

# ANEW QUANTITATIVE THINKING FRAMEWORK FOR THE DIGITAL AGE

UNDERSTANDING CHANGE WITH SCIENTIFIC METHODS, NAVIGATING COMPLEXITY WITH STRUCTURED LOGIC

Welcome Content: The digital wave is reshaping the global system at an unprecedented pace. The dynamic nature of market structures, the increase in information density, and the acceleration of technological iteration have made traditional cognitive methods insufficient to cope with today's complex environment. In this context, building a thinking framework that can explain change, adapt to cycles, and maintain robustness under multidimensional conditions has become more important than ever before. This white paper aims to guide readers to understand the logical foundation of the digital age, starting from data, models, and structures, exploring sustainable development analytical methods, and opening up a more in-depth and clearer perspective.

SLOGAN

LET DATA BE THE LANGUAGE TO THE FUTURE



# COMPANY ORIGINS AND BACKGROUND



Giant Whale Quantitative's development began on December 26, 2008, when it entered the market as a traditional wealth management fund company. As global digitalization accelerates and market structures evolve, the team keenly recognized that traditional asset management methods are no longer sufficient to handle the ever-increasing volume of data and intraday structural changes. Based on a long-term assessment of industry trends, the company has gradually shifted from traditional wealth management models to a quantitative approach centered on scientific methods and technological systems, completing a strategic upgrade from "fund management" to a "quantitative trading technology company."



As the global market moves from early experimental stages to higher technological barriers, the team realized that traditional methods cannot effectively cope with the rapidly changing market pace. Therefore, it assembled professionals from algorithm research, engineering applications, and data science, with the common goal of building a systematic, engineered, and verifiable quantitative system. Starting from scratch, the company built the underlying framework of technology, structure, and risk control, enabling it to have the technological foundation for long-term development in complex markets.

In its early stages, the company's development focus was not on pursuing scale expansion, but rather on building a solid technological foundation. The team invested heavily in four areas: market microstructure analysis, strategy validation, execution efficiency, and risk framework, forming a rigorous R&D process and iteration mechanism that ensured the system maintained consistency and stability in highly volatile environments. This scientific approach to development provided the company with a clear development path from its inception, laying a solid foundation for subsequent system expansion, technology upgrades, and global service capabilities.

In terms of organizational structure, the company chose to start with cross-regional collaboration, first establishing a research and development center in Australia, where technology is more mature, and then setting up a wholly-owned subsidiary in California, USA, to absorb broader technological resources and regulatory concepts. This cross-regional structure not only provides the company with a richer data environment but also offers stronger institutional support for compliance. As its business developed, driven by both a global perspective and engineering-oriented thinking, the company gradually laid the foundation for expanding its quantitative system.

# CORPORATE POSITIONING AND CORE PHILOSOPHY





Giant Whale Quantitative's corporate positioning is built upon a professional system of "data-driven, technology-enabled," using scientific methods as its core logic and an engineering-based structure as its practical path. The company believes that in a deeply digitalized market environment, any effective judgment must be based on sufficient data; therefore, from data collection, processing, and verification to model construction and iteration, a precise, traceable, and continuously optimized technical process has been established, enabling the system to operate stably across cycles.

Under this positioning, technology is not merely a supporting tool, but the core engine of the company. The team integrates artificial intelligence modeling, machine learning frameworks, and automated execution structures in a systems engineering manner, enabling high-speed communication and unified response between different modules. This highly integrated technical system allows the decision-making process to shift from relying on experience to relying on structured methods, enabling behavior in complex environments to be more accurately quantified, interpreted, and captured.

The company's development trajectory has undergone a profound evolution from a traditional service model to a comprehensive quantitative system. In its early stages, the focus was on basic data processing and structured analysis. As technical capabilities improved, the team gradually built a complete chain covering strategy verification, real-time execution, continuous monitoring, and risk defense. This process was not a simple addition of functions, but a holistic transformation of methodology, enabling the company to grow from an initial auxiliary service provider into a quantitative technology institution with a research-grade technical architecture at its core, achieving a comprehensive upgrade from experience-based output to a model-based, systematic, and verifiable system.



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## **VISION**





In the rapidly evolving landscape of global digital assets, Giant Whale Quantitative builds its corporate vision on cross-regional influence and long-term structural contributions. The company believes that future leaders will not rely on single-market size, but rather on the ability to maintain highly consistent technological capabilities across multiple regions and scenarios, driving industry maturity through transparency, standardization, and systematization. The core of this vision is not short-term expansion, but building a technological system that can transcend cycles and geographical boundaries and evolve continuously, enabling the company to have a stable and far-reaching influence in the global digital finance architecture.

To achieve this, Giant Whale Quantitative is committed to establishing a dual-center technology hub between Asia Pacific and North America, ensuring efficient and continuous data processing, model iteration, and system response across time zones. The company also emphasizes the importance of industry transparency, improving data traceability, model interpretability, and systematic output methods to ensure that digital asset management no longer relies on opaque, single-point judgments, but rather follows clear, structured, and verifiable methodologies. This shift towards transparency not only enhances system reliability but also lays a more solid foundation for the industry's long-term credibility.



Looking to the future, the company will continue to promote standardized development, ensuring that more core processes conform to engineering logic and compliance requirements, thus enabling the digital asset industry to gradually move from the experimental stage to maturity. Furthermore, Giant Whale Quantitative will participate in global ecosystem building through long-term technological innovation, making deeper structural contributions to model systems, behavioral analysis methods, and industry standards. The ultimate goal of this vision is to make technology a driving force for the industry's sustainable development, making the digital finance world more robust, understandable, and sustainable.

## **MISSION AND VALUES**





Transparency and verifiability occupy a crucial position within this mission framework. Giant Whale Quantitative ensures that every operation has a complete logical chain and auditable records through rigorous data processing standards, clear model structures, and traceable system behavior. By strengthening process and structuring, the company ensures that every technological achievement maintains consistency across different cycles and structural conditions, reducing uncertainty caused by information noise or systematic biases. The core objective of the mission is to make advanced technology a true long-term force for improving the decision-making environment.

Giant Whale Quantitative's mission is built on the core principle of "reducing uncertainty through technology," aiming to make the complex behavior of digital markets more interpretable and measurable. The company believes that in an era of ever-increasing information density and speed, traditional experience-based judgment is insufficient to cope with multidimensional environments. Only by relying on structured models, systematic technologies, and engineering-grade processes can users be provided with a more stable and clearer reference foundation. The mission is not about pursuing short-term advantages, but about transforming technology into a long-term reliable tool system, enabling market participants to maintain a sense of security and direction in complex environments.

The company's values are comprised of four pillars: professionalism, integrity, innovation, and collaboration, providing cultural and methodological support for the overall system. Professionalism is reflected in processing data and models using research-level processes; integrity is demonstrated by a long-term commitment to transparent operations and compliance requirements; innovation represents the continuous exploration of new approaches to artificial intelligence and structured analysis; and collaboration emphasizes the long-term collaborative capabilities among teams, users, and ecosystem partners. These values collectively form the foundation of the company's behavior, ensuring the consistency and sustainability of its mission across diverse global market environments.

# **QUANTITATIVE MODEL ARCHITECTURE**



The quantitative model system is the core technological foundation of Giant Whale Quantitative. Its design focuses on the structured integration of multi-dimensional data, enabling strategies to maintain consistency and interpretability in complex environments. The model construction process employs an engineered workflow, ensuring rigor at every step from data selection and factor generation to result validation, and continuously improving the model's adaptability across different market cycles through iteration. Within this architecture, the model not only performs predictive functions but also plays a role in interpretation, filtering, and structured analysis, forming a technical system capable of

### **CORE DIRECTIONS OF QUANTITATIVE MODELS:**

### Multi-factor Model Construction:

consistently outputting effective signals in high-noise environments.

By integrating factors from different dimensions such as value, momentum, structural strength, and sentiment, a multi-faceted characterization of market behavior is achieved.

### Factor Selection and Validation Mechanism:

Long-term data backtesting, stability testing, and orthogonalization ensure consistent factor performance across different environments.

### Market Microstructure Analysis Application:

Understanding the internal dynamics of the market through detailed indicators such as trading volume distribution, order book changes, and price elasticity.



### Microstructure signal fusion method:

Combining high-frequency and deep data processing to capture effective changes within a very short time window.

### Model iteration path:

Employing machine learning and deep learning frameworks for factor updates, enabling the model to continuously evolve with changes in market structure.

# **AUTOMATED EXECUTION SYSTEMS AND HIGH-FREQUENCY FRAMEWORKS**





In the high-speed trading environment of digital assets, the speed and consistency of the execution system determine the feasibility and final outcome of a strategy. Giant Whale Quantitative's automated execution system is built on a three-layer structure: Application layer: SO (Social Index Futures) automated strategies; System layer: nanosecond-level computing framework; Physical layer: picosecond-level hardware timing design.

Through bottom-up architectural restructuring, "information perception—decision generation—order execution" becomes a coherent and low-latency instruction chain.

### I. Application Layer:

### **Automated Execution System for SO**

SO strategies rely on the instantaneous deviation between the spot basket and futures prices. The core lies in whether the synchronization and hedging of both ends of the trade can be completed before the price difference converges.

Giant Whale Quantitative employs a highly structured automated SO execution system, including:

- Real-time pricing model for constructing the spot basket
- Automated scheduling mechanism for multi-asset synchronous execution paths
- Dynamic management logic for transaction costs, slippage, and liquidity density

In this layer, execution speed directly determines whether the arbitrage can be successfully executed. Therefore, SO is considered an "application battlefield" for measuring the efficiency of the underlying architecture, and its effectiveness depends entirely on the speed support of the underlying system.

# **AUTOMATED EXECUTION SYSTEMS AND HIGH-FREQUENCY FRAMEWORKS**



### **II. System Engineering Layer:**

# Nanosecond (ns) End-to-End Computing Framework

To enable strategies to respond to market changes within microseconds or even shorter time windows, Giant Whale Quantitative has established a system architecture with nanosecond-level latency control, covering the entire chain from data input to order output.

The core of the system engineering layer includes:

- Dedicated hosting and ultra-low latency network topology
- FPGA-accelerated computing and event-driven scheduling framework
- End-to-end latency path analysis and nanosecond-level timestamp management

Through these technologies, the system can complete core logic at the nanosecond level, improving the execution chain from the traditional "millisecond-level speed" to "the physical limits supported by the hardware."

### **III. Physical Foundation Layer:**

# Picosecond (PB) Hardware Timing Control Design

Under the nanosecond-level architecture, Giant Whale Quantitative further implements picosecond-level signal timing control at the hardware physical layer to compress propagation delays within the chip, bringing the overall execution capability close to the theoretical upper limit of silicon materials.

The core of the picosecond layer involves:

- Logic gate-level timing adjustment for FPGAs/ASICs
- Picosecond-level path compression for circuit routing
- Low-latency design for transistor switching behavior
- Physical timing reconstruction of signal propagation paths

The picosecond layer is the lowest-level foundation of the execution system. Its stability determines the speed ceiling of the upper-layer nanosecond architecture, providing the company with a continuous and structured speed advantage under extreme market conditions.

# **AUTOMATED EXECUTION SYSTEMS AND HIGH-FREQUENCY FRAMEWORKS**



### **Unified Execution Framework:**

# High-Frequency Execution Core with Cross-Layer Collaboration

When the three-layer structure works collaboratively, the execution system possesses the following characteristics:

- End-to-end latency from perception to execution is compressed to nanosecond/picosecond levels
- Complex strategies (such as SOs) can be automatically implemented within extremely short windows
- Execution results maintain a high degree of consistency with the expected model
- Multi-market and multi-asset parallel and synchronous scheduling is possible

This enables Giant Whale Quantitative's strategies not only to capture structural opportunities with extremely short time windows but also to maintain stability and predictability in highly volatile environments.





# **INTELLIGENT RISK CONTROL SYSTEM**





In the digital asset environment characterized by high volatility and high information density, the role of a risk control system is not only to identify risks but also to ensure the structural stability of the entire quantitative system under any market conditions. Giant Whale Quantitative's intelligent risk control system is based on a data-driven real-time monitoring mechanism. It uses cross-dimensional indicators to instantly perceive market behavior and proactively address anomalies before they are triggered. This system employs a multi-level structure, integrating extreme market conditions identification, risk exposure assessment, threshold management, and protection mechanism triggering into a collaborative framework. This ensures the system maintains consistency and coherence in responding to sudden changes, preventing chain reactions caused by local imbalances.

### **KEY FEATURES OF THE INTELLIGENT RISK CONTROL SYSTEM:**

### Extreme Market Condition Monitoring Mechanism:

Real-time tracking of key indicators such as market volatility, order book depth, and capital flow density to identify short-term, drastic changes.

### Anomaly Behavior Capture Model:

Identifying risk characteristics based on historical patterns, structural shifts, and microstructural changes to detect potential imbalances in advance.

### Multi-level Risk Management Structure:

Assessing risk exposure layer by layer from the account level, strategy level to the system level, achieving layered isolation and control.

### Dynamic threshold management:

Automatically adjusts risk parameters based on real-time data, enabling the protection mechanism to proactively adapt to market rhythms.

### Automatically triggered protection module:

Includes multiple strategies such as position reduction, execution suspension, and path switching to mitigate systemic damage in extreme situations.

### Risk control feedback loop design:

All details of risk events are fed back into the model system to further improve identification accuracy and structural stability.

# **LARGE-SCALE DATA ACQUISITION SYSTEM**



The effectiveness of a quantitative system relies on stable, abundant, and verifiable data sources. To ensure the reliability of the model under different timeframes and structural conditions, Giant Whale Quantitative has built a large-scale data acquisition system covering multiple dimensions, markets, and frequency bands.

Based on a high-throughput architecture, this system comprehensively collects data from transaction data, on-chain data, depth data, and macroeconomic environmental variables. Through layered cleaning, anomaly removal, and quality verification processes, it ensures that the data ultimately entering the model has high accuracy and consistency.

Through engineered data processing methods, the company can maintain high-quality standards while expanding data scale, enabling the model to have a more comprehensive structural understanding and maintain stable output when facing changes in multiple scenarios and timeframes.

### **CORE DATA SYSTEM STRUCTURE**

### 1. Multi-Source Data Input System

This system covers multiple data sources, including exchange market data, order book depth, on-chain activity, cross-regional market indicators, and derivative structure signals, providing a multi-dimensional input foundation for the model.

### **3. Quality Control Process**

Through missing data detection, format standardization, anomaly filtering, duplicate value identification, and structural consistency checks, the source data is ensured to reach stable standards before entering the model.

### 5. Multi-level Caching and Storage Strategy

Hierarchical storage based on data frequency, usage, and model requirements, including high-speed caching, structured databases, and historical data warehouses, improves system call efficiency and concurrency capabilities.

### 2. Real-time Data Stream Processing Framework

A high-frequency acquisition mechanism ensures that microsecond-level market changes, deep data adjustments, and microstructural events are fully recorded and transmitted, providing a real-time information foundation for the upper-level nanosecond-level execution system, enabling strategies to maintain consistency and responsiveness in high-speed environments.

### 4. Data Cleaning Mechanism

Employing outlier removal, slippage correction, microstructure calibration, and sample time alignment to improve data usability and structural integrity, enabling the model to maintain interpretability in high-noise environments.

### 6. Data Validation and Backtesting Process

All input data undergoes historical comparison, interval consistency checks, and structural stability verification before entering the core model. This ensures the long-term reliability of the model input, providing a solid foundation for strategy iteration, backtesting, and risk assessment.

# **RESEARCH TEAM AND ROADMAP**



The team adheres to a scientific methodology in its research, integrating data evaluation, feature extraction, model building, execution verification, and risk mitigation into a unified engineering process. Every model update undergoes cross-team review, including performance stability testing, market adaptability assessment, and microstructure consistency checks, ensuring robust operation across different market cycles. This rigorous process allows for long-term evolution of the research direction, rather than relying on short-term signals.







Giant Whale Quantitative's research team comprises quantitative analysts, AI engineers, and financial engineering experts. Members possess interdisciplinary backgrounds, encompassing mathematical modeling, probability and statistics, machine learning, computer architecture, and financial market theory. This diverse structure enables the team to understand market behavior from different perspectives and collaboratively build stable and interpretable quantitative systems.

The future roadmap will focus on enhancing the model's structuring and scenario expansion capabilities, including high-dimensional factor selection methods, the application of reinforcement learning at the execution end, optimization of microstructure matching algorithms, extension of cross-market synchronization frameworks, and broader data structure fusion. By continuously improving model interpretability and system stability, the team hopes to build a quantitative technology system that can transcend cycles and adapt to multiple global scenarios, laying a more solid foundation for the future digital market.

# DIGITAL ASSET QUANTITATIVE PRODUCT SYSTEM





Giant Whale Quantitative's product system is based on a quantitative technology architecture, achieving stable output across different scenarios through structured strategies and a modular framework. The product's technical logic is not centered on a single strategy, but rather on the system structure. Through model combination, risk stratification, and execution chain coordination, the system maintains consistency and scalability in dynamic environments. This holistic architecture allows different products to operate within a unified framework while possessing independent optimization capabilities, ensuring stable performance across various market conditions.

### **Core Directions of the Product System:**

### Structured Strategy Design:

Building strategy combinations around data factors, market structure, and execution rhythm to achieve sustained performance across cycles.

### Modular Strategy System:

Decomposing modules such as prediction, execution, and risk control, allowing for independent optimization and upgrades.

### Unified Technical Framework:

All products run on the same technical foundation, achieving high consistency and high compatibility.



### Multi-Market Adaptability:

Through parametric design and a scalable framework, strategies can be quickly adapted to different markets and asset structures.

### Systematic verification process:

All products must undergo stress testing, historical backtesting, and real-time simulation before going live to ensure security and stability.

# GLOBAL USER SERVICE MODEL



With the diversification of global user needs, Giant Whale Quantitative has established a cross-regional, cross-platform service system, enabling users to consistently utilize system functions regardless of their location. The company has established technical nodes and support teams in different regions globally, ensuring stable system operation in multi-regional environments through unified standards, architecture, and processes. The service model focuses not only on availability but also on consistency, providing users with a smooth experience across multiple devices, time zones, and network environments.

### **Core Structure of the Service Model:**



### **Cross-Regional Technical Support:**

Establishing technical and response centers in multiple regions ensures service coverage of major global time zones.



### **Highly Consistent System Experience:**

A unified interface logic and interaction method are provided regardless of whether the user is using a desktop, mobile, or browser.



### **Omnichannel Collaboration Mechanism:**

Technical, risk control, and user support teams collaborate to shorten the problem-solving process.



### **Multi-Terminal Performance Optimization:**

Independent optimization is performed for different device environments, ensuring stable system performance under varying hardware conditions.



### **Security and privacy protection mechanisms:**

User data is managed with strict compliance standards, and multi-layered protection is used to ensure access and usage security.

# PROFESSIONAL SUPPORT AND TRANSPARENT MANAGEMENT MECHANISM





Giant Whale Quantitative consistently prioritizes transparency and professionalism as core principles of its long-term operations.

Through verifiable data processes, a rigorous compliance system, and a multi-layered security structure, it establishes a stable and reliable technological foundation for global users. All key processes are recorded, reviewed, and monitored in an engineered manner, ensuring traceability and explainability. The company adheres to unified standards in internal management, system operation, and data processing, aiming to build a service system that can withstand economic cycles and maintain continuous stability.

### **Core management mechanisms include:**

### Data Traceability Structure:

All critical data processing links are time-stamped, version-managed, and operation-logged, ensuring that any result can be traced back to its complete source.

### Compliant Operation Process System:

Standardized process management for all operations, including data processing, system changes, access control, and behavior logging, ensures that all operational logic is verifiable and compliant with regulatory requirements.

### Multi-layered Security Structure:

A multi-layered security framework is built using access control, hierarchical permissions, encrypted transmission, and data isolation to reduce potential risks at the system and data levels.

### Transparent Oversight Mechanism:

The operational status of critical systems, data processing flows, and risk control events are recorded in a structured format, providing complete evidence for internal audits and external inspections.

### Service Support and Response Closed Loop:

A cross-regional professional support team is established to handle issues using unified protocols, ensuring the stability and consistency of communication, feedback, and resolution processes.

# **GLOBAL DIGITAL ASSET INDUSTRY TRENDS**



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The global digital asset industry is undergoing rapid evolution, characterized not only by price volatility but also by the continuous acceleration of structural changes and technological innovation. In a new environment of high volatility, high-density data, and cross-market interconnectivity, market behavior is shifting from traditional linear logic to more complex dynamic structures. Industry participants are increasingly recognizing that, in the context of overlapping cycles and information overload, relying solely on experience and single indicators is insufficient for long-term development; a structured approach is needed to enhance understanding of complex markets.



Technology plays an increasingly central role in industry evolution. With the continuous expansion of data scale, improved model capabilities, and widespread adoption of automated systems, the market is moving towards a more scientific, engineered, and systematic approach. Technologies such as artificial intelligence, deep learning, and microstructure analysis are becoming important components of new asset management methods, enabling market participants to address higher-dimensional structural changes through technological frameworks. From data-driven to model-driven, and then to full-process automation, technology has become a key variable determining the competitive landscape of the industry.

Globally, industry trends are showing a trend towards greater transparency, stronger demand for structure, and more rigorous technological systems. The era of high volatility places higher demands on system stability, while technology-driven management approaches offer new solutions to the industry. The focus of future competition will no longer be on individual tools, but rather on a complete technological system capable of operating across scenarios and timeframes – a long-term trend that the global asset management industry is moving towards.

# **OPPORTUNITIES AND CHALLENGES IN AN ERA OF STRICTER REGULATION**



As regulatory efforts in the digital asset sector continue to intensify globally, the industry's overall entry barriers and operational requirements are becoming increasingly stringent and systematic. Stricter regulation is not only changing how companies participate in the industry but also reshaping the competitive logic among them. In this new environment, compliance has shifted from a mere condition to a core competitive element, placing clear demands on companies' structural transparency, data processing standardization, and system robustness.





Improving compliance capabilities is not only a necessary condition for coping with regulations but also a crucial foundation for building long-term sustainable capabilities. For institutions with robust process management, transparent auditing mechanisms, and rigorous data recording systems, increased regulation will become a key window for expanding their advantages. Standardized operations enable companies to gain wider global recognition and reduce institutional barriers in cross-regional business expansion, thereby forming a more sustainable competitive advantage.

Global regulatory trends exhibit three main directions: unification, transparency, and increased accountability. Different regions are gradually establishing more consistent standards in asset classification, data requirements, risk control frameworks, and review processes, leading the industry towards institutionalization and maturity. For companies with structured systems and compliance foundations, this trend will bring broader development opportunities; while institutions lacking system support will face greater challenges in the new regulatory environment.

# **CORPORATE SOCIAL RESPONSIBILITY**





Giant Whale Quantitative believes that the development of technology and capital should serve a broader range of social groups. Therefore, the company has consistently undertaken responsibilities in education, knowledge dissemination, and community support throughout its long-term operations.

Globally, the company promotes financial literacy education and digital skills education in multiple regions, enabling people from diverse backgrounds to more comprehensively understand the risks, opportunities, and tool usage methods of the digital age. Based on the principles of long-term commitment, sustainability, and transparency, CSR projects are gradually forming a comprehensive system covering education, public welfare, and social support, bringing more constructive value to the industry and society.

Financial Education Program:

Conducting open courses and online learning programs in different regions to guide the public in understanding the modern financial framework and basic analytical methods of the data age.

Community Public Welfare Projects:

Collaborating with local organizations to promote long-term public welfare activities, including youth technology training, support for disadvantaged groups, and digital resource sharing projects.

Digital Literacy Program:

Helping users improve their digital skills and basic technological capabilities through content materials, technical explanations, and open learning resources.

Knowledge Equity Promotion
 Mechanism:

Ensuring that educational resources are provided in an open manner, enabling more people to access reliable information and scientific learning methods.

Long-term social impact goals:

To continuously expand the coverage of public education and public welfare programs, so that the technological achievements of the industry can benefit a wider range of social strata.

# DEVELOPMENT ROADMAP AND FUTURE PLANNING



Giant Whale Quantitative's development path spans from 2008 to 2025, undergoing a complete evolution from traditional business to digital construction, from model engineering to high-frequency execution architecture, and from regional operations to global technical collaboration. Over a decade of iteration reflects the company's long-term direction of continuously deepening its technology system, strengthening its structural capabilities, and enhancing its global influence. In the future, the company will continue to focus on technology upgrades, cross-regional expansion, and structural contributions to the industry as its core plans. Through model refinement, execution system optimization, and compliance system construction, it will provide a more robust technological foundation for the global digital finance ecosystem.

### **Development Outline (2008–2025) and Future Planning**

2008-2012

### Laying the Foundation for Traditional Business

During this period, the company focused on traditional wealth management and asset management, gradually establishing an early customer structure and accumulating initial data and operational experience. This business accumulation provided the foundational material for subsequent digitalization, enabling the company to initially form an underlying data framework that can be used for analysis, organization, and modeling.

2013-2017

### **Digitalization Phase**

With changes in market structure, the company began systematically advancing data engineering, structuring and organizing scattered business data, and establishing an initial data cleaning, backtesting, and process standardization system. This period marked the company's first path shift from a "traditional service model" to a "technology-driven model," laying the structural foundation for future quantitative research.

2018-2020

### **Establishment of**

### **Quantitative Direction**

The company formally established its core development path in quantitative technology, assembling a research team composed of experts from multiple fields including quantitative analysis, artificial intelligence, computer engineering, and financial engineering. This phase completed the early engineering construction of model systems, automated execution frameworks, and risk management architectures, achieving a fundamental transformation from experience-based judgment to structured scientific methods.

2021-2025

# Formation of the Full-Link Quantitative System

During this period, the company completed the comprehensive integration of data engineering, model iteration, nanosecond-level execution systems, picosecond-level hardware optimization, and a compliance management system.

The construction of cross-regional technology nodes enables enterprises to have global responsiveness, significantly improving execution stability under different market conditions. The entire technology system has entered a mature stage of replicability, scalability, and global deployment.

# DEVELOPMENT ROADMAP AND FUTURE PLANNING



### Future Direction | Model Deepening and Global Expansion

In the future, Giant Whale Quantitative will focus on technology deepening, cross-regional expansion, and structural transparency as its main development directions, enabling the overall system to have higher stability, consistency, and verifiability in long-term operation in the global market.



2025-2026

### **Model System Deepening Phase**

In the next two years, the company will focus on strengthening high-dimensional factor research, reinforcement learning models, and robustness verification in noisy market environments, enabling the model system to maintain a consistent judgment framework across different liquidity, volatility structures, and trading systems. The core objective of this phase is to move the strategy further from "efficient execution" to "structured cognition," and to expand the model to a unified architecture across categories, markets, and timeframes through higherdimensional factor combinations.

2027-2028

### **Global Node Expansion and Collaboration Capability Enhancement Phase**

During this phase, the company will further expand its cross-regional technology nodes, forming a multi-center collaborative structure covering the Asia-Pacific, North America, and Europe, enabling the execution architecture to synchronize under a unified time-series system. Simultaneously, the company will strengthen its regulatory adaptability in various regional markets, improving compliance consistency under multiple regulatory frameworks, ensuring the system maintains stable operation and transparent audit capabilities globally.

2029-2030

### **Transparent Infrastructure and Verifiable System Construction Phase**

Starting in 2029, the company will focus on building more structured and verifiable financial infrastructure, including auditable model interfaces, verifiable execution paths, cross-system collaboration protocols, and data integrity verification systems. The goal of this phase is to evolve the entire quantitative system from a "high-performance trading system" into a long-term financial technology infrastructure with "visibility, verifiability, and structural transparency," driving the industry towards a more stable, standardized, and engineered direction.



# GIANT WHALE QUANTITATIVE'S FUTURE COMMITMENT

DRIVING THE GLOBAL DIGITAL FINANCE FUTURE WITH TECHNOLOGY, INTEGRITY, AND LONG-TERM

Giant Whale Quantitative will continue to drive its development through rigorous technology, transparent operating standards, and a responsible long-term industry approach, striving to bring more stable, verifiable, and constructive power to the global digital finance ecosystem. Regardless of market changes, we will adhere to understanding structures scientifically, supporting practices with technological capabilities, and driving progress with integrity, working together with global users towards a more mature and robust future system.



Giant Whale Quantitative

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MAKING COMPLEXITY UNDERSTANDABLE, MAKING THE FUTURE MORE BUILDABLE