REPORT

China's cost and speed advantage

A wake-up call for Western companies

Roland Berger

Management summary

Chinese companies are redefining the rules of competition. No longer focused solely on cost, they now excel in product development and go-to-market speed as well. Development cycles that still take Western firms years are compressed in China into months, while cost advantages of 20 to 30 percent remain firmly in place.

This combination of speed and cost efficiency has set a new global benchmark. Industrial companies from automotive to electronics, from machinery to home appliances, now find themselves competing against rivals that can outpace them on the two most critical levers of competitiveness.

Of course, Western manufacturers are not without their own strengths. Their reputation for quality, brand trust and breakthrough innovation remain intact. Yet these are under pressure. If speed and cost gaps are not closed, even these advantages risk erosion. The urgency is clear: speed has become a weapon, and cost discipline a shield. Industrial leaders must act now to defend their position.

Cover: Dallas and John Heaton/Getty Images

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A shifting balance

China's challenge
to Western industrial
leadership

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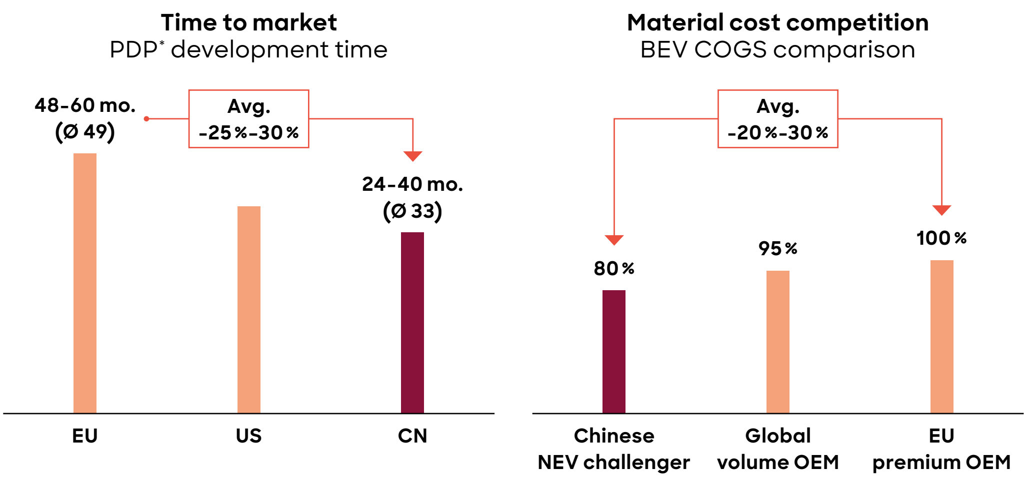
Not long ago, Chinese products were regarded as low-cost alternatives that often failed to meet quality or customer requirements. That perception has changed dramatically. Across industries, Chinese firms are now developing and manufacturing products that are perfectly aligned with customer requirements – meeting expectations at a lower price and with a far shorter time to market.

Increasingly, Chinese companies are able to develop their products faster and achieve a lower cost level than their Western counterparts. Our project experience and benchmarks indicate that in the automotive industry, for example, Chinese players develop new passenger car vehicles 25 to 30 percent faster and achieve a 20 to 30 percent lower cost level, while in other industries the difference can reach as much as 40 percent for both development speed and cost. Western manufacturers are now facing a disruptive performance gap. ▶ A

A Engineered products & automotive companies face a time-to-market and cost gap of 20%-30% – Key question: How to achieve "Chinese speed & cost"?



Other industries	Time to market	Material cost competition
Machinery	30%-40%	20%-30%
White goods	20%-30%	20%-30%
Power tools	30%-40%	30%-40%
Wind	40%-50%	30%-40%
Elevator	20%-30%	20%-30%
Off-highway	30%-40%	20%-30%

* PDP: Product development process

Source: Capital IQ, company information, Roland Berger

Consider this: In many sectors, new product generations appear in China in half the time they take in Europe or the United States. Smartphones refresh in under a year and household appliances are redesigned with every season. Even complex machinery can be adapted quickly to customer needs through modular platforms.

To make matters more difficult for Western companies, Chinese competitors are now pushing systematically into their "living room" – Western players' domestic markets. As China's domestic annual growth rates normalize, its companies are seeking new growth abroad while navigating geopolitical constraints. They are entering these markets with a deliberate strategy: offering competitive, high-quality products and building local value chains in the West that often include R&D and production facilities. The story is no longer about low-cost labor alone. It is about a system – organizational design, digital tools, supply chains and decision-making – that prioritizes speed and cost efficiency at every step. Western firms cannot afford to underestimate this shift. ▶ B

B Players' strengths differ between domestic and international markets

	Time to market	Material cost	"Attunement" to customer needs
Domestic Chinese market			
European/Western company in China	●○○	●○○	●○○
Chinese company in China	●●●	●●●	●●●
Domestic US/European market			
US/Western company in EMEA/US	●●○	●●○	●●●
Chinese company in EMEA/US	●●●	●●●	●●○

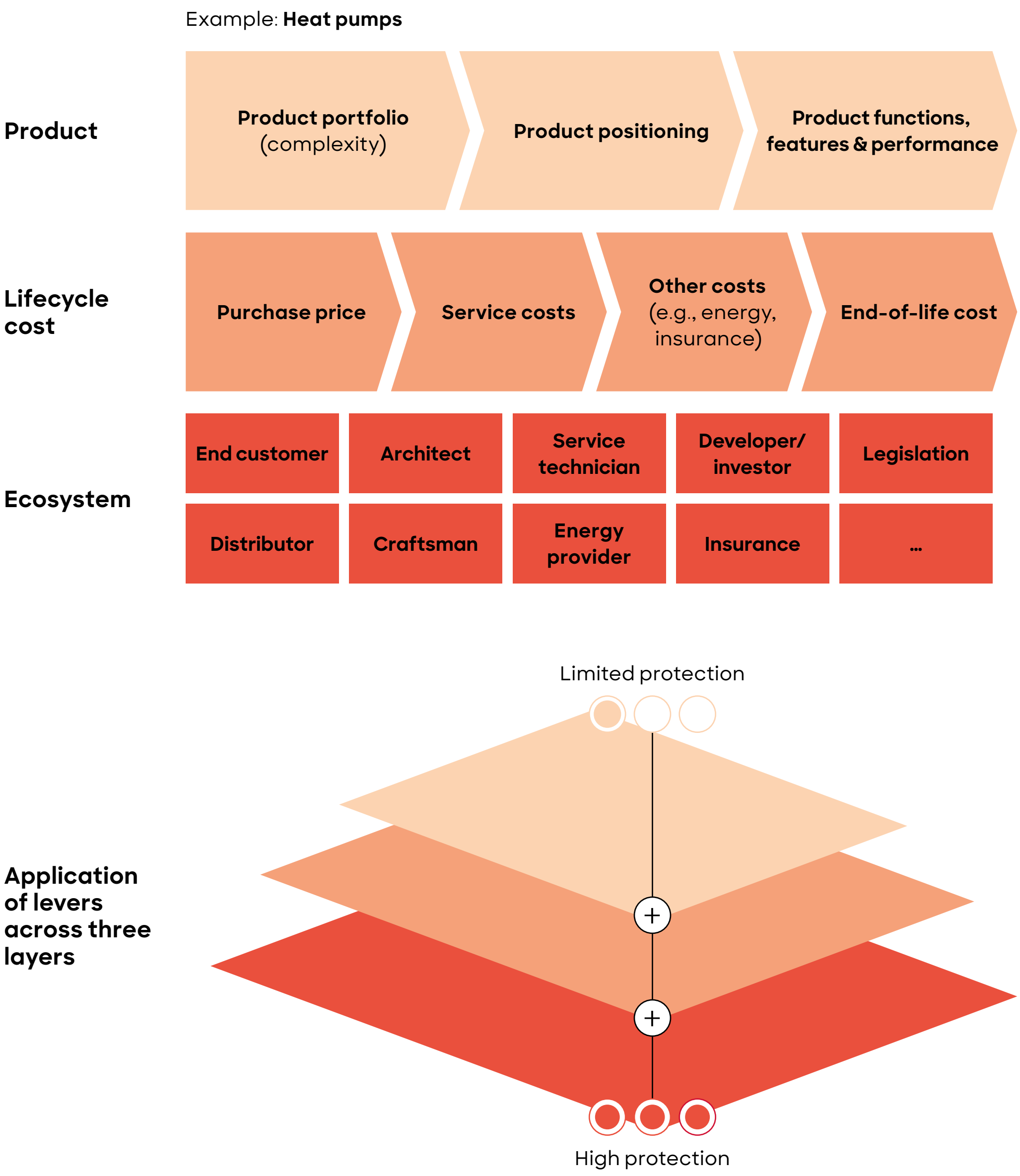
● Stronger in this combination/category ○ Weaker in this combination/category

Source: Roland Berger

For Western companies, this competitive shift raises several questions. First, what time-to-market and cost benefits will Chinese companies be able to transfer to Western markets? Based on our experience, more than half – and in some cases up to 80 percent – of the advantage achieved in China can materialize in Europe. In other words, when Chinese firms localize their value chain, especially R&D, their efficiency edge largely survives the transfer.

Second, how much time do Western companies have to react? That depends mainly on how quickly Chinese companies can "decode" customer requirements in Western markets. For now, Western players still possess a valuable advantage in the shape of their deeper attunement to local customer preferences (even though that may not be true anymore in some industries). This acts as a temporary protective shield for them – one that they can reinforce by focusing on three layers of competitiveness: product, lifecycle cost and ecosystem integration. ▶ C

C Potential for Western players to leverage customer attunement as a protective shield



Source: Roland Berger

Some practitioners, particularly in solar and automotive, argue that the time to react has already passed. In their view, Western manufacturers now face two realities at once: Chinese competitors are entering European home markets with products that meet local expectations, while China's domestic market is increasingly being conceded as unwinnable. European companies may still understand European customers better, yet many concede that in automotive, for example, the latest Chinese models now match or even surpass local expectations. This is especially visible among younger drivers, who expect constant connectivity and full digital integration.

Third, how will the strategic playing field evolve, and who has more to lose? Initially, Chinese original equipment manufacturers (OEMs) challenged Western OEMs through superior speed and cost. For suppliers who do their homework – identifying what must be done, planning how to do it and executing decisively – this shift can create opportunities to win new business with Chinese OEMs as they localize their operations.

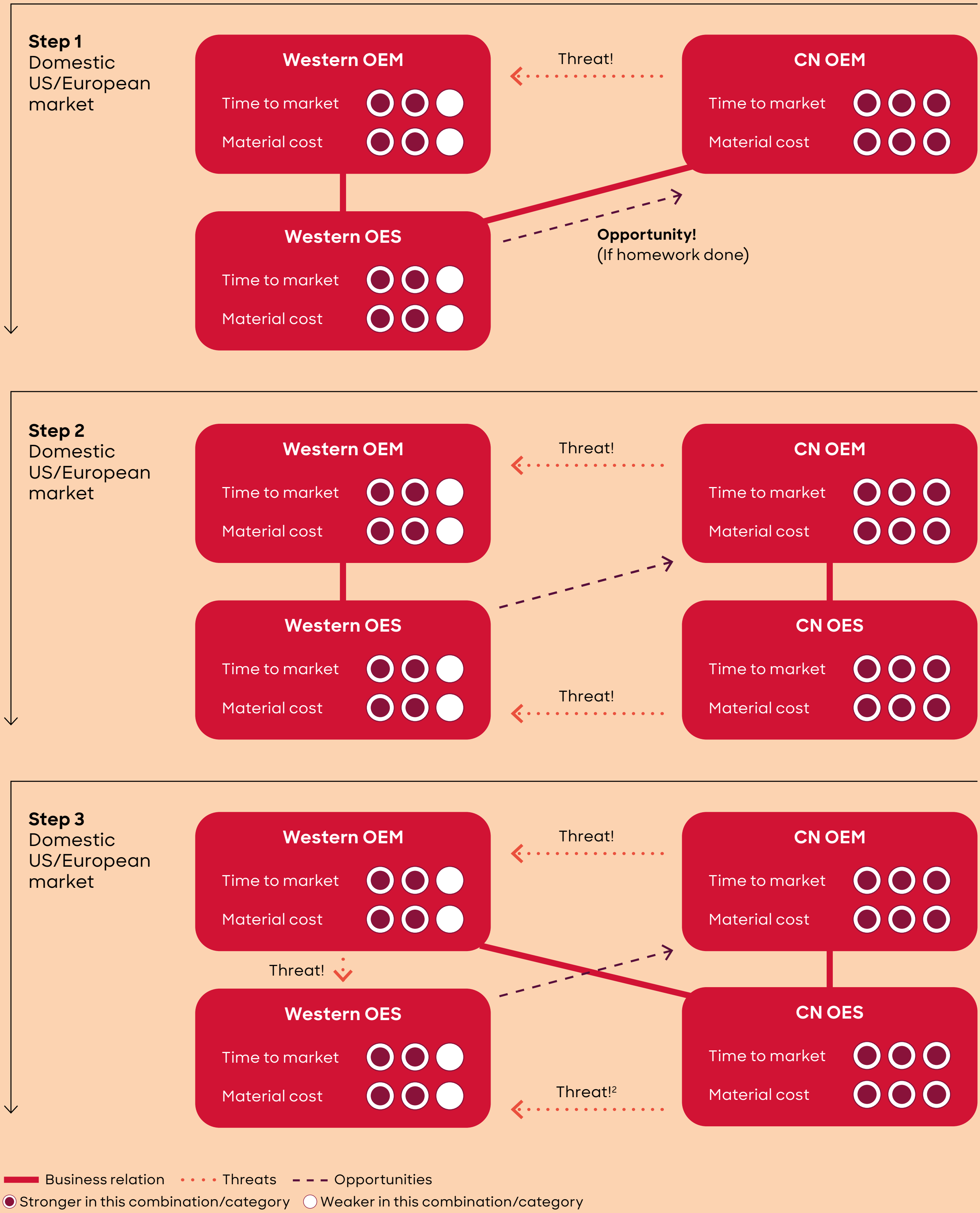
However, if Western suppliers fail to act, Chinese OEMs will encourage their own domestic suppliers to establish local operations in Western markets, primarily in cost-competitive regions. If that happens, Western suppliers will face what we call "threat squared": Chinese OEMs will rely on localized Chinese suppliers, while Western OEMs may also begin sourcing from those same suppliers to capture time and cost advantages.

In reality, this evolution will not be purely black and white but rather a continuum. Still, the conclusion is clear: suppliers stand to lose more if they fail to respond quickly and decisively.
▶ D

"Western industry is being hit on two fronts: Chinese players are moving faster and delivering at lower cost. The gap is widening – and the time to respond is shrinking."

Oliver Knapp, Senior Partner, Global Co-Head Operations

D Shifting competitive dynamics poses both opportunities and threats for manufacturers and suppliers



Source: Roland Berger

Engineering speed

How China turned development speed into a competitive advantage

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> **"Today, employees in China are very well educated and equipped with technology and information. They are eager to improve their living situation and they set ambitious targets."**
>
> **Angela Qu, Former CSO of IVECO, Senior Advisor Roland Berger**

"China speed" is not just a buzzword: it is a measurable capability within China's automotive and capital goods sectors that has redefined global competition. At the heart of this acceleration lies a willingness to rethink traditional development processes. Where established Western companies might spend years moving from concept to market, Chinese firms have reengineered that journey by compressing timelines through strictly adhering to process KPIs, involving their suppliers and fully integrating data and digitalization into an end-to-end development process.

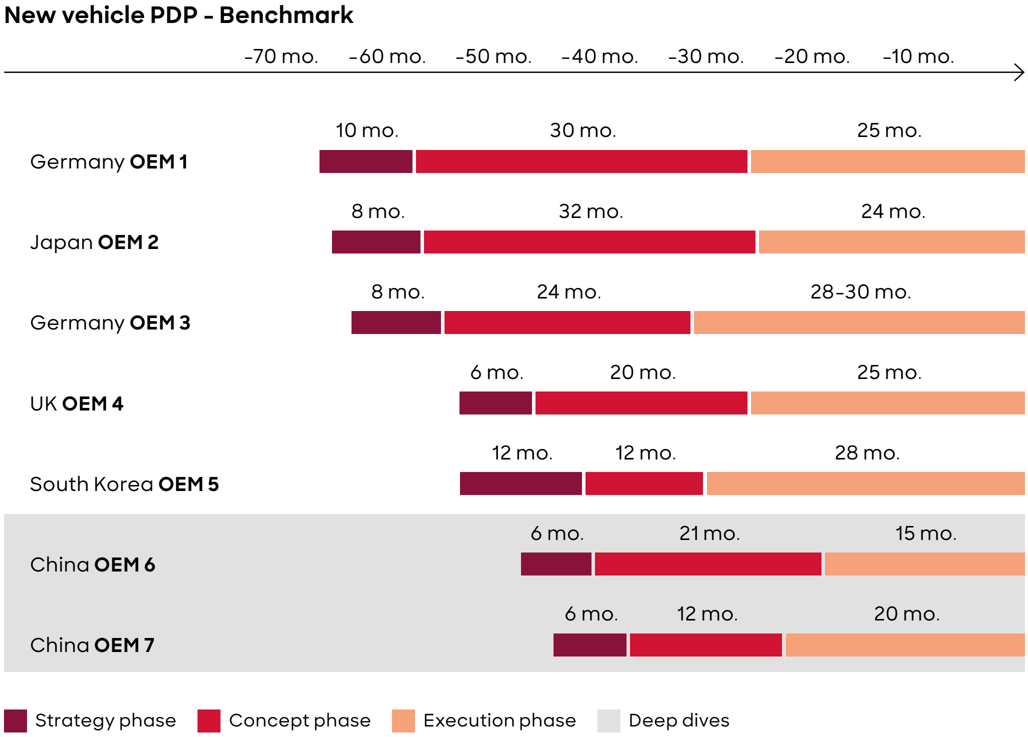
CHINA'S DEVELOPMENT SPEED

Chinese automotive companies, for example, achieve this pace through three core principles. First, they accelerate processes by shortening the strategy phase and leveraging supplier platforms with high vertical integration for key systems. Second, they run multiple development steps in parallel and focus on quickly launching a minimum viable product. And third, they maintain lean, flexible organizations that can adapt rapidly to market changes. Together, these principles enable new products to reach the market faster and at a lower development cost than those of traditional competitors.

A leading Chinese passenger car OEM illustrates this approach. By applying the three principles of China speed in product development, the company reduced its overall development time by 14 months compared to established industry benchmarks. It effectively shortened its strategy phase by four to six months through faster decision making and clear project prioritization. Digitalization played a pivotal role: virtual validation and digital twin technology eliminated another four months of development time and minimized costly physical prototypes. Software development – often a bottleneck in modern vehicles – was also streamlined. By developing software and hardware in parallel and integrating software features early in the lifecycle, the OEM cut software validation time by two months. Perhaps most importantly, suppliers were involved from the concept stage rather than after design finalization.

The result? In the case of this Chinese OEM, a development process that was not only faster but also more agile and cost effective – demonstrating how strategic changes in organization, technology and supplier relations deliver a quantifiable competitive advantage. For decision makers at Western companies, this provides a clear blueprint for accelerating their own innovation and product development processes in order to remain competitive. ▶ E

E **Compared to traditional OEMs, Chinese companies achieve significant time savings in all stages of the product development process**



Source: Company website, expert interviews, Roland Berger

DIGITALIZATION MEETS PRAGMATISM

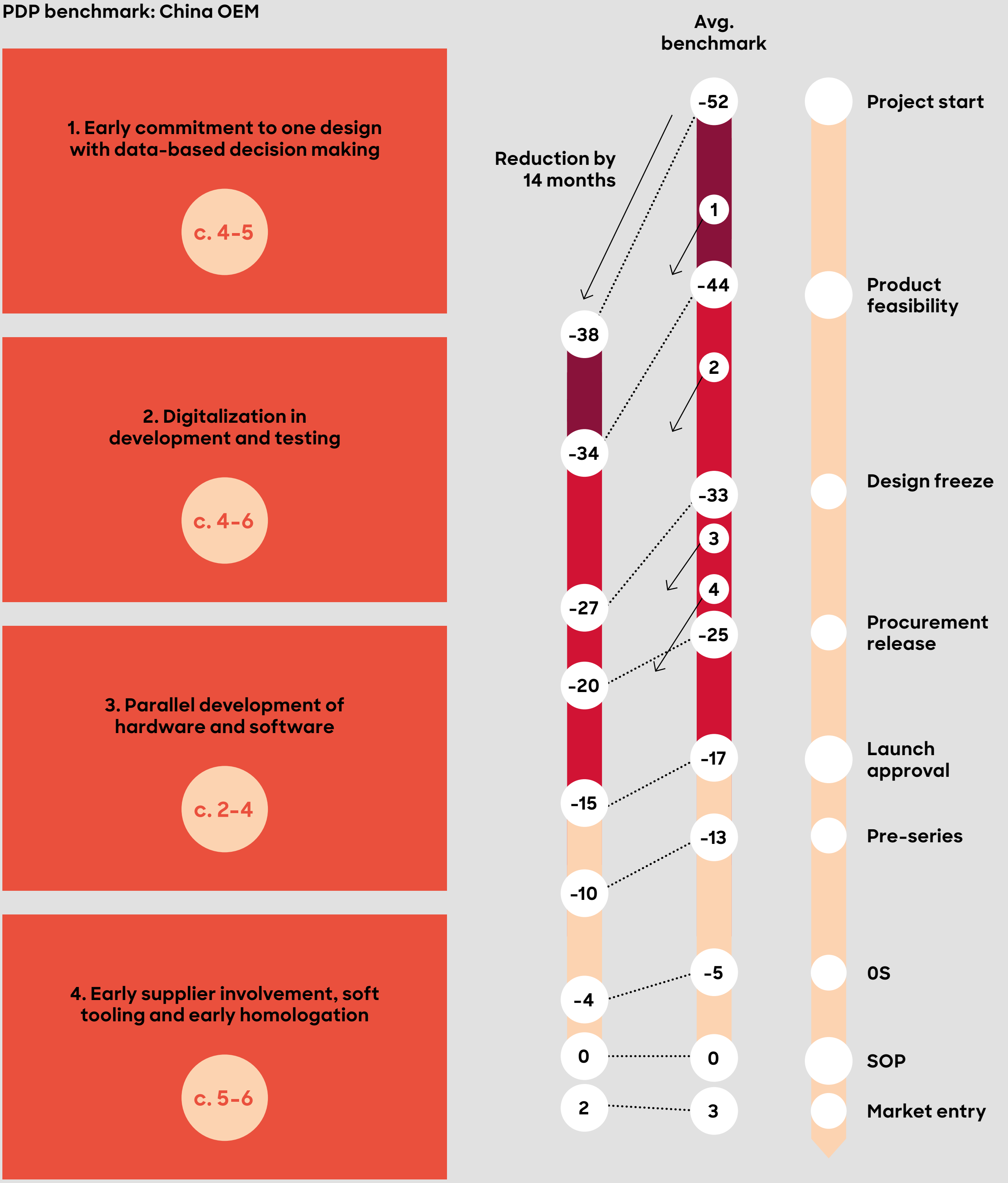
Across the industry, Chinese vehicle manufacturers now develop products 20 to 30 percent faster than their established peers. A major driver is their embrace of digitalization and artificial intelligence (AI) within engineering and product development. Up to 80 percent of testing is performed in virtual simulation environments, and AI tools translate customer demand and market requirements directly into component specifications. By integrating technology across the entire workflow, Chinese firms compress development time dramatically.

Equally important is a pragmatic mindset that underpins each stage of the development process. Where Western manufacturers often use customer data in specification meetings to justify yet another product variant aimed at marginal market niches, Chinese OEMs adopt a sharper focus. They define component parameters that satisfy the majority of customers, enabling shorter decision cycles and greater use of off-the-shelf or carryover parts.

This pragmatism extends to supplier interaction. Whereas Western OEMs frequently dictate detailed tooling designs – even for simple, non-visible components such as printed circuit board assembly (PCBA) housings – Chinese OEMs take a more flexible approach, accepting existing supplier housings and, for example, simply requesting the supplier to put a logo sticker on the housing. The result is less supplier specification and tooling effort, shorter lead times and lower costs. ▶ F

F Example: A Chinese OEM reduced its PDP by up to 14 months compared to the benchmark thanks to a shorter strategy phase, digitalization and early supplier involvement

PDP benchmark: China OEM



Strategy/feasibility phase
Concept phase
Execution phase
Savings potential compared to benchmark in months

Source: Company website, expert interviews, Roland Berger

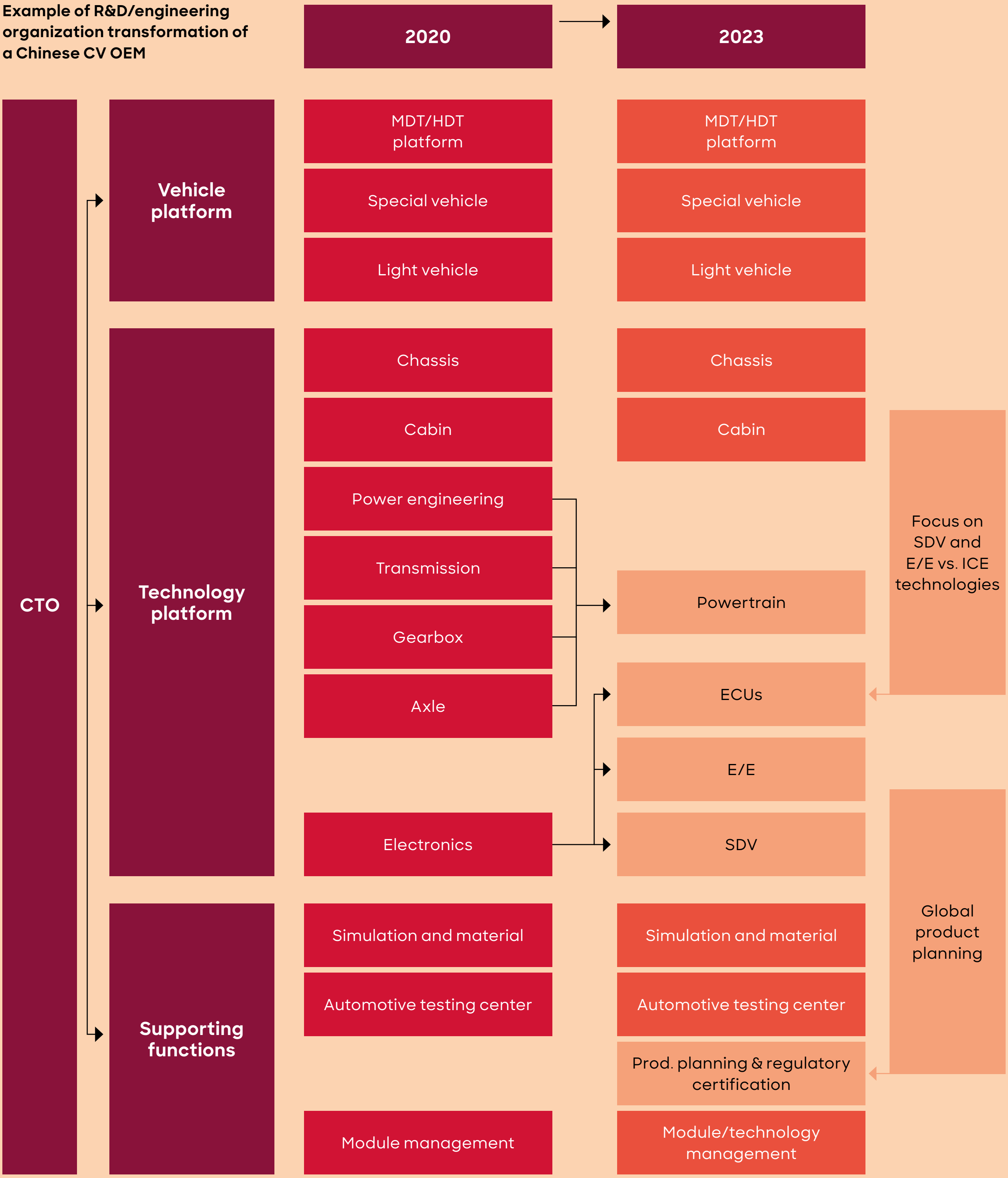
DEVELOPMENT GOVERNANCE AS AN ACCELERATOR

Beyond process efficiency and digital tools, Chinese companies also structure their R&D organizations to enable faster product development and go-to-market. A leading brownfield manufacturer of commercial vehicles offers a case in point. Within three years, it shifted its sales portfolio from 80 percent domestic to 60 percent international while reorganizing R&D to support this expansion. The company consolidated previously independent development units for axles, gearboxes, transmissions and power engineering into a single powertrain technology platform. At the same time, it created three new units dedicated to electrical and electronic (E/E) components, software-defined vehicle (SDV) functions and electronic control unit (ECU) development. A further division was established to focus solely on product planning for international markets, aligning R&D output with customer and regulatory requirements abroad. ▶ G

This example shows how Chinese OEMs use organizational design to accelerate development and tailor products for non-domestic markets. Taken together, the readiness to break traditional paradigms along the entire product development process, the intensive use of digital technology, early supplier integration and lean, fast decision-making structures are fueling China's development speed. These approaches will remain a decisive competitive advantage unless Western companies adopt at least some of them in their own product development processes (PDPs).

> **"Western workforces need a stronger entrepreneurial mindset and a higher tolerance for calculated risk."**
>
> **Ning Wang, CEO of Yinlun**

G Even traditional Chinese companies have begun to drastically change their R&D organizations and gear them toward global market expansion



Source: Annual reports, company website, expert interviews

Mastering cost

Efficiency by design

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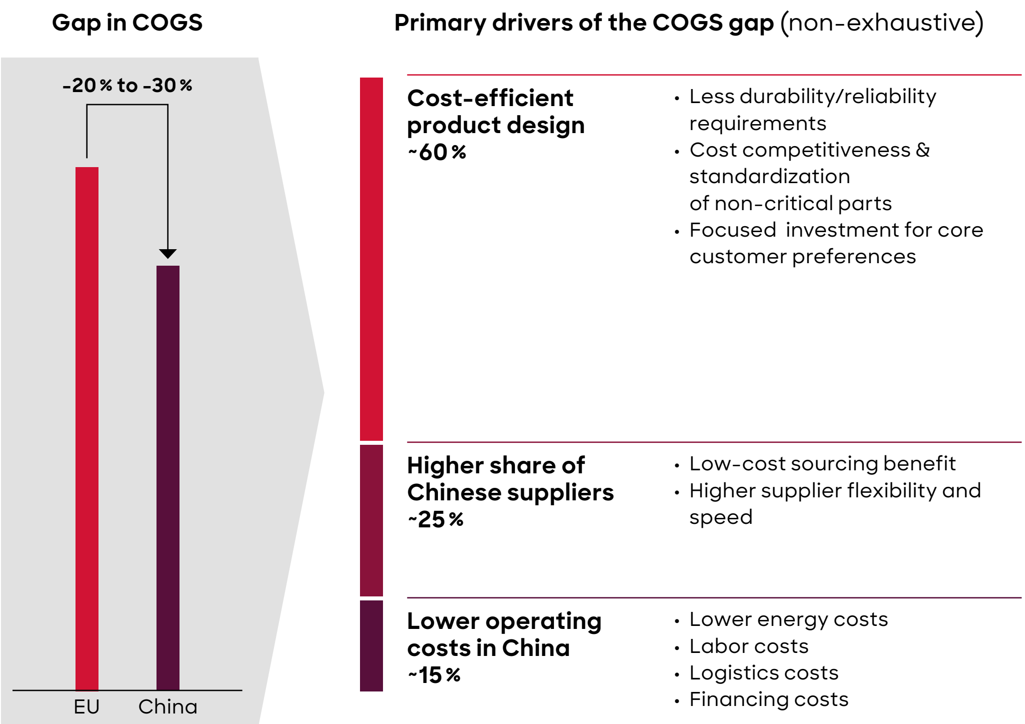
As noted in Chapter 1, Chinese manufacturers enjoy a cost advantage of 20 to 30 percent in the automotive industry. In other sectors, the gap is as big as 40 percent. Based on our project experience and benchmarking insights, we estimate that Chinese companies can replicate 50 to 80 percent of this cost gap even when producing in Western markets, depending on the industry and the structure of their value chain. But the more important question is how they achieve it. Their advantage is not simply the result of lower wages or energy costs: it stems from structural efficiency and disciplined management across the entire value chain. ▶ H

H Heavy-duty trucks show a 20-30 % cost gap, mainly driven by design choices, a high local supplier share and lower operating costs



Source: Interviews with market participants

In a recent project for an automotive client, we identified three main drivers of the cost of goods sold (COGS) gap. Roughly 60 percent stemmed from more cost-efficient product design, 25 percent from a higher share of Chinese suppliers, and the remaining 15 percent from lower operating costs in China.

Chinese companies manage product cost by defining durability and reliability requirements more selectively. They use lower material grades for non-critical parts (such as single-sided rather than double-sided galvanized steel) and standardize non-critical components through wider use of cost-competitive materials. Less emphasis is placed on environmentally advanced plastics, while resources are reallocated toward features that customers value most, notably E/E components. In turn, expenditure is reduced in areas that are less visible or less relevant to end users.

Sourcing provides a second advantage. Chinese players rely on a high share of domestic suppliers – often more than 70 percent in battery electric or mechanical components. This localization delivers low-cost sourcing benefits and enables shorter, more flexible supply chains. Because Chinese OEMs complete product development cycles roughly 20% – 30% faster than their European peers, their suppliers must operate with comparable agility.

A third element of China's cost advantage is structural. Input and financing costs remain markedly lower than in Europe. Industrial energy prices are well below EU levels, labor costs are lower and working hours longer – engineers at leading firms such as SAIC may work six days a week from nine in the morning until 11 pm or midnight. Massive infrastructure investment and economies of scale make logistics cheaper, while state support mechanisms, including subsidized energy and financing programs, further reduce total cost.

These structural and managerial factors reinforce one another. China's vast domestic market creates economies of scale and purchasing power, while its vertically integrated supply ecosystems in batteries, semiconductors and steel reduce transaction costs and operational risk.

Across manufacturing sectors – from automotive to white goods, power tools, solar and wind turbines, and machinery – a consistent pattern emerges. Chinese companies embed cost discipline through three interlocking levers. They exercise strict control over product complexity, limiting variants, enforcing business case justification and regularly cleaning up portfolios. They make conscious trade-offs on features and performance, designing around demanded customer benefits and avoiding overengineering. They also lower technical specifications where appropriate and increase standardization, maximizing the use of off-the-shelf and carryover parts while granting suppliers greater freedom to build to specification.

Equally important is a focused cost-out mindset. Operating models are designed for intensity: value analysis and value engineering (VA/VE) sessions occur weekly or monthly, and ambitious year-on-year material cost targets are enforced. Supplier management is handled with comparable rigor: key partnerships, such as those for battery components, are maintained closely, but negotiations take place quarterly to secure rapid savings.

Finally, Chinese firms exploit and amplify sourcing advantages. Large domestic battery electric vehicle (BEV) and internal combustion engine (ICE) volumes generate powerful scale effects, while high local supplier shares – typically around 70 percent – and blue-collar labor costs roughly 40 percent below EU levels support low manufacturing costs. Many companies retain captive suppliers to sustain no-to-low-margin pricing strategies, complemented by selective state subsidies in strategic sectors such as steel, energy and battery materials.

Taken together, these practices explain why Chinese products often reach markets not only earlier but also at significantly lower cost. Speed and cost are not independent levers; rather, they form a single, self-reinforcing system of competitiveness.

Enduring strengths

Where Western firms still lead

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The rise of Chinese competitiveness does not mean Western firms are left completely without strengths. In fact, they continue to hold clear advantages that remain difficult to match. Reliability and quality are long-standing strongholds. In high-stakes industries such as aerospace, healthcare and energy infrastructure, Western products are still the gold standard. Customers trust them because they know that each product launch rests on decades of validation, compliance and testing. Yet the standards of quality and reliability must evolve in line with changing customer expectations and willingness to pay.

Western innovation also remains formidable. In many cutting-edge fields – advanced materials, robotics, software-defined products – breakthroughs still originate in European or US R&D centers. These are not incremental improvements but category-shaping innovations that set the global agenda. Regulatory expertise provides another edge. Navigating the complex approval landscapes of the European Union and United States is second nature to Western firms, and this expertise is becoming even more valuable as global compliance requirements intensify. Finally, brand and trust remain powerful assets. Many customers continue to associate Western products with premium quality, sustainability and durability. In precision machinery, aerospace and medical devices, Western firms still occupy defensible positions, although continuous review and adaptation to customer requirements are essential to preserve that advantage.

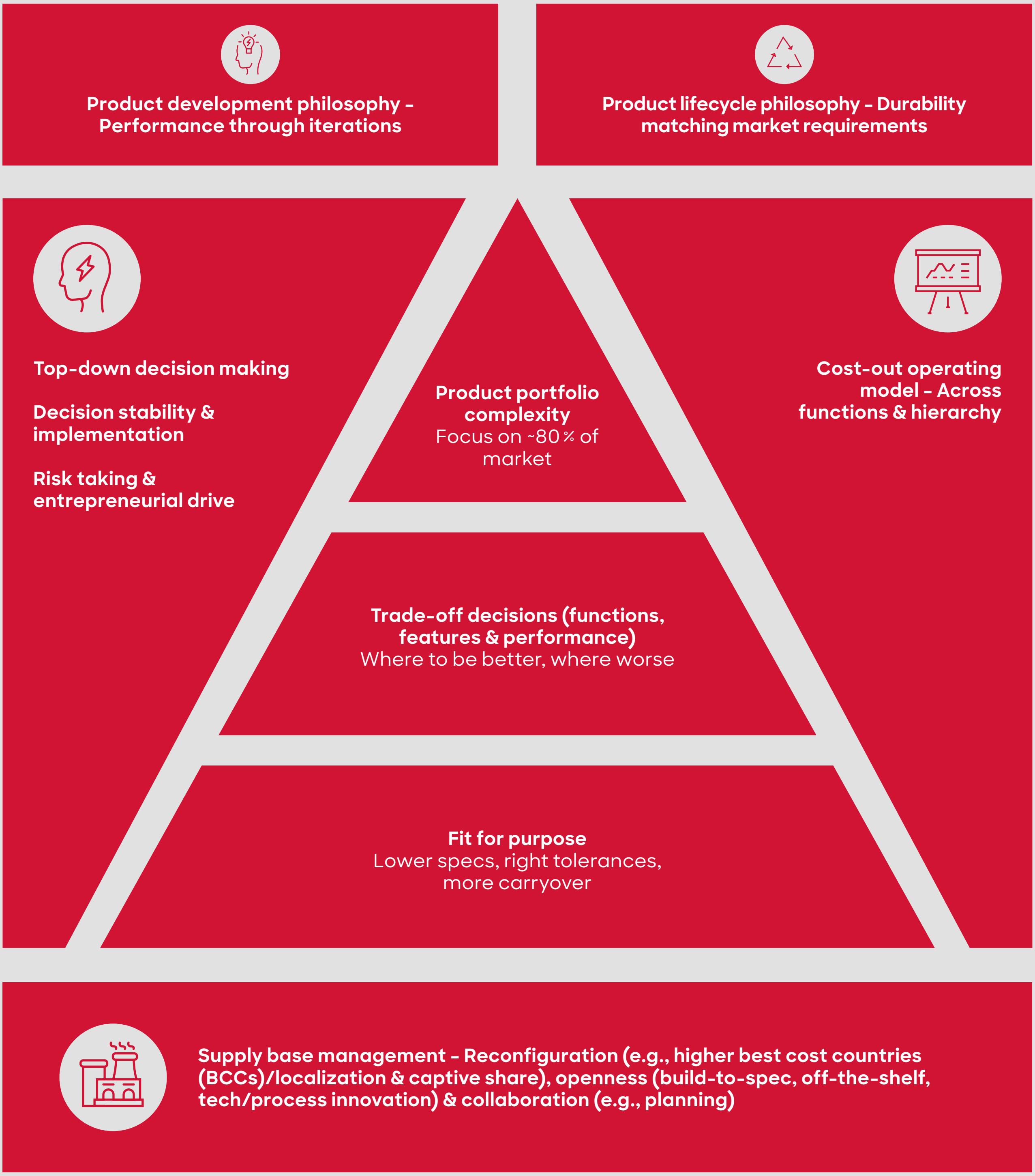
These are no small advantages. However, they become vulnerable if Western firms allow speed and cost gaps to grow unchecked. As one executive put it in our discussions, "If a Western teenager today recommends buying a Chinese car, it contains a couple of important messages: future customers perceive Chinese products already on equal terms, have a different perspective on product requirements and value classical Western brands less." Shifts in customer perception of that kind can redefine markets quickly.

TRADE-OFFS IN THE CHINESE MODEL

The Chinese model, powerful as it is, comes with compromises. Prioritizing speed can increase risk: shortened testing cycles sometimes lead to reliability issues, though these are becoming less frequent as capabilities mature. Depth of innovation remains another Western advantage. Chinese firms excel at rapid adaptation and commercialization, but disruptive breakthroughs are still more likely to originate in Western research ecosystems. Cultural and organizational structures also differ. The top-down, hierarchical decision making that enables speed in China may be difficult to replicate in Western contexts, where consensus-driven processes dominate. Finally, geopolitical exposure is an increasing concern, as rising trade restrictions and shifting international alliances leave Chinese firms more vulnerable to external shocks.

For Western leaders, these vulnerabilities represent opportunity. The task is to defend areas where China cannot easily compete, while selectively adopting China's speed and cost discipline to strengthen overall competitiveness. The companies that manage to combine both systems – Western depth with Chinese agility – will define the next era of industrial leadership.

I Decoding the China speed and cost playbook



25-30% speed gap | 20-30% cost gap

Source: Roland Berger

From analysis to action

Implications for industrial leaders

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At Roland Berger, we have seen these dynamics unfold across sectors. Our work with industrial clients in the West shows that adaptation is possible – but it requires urgency, focus and leadership commitment. For CEOs, COOs and CFOs, the implications are immediate and practical. The checklist on the next page (see box: Action checklist) highlights the key steps that industrial leaders should prioritize to accelerate speed, improve cost efficiency and reinforce competitiveness. ▶ J

J A basic recipe for action

Source: Roland Berger

ACTION CHECKLIST

Speed

- Benchmark product development timelines and methods against leading Chinese/BCC competitors to quantify the gap
- Identify pain points in current development processes, including key cross-functional interfaces and opportunities for data integration and use
- Translate lessons learned into an actionable roadmap with clear responsibilities and timing

Costs

- Conduct detailed teardown and should-cost analyses of selected own and Chinese/BCC competitor products
- Identify cost gaps at bill-of-materials (BOM) level, distinguishing technical from commercial drivers
- Assess which measures are transferable and design an implementation plan

Accompanying actions

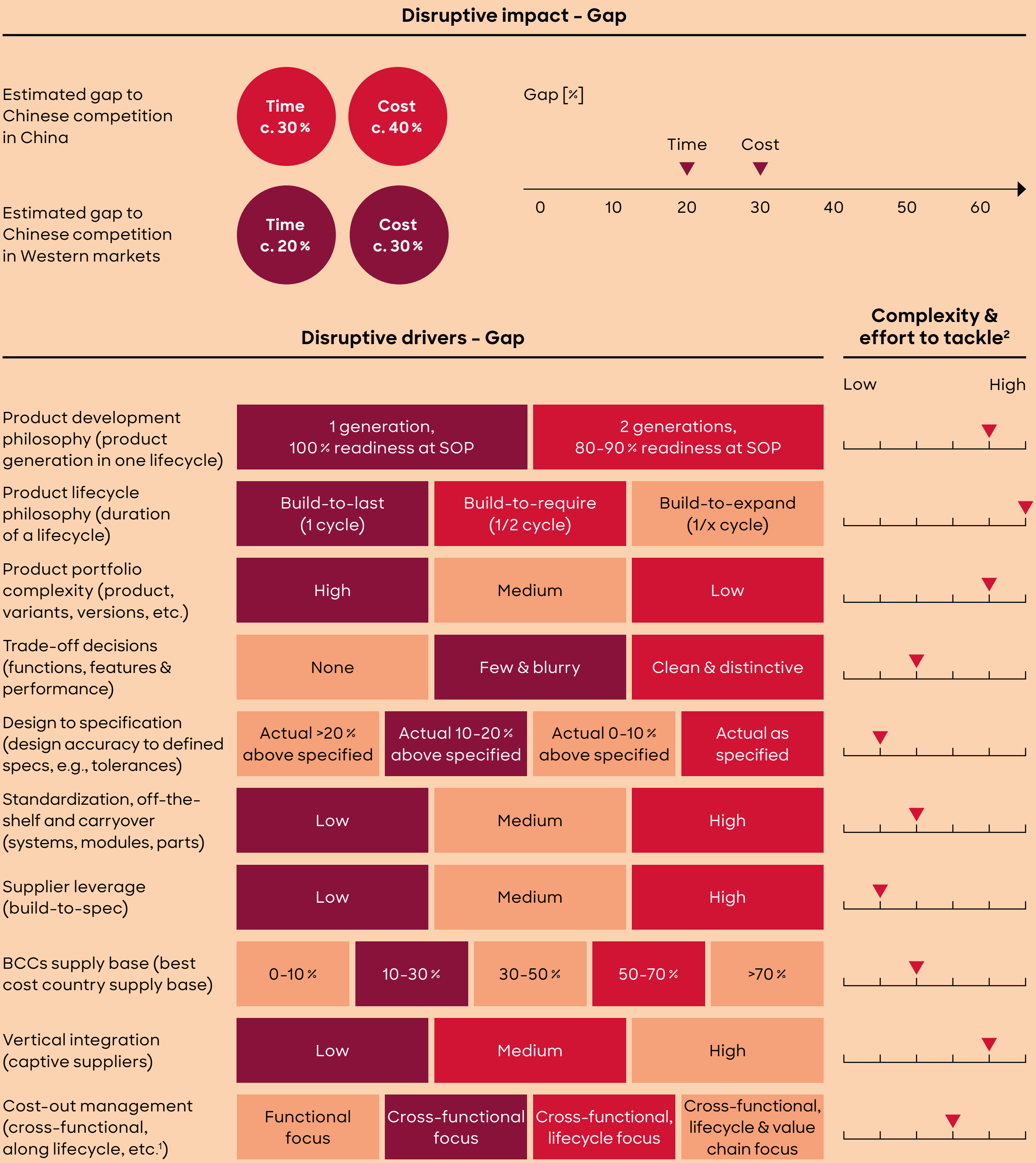
- Create a burning platform by communicating a clear narrative that underlines the need for change
- Simplify the product portfolio by removing low-volume variants and enforcing complexity control; focus on addressing ~80% of the market
- Reinforce the cost-out operating model by aligning engineering, quality, procurement and supply chain functions, and by engaging suppliers in active ideation

Time is short, and the gaps are already visible. Acting now can mean the difference between defending a strong market position and losing it. The path forward is not imitation but transformation. Western companies cannot and should not simply copy China's model, but they can learn from it and adapt. By exploiting their own strengths while addressing structural weaknesses, they can protect what makes them distinctive and, in so doing, close the most critical performance gaps.

The global industrial landscape has shifted. Chinese firms are no longer low-cost followers; they are fast, disciplined and increasingly capable of delivering products fully aligned with customers' expectations. Western companies still hold powerful advantages in areas such as quality, innovation, brand and trust, but these are not unassailable. If speed and cost gaps continue to widen, even the strongest of positions will erode. The choice is clear: speed and cost are no longer just operational levers but strategic imperatives. The time to act is now. ▶K

K Self-assessment vs. China (will vary by industry)

Schematic example



Your company Chinese competitors

1 Incl., e.g., joint planning, shared KPIs, supplier involvement, advanced cost engineering, etc. 2 RB experience

Source: Roland Berger

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- *OPTIMIZE OPERATIONS AND PERFORMANCE*
- *SOLVING GERMANY'S PROCUREMENT PARADOX*
- *HOW CFOS CAN UNLOCK FINANCIAL LEEWAY*
- *PROCUREMENT ENDGAME 2.0*
- *REASONS TO RETHINK YOUR MANUFACTURING NETWORK*
- *NAVIGATING DISRUPTION: CHINA'S ECONOMIC MODEL IN A WORLD IN TRANSITION*

03.2026
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We would like to thank our colleagues from PolarixPartner, a Roland Berger subsidiary focusing on cost and process optimization in the manufacturing industry.

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