

RenDanHeYi: Pioneering the Quantum Organisation

By
Jin Chen

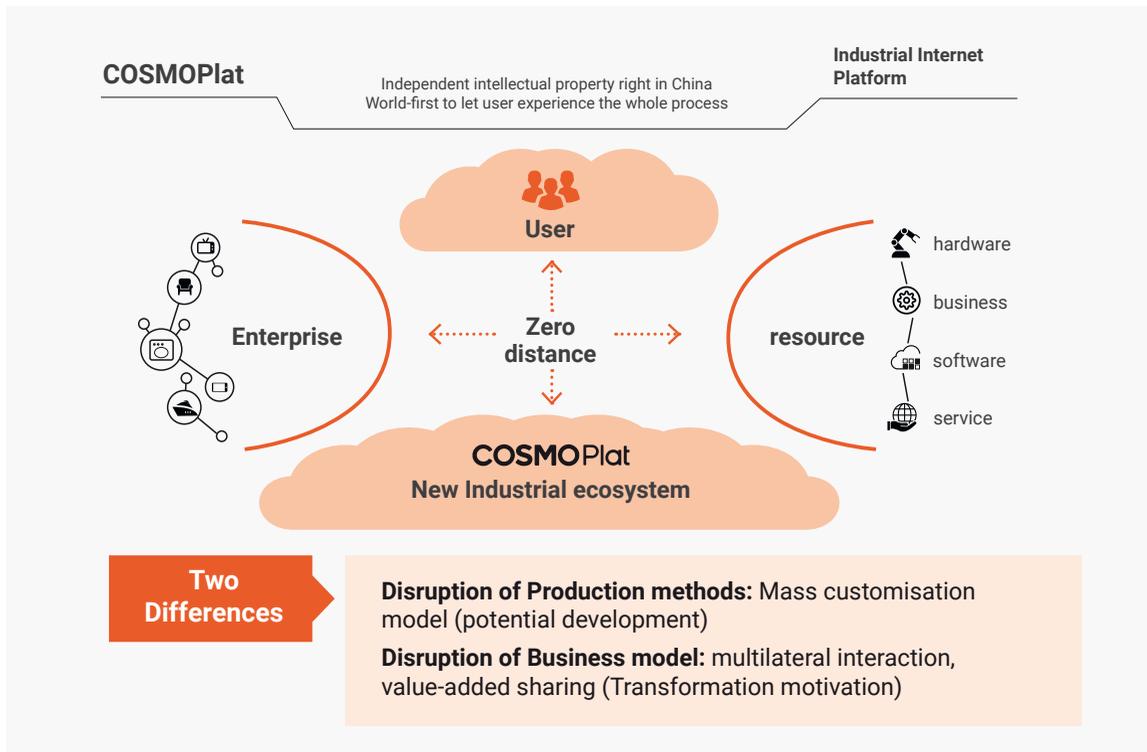
COSMOPlat: A leading industry internet with advanced management model





The rapid development of new generation information technologies, such as big data, cloud computing, artificial intelligence, blockchain, and IoT (Internet of Things), has prompted a full-scale digital revolution on a global scale. The industrial internet has been the primary tool in supporting the digital transformation of traditional manufacturing around the world. As one of the first industrial IoT runners in China, Haier has been exploring smart manufacturing transformation since 2012, which is turning from mass manufacturing into scaled customisation. The COSMOPlat is an industrial internet platform with Chinese intellectual property rights. It was independently researched and developed by the Haier Group, based on “RenDanHeYi” and Mass Customisation models. It provides specific solutions for scenario-ecosystem digital transformation for enterprises in various industries, regardless of their size. It constructs a new industrial ecosystem of “big enterprise co-creating, small enterprise sharing”, in which big enterprises provide the platform for smaller enterprises to begin trading.

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COSMOPlat is a “cross-industry, cross-function” industrial internet platform that was established by Haier Group based on over 30 years of manufacturing experience. The platform aims to provide companies around the world with scenario-specific digital transformation solutions. It promotes the transformation of production methods, business models, and management paradigms and pushes the popularisation of new models and new business types. As a result, a high-quality new industry ecosystem is co-created incorporating “government, industry, research, application, and financing”. COSMOPlat is an open, multilateral, interactive platform of co-creation and sharing, which can generate lifelong user values and win-win results for enterprises, users, and resources.

There are considerable technological advantages with the COSMOPlat. COSMOPlat focuses on the platform capabilities of “one body, two wings” (one body: AIoT + Digital

Innovation Capabilities; Two-Wings: capabilities in global sourcing resource allocation and purchase order capabilities in mass customisation). It deepens vertical industries and strengthens particular fields, such as intelligent appliances, the chemical industry, and manufacturing. In addition, it also enhances the “strong country empowered by industrial internet” model; builds a new cross-industry, cross-function, cross-region paradigm of complete digital economic empowerment; and establishes a brand-new ecosystem.

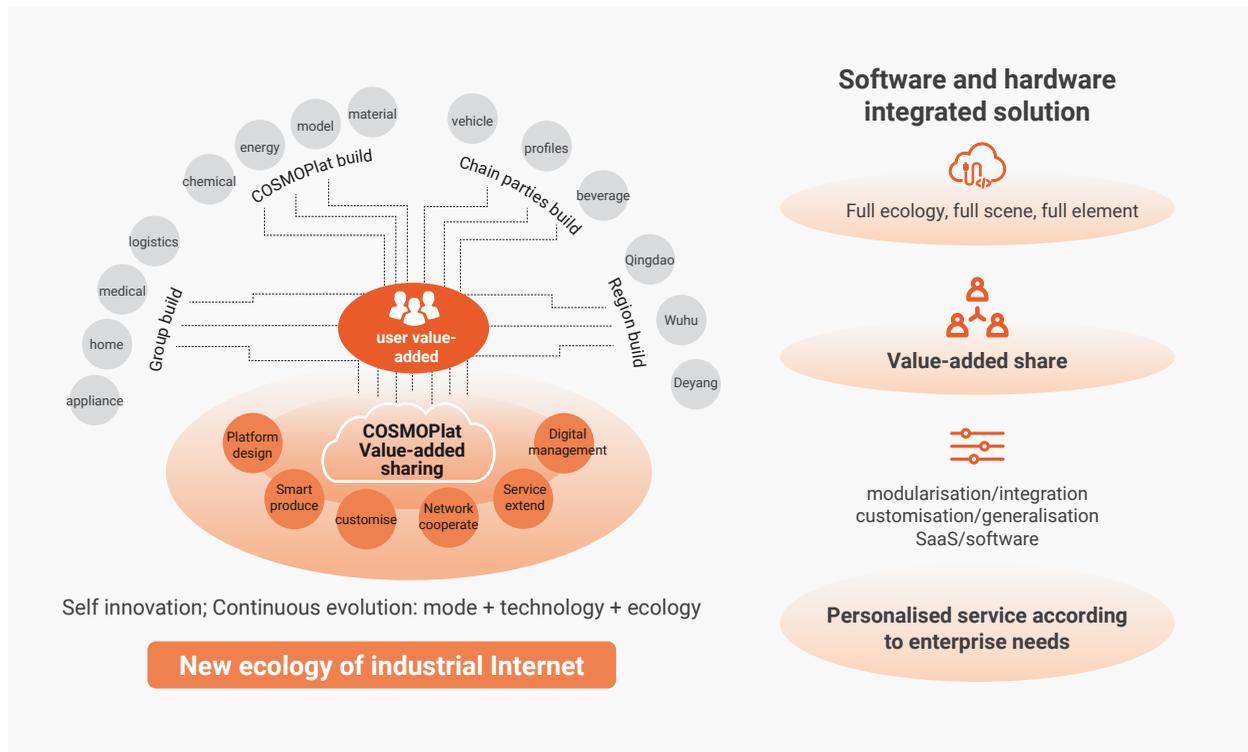
Adhering to the idea of “multilateral interaction, sharing added values”, it engages users throughout the entire production process. By disrupting the conventional mass manufacturing model, it enables enterprises to anticipate and understand users' needs. By connecting with platform participants to create solutions, it establishes dual value circulation with an ever-iterating user experience and added value-sharing for all ecosystem collaborators.



In terms of specific implementation, COSMOPlat embeds a global-leading BaaS engine industrial internet operating system into the “RenDanHeYi” management model to construct platform mass customisation differentiation advantage. First, it solves productivity problems through digitalised management, networked collaboration, individualised customisation, intelligent manufacturing, extended servicing, and platform design. It helps companies improve product quality, reduce cost, and increase working efficiency. It supports digital transformation and upgrades. At the same time, it adheres to “big enterprises co-creating, smaller enterprises sharing”, and prompts companies to go beyond boundaries, connect with more extensive production elements, and enhance ecological capabilities. Furthermore, it pushes continuous innovation, enlarges the user base, strengthens the ecosystem, and establishes new models.



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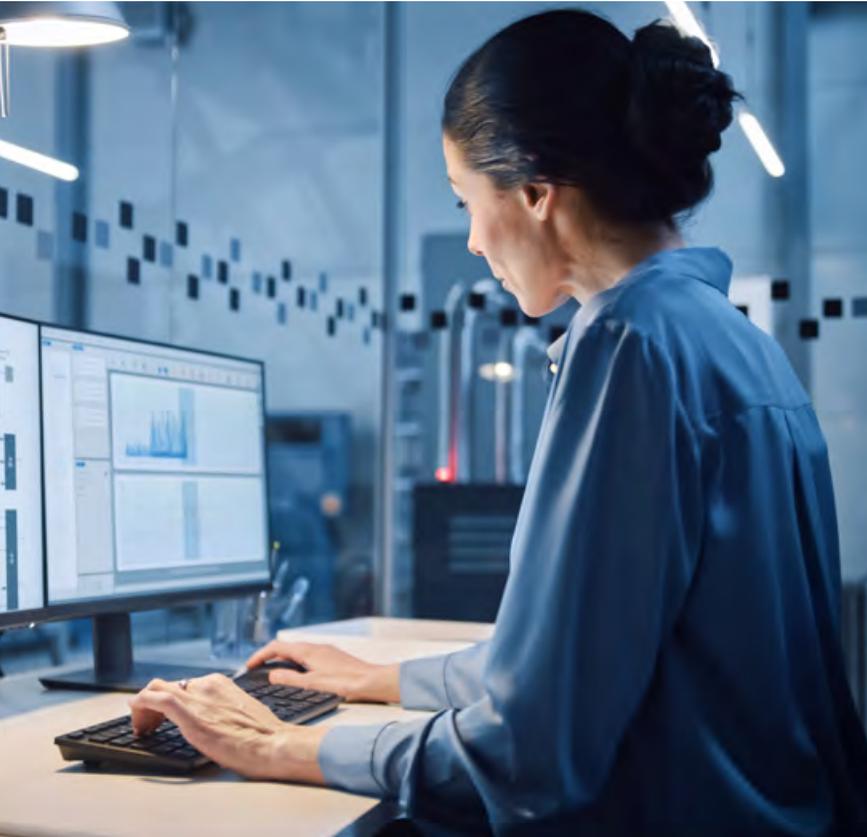
Adhering to the mission of “Add Values for Users, Create Win-Win Ecosystem”, COSMOPlat establishes a multilateral, co-creating, and sharing ecosystem. By connecting both upstream and downstream throughout the value system, it achieves ecosystemic added value, which is full-process, full-element, and full-value for users and ecological collaborators, and a dual-value circulation is established. Meanwhile, COSMOPlat deeply integrates information systems and industrialisation and builds both standard basic and more specialised platform capabilities. Thus, a new cross-industry, cross-functional, and cross-regional “three-dimensional digital economy empowerment paradigm” is established.

Cross-industry. At present, COSMOPlat has incubated many industrial ecosystems such as chemical engineering, moulding, automotive, etc. It covers 29 industrial categories and 12 regions in China. It empowers over 20 countries

worldwide. Based on the idea of “big enterprises co-creating, smaller enterprises sharing”, COSMOPlat has co-created vertical industrial internet platforms with leading companies, such as Tsingtao Beer, Chery Motors, Tianyuan Chemicals, and Conch Section Bar, etc. As an example, only three months after COSMOPlat co-founded its first mass customisation industrial internet platform with Chery Motors, the platform had connected with 375 Chery component vendors, the upstream and downstream value system. The warehouse-free rate was increased by 10%, resulting in 10% less inventory. It was successfully nominated as the 2021 Anhui Provincial Dual-Cross (cross-field and cross-industry) Platform. In 2022, COSMOPlat will enable Chery Motors to create a smart connecting super factory and will fully empower the digital transformation and upgrade of other medium-sized and small-sized companies within the industry.

375

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Cross-function. COSMOPlat empowers companies to go from “corporate digitalisation” to “digital enterprises”, through its new Six Zations model. Chain-driving corporation Choho Industries, which was empowered by intelligent manufacturing is a great example of digitalised, intelligent transformation. COSMOPlat helped companies break through “bottleneck” technical problems in the field of the chain-driving system. At the same time, Choho’s productivity efficiency was increased by 80% and the R&D cycle was reduced by 10%. Therefore, the company entered a new era of high-quality development. Empowered by COSMOPlat, Choho was listed in the 3rd batch of “Small Giants” by MIIT. What’s more, it became the first public corporation in Pingdu City; and was named by Tsingtao City as a Hidden Champions company.

Cross-Region. On the regional side, working with Tsingtao City, COSMOPlat created the “Strong Country Empowered by Industrial Internet” 1+N+X Model. The “1” refers to one industrial internet enterprise comprehensive service platform, the “N” means a certain number of industrial internet platforms in particular fields, and the “X” means a certain number of industrial internet demonstration parks. Based on the industrial internet, this model targets a city’s digital economy and constructs “new engines” for the city’s digital economic transformation. It produced new ideas on city digital transformation and high-quality development and duplicated it to Wuhu and Deyang successfully. This model was included in APEC’s *China Digital Economy Demonstration Models 50 Report*: “it created a new paradigm for city transformation and enabled regional industrial digital constructions”.



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One of the typical applications of COSMOPlat is the industrial internet platform for the Chlor-Alkali industry. In August 2020, relying on COSMOPlat industrial internet parent platform capabilities, the “Haizhi Chem Cloud” platform cooperated with the Tianyuan Group to build China’s first industrial internet platform for the chlorine alkali industry. The platform empowers chemical SMEs in six aspects: knowledge model, data service, sourcing and sales, operational management, consulting construction, and industry-university-research convergence. A win-win ecosystem linking upstream and downstream chemical resources was successfully established. In March 2021, during the 2nd session of the 11th Council Meeting of CCAIA (China Chlor-Alkali Industry Association), the industrial internet platform for the Chlor-Alkali industry was formally launched. The implementation created access to IoT devices, edge-end data gathering, edge computing, visualised data analysis, industrial application software development, big data analysis, and established an AI algorithms library. It provides a unified mobile application framework for the construction of the Chlor-Alkali application software ecosystem and intelligent industrial applications for specialised scenarios. This platform will become best practice for the upgrade that will see China evolve from a large Chlor-Alkali country to a strong Chlor-Alkali country.

From the perspective of industry arrangement, the COSMOPlat Chlor-Alkali industrial internet platform establishes an integrated empowerment solution for the chemical industrial ecosystem from macroscopic to mesoscopic to microscopic levels. It provides companies with low-cost information empowerment, directly shares industrial best practices, and constructs a value appreciation model that is supported by high-dimension data.



Macroscopic level. It solves industrial corporate strategy arrangement problems from a national perspective, integrating domestic and international development trends. The platform traces an industrial chain map and leverages the huge backend data resource, by combining with the industrial association’s macroscopic business experience, a national level integrated Chlor-Alkali industrial analysis and decision-making ‘engine-room’ is created.

Mesoscopic level. It solves inter-company resource synergy problems on a regional level. Based on the six-dimensional capability model, the platform provides data support for governments and enterprises. It also provides a company model for developing investments and facility building, allowing the implementation of precise policies during a company’s strategic development.

Microscopic level. It resolves fundamental production problems at the factory level. The platform empowers companies by providing integrated industrial cloud solutions with multiple advantages like low cost, high added value, high adhesiveness, and direct access to industry best practices.

2021

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After its completion, the platform initially carried out empowerment practice in Haifeng Herui, which belongs to the Tianyuan Group. It achieved consistency in corporate production data and the sharing and visualisation of production information. It standardised the management process of the company's production and optimised the utilisation of resources. It reduced costs by over 20 million yuan and increased new revenue by 30 million yuan. After passing the benchmark experiment at Haifeng Herui, the platform entered the area of industrial service and focused on industrial and brand resources, building an information service brand, and broadening diversified service and market channels. Currently, it has duplicated the safe scenario solution to Shaanxi Jintai Chlor-Alkali Chemical Co., Ltd, helping the company to improve safety management, environmental monitoring, and the quality of emergency disposal.

In summary, in contrast to the conventional industrial internet, which focuses on the digitalisation of industry only, COSMOPlat adds a modern management approach: RenDanHeYi. COSMOPlat adheres to the "create value for customers, create win-win ecosystem" mission to build an ecological system with multilateral interaction, co-created and shared. COSMOPlat integrates information systems and industrialisation to build both a common essential platform ability and a modular professional platform ability.

It will not only promote the efficiency of traditional manufacturers but also promote the innovative and entrepreneurial behaviour of every employee and nurture the ecological development of the company. Thus, COSMOPlat has great potential for industries throughout the world.



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About the Author

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