time on the same touchscreen

The nature of human-computer interaction has evolved significantly with the rise of different screen types and larger sizes. For example, customers can engage with a touch table from four different sides. Special software ensures that content is rotated at the right angle so that it is facing the customer.

**KEY TAKEAWAY:** Smartphone apps do not cater to large screens or multi-user scenarios

and it is unlikely they will do so in the future. Multitouch software on the other hand was created specifically for large-scale touchscreens and designed to support multi-user applications. This solution involves a completely new software architecture and facilitates a completely new way of interacting with large-scale screens.

## 4. HIGH TECHNOLOGY VS. BROWSER LIMITATIONS

Interactive software that is built on web-based technologies like HTML5 or JavaScript is limited by the underlying browser technology and tends to resemble common websites with click-like interactions.

Since eyefactive's touchscreen software runs directly on the operating system, there is no browser "in the middle" and browser restrictions do not exist. Special multitouch software is thus able to support an interface that is quicker, seamless, more intuitive to use and feature-rich compared to web-based applications.

**KEY TAKEAWAY:** High technology solutions are able to leverage 100% of the device resources which results in better performance, higher resolution, a responsive user experience and better support for multiple users and multiple touch points.

## 5. FLEXIBLE CONTENT VS. FIXED FEATURES

Consumer apps and business apps serve different purposes and thus have different requirements. Business apps that are used for smart interactive signage are often content rich

and need to be updated on a regular basis. For example, a touchscreen system in use in stores, museums or hotels would feature a host of images, audio files, videos, brochures, charts, tables or even 3D models that need to be updated every so often as product or pricing information changes.

**KEY TAKEAWAY:** Content management is a key requirement in business apps and public touchscreens. Special touchscreen CMS solutions address this requirement with provisions to update content easily via the cloud.

## 6. COMPLEX PROJECTS VS. SINGLE APPS

Smartphone apps are usually very good at completing a single function. To use a different function, the first app must be closed and the next one opened. When it comes to shared devices or public touchscreens, the only way to switch from one app to another is by accessing the mobile device operating system. This is not recommended on public screens at all.

**KEY TAKEAWAY:** Special B2B touchscreen software tackles the problem by creating projects with multiple apps and including a menu that allows customers to switch from one app to the other without "leaving" the app or accessing the operating system. On larger screens, multiple apps can be started and used simultaneously in virtual windows.

## 7. SCALABILITY: CLOUD MANAGEMENT VS. SINGLE DEVICE CONFIGURATION

For instance, retailers will often use multiple devices across multiple stores. Without a centralized content distribution via the cloud, each device must be configured individually which can be time-consuming and leaves a large margin for error.

**KEY TAKEAWAY:** Special software platforms bypass this problem by allowing retailers to manage all devices remotely via a central management system that is based in the cloud.

# THE BENEFITS OF SPECIAL SOFTWARE FOR XXL TOUCHSCREEN SYSTEMS

Interactive software based on a special technology for large-scale touchscreen systems is rich with advantages and comes with none of the drawbacks of common web technologies. This translates into 6 key advantages for businesses and customers.

## ⊘ GO TO MARKET QUICKER

Businesses and service providers save time and effort when using customisable ready-to-use apps that are designed especially for large-scale touchscreens. This results in faster production times and lower costs than when developing software from scratch.

## ⊘ DELIVER A UNIQUE CUSTOMER EXPERIENCE

Rather than copy pasting traditional browser or smartphone features to larger screens, solution partners can use multi-touch software to leverage the full potential of multitouch gestures, innovative multi-user applications and intuitive interfaces for great user experiences.

## ⊘ A SOFTWARE THAT MATCHES YOUR HARDWARE

Interactive digital signage hardware has advanced significantly over the years. Software from special suppliers like eyefactive meets the quality of the latest touchscreen hardware be it super-sized wall-mounted touchscreens, multi-screen interactive videowalls or interactive touch tables. eyefactive's advanced multitouch software technology supports high-performance applications and enables the smooth delivery of content at special resolution.

## ⊘ DESIGNED FOR REAL-TIME TWEAKS AND CHANGES ON-THE-FLY

Through the app platform's cloud architecture and ecosystem, solution partners and campaign managers can

easily customise, manage and synchronise projects, content and configurations for multiple touchscreen systems.

### ⊘ THE SEAMLESS OMNI-CHANNEL EXPERI-ENCE CUSTOMERS HAVE BEEN WAITING FOR

Special software supports solutions where customers can explore products on public XXL touchscreens and then complete 'private' tasks such as payments or social media integration on their smartphones.

### ⊘ A SOFTWARE THAT GROWS WITH YOU

Dedicated large-scale touchscreen apps are designed to work with one another and can be layered together to offer customers additional features. This has proven to be a seamless way for businesses and solution partners to evolve their offering while also meeting changing customer needs.

# CONCLUSION

The right choice of software at the beginning of the project leads to an elevated customer experience, improved ope-rations, streamlined content management and increased longevity of innovative interactive signage touchscreen solutions.
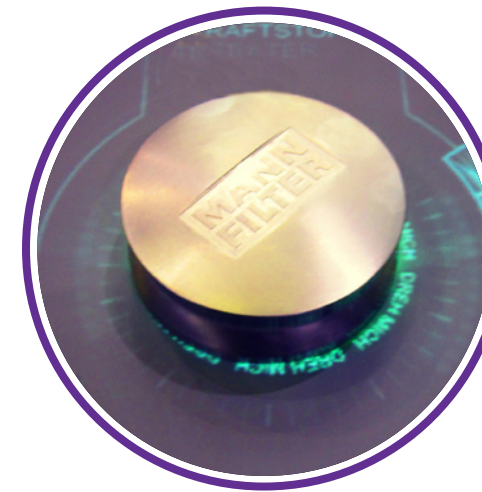
## ABOUT THE AUTHOR

Matthias Woggon is CEO & Co-founder of eyefactive GmbH. A pioneer in interactive signage, eyefactive combines interactive touchscreen systems, software and technologies like object recognition to offer innovative solutions for businesses. Furthermore, clients and partners can create ready to use apps with individual content and designs in the world's first ever app store for professional large-scale touchscreens.

**TOUCHSCREEN SOFTWARE**

Customizable multitouch apps from the world's first dedicated app store for large-scale touchscreens.

**TOUCHSCREEN TECHNOLOGIES**

Innovative technologies like object-recognition, payment, scanners and video retail analytics.

**TOUCHSCREEN HARDWARE**

Various MultiTouch Screens, Tables, Kiosks or Videowalls in any size or format.

**TOUCHSCREEN SERVICES**

From expert consultation, to cloud-based content integration and system administration.

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## TOUCHSCREEN APP PLATFORM

Start the tour, browse apps & widgets and download your free version of AppSuite CMS at:

**www.multitouch-appstore.com**

## INTERACTIVE SIGNAGE XXL

Find out more about our eyefactive's interactive touchscreen technologies and products:

**www.eyefactive.com**

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