Chapter 16. Corporate Periodic Tables make visible relative competitive position by key functions for success

Introduction

Chapter 7 established the idea of paradoxes and paradox settlement: societies repeatedly have to hold tensions between competing goods and arrive at settlements that allow people and institutions to function. Corporations operate inside those wider settlements. Governments translate them into laws, regulations and other design constraints that set the boundaries within which companies compete.

This chapter then turns inward and creates visibility inside the corporation. Corporate aims, primary functions and operating sub-functions can all be located by level. That lets a company see where each part of the business is operating, compare itself with competitors, expose mismatches and identify where a deliberate lift in level could create competitive and economic advantage. The chapter then asks what changes when AI begins to raise the attainable level of individual functions and shifts the competitive frontier itself.

How This Chapter Unfolds

1. Corporations operate inside government paradox settlements — Shows that companies compete inside higher-level social settlements expressed through law, regulation, standards and other design constraints.

2. Corporations operate at different levels of aim and complexity — Shows how the same economic purpose can be understood at progressively wider levels, from functional performance to global industry structure.

3. The Eight Primary Functions of a Corporation by Level — Places sales, marketing, R&D, finance, operations, IT, human resources and public relations into one levelled corporate periodic table.

4. Operations Sub-functions by Level — Opens one corporate function and shows how operations, procurement, quality assurance and process engineering change by level.

5. Periodic Tables as a Competitive Diagnostic — Uses back-sighting to make current capability, competitor capability, gaps and intended level shifts visible.

6. Higher Levels Produced Competitive and Economic Advantage in the Pre-AI World — Uses real cases to show how deliberate level shifts changed productivity, quality, availability, cost, sales and profitability.

7. AI Changes the Competitive Frontier — Shows how AI changes the attainable level of functions and shifts competition from cost reduction toward new forms of value creation.

8. What this means for corporate leaders and entrepreneurs — Turns the chapter into a practical leadership discipline: see the present level, the competitor level, the AI-enabled level and the moves with the greatest leverage.

9. What this means for AI — Defines AI's role as an accelerator of visibility, level shifts and learning while keeping aims, judgement and competitive choice with humans.

1. Corporations operate inside government paradox settlements

As Chapter 7 showed, societies repeatedly face tensions between competing goods — freedom and control, competition and cooperation, inequality and distribution, secrecy and transparency, innovation and safety, and others. These tensions cannot simply be eliminated. They have to be settled well enough for society to function.

In the ideal arrangement, corporations do not make those fundamental societal settlements for themselves. They operate inside settlements made at the level of government. In that sense, corporations have effectively subcontracted the settlement of major societal paradoxes upward. Government determines the acceptable boundaries between competing goods on behalf of the wider society.

Those settlements are then expressed through law, regulation, standards and enforceable rules. Together, they create the design constraints within which corporations are expected to operate. A corporation may pursue profit, growth, innovation and competitive advantage, but it is not free to do so without regard to the wider settlement. Employment law constrains how labour can be treated. Competition law constrains the pursuit of market power. Environmental law constrains the externalisation of harm. Safety law constrains experimentation. Corporate and securities law constrain the use of capital and the treatment of owners and investors. Tax law contributes to the settlement between private accumulation and wider distribution.

This matters because the corporation is not an autonomous social system. It is a nested institution. Its freedom to act depends upon the higher-level rules within which it sits. When government has made workable paradox settlements and

translated them into clear, legitimate and enforceable rules, corporations can concentrate on performing their economic role inside those boundaries.

When that higher-level settlement is weak, captured, incoherent or unenforced, corporations are pushed into territory they should not have to occupy. They may be left to decide for themselves how much safety is enough, how much market power is acceptable, what obligations they owe to workers or communities, or how far they may externalise costs onto others. The result is not simply a corporate governance problem. It is a failure in the higher-level settlement within which corporations are meant to operate.

The starting point for analysing corporations is therefore simple: corporate performance takes place inside a set of government-created design constraints. The next question is what corporations themselves look like when viewed through the lens of levels — the level of their aims, the complexity they can handle, and the level at which their major functions operate.

2. Corporations operate at different levels of aim and complexity

The economic purpose remains constant: sustained profitability. What changes is the level at which the corporation understands how that profitability is created, defended and renewed. A corporation can therefore pursue the same broad economic purpose while operating at very different levels of complexity.

A hierarchy of corporate aims

At the lower end of the hierarchy, sustained profitability is understood primarily through the performance of individual functions. As the level rises, the corporation progressively widens the frame through which it understands performance: from the function, to the profit-and-loss account, to its position against competitors, to the structure of the national industry, and finally to the structure of the global industry.

Corporate aims by level. Exhibit 16.1

Level	Corporate aim	Primary question	Profitability frame
VII	Global industry structure	How is the global industry evolving, and how can we shape or occupy an advantaged position within it?	Profitability through superior position in the global industry system.
VI	National industry structure	How is value created and captured across the national industry, and where should we position ourselves within it?	Profitability through shaping or exploiting national industry structure.
V	Relative competitive position	Why will customers choose us rather than competitors, and can that advantage be sustained?	Profitability through superior competitive position.
IV	Profit and loss	How does the business as a whole produce and sustain profit?	Profitability through management of the integrated P&L.
III	Functional performance	How well does this function perform its work?	Profitability through functional effectiveness, efficiency and control.

The same purpose, seen at progressively higher levels of complexity - Level III does not mean that profitability is unimportant. It means that profitability is understood principally through the performance of functions: sales, production, finance, logistics, marketing or other areas of work. Improvement is sought by making the function perform better.

At Level IV the frame widens to the integrated profit-and-loss account. The corporation is no longer asking only whether individual functions perform well, but whether their combined operation produces a sustainably profitable business.

At Level V, profitability is understood comparatively. The critical issue becomes relative competitive position: whether the corporation possesses advantages over competitors that allow it to win customers, defend margins and sustain superior returns.

At Level VI, the frame widens again. Management looks beyond individual competitors to the structure of the national industry itself: the distribution of power, barriers to entry, channels, regulation, suppliers, customers, substitutes and the ways in which value is created and captured across the industry.

At Level VII, the corporation operates within the global industry structure. Competitive position is understood across countries, technologies, supply chains, capital markets, regulatory systems and global competitors. The corporation seeks

not merely to perform within an existing industry, but potentially to influence where the industry is going and how value will be created within it.

The governing idea - The hierarchy does not replace sustained profitability with progressively more abstract aims. Sustained profitability remains the corporate economic purpose throughout. What changes is the level of complexity at which management understands the sources of that profitability and acts to protect or improve them.

The progression can therefore be expressed simply as: Function → P&L → Relative competitive position → National industry structure → Global industry structure. Each step widens the system that the corporation must understand and the complexity that its leaders must be capable of managing.

3. The Eight Primary Functions of a Corporation by Level

A corporation can be decomposed into eight primary functions: sales, marketing, research and development, finance, operations, information technology, human resources and public relations. Each function can operate at a different developmental level. The periodic table below places each function against Levels III to VII, with Level VII at the top and Level III at the bottom. The level does not describe the importance of the function; it describes the breadth of aim, complexity and competitive field that the function is capable of handling.

The common developmental logic is the same across all eight functions: Level III organises the function itself; Level IV manages its contribution to profit and loss; Level V manages it against competitors and relative competitive position; Level VI shapes and responds to the national industry structure; and Level VII operates against the global industry structure.

Periodic table of corporate functions. Exhibit 16.2

Level	Corporate aim	Sales	Marketing	R&D	Finance	Operations	IT	Human Resources	Public Relations
VII	Global industry structure	Builds and reallocates global routes to market, accounts and channels across regions.	Shapes global category position, brand architecture and demand across markets.	Builds global technology and innovation platforms; anticipates worldwide discontinuities.	Allocates capital globally across currencies, jurisdictions, risks and strategic options.	Designs and orchestrates global supply, production and delivery networks.	Creates global digital architecture, platforms, data and interoperability across the enterprise.	Builds global leadership, talent and capability systems across cultures and labour markets.	Manages global legitimacy, reputation and stakeholder relationships across jurisdictions.
VI	National industry structure	Shapes national channels, account structures and routes to market within industry economics.	Positions the company within the national category and influences market structure and demand.	Develops technologies and offerings against national industry trajectories, standards and ecosystems.	Allocates capital against national industry economics, regulation, risk and consolidation options.	Designs national capacity, supply networks and operating footprint against industry structure.	Builds enterprise architecture that connects the firm to national infrastructure, partners and standards.	Builds workforce capability against national labour markets, institutions and skill pipelines.	Shapes national stakeholder, regulator, media and community relationships affecting the industry.
V	Relative competitive position	Wins priority customers and channels by outperforming competitors on coverage, conversion and value.	Builds differentiated positioning, customer preference and share relative to competitors.	Creates distinctive products, technologies and capabilities that competitors cannot easily match.	Directs resources to strengthen competitive advantage, returns and strategic optionality.	Builds cost, quality, speed, reliability and service advantages versus competitors.	Creates distinctive digital capability, data advantage and faster enterprise coordination.	Builds superior leadership, skills, organisation and productivity versus competitors.	Builds stronger legitimacy, trust and influence than competitors with key stakeholders.

IV	Profit and loss	Manages revenue, price, margin, mix, pipeline and customer economics against the P&L.	Allocates spend to profitable demand, customer acquisition, retention and portfolio economics.	Manages innovation investment against commercial returns, margins, timing and portfolio value.	Owns integrated P&L, cash, capital, risk, budgeting and economic performance.	Manages cost, productivity, organisation, quality and delivery to achieve P&L targets.	Prioritises systems and technology investment by enterprise economic value and operating return.	Manages labour cost, productivity, capability and organisation against business economics.	Protects reputation and stakeholder support where they materially affect economic performance.
III	Functional performance	Runs the sales process: leads, calls, proposals, conversion, account coverage and sales activity.	Runs campaigns, communications, research, content, channels and lead generation.	Runs projects, experiments, engineering and product development within the technical function.	Runs accounting, reporting, payroll, controls, transactions and functional finance processes.	Runs production, service delivery, scheduling, quality, maintenance and day-to-day execution.	Runs infrastructure, applications, support, cybersecurity and functional technology services.	Runs recruitment, payroll support, training, performance processes and employee administration.	Runs media, communications, issues handling, events and stakeholder contact.

Reading the table. A corporation need not have all eight functions at the same level. The diagnostic value comes from locating the actual operating level of each function, then comparing the resulting pattern with the levels required by the corporation's aims and with the levels achieved by competitors.

4. Operations Sub-functions by Level

Operations is itself a broad corporate function. To understand how operational capability develops, it can be decomposed into four recurring sub-functions: Operations, Procurement, Quality Assurance, and Process Engineering. Each of these can be located by level. The resulting periodic table shows a progression from immediate task execution at Level II to system-wide integration and optimises at Level VI.

The table is not intended to imply that every operating activity should migrate to Level VI. Lower-level work remains necessary. The point is that higher levels add broader time horizons, wider boundaries, greater integration and more complex problem solving. A strong operation therefore contains work at several levels while ensuring that its governing capability is high enough to coordinate the complexity of the business.

Periodic table of operations sub-functions. Exhibit 16.3

Level	Operating frame	Operations	Procurement	Quality Assurance	Process Engineering
VI	Enterprise / network optimisation	Operations coordinates an integrated operating system across sites, products, partners and flows; capacity, risk and performance are optimised across the whole enterprise.	Procurement shapes supply networks and strategic supplier ecosystems, balancing resilience, innovation, cost, risk and long-term access to critical inputs.	Quality Assurance governs quality as an enterprise system, integrating customer requirements, regulatory obligations, data, suppliers and continuous learning.	Process Engineering redesigns end-to-end operating systems across functions and sites, using advanced modelling, automation and system-level optimisation.
V	Competitive operating system	Operations is designed to create relative competitive advantage through superior cost, delivery, flexibility, throughput, reliability or service performance.	Procurement manages categories strategically to improve total cost, supplier performance, innovation contribution and competitive position.	Quality Assurance links quality performance to customer value, competitive differentiation, cost of failure and systematic improvement.	Process Engineering redesigns major value streams and production systems to improve competitive economics, capability and scalability.
IV	Managed functional performance	Operations manages the whole function against output, cost, schedule, optimisation, service and profit-and-loss requirements.	Procurement plans and controls purchasing across the function, negotiating suppliers, prices, terms, availability and working-capital consequences.	Quality Assurance establishes formal standards, inspection regimes, corrective action and recurring controls across operational work.	Process Engineering optimises and improves processes using measured performance, root-cause analysis, workflow design and repeatable methods.
III	Coordinated work	Operations coordinates teams, schedules, resources and hand-offs so that a complete stream of work is delivered reliably.	Procurement coordinates recurring purchasing requirements, approved suppliers, ordering cycles and material availability for multiple jobs or teams.	Quality Assurance checks conformance across recurring work, identifies defects and ensures that corrections are completed.	Process Engineering maps recurring workflows, removes obvious waste and improves local methods, sequencing and hand-offs.
II	Task / immediate execution	Operations performs and controls immediate tasks: who does what, when, with what resources, to the required specification.	Procurement obtains the specific materials, equipment or services required for the immediate task or job.	Quality Assurance checks the immediate output against a defined requirement and identifies defects or non-conformance.	Process Engineering improves a particular task or work method through simple changes to sequence, tooling, layout or technique.

Reading the table

- Level II is immediate execution: the unit of work is the task or job.
- Level III coordinates recurring work across people, resources and hand-offs.
- Level IV manages each sub-function as a formal system with measures, standards and economic accountability.
- Level V connects the operating system directly to relative competitive position.
- Level VI integrates and optimises the operating system across the wider enterprise and its external network.

5. Periodic Tables as a Competitive Diagnostic

Once a periodic table has been constructed, back-sighting converts it from a descriptive framework into a map of relative competitive capability. A company can place itself and a competitor against the same levelled functions, see where the two organisations are operating at the same level, identify where one has a capability advantage, and decide deliberately where to lift its own operating level.

The example below compares Competitor A, the client, with Competitor B, its dominant competitor. Competitor A is shown in green and Competitor B in red. A hollow green marker shows a level to which Competitor A deliberately chose to move. The comparison is shown first across the eight primary corporate functions and then at the more detailed operations level.

Corporate periodic table: Competitor A versus Competitor B. Exhibit 16.4

Level	Sales	Marketing	R&D	Finance	Operations	IT	Human Resources	Public Relations
VII	Builds and reallocates global routes to market, accounts and channels across regions.	Shapes global category position, brand architecture and demand across markets.	Builds global technology and innovation platforms; anticipates worldwide discontinuities.	Allocates capital globally across currencies, jurisdictions, risks and strategic options.	Designs and orchestrates global supply, production and delivery networks.	Creates global digital architecture, platforms, data and interoperability across the enterprise.	Builds global leadership, talent and capability systems across cultures and labour markets.	Manages global legitimacy, reputation and stakeholder relationships across jurisdictions.
VI	Shapes national channels, account structur… routes to market w… industry economics.	Positions the company within the national category and influences market structure and demand.	Develops technologies and offerings against national industry trajectories, standards and ecosystems.	Allocates capital against national industry econom… ulation, risk and c…olidation options.	Designs national capacity, supply networks and operating footprint against industry structure.	Builds enterprise architecture that connects the firm to national infrastructure, partners and standards.	Builds workforce capability against national … markets, institutio… skill pipelines.	Shapes national stakeholder, regulator, media and community relationships affecting the industry.
V	Wins priority customers and channels by out… ning com… rs on coverage, conversion and value.	Builds differentiated positioning, customer preferen… share relative t… etitors.	Creates distinctive products, technologies and ca… ies that comp… cannot easily match.	Directs resources to strengthen competitive advanta… urns and strateg… nality.	Builds cost, quality, speed, reliability and service… tages versus … itors.	Creates distinctive digital capability, data advant… d faster enterpris… dination.	Builds superior leadership, skills, orga… and produc… versus competitors.	Builds stronger legitimacy, trust and influ… an competi… ith key stakeholders.
IV	Manages revenue, price, margin, mix, pipeline and… mer econom… inst the P&L.	Allocates spend to profitable demand, custom… isition, retentio… ortfolio economics.	Manages innovation investment against commer… returns, margi… g and portf… value.	Owns integrated P&L, cash, capital, risk, budgeting and economic performance.	Manages cost, productivity, organisation, quality and deli… achieve P&L … gets.	Prioritises systems and technology investment by enterpris… economic value a… ating ret…	Manages labour cost, productivity, capability and organisation against busines… omics.	Protects reputation and stakeholder support where they materially affec… mic perf… ce.
III	Runs the sales process: leads, calls, proposals, conversion, account coverage and sales activity.	Runs campaigns, communications, research, content, channels and lead generation.	Runs projects, experiments, engineering and product development within the technical function.	Runs accounting, reporting, payroll, controls, transactions and functional finance processes.	Runs production, service delivery, scheduling, quality, maintenance and day-to-day execution.	Runs infrastructure, applications, support, cybersecurity and functional technology services.	Runs recruitment, payroll support, training, performance processes and employee administration.	Runs media, communications, issues handling, events and stakeholder contact.

● Competitor A current ● Competitor B current ○ Competitor A intended level

Observed corporate positions. Competitor A was already one level above Competitor B in six of the eight functions, two levels above nowhere, and level with B in Marketing. Finance sat at VI for A versus V for B. A then chose targeted lifts in Sales V→VI, Marketing IV→V, and Human Resources V→VI.

Operations periodic table: Competitor A versus Competitor B. Exhibit 16.5

Level	Operations	Procurement	Quality Assurance	Process Engineering
VI	Operations coordinates an integrated operating system across sites, products, partners and flows; capacity, risk and performance are optimised across the whole enterprise.	Procurement shapes supply networks and strategic supplier ecosystems, balancing resilience, innovation, cost, risk and long-term access to critical inputs.	Quality Assurance governs quality as an enterprise system, integrating customer requirements, regulatory obligations, data, suppliers and continuous learning.	Process Engineering redesigns end-to-end operating systems across functions and sites, using advanced modelling, automation and system-level optimisation.
V	Operations is designed to create relative competitive advantage through superior cost, delivery [illegible]ility, throughput, reliability or service performance.	Procurement manages categories strategically to improve total cost, supplier performan[illegible]ovation contribution and competitive position.	Quality Assurance links quality performance to customer value, competitive differentiation, cost of failure and systematic improvement.	Process Engineering redesigns major value streams and productio[illegible]ystems to improve competitive econ[illegible] capability and scalability.
IV	Operations manages the whole function against output, cost, schedule, optimisation, service and pro[illegible]-loss requirements.	Procurement plans and controls purchasing across the function, negotiating suppliers, prices, terms[illegible]ability[illegible]orking-capital [illegible]nsequen[illegible].	Quality Assurance establishes formal standards, inspection regimes, corrective action an[illegible]rring [illegible]s across o[illegible]ational w[illegible].	Process Engineering optimises and improves processes using measured performance, root-cause analysis[illegible]flow design and repeatable[illegible]thods.
III	Operations coordinates teams, schedules, resources and hand-offs so that a complete stream of work is delivered reliably.	Procurement coordinates recurring purchasing requirements, approved suppliers, ordering cycles and material availability for multiple jobs or teams.	Quality Assurance checks conformance across recurring work, identifies defects and ensures that corrections are completed.	Process Engineering maps recurring workflows, removes obvious waste and improves local methods, sequencing and hand-offs.
II	Operations performs and controls immediate tasks: who does what, when, with what resources, to the required specification.	Procurement obtains the specific materials, equipment or services required for the immediate task or job.	Quality Assurance checks the immediate output against a defined requirement and identifies defects or non-conformance.	Process Engineering improves a particular task or work method through simple changes to sequence, tooling, layout or technique.

● **Competitor A current** ● **Competitor B current** ○ **Competitor A intended level**

Procurement demonstrates the economic significance of a level shift. Both competitors were initially at Level IV. Competitor A deliberately lifted Procurement to Level V. That stepped-up process delivered approximately $320 million to the bottom line.

What the diagnostic shows. The two tables make relative competitive position visible at the level of capability rather than only through financial outcomes. Competitor A already operated above Competitor B across most of the primary functions and across Operations and Process Engineering. Where the competitors were level, the table identified potential opportunities for deliberate lift. The procurement move provides a concrete example: a one-level increase was not simply a change in management sophistication; it translated into a very large improvement in profitability.

This is the essential use of the corporate periodic table as a competitive diagnostic. It allows management to identify where advantage already exists, where a dominant competitor is close, where the company is exposed, and where a deliberate increase in level may create further economic advantage. The next question is therefore whether operating at a higher level than competitors systematically produces superior performance and profitability.

6. Higher Levels Produced Competitive and Economic Advantage in the Pre-AI World

In the pre-AI world, moving a corporate function to a higher operating level repeatedly produced measurable competitive and economic advantage. This was not a theoretical proposition. The periodic-table approach has been applied over nearly thirty years across dozens of companies, and the effects of level shifting were visible in value share, speed to market, productivity, quality, plant availability, overhead cost, sales productivity and labour economics.

The pattern was consistent. A higher level did not simply mean more sophisticated language or more elaborate management processes. It meant that the function could see and act on a wider set of variables, coordinate across more boundaries, solve more complex problems and work with a longer time horizon. When the higher-level capability was translated into operating practice, the economic consequences could be very large.

Examples of level shifting in practice. Exhibit 16.6

Area	Level shift	Operating change	Observed economic or performance effect
Marketing	IV → V	Moved from conventional market activity to social insight and faster market response.	Over three years of approximately 7% value-share gains; time to market reduced from months to weeks.
Operational productivity	III → V	Changed the system of labour and machine productivity, principally through a different level of union relationship and coordination.	Labour and machine productivity increased to over 100% of the prior baseline.
Manufacturing quality	III → V	Shifted from local defect detection and correction toward more systematic process control and higher-level quality management.	Scrap reduced from approximately 12–15% to 1.8%; defect rates reduced from approximately 1–2% to about one in a million.
Maintenance / plant availability	III → IV	Moved from local maintenance response toward coordinated management of multiple interdependent systems in continuous plant.	Availability increased from 64% to 85%. A further move to Level V was expected to lift availability to approximately 97%.
Administrative overhead	III → IV	Reframed administration from local activities to integrated process and system management.	Total administrative cost reduced by about $300 million, representing a 35–40% reduction across the cost base.
Mortgage sales	II → III	Lifted mobile mortgage management from individual transaction activity to structured functional sales management.	Sales per mobile mortgage manager increased from 2 to 5 mortgages per week; average mortgage value rose from about $80,000 to $130,000.
Frontline food preparation	III → IV	Lifted management thinking from direct frontline control toward system design and automation of food preparation.	Sales supported per labour hour increased from about $100 to about $150.

What the examples show

The gains occurred in very different functions. They were not confined to manufacturing, nor to a particular industry. Marketing, sales, maintenance, quality, administration and frontline operations all showed the same underlying effect: when the level of thinking and operating increased, the function could address a larger and more complex system.

The level shift also changed the source of advantage. At lower levels, performance improvement tended to come from working harder, controlling individual activities more tightly or improving local execution. At higher levels, advantage increasingly came from redesigning relationships, integrating processes, changing the system itself and acting on information that lower-level competitors could not yet use.

This is why the periodic table matters as a competitive diagnostic. If two competitors are operating the same function at different levels, they are not simply executing the same game with different efficiency. They are often playing different games. The higher-level competitor can see a wider field, coordinate more variables and create forms of advantage that are difficult for the lower-level competitor to match.

The economic relationship

In the pre-AI world, the practical relationship was therefore:

Higher operating level → greater capability → superior competitive performance → higher profitability

The relationship was not mechanical. Moving a function to a higher level did not guarantee success, and poor execution could still destroy value. But across repeated applications, the direction of travel was clear: where higher-level capability was real and was converted into operating practice, it created material economic advantage.

Why this matters now

These cases establish the historical baseline. Before AI, raising the level of a corporate function usually required changes in management capability, organisation, relationships, systems, information and time. Those changes could be difficult, but when achieved they produced substantial performance gains. The next question is what happens when AI begins to raise the effective operating level of functions much faster, and potentially at very different rates across the corporation.

7. AI Changes the Competitive Frontier

AI has the potential to change the competitive frontier altogether. In the pre-AI world, lifting the operating level of a function required substantial changes in management capability, systems, organisation and time. AI can now lift the effective level of particular functions much faster, and not necessarily evenly across the corporation. That creates both a major opportunity and a major threat: the firms that identify where AI can most powerfully raise cost efficiency and customer value, and then move those functions fastest, can reset the basis of competition.

This change may advantage new entrants disproportionately. Incumbents often possess substantial physical assets, installed systems and market positions, but they also carry legacy processes, legacy technology and, critically, legacy felt truths about how the business works. Those accumulated beliefs can make it harder to recognise when an old operating model has ceased to be the best one. Organisational power and incentives can then reinforce resistance to change even when the new technology is visible.

That does not mean incumbents are necessarily trapped. Some have responded by creating skunk works or structurally separate AI businesses with permission to attack profitable segments of the incumbent model without being constrained by existing processes, economics or assumptions. The purpose is defensive as much as innovative: to disrupt their own most attractive profit pools before an external entrant does so.

Using levels to analyse the AI frontier. The periodic-table approach provides a practical way to analyse this new environment. Rather than asking whether a company is “using AI”, the more useful question is which functions AI can move to a higher effective operating level, how far that movement can go, and what the economic consequences of the shift are likely to be.

The analysis therefore remains function by function. Sales, marketing, research and development, finance, operations, IT, human resources and public relations may each be affected differently. Within operations, procurement, quality assurance, process engineering and the operating system itself may also move at different speeds. AI in information processing will affect some cells; robotics and physical automation will affect others.

The periodic table becomes a visibility map of potential level shifts. For each function, the company can see its current level, the level of competitors, the level AI makes technically and economically possible, and what movement would do to both cost and value.

Two lenses on competition. Exhibit 16.7

Question	Cost lens	Value lens
Where can AI lift the level of the function?	Automation, labour substitution, lower processing cost, fewer hand-offs, higher asset utilisation.	Better decisions, faster response, deeper insight, higher precision, improved customer outcomes.
How large is the leverage?	Estimate addressable cost base and unit-cost reduction.	Estimate additional willingness to pay, market share, speed, quality or strategic differentiation.
How quickly can competitors copy it?	Cost advantages may diffuse rapidly as tools and infrastructure become widely available.	Distinctive value may persist longer where it depends on proprietary data, workflow, relationships, brand or system integration.
What does the level shift change?	The economics of producing and administering the offer.	The nature, quality and usefulness of the offer itself.

Cost will be easier to see than value. The first wave of AI economics is likely to be easiest to see on the cost side. Processing work can be decomposed, timed and priced. Administrative effort can be reduced. Transactions can be automated. Robotics can replace or augment physical tasks. Unit costs, labour requirements and throughput can therefore be modelled with increasing precision.

Those advantages matter, but they are unlikely to remain permanently distinctive. Once a technology, model or robotic system becomes broadly available, competitors can adopt similar tools. Industry cost curves then move downward together. What begins as a competitive cost advantage tends progressively to become the new minimum cost of participation.

Value is harder to envisage because it requires imagining products, services, experiences and forms of problem solving that may not yet exist. But value is likely to become the more important source of durable competitive advantage. The company that uses AI merely to make the old offer cheaper may gain temporarily. The company that uses higher-level capability to create a materially better offer can change customer expectations and redefine the market.

The emerging competitive question

Current level → AI-enabled level → cost effect + value effect → new relative competitive position

The competitive question therefore changes. It is no longer simply which company currently operates at the higher level. It becomes which company can identify the new level made possible by AI, move there fastest, and convert that level shift into economic value before competitors normalise the same capability.

For incumbents, the danger is that yesterday's advantage becomes tomorrow's constraint. For new entrants, the opportunity is to begin without the inherited organisation, assets, systems and felt truths that were necessary in the old world. For both, the periodic table provides the same discipline: locate the present level, locate the AI-enabled level, and determine where the greatest leverage in cost and value sits.

The end game is value. Cost reduction will matter and in many cases be dramatic. But as AI capability spreads, much of the cost benefit will diffuse across industries. Sustainable advantage will increasingly depend on who can use AI-enabled higher levels to create more value, not simply who can perform the old work more cheaply.

8. What this means for corporate leaders and entrepreneurs

The corporate periodic table turns strategy into visibility. A leader no longer has to describe a company as simply strong, weak, innovative or efficient. The company can

be opened up function by function and placed against a common level architecture. The result shows where capability sits now, where competitors sit, where the company is exposed and where a deliberate lift could create advantage.

For corporate leaders, this changes the management question. The aim is not to push every function to the highest possible level. Lower-level work remains necessary. The task is to make sure that each function operates at the level required by the company's aim and by the complexity of the competitive field. A Level III function inside a Level VI strategy creates a visible mismatch. So does a highly developed function whose capability is not connected to the rest of the business.

The same visibility helps leaders decide where not to invest. If a competitor has already normalised a capability and AI will soon make it cheap for everyone, lifting that function may be necessary but not distinctive. The stronger opportunity may sit somewhere else: a function where a higher level changes the offer, the customer experience, the operating model or the structure of the market.

For entrepreneurs, the method is especially powerful because a new business does not have to inherit the old level architecture of an incumbent. An entrepreneur can begin with the AI-enabled level now possible, design the company around it and attack a profit pool whose existing structure was built for an earlier technology. The absence of legacy systems, assets and felt truths can itself become an advantage.

The practical discipline is simple: make the company visible. Locate the current level. Locate the competitor. Locate the AI-enabled level. Estimate the cost effect and the value effect. Then decide where movement creates the greatest leverage.

This is also a control-and-correction process. Make the intended move visible. Act. Measure what changed. Compare the result with the aim. Then correct again. The periodic table is useful because it converts a broad strategy into a set of visible, testable level shifts rather than leaving it as an abstract ambition.

9. What this means for AI

For AI, this chapter makes the role more precise. AI is not simply another technology to insert into every function. It changes the level of work that a function can perform.

AI can widen the field a function can see, increase the number of variables it can hold, shorten the time needed to analyse and coordinate, preserve more history, compare more alternatives and make patterns visible that a human team could not easily hold at once. In that sense, AI can raise the effective operating level of sales, marketing, R&D, finance, operations, IT, human resources and public relations - but not necessarily by the same amount or at the same speed.

That uneven movement matters. If one function moves rapidly while the functions around it remain lower, the company can become less coherent rather than more

capable. AI therefore needs to help show not only the level shift inside a cell, but the consequences for the whole corporate system.

AI also changes visibility between competitors. It can help back-sight public evidence, compare operating models, identify capability gaps, model possible level shifts and preserve a history of movement through time. What was once an occasional consulting exercise can become a continuing diagnostic.

But AI does not decide the corporate aim. It does not decide which trade-offs the company should make, what risk it should accept, what customers it should serve or which advantage is worth pursuing. Those remain leadership choices made inside the wider social constraints established above the corporation.

The useful relationship is therefore reciprocal visibility. AI helps leaders see the company, the competitor and the changing frontier more clearly. Leaders must also be able to see what the AI is doing: what evidence it used, what assumptions it made, where confidence is weak and what alternatives it rejected.

Used this way, AI becomes part of the corporate control-and-correction system. It helps the company see, compare, act and learn faster. The advantage does not come from having AI. It comes from seeing earlier where AI changes the attainable level, moving intelligently, and converting that movement into value before the same capability becomes normal.