

DECISION MAKING IN THE TIME OF COMPLEXITY

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If you peruse the business section of the newspaper, browse the business section of a bookshop, or read any business journals (*Amplify* included), you will almost certainly encounter a huge number of words devoted to complexity and the challenges that dealing with it cause for business leaders. How to deal with complexity has become the defining question for leaders in the last decade, and terms like VUCA (volatile, uncertain, complex, and ambiguous) have become ubiquitous.¹

The massive disruption caused by the pandemic has made the problem of complexity very real for leaders who once considered themselves in a relatively safe, stable environment. Global supply chains have proven highly susceptible to disruption, and established norms around how and where we work have been overturned. At the same time, the need to respond rapidly to a changing climate is shifting long-established patterns of investment and threatening to strand once-valuable assets.

TRADITIONAL DECISION MAKING

In the past, we have been able to rely on a relatively small set of decision-making strategies that work extremely well when conditions are stable. Although we like to tell ourselves that we are data-driven, rational decision makers, a large number of decisions are made based on experience or instinct, rather than actual analysis. More often, analysis is often used to justify a decision that has already been made. There is nothing wrong with experience-based decision making. When conditions are stable, past experience is a very good predictor of future outcomes. What worked yesterday will probably work today, as long as conditions are stable.

Where analysis-based decision making is used, it serves organizations well. Identify the problem, analyze potential solutions, then pick the best (or least worst) outcome. If conditions are stable, you can analyze potential outcomes from a decision with a high degree of certainty. The analysis you did last year is likely to still be valid today. As long as conditions are stable.

**WHEN PAST
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As soon as conditions become unstable, these decision-making techniques quickly lose effectiveness. When past experience can't be used to predict future outcomes, leaders who rely on experience may become paralyzed, unable to decide or stuck in a pattern of repeatedly trying what worked before with less and less success.

In rapidly changing conditions where the results of an analysis are out of date before it is completed, leaders can end up in a spiral of analysis paralysis, continually searching for the analysis that gives them certainty and unable to move without it. Complexity robs us of our ability to be certain about our decision making.

MANY OF THE TOOLS WE REACH FOR IN DAY-TO-DAY DECISION MAKING ARE THE WRONG TOOLS FOR A COMPLEX ENVIRONMENT

THE SEARCH FOR CERTAINTY

We are, as a rule, certainty seekers. We invent techniques like budgets, plans, and schedules to remove doubts about our likelihood of success and make ourselves more certain, or at least give ourselves the illusion of certainty. When we can't find certainty, we get stuck. If we can't be sure we are making the right decision, we often can't make a decision at all.

Complexity presents many challenges for decision making. In an uncertain environment, with conditions rapidly changing, how can you be sure that the decision you make is the right one? What data do you need to make the right decision? What happens if a decision is made and conditions change?

The biggest problem with making decisions in a complex, rapidly changing environment is not the decision itself; it's our psychology.

Our psychological need to be right the first time presents the biggest challenge to successful decision making in complexity. The inability to see a clear decision often leads to a decision being continually deferred to build more certainty through more analysis. This leads to delays that cannot be tolerated in our fast-changing world.

Once a decision is made, if it ever gets made, it is often seen as fixed. We have chosen our path; let's not revisit it. However, in a rapidly changing environment, the right decision today may not be the right decision tomorrow, and the inability to adapt becomes a veritable albatross around the neck of the organization.

THE WRONG TOOL FOR THE JOB

Leaders have deeply internalized the need to be right the first time. They feel every decision must be correct and unchangeable because to change a decision is to admit to having made a bad decision in the first place. Having a "right-first-time" view is fundamentally incompatible with successful decision making in complexity.

Many of the tools we reach for in day-to-day decision making are the wrong tools for a complex environment. It's like reaching into your tool bag and finding only a hammer. Although a hammer is a useful tool and can do many things, it is not the best tool in many situations. You can drive a screw in with a hammer, but slowly and with much damage to the timber you are fastening — and no guarantee that the timber will stay fastened under load.

Thus, leaders need to expand their decision-making toolbox. They need tools that allow for a rapid situation assessment so they can make a decision (right or wrong), then adapt that decision as it plays out in the real world.

The most important tool for leaders in complexity is the notion of partial correctness: a decision does not need to be, and indeed often cannot be, fully correct. It just needs to be correct enough to provide a starting point for learning.

The notion of waiting for a fully correct decision (indeed, the notion that a fully correct decision exists at all) is problematic in a complex environment. Leaders must accept that any decision they make will not be the "best" decision, but the "best we can do with the knowledge we have right now" is the right decision to make at this point in time.

As more information comes to light about the situation and how the organization is responding to the actions already taken, that decision can (and must) be revisited and adapted. Leaders in complexity can learn from Paul Samuelson, the famous 20th-century economist who is attributed to have said: “When the facts change, I change my mind. What do you do, sir?”²

Decision making in complexity is not difficult, just different. Old tools based on searching for certainty and finding the best answer must give way to a new set of tools based around iteration, experimentation, and adaptation.

COMPLEXITY IS EVERYWHERE, BUT NOT EVERYTHING IS COMPLEX

Although having the right tools in your toolkit to handle decision making in complexity is important, it is also crucial not to throw away your old tools. Buying a screwdriver does not necessitate throwing away your hammer.

A lot of decisions are made in a context of complexity, but there are a great many decisions within an organization that are simple. Perhaps the answer is fairly obvious, or the problem is amenable to analysis.

It is popular in business writing these days to refer to the entirety of the business environment as complex — everything is VUCA! This is just as unhelpful as assuming that nothing is complex. A mix of different decision types and decision-making tools are required in modern organizations.

So having a well-stocked tool bag is important. Knowing when and where to use each tool inside is even more important, and that requires a mechanism for appraising a situation and assessing which decision-making tools to pull out of the bag.

KNOWING WHERE YOU STAND

The Cynefin framework is a sense-making tool that provides a common language for groups to identify the levels of certainty in the environment (see Figure 1).³ It has five domains, with the central



Figure 1. Cynefin framework (source: Snowden)

one representing “when we do not know where we are” (the AC refers to *Aporotic or Confused*). The main value comes from the conversations in understanding which of the other four domains we are actually working in:

- The **Clear** domain is where we can have one best practice. We should be able to look up the decision somewhere and get a predictable outcome.
- The **Complicated** domain is one of expertise. There are often several good options, and the right subject matter experts can guide the decision to a good outcome.
- The **Complex** domain means we cannot predict the outcome. We will need to navigate the environment and take an exploratory approach to influence our decision making. This is the place where being partially correct shines, and we must be comfortable with the ambiguity that ensues. When we cannot predict an outcome, the attempt to gain certainty before we make a decision is costly and futile. This is the key reason for taking a test-and-learn (partial correctness) approach. How can we make the decision in a way that makes it safe to learn while helping us avoid bad unintended consequences? (Good unintended consequences are fine and should be amplified.)
- The **Chaotic** domain is where decisions are required very quickly, and the main aim is to control the environment and prevent further bad things from happening.

THE RIGHT TOOL FOR THE JOB

The Clear and Complicated domains have a high level of certainty. There is either one clear option or several good ones to choose from. Tools such as SWOT (strengths, weaknesses, opportunities, and threats) and cost-benefit analysis are effective here. In the Chaotic domain, action is required to prevent bad consequences from occurring or to prevent more damage. This is where a command-and-control approach is expected and useful. Take a building evacuation: everyone knows to follow the directions of the emergency response team that has been trained on what to do in various scenarios. Drills are very useful practices to prepare for and speed up decision making when a chaotic event happens.



One of the symptoms of complexity is when the usual decision-making tools seem to be taking a long time. For example, when business cases (to inform cost-benefit decisions) take years to compile. We cannot get to a +/-10% level of confidence without almost building the project, and by then, the sunk cost is so high it's tricky to stop it. Here, we can use light exploratory tools such as design thinking, experimentation, and feasibility studies. By surfacing and testing assumptions, we can start with being partially correct and build more certainty from that point.

One often-ignored tool in navigating through environments of complexity is the transparency of information. The ability for leaders to ingest, digest, and radiate the right information at the right time from the right source is essential to be able to respond to the demands of the VUCA environments in which organizations now operate.

Unfortunately, the organizational constructs that exist in today's enterprise have become so complex that they create a bifurcation of information. Information is held in silos and shared on a need-to-know basis, to the extent that leaders are left with no choice other than to make localized decisions based on what they know, surmise, or believe.⁴ This inherently increases the risk of incorrect, short-sighted decisions that are not in the best interests of the organization, the leaders, or their people.

One of the most important tasks a leader can undertake to mitigate (if not remove) the complexity that is truncating their ability to make fact-based decisions is increasing information transparency. This requires a focus on purposeful design in the context of the individual organizations and its leaders to reconnect or create the connective tissues that enable communication, information flow, and directional decisions (see Figure 2).

Designing purposefully requires us to fully understand the organization's information needs. We must know how to do the following:

- Make and enable dynamic directional decisions and expedient interventions.
- Provide alignment between strategic intent and delivery.
- Create bidirectional flow rather than single directional (push-pull).
- Be synchronous (immediately available) versus asynchronous (on demand).
- Understand what information is white noise and does not provide value.
- Recognize what needs to be deprecated — what is no longer recommended or must be removed — as it is simply there because it always was.

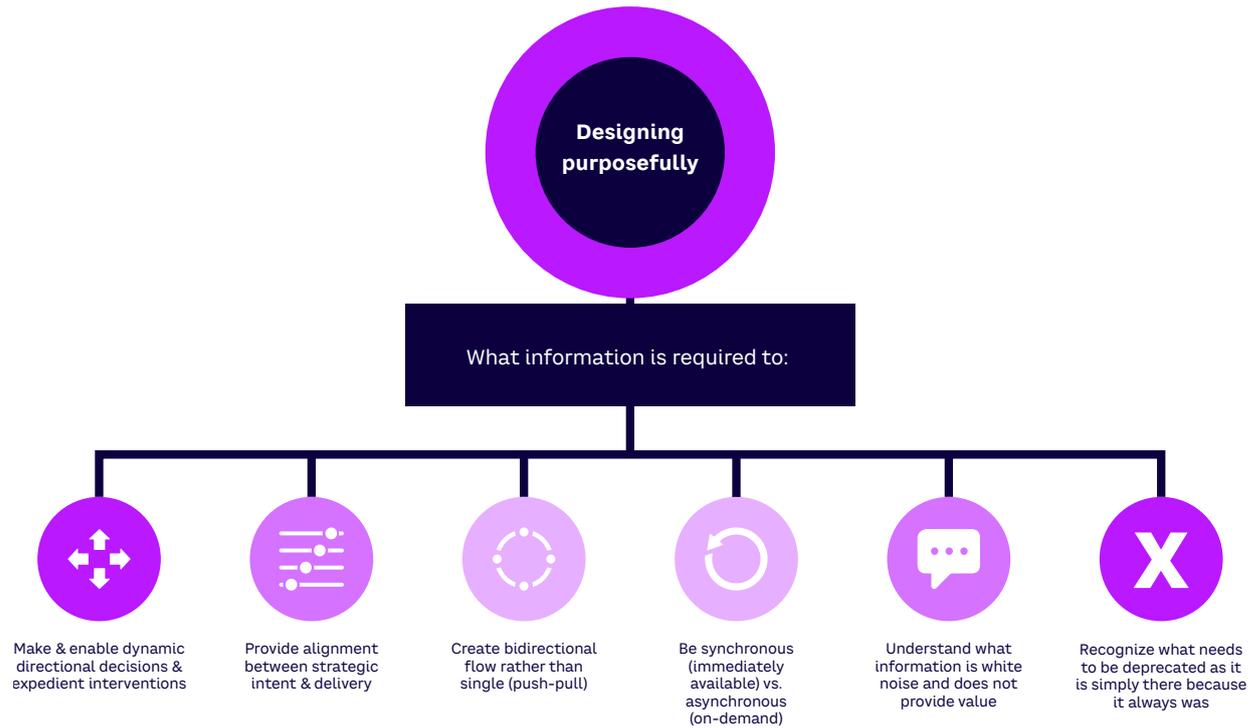


Figure 2. Purposeful information design

When we talk about tools to support decision making, leadership style is generally not top of mind. However, leading with intent is an important factor in increasing transparency and, therefore, a key factor in enabling decisioning.⁵

Leading with intent creates a bidirectional flow of transparency. Ensuring that those who are closest to the work have both the competence required and the organizational clarity needed to fully understand the situation allows decisions to be made close in person, place, and time to the issue at hand. Decisions can be made quickly, and feedback on the outcomes of those decisions can be received faster than in traditional, top-down decision-making systems.

This aligns to our understanding that right-first-time decisions in complexity are rare and the probe/sense/respond journey in the Complex quadrant of the Cynefin framework is required to reach the destination.

COMPLEX DECISION MAKING: A JOURNEY, NOT A DESTINATION

Decision making in complexity differs from decision making in other domains in that it's an

iterative process rather than a linear one. In other domains, you use whatever techniques are appropriate to arrive at a decision, and that's the end of the process. In complexity, you may make multiple decisions to get to where you want to go, checking each decision against actual results and refining as you go.

The process of complex decision making is a four-step cycle (see Figure 3). We start with the desired outcome — where we want to end up. It could be a very specific outcome, like increasing sales by 20%, or a more general one like being best in the market within five years. This gives you a direction you can test against, like plugging your final destination into your GPS; at any stage in the journey, you can test to see whether or not you are on track to reach your destination.

We next ask ourselves how we will know we are on the right track. What measures will we use to know that we are succeeding or failing in moving toward our goal? In our GPS example, we can check the distance remaining on the display. So for your end goal, what serves the function of the distance remaining on the GPS display? What measures can you make (preferably leading rather than lagging) that will tell you whether or not you are moving in the right direction?

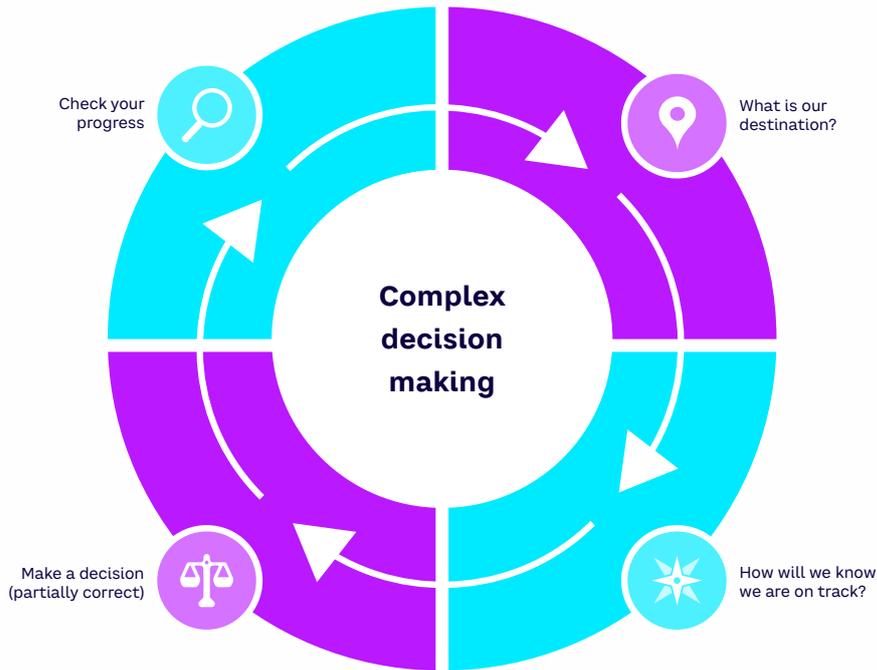


Figure 3. Cycle of complex decision making

Next, we make a decision that we think will get us closer to our goal. It may not get us all the way there (if it will, it's probably not a complex decision), but it should get us closer. Make the decision. Don't wait for all the information because you will never have all the information. Don't wait for the best possible decision because you will never know what that best possible decision is. Just make the best decision you can with the information you have on hand.

Then we watch our indicators. Are we moving in the right direction? Are we moving in the wrong direction? Are we standing still? What impact is the decision we made having?

Once we can see the impact of the decision and the direction we are heading, we loop back to the start. Now that we know more, is our destination still the destination we want to get to? Has a new destination revealed itself? Are our measures still appropriate? Do we need to revise the decision already made? If we are going in the wrong direction, do we need to change the decision? If we are going in the right direction, can we do anything to get there faster?

Decision making in complexity is a journey, not a destination. The decision you make is not the end of the process but the beginning of a cycle.

CULTURE OF COMPLEX DECISION MAKING

In complexity, there is no one best decision to make. We cannot avoid all risks. If we expect there to be a single best decision that we can make, that we can get right the first time, then decision making in a complex environment will seem impossible.

Leaders must become comfortable with the idea of decision making as a journey rather than a destination. They must become comfortable with not always having the answer, making mistakes, heading in the wrong direction, learning from that, and correcting. They must become comfortable with being partially correct.

Organizations that can make the leap from right-first-time decisions to partially correct ones will navigate the complex environment in which we find ourselves much better than those that can't. To do that, they will need to challenge the existing culture built around the need for certainty and the fear of not having the answer or of being wrong. They need to allow themselves to be uncertain, to make the best decision they can for now and correct later with no fear of punishment.

Our current culture strongly discourages the appearance of uncertainty. Politicians and business leaders are accused of flip-flopping or having made a horrific blunder if they revise or change a decision in the face of new evidence. Instead, they are expected to push on with their chosen course with certainty and determination. To change is to show weakness.

Overcoming this is the biggest challenge to making decisions in complex environments. Far more than the decisions themselves, the cultural barriers that lock us into right-first-time thinking and prevent us from embracing partial correctness are the challenges we must overcome.

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