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The Capability-Based Economy

Reframing Human Value in an Age of Intelligent Systems

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AI Disclosure Statement

In preparing this paper, AI tools were used to support original research, synthesise data, and refine language during the final editing process. AI-assisted image generation was also employed to create illustrative graphics.

All content was reviewed, validated, and finalised by the authors to ensure it reflected the paper's original intent, upheld scholarly integrity, and was grounded in the cited evidence base. No generative AI tools were used to produce core research findings, original data, or final authorial judgments.

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Abstract

Core Proposition:
We are not lacking capability; we are confusing it with skills and systematically mispricing its value.

Contemporary economic systems remain anchored in models that explain value through the efficient allocation of labour, capital, and resources under relatively stable conditions. Within these models, value is inferred from outputs, price signals, and productivity measures observed at a point in time. However, as economies become increasingly complex, interdependent, and shaped by continuous technological change, these assumptions are no longer sufficient (Arthur, 2013; Beinhocker, 2006).

This paper argues that a structural limitation exists in how value is recognised and measured. Markets function effectively in pricing what is observable, standardised, and immediate, yet systematically underprice the human capabilities that determine how value is created, sustained, and protected over time (Sen, 1985; Teece, Pisano, & Shuen, 1997). These capabilities, including judgement under uncertainty, adaptive coordination, and ethical reasoning, are often only revealed under conditions of disruption or failure.

The Capability-Based Economy (CBE) is introduced as an extension to prevailing economic models. Rather than replacing existing economic models, it extends them by explaining how value is created and sustained within complex adaptive systems by shifting the unit of analysis from tasks and outputs to capability expressed in context and realised through future consequences. This reframing distinguishes between productive capability, which generates value, and protective capability, which preserves it.

In an age where artificial intelligence (AI) increasingly automates task execution and commoditises knowledge, the scarcity and economic importance of human capability intensify (Chollet, 2019; van Noordt & Tangi, 2023). The need to make capability more economically legible therefore becomes central, not only to understanding value, but to ensuring its persistence across human, social, and ecological systems. The CBE provides the conceptual architecture for this shift, establishing a theoretical foundation from which applied models, measurement approaches, and empirical validation can be systematically developed and tested.

Positioning Note: From Theory to Application

This paper establishes the theoretical foundation for a Capability-Based Economy. It is not intended to provide a complete measurement model or prescribe implementation approaches.

The practical application of this framework has been developed and tested through a series of applied models and published research, including:

- Human Capability Tokens (HCT), which enable capability to be evidenced, verified, and exchanged beyond educational systems (Bowles, January 2026; Bowles, March 2026)
- Return on Intelligence (ROI^2), which link capability to value creation generated by machine intelligence amplifying human intelligence (O'Hanlon & Bowles, 2025)
- Capability-based organisational diagnostics which measure how capability is expressed through a living culture and valued through return on investment (ROI^3) that extends beyond productivity and human capital to encompass social and ecological outcomes (Bowles, November 2025)
- Revisiting skills and capabilities research, to help distinguish inputs from realised performance under changing conditions (Bowles, March 2026a)

Together, these applied models provide evidence of how capability can be made visible, measured, and increasingly priced across organisational and economic systems.

This paper should therefore be read as a conceptual architecture within a broader body of work that is actively testing how capability can be recognised, deployed, and valued in practice.

The Capability-Based Economy:

Reframing Human Value in an Age of Intelligent Systems

1. Introduction: From Outputs to Capability and Consequences

Core Proposition:
Value is not created or measured solely at the point of output, but is revealed over time through the consequences of how capability is applied in context.

For over two centuries, economic systems have explained value through the efficient allocation of labour, capital, and resources. These models assume relatively stable conditions, where inputs can be reliably transformed into outputs and measured through price, productivity, and cost.

Modern economies operate as complex adaptive systems characterised by continuous technological change and interdependence (Arthur, 2013). In such systems, value is not a static property captured by price or output at a point in time, but emerges through interaction and is realised through consequences that unfold across time and context (Beinhocker, 2006).

As a result, the human capabilities that matter most, including judgement under uncertainty, the ability to interpret complexity, collaborate across boundaries, and act with responsibility for consequences, remain systematically under-recognised and mispriced. Their value is often only revealed in moments of disruption or failure (Sen, 1985).

This limitation is becoming more pronounced.

Recent developments in behavioural economics have refined our understanding of how decisions are made by highlighting the role of bias, heuristics, and context (Kahneman, 2011; Thaler, 2015). However, these approaches largely accept existing definitions of value, focusing on how decisions are made within existing value structures, rather than how value itself is constituted, sustained, or degraded across systems.

At the same time, artificial intelligence (AI) is accelerating a structural shift in how value is created. Tasks that once required years of training can now be completed instantly, and knowledge, once scarce, is increasingly abundant (Autor, Levy, & Murnane, 2003; Massenkoff & McCrory, 2026). As AI automates execution and optimises processes, the economic value of routine task performance declines.

What becomes scarce is not information or technical skill, but the human capability required to interpret, decide, and act in context (Chollet, 2019; van Noordt & Tangi, 2023).

Yet these capabilities remain largely invisible within existing economic frameworks. Markets focus on pricing what is visible and immediate, while undervaluing capabilities that drive sustained performance, prevent loss, and influence future results.

This suggests that the challenge is not a failure of markets, but a limitation in what markets can readily price.

The Capability-Based Economy (CBE) addresses this limitation. It extends prevailing economic models by shifting the unit of analysis from tasks and outputs to capability in context, and from point-in-time performance to patterns of consequence over time. It argues that value is not determined by decisions alone, but by how human capability is applied and what consequences it produces across human, social, and ecological systems (Sen, 1985; Teece, Pisano, & Shuen, 1997).

Within this frame, capability becomes central. It determines how effectively individuals and organisations respond when conditions change, shaping not only the creation of value, but its protection and continuity.

Where capability is strong, systems adapt and endure; where it is weak, systems may appear efficient for extended periods, yet fail when conditions shift. This is not simply an operational issue but an economic one. The persistent underpricing of capability drives systematic underinvestment in the very capacities required to sustain performance, while reinforcing efficiency models that can quietly erode resilience. As more of what can be codified is automated or commoditised, the frontier of value shifts toward how effectively systems interpret, adapt, and sustain outcomes under changing conditions. In this context, capability does not merely create value, it determines whether that value endures.

2. From Equilibrium to Adaptation: Rethinking Economic Foundations

Core Proposition:
Economic models explain behaviour under stability, but struggle to account for how value emerges as systems respond to opportunity and change.

For much of its history, economic thought has been grounded in models of equilibrium, where value is understood through the efficient allocation of resources under relatively predictable and standardised conditions. Even as these models have been refined, including through behavioural approaches that improve our understanding of decision-making, the underlying structure of value has remained largely unchanged.

This creates a fundamental limitation.

Contemporary economies no longer operate within bounded or predictable conditions. They function as complex, adaptive systems characterised by continuous technological change, interdependence, and periodic disruption (Arthur, 2013; Beinhocker, 2006). In such environments, value is not determined at a single point in time, nor fully revealed through price or output, which reflect only the information available in the moment. It emerges through interaction, evolves through feedback, and is realised through future consequences.

Existing economic models remain well suited to explaining how resources are allocated and how decisions are made within defined parameters. Behavioural approaches extend this by improving our understanding of how those decisions are shaped in practice, including the influence of bounded rationality, bias, heuristics, and context (Simon, 1957; Tversky & Kahneman, 1974; Kahneman, 2011).

However, neither perspective fully explains how value is created once decisions are enacted within complex, interdependent systems. Decisions do not generate value in isolation. Their economic significance lies in how they are interpreted, coordinated, and sustained through subsequent action. This is the domain of capability.

Capability determines whether decisions translate into effective outcomes, whether systems adapt under pressure, and whether value is sustained or eroded as conditions change.

The limitation, therefore, is not in understanding behaviour, but in explaining how capability shapes the consequences of action, and in doing so, how value is created, protected, and sustained when conditions are uncertain, interdependent, and evolving.

The Capability-Based Economy addresses this gap by reframing value from equilibrium and efficiency toward adaptation and consequence.

Traditional economic models assume predictable conditions where value emerges through predefined processes and standardised outputs. In contrast, adaptive systems are shaped by human capability expressed through decision, judgement, interpretation, and reflection, where outcomes emerge through feedback and are realised through consequence over time.

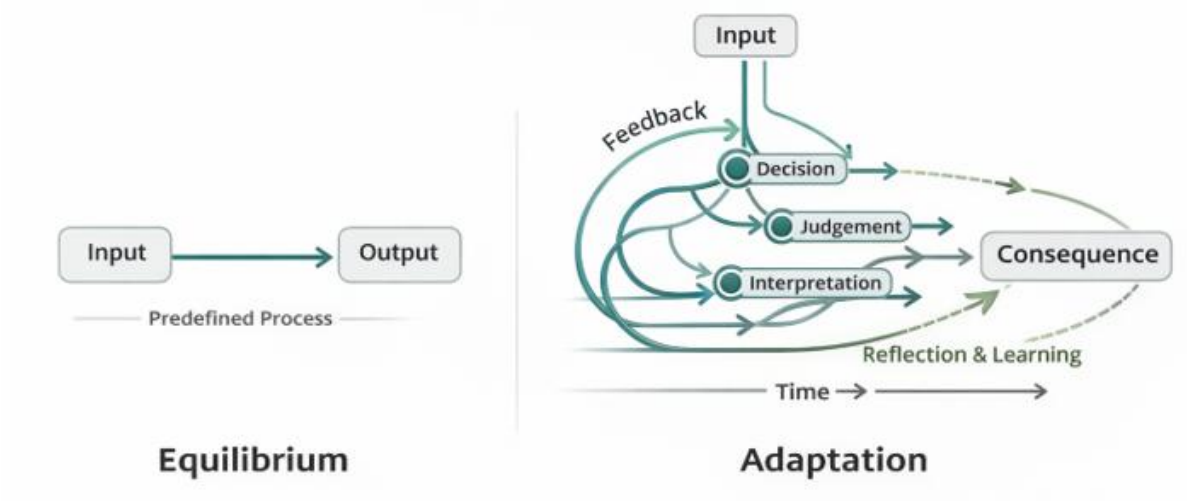

Figure 1 From equilibrium to adaptation

This shift can be understood in three ways.

First, traditional models explain behaviour. The CBE explains value.
Prevailing approaches focus on how individuals act within given constraints, whether through rational optimisation or bounded decision-making. However, behaviour alone does not determine value. Value is realised through the outcomes that behaviour produces, particularly in situations where conditions are uncertain, interdependent, and evolving.

The CBE therefore focuses on how human capability shapes those outcomes, including how situations are interpreted, how decisions are enacted, and how systems respond to future contingencies. This aligns with broader capability theory, where value arises from what individuals and systems are able to do and become in context (Sen, 1985), rather than from decisions in isolation.

Second, traditional models are episodic. The CBE is longitudinal.
Much of economic analysis evaluates decisions and performance at a point in time, treating longer-term effects as external or secondary. As Nicholas Stern (2007) demonstrates, this tendency to exclude delayed, distributed, and systemic consequences from core valuation leads to persistent underestimation of risk and mispricing of value. This reflects an underlying assumption that systems tend toward equilibrium, where outcomes can be assessed within bounded frames and value inferred through price signals (Friedman, 1962).

In contrast, complex systems do not reach equilibrium and settle into stable outcomes. Outcomes are path-dependent, delayed, and often non-linear. Small differences in capability can produce disproportionately large differences in consequence, particularly under conditions of stress or disruption.

In complex systems, performance depends not only on execution within a given mode, but on the capacity to recognise when that mode is no longer appropriate. This reflects a fundamental dynamic observed across adaptive systems: the tension between exploitation of existing capability and exploration of new possibilities. The economic significance lies not in either state alone, but in the capability to shift between them as conditions change. Failure to transition in time can lock systems into efficient but progressively less competitive operations, while premature transition can dissipate value. Capability, in this sense, governs not only how performance is sustained, but when to move into an adaptive mode of action.

A capability-based perspective therefore recognises that value emerges through patterns of consequence as they unfold, reflecting how effectively systems adapt, learn, and respond as conditions evolve (Teece, Pisano, & Shuen, 1997; Arthur, 2013).

Third, existing models improve descriptive accuracy but leave value systems largely unchanged. The CBE addresses the mispricing of human capability.

While refinements to economic theory have improved how behaviour is understood, they have not fundamentally altered how value is recognised. Systems continue to privilege what is easily measured, including tasks, outputs, and short-term efficiency, over what is consequential but less visible (Mazzucato, 2018).

As a result, critical forms of human capability, including judgement, sensemaking, and adaptive coordination, remain systematically under-recognised and underpriced. Capabilities that sustain long-term performance and prevent loss are still treated as externalities rather than as core drivers of value (Pigou, 1920; Stern, 2007).

In complex systems, this mispricing has material consequences. The pursuit of efficiency can erode adaptive capacity, creating systems that perform well under predictable conditions yet fail under stress.

Addressing this requires more than extending existing models. It requires a reframing of value itself. The CBE shifts:

- the unit of analysis from behaviour to capability in context
- the time horizon from decision to consequence
- the basis of value from outputs to sustained system performance
- the representation of human contribution from skills as static proxies of value to capability as the expression of latent potential through realised future outcomes.

This reframing changes how value is recognised, allocated, and sustained. The focus moves from optimising isolated decisions to designing conditions in which capability can be developed, applied, and evidenced over time. In doing so, it places judgement, responsibility, and adaptive capacity at the centre of economic performance.

Within complex adaptive systems, capability becomes the primary determinant of system fitness, shaping how effectively individuals and organisations respond to variation, learn, and sustain performance. Failure to recognise and develop this capability is therefore not simply conceptual, but economic.

3. From Skills to Capability: A Structural Shift

Core Proposition:
Skills describe what can be done. Capability determines what is achieved when conditions no longer follow the script.

Traditional economic models rely heavily on skills as units of value, reflecting their treatment within growth and production frameworks as inputs to labour, combined with capital to generate output (Solow, 1970). Skills are observable, trainable, and measurable, aligning well with environments where tasks are repeatable and outcomes predictable. However, as McClelland (1973) argued, such measures often fail to predict performance in practice, where effectiveness depends on broader competencies expressed through behaviour, motivation, and context.

These limitations can be understood in three ways.

- **They are context-bound.** A skill demonstrated in one setting does not guarantee performance in another.
- **They assume stability.** Skills perform best when conditions are known and consistent.
- **They measure inputs, not outcomes.** They indicate what a person can do, not what they will achieve under pressure.

Capability, by contrast, operates differently.

While skills are the discrete tools of a job role, capability is the integrative engine that drives their application. A capability is the ability to apply skills, knowledge, and behaviours in context (Bowles & Schoenheimer, 1997; Bowles & Lanyon, 2016). It is revealed not through routine execution, but through response to novelty, constraint, and consequence. Capability becomes visible when conditions intensify the demands placed on human judgement. This occurs when conditions are uncertain, stakes are high, risk or human consequences for decisions are evident, and there is no predefined script.

> **Snapshot: Two Technicians, One Operational Problem**
>
> Two technicians are equally trained and certified.
>
> Under normal conditions, their performance is indistinguishable.
>
> When a system failure occurs, one follows procedure and waits.
> The other interprets the situation, engages others, takes responsibility, and acts.
>
> The difference is not skill. It is human capability.
>
> It is only visible when conditions change.

Capability can emphasise the ability to build, adapt, and respond effectively under changing conditions. However, this captures only part of its economic function.

Capability also governs the ability to recognise and act upon what degrades system performance. This includes identifying emerging risks, addressing behaviours that extract value, and intervening before adverse patterns become embedded.

Capability is both productive and protective, shaping not only the creation of value but the conditions under which it is sustained. This protective dimension remains largely invisible within current economic models and measures of value, which readily capture output gains but rarely account for the capability required to prevent loss, mitigate risk, or maintain system integrity.

This capacity is reinforced through reflective practice. Schön (1983) demonstrated that effective practitioners do not simply apply predefined rules, but engage in reflection-in-action, continuously interpreting, reframing, and adjusting their responses as situations unfold. Capability therefore develops not only through experience, but through disciplined reflection and metacognitive awareness, strengthening the ability to learn, adapt, and reconfigure responses over time. It is this capacity to think within action, rather than merely execute against instruction, that underpins judgement in complex environments. Systems that fail to recognise this adaptive capability risk valuing routine performance over applied intelligence.

Capability is also inherently situated. Research on situated learning shows that knowledge and skill are not abstract assets that transfer cleanly across contexts, but are developed through participation in authentic activity, social interaction, and shared practice (Brown, Collins, & Duguid, 1989; Wenger, 1998). What individuals know is inseparable from how and where that knowledge is applied, and from the communities and shared purposes through which that knowledge is shaped. This reinforces a critical distinction. Capability cannot be inferred from decontextualised learning or task execution alone. It is constructed through engagement in real situations where judgement, interpretation, and adaptation are required. Any system seeking to recognise capability must therefore capture evidence of performance in context, not simply completion of learning or acquisition of skill.

This distinction is economic rather than semantic, reflecting a shift from skills as inputs to capability as the determinant of how value is created, protected, and sustained through the quality of decisions, actions, and their consequences. Capability is not transferable independent of context, but is developed through situated practice and interaction (Brown, Collins, & Duguid, 1989) and refined through reflective engagement (Schön, 1983). As AI systems absorb task-based work, the marginal value of skills declines, while the value of capability increases, governing how systems adapt, how decisions are enacted, and how outcomes inform action.

4. The Limits of the Current Economic Model

Core Proposition:
The issue is not that markets fail, but that they systematically ignore or underprice the capability required to sustain performance over time.

The prevailing economic model struggles to account for capability because it is built on assumptions that no longer hold.

This creates a widening divergence between efficiency gains and the adaptive capacity required to sustain performance under stress. As AI drives efficiency upward, it simultaneously erodes the adaptive capacity needed to handle systemic shocks. This divergence is a measurable economic distortion: efficiency is enhanced while adaptive capacity is reduced, revealing the hidden costs of underpricing human capability.

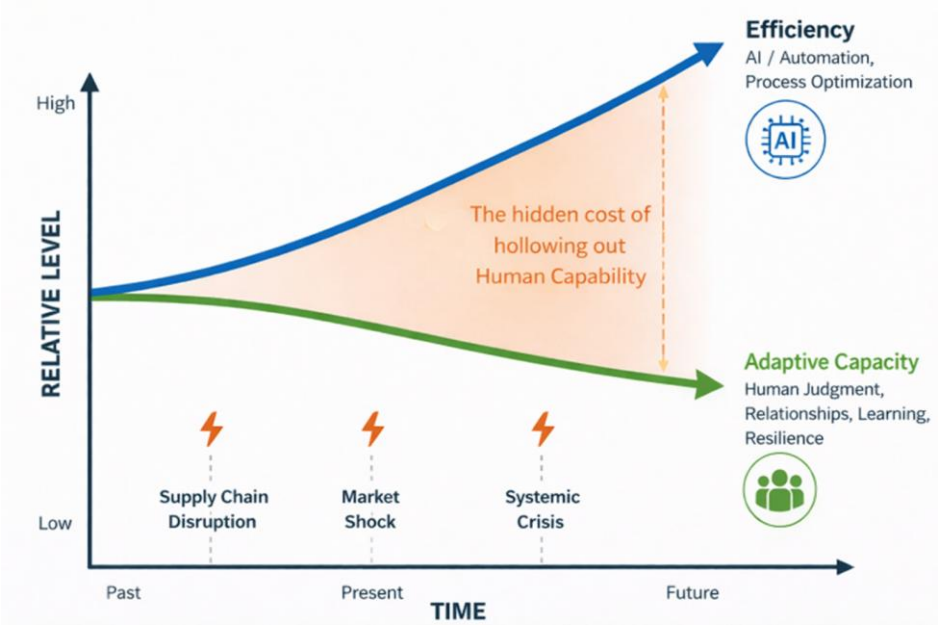

Figure 2 The Risk: Efficiency gains and declining adaptive capacity

This confirms a deeper structural issue. The limitation is not that markets or economic systems fail to operate, but that they systematically misprice human capability. Pricing mechanisms are highly effective for observable outputs and immediate exchange, but systematically underrepresent capabilities whose effects are distributed across time, context, and system interaction. Skills-based classifications provide useful taxonomies, but fail to capture how capability is enacted through judgement, interaction, and adaptation in context (OECD, 2021, 2023). The CBE addresses this by linking value directly to demonstrated capability evidenced through future consequences (Bowles, 2022).

At the same time, the costs of maintaining skills-based systems are also misrepresented. Organisations incur recurring costs associated with poor job fit, including misalignment of mindsets, values, and culture, alongside repeated cycles of hiring, onboarding, and reskilling required to keep pace with technological change. These costs are typically treated as operational necessities rather than as structural inefficiencies, masking the extent to which skills-based models generate avoidable friction and value leakage.

Within this prevailing model, labour is treated primarily as a cost, productivity is assessed through volume, speed, and efficiency, and value is attributed to outputs rather than to the quality of decisions or the resilience of the systems that produce them. Behavioural economics extends this framework by improving how decisions are understood within these conditions, but largely retains the same underlying assumptions of value, focusing on how choices are shaped rather than how value is constituted or sustained (White, 2016).

At its core, value is not an inherent property of outputs, nor fully captured by market exchange at a point in time. Price reflects current conditions and available information, but not necessarily the full consequences that unfold as the operating environment changes. As capability theory suggests, value is realised through what individuals and systems are able to do and become in the future context, and through the consequences that actions produce across systems (Sen, 1985). It reflects the extent to which outcomes contribute to or degrade human, social, and ecological conditions.

This extends the critique of human capital theory associated with market-based models. Where Friedman (1962) argued that the market is the ultimate arbiter of value through price signals, these models struggle to account for capabilities that generate long-term or system-level resilience. As Mazzucato (2018) demonstrates, when we conflate price with value, we fail to distinguish between productive value creation and the mere extraction of short-term efficiency. The issue is therefore not whether markets determine price, but whether price adequately reflects value in systems where consequences are delayed, distributed, and interdependent.

As a result, value emerges through interaction across markets, organisations, and communities, yet remains only partially recognised within prevailing models. While human capital theory reframed labour as an investment in education, skills, and knowledge that generates economic return (Becker, 1964), capabilities that sustain performance, prevent loss, and maintain system integrity continue to be treated as externalities rather than as core drivers of value (Pigou, 1920; Stern, 2007).

The consequence is not theoretical but economic. Persistent mispricing drives systematic underinvestment in capability, reinforcing efficiency models that can erode resilience and adaptive capacity over time.

This manifests in three systemic distortions.

1. Misallocation of investment
Investment is systematically misallocated by focussing on training for skills that quickly become obsolete, while underinvesting in human capabilities that sustain long-term performance, such as critical thinking, judgment, ethical responsibility, and adaptive mindset. They are pursuing non-complex, linear decisions for a non-linear, complex world of work.

2. Invisible contributions
Capabilities that are forged between people in a cultural context will determine how systems function in practice, yet are rarely captured in economic measures (Bourdieu, 1986). As a result, they are systematically undervalued and often eroded, despite underpinning the ability to detect and act on emerging risks, prevent value extraction, and maintain system integrity, functions that typically become visible only after failure has occurred(Weick & Sutcliffe, 2001). These capabilities are not free; they are stocks of relationships, shared purpose, and cultural norms that must be actively sustained as they are drawn upon.

3. Fragile performance gains
Efficiency improvements driven by automation can increase short-term productivity while hollowing out the long-term protective capability of the workforce. This creates fragile systems that appear optimised

under stable conditions but fail under stress. Efficiency measures the past, doing what is already known faster. Capability measures the future, anticipating what can be done under changing conditions.

These distortions drive persistent underinvestment in capability, allowing degradation to accumulate unnoticed until external events expose it. This reflects a structural limitation in pricing formation in which the capabilities required to sustain, adapt, and protect value remain under-recognised or are only seen as valuable after failure. The CBE can therefore be understood as a corrective framework that internalises the value of human capability, rather than allowing it to remain an externality revealed only through breakdown.

SNAPSHOT: THE SYSTEM THAT LOOKED EFFICIENT

Capability degradation rarely appears in performance metrics until it impacts outcomes, at which point value loss is already realised.

A firm automates its customer operations.

Efficiency improves.
Response times fall.
Costs reduce.

Experienced staff move on.
New hires are found to fill redesigned jobs.
Escalations become procedural.
Fewer people step back to interpret patterns across issues.

When a complex case emerges, it does not fit any category.

Each team resolves its part.
No one integrates the whole.
No one takes ownership of the outcome.

The issue escalates and the technology enabling the automation is ‘blamed’ for the problem.

The system did not fail. Efficiency improved. But the capability to interpret, align collective effort, respond to evolving customer expectations, and act under uncertainty had eroded.

5. Defining the Capability-Based Economy

Core Proposition:
A Capability-Based Economy extends the focus from tasks performed to how capability is applied to produce and sustain outcomes.

A **Capability-Based Economy (CBE)** is an economic system in which value is derived from the application, development, and exchange of human capability, rather than the execution of tasks alone.

In a CBE:

- Value is measured through outcomes shaped by human capability, including judgement, adaptation, collaboration, and decision quality.
- Individuals are recognised not only for what they know or can do, but for how they apply capability in context.
- Organisations invest in capability as a form of capital, not merely as a cost of labour.
- Economic exchange increasingly involves verified evidence of capability, not just learning credentials or job history.

This does not replace existing economic structures. It reframes them.

Labour still exists, but its value shifts from time and output to contribution and consequence. Capital still matters, but its effectiveness depends on the capability of those who deploy it. Technology continues to scale performance, but its impact is governed by human capability, particularly in how decisions shape outcomes beyond the immediate context (Barter et al., 2026).

The CBE therefore sits alongside traditional economic models, extending them to account for what they currently ignore. This shift is already emerging in systems where value is increasingly linked to capability in context rather than assumed through role description, qualification, competency, or task execution. In doing so, capability begins to function not simply as an input or a discrete form of capital, but as the integrating mechanism through which capital is applied, aligned, and realised in context.

6. Capability as Capital

Core Proposition:
Capability isn't another form of capital; it is the mechanism through which all forms of capital are activated and sustained.

For capability to function within an economic system, it must be recognised not only as human capital, but as a broader form of capital that generates future value. This value is not created solely through development, but through the recognition, mobilisation, and application of capability as it is expressed in context and positioned to sustain readiness for future conditions.

Unlike traditional forms of capital, capability is not directly priced in markets. Its economic value is inferred through the outcomes it produces, the risks it mitigates, and the performance it sustains. As a result, capability often remains underrepresented in price signals, particularly where its contribution is preventive, relational, or distributed across systems.

Capability exists as latent adaptive capacity embedded within individuals, organisations, and systems, and is expressed through the outcomes it enables in action (Bowles, 2023). Its value lies not in its static presence, but in its reliable expression through consequence. This aligns with established distinctions between capital stocks and performance flows, while extending them to account for how value emerges through use rather than possession (Edvinsson & Malone, 1997; Beinhocker, 2006).

This perspective builds on earlier work on Return on Intelligence (ROI^2), where value is derived not from accumulated knowledge alone, but from the quality of decisions, learning, and adaptation that sustain performance (O'Hanlon & Bowles, 2025). Capability emerges through interaction, shared purpose, and contextual relationships, producing outcomes that extend beyond immediate task performance to include system future-readiness and adaptability, and sustained value across social and ecological domains.

Capability performs two interdependent economic functions: it creates value through performance, output, and innovation, and protects value by preventing loss, reducing risk, and limiting inefficiencies caused by poor talent alignment, workforce turnover, and repeated reskilling cycles. Together, these functions help sustain system integrity over time. While productive capability is visible and easier to measure, protective capability remains systematically under-recognised, creating a structural imbalance in how value is recognised and rewarded.

This relationship is illustrated in Figure 3 below, where capability underpins both value creation and value preservation. These are not separate contributions, but continuously expressed through adaptive capacity, drawing on underlying stocks of human, social, and ecological capital. The figure highlights that value emerges through the dynamic interaction between productive (value creation) and protective (value preservation) capability.

A CBE addresses this imbalance by bringing both forms of capability into the core of economic value. Long-term performance depends not only on the capacity to generate output, but on the capability to sustain and protect it. Systems that recognise only productive capability may appear efficient, yet fail to respond to market opportunities or challenges. Those that recognise both are better able to generate, protect, and sustain value under changing conditions, aligning with broader observations that efficiency without resilience exposes hidden risks under volatility (Taleb, 2012).

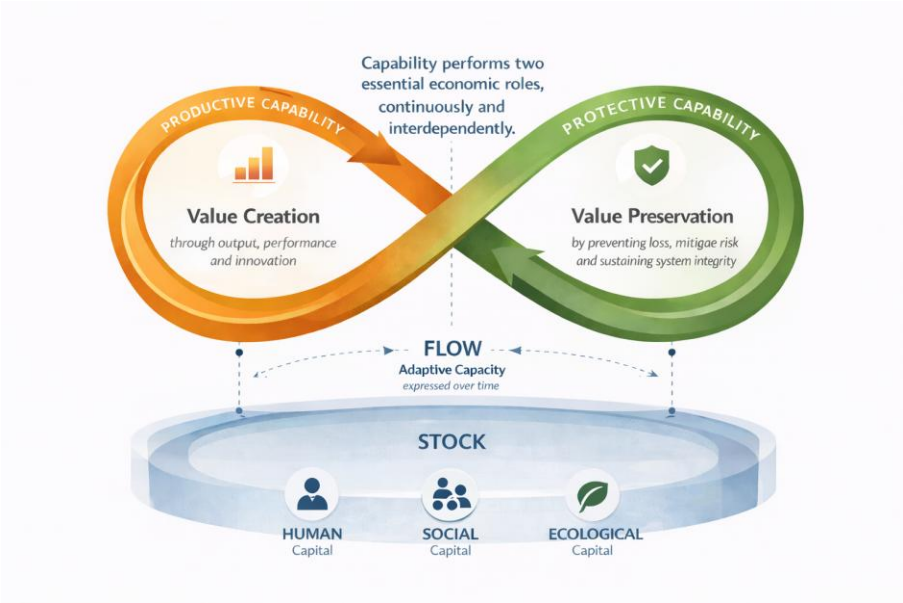

Figure 3 Capability as Capital: Productive and Protective Functions

Capability operates across three interdependent forms of capital, extending this economic framing beyond individual performance and aligning with broader models of multi-capital value creation (Edvinsson & Malone, 1997; Bowles, 1997, 2025).

Human capital reflects the capacity of individuals to apply judgement, learn, adapt, and perform under changing conditions.

Social capital reflects the quality of relationships, trust, and shared intelligence that enable coordinated action and collective sensemaking (Woolcock, 1998; Portes, 1998).

Ecological capital reflects the capability to sustain and regenerate the natural systems upon which economic and social performance depend (Stern, 2007).

These forms of capital do not operate independently. Their value is realised through flows of capability expressed in context, where human judgement shapes social cohesion, social systems influence ecological outcomes, and ecological constraints in turn reshape the conditions for performance. This reflects a shift from internal benefits (ROI^2) to system-level impact (ROI^3), where value is created across human, social, and ecological domains (Bowles, 2025; O'Hanlon & Bowles, 2025).

As a result, capability does not operate alongside human, social, and ecological capital as an equivalent category. It functions as the mechanism through which these forms of capital are activated, coordinated, and sustained in practice.

While capability is not directly priced in markets today, emerging approaches are beginning to make its contribution more visible. These include linking capability to decision quality and organisational-level performance (ROI^2), extending this to multi-capital impact (ROI^3), and enabling verified evidence of capability to be recognised and exchanged across systems through mechanisms such as Human Capability Tokens (Bowles, January 2026 & March 2026).

These developments do not yet constitute a complete pricing model, but they signal a transition toward capability becoming a measurable and investable asset.

7. Responding to Shocks: Repricing and the Visibility of Capability

Core Proposition:
Capability is rarely priced in advance. Disruption reveals that past performance is a poor guide to future value.

The mispricing of human capability does not correct gradually. Under stable conditions, capability remains partially obscured, inferred through proxies such as roles descriptions, skill profiles, credentials, and historical performance. These proxies persist while system conditions remain within expected bounds. When those conditions shift, they fail.

This reflects a broader limitation in prevailing economic models. Value is primarily attributed to efficiency, optimisation, and observable output, while the capacity to adapt under changing conditions remains underrepresented in measurement and pricing mechanisms (Beinhocker, 2006; OECD, 2023). As a result, capability is systematically undervalued until conditions change.

When disruption occurs, previously externalised dependencies become binding constraints. Inputs assumed to be stable, including energy, materials, labour, or environmental conditions, begin to constrain system function. At this point, capability is no longer inferred. It is revealed through the capacity to continue operating under altered conditions.

The market response to this shift is not incremental. It is discontinuous.

Access to capital, cost of capital, and perceived asset quality adjust rapidly as new information becomes visible. This reflects a repricing of underlying capability rather than a reassessment of past performance. In effect, capability transitions from a latent attribute to an economically legible signal.

This shift aligns with the concept of dynamic capabilities, where value arises not from resource possession alone, but from the ability to sense, adapt, and reconfigure in response to changing conditions (Teece, Pisano, & Shuen, 1997). It also reflects the distinction between capital stocks and performance flows, where capability exists as a stock of adaptive capacity, and performance represents the flow of outcomes realised under future conditions (Edvinsson & Malone, 1997).

In this context, capability can be understood as a risk-adjusted asset class. Its value is not limited to its contribution to output, but extends to its capacity to preserve function, maintain optionality, and enable adaptation under stress. This includes the preservation of trust and brand integrity, which sustain future value. This is particularly evident in capabilities that reduce dependency on volatile inputs or enable alternative modes of operation.

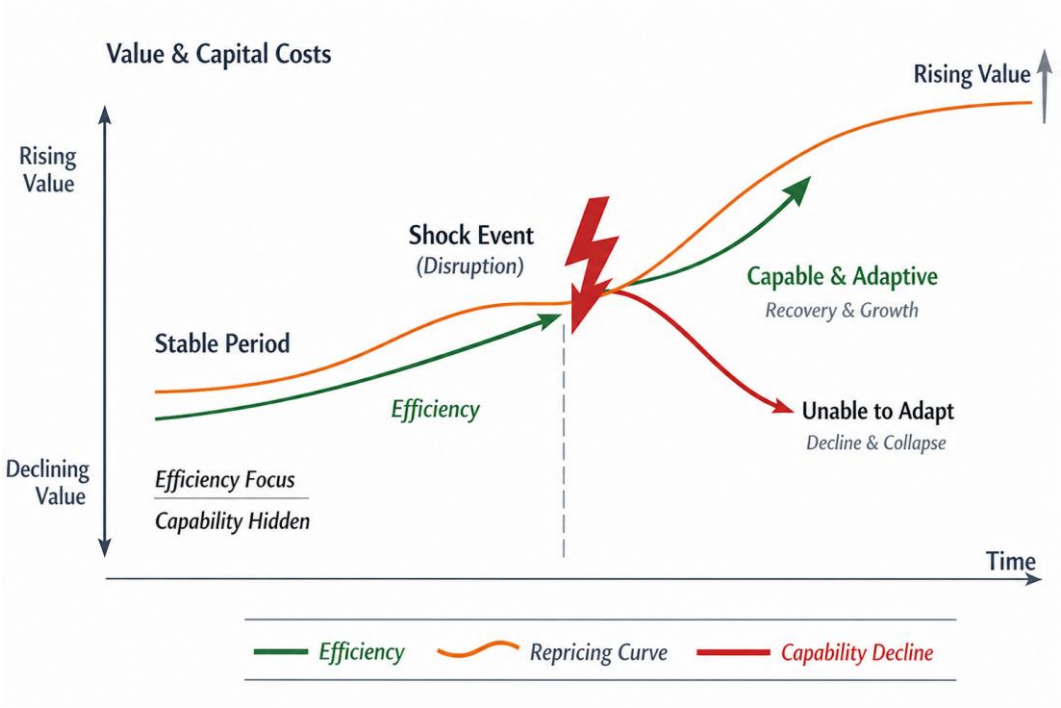

Figure 4 Shock pricing dynamics

The distinction between productive and protective capability becomes economically visible at the point of disruption. Productive capability supports efficiency and output, while protective capability preserves system function and enables adaptation when conditions change. Both contribute to value, but protective capability is underpriced until disruption triggers rapid repricing.

SNAPSHOT: REPRICING CAPABILITY UNDER CONSTRAINT (Australian Grain Producers, 2026)

Capability that reduces dependency on volatile inputs improves resilience, reduces risk, preserves optionality, and attracts more favourable capital allocation when market conditions are disrupted.

In early 2026, the cost of key inputs for Australian grain farming rose sharply. Fertiliser prices increased, diesel costs surged, and many farms could no longer afford to plant. This was not a question of yield or seasonal risk. For some, it simply no longer made economic sense to put seed in the ground.

Until then, most farms looked similar on paper. They shared the same dominant variable: the weather. Costs were controlled, outputs were predictable, and performance met industry benchmarks. Their reliance on inputs remained largely invisible and was not reflected in how they were valued.

A smaller group of farmers operated differently. Over time, they had reduced their reliance on synthetic fertilisers and high fuel use. Their sustainable approach required different forms of capability, including ecological system understanding, the ability to sustain production under variable conditions, and human capabilities that emphasised stewardship, systems thinking, environmental governance, adaptive leadership, and collaborative decision-making.

When input costs increased, the difference became distinct. As planting season began, many farms were locked into supply contracts agreed under earlier conditions. For most, proceeding was no longer commercially viable. Others could continue.

Production shifted toward those able to operate under the new conditions, as banks and investors began reassessing their exposure in response to the rapid divergence in income-generating capacity between producers. In that moment, capability was no longer inferred but revealed through who could continue to operate, bringing with it improved access to capital, lower cost of finance, and increased confidence from both investors and buyers.

This dynamic reflects more than variation in farming practice. It illustrates the economic function of capability as both productive and protective, expressed across human, social, and ecological capital. Systems developed through approaches such as those advanced within Earth Returns frameworks (Bennett, 2025), which extend established work on natural capital and value creation (Stern, 2007; Mazzucato, 2018) by linking ecological outcomes to demonstrated human capability.

These effects extend beyond output and are increasingly realised through improved risk-adjusted performance, asset resilience, and verified environmental and social outcomes, reflected in ESG reporting, sustainability-linked finance, natural capital accounting, and IFRS-aligned disclosures (Bowles, January 2026). This supports capability-based models where verified evidence of capability enables these contributions to be recognised and increasingly priced across systems.

The disruption did not create these capabilities. It revealed them, exposing a prior misalignment between what was priced under stable conditions and what was required for continued system performance.

What followed was not gradual reassessment, but abrupt repricing that made visible what the model had systematically ignored.

7.1. Reversion Under Shock: The Reinforcement of Mispricing

A further dynamic emerges under conditions of stress. Rather than correcting the mispricing of capability through deliberate investment, many organisations revert to traditional prioritisation models.

Under pressure, decision-making compresses toward what is immediately measurable and controllable. This often manifests as renewed focus on cost reduction, workforce contraction, and short-term efficiency gains. Skills gaps are framed as deficits to be filled through accelerated training, while capability degradation is addressed through substitution rather than development.

Recent analyses of organisational responses to economic and technological disruption highlight this pattern. Firms frequently respond to volatility by increasing efficiency targets, reducing labour costs, and intensifying output expectations, consistent with recent global workforce and productivity analyses (McKinsey Global Institute, 2024). While these responses may stabilise short-term performance, they can simultaneously erode the adaptive capacity required to respond to ongoing or future shocks.

This creates a paradox in which the conditions that reveal the value of capability are the same conditions under which organisations underinvest in it. As capability is drawn down to sustain immediate performance, it is not replenished at the same rate, leading to the loss of experience, declining discretionary effort, and weakening relational and interpretive capacity. Systems become more efficient in execution, yet less capable of adaptation, reinforcing a cycle of continual mispricing.

This dynamic reveals how leaders are rewarded for short-term performance gains rather than sustained capability. Capability is not only under-recognised in favourable conditions. It is often actively depleted in the pursuit of immediate performance, even as its value becomes more apparent.

The result is a cycle of delayed recognition and reactive correction, where capability is only repriced after degradation has occurred and its absence produces measurable impact.

SNAPSHOT: THE RESPONSE TO PRESSURE (Global Retailer, late 2025)

Short-term efficiency gains that draw down capability can degrade long-term performance, increasing operational risk and reducing future value.

A global retail firm faces rising cost pressure and uncertainty and reverts to familiar responses.

Headcount is reduced, particularly in non-customer-facing functions.
Experienced staff and managers exit, and remaining teams absorb additional workload.

The rollout of AI is accelerated to improve efficiency and sustain output with fewer people.
Training increases to support adoption, focused on tools and immediate productivity gains.
Performance targets rise.

In the short term, output stabilises.

Progressively, fewer people step back to interpret patterns, challenge decisions, or connect activity across the system. Issues are resolved, but root causes are not understood. Signals are missed, and customer dissatisfaction begins to erode confidence in the brand.

The system continues to operate, but its capacity to adapt has diminished.

AI sustains execution, but the capability required to interpret, integrate, and act under changing conditions is reduced.

Capability is drawn down to sustain performance, but not replenished at the same rate.

8. The Measurement Problem: From Outputs to Consequences

Core Proposition:
What is measured shapes what is valued. Current measures capture outputs but miss the less tangible capabilities that determine whether outcomes endure.

The transition to a CBE, and the repricing of capability under shock, expose a central challenge: how value is recognised before disruption makes capability visible through its absence.

This is not a limitation of measurement techniques alone, but of what is being measured. They quantify what is produced, how quickly it is delivered, and at what cost. Recent work on "human performance" highlights the growing inadequacy of activity-based productivity metrics in complex, interdependent systems (Cantrell & Duda, 2024). While these measures remain useful within stable, task-oriented environments, they become increasingly insufficient as work shifts toward complexity, interdependence, and uncertainty.
The limitation is not simply technical. It is conceptual.

Outputs capture the result of activity, but they do not reveal how those outcomes were achieved, nor whether they are sustainable over time. Two systems may produce identical outputs while differing significantly in the quality of decision-making, integrity, the strength of relationships, and the long-term consequences of their actions.

Even attempts to address this gap through AI-mediated assessment further illustrate the nature of the problem. Recent approaches use large language models to simulate complex interactions, steer dialogue, and evaluate performance against predefined rubrics, producing structured evidence of competence in controlled environments (Elidan & Haramaty, 2026). While often framed as capturing "future-ready skills", these systems remain grounded in the assumption that uniquely human capabilities can be recast as a set of skills able to be surfaced, standardised, and scored. This reflects a reversion to a skills-based logic rather than a conceptual advance. Capability, as it is expressed through judgement under uncertainty, responsibility for consequences, and adaptation to contextual challenges, cannot be fully elicited on demand or stabilised within designed conditions. Improvements in measurement therefore risk reinforcing confidence in proxies that remain disconnected from how value is created, sustained, and protected over time.

Capability-based approaches address this limitation by shifting attention from outputs to consequences. The value of capability does not arise from static attributes, but from its demonstrated reliability in producing outcomes as conditions shift. As a result, capability is not measured once, but revealed through patterns of consequence that reflect how effectively judgement is applied in context.

Consequences unfold across time and systems, reflecting the quality of decisions made under uncertainty, the capacity to learn and adapt, the resilience of relationships, and the sustainability of outcomes within social and ecological contexts. These dimensions are more difficult to quantify, yet they provide a more accurate reflection of value in contemporary systems.

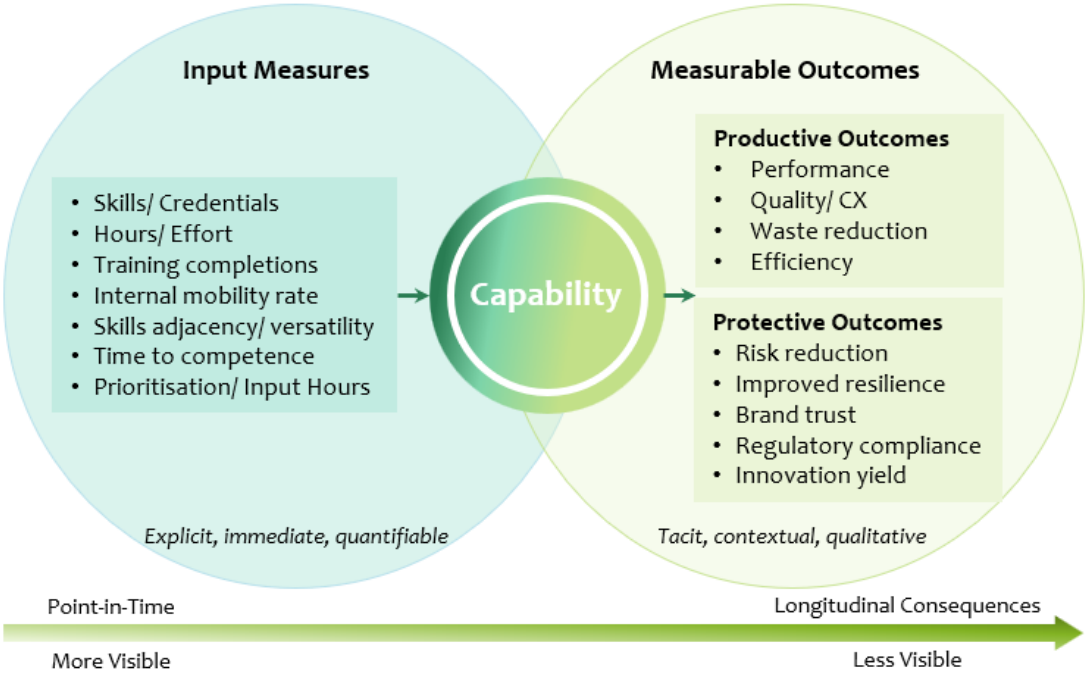

Figure 5 From inputs to outcomes and consequences measurement

This shift from point-in-time inputs to longitudinal outcomes is illustrated in Figure 5, where capability acts as the integrating mechanism between observable inputs and both productive and protective outcomes. Rather than defining a single metric, measurement in this context requires recognising patterns of consequence across conditions, including how outcomes are co-produced through the interaction of individuals, systems, and environments.

This perspective aligns with broader critiques of task-based measurement in both economic and AI research. As Chollet (2019) demonstrates, performance on predefined tasks does not constitute intelligence. Similarly, performance against predefined outputs does not fully capture human contribution. In both cases, measurement systems risk optimising for what is easily observed while neglecting what is most consequential.

Emerging approaches begin to address this gap by linking demonstrated behaviour to outcomes in context. While micro-credentials have expanded the ability to verify discrete learning attainment, their value remains bounded by issuing institutions, limiting portability and consistent interpretation across systems (OECD, 2021; 2023). More recent capability-based frameworks extend this by focusing on authentic evidence gathered in the flow of work, enabling capability to be demonstrated, verified, and carried across economic and institutional boundaries (Bowles & Ghosh, 2025; Bowles, 2026).

These developments reflect an emerging shift from proxy-based recognition toward evidence grounded in context and consequence, where capability is no longer inferred from roles or credentials, but from its reliable expression as it is demonstrated as conditions change. The challenge is not to abandon measurement, but to reorient it, moving beyond episodic evaluation toward understanding how capability shapes outcomes across systems. In this sense, decisions can be analysed at a point in time, but value cannot.

9. The Role of AI in a Capability-Based Economy

Core Proposition:
AI can amplify efficiency and performance, but the value it creates depends on the human capability that interprets, directs, and integrates its use.

AI accelerates the transition toward a CBE by reducing the economic value of routine task execution while increasing the importance of human capability in interpreting, deciding, and acting in context.

AI can surface and analyse evidence of performance in context, but it cannot determine meaning or value without human judgement. Its role is not to replace capability, but to make its application and consequences more visible.

Human capability becomes critical in three interrelated ways. It determines how information is interpreted where meaning is not given but constructed, how judgement is exercised where trade-offs involve uncertainty and competing values, and how decisions are integrated and held accountable across systems. These functions cannot be reduced to optimisation or bias correction. They require the capacity to align action across people, processes, and systems, and to sustain responsibility for outcomes as they emerge.

As AI systems accelerate the automation and cognitive offloading of task-based work, they risk hollowing out the adaptive capacity required for teams and organisations to interpret and act within complex, interdependent systems.

In this context, capability becomes the underlying currency of performance. It enables coordination across functions and domains by aligning people, processes, and systems toward common purpose, while sustaining accountability for outcomes through the integration of decisions within strategic and cultural guardrails (Teece, Pisano, & Shuen, 1997; Bowles, 2025).

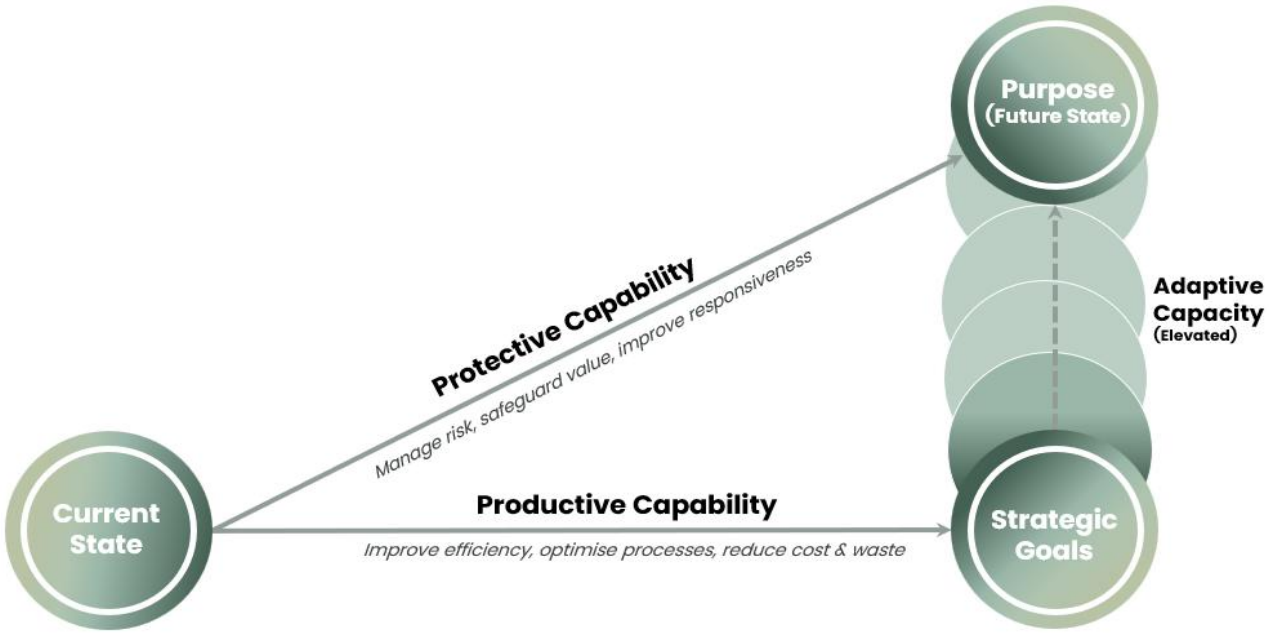

Figure 6 Productive and protective capability in building adaptive capacity (Bowles, July 2023:11)

The value of AI, therefore, lies not in replacing human capability, but in amplifying it. Systems that fail to invest in capability will struggle to realise the benefits of AI, regardless of technological sophistication. Investment must move beyond AI as an enhancement of efficiency alone, toward strengthening the two interdependent roles through which capability contributes to economic performance: productive capability, which drives output and optimisation, and protective capability, which safeguards value and sustains system responsiveness.

Where this balance is not maintained, efficiency gains may increase in the short term, while system resilience and long-term value are progressively eroded.

10. Conclusion: Making Capability Economically Legible

Core Proposition:
The challenge is not to redefine value, but to make the capability that sustains it visible, measurable, and investable.

This paper has argued that prevailing economic models struggle to account for how value is created and sustained under contemporary conditions. In environments shaped by complexity, interdependence, and overlapping technological, geopolitical, and ecological disruption, value is no longer fully captured through price, output, or efficiency at a point in time. It emerges through consequences that unfold across time, relationships, and systems, where the options available to future generations are the product of decisions made today (Barter et al., 2026). This highlights a critical limitation in prevailing models: value is inferred from present outputs, while the consequences that determine long-term system performance remain structurally underrepresented.

Within this context, a structural limitation becomes evident. The capabilities required to interpret complexity, exercise judgement, align action across people and systems, and sustain performance under uncertainty remain systematically under-recognised and underpriced.

This asymmetry creates a fundamental pricing failure. When value is inferred primarily from outputs and price signals, the capabilities that underpin long-term resilience are under-recognised, leading to over-investment in productive activity and under-insurance against risk and value erosion (Bowles, 2025). By neglecting protective capability, organisations inadvertently build systems that appear efficient, yet remain exposed to failure when conditions shift (Pigou, 1920; Mazzucato, 2018).

The Capability-Based Economy provides a way of addressing this limitation. It does not replace existing economic structures, but extends them by making human capability economically legible. It reframes value away from tasks performed and outputs produced toward capability applied in context and realised through consequence. In doing so, it brings both productive and protective dimensions of capability into the core of economic analysis, recognising that long-term performance depends as much on the capacity to sustain and protect value as it does on the capacity to generate it.

As AI accelerates the automation of task-based work, this shift becomes more pronounced. AI reduces the scarcity of execution and expands access to knowledge, but it does not determine meaning, resolve competing priorities, or sustain accountability across systems. These remain fundamentally human functions. Capability therefore becomes the underlying currency of performance, governing how information is interpreted, how judgement is exercised, and how decisions are integrated and accountability is maintained. In this context, the value of AI lies not in replacing human capability, but in amplifying it. Where capability is strong, AI extends reach, coherence, and impact. Where it is weak, AI accelerates fragmentation, error, risk, and value erosion.

This has direct implications for the systems that develop and deploy capability. If capability has been systematically mispriced, then education, work design, and recognition systems have been shaped by distorted signals of demand. Education must move beyond the transmission of knowledge and discrete skills

toward the development and assessment of capability in context, where judgement, reasoning, and adaptation are demonstrated under real conditions. Organisations must shift from job-based structures and competency models toward capability deployment across fluid roles, recognising both productive capability, which drives performance, and protective capability, which sustains system integrity. For individuals, progression can no longer rely solely on credentials or accumulated experience, but must be supported by evidence of capability demonstrated across contexts. Together, this signals a transition from qualification-based signalling toward evidence-based recognition, where value is inferred from demonstrated capability and its future consequences.

In this sense, the CBE does not discard the foundations of economic thought, but extends them. It shifts the focus from tasks, skills, and outputs toward capability in context as the unit through which value is created and sustained. Skills remain necessary but insufficient. In complex environments, value depends equally on tacit knowing, the ability to interpret ambiguity, exercise judgement, and adapt in real time (Polanyi, 1966; Schön, 1983). Capability integrates these explicit and tacit dimensions, shaping not only what individuals know, but how effectively they apply that knowledge under changing conditions. This shift is already underway, as organisations encounter the limits of efficiency-led models, governments recognise the inadequacy of skills frameworks alone, and individuals experience the declining signalling power of credentials in dynamic labour markets.

Seen in this light, the question is not whether a new economic model is required, but whether existing models can be extended to reflect the conditions under which value is now created. AI has effectively commoditised the ‘what’ of economic production. The new frontier of value lies in the ‘why’, the ‘how’, and the capacity to sustain outcomes over time.

The systems that succeed will be those that recognise this distinction. They will treat capability not as a residual attribute of labour, but as a form of capital that must be developed, evidenced, and applied. They will recognise that value is neither generated nor exhausted at the point of production, but evolves through continuous adaptation, reflection, and learning from the consequences of action.

The CBE provides a framework for this transition. It offers a more complete account of value in an age where performance is shaped not only by what is done, but by how effectively individuals and systems interpret, respond, and sustain outcomes under changing conditions.

In doing so, it repositions human capability from a peripheral consideration to a central economic variable, one that determines not only the creation of value, but its persistence. Where capability is strengthened, value compounds. Where it is neglected, value is not simply lost, but systematically misrepresented until disruption reveals the hidden capabilities sustaining performance.

References

Arthur, W. B. (2013). *Complexity economics: A different framework for economic thought*. Santa Fe Institute Working Paper No. 2013-04-012.

Autor, D. H., Levy, F., & Murnane, R. J. (2003). The skill content of recent technological change: An empirical exploration. *The Quarterly Journal of Economics*, *118*(4), 1279–1333. https://doi.org/10.1162/003355303322552801.

Barter, N., Bebbington, J., & Omura, A. (2026). *Generational governance: Future proofing organisations – Insights from Australia, Japan and the United Kingdom*. Griffith University; Lancaster University; Pentland Centre for Sustainability in Business.

Becker, G. S. (1964). *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*. National Bureau of Economic Research.

Beinhocker, E. D. (2006). *The origin of wealth: Evolution, complexity, and the radical remaking of economics*. Harvard Business School Press.

Bennett, T. (December 2025). *Earth Returns: The Proven Improvement Evaluation (PIE) Model*, Presentation, Earth Returns.

Bourdieu, P. (1986). *The Forms of Capital*. In J. Richardson (Ed.), Handbook of Theory and Research for the Sociology of Education.

Bowles, M. & Schoenheimer, H. (1997). *Human Capability Development*. Andermark, Sydney.

Bowles, M. & Lanyon, S. (November 2016). *Demystifying Credentials: Growing capabilities for the future*, Deakin.Co, Melbourne.

Bowles, M. (November 2022). *Capabilities and the next generation of work: Cutting through the mumbo jumbo of skills and jobs*. The Next Normal White Paper No. 1, Capability.Co & The Institute for Working Futures. https://www.workingfutures.com.au/publications/

Bowles, M. (July 2023). *Capability Building and Organisational Adaptive Capacity*. *The Next Normal: 2023: 3,* The Institute for Working Futures and Capability.Co.

Bowles, M. (November 2025). *Living culture: Measuring what matters in organisational performance*. The Institute for Working Futures & Swinburne Edge.

Bowles, M. (January 2026). *Tokenising Human Capability.* Part 1. White Paper 2024: 1, The Institute for Working Futures.

Bowles, M. (March 2026). Trading *Human Capability Tokens.* Part 2. White Paper 2024: 2, The Institute for Working Futures.

Bowles, M. (March 2026a). *When skills are not enough: Human Capability in an AI Economy*. Swinburne University, Swinburne Edge.

Bowles, M. & Ghosh, S. (June 2025). *From Recognition to Results: Verifying the Business Impact of Micro-Credentials*. White Paper, Future Ready No.3, The Institute for Working Futures & Capability.Co.

Brown, J. S., Collins, A. & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, *18*(1), 32–42. https://doi.org/10.3102/0013189X018001032.

Cantrell, S. & Duda, J. (February 5, 2024). *As human performance takes center stage, are traditional productivity metrics enough?* Deloitte Insights. https://www.deloitte.com/us/en/insights/topics/talent/human-capital-trends/2024/human-performance-is-the-new-way-to-measure-productivity.html.

Chollet, F. (2019). On the measure of intelligence. *arXiv*. https://arxiv.org/abs/1911.01547.

Elidan, G., & Haramaty, Y. (April 13, 2026). *Towards developing future-ready skills with generative AI*. Google Research. https://research.google/blog/towards-developing-future-ready-skills-with-generative-ai/.

Friedman, M. (1962). *Capitalism and freedom*. University of Chicago Press.

Kahneman, D. (2011). *Thinking, fast and slow*. Farrar, Straus and Giroux.

Massenkoff, M. & McCrory, P. (2026). *Labor market impacts of AI: A new measure and early evidence*. Anthropic. https://www.anthropic.com/research/labor-market-impacts.

Mazzucato, M. (2018). *The value of everything: Making and taking in the global economy*. Penguin Random House.

McClelland, D. C. (1973). Testing for competence rather than for intelligence. *American Psychologist*, *28*(1), 1–14. https://doi.org/10.1037/h0034092.

McKinsey Global Institute. (2024). *A new future of work: The race to deploy AI and raise productivity*. McKinsey & Company.

O'Hanlon, F. & Bowles, M. (September 4, 2025). *Return on Intelligence: Rethinking Value in the Age of Human–AI Synergy*. The Institute for Working Future. https://www.workingfutures.com.au/wp-content/uploads/2025/09/2Return_on_Intelligence_1Sept25_Final.pdf.

Organisation for Economic Cooperation and Development [OECD] (2021). *OECD skills outlook 2021: Learning for life*. OECD Publishing. https://doi.org/10.1787/0ae365b4-en

OECD (2023). *OECD skills outlook 2023: Skills for a resilient green and digital transition*. OECD Publishing. https://doi.org/10.1787/df80bc12-en

Pigou, A. C. (1920). *The economics of welfare*. Macmillan.

Polanyi, M. (1966). *The tacit dimension*. University of Chicago Press.

Portes, A. (1998). Social capital: Its origins and applications in modern sociology. *Annual Review of Sociology, 24*, 1–24.

Schön, D. A. (1983). *The reflective practitioner: How professionals think in action*. Basic Books.

Sen, A. K. (1985). *Commodities and capabilities*. Oxford University Press.

Simon, H. A. (1957). *Models of man: Social and rational*. New York, NY: Wiley.

Solow, R. M. (1970). *Growth Theory: An Exposition*. Oxford University Press.

Stern, N. (2007). *The economics of climate change: The Stern review*. Cambridge University Press

Taleb, N. N. (2012). *Antifragile: Things that gain from disorder*. Random House.

Teece, D. J., Pisano, G. & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal, 18*(7), 509–533. https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z.

Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science, 185*(4157), 1124–1131. https://doi.org/10.1126/science.185.4157.1124.

Thaler, R. H. (2015). *Misbehaving: The making of behavioural economics*. W. W. Norton & Company.

van Noordt, C. & Tangi, L. (2023). The dynamics of AI capability and its influence on public value creation of AI within public administration. *Government Information Quarterly, 40*(4), 101860. https://doi.org/10.1016/j.giq.2023.101860.

Weick, K. E., & Sutcliffe, K. M. (2001). *Managing the Unexpected: Assuring High Performance in an Age of Complexity*. Jossey-Bass.

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge University Press.

White, M. D. (2016). Preferences All the Way Down: Questioning the Neoclassical Foundations of Behavioral Economics and Libertarian Paternalism. *OEconomia. History, Methodology, Philosophy*, *6*(1), 125-149.

Woolcock, M. (1998). Social capital and economic development: Toward a theoretical synthesis and policy framework. *Theory and Society, 27*(2), 151–208.