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Analysis on Geely's Layout in Electrification, Connectivity, Intelligence and Sharing

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Geely makes comprehensive layout in electrification, connectivity, intelligence and sharing

Geely, one of the leading automotive groups in China, makes comprehensive layout in electrification, connectivity, intelligence and sharing.

Geely boasts more than ten brands. In 2023, it sold a total of about 2.79 million vehicles, a year-on-year increase of 20%. Geely clearly aims to become “Volkswagen Group” in the era of new energy vehicles.

Volkswagen Group has 10 brands, each of which is not closely related to one another but highly related in the extension and inheritance of internal technologies. In terms of external and internal cooperation, the brands under Volkswagen are very independent and have their own operation and management models. In recent years, Geely has been learning from Volkswagen and pursuing the strategic construction of unified internal underlying technology and independent brands. In this process, Geely builds cars through architectures, hoping to form unified technology architecture. But in the whole management structure, Geely thoroughly manages each business unit in a market-oriented manner.

As a technical base shared by multiple brands of Geely, the Sustainable Experience Architecture (SEA) covers full size of vehicles from A-class cars to E-class in the wheelbase range of 1,800mm-3,300mm, and meets all styling needs of sedans, SUVs, MPVs, small urban vehicles, sports cars, pickups and future vehicles for mobility.

Geely will take efforts in four aspects

In 2023, Volkswagen Group sold 9.24 million new vehicles, while Geely sold about 2.79 million units. The gap between them is obvious. Geely's opportunity to catch up with Volkswagen lies in new energy vehicles. To achieve the goal of "becoming Volkswagen Group in the era of new energy vehicles", Geely will take efforts in the following four aspects:

First of all, it uses architectures to build cars. By the end of 2023, SEA had empowered 6 brands and 11 production models.

Second, it vertically integrates the industry chain. From technological ecosystem layout, to core technologies of "electric drive, batteries and electric control" and intelligence, and then to intelligent manufacturing and energy replenishment systems, Geely focuses on full-stack independent R&D and vertical integration in the core fields of new energy vehicles to improve economies of scale.

Third, it works on technologies. Geely's self-developed SEA for high-level intelligent driving targets common intelligent driving scenarios such as highway NLP, urban NLP and intelligent parking, and is mounted on ever more models. In terms of IVI, Geely not only has a self-developed solution based on Qualcomm 8295 computing platform, but also launched Flyme Auto through Meizu IVI system to share its core capabilities with other IVI systems. At present multiple models of Polestar, Lynk & Co and Galaxy have been connected to it. The version 2.0 will be launched this year.

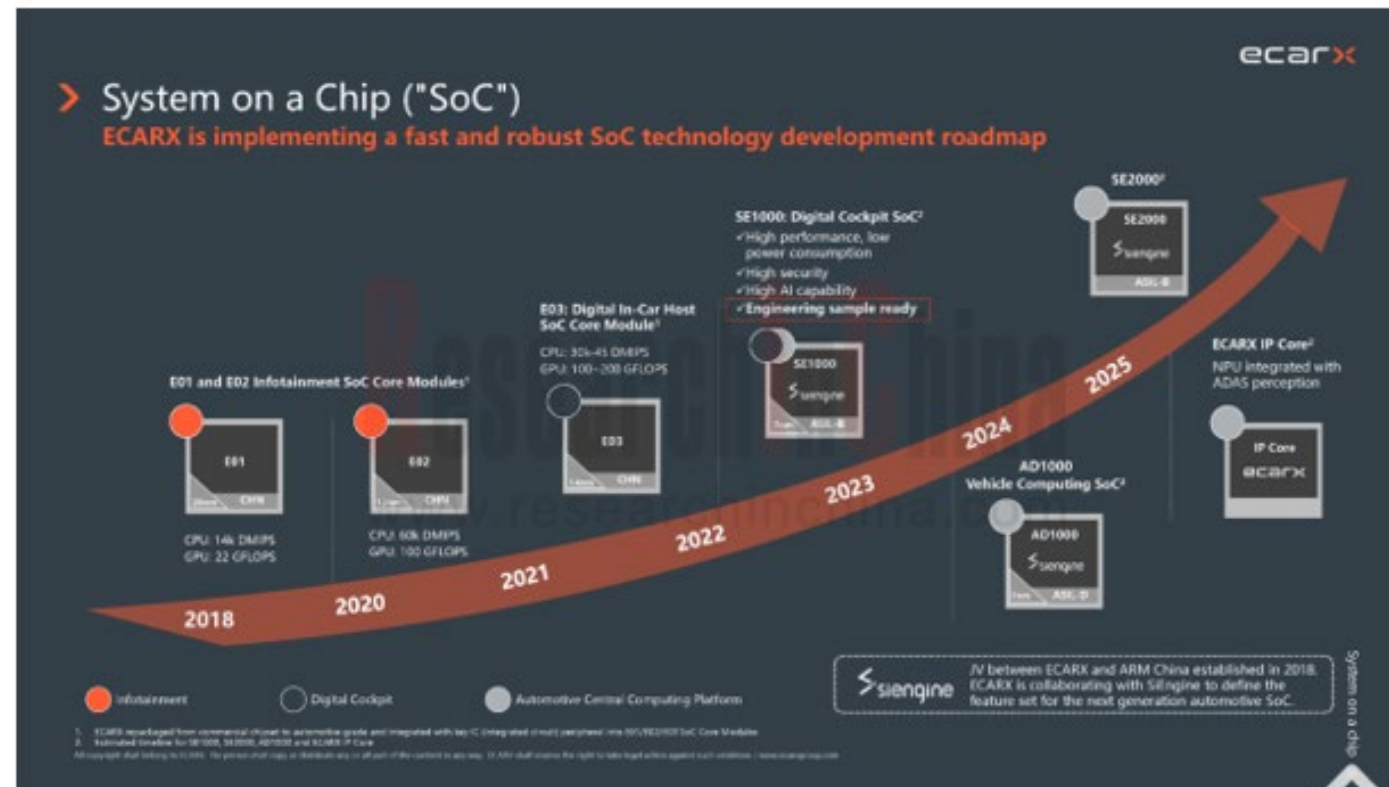
Fourth, it synergizes brands. The Geely brand is positioned as a high-value popular brand with various power forms, including three main series: Geely China Star, Galaxy, and GEOME. Lynk & Co, a mid-to-high-end brand, features super hybrids. The luxury intelligent BEV brand ZEEKR offers all-electric products.

Geely independently develops high-compute chips and gets ahead of other major automakers in satellite technology

Geely sets ambitious goals, but it faces pros and cons, as follows.

Pros 1: Geely independently develops high-compute chips and gets ahead of other major automakers in satellite technology.

At present, only Tesla and Geely have achieved independent R&D and mass production of high-compute chips. ECARX, a subsidiary of Geely, has developed E01 and E02 cockpit chips independently, and Longying No.1 together with SiEngine Technology. These chips have been mass-produced and mounted on vehicles.



Geely is currently the only Chinese independent automaker that launches satellites

On February 3, Geely conducted its second successful satellite launch in Xichang Satellite Launch Center, and sent eleven satellites into low Earth orbit, finishing the deployment of the second orbital plane of the Geely Future Mobility Constellation. Geely is currently the only Chinese independent automaker that launches satellites.

The Geely Future Mobility Constellation technology allows vehicles to achieve instantaneous “centimeter-level” high-precision positioning and accurate route planning, and then enable applications such as vehicle cloud management, V2X-based intelligent driving and automated parking.



Geely's sales in January soared by 110% on a like-on-like basis, surpassing BYD

Pros 2: Geely's sales in January soared by 110% on a like-on-like basis, surpassing BYD.

Geely sold 213,487 vehicles in January 2024, a year-on-year spurt of 110% and a month-on-month jump of approximately 46%, of which 65,826 units were new energy vehicles, rocketing by 591% from the prior-year period. BYD sold a total of 201,493 vehicles in January, up 33.9% from the same period last year.

The surging sales of Geely's brands in January 2024 lay the foundation for Geely to achieve its long-term strategic goals.

Geely's Brands

Geely Galaxy E8 was rolled out.

New NEV products are launched quickly.

The sales in January surged by over 98% year on year.



Geely Galaxy sold 19,223 vehicles in January, rising by over 59% month on month.

The sales of Geely Galaxy totaled over 100,000 units for the eight months since its launch.

Geely GEOME sold 20,722 vehicles in January, a year-on-year spurt of approximately 256%.

China Star (high-end) sold 47,458 vehicles in January, a record high, with the year-on-year jump of over 124% and the month-on-month growth of over 73%.

Geely has strong capital operation capabilities and its brands have been listed one after another

Pros 3: Geely has strong capital operation capabilities and its brands have been listed one after another.

Geely has 7 listed companies: Geely Automobile Holdings Limited (0175.HK), Zhejiang Qianjiang Motorcycle Co., Ltd. (000913.SZ), Hanma Technology Group Co., Ltd. (600375.SS), Lifan Technology (Group) Co., Ltd. (601777.SS), ECARX (NASDAQ: ECX), Polestar (NASDAQ: PSNYW), and Volvo (STO: VOLV-B).

Other brands under Geely are also gearing up for listing. Lotus will go public the US stock market through backdoor listing; ZEEKR has also submitted a prospectus for listing in the US stock market.

Other brands, including RADAR and Farizon Auto, are also seeking to be listed.

Cons 1: Geely faces difficulties in realizing its 2025 Strategy.

In 2021, Geely set its 2025 strategic goals: to invest RMB150 billion in R&D over five years, build an international R&D system based on the global "5 major R&D centers + 5 major styling centers", and head toward the intelligent era.

The investment in R&D in five years is RMB150 billion, namely, RMB30 billion per year. In fact, Geely's R&D investment was RMB6.7 billion in 2022, and is estimated to be RMB12 billion in 2023. Geely's R&D investment is the same with that of NIO and Li Auto both with a single brand, but much lower than first-tier brands like BYD, Toyota and Volkswagen.

Geely still needs to do a lot of work to unify the technical base and achieve economies of scale

Geely still needs to do a lot of work to unify the technical base and achieve economies of scale. Geely performs best in electrification technology. The advanced SEA allows Geely to launch new cars and popular models faster than its counterparts. Geely's models such as ZEEKR and Galaxy are well accepted by the market, with surging sales volume.

However, Geely has not unified its technical bases of cockpit and intelligent driving. Different models are often supported by different suppliers of intelligent driving chips and systems, and cockpit chips and systems.

R&D Investment and Profit of Some Automakers, 2023H1

Ranking	Automaker	R&D Investment (RMB)	YoY Growth	Net Income (RMB)
1	BYD	14.246 billion	120.20%	10.954 billion
2	SAIC	7.954 billion	3.72%	7.09 billion
3	NIO	6.42 billion	/	-10.795 billion
4	Geely	5.91 billion	62.80%	1.571 billion
5	Li Auto	4.28 billion	58.40%	3.244 billion
6	Great Wall Motor	3.509 billion	10.48%	1.361 billion
7	GAC	3.164 billion	/	2.966 billion
8	Changan	2.964 billion	53.42%	7.653 billion
9	Xpeng	2.66 billion	/	-5.14 billion
*1	CATL	9.85 billion	70.77%	20.717 billion
#1	Toyota	63.364 billion	/	JPY1.3 trillion
#2	Tesla	12.385 billion	/	USD5.216 billion

Source: Automakers, Wancheqingbaoju

Intelligent Driving Chips and Cockpit Chips of Some Models of Geely

The complex cockpit technology sources and intelligent driving technology systems, and the decentralized R&D investments make Geely unable to conduct frequent, continuous functional iterations as emerging carmakers, which leads to the low satisfaction of users with the cockpit and intelligent driving of Geely's models.

Intelligent Driving Chips and Cockpit Chips of Some Models of Geely

Model	Intelligent Driving Chip	Cockpit Chip	Cockpit System
ZEEKR 001	Mobileye EyeQ5H	Qualcomm 8155/8295	--
ZEEKR 007	Nvidia ORIN	Qualcomm 8295	--
Galaxy E8	Black Sesame A1000	Qualcomm 8295	Galaxy NOS
Galaxy L7	--	Qualcomm 8155	Galaxy NOS
Boyue L	Horizon Robotics J3	Qualcomm 8155	Galaxy OS
Jiyue 01	Nvidia ORIN	Qualcomm 8295	Self-developed by Jiyue
smart	Mobileye EyeQ5H	AMD V2000	smart
Lynk & Co 08	Black Sesame A1000	Longying No.1	Flyme Auto

Source: ResearchInChina

The Flyme Auto solution adopted by Lynk & Co 08 EM-P is praised by users in terms of touch experience, UI aesthetics, interaction details and car-phone interconnect. According to Geely's latest "technology focus" strategy, the intelligent driving system and cockpit system accepted by consumers will be seen in more models of Geely brands.

Feedback of ZEEKR 001 Users

	Satisfaction		Dissatisfaction
Interior space	<ul style="list-style-type: none"> Plenty of legroom in the rear row, making it spacious and comfortable for multiple people Large trunk with ample space and bottom compartment for storage Adequate head and leg room in the front row Deep armrest box and glove box for storage 	Intelligent driving	<ul style="list-style-type: none"> Straight in/out, sentry mode, NZP unavailable Full speed range ACC (FSRA) automatically exits when cornering, offering poor following experience DOW is unstable in blind spots
Safety	<ul style="list-style-type: none"> Safe body structure: strong and impact-resistant aluminum alloy Battery safety: no cases of collision, fire or spontaneous combustion Active/passive safety: endorsed by Volvo and Geely, trustworthy 	Intelligent cockpit	<ul style="list-style-type: none"> Intelligent interactive experience: inconvenient voice and UI interaction Audio and video entertainment: few APPs, insufficient extensibility Scenario experience: confusing seat memory Basic services: the Bluetooth key takes a long time to connect, and there are many bugs in the IVI
Power and control	<ul style="list-style-type: none"> Driving smoothness: flexible driving mode, smooth and comfortable ride Body stability: solid chassis, strong suspension isolation, stable body Power: high top speed, fast acceleration, good overtaking Steering flexibility: good turning direction and small turning radius 	Services	<ul style="list-style-type: none"> The APP customer service responds slowly, or even no one responds for a long time Unclear and non-standard service procedures After-sales services depend on Lynk & Co, with long waiting time and poor experience No enough service outlets
Exterior	<ul style="list-style-type: none"> Porsche-like appearance, cool hatchback style, and recognizable details High-end appearance and texture 		

Source: EV Users Union

Declining profits and fewer profitable brands

Cons 2: Declining profits and fewer profitable brands

Since its establishment, Geely has figured out three multi-brand strategies: First, Geely launched three brands: Free Cruiser, KingKong and Vision from 2004 to 2007. Second, it unveiled Emgrand, GLEAGLE and Englon in 2008. In 2014, Geely returned to the "One Geely" strategy in time.

Third, Geely launched brands such as Emgrand L, Emgrand GS, and Boyue, and gradually formed more than a dozen passenger car brands by way of acquisitions from 2015 to 2017. But the brands that can make profits independently are only Geely and Volvo, and others need more financial support.



Geely has great product R&D and capital operation capabilities

The investment in too many brands consumes the funds of Geely and lowers its profitability. From 2018 to 2021, the net income of Geely plunged from RMB12.55 billion to RMB4.847 billion. In the first half of 2023, Geely recorded only RMB1.57 billion in net come.

By the end of the third quarter of 2023, Geely has had the total assets of RMB640.399 billion, and the total liabilities of RMB441.599 billion increasing RMB61 billion over the end of the previous year, with the debt ratio up to 68.96%, a warning figure for the company. In contrast, Geely's debt ratio was higher than that of Changan Automobile (60.4%), SAIC (63.95%), Great Wall Motor (65.64%) and GAC (40.8%) but lower than BYD's (77.37%). Therefore, in January 2024, Geely reduced its shares worth nearly USD680 million in Volvo to gain more financial support for the electrified and intelligent transformation.

In short, Geely has great product R&D and capital operation capabilities. In January 2024, it gained momentum and had the potential to become a global first-tier manufacturer of new energy vehicles. Amid the sluggish economic environment in 2024, only by implementing the strategy of "architecture-based car making, vertical integration, technology focus, and brand synergy" can Geely hope to become the "Volkswagen Group in the era of new energy vehicles."

1. Analysis on Xpeng's Layout in Electrification, Connectivity, Intelligence and Sharing, 2023
https://mp.weixin.qq.com/s/qdQ_sKEcDGyzwdp9aSFdIA
2. Analysis on GAC's Layout in Electrification, Connectivity, Intelligence and Sharing, 2023
<https://mp.weixin.qq.com/s/acfyPJFVC3NcEymBcFanzQ>
3. Analysis on NIO's Layout in Electrification, Connectivity, Intelligence and Sharing, 2023
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5. Analysis on Li Auto's Layout in Electrification, Connectivity, Intelligence and Sharing
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6. Analysis on Great Wall Motor's Layout in Electrification, Connectivity, Intelligence and Sharing
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<https://mp.weixin.qq.com/s/kF5T0mwE0EatjKn5mgUz4w>

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Beijing Headquarters

TEL: 13718845418

Email: report@researchinchina.com

Website: [ResearchInChina](http://ResearchInChina.com)

WeChat: Zuosiqiche



Chengdu Branch

TEL: 028-68738514

FAX: 028-86930659

