

Adopting a Retail Phygital Experience via Open Innovation: The Story of WOW

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With a \$26 trillion size globally in 2021, the retail sector is experiencing an adoption of technologies to improve consumers' omnichannel experiences in order to secure access anytime, anywhere, on any device, and with any content. This development has been catalyzed by the recent pandemic, and the growth of more digitalized generations, among other factors. Meanwhile, laws protecting consumers' data have been reinforced.

However, while research indicates that e-commerce sales (digital) are expected to grow by 13% annually worldwide, 78% of the total purchases are estimated to still be made in-store (physically) by 2024. So then, how to secure this 'phygital' integration between the physical (in the store) and the digital purchasing experience (in the e-commerce)? Touch kiosks, connected mirrors, beacons, and commercial augmented reality are some of the technologies that retailers are applying in order to integrate this concept.

Adidas has introduced some of them to allow consumers to digitally try on clothes before purchasing in person. In the case of Gucci, in collaboration with Snapchat and the startup Wannaby, consumers can not only try their products but also personalize them before the purchase. Others aim to improve other steps of the customer journey such as Tesco's virtual store in Seoul's subway or its contactless service in London, Amazon Go's delocalized picking service, and more.

Following this trend, the startup WOW—founded in 2019 in Madrid (Spain)—has developed a sandbox to test startup technologies aiming to later improve the phygital experiences of other retailers. With a €42 million investment, the startup's first physical store encompasses six floors of premium products addressing white-collar customers. It uses the building as an extended arm of its e-commerce.

The Retail Industry: Some of the Recent Trends and Challenges

In 2021, the global retail market generated sales of over \$26 trillion, with a forecast to reach over \$30 trillion by 2024.¹ It is currently undergoing a deep transformation due to factors such as the rapid development of tech-enabled new revenue models as well as the changes in consumer-shopping interactions. These are behaviors that have been catalyzed by restrictions to mobility in a post-pandemic time with trends that were already rising such as ubiquitous consumption (the ability to access and consume goods and services anytime and anyplace), an improvement in user experience, and crowd creativity (developing products by crowdsourcing creative designs, ideas, or executions).²

Some retail pioneers almost went bankrupt in 2020 such as the former American department store Lord & Taylor that “was forced” to be transformed into e-commerce. Meanwhile, Amazon’s share price rose from over 72% between the end of 2019 and August of 2021.³ Due to the changes in how retailers and consumers view locational choices, e-commerce is projected to account for 25–40% of sales across categories.⁴ Like Amazon, other retailers such as Walmart, CVS Pharmacy, Walgreens, and Home Depot have adopted technology to improve operations and provide more appealing customer experiences.⁵

Another challenge for physical retailers, following the development of non-store retailing, is reinventing the functions of physical outlets. Currently, virtual channels have built a significant customer base by providing a broader assortment than supermarkets,⁶ outstripping one of the main competitive advantages of large superstores: the possibility of offering a very wide range of goods.^{2,6}

Behavioral Factors: Faster, More Informed, Convenient, and Digital Purchases

Nowadays, consumers are increasingly ordering online seeking faster purchases and less stress (for some) than buying in crowded supermarkets and shopping malls. Over the last decade, omnichannel retailers have increased shopping convenience by creating delivery points at locations with a high commuter flow.² In 2011, the British retail giant Tesco, for example, launched its first virtual store located in a Seoul subway station based on the observation that the typical Seoul commuter did not have time to shop in a traditional store. In line with this movement, retailers such as the Americans Walmart and Target have been some of the pioneers in implementing curbside pickup services, which allows customers to collect their order from a convenient location.⁷

However, it is a matter of not only time but also channel. On average, Internet users spend around 75 hours a month on social media such as the short-form video hosting TikTok and Facebook (from Meta), apps that in 2021 had 656 and 416 million downloads globally, respectively.⁸ This is why retailers and e-commerce are leveraging these platforms. Furthermore, Generation Alpha Internet users—those born between 2010 and 2024—are expected to grow up surrounded by the metaverse. This demographic is already hanging out with their friends in virtual playgrounds such as the online game platforms Roblox and Minecraft, expressing themselves with online avatars. Looking to 2030, this segment is expected to account for nearly a quarter of the world’s population.^{9,10}

Legal Factors: Stricter Data Protection

With this rising adoption of digital technologies and related data collection from consumers, the retail industry has faced the introduction of a much more severe General Data Protection Regulation (GDPR), starting in March 2018.

The 50,000-word-directive and the threatened fines of up to €20 million or 4% of the total worldwide annual turnover (whichever is higher) have impacted how retail companies manage their consumers’ data.¹¹ In 2021, a major e-commerce corporation faced one of the biggest privacy

finer—a €746 million penalty—by the European Union, for violating these data protection rules.¹² In October 2020, a multinational clothing retailer was also fined €35.3 million by the Data Protection Authority of Hamburg because the German branch was maintaining excessive details about employees' private lives since 2014.¹³

Technological Factors: An Omnichannel Perspective

Since the appearance of sophisticated smartphones, customers demand purchasing processes that happen anytime, anywhere, on any device, and with any content. Customers now expect retailers' selling technologies to be inherently ubiquitous.^{14,15}

According to recent industry research, there are three common problems that retailers face in the implementation of an omnichannel strategy. First, there is an unclear understanding of what parts of the omnichannel are crucial to prioritize through investments. Second, there is an increasing focus on tech capabilities rather than customer value, and without a proper grounding in customer needs to determine how these investments will create and sustain value at scale (e.g., there were attempts to just add digital assets to traditional physical store networks that were predominant among retailers). Lastly, there is a failure to sequence investments in line with the strategy because of a lack of critical thinking to identify the starting point and the specific capabilities needed to succeed at each step.¹⁶ These are some of the factors to consider when combining physical and digital assets under a single and integrated vision.

Moreover, in 2013, studies were already announcing how the retail industry was evolving toward a seamless omnichannel experience.^{15,16} However, whilst a recent analysis suggests that e-commerce worldwide sales are expected to grow by 13%¹⁷ annually, 78% of the total purchases are estimated to still be made in-store by 2024.¹⁸ Some companies are working on this equilibrium with a phygital perspective (See Section 2), in which physical and digital experiences are aimed to be smoothly integrated, following a holistic approach to the customer.¹⁹

Phygital: Combining Physical and Digital Experiences

In 2013, the Australian marketing agency Momentum, coined the term “phygital,” contracting the words physical and digital. This concept is growing in the retail industry, where digital and physical experiences are blending into one.²⁰ The distinction between physical and online is vanishing, “turning the world into a showroom without walls.”²¹

In this sector, phygital is frequently used when referring to the shift from cross-channel to an omnichannel logic for connected stores that incorporate digital technologies such as touch kiosks, connected mirrors, beacons, and commercial augmented reality (CAR).¹⁹

Touch kiosks enable interactivity via a specialized type of digital display that responds to pressure or placement of certain types of objects on the screen, such as a finger, or a stylus. It allows the customer to access the full catalog even if the items are not in stock. With connected mirrors, shoppers can view product information, request different sizes and colors, and ask for recommendations.

Beacon technology is a small, wireless transmitter that uses low-energy Bluetooth technology to send signals to other smart devices nearby. It serves as a location technology and for proximity marketing. It can reach customers' smartphones to send them product suggestions, coupons, or rewards.

The use of CAR started in 2010 with virtual dressing rooms for e-commerce. Now it yields a wider number of applications in both physical and digital stores. It describes augmented reality applications that support various commercial activities.

Furthermore, there are many ways to enrich the shopping experience, while ensuring that both parties gain better information from each other: reserving digital baskets via customers' smartphones, reading and sharing product QR codes, live-streaming their shopping experiences and interactions via social media (i.e., live shopping), to name a few. The use cases of phygital experiences are quite diverse.¹⁹

Some retailers have introduced sensing technologies to automate in-person processes, reducing the immediate pain of payment that is delayed. For instance, Amazon Go has stores with the technology to automate in-person shopping processes.²² In the United Kingdom, the supermarket chain Tesco has also opened its first checkout-free store in central London, enabling customers to check in at the store entrance with a smartphone app, select the products they want, and leave without needing to scan their purchases or pay for them at the checkout.²³

Even as early as 2012, the fast-moving consumer goods French retailer Groupe Casino opened one of the first contactless purchasing solutions based on image recognition and NFC (near-field communication). These two technologies enabled customers to use their smartphones to select a product in a matter of seconds and access data—such as pricing and nutritional facts—before they decide to add it to the cart.^{2,24}

Others have implemented augmented and virtual reality to evaluate before purchasing, increasing the product attachment. The German sports apparel company Adidas has introduced these technologies for digitally trying on clothes before purchasing in person.²⁵ Similar services are offered by the Italian luxury fashion brand Gucci, which, in collaboration with the Lithuanian startup Wannaby and the American multimedia instant messaging app Snapchat, allow for not only trying on their products but to personalize them before the purchase.²⁶ In parallel, other startups, and consulting firms are trying to develop this concept, such as the British tech startup Mercaux, which aims to develop in-store experiences, universal baskets, and checkout platforms designed to provide customers with a frictionless shopping experience.

In 2022, Inditex's Zara opened one of its flagship stores in Madrid (at Plaza de España) to showcase some of its phygital functionalities. With its app's "store mode" function, customers can select a fitting room to avoid lines, scan and add products to the shopping cart, and decide how they want to pay—either via the app or in-store. When paying through the app, they can remove the product's electroacoustic alarm by scanning a QR code. Additionally, the store also allows automatic returns by scanning the QR code at the self-service checkout machine.

WOW: Testing Phygital Technologies Through Open Innovation

Based on these principles, the startup WOW was founded in 2019, to mix physical locations with an online marketplace. It is an operator of an online marketplace intended to offer a go-to marketplace for early adopters with physical branches. The company's omnichannel platform offers a curation of lifestyle brands for millennialsⁱ and Gen Zⁱⁱ that combines cutting-edge physical locations with a centralized marketplace.

In March 2021, its first physical store opened in Madrid city (Spain), at the beginning of the crowded street of Gran Via, a central location for white-collar buyers, and international travelers (See **Exhibit 1**). This store embodies a highly diversified number of mid to premium articles across categories (e.g., executive chairs for €7,270; handbags between €100–€1,250, jackets between €150–€1,300)²⁷, with low stocks, encouraging online purchases via consumers' phones and store displays.

ⁱ Born between 1981 and 1996.

ⁱⁱ Born between 1997 and 2012.

The scanning of QR codesⁱⁱⁱ facilitates this process through the floors²⁷ where different categories of products are offered:

- Floor -1: the so-called “Tech Garage” features a 3D-printed marine landscape and an augmented reality integration that blends technology products into nature (See **Figure 1**).
- Floor 0: the “Self-Care Lab” is a pink-hued space crafted to fulfill cosmetic needs, where you have experiences such as a self-diagnosis tool to identify the quality of your skin through a camera and a multiple-choice survey shown on a screen (See **Figure 2**).
- Floors 1 to 3: “Fashion Hub” and “Urban District” are three floors dedicated to apparel and sneakers, with digital-native brands, established brands, and sports-focused brands each taking up a space of their own (See **Figure 3** and **Figure 4**).
- Floor 4: the “Home Boulevard” showcases homeware aligned with metaverse-inspired aesthetics. (See **Figure 5**).
- Floor 5: the “Gastro Marketplace” gourmet space is designed with the presence of Michelin Star-awarded chefs and music performances (See **Figure 6**).

The shop has been designed as an experience, focusing on consumers seeking premium products. According to the company, nearly 80% of the audience is at least 35 years old and combines local consumers with a high buying power as well as wealthy tourists. The remaining 20% of the customers are young people interested in the novel concept rather than in buying products. This second audience, looking for experiences (e.g., gaming events, fashion shows, and product launches) boost the visibility of the store through social media, while increasing engagement with the store’s brands.

Later, in October 2022, the company rented a new building in one of the exclusive shopping areas of Madrid: the Salamanca district. Expected to open doors in the second half of 2023, this second space (in Serrano Street) is going to focus on elegant fashion, formal (or smart casual), and premium-luxury brands. This will complement Gran Via’s approach, more dedicated to urban fashion, sports, and premium brands.²⁸

This experience-oriented journey has a twofold advantage: firstly, it intrigues and incentivizes customers to enter the store. Secondly, the layout of the store provides a conducive environment for the commercial validation of proofs of concept through technological demos. These advantages can enhance the analytical capabilities of the company, especially when combined with initiatives that incentivize customers’ engagement in order to tailor their experiences. For instance, during the first months after the opening in Madrid, customers were required to fill out a form before entering the store.

In short, with this combined strategy under the phygital umbrella, the company can get ahead to validate four hypotheses: (i) the customer acquisition cost can be optimized, (ii) the selling conversion rate can be improved, (iii) the lifetime value per customer can increase, and (iv) the company can equally balance a 50-50% revenue spread coming from digital and physical channels.

ⁱⁱⁱ A QR code is a type of matrix barcode.

Some of the Technologies in Validation

In ‘store mode’ functionality via the mobile app, touch kiosks and connected mirrors offer to customers a unified experience with a single cart. Video analytics—based on artificial intelligence—drawing customer traffic maps, outdoor and indoor geolocation, radio frequency identification (RFID) tags included in the products as well as other sensors generate context information that allows for understanding their behaviors, while reaching them when they are buying. This real-time intel is also available to the sales associates, equipped with devices to visualize the information.

These technologies aim to reduce customers’ friction points such as payment, and increase the conversion rate. Capabilities such as allowing customers to request other sizes and recommendations without leaving the fitting room and being supported by the clerks in real time can be differentiating factors in pursuing these goals.²⁹ However, some of these technologies have to overcome challenges to be successfully validated and implemented such as the increasing public concern about data privacy.³⁰

Are these new technologies? Despite the emergence of the concept, many of these technologies implemented are based on existing ingredients: Tesco’s contactless service, Apple’s store experience, and Amazon’s delocalized picking services, to name a few (See **Section 1.**). Others, such as synchronous stock management in real-time, have been implemented by Tesco and Walmart for years.³¹

From Startup to Sandbox to Phygital-as-a-service (PHaaS)

Although WOW was launched as a startup in 2019, it quickly became a way to prototype new startup technologies in the retail sector in a low-risk environment (sandbox) via open innovation^{iv}, as part of the ecosystem of innovative initiatives surrounding WOW.

With the creation of its venture capital fund Kapita in 2021 (focused on retail innovation)^v, WOW became a way to test and adopt at speed new technologies from the fund’s investment portfolio of startups. For instance, the phygital store operating system led by the start-up Jogotech (a Kapita’s investee) has become one of the backbones of WOW, including Jogotech’s chief executive officer as WOW interim chief technology officer. Moreover, this ecosystem has been later enhanced with other activities such as the creation of the Retail Innovation Lab, a start-up incubation program.^{32,33}

After corporate retailers started to visit the building, the store also became a showroom for retail technologies, a way to demonstrate technologies for later sale to those companies. Currently, the company is developing a few collaborations to advance in the PaaS strategy by supporting the adoption of phygital technologies at the Mexican retailer Palacio del Hierro and the fashion Tendam.

During the process, the company has developed partnerships with technological players not only to decrease the implementation cost but also to secure the scalability of the services. The list includes tech companies such as SAP, Salesforce, Amazon Web Services, and Oracle.

^{iv} Open innovation assumes that firms can and should use external ideas as the firms look to advance their technology, according to Henry Chesbrough’s definition.

^v Every year, the venture capital fund Kapita analyzes nearly 3,000 startups.

Exhibit 1: WOW Store Pictures

Figure 1. WOW 1st floor (Tech Garage)



Source: Puro Diseño, 2022.³⁴

Figure 2. Entrance to WOW via 1st floor (Self-Care Lab)



Source: Archilovers, 2022.³⁵

Figure 3. WOW 1st and 2nd floors (Fashion Hub)



Source: Puro Diseño, 2022.³⁴

Figure 4. WOW 3rd floor (Urban District)



Source: Puro Diseño, 2022.³⁴

Figure 5. WOW 4th floor (Home Boulevard)



Source: Puro Diseño, 2022.³⁴

Figure 6. WOW 5th floor (Gourmet Marketplace)



Source: Expansion, 2022.³⁵

References

1. Tugba Sabanoglu, "Retail market worldwide - Statistics & Facts." *Statista*, April 21, 2022, https://www.statista.com/topics/5922/retail-market-worldwide/#topicHeader__wrapper.
2. Daniele Pederzoli, "ICT and Retail: State of the Art and Prospects" in *Information and Communication Technologies in Organizations and Society*, eds. Francesca Ricciardi & Antoine Harfouche (Cham: Springer, 2016), 329–336. doi:10.1007/978-3-319-28907-6_22.
3. AMZN: Amazon.com Inc Stock Price Quote: NASDAQ GS, *Bloomberg*, accessed on October 19, 2022, <https://www.bloomberg.com/quote/AMZN:US>.
4. "Retail Speaks: Seven Imperatives for the Industry," *McKinsey*, accessed on October 19, 2022, <https://mck.co/3Sg9QMs>.
5. Dhruv Grewal & Anne L. Roggeveen, "Understanding Retail Experiences and Customer Journey Management," *Journal of Retailing* 96, issue 1 (March 2020): 3–8. doi:10.1016/j.jretai.2020.02.002.
6. Daniel Läubli, Virginia Simmons & Rickard Vallöf, "Will Brick-and-Mortar Supermarkets Survive in Europe?" *McKinsey*, June 1, 2021, <https://www.mckinsey.com/industries/retail/our-insights/will-brick-and-mortar-supermarkets-survive-in-europe>.
7. Martin Petit de Meurville, Kimberley Pham & Courtney Trine, "How Tesco Virtually Created a New Market on a Country's Lifestyle," *Business Today*, February 15, 2015, <https://www.businesstoday.in/magazine/lbs-case-study/story/case-study-tesco-virtually-created-new-market-based-on-country-lifestyle-143807-2015-02-06>.
8. L. Ceci, "Most Downloaded Apps Worldwide 2021," *Statista*, July 15, 2022, <https://www.statista.com/statistics/1285960/top-downloaded-mobile-apps-worldwide/>.
9. Jia Wertz, "Why Retailers Should Utilize TikTok to Grow Their Business," *Forbes*, September 24, 2021, <https://www.forbes.com/sites/jiawertz/2021/09/24/why-retailers-should-utilize-tiktok-to-grow-their-business/?sh=72e56751676e>.
10. Elad Natanson, "TikTok, Facebook & Generation Alpha Will Shape the Future of Social Shopping," *Forbes*, June 28, 2022, <https://www.forbes.com/sites/eladnatanson/2022/06/28/tiktok-facebook--generation-alpha-will-shape-the-future-of-social-shopping/?sh=5ed7cb94223b> (2022).
11. Commission, E. Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation). *European Commission*, accessed on October 19, 2022, <https://eur-lex.europa.eu/eli/reg/2016/679/oj>.
12. Stephanie Bodoni, "Amazon Gets Record \$888 Million EU Fine Over Data Violations," *Bloomberg*, July 30, 2021, <https://www.bloomberg.com/news/articles/2021-07-30/amazon-given-record-888-million-eu-fine-for-data-privacy-breach#xj4y7vzkg>.
13. Data Protection and Freedom of Information. 35.3 Million Euro Fine for Data Protection Violations in H&M's Service Center, Press Release. *The Hamburg Commissioner for Data Protection Information*, October 1, 2020, <https://datenschutz-hamburg.de/assets/pdf/2020-10-01-press-release-h+m-fine.pdf>.
14. Sara Belghiti, Adeline Ochs, Jean-Francois Lemoine & Olivier Badot, "The Phygital Shopping Experience: An Attempt at Conceptualization and Empirical Investigation in Developments in Marketing Science," *Proceedings of the Academy of Marketing Science* (November 2017):61–74, doi:10.1007/978-3-319-68750-6_18.
15. Eleanora Pantano & Milena Viassone, "Demand Pull and Technology Push Perspective in Technology-based Innovations for the Points of Sale: The Retailers Evaluation," *Journal of Retailing and Consumer*

- Services* 21, issue 1 (January 2014): 43–47,. doi:10.1016/j.jretconser.2013.06.007.
16. Holly Briedis, Brian Gregg, Kevin Heidenreich & Wei Wei Liu, "Omnichannel: The Path to Value," *McKinsey*, April 20, 2021, <https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-insights/the-survival-guide-to-omnichannel-and-the-path-to-value>
 17. "Here's Why Global E-commerce Growth Can Stay Stronger for Longer," *Morgan Stanley*, June 14, 2022, <https://www.morganstanley.com/ideas/global-ecommerce-growth-forecast-2022>.
 18. Cómo pueden aprovechar las tiendas físicas el aumento de las compras online, *Jim Collective*, May 6, 2021, <https://www.thinkwithgoogle.com/intl/es-es/futuro-del-marketing/transformacion-digital/como-pueden-aprovechar-las-tiendas-fisicas-el-aumento-de-las-compras-online/>.
 19. Wided Batat, "Getting Phygital with Consumers," *IVEY Business Journal*, March/April 2021, <https://iveybusinessjournal.com/getting-phygital-with-consumers/>.
 20. Daniel McGinn, "What Did 2020 Do to Retail?" *Harvard Business Review*, December 8, 2020, <https://hbr.org/2020/12/what-did-2020-do-to-retail>
 21. Erik Brynjolfsson, Yu Jeffrey Hu & Mohammad S. Rahman, "Competing in the Age of Omnichannel Retailing," *MIT Sloan Management Review*, May 21, 2013.
 22. Zigi Kaiser, "Amazon and Starbucks Have Teamed Up (No, Really)," *TheStreet*, July 16, 2022, <https://www.thestreet.com/investing/starbucks-amazon-expand-experiment-in-hyper-convenient-stores>.
 23. "Tesco Opens Its First Checkout-free Store," *BBC News*, October 19, 2021, <https://www.bbc.com/news/business-58951984>.
 24. Sarah Clark, "Casino to Open World's First NFC-Enabled Supermarket," *NFCW*, September 12, 2012, <https://www.nfcw.com/2012/09/12/317798/casino-to-open-worlds-first-nfc-enabled-supermarket/>.
 25. Craig Keefner, "Adidas Body Scanner Lets You Try Clothes on Virtually," *Retail Innovation*, September 12, 2015, <http://www.retail-innovation.com/adidas-body-scanner-lets-you-try-clothes-on-virtually>.
 26. Maghan McDowell, "Gucci Partners with Snap on AR-friendly Glasses," *Vogue Business*, December 5, 2019, <https://www.voguebusiness.com/technology/snap-x-gucci-glasses-augmented-reality>.
 27. WOW concept: Belleza, Moda, Hogar y Tecnología, accessed on October 19, 2022, <https://wowconcept.com/es/>.
 28. Dimas Gimeno alquila el antiguo El Corte Inglés de Serrano para una segunda tienda de Wow. *Modaes*. October 19, 2022, <https://bit.ly/3syqOek>.
 29. "Jogotech nos cuenta sobre Phygital, el futuro del retail," *Adyen*, December 8, 2021, https://www.adyen.com/es_ES/blog/phygital-el-futuro-del-retail.
 30. Venky Anant, Lisa Donchak, James Kaplan, Henning Soller, "The Consumer-Data Opportunity and the Privacy Imperative," *McKinsey*, April 27, 2020, <https://www.mckinsey.com/business-functions/risk-and-resilience/our-insights/the-consumer-data-opportunity-and-the-privacy-imperative>.
 31. "Future of Retail Operations: Winning in a Digital Era," *McKinsey*, Winter 2020, <https://www.mckinsey.com/industries/retail/our-insights/future-of-retail-operations-winning-in-a-digital-era>.
 32. Pitchbook. WOW Shop, accessed on October 19, 2022, <https://my.pitchbook.com/profile/442720-54/company/profile#general-info>.
 33. "Kapita lanza Retail innovation hub," *Capital Riesgo*, May 4, 2021, <https://www.webcapitalriesgo.com/kapita-lanza-retail-innovation-lab-incubadora-de-proyectos-en-los-ambitos-retail-tecnologia/>.
 34. "Así es WOW Store, una espectacular concept store sensación de Europa," *Puro Diseño*, March 22, 2022. <https://purodiseno.lat/tendencias/asi-es-wow-store-una-espectacular-concept-store-sensacion-de-europa/>.
 35. Marta Fernández Guadaño, "Así será la oferta gastronómica de WOW, el "Marketplace," *Gastronomía*, January 9, 2022, <https://www.expansion.com/directivos/estilo-vida/rincones-gastronomicos/2022/01/08/61d88e0de5fdea122c8b45ae.html>.

