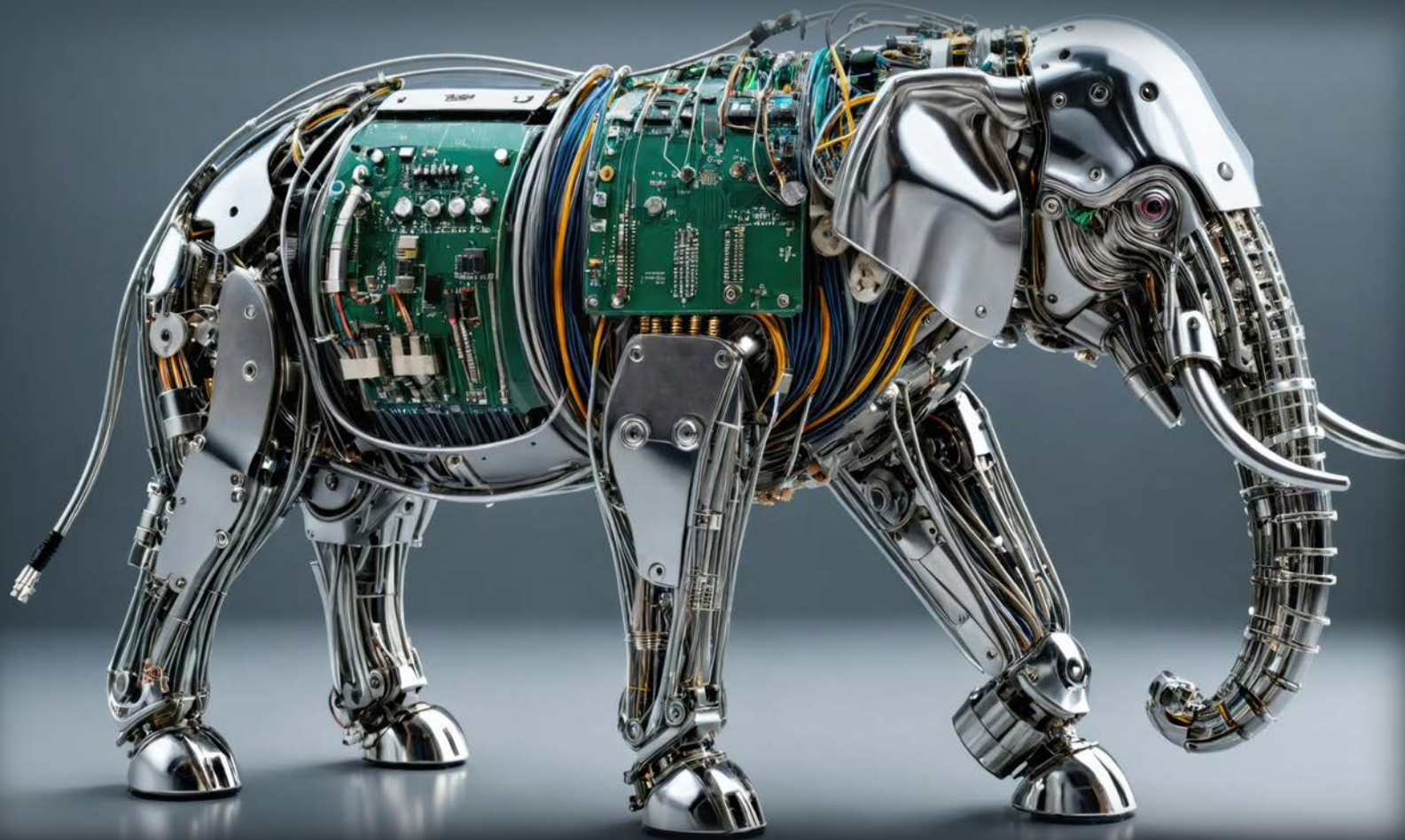


FULL
STACK
ENERGY

SEEING THE WHOLE ELEPHANT

Energy Leaders on Complexity, Connection, and the Value It Unlocks



Description

The energy landscape is experiencing unprecedented complexity due to:

- ⚡ Electrification
- ⚡ Renewable energy integration
- ⚡ AI-driven energy demand
- ⚡ Energy reliability concerns
- ⚡ Sustainability requirements
- ⚡ New regulatory structures
- ⚡ Volatile electricity markets

Our discussion explored how the industry is becoming increasingly interconnected, making traditional siloed approaches to decision-making inadequate, even disastrous. As a result, leaders must develop an understanding of systems holistically, connect disparate data sources, collaborate across functions, and leverage AI as a decision-support tool.

Organizations can no longer optimize individual departments independently because actions in one area increasingly create consequences elsewhere.

“To optimize part of the system is to pessimize the whole system.”

Complexity Is the New Reality

Energy leaders are facing more disruption today than at any point in decades.

Challenges now include:

- ⚙ Reliability
- ⚙ Availability
- ⚙ Cost volatility
- ⚙ Carbon intensity
- ⚙ Regulatory compliance
- ⚙ Sustainability reporting
- ⚙ Energy procurement

These factors interact simultaneously, creating a web of dependencies that organizations often struggle to understand.

**"We are experiencing more disruption in the energy space...
than we've seen in maybe 50 years." Kevin Hagen**

Siloed Organizations Create Hidden Problems

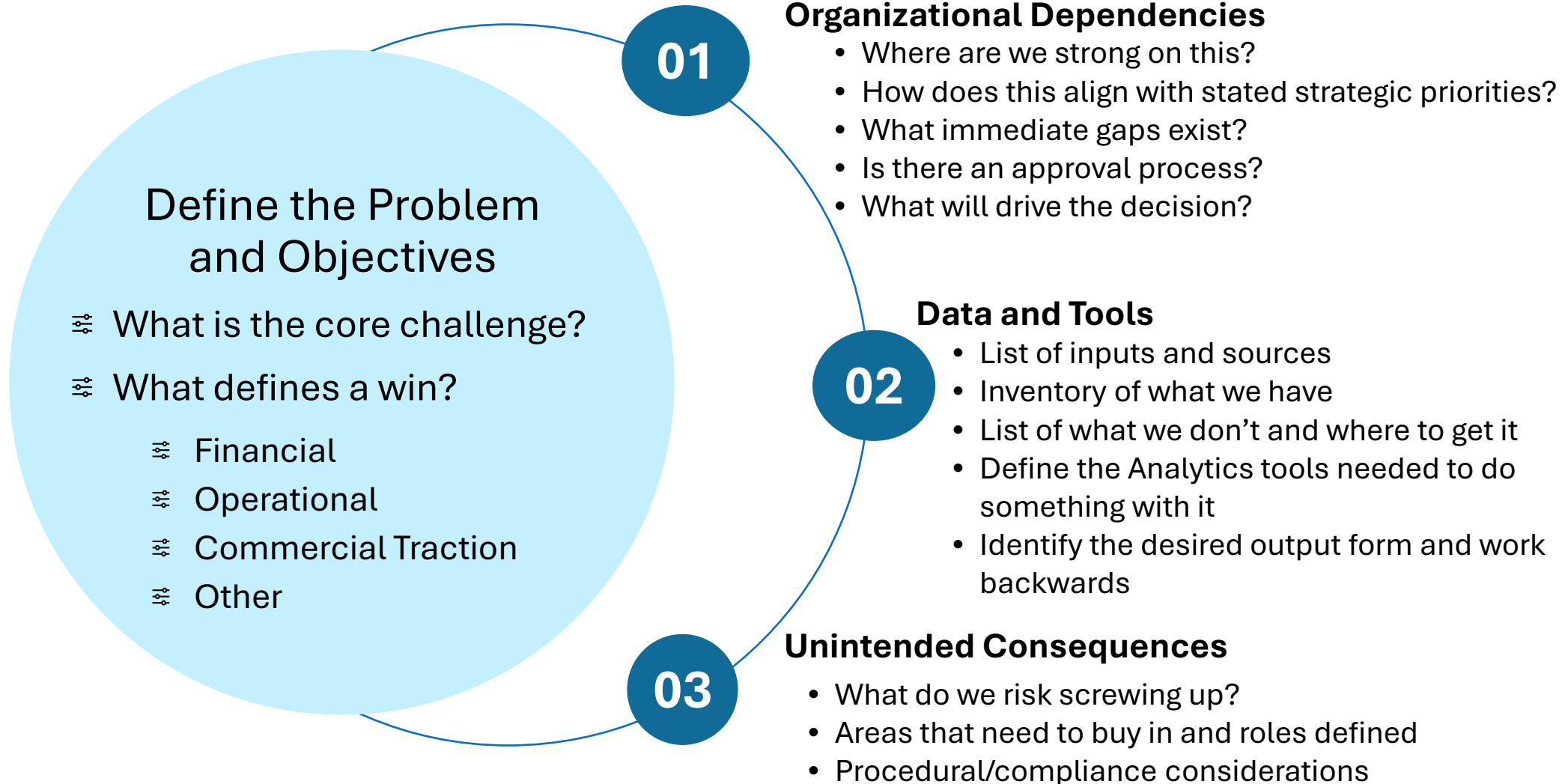
Traditional organizations are designed around specialization.

Modern energy initiatives often cross:

- ⌵ Facilities
- ⌵ Operations
- ⌵ Finance
- ⌵ Sustainability
- ⌵ Procurement
- ⌵ Government Affairs
- ⌵ Executive Leadership

A project that appears beneficial from one department's perspective may create costs or risks elsewhere.

The First Step in Any Project



EV Fleet Example

Kevin Hagen described Iron Mountain's fleet electrification initiative:

- ⚙️ Fleet managers loved lower operating costs.
- ⚙️ Facilities managers saw rising electricity bills.
- ⚙️ Energy managers saw new solar and battery opportunities.
- ⚙️ Government affairs identified regulatory incentives

What looked like a simple vehicle replacement became a multi-department optimization challenge.

**All of a sudden, it becomes a multifunctional algorithm to come up with
“How do you make this a win for everybody in the business?”**

Sustainability Is a Systems Thinking Discipline

Sustainability work forces leaders to think across organizational boundaries. Because sustainability departments rarely own large budgets or operational assets directly, success depends on influencing and coordinating with others.

This creates leaders who must develop:

- ⚙️ Cross-functional communication
- ⚙️ Systems thinking
- ⚙️ Stakeholder alignment
- ⚙️ Strategic perspective

**Sustainability projects don't win because they're greener.
Sustainability projects win when they're better, faster, cheaper.**

Data Is Necessary – But Not Sufficient

Organizations already possess enormous amounts of data.

The challenge is:

- ⇌ Finding it
- ⇌ Connecting it
- ⇌ Understanding it
- ⇌ Asking the right questions

The old "data lake" philosophy of collecting everything and hoping insights emerge is gone. Instead, we must:

1. Define the questions
2. Identify required data
3. Connect context to the data
4. Apply analysis and AI

“You’ve got to know the questions you want to ask.” Liam Relihan

AI Is a Force Multiplier, not a Replacement for Thinking

AI is powerful for:

- ⚙️ Pattern recognition
- ⚙️ Context synthesis
- ⚙️ Communication planning
- ⚙️ Opportunity identification
- ⚙️ Data correlation

But it remains dependent on human judgment. AI excels at reasoning through possibilities but should not be blindly trusted for facts, calculations, or conclusions.

Liam Relihan's AI Analogy

"You've just been promoted... and you now have a very eager recent college graduate joining you who's very intelligent but constantly needs to be kept on a tight leash."

Best Practice: "Trust but verify."

Energy Has Become Strategic

Historically energy was:

- ⚡ Cheap
- ⚡ Reliable
- ⚡ Predictable

Today that assumption is breaking down.

Organizations increasingly face situations where:

- ⚡ Grid capacity is unavailable.
- ⚡ Expansion is delayed by power constraints.
- ⚡ Electricity prices become highly volatile.
- ⚡ Time-of-use pricing changes economics.
- ⚡ Energy availability influences business strategy.

You can literally be told by the utility company you can't expand your business because they can't deliver enough power.

Curiosity Is the Missing Leadership Skill

In many organizations struggling to develop holistic thinking, curiosity is the missing ingredient.

Instead of simply accepting incentives, regulations, or opportunities, leaders should ask:

- ⌘ Why does this incentive exist?
- ⌘ What larger system is driving it?
- ⌘ What unintended consequences could emerge?
- ⌘ Where else in the organization might this matter?

Throughout history, curiosity has been a crucial driver of the critical thinking necessary for progress.

Cross-Functional Success Depends on Trust

In today's energy landscape, technical knowledge alone is insufficient.

Leaders must develop:

- ⚙️ Listening skills
- ⚙️ Empathy
- ⚙️ Trust-building
- ⚙️ Communication across disciplines

Our organizations can be described as collections of different "languages." Every function has its own language, that is, finance speaks finance, engineering speaks engineering, operations speaks operations, etc. Successful leaders become multilingual.

**Today's leadership must develop these CEO-level,
look-across-the-business type skills.**

Final Takeaway

The future belongs to leaders who can see "the whole elephant."

Success increasingly depends on:

- ⚙ Thinking in systems rather than silos
- ⚙ Connecting diverse data sources
- ⚙ Understanding organizational interdependencies
- ⚙ Using AI to amplify human judgment
- ⚙ Building trust across functions
- ⚙ Developing curiosity about unintended consequences
- ⚙ Acting before complexity overwhelms traditional decision-making models

Complexity is increasing, but so are the tools and opportunities available to organizations willing to adapt.

The opportunities are too significant. The risks are too material to take a wait-and-see approach.

Tactical Initiative Sample Check list

Organizational Dependencies

- What are we trying to achieve and what defines success?
- Who will the initiative touch in the organization? Not just directly, but indirectly as well
- What dependencies do they have outside of the core objective that need to be considered?

Data and Tools

- What data do we need to understand the implications of all of the above?
- Where do we have that data?
- Where do we get what we don't have?
- How do we quantify and forecast that impact?
- What tools do we need to bring it all together in one place to perform the analytics necessary to forecast cost and revenue impact?

Unintended Consequences

- How do we keep this from becoming yet another quagmire initiative?
- How does that translate into a project plan for executing the initiative?
- What tools do we need to track and monitor performance once implemented?
- How do we automate more of the process?

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