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Technology | Product | Operations

From Data to Behavior

A PRACTICAL APPROACH TO DELIVERING
SUSTAINED BUSINESS VALUE

*Translating data into action,
and action into continuously
improving behavior.*

LOW VALUE / HIGH VOLUME

HIGH VALUE / LOW VOLUME



“

Value is not created
at the point of insight.
It is created when
action becomes behavior.

Executive Summary

Organizations have invested heavily in data, analytics, and more recently, Artificial Intelligence. Yet many still struggle to realize consistent, measurable value from these investments.

The challenge is not a lack of data or technology.

It is a failure to translate information and insight into effective action, and more importantly, into sustained behavior.

This paper introduces the Data Value Hierarchy, a practical framework developed through real-world application and used across multiple industries. It defines a progression from Data through to Behavior, where value is actually created and sustained.

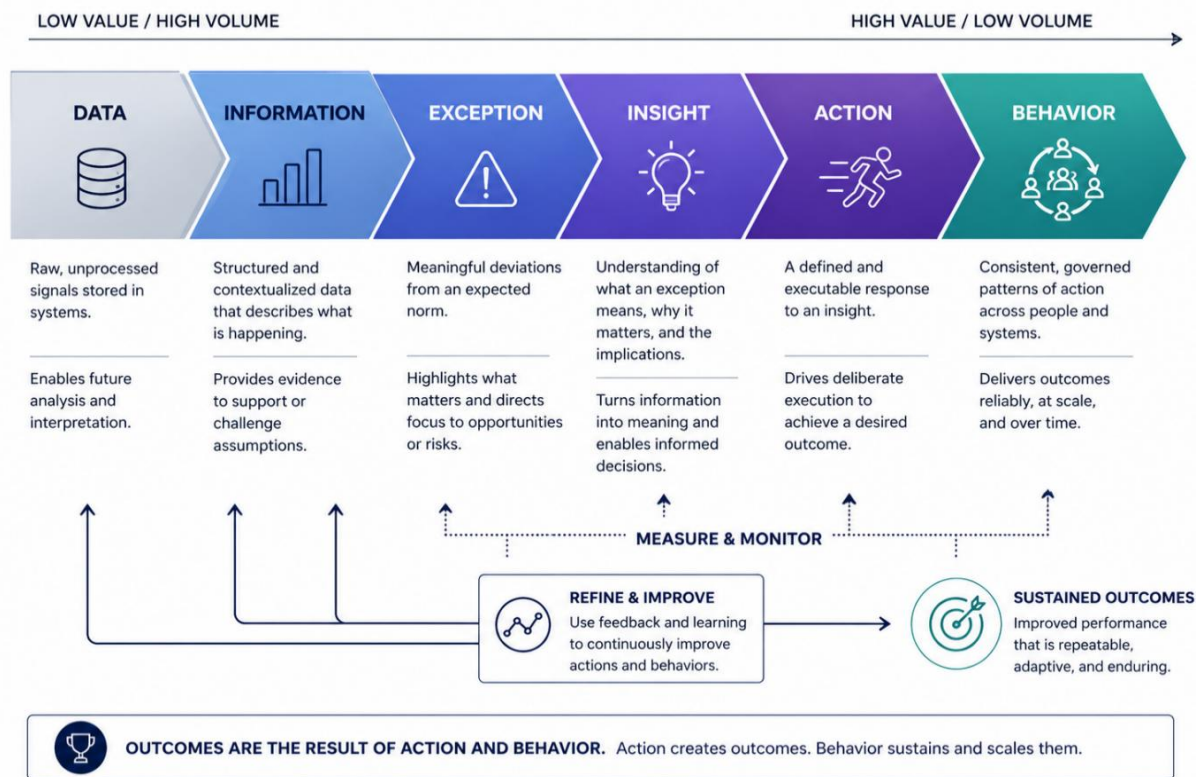
While technologies such as AI accelerate parts of this progression, they do not change the fundamental principle: value is only realized when action is taken, and sustained when those actions become consistent, aligned behavior.

Organizations that succeed will not be those with the most advanced technology. They will be those that can consistently translate information into action, and action into behavior.

This becomes increasingly important as AI and agentic systems move from analysis into execution. When systems begin taking action, the quality of the feedback loop becomes just as important as the quality of the data or model. Poor actions, if not measured and corrected, can become poor behavior at scale.

***“Value is not created at the point of insight.
It is created when action becomes behavior.”***

1. The Data Value Hierarchy



The Data Value Hierarchy defines the progression from raw data to realized value:

1. **Data** – The storage of raw, unprocessed signals in databases, logs, or similar electronic forms. In isolation, data does not create value. Its potential value lies in enabling future analysis and interpretation. Data storage also carries real cost, which must be balanced against the potential future opportunity it enables.
2. **Information** – Structured and contextualized data that describes what is happening. This is typically achieved through aggregation, organization, and communication to provide a statistical or contextual representation. The value of information lies in its ability to support or challenge assumptions, ideas, or hypotheses by providing evidence.
3. **Exception** – The identification and communication of meaningful deviations from an expected norm within the available information. Exceptions highlight areas that require attention and focus. Their value lies in directing effort toward what matters, enabling targeted investigation and prioritization of opportunities or risks.
4. **Insight** – An understanding of what an exception means, why it matters, and the potential implications. Insight translates data and information into meaning. Its value lies in making complex situations understandable and enabling informed decision-making, even by those not directly familiar with the underlying data.

5. **Action** – A clearly defined and executable response to an insight, designed to remediate, prevent, or exploit a situation. Actions may be carried out by people or systems. The value of action lies in enabling deliberate, consistent responses that move beyond understanding to achieving a desired outcome.
6. **Behavior** – Consistent, governed, and trusted patterns of action across people and systems, continuously monitored, measured, and intentionally refined over time. Behavior represents the embedding of action into how work is performed. Its value lies in removing the need for repeated instruction, enabling outcomes to be delivered reliably, at scale, and over time.

Outcome is not a step in this hierarchy. It is the result of Action and Behavior.

***“Action can create outcomes.
Behavior sustains and scales them.”***

Origin in Practice

The Data Value Hierarchy was formalized through practical application while leading technology and development as part of a small but exceptional team developing and scaling an early AI and SaaS virtual consulting platform for retail in the early 2000s.

Traditional retail analytics approaches focused on reporting and dashboards, delivering information and, at best, insight. However, these did not consistently translate into improved in-store performance.

The critical realization was that value was not created at the point of insight. It was created when store managers changed how they operated on a daily basis.

This led to a shift in approach: designing systems not just to inform, but to drive action and ultimately influence and reinforce behavior, through small, easily consumable prompts (email, SMS, and system notifications).

Since then, the same principles have been applied across multiple organizations and industries. Their continued use reflects a consistent outcome: value is realized when actions are consistently taken and behavior changes.

***“The failure is not in producing insight.
It is in failing to act on it consistently.”***

2. Why Outcome is Not a Step

Outcome is not part of the hierarchy because it is not something an organization performs. It is the result of what the organization does repeatedly.

Action creates the possibility of an outcome.

Behavior determines whether that outcome can be repeated, scaled, and sustained.

3. Where Organizations Fail

Most organizations are effective at producing information and, increasingly, insight.

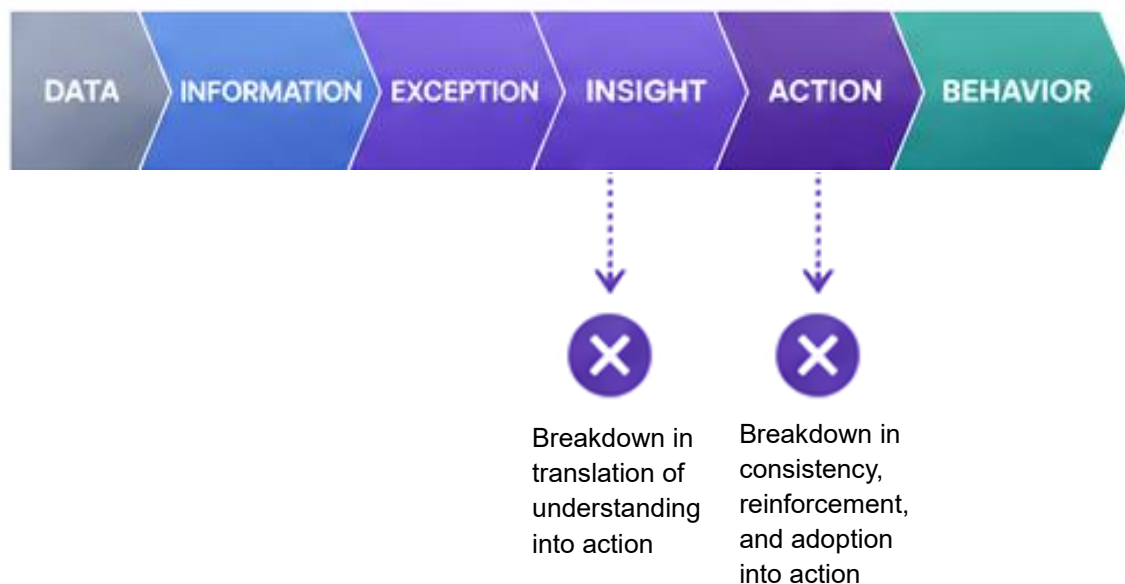
Few are effective at consistently translating these into action, and fewer still into behavior.

Common patterns include:

- Information and insight that are not acted upon
- Actions that are inconsistent or poorly timed
- Lack of clarity on decision ownership
- Limited measurement of behavioral change
- Systems that inform, but do not influence how work is done

The result is a familiar position: organizations that are data-rich, but value-poor.

Value is rarely lost in the early stages of the hierarchy. It is lost in the transition from insight to action, and from action to behavior.



The result: organizations that are data-rich, but value-poor.

“The failure is not in producing insight. It is in failing to act on it consistently.”

Four Common Failure Modes



1. **Insight without action** - The organization understands the issue, but no clear action is defined.
2. **Action without ownership** - The action is known, but responsibility is unclear.
3. **Action without reinforcement** - The action happens once, but does not become embedded into daily work.
4. **Automation without correction** - Systems execute actions, but outcomes are not measured quickly enough to refine behavior.

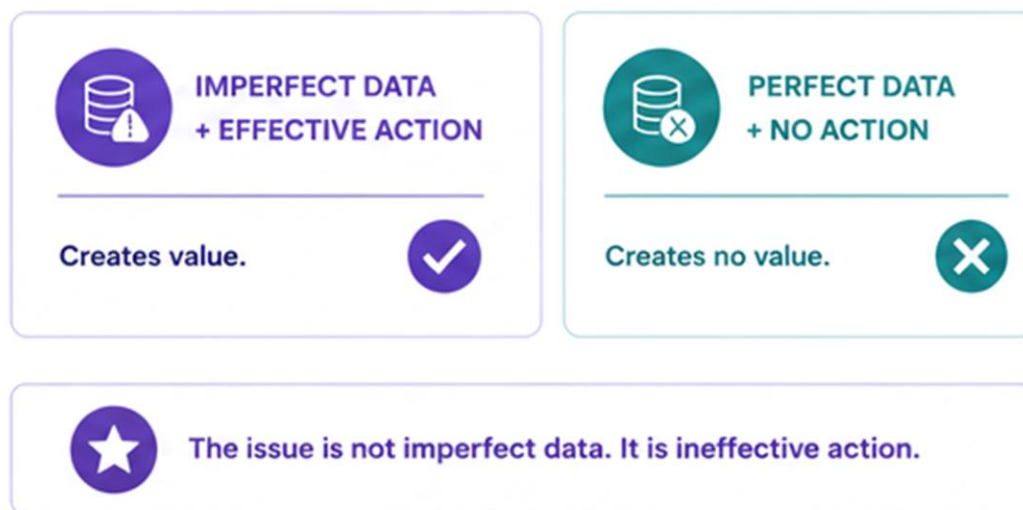
4. Data Does Not Need to Be Perfect

A common assumption is that data must be complete and accurate before it can be used effectively.

In practice, this is rarely true.

Organizations have always operated with imperfect data. Experienced operators interpret signals, apply context, and take action that is directionally correct. Over time, these actions evolve into consistent behaviors that deliver improved outcomes.

Perfect data is not required for value. Effective action is.



The challenge is not whether data is perfect, but whether organizations are able to act appropriately given the data they have.

This becomes particularly important as systems begin to take on a greater role in decision-making. Imperfect data does not prevent value creation, but it does require that actions and behaviors are monitored and adjusted over time.

***“The issue is not imperfect data.
It is ineffective action.”***

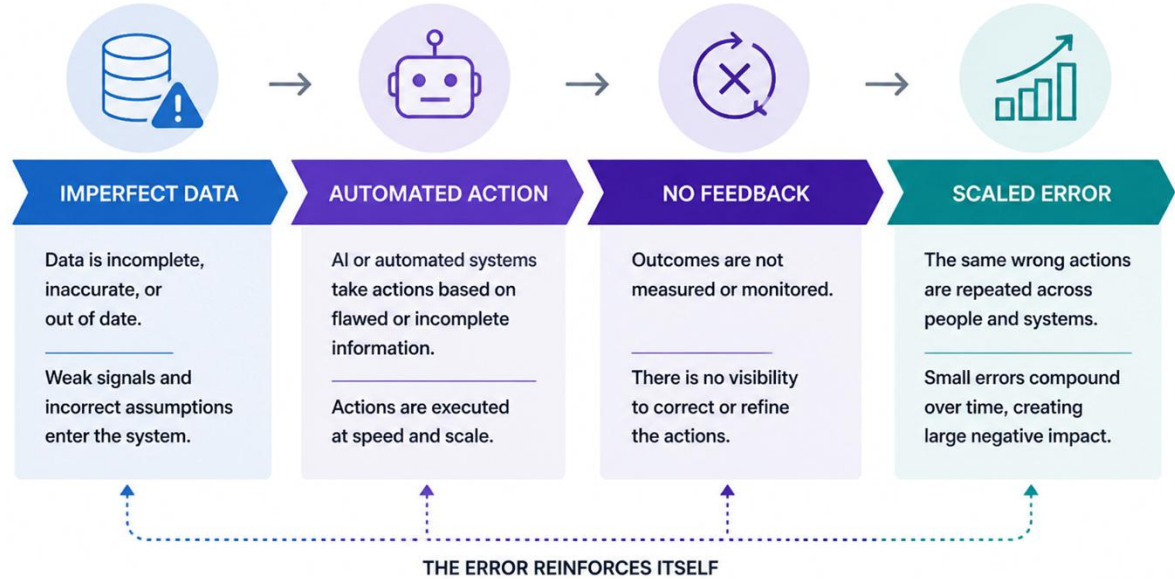
Imperfect Data Requires Stronger Feedback


Imperfect data does not prevent value creation. But as systems take on more decision-making and execution, imperfect data requires stronger monitoring.

The risk is not that imperfect data exists. The risk is that imperfect data triggers actions that are not measured, corrected, or refined.

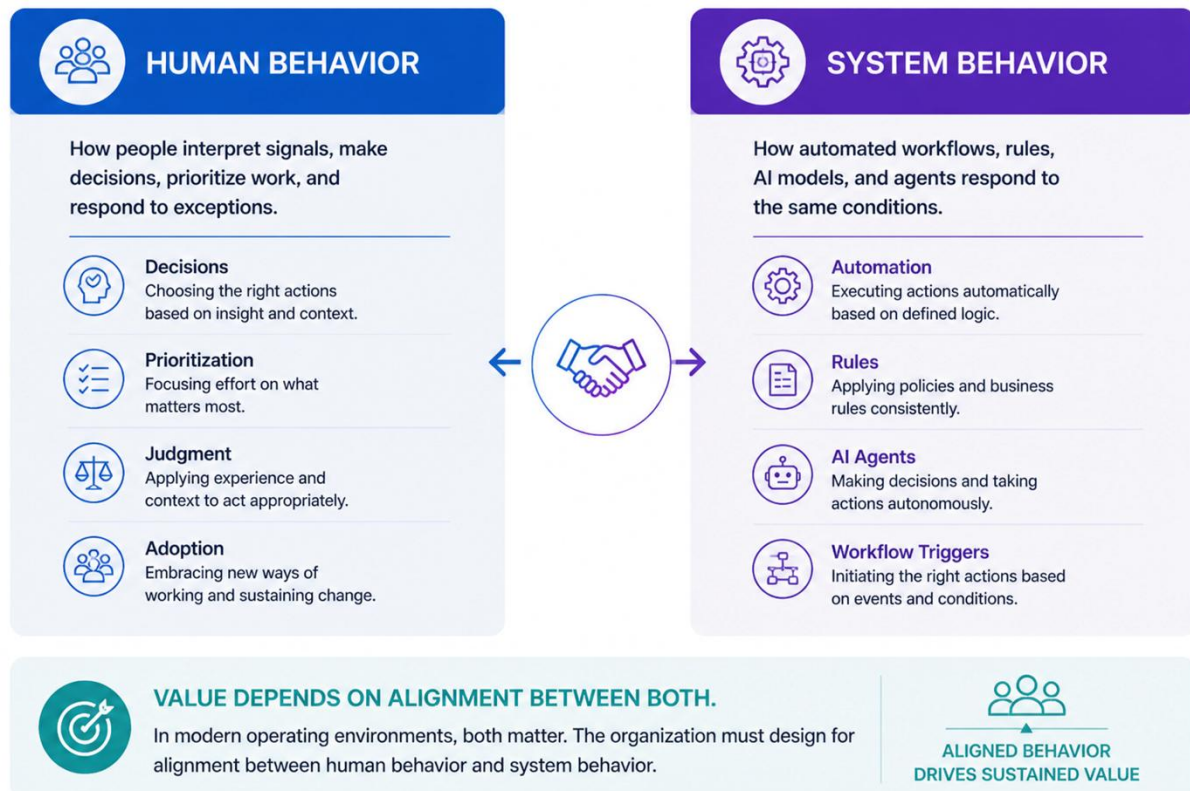
With traditional decision-making, experienced people often compensate for weak signals. With AI-driven or agentic execution, that human judgment may be reduced or removed. This makes feedback loops essential.

Imperfect Data + Automated Action + No Feedback = Scaled Error



 Without feedback, imperfect data leads to incorrect actions that are repeated at scale. **Strong feedback breaks the loop. Measurement enables correction. Correction drives better outcomes.**

5. Behavior Is Where Value Is Sustained



Action creates outcomes. Behavior sustains them.

An organization may achieve a positive result through a single action. However, without consistency, that result is unlikely to be repeated or scaled across teams and systems. Behavior represents the point at which action becomes embedded into how work is performed.

This applies equally to:

- **Human behavior**, such as how individuals interpret signals, make decisions, prioritize tasks, and respond to exceptions.
- **System behavior**, such as how automated processes, AI agents, and workflow rules execute and respond in a predictable manner.

In both cases, value is realized when actions are:

- Aligned with objectives
- Trusted by the people and systems involved
- Repeated consistently over time

Without this alignment, outcomes remain isolated, inconsistent, and difficult to replicate. Isolated successes can create the illusion of progress, but they rarely scale without embedding consistent behaviors.

Alignment between human and system behavior is critical.

Organizations must design processes, feedback mechanisms, and reinforcement loops to ensure that what people do and what systems execute are mutually supportive. Misalignment can lead to conflicting priorities, redundant effort, or unintended consequences.

When behavior is actively monitored, measured, and refined, it becomes a source of sustained improvement. Small adjustments to action or system execution can compound over time, creating predictable, repeatable outcomes that scale across teams, locations, or business units.

Behavior that is refined becomes the organizational habit. It ensures that good decisions are not one-off events but are embedded in everyday practice. This discipline transforms individual and automated actions into collective, repeatable outcomes that drive measurable business value.

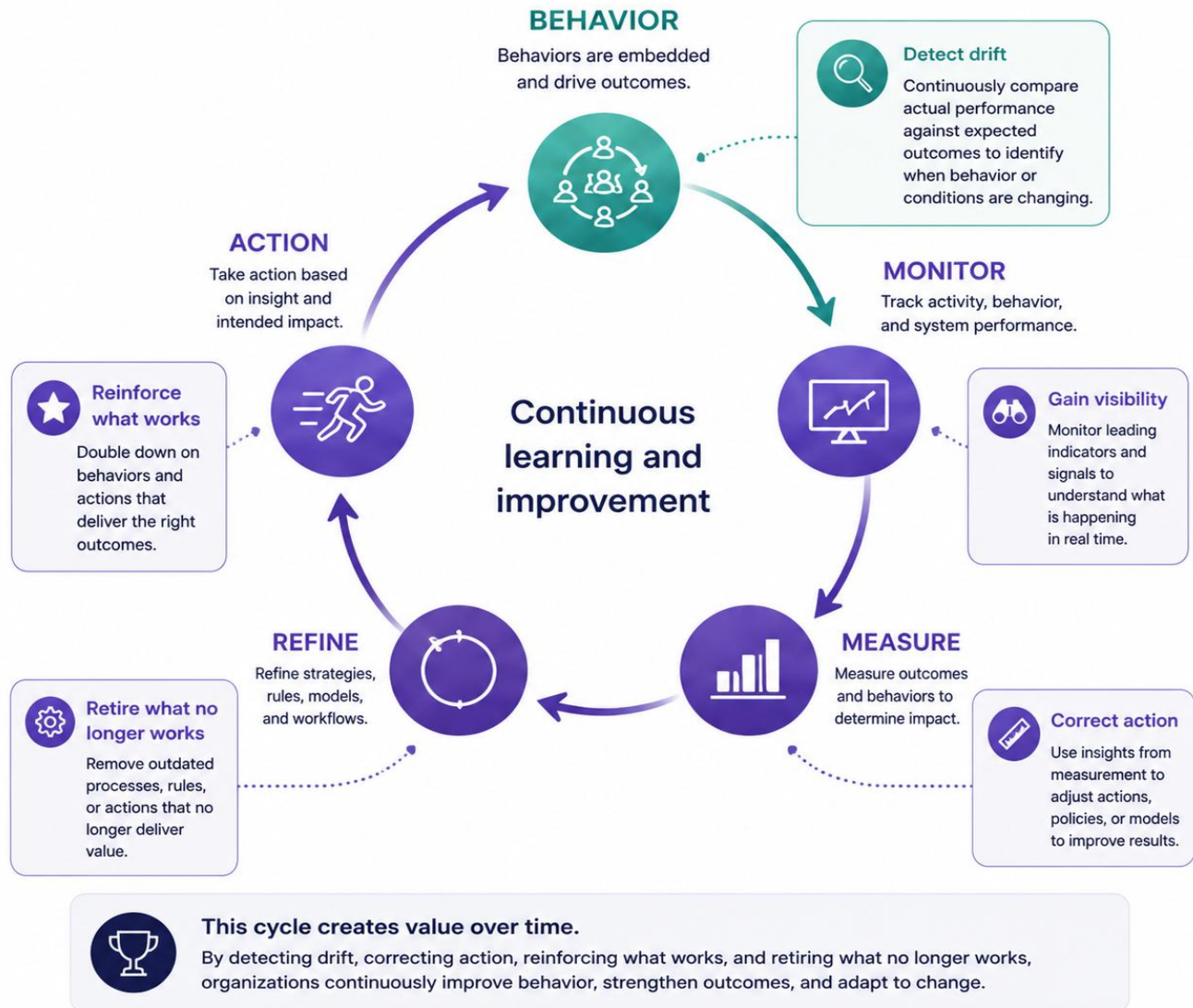
***“Without behavior, outcomes remain isolated.
With behavior, they become repeatable.”***

6. Behavior Is Not Static

Behavior is not a fixed state. It must be continuously evolved.

Effective organizations monitor, measure, and refine behavior over time. Small deviations are identified early and corrected through adjustments to action.

This creates a feedback loop between behavior, action, and insight.



This feedback loop is critical, particularly when working with imperfect data. Incorrect actions can be identified and corrected before they become embedded patterns.

Without this discipline, organizations risk normalizing ineffective or incorrect behavior.

With it, they create a system of continuous improvement.

***“Behavior that is not actively refined will drift.
Behavior that is refined becomes a
source of sustained value.”***

Drift is Inevitable

Behavior will drift when conditions change, incentives change, teams change, or systems change.

The purpose of measurement is not just to prove value. It is to identify when action is no longer producing the intended outcome.

This is why the feedback loop matters. It allows the organization to correct action before poor behavior becomes normalized.

7. The Role of Technology and AI

Technology plays an important role in enabling the Data Value Hierarchy.

It improves the ability to capture and structure data, identify exceptions, generate insight, support decisions, and increasingly execute actions.

AI accelerates this progression. Agentic AI extends it further by allowing systems to carry out actions independently or semi-independently.

This creates both opportunity and risk.

When AI supports insight, the main risk is that the insight is not acted upon.

When AI executes action, the risk changes. Poor data, flawed assumptions, or weak governance can result in poor actions being executed repeatedly at scale.

AI RISK PROGRESSION



The issue is no longer only whether the system is accurate. The issue is whether the actions it takes produce the intended outcome.

This requires continuous monitoring, measurement, and refinement of actions to ensure behavior aligns with intended outcomes. Technology enables action. Behavior determines whether that action creates value.

***“Technology enables action.
Behavior determines whether that
action creates value.”***

8. Case Studies

Applying the same principles across multiple initiatives, the focus consistently shifted from insight to action and behavior, unlocking significant value from the data available, even when that data was imperfect.

While the contexts differ, the pattern is consistent: value is created when action becomes behavior.

RPM Retail – Virtual Retail Consulting SaaS Platform

Context - Retailers had access to point-of-sale and stock data, but traditional reporting did not consistently improve in-store execution or decision-making.

Problem - The issue was not a lack of information, but translating that information into actions that store managers and staff could understand, adopt, and repeat reliably.

Approach - The platform used machine learning and expert systems to turn data into plain-English action statements delivered through accessible notifications, including email, SMS, and in-system alerts.

Behavior Created - Store teams were guided toward repeatable sales, stock, and merchandising behaviors, reinforcing consistent in-store practices across multiple locations.

Result - The solution supported stronger in-store performance, improved use of working capital, and empowered the scaling of this SaaS and AI-enabled consulting model across major retail chains.

Christchurch International Airport - Water Network Telemetry

Context - Christchurch International Airport manages a complex water distribution network with multiple assets and regulatory obligations, where reporting and monitoring were previously fragmented and delayed.

Problem - The challenge was to ensure regulatory compliance, accurate billing, and rapid detection of anomalies while embedding operational behavior into daily workflows.

Approach - A digital telemetry platform was implemented to automatically capture water usage and network performance data, generate real-time alerts for anomalies, automate billing, and integrate human review with system-driven actions to ensure operational and regulatory alignment.

Behavior Created - Field operators and office teams consistently responded to alerts, reviewed automated reports, and coordinated across functions, embedding proactive operational behavior into daily routines.

Result - The platform enabled faster identification and resolution of network issues, improved accuracy of billing, ensured regulatory compliance, and sustained consistent operational behavior, delivering measurable value over time

Citycare Ltd

Context - Citycare's data-driven field and office operations lacked alignment in how processes and insights translated into consistent and validated actions, resulting in inefficiencies and issues in customer delivery.

Problem - The organization faced inconsistent application of safety, asset, and service management processes across teams and locations.

Approach - Embedded exception-driven alerts and workflow guidance were implemented, combining digital dashboards with staff notifications to guide actions and ensure operational compliance.

Behavior Created - Field teams consistently performed inspections, maintenance, and reporting according to defined procedures, with the system supporting decision-making, progress tracking, and risk management.

Result - Operational performance improved across safety, margin, revenue, and customer KPI compliance, with consistent behaviors embedded into daily practice.

Builtit Group

Context - Customer service operations required speed and consistency in responding to service requests at scale, but manual processes could not meet these demands.

Problem - The challenge was to improve response times, quality, and consistency while maintaining customer satisfaction at scale.

Approach - Agentic AI was implemented to execute structured, action-oriented workflows, supported by feedback loops and human oversight to ensure correct prioritization and escalation.

Behavior Created - Staff and AI agents acted consistently on requests, following verified procedures and escalation rules, reinforcing repeatable operational behaviors.

Result - The implementation improved response speed and quality, increased customer satisfaction, and enhanced margin and revenue, while establishing sustainable operational practices.

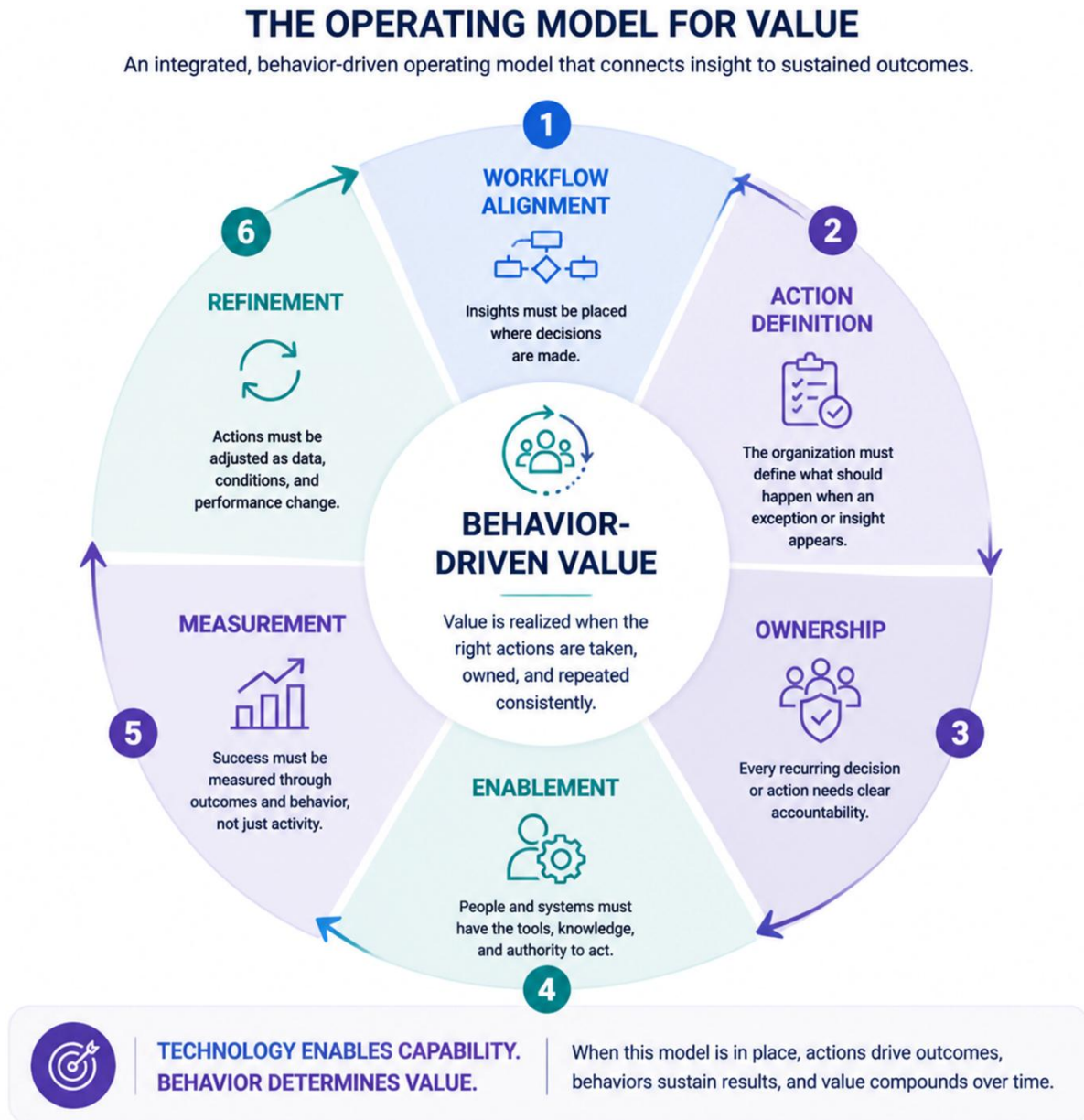
***“While the contexts differ, the pattern is consistent.
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9. The Operating Model for Value

To consistently realize value, organizations must deliberately design for behavior, not just insight.

This requires an operating model that connects strategy, data, technology, people, and execution.

A practical operating model includes:



1. Workflow alignment - Insights must be placed where decisions are made.

2. Action definition - The organization must define what should happen when an exception or insight appears.

3. **Ownership** - Every recurring decision or action needs clear accountability.
4. **Enablement** - People and systems must have the tools, knowledge, and authority to act.
5. **Measurement** - Success must be measured through outcomes and behavior, not just activity.
6. **Refinement** - Actions must be adjusted as data, conditions, and performance change.

***“Technology enables capability.
Behavior determines value.”***

7. Conclusion

Organizations do not create value from data alone.

They create value when they act on it.

They sustain value when those actions become behavior.

And they improve value when that behavior is continuously monitored and refined.

Organizations that understand this will not just invest in data and technology.

They will build the capability to translate information into consistent, effective behavior.

That is where value lives.

The organizations that win will not simply be those that collect the most data or deploy the most advanced AI. They will be those that can translate data into action, action into behavior, and behavior into continuously improving outcomes.

***“Technology, including AI, will continue to evolve.
The principle of value creation will not.”***

Supporting Context

This paper is based primarily on practical experience delivering data, product, and technology solutions across multiple industries and multiple countries. The perspectives presented reflect observed patterns in how organizations translate data into action and sustained behavior.

The following industry research provides supporting context on common challenges in realizing value from data and AI:

- McKinsey & Company — Reports on AI adoption and value realization consistently highlight challenges in scaling beyond pilot stages and embedding changes into business operations
- Gartner — Research on data and analytics maturity emphasizes the importance of decision-making, governance, and organizational alignment over purely technical capability
- NewVantage Partners — Executive surveys frequently report that organizations struggle to become data-driven despite significant investment
- Harvard Business Review — Articles on data-driven organizations and AI adoption highlight the importance of culture, leadership, and behavior in realizing value

These sources reinforce a consistent theme: the primary barriers to value realization are organizational and behavioral, rather than purely technical.



ABOUT THE AUTHOR



Greg Scott

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Greg is a technology, product, and operations leader with over 25 years of experience building and scaling data-driven solutions that deliver measurable business impact.

He has led teams and initiatives across multiple industries and markets, translating complex data and insight into practical actions and sustained behaviors that improve performance, efficiency, and customer outcomes.

This paper reflects lessons learned from real-world application, posited in practice, proven across organisation, and refined over time.

His international experience and cross-functional leadership bring a global perspective to solving complex challenges and delivering value that lasts.



25+ YEARS

Leading technology, product, and operations initiatives.



INTERNATIONAL EXPERIENCE

Proven track record across global markets and diverse industries



DATA TO IMPACT

Focused on turning insight into action and behavior



PROVEN IN PRACTICE

Lessons learned across industries, applied and refined over time



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