

# Research on the Business Management and Operation Models of Mainstream Multinational Companies: The Case Analysis Based on Apple and Huawei

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**Abstract.** This paper examines the business management and operational models of two global technology giants, Apple and Huawei. By analyzing Apple's Directly Responsible Individual (DRI) management system and Huawei's Integrated Product Development (IPD) model, the study highlights how these companies' foster innovation, improve operational efficiency, and adapt to market changes. Apple's DRI system centralizes decision-making authority and emphasizes individual accountability, promoting rapid innovation through expert leadership. In contrast, Huawei's IPD model focuses on cross-functional collaboration, enabling a fast response to market demands and fostering structured product development. The comparison provides insights into how different management models contribute to corporate success in the technology industry. The study aims to offer valuable lessons for multinational companies seeking to enhance competitiveness through innovative management strategies, particularly in fast-evolving market environments.

**Keywords:** Apple; Huawei; DRI management; IPD model; innovation.

## 1. Introduction

The technology industry plays a pivotal role in the global economy, driving innovation, technological progress, and industrial change. As the world's leading technology companies, Apple and Huawei have become industry benchmarks through their unique management systems and operating models. In the current increasingly complex and competitive market environment, it is of great practical significance to study how these two companies can improve their operational efficiency and promote technological innovation through innovative management systems.

Apple uses the "Directly Responsible Individual" (DRI) management system, which emphasizes the direct responsibility and decision-making power of individuals. It plays a core role in Apple's innovation culture and product development. Huawei, on the other hand, has formed a market-oriented, cross-departmental collaborative product development process through the "Integrated Product Development" (IPD) model. These two management models have their own characteristics and have helped companies succeed in their respective market fields.

The purpose of this study is to analyze the operational efficiency, innovation capabilities and market response strategies of Apple and Huawei under their respective management models. The significance of the study is to provide reference for other companies, especially in the context of rapid technological iteration and market changes in the global technology industry, to explore the advantages and disadvantages of different management models and their role in promoting corporate innovation and development.

To achieve the above objectives, this paper mainly adopts comparative analysis and case analysis. First, the characteristics of the management models of Apple and Huawei are analyzed through literature review. Secondly, by comparing the advantages and disadvantages of these two management systems and their impact on innovation and market adaptation, this paper explores how to improve the competitiveness of enterprises through reasonable management models.

The article is structured as follows: First, the overview and financial status of Apple and Huawei are introduced; then, the advantages of Apple's management system and functional organization under the DRI model are analyzed; then, Huawei's product development and management process under the IPD logic is discussed. Finally, the similarities and differences of the two companies'

management systems are compared in detail, and their challenges and inspirations in innovation and leadership are summarized.

## **2. Literature Review**

### **2.1. Overview of Apple Inc. and Its Financial Status**

Apple Inc., a global leader in technology, is based in Cupertino, California. Founded in 1976, the company is known for designing, developing, and selling innovative consumer electronics, computer software, and online services. Its product lineup includes iPhone smartphones, iPad tablets, Mac computers, iPod media players, and Apple Watch wearables. Apple also offers a range of online services such as the iTunes Store, App Store, and iCloud. Steve Jobs, Steve Wozniak, and Ronald Wayne established the company, which has grown into one of the most valuable businesses worldwide, boasting a market capitalization exceeding \$2 trillion.

According to its financial results, Apple generated \$274.535 billion in total revenue, with a net income of \$57.470 billion. iPhone sales contributed \$214.558 billion, iPad sales brought in \$58.283 billion, Mac revenue amounted to \$89.742 billion, and other products generated \$13.760 billion. The company's gross margin stood at 38.0%, while its net margin was 14.7%. Regarding cash flow, Apple reported \$10.737 billion from operating activities, -\$1.968 billion from investing activities, and -\$1.066 billion from financing activities. The company's total cash reserves were valued at \$19.239 billion (Source: Apple's official website).

### **2.2. Overview of Huawei and its Financial Performance**

Huawei Technologies Co., Ltd., headquartered in Shenzhen, China, is a prominent provider of communications technology and consumer electronics. Founded by Ren Zhengfei in 1987, Huawei is involved in the development, production, and sale of communication equipment, IT products, and electronics. The company's core offerings include smartphones, network infrastructure, enterprise solutions, and cloud services. Huawei's smartphones, covering mid-range to premium models, hold significant global market share. The company is also recognized as a leader in 5G technology, supplying 5G equipment and solutions across the world. Committed to innovation, Huawei continues to make advancements in areas like artificial intelligence and the Internet of Things (IoT). As of 2023, Huawei employed over 190,000 people and operated in more than 170 countries and regions. Despite external challenges, the company maintains robust growth and advances its global strategy.

In 2023, Huawei reported total revenue of approximately RMB 674.2 billion. The operator business contributed RMB 274.5 billion, making up 40.7% of the revenue, while the enterprise segment earned RMB 129 billion (19.1%). The consumer division generated RMB 291.6 billion, accounting for 43.2% of total sales. The remaining 3.9% came from other businesses and services. Huawei posted a net profit of RMB 123.4 billion, with a gross margin of 33.5% and a net margin of 18.3%. The company's operating cash flow amounted to RMB 169.5 billion, while its investment and financing cash flows were RMB -42.1 billion and RMB -27.8 billion, respectively. Huawei's total cash and equivalents stood at RMB 135.4 billion (Source: Huawei's official website)

## **3. Apple's Management System and the DRI Model**

### **3.1. Jobs' Return and the Formation of a New Organizational Structure**

When Steve Jobs rejoined Apple in 1997, the company was operating in a traditional business structure, with separate units responsible for their own profits and losses. Jobs changed this by integrating the entire company under a unified profit and loss system, restructuring the separate business units into a functional organization that emphasized decision-making based on expertise. This structure remains in place today.

At Apple, senior vice presidents manage functions rather than specific products. Like Jobs before him, current CEO Tim Cook holds the only role where key areas such as design, engineering, operations, marketing, and retail converge. The company has no general managers except for the CEO, who oversees everything from product development to sales and is evaluated by overall profit and loss performance. By the late 20th century, many large corporations adopted a similar approach. Apple showed how a functional structure could help companies adapt to rapid technological change and industry disruption. Over time, as fields like artificial intelligence gained importance, Apple adjusted its organizational structure accordingly [1].

### **3.2. Benefits of a Functional Organization**

Apple's mission is to develop products that improve people's lives, exemplified by innovations like the iPhone and Apple Watch. The company relies on a functional structure, where the most knowledgeable individuals are empowered to make decisions. In a fast-paced technological environment, Apple leans on the expertise of technical specialists rather than the generalist business managers. Its research and development efforts emphasize a balance between technology and user experience. Additionally, senior R&D leaders focus on innovation without being pressured by short-term financial goals, aligning their work with long-term value creation.

### **3.3. Key Leadership Traits**

Since Jobs implemented the functional structure, Apple has emphasized three leadership traits: deep expertise, attention to detail, and collaborative discussion.

#### **3.3.1. Expertise**

Apple's management philosophy centers on the idea that experts should lead in their respective areas, ensuring professionalism and efficiency. For instance, hardware development is overseen by hardware specialists, and software by software experts. This specialization attracts top talent, fostering an environment where like-minded professionals thrive. As early as 1984, Jobs insisted that managers must possess expertise in the areas they oversee.

#### **3.3.2. Attention to Detail**

Apple requires its leaders to understand the fine details at every level of the organization, from the highest level down to the intricacies of design. This ensures that top-level decisions are well-informed. Leaders at Apple, for example, pay attention to product design details, down to the curvature of corners, to maintain the company's design standards and efficiency.

#### **3.3.3. Collaborative Coordination**

Cross-functional collaboration is essential at Apple, where different teams of experts must work together on complex projects. Effective collaboration is achieved through open debate, and when conflicts arise, senior leaders step in to facilitate resolution. This leadership approach requires a balance between strong personal opinions and a willingness to adjust to foster teamwork. As Apple grows, its leaders must increase their focus on important details and maintain effective cross-functional collaboration.

## **4. Huawei's Management System Under IPD Logic**

### **4.1. Concept of IPD Logic**

IPD is the abbreviation of Integrated Product Development, which integrates many management models and theories. A complete system of best management practices of many enterprises, which can help enterprises quickly respond to market changes, shorten product launch time, reduce resource waste, improve productivity, and ultimately achieve business success. The idea of IPD originated from the book "Product and Life Cycle Optimization" published by PRTM in the United States. The

book describes in detail. The IPD model includes all aspects. However, the popularity of IPD in China stems from the promotion and use of IBM and Huawei.

Integrated Product Development (IPD) is a systematic product development management process that aims to provide enterprises with a closed loop from market opportunity identification to commercial success. It ensures that products are market- and customer-centric through product strategy management, market management, and demand management processes, helping enterprises do the right thing.

In 1998, Huawei faced challenges in product competitiveness and R&D capabilities. In order to improve these capabilities, Huawei introduced the IPD system and started a large-scale product R&D transformation. Huawei introduced the IPD system from IBM and started full-process management from demand exploration to product delisting. Huawei formed a cross-functional team, including marketing, R&D, production, user service and other departments, to ensure that each link can work closely together. Through market management and demand management processes, Huawei ensures that product development is customer-centric and responds quickly to market changes. In 2005, Huawei optimized the IPD process based on its own characteristics and solved the problems of insufficient demand drive and response in the IBM-IPD process. Huawei continues to improve the IPD process and introduce agile development methods to make it more efficient and flexible. Through the implementation of IPD, Huawei's product innovation capabilities and corporate competitiveness have been greatly improved. Huawei's operating income has increased from RMB 8.9 billion in 1998 to RMB 891.4 billion in 2020, a 100-fold increase. The successful implementation of IPD has not only helped Huawei achieve great success in the market, but also provided valuable experience for other companies. In practical applications, the IPD system helps companies achieve a closed loop of the entire process from market opportunity identification to business success, thereby enhancing the overall competitiveness of the company [2].

#### 4.2. Huawei's IPD System

Huawei implemented the Integrated Product Development (IPD) system in 1998, transitioning from a department-based management structure to one focused on business processes and production lines. The IPD system integrates a structured R&D process with cross-departmental teams responsible for executing these processes. Previously, product development was solely handled by the R&D department, with key personnel determining the technical direction. Under the IPD model, teams from various departments collaborate in both planning and implementation stages, forming cross-functional teams known as IPMT and PDT (IPT). These teams are required to plan and coordinate product development to ensure technological advancement, cost-effectiveness, and market relevance throughout the entire process.

The IPD framework consists of six core modules: demand management, strategic planning, product planning, technical planning, technical development, and product development. Demand management focuses on understanding customer needs and monitoring implementation processes, which occur in five stages: collection, analysis, distribution, execution, and verification. Strategic planning establishes the medium- and long-term product development strategies, while product planning develops product roadmaps and version strategies. Technical planning focuses on the development of key core components. The technical management process involves five stages: technical planning, pre-research, architecture development, technology and platform development, and component reuse and evaluation.

Technical development ensures the early preparation of critical core technologies and components, facilitating the creation of a shared component library (CBB). Product development then uses this shared resource, following a six-stage process: concept, planning, development, verification, release, and lifecycle management, ensuring efficient, and high-quality product launches.

## 5. Comparative Analysis

In the context of increasingly fierce competition in the global market, multinational companies must constantly innovate their business management and operation models to adapt to the rapidly changing market environment. As two technology companies with global influence, Apple and Huawei have adopted different management systems and operation models to achieve their business goals. This article will analyze the similarities and differences between Apple's DRI (Directly Responsible Individual) management system and Huawei's IPD (Integrated Product Development) model in management and operation.

### 5.1. Comparison Of Management Systems

#### 5.1.1. Apple's DRI Management System

Apple has adopted the DRI system in management, emphasizing that every employee is directly responsible. This system aims to improve responsibility and efficiency and avoid the "giant baby phenomenon", that is, employees evading and relying on responsibility. At Apple, responsibilities are clear and transparent, and each project has a direct person in charge, which ensures rapid and effective decision-making.

1) Clear accountability: Each project has a direct person in charge to avoid unclear responsibilities and ensure that problems are quickly identified and resolved.

2) Improve decision-making efficiency: Quickly promote project progress by reducing unnecessary meetings and communications.

3) Strengthen teamwork: In cross-departmental cooperation, each member is clear about his or her responsibilities, which promotes efficient collaboration.

#### 5.1.2. Huawei's IPD Management System

Huawei's IPD model is a systematic product development management process that aims to achieve rapid response to market changes and shorten product launch time through cross-departmental team cooperation. Its main features include:

1) Cross-departmental collaboration: IPMT (Integrated Product Management Team) and PDT (Product Development Team) ensure that all aspects of the product from concept to market are fully planned and coordinated through cross-departmental collaboration.

2) Market orientation: Through demand management and market research, ensure that product development is centered on customer needs, reduce resource waste and improve market competitiveness.

3) Structured process: IPD includes six key stages to ensure standardized and efficient product development, reduce development cycle and improve product quality [3].

### 5.2. Comparison Of Operating Models

#### 5.2.1. Apple's Functional Organizational Structure

Apple uses a functional organizational structure, with all business units operating under an overall profit and loss statement. This structure allows Apple to focus resources and expertise to ensure product innovation and quality.

1) Professional decision-making: Decision-making power is concentrated in the hands of experts in various fields, which can better cope with technological changes.

2) Focus on innovation: Apple maintains a high level of specialization in product design, R&D, and marketing to promote continuous innovation.

3) Flexibility in responding to market changes: Despite Apple's continued expansion, its organizational structure remains flexible to adapt to the rapidly changing market environment.

### 5.2.2. Huawei's Integrated Product Development Process

Huawei's IPD model ensures that all departments can collaborate efficiently and respond to market demands during the product development process through an integrated product development process [4].

1) Full process closed loop: From market opportunity identification to product lifecycle management, Huawei's IPD model ensures that each link is closely connected to avoid waste of resources.

2) Quick response to the market: Through rapid market research and demand management, Huawei can quickly adjust its product strategies to adapt to market changes.

3) Integration of technology and market: Huawei focuses on the integration of technology development and market demand and ensures the market competitiveness of products through the effective connection between technology planning and product development.

### 5.3. Innovation and Leadership Challenges

#### 5.3.1. Apple's Innovation and Leadership

Apple's management model emphasizes that leaders should have deep expertise and attention to detail. In this way, Apple is able to maintain its leading position in technological innovation, but it also faces leadership challenges as the company scales up.

1) Continuous innovation: Apple's continuous innovation in product features and design enables it to remain competitive in the market.

2) Dispersion of leadership: As the number of employees increases, maintaining leaders' expertise and decision-making capabilities becomes a major challenge.

#### 5.3.2. Huawei's Innovation and Leadership

Huawei has achieved cross-departmental collaboration and innovation through the IPD model, but it also faces the challenge of how to maintain product competitiveness in a rapidly changing market.

1) Importance of teamwork: Huawei's success depends on effective collaboration among cross-departmental teams. However, as the team size expands, maintaining efficient communication and collaboration becomes the key.

2) Pressure from technology updates: Faced with a rapidly changing market environment, Huawei needs to continuously update its technology and products to meet customer needs [5].

### 5.4. Summary

As the world's leading technology companies, Apple and Huawei have each adopted different management and operation models to cope with the complex market environment. Apple's DRI management system emphasizes individual responsibility and professional decision-making, while Huawei's IPD model focuses on cross-departmental collaboration and market orientation. Both face challenges in innovation and leadership, but through their respective management models, Apple and Huawei are constantly promoting technological progress and market success. In the future, as the market environment changes further, the two companies will still need to continue to optimize their management and operation models to maintain their competitive advantage [6].

## 6. Conclusion

In the context of increasingly fierce competition in the global market, multinational companies must constantly innovate their business management and operation models to adapt to the rapidly changing market environment. As technology companies with global influence, Apple and Huawei have adopted different management systems and operation models to achieve their business goals. Apple has implemented the DRI (Directly Responsible Individual) management system, emphasizing that each employee is directly responsible. This system aims to improve responsibility and efficiency and avoid employees from evading responsibility. Apple's management model promotes project

progress by clarifying responsibility, improving decision-making efficiency and strengthening team collaboration. In contrast, Huawei adopts the IPD (Integrated Product Development) model, which is a systematic product R&D management process that focuses on cross-departmental team cooperation to achieve rapid market response and shorten product time to market. Huawei's IPD model improves product development efficiency and market competitiveness through cross-departmental collaboration, market orientation and structured processes. In terms of operating model, Apple uses a functional organizational structure, with all business units operating under the overall profit and loss statement. This structure enables Apple to concentrate resources and expertise to maintain product innovation and quality. In contrast, Huawei's integrated product development process ensures a closed loop of the entire process from market opportunity identification to product life cycle management, enhancing its ability to respond quickly to market changes. In terms of innovation and leadership, Apple maintains its technological leadership by emphasizing the expertise and attention to detail of leaders, but it also faces leadership challenges as the company scales up. Huawei relies on cross-departmental team collaboration and technological updates to cope with market pressure, but it also faces the challenge of maintaining efficient team communication and continuous technological innovation.

This study compares Apple's DRI (Directly Responsible Individual) management system with Huawei's IPD (Integrated Product Development) model to explore the differences between the two companies in innovation, operational efficiency and market response strategies. The study found that Apple relies on a highly specialized decision-making process to improve management efficiency and innovation capabilities through a direct responsibility system, while Huawei achieves rapid market response through an integrated product development process and cross-departmental collaboration.

However, this study also has some limitations. First, although the management model characteristics of the two companies are revealed through case analysis, it is difficult to fully quantify the direct impact of their management system on corporate performance because the research method is mainly qualitative analysis. Second, the data source is mainly based on public financial reports and literature reviews, which may ignore some internal operating details. In addition, this study only examines the management model of two technology giants. Whether its applicability and conclusions can be extended to other industries and small and medium-sized enterprises still needs further verification.

Future research can be expanded in the following directions. First, increase the research on the management models of technology companies in other industries or regions to conduct a more extensive horizontal comparative analysis. Second, combine more empirical data and use quantitative models to verify the specific relationship between management systems and corporate performance. Finally, as the technology industry continues to change, we should continue to pay attention to the dynamic adjustments of Apple and Huawei's management systems in the face of emerging technologies and changes in the global market, so as to provide more timely management model suggestions for companies in global competition.

## References

- [1] Apple Inc. (2019); Patent Application Titled "Implicit Power Management Mode And State Transitions" Published Online (USPTO 20190124593).
- [2] Zou Daobiao, Chen Hong & Zhang Haomin. (2013). Analysis of enterprise innovation management in the new economic era: Taking Apple as an example. *Research on Technological Economy and Management* (02), 42-45.
- [3] Apple Inc. (2012).; Agency Reviews Patent Application Approval Request for "Motion Sensor Data Processing Using Various Power Management Modes".
- [4] Song Xuan. (2022). Research on the financial management model of Huawei. *Chemical Engineering Management* (15), 7-9. doi:10.19900/j.cnki.ISSN1008-4800.2022.15.003.

- [5] Leng Hanfeng. (2015). Analysis and reference research on Huawei's management model. Modern Economic Information (13), 55-56.
- [6] Shen Wei. (2010). Analysis of Huawei's strategic management and business model reconstruction. Management and Technology of Small and Medium Enterprises (First Half of the Month) (11), 29-30.