VALIDATED KNOWLEDGE SHOULDN'T WAIT

A philosophy of operational knowledge systems

From behavioral research to First API-Integrated Learning Ecosystem for towing and roadside operations

TOW TRUCK TECH

Where Does Information Stop Moving Inside Your Organization?

I — The Problem Nobody Owned

Engineers design products. Manufacturers build them. Operations deploy them. Customer support assists customers. Training organizations educate users. Each group performs an important function, yet somewhere between engineering knowledge and field execution, information often stops moving. Every organization becomes increasingly effective within its own area of responsibility. **No one owns the movement of operational knowledge between them.**

Throughout my career, I watched increasingly sophisticated vehicles enter service while the people expected to recover them were left with little more than experience, intuition, and improvisation. The consequences became impossible to ignore. Preventable vehicle damage. Repeated phone calls. Customer frustration. Claims. Extended roadside events. None of these represented individual performance problems. They were systems problems. The knowledge existed. The system responsible for moving it did not.

Operational Knowledge System

An Operational Knowledge System is the mechanism responsible for moving validated operational knowledge to the Point of Execution, where planning ends and performance begins.

The important realization was not that OEMs lacked technical knowledge. The knowledge already existed. On the rare occasions it moved beyond engineering, it often stopped at multiple points before reaching the people expected to perform the work, if it reached them at all.

How Knowledge Stops Moving

Every organization attempting to move operational knowledge encounters the same four bottlenecks. Understanding them is the key to understanding everything that follows.

Understanding the Bottlenecks

Knowledge Bottleneck — Engineering knowledge isn't being extracted from the OEM.

Content Development Bottleneck — Validated engineering knowledge isn't being transformed into usable instructional resources.

Distribution Bottleneck — Even when instructional resources exist, they aren't broadly disseminated throughout the organizations expected to use them.

Integration Bottleneck — Even when validated instructional resources have been distributed, they often fail to reach the Point of Execution because client systems and towing company workflows aren't effectively connected.

Knowledge trapped inside an organization has limited operational value. Knowledge changes outcomes only when it reaches the Point of Execution.

HOW KNOWLEDGE MOVES THROUGH TRADITIONAL SYSTEMS

THE PREDICTABLE BOTTLENECKS THAT PREVENT VALIDATED KNOWLEDGE FROM REACHING THE POINT OF EXECUTION.

OEM ENGINEERING
Engineering knowledge, design intent, specifications, analysis, and expertise.

KNOWLEDGE BOTTLENECK
Engineering knowledge does not flow into operational systems.

PROCEDURE VALIDATION
Procedures validated, structured, and approved for operational use.

CONTENT DEVELOPMENT BOTTLENECK
Validated procedures are not efficiently converted into operational learning resources.

VALIDATED INSTRUCTIONAL RESOURCE DEVELOPMENT (CONTENT)
High-quality instructional resources developed and approved.

DISTRIBUTION BOTTLENECK
Content is not delivered to the right people in the right format at the right time.

CLIENT WORKFLOW
Content embedded into client systems and operational workflows.

INTEGRATION BOTTLENECK
Knowledge is not seamlessly integrated into the point of execution.

POINT OF EXECUTION
Knowledge available and applied in the moment of need.

EVERY DELAY IN OPERATIONAL PERFORMANCE BEGINS WITH A BOTTLENECK IN KNOWLEDGE MOVEMENT.
Every Operational Knowledge System begins by identifying where knowledge stops moving.

II — Learning the Work Before Studying the Work

Working in vehicle repossession taught me that every unnecessary movement has a cost. Repossession is one of those professions where every decision matters. Every unnecessary action creates unnecessary risk. You learn very quickly that no one is coming to help. Whatever problem exists in front of you belongs to you.

Years later, I realized operational information behaves the same way. Every unnecessary search, phone call, escalation, customer explanation, or delay is a wasted movement in the flow of information. Repossession taught me to eliminate wasted physical movement. Operational Knowledge Systems are designed to eliminate wasted informational movement.

Technology should reduce cognitive load, not replace human judgment. The purpose is not to make people dependent on technology. The purpose is to reduce unnecessary mental effort so people can focus on the decisions that require experience, judgment, and awareness.

III — The Broken Promise

As vehicle technology became increasingly sophisticated, the gap between engineering knowledge and field operations continued to widen. For more than fifteen years, motor clubs competed to differentiate themselves by promising just-in-time, vehicle specific technical guidance for tow operators, information delivered when and where it was needed. It was the right vision. The problem was that it never became reality.

I always believed in the vision. I believed the industry had identified the right destination, but never built the system capable of getting there.

The vision was never wholly my own. The industry had been talking about just in time technical guidance for years. My contribution was turning that vision into an operational system.

If the industry wasn't going to fulfill that promise, I would build the system that could.

Waiting another fifteen years wasn't an option.

IV — Discovering the Missing System

At the time, I was already working with one of the industry's largest motor clubs, developing instructional resources for their partner automotive manufacturers. In the later years, I had begun developing the concept for a fully API integrated learning portal and presented it to them as a way to finally deliver vehicle specific technical guidance directly to tow operators at the Point of Execution. Had they chosen to pursue it, they would have possessed a proprietary learning platform capable of delivering validated instructional resources throughout their network while creating a meaningful competitive advantage in the marketplace.

I went into that meeting hoping to discover they recognized the same systemic problem I did.

They didn't.

When I walked away from that meeting, one thing had become unmistakably clear: no one was coming to solve this problem for us. Much of the industry was waiting for someone else to solve it.

I stopped waiting.

That meeting clarified the real issue. The challenge wasn't creating technical knowledge. It wasn't even creating instructional resources. The challenge was building a system capable of moving validated instructional resources to the Point of Execution.

The decision by the motor club not to pursue the concept didn't end the idea. It simply changed where it would be built. Around that same time, I was already collaborating with the team at Dolooma on other initiatives. As we discussed the challenges of moving validated instructional resources to the Point of Execution, the right path forward became clear. Rather than building a standalone platform, we would integrate it into the Dolooma ecosystem. That conversation became the foundation for what would eventually be known as Dolooma Academy.

People occasionally ask why I kept going. My answer is usually the same: I wasn't smart enough to quit. The truth is, once you've seen a problem this clearly, walking away becomes harder than solving it.

V — Two Problems, One Solution

Understanding what was missing was only half the challenge. The next question was how to build it.

Our research quickly revealed two independent problems that had to be solved simultaneously. First, very little effective instructional content existed for the people performing the work. Second, even when information existed, there was no reliable mechanism for delivering it to the Point of Execution. While Tow Truck Tech refined a methodology for developing validated instructional resources, we were simultaneously trying to solve the much larger problem of how those resources should move through an operational system.

To solve the first problem, we needed to understand how operators actually consumed technical information. Traditional learning management systems couldn't answer those questions. They could report course completions and quiz scores, but they couldn't tell us how many people watched, who they were, where they were located, how long they watched, what they shared, or,most importantly, what they discussed. Social media platforms could. That's exactly what they were built to do.

Over time, those interactions became one of the most comprehensive behavioral datasets we had ever assembled. More than 16 million video views provided continuous insight into how roadside professionals searched for information, consumed technical guidance, and interacted with instructional resources. Every view, every comment, every question, every share, and every discussion became another data point. We weren't building an audience. We were studying behavior.

Every insight helped refine how we developed validated instructional resources, bringing us closer to a system designed around how operators actually learn rather than how organizations traditionally deliver training. That research fundamentally changed how we developed instructional resources. We discovered that operators responded to concise, visually direct instruction rather than highly polished corporate productions. They didn't want to read a manual or watch an overproduced marketing video. They wanted practical guidance they could immediately apply in the field. Over time, those observations evolved into our own proprietary instructional format, designed specifically around operator behavior instead of traditional training assumptions.

Social Media Was Never the Product

Social media allowed us to conduct the research, validate our instructional methodology, and continuously improve it through immediate behavioral feedback. It was the laboratory, not the destination.

Dolooma Academy is something fundamentally different. It is an independent Operational Knowledge System that integrates directly into client workflows through a modern API driven architecture. The behavioral research conducted on social media informed how validated instructional resources should be developed. Dolooma Academy solved the much larger problem of delivering those resources directly to the Point of Execution.

One event made the distribution problem impossible to ignore.

An operator in North Dakota, working in extreme winter conditions, searched for guidance on a vehicle he had never handled before. The engineering knowledge already existed inside the OEM. Instructional resources had already been developed for that manufacturer through its partner motor club. I know what those resources contained because I developed them.

Those original resources never reached the field. Years later, I independently recreated those validated procedures using Tow Truck Tech's methodology and made them publicly discoverable. The operator never found the original resources. He found ours.

He didn't need more information.

He needed access to information that already existed.

VI — Building the Missing Infrastructure

By this point, the problem was clearly defined. We understood how operators consumed technical information. We had developed a methodology for creating validated instructional resources. We had also found the technology capable of delivering those resources directly into client workflows. The remaining challenge was integrating those pieces into a single Operational Knowledge System.

Every project begins the same way. We work directly with OEM engineers to validate the operational procedure. Only after the procedure has been validated do we develop the instructional resource. We don't validate content. We validate procedures. The instructional resource simply communicates the validated procedure.

Tow Truck Tech understood the operational problem, validated procedures, and developed the instructional resources. Dolooma understood how to engineer the information architecture. From that partnership, Dolooma Academy was born.

Existing dispatch platforms are designed to move work. Dolooma Academy is designed to move knowledge.

By embedding validated instructional resources directly into the client's workflow through a modern API driven architecture, Dolooma Academy transformed information delivery from a manual search into an integrated component of operational execution.

The difference between the traditional model and the Operational Knowledge System isn't simply speed. It's architecture. Traditional development relies on organizational processes to move information through meetings, approvals, scheduling, production, and distribution. The Operational Knowledge System was designed from the beginning to move validated instructional resources directly to the Point of Execution while continuously improving through operator feedback and field experience.

Traditional vs. Operational Knowledge Development

Traditional content development evolved around large organizations, multiple stakeholders, and formal approval processes. The result is often excellent technical content—but at the cost of significant latency. Every meeting, approval cycle, scheduling conflict, revision, and handoff slows the propagation of operational knowledge and reduces organizational throughput.

The Operational Knowledge System was designed around a different objective. Validation occurs first. Instructional resources are developed second. Delivery is integrated directly into the client's workflow. Continuous feedback loops from the field improve both the instructional resources and the operational procedures over time. The goal isn't simply to create better content—it's to move validated knowledge faster, farther, and more reliably to the Point of Execution.

TRADITIONAL CONTENT DEVELOPMENT VS. OPERATIONAL KNOWLEDGE SYSTEM

TWO APPROACHES. TWO VERY DIFFERENT TIMELINES.

TRADITIONAL CONTENT DEVELOPMENT

- OEM
- Planning Meeting
- Meeting About the Planning Meeting
- Scheduling
- Schedule Change
- Planning Meeting
- Meeting About the Planning Meeting
- Scheduling
- Approvals
- Production
- Editing
- Review
- Revision
- Approval
- Release

6–9 MONTHS

OPERATIONAL KNOWLEDGE SYSTEM

- OEM
- Direct Collaboration
- Procedure Validation
- Validated Instructional Resource Development (Content)
- Dolooma Academy
- Client Workflow (API Integration)
- Point of Execution

WEEKS

The Difference in Practice

A recent OEM production effort in Canada illustrates the difference. The entire project was coordinated through a short text message exchange. One request set the need in motion, five people aligned around the scope, date, and timing, and within approximately twenty-five minutes the production was scheduled two weeks out. The completed validated instructional resources were then positioned to be delivered in time for the client's program launch.

The speed wasn't the result of rushing. It was the result of removing unnecessary coordination. No calls about calls. No excessive meetings. No committee process. Just the people responsible for the work making the decisions required to move it forward.

Nothing about the quality was sacrificed. In fact, the quality improved. Working directly with OEM engineers eliminated unnecessary organizational friction while allowing procedures to be validated, instructional resources to be developed, and information to begin moving sooner. Higher velocity didn't simply make the process faster, it made the outcome better.

VII — Beyond Towing

One of the most important discoveries came from outside the towing industry. A European OEM initially approached Dolooma Academy as a roadside solution. As our conversations progressed, they realized the same knowledge movement problem existed inside their own organization. The same platform capable of delivering validated instructional resources to roadside professionals could also reduce lengthy customer support phone calls by delivering concise, vehicle specific instructional guidance directly to vehicle owners, reducing 45 minute technical support calls to the delivery of a concise, vehicle specific instructional video.

That conversation changed my thinking. We had not built a towing platform. We had built an information movement platform.

Whether the destination is a roadside professional, a customer support representative, or the vehicle owner, the path remains the same.

From Knowledge to Performance

Every Operational Knowledge System follows the same progression.

Validated knowledge must move from its source, through a structured delivery architecture, to the Point of Execution where it changes performance.

The illustration below summarizes that progression.

FROM KNOWLEDGE TO PERFORMANCE

THE OPERATIONAL KNOWLEDGE SYSTEM IN ACTION

OEM ENGINEERING KNOWLEDGE

Original equipment manufacturers develop engineering knowledge, design intent, and technical specifications.

CAPTURED AT THE SOURCE
Accurate, authoritative engineering knowledge is captured.

PROCEDURE VALIDATION

Procedures are validated in the field, structured, and approved for operational use.

VALIDATED FOR REAL-WORLD USE
Procedures are proven, safe, and ready for instruction.

VALIDATED INSTRUCTIONAL RESOURCE DEVELOPMENT

High-quality instructional resources are developed using proven learning science and multimedia methodology.

BUILT FOR HOW PEOPLE LEARN
Resources are clear, consistent, and designed to drive understanding and retention.

DOLOOMA ACADEMY

Resources are organized, version-controlled, and delivered through a centralized knowledge platform.

ALWAYS ACCESSIBLE. ALWAYS CURRENT.
The right knowledge is available in the right format, in the right language, anytime, anywhere.

CLIENT WORKFLOW

Knowledge is embedded into client systems and operational workflows through seamless integration.

EMBEDDED IN THE FLOW OF WORK
Knowledge is contextually delivered within the tools and workflows people already use.

POINT OF EXECUTION

The right knowledge is delivered at the moment of need, in the field, at the point of decision.

RIGHT KNOWLEDGE. RIGHT TIME. RIGHT FORMAT.
Frontline teams have exactly what they need to perform the task safely and effectively.

OPERATIONAL PERFORMANCE

Better-informed actions lead to safer operations, higher quality outcomes, and measurable performance results.

MEASURABLE IMPACT
Improved safety, efficiency, quality, and customer outcomes drive bottom-line results.

VALIDATED KNOWLEDGE. SEAMLESS DELIVERY. MEASURABLE PERFORMANCE.
This is the Operational Knowledge System in action—turning engineering knowledge into real-world performance where it matters most.

VIII — The Cost of Waiting

Repossession taught me to waste no movements. The behavioral study taught me not to waste information. Large organizations taught me something else: they often waste years.

Organizations frequently revisit problems that already have solutions. They do not always wait because the solution is unavailable. They wait because acting requires someone to take a risk. While they wait, preventable negative customer experiences continue to occur. Vehicles continue to be damaged. Operators continue searching for information that should already be available. Time continues to pass.

We can only solve problems moving forward. We cannot recover yesterday's preventable failures. Time is the one irrecoverable resource every organization shares.

The Language of Operational Knowledge Systems

Latency is the elapsed time between validated knowledge being created and becoming available at the Point of Execution

Propagation describes whether that knowledge successfully reaches the people expected to act on it.

Throughput is the capacity of the entire system to continuously create, validate, distribute, measure, and improve operational knowledge

Feedback loops are how field experience improves the next generation of resources.

Operational Performance is the measurable improvement produced when validated knowledge reaches the Point of Execution and is consistently applied.

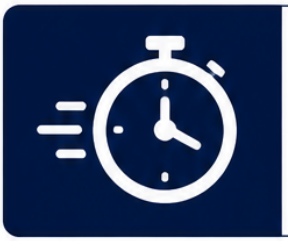
Those terms may sound technical, but the ideas are simple. How long does knowledge take to arrive? Does it reach the right person? How much validated knowledge can continuously move through the system? How does the field teach the system what to do next? Operational Knowledge Systems exist to reduce latency, increase information velocity, and preserve time.

These are not buzzwords. They are practical ways to describe whether knowledge is moving fast enough to improve operational performance.

THE LANGUAGE OF OPERATIONAL KNOWLEDGE SYSTEMS

FIVE FOUNDATIONAL TERMS. ONE SHARED PURPOSE.

These terms describe how knowledge moves, adapts, and drives results within an Operational Knowledge System.



1. LATENCY

How long does knowledge take to arrive?

The time between when knowledge is validated and when it is available at the Point of Execution. Lower latency means faster, better-informed action.

2. PROPAGATION

Does knowledge reach the right person at the Point of Execution?

The ability of knowledge to reach the right people, with the right context, in the right format, in the moment of need.

3. THROUGHPUT

The capacity of the entire system.

The ability of the system to handle knowledge flow at scale—across people, processes, and operations—without delay or degradation.

4. FEEDBACK LOOPS

How does field experience improve the system?

The mechanisms that capture real-world experience, convert it into actionable insight, and strengthen the system over time.

5. OPERATIONAL PERFORMANCE

The outcome that actually matters.

The measurable impact of an effective knowledge system—safer operations, higher efficiency, better quality, and superior customer outcomes.

**WHEN WE UNDERSTAND THESE TERMS,
WE CAN DESIGN SYSTEMS THAT DELIVER WHAT MATTERS MOST:
THE RIGHT KNOWLEDGE, TO THE RIGHT PERSON,
AT THE RIGHT TIME—DRIVING OPERATIONAL PERFORMANCE.**

Operating Principles

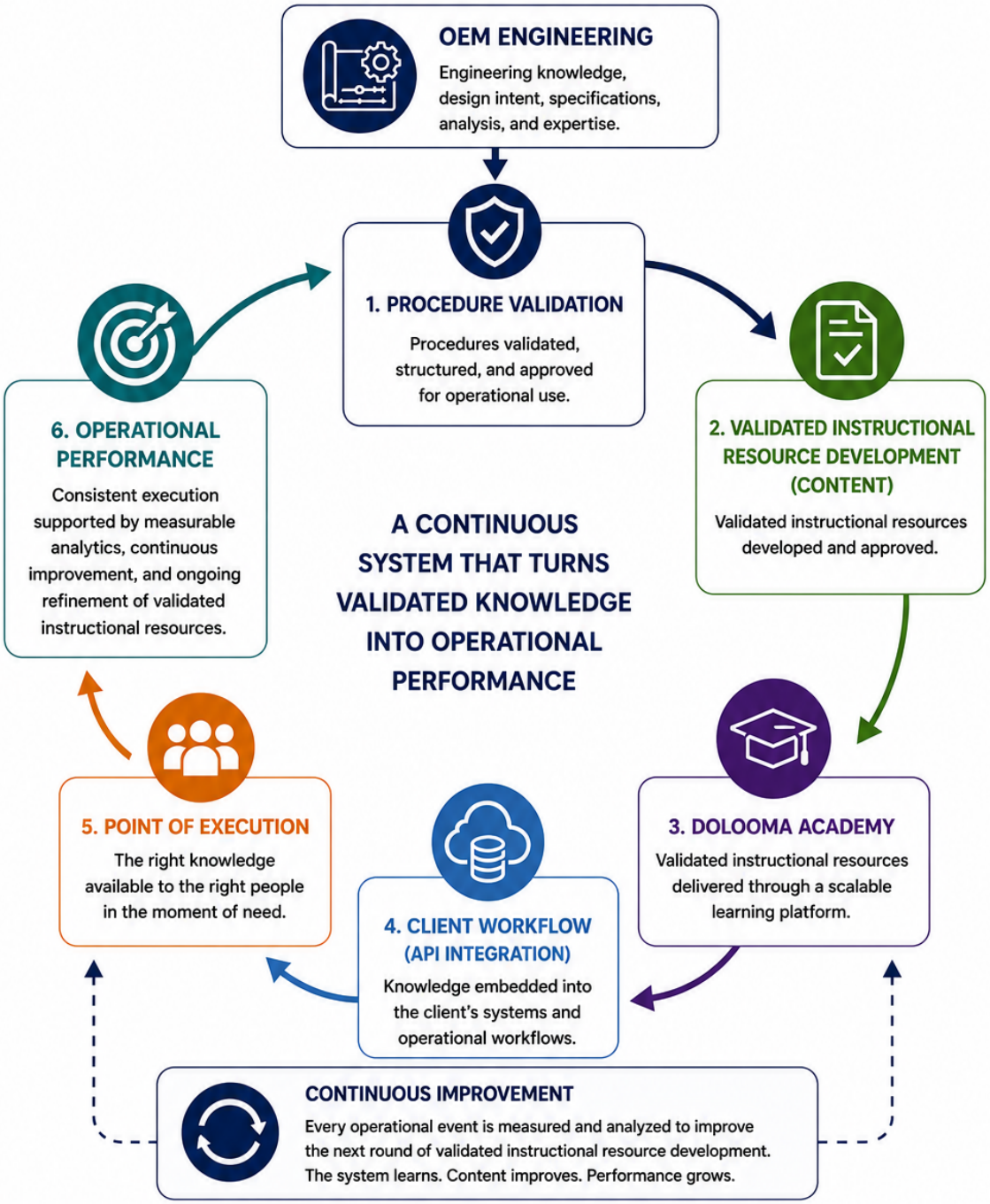
- The information shouldn't wait to be found. It should arrive with the work.
- Knowledge has value only when it moves.
- Technology should reduce cognitive load, not replace human judgment.
- Performance, not retention, is the objective.
- The absence of critical information at the Point of Execution is a systems design problem, not an operator problem.
- Information is operational infrastructure.
- Reduce organizational friction whenever possible.
- Validate procedures before developing validated instructional resources.
- The field asks the questions. The system delivers validated knowledge. The next generation of questions begins again.

Questions Worth Asking

- Where does information stop moving inside your organization?
- What knowledge already exists but never reaches the Point of Execution?
- What organizational friction is slowing the movement of information?
- How much latency exists between engineering knowledge and operational execution?
- What information should arrive automatically instead of waiting to be found?
- Are you measuring training, or are you improving operational performance?

CONTINUOUS LEARNING LOOP

HOW VALIDATED KNOWLEDGE CREATES PERFORMANCE



The Continuous Learning Loop ensures validated knowledge never stops evolving. Operational insights fuel better content, better performance, and a stronger, safer operation—every day.