

Согласно исследованиям, рост цены на углеродные квоты до 500 юаней за тонну позволит 22 провинциям Китая полностью перейти с «серого» водорода на «зеленый» к 2060 г., что отражает огромный потенциал данной отрасли [2].

Китайские водородные автомобили (FCEV) открывают перспективы для глубокой декарбонизации транспорта, связывая технологические инновации с климатическими целями. Стратегия КНР, направленная на производство 100 млн тонн «зеленого» водорода к 2060 г., уже реализуется через масштабные инвестиции в ВИЭ и инфраструктуру. Однако переход к углеродной нейтральности сталкивается с трудностями, главной из которых является высокая стоимость производства «зеленого» водорода, связанная с энергоемкостью электролиза и зависимостью от возобновляемых источников энергии. Дальнейшее развитие FCEV требует преодоления этих барьеров для эффективной трансформации экологических амбиций в устойчивую экономическую модель.

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## **Omnichannel Retailing: Creating a Seamless, Customer-Centric Shopping Experience**

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Amid the wave of digitalization and the transformation of consumer behavior, the boundaries of traditional retail channels are becoming increasingly blurred. Consumers are no longer satisfied with a single shopping method; instead, they seek shopping experiences that are accessible anytime, anywhere, and on their own terms. Omnichannel retailing, as a customer-centric retail strategy that integrates both online and offline resources, is emerging as a key trend in the retail industry [1].

Unlike multichannel retailing, where different channels often operate independently, omnichannel retailing emphasizes the seamless integration of information, systems, and customer experience across all touchpoints [2]. This means consumers can interact with brand content through any channel and switch between them freely without encountering disruptions in systems, inventory, or service. For example, a user might browse products on a mobile app, try them on in a physical store, place an order via a mini-program, and choose either home delivery or in-store pickup – this is a typical example of an omnichannel shopping experience.

How to design a Customer-Centric Omnichannel experience?

1) Unified Customer Profiles and Data-Driven Operations. To realize a seamless omnichannel experience, enterprises must integrate online and offline systems and build a unified data platform. This integration allows for the consolidation of consumer behavior, preferences, and purchase records. Such data-driven consumer insights form the foundation for personalized recommendations and precision marketing efforts [3]. 2) Seamless Cross-Channel Shopping Journeys. Every touchpoint within the customer journey must ensure consistency and continuity. By linking CRM and ERP systems, businesses can synchronize information such as inventory availability, promotional offers, and membership tiers across all channels [4]. 3) Enhancing Consumer Engagement and Loyalty. Through community building, content marketing, and tailored recommendations, brands can strengthen emotional connections with their customers. Omnichannel retailing is not just about expanding transaction channels, but also about reshaping the entire customer relationship.

There are two typical cases of Omnichannel implementation.

1) Nike has built a fully integrated omnichannel user experience through its “NIKE App + Direct Stores + Nike Membership System”. Customers can scan products in-store to check availability and try-on options. The integration of online and offline channels has significantly boosted membership engagement and repeat purchases. 2) Hema Fresh has adopted an online-offline integration model, offering both “30-minute delivery” and “in-store experience” services. Physical stores also serve as warehouses and display centers, helping the brand gain a competitive edge in the fresh grocery retail market.

Despite its benefits, omnichannel retailing faces several challenges in areas such as technology, organizational structure, and supply chain management:

1) Technological complexity: Integrating systems across channels requires significant IT investment. 2) Organizational restructuring: Businesses must break down the silos between online and offline departments and establish unified management frameworks. 3) Flexible supply chains: Retailers must build agile and responsive supply chains to meet cross-channel fulfillment needs. Looking forward, omnichannel retailing is expected to evolve toward intelligent recommendation

systems, immersive VR/AR experiences, AI-driven customer service, and interactive livestream shopping, further enhancing personalized and immersive customer engagement.

Omnichannel retailing is not merely an extension of traditional retail – it represents a systemic reconstruction centered around the customer. In an era where the logic of “people, products, and places” is constantly being redefined, only those retailers who truly understand consumer needs and innovate through the integration of technology and data will stand out in the increasingly competitive landscape.

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## **Криптовалютные биржевые фонды как растущий сегмент современного финансового рынка**

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В условиях стремительного развития криптовалютного рынка и растущего интереса со стороны традиционных инвесторов, криптовалютные ETF становятся важным связующим звеном между цифровыми активами и классической финансовой системой.

Криптовалютные ETF (англ. Exchange-Traded Funds – биржевые фонды) представляют собой финансовый инструмент, который отслеживает цену криптовалюты и торгуется на традиционных фондовых биржах как обычные акции. Они предоставляют инвесторам возможность получать доход от криптовалют без необходимости прямого владения ими.

Первым биржевым фондом на криптовалюту, получившим одобрение Комиссии по ценным бумагам США (SEC) в январе 2024 г., стал Grayscale Bitcoin Trust ETF (тикер GBTC) от американского фонда Grayscale Investments. Сразу