

Research on the Organizational Model of Digital Transformation of Energy Internet Enterprises

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ABSTRACT

Chinese power companies propose to build world-leading energy Internet companies. How to achieve digital transformation and how to adjust the organizational structure and management model are urgent problems for power companies to solve. The purpose of this study is to analyze the change trend of the organizational form in the process of digital transformation of energy Internet companies, and to study the organizational structure and management mode of energy Internet companies after digital transformation. The results of this research show that the organizational structure of energy Internet companies will be transformed from pyramid to flat. Energy Internet companies need to build value-oriented and service-oriented headquarters, and establish an enterprise-level data center and business center. Enterprises need to establish an enabling management model to achieve authorization and decentralization, and at the same time establish a market-oriented value sharing mechanism and employment mechanism.

Keywords: Organizational Model, Digital Transformation, Energy Internet Enterprises, Organizational Structure Design

1. INTRODUCTION

After entering the digital era, power companies also need to undergo digital transformation. How power companies adapt to the requirements of digital transformation in terms of organizational structure and organizational model is of great significance for power companies to achieve energy Internet transformation. The purpose of this study is to analyze the change trend of the organizational form in the process of digital transformation of energy Internet companies, and to study the organizational structure and management mode of energy Internet companies after digital transformation.

2. CHANGES IN ORGANIZATIONAL MODELS IN DIGITAL TRANSFORMATION

From the perspective of development trends, the company's construction of an energy Internet enterprise needs to adhere to the priority of organizational efficiency and customer orientation, and continue to promote the accelerated transformation of the organizational form to a digital, platform-based,

ecological, and empowering organization. However, it should also be noted that the operation characteristics of power grid enterprises determine that the company must maintain the management characteristics of traditional large enterprises in power grid organization in the process of organizational transformation. The company needs to form a balance between the semi-military and stable grid operation organization model and the high-frequency iterative Internet organization model. At the same time, as a central enterprise, the company also needs to take the relevant requirements for the reform of state-owned assets and state-owned enterprises and the requirements for the reform of the power system as basic constraints in the process of organizational transformation.

2.1. Organizational Structure Changes from Pyramid to Flat

The overall organizational form of the company will change from a pyramid-like multi-level, long-chain organizational structure to a flat organizational form with simplified management levels, increased management scope, and increased authorization. For traditional power grid business, the front-end

organization needs to be close to the market and users. The organizational structure needs to abandon the shortcomings of the previous fixed form, inefficient operation, and fragmented links, increase flexibility and market response speed, and build a "customer-centric" organizational structure.

For emerging businesses, the organizational structure needs to be moderately flexible in terms of power allocation and differentiation. The company should reduce unnecessary vertical approval chains and appropriately delegate the authority to adjust the organizational structure. Emerging business units should be allowed to dynamically adjust the organizational structure in real time according to the market and customers, and be allowed to carry out the differentiated design of the organizational structure according to different markets, regions and business characteristics.

2.2. Management Mode Changes from Vertical Type to Process Type

The internal management mode and operation mechanism of the company will change from vertical management to self-driven process management. Process-based management is to establish an independent standardized process for each business line of the company, through the application of energy Internet technology and digital management methods, and to make each business operate independently according to the process.

Under the process-based structure, the relationship between the company's various organizational units is based on the operation of professional lines, and each unit emphasizes horizontal collaboration. With the maturity of energy Internet technology, it is no longer the clearer the professional boundary, the higher the efficiency. The improvement of operational efficiency depends on the collaboration between various disciplines. The improvement of management efficiency has changed from mainly relying on the division of professional lines to relying on collaborative evolution. The organizational form also needs to further highlight the collaborative structure on the basis of the traditional division of labor.

2.3. Internal and External Organizational Boundaries are Gradually Weakening

At present, the horizontal relationship between the internal and external organizations of the company is a chain-type organizational form in which the power supply sequence is the mainstay, and the financial business, international business, supporting industries, and strategic emerging industries develop independently. In the future, in order to further build an energy Internet enterprise, it is necessary to gradually

weaken the organizational boundaries with clear barriers.

From the perspective of the organization, the openness of the structure of each organization within the group should be strengthened. In the past, the organizational structure of each unit in the group was determined by business positioning. In the future, the organizational structure will shift to a structure with moderate cross-border business boundaries and collaborative development between units. From the outside of the organization, the company needs to establish a symbiotic value ecological network with customers, upstream and downstream companies, supply chain companies, and external companies. The members of each ecological network establish a relationship of equality and mutual benefit, common resources, co-creation of value, and sharing of benefits.

2.4. Organizational Form will be Continuously Optimized with the Advancement of Organizational Change

The requirements of the reform of state-owned assets and state-owned enterprises, the update of market and customer needs, and the needs of the company's internal management reform all require corresponding changes and adjustments to the company's organizational form and functions. As a power grid company, the core function of the organization has always been focused on promoting the more economical and safe operation of the power supply business. With the support and arming of energy Internet technology, the company's organizational form and functions need to be expanded and extended on the original basis. Organizations need to improve the system efficiency of internal and external ecological networks, promote the coordinated operation of traditional power grid business and emerging businesses such as integrated energy services and electric vehicles, and constantly adapt to the uncertainty of market and customer needs. The process of optimization and adjustment of this organizational form will not be completed in one step, and requires continuous changes and iterative improvements.

3. ORGANIZATIONAL STRUCTURE DESIGN OF DIGITAL ORGANIZATION

3.1. Value and Service Headquarters

It is necessary to promote the transformation of the functions and roles of the company headquarters, adapt to the optimization requirements of the strategy and management and control model, and further optimize and highlight the core functions of the headquarters. It is necessary to strengthen functions such as party building management, strategic management, resource

integration and allocation, capital operation, service sharing, and supervision and evaluation. It is necessary to further reduce the specific operating powers of the headquarters, improve the management level of the headquarters, and increase the strategic value contribution of the headquarters.

For the power grid business, it is necessary to focus on improving the coordination efficiency of the headquarters for the management functions of various professional lines of the power grid business. It is necessary to speed up the rationalization of the responsibility interface between development planning, construction, operation, maintenance, marketing, materials and other related disciplines. Starting from customer needs and front-end business needs, it is necessary to optimize business processes, establish regular contact and rapid linkage mechanisms, and promote the transformation of headquarters functions from guidance to service.

3.2. Enterprise Data Center

By building an enterprise-level data center, the company can further improve the professional data management system, realize the unified operation of data assets, and promote the efficient use of data resources. It can speed up the construction of a data service platform, and support companies to professionally carry out data analysis and decision-making by providing power and energy data services. At the same time, based on the unified data center of the whole business, according to the needs of data sharing and analysis applications, we can accumulate and improve the common data service capabilities. In order to meet the needs of data sharing, analysis, mining and integration of horizontal, cross-professional and vertical different levels, it can effectively support the analysis of various application scenarios.

It is necessary to speed up the construction of a data sharing platform, and carry out the access, governance, integration and standardization of the company's internal and external full-service data. By breaking through data barriers, data aggregation, fusion, sharing, distribution, transaction and application can be realized. We should speed up the construction of digital innovation platforms, carry out digital innovation, and develop digital products. Through continuous improvement of digital operation capabilities, it can not only empower front-end applications, incubate emerging businesses, and meet the rapid changes in front-end business needs, but also help to promote the construction of an ecosystem with open capabilities and win-win cooperation, and build a ubiquitous power IoT industry ecosystem.

3.3. Enterprise Business Center

An enterprise middle-office architecture system should be established to speed up the integration of various types of enterprise data, and effectively support the construction and development of various application scenarios of the Energy Internet. It should continue to tap market value, actively empower various businesses and users, and promote the improvement of the company's synergy ability. The business center can integrate the common content of each core business into multiple shared services. The application service form is used for the deployment of various front-end applications to achieve the aggregation effect of cross-departmental, cross-regional and branch-level general resources such as customer resources, power grid resources, and supplier resources. By separating the front office, middle office, and back office, the business middle office can flexibly and quickly provide support for various front-end business units for the purpose of new business development, so that the service expansion can be flexibly and software development can be assembled.

3.4. Enterprise Business Center

Enterprises can learn from the practices of some central enterprises and large Internet companies to establish human resource shared service centers, financial shared service centers, and data resource shared service centers to achieve intensive sharing of headquarters management functions, and improve the group's professional management capabilities and decision-making efficiency. The shared service center can be positioned as a functional professional management and process management center. It is committed to rapidly improving the level of functional management by improving the overall management and control level of the group and duplicating the standardized functional management model.

At the same time, it is also necessary to speed up the data empowerment of shared service centers. Enterprises should seize the favorable opportunity of the construction of business center and data center, change the traditional function-intensive model, and build a smart function sharing center in some functional management areas driven by data empowerment. It should also implement full-process intelligent management of routine functions, and provide large-scale services for various enterprises in terms of resource support, data empowerment, and coordinated problem solving.

4. MANAGEMENT MODELS OF DIGITAL ORGANIZATIONS

4.1. Establish a Value Sharing Mechanism

At the front end of the power grid business, an internal simulation profit mechanism is established to increase profit sharing. For the front-end organization of the power grid business directly facing customers, an internal simulated profit mechanism is introduced, and each unit is encouraged to formulate internal pricing standards and transfer prices. The company conducts cost accounting and collection through internal orders, accurately calculates input costs and simulated profits, formulates an excess profit sharing mechanism, and appropriately increases the profit sharing ratio of the person in charge of the simulated profit unit.

Power grid enterprises should be encouraged to establish and improve a salary distribution model based on simulated profits by dividing down and subdividing accounting units. It is recommended to formulate performance strategies according to local conditions, and scientifically allocate and issue performance wages by means of working hours, team contracting, task grabbing, and project commissions. Enterprises should continuously increase the inclination to key positions, core talents, and front-line production personnel, and fully mobilize the enthusiasm of employees.

4.2. Establish a Market-based Election and Employment Mechanism

For the leadership team of the provincial company, on the basis of implementing the leadership team tenure system, the managerial tenure system and contractual management are steadily implemented. From top to bottom, the tenure system and contractual management are gradually implemented for the heads of units at all levels, department heads, team leaders, and directors of power supply offices. Enterprises should cash remuneration and implement renewal or dismissal strictly according to the assessment results. The leadership team's sense of contract, competition, and sense of responsibility need to be further strengthened to promote the ability of managers to go up and down.

The enterprise fully implements the standing up of all middle-level cadres, two-way selection, and competition for employment, and cultivates a competitive pattern in which the capable ones are promoted and the mediocre ones are inferior. For those who fail the assessment, the employment contract will be terminated or the salary will be reduced and transferred. Through pressure transmission, the enterprise changed the attitude of hesitation, wait-and-see and slack of some cadres, and promoted the majority of cadres to profoundly change their thinking and take the initiative to act, and further stimulate their vitality.

For emerging business units with a high degree of marketization, enterprises may implement the professional manager system on a pilot basis. We should dilute the awareness of identity, build standards for

appointments, and speed up the channel for the transition of identities between management cadres and professional managers. Through market-oriented and competitive selection and recruitment, the proportion of external employment of professional managers has been reasonably increased, and the "double benchmarking" level of performance and compensation has been continuously improved.

4.3. Establish an Enabling Management Model

It is necessary to continuously optimize the position of each management level of the company in the authorization management, speed up the transformation of the authorization management model, and promote the "authorization" of key authorization matters. Enterprises should push the headquarters to change from micro-management to macro-management, second-level units to change from micro-management to meso-management, and third-level and below units to be responsible for micro-management. Enterprises should be guided by "what the law does not prohibit", use the list of authorization and decentralization and the list of negative management as management methods, and explore the establishment of a positive incentive mechanism. All units should be encouraged to boldly carry out other matters outside the negative list, and take the initiative to improve market responsiveness.

The authorization supporting system should be accelerated to improve, the authorization process and matters should be continuously optimized and simplified, and the management and control mechanism should be continuously improved. By promoting "delegating, delegating accurately, managing well, and receiving", the group management and control model should be continuously deepened, and the transformation of power from "control" to "allocation" should be accelerated to improve management flexibility, synergy and precision.

5. CONCLUSION

In the future, organizational structure of energy Internet companies will be transformed from pyramid to flat. Energy Internet companies need to build value-oriented and service-oriented headquarters, and establish an enterprise-level data center and business center. Enterprises need to establish an enabling management model to achieve authorization and decentralization, and at the same time establish a market-oriented value sharing mechanism and employment mechanism.

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