# AI, The Erosion of Cognition and Capability, and the Future of Leadership

By Dr. Chris Rowell

While many leaders are embracing AI at full speed, few are considering its cognitive, cultural, and developmental implications. AI is not just transforming how we work; it's reshaping how we think, learn, and grow. As leaders, we face a crucial decision: embrace short-term efficiency or invest in long-term capability.

Much of the conversation around AI focuses on its potential to liberate humans from the drudgery of repetitive tasks, enabling us to focus on strategic thinking and creative problem-solving. Yet, what often goes unspoken is the risk AI poses to these very skills, particularly for younger generations, where its widespread use may hinder the development of critical and creative thinking in the first place.
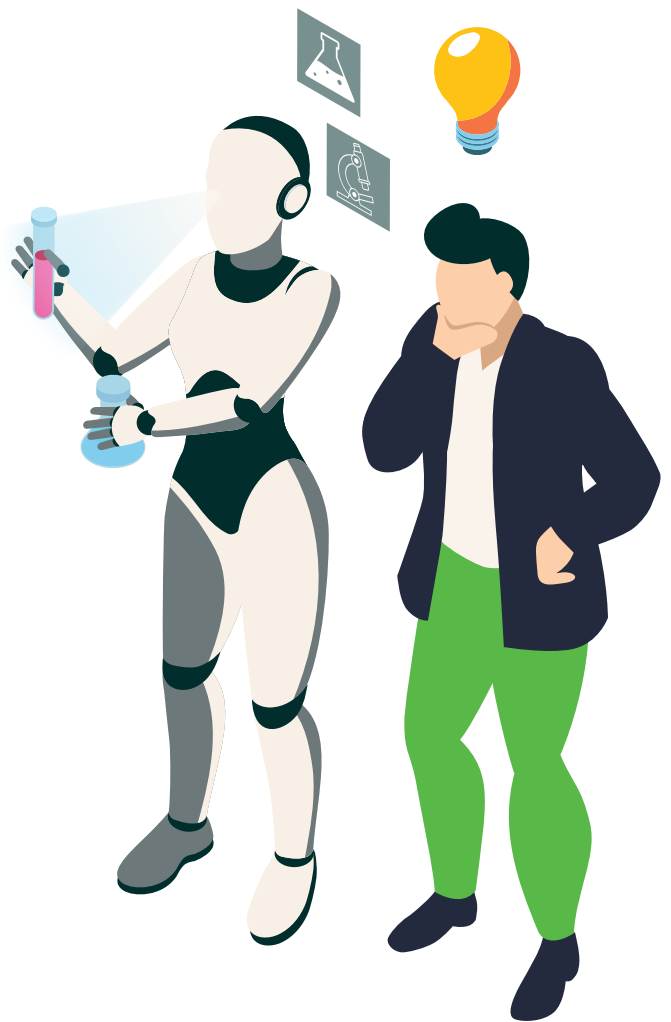
The Cognitive Erosion Problem

How many phone numbers do you know by heart? A couple of decades ago, we could easily rattle off numbers for family, friends, and colleagues. Today, the number might be just our own, or if we're lucky, a few close family members.

This shift highlights a broader impact of technology on our cognitive abilities, known as the "Google effect" or "digital amnesia." As technologies evolve and become more ubiquitous, we're increasingly offloading our memory and mental processing to them. Psychologists call this "cognitive offloading." The brain, much like a muscle, thrives on exercise, and memorisation is one of its most foundational workouts. By offloading this task to our phones, we risk letting those neural pathways weaken.

AI, with its exponential capacity to provide answers at the click of a button, is dramatically accelerating this process of cognitive offloading.

The Friction Dilemma: Value-Creating vs. Value-Destroying

In organisations, the integration of AI has immense potential to eliminate value-destroying frictions - tasks that are repetitive or menial. But there's a catch. Many of the frictions that AI can eliminate are the very ones that create value over time: the mental strain of learning-by-doing, problem-solving, and critical thinking.

Take writing an email, generating a presentation, or analysing a dataset. When you let AI take over these tasks, you're not just saving time; you're eroding your cognitive muscles. Each time we delegate thinking to AI, we not only lose the immediate learning opportunity but also diminish our ability to develop these skills in the future.
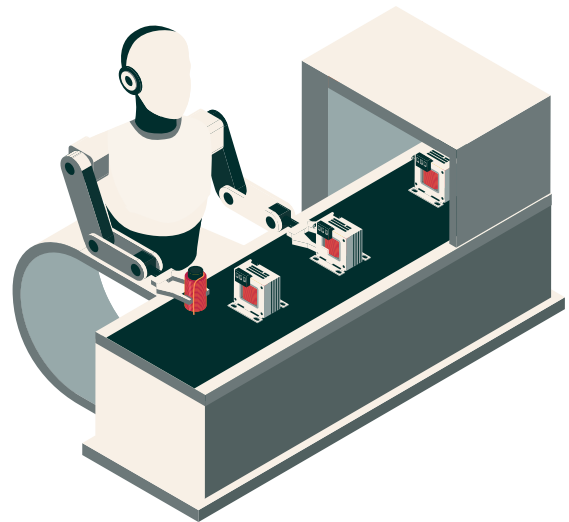
The Demise of Deep Specialisation

The convenience of AI answers creates an incentive problem, particularly for emerging professionals. Historically, the best advice for ambitious professionals was to become "T-shaped"; developing deep expertise in one area, with a broad base of skills across other fields. But with AI serving up answers instantly, who's motivated to go deep?

By outsourcing the work of specialists to AI, we risk eliminating the vertical bar in the "T" - the expertise that once required years of focused effort. Now, it's easy to get shiny, polished answers we don't fully understand or critically engage with, and many are happy to take them at face value. Deferring to AI is likely to be more pronounced in organisational cultures that impose a high cost of "getting it wrong". If my leaders don't tolerate the experimentation and imperfection that comes with learning, why risk it?

This loss of specialisation may matter differently across industries, but the concern is clear: an incomplete "T" undermines our ability to think critically and creatively. Senior leaders who use AI to augment their capabilities might still evaluate and innovate on the answers they receive. But when junior team members rely on AI to generate solutions, they miss the crucial step of critically evaluating and expanding upon those ideas, missing out on essential learning opportunities. Over time, this reliance can hinder their ability to develop the critical thinking and problem-solving skills necessary for growth and advancement.

The Succession Crisis

In May 2025, Dario Amodei, CEO of AI firm Anthropic, predicted that 50% of entry-level white-collar jobs could be wiped out by AI in the next five years. In the short term, this could yield significant efficiency gains for organisations. But the long-term consequences are more worrying.

AI is disrupting traditional pathways for developing skills, experience, and leadership potential. If organisations rely on AI to handle increasingly routine work, they may find themselves facing a future leadership gap. If your graduate hires never learn to structure a compelling argument, who will lead your boardroom in a decade? Will the next generation of leaders be AI operators, or independent thinkers? The future of leadership succession depends on how we balance AI's efficiencies with the need to foster deep thinking, problem-solving, and human connection.

# A Critical Decision Point for Leaders

This is a leadership moment. Not just to deploy AI efficiently, but to define the human edge in your organisation. Leaders must take a conscious, balanced approach to AI. The short-term efficiency gains are tempting, but leaders must also consider the future: how will their people think, grow their skills, and develop as successors?

To maintain a thriving, future-ready workforce, leaders must preserve - or create - the frictions that drive learning and growth. Moreover, leaders must consciously shape their organisational culture to appreciate and encourage the messiness, inefficiencies, and inaccuracies that come with human learning. If these are not tolerated, then the sheen of AI-generated answers will be too difficult to resist.

It's not just about eliminating inefficiencies; it's about designing new opportunities for development, creativity, and critical thinking.

The answer likely lies in a mix of both. Some frictions will need to be preserved and others are better off eliminated. The challenge is navigating this balance with intentionality.
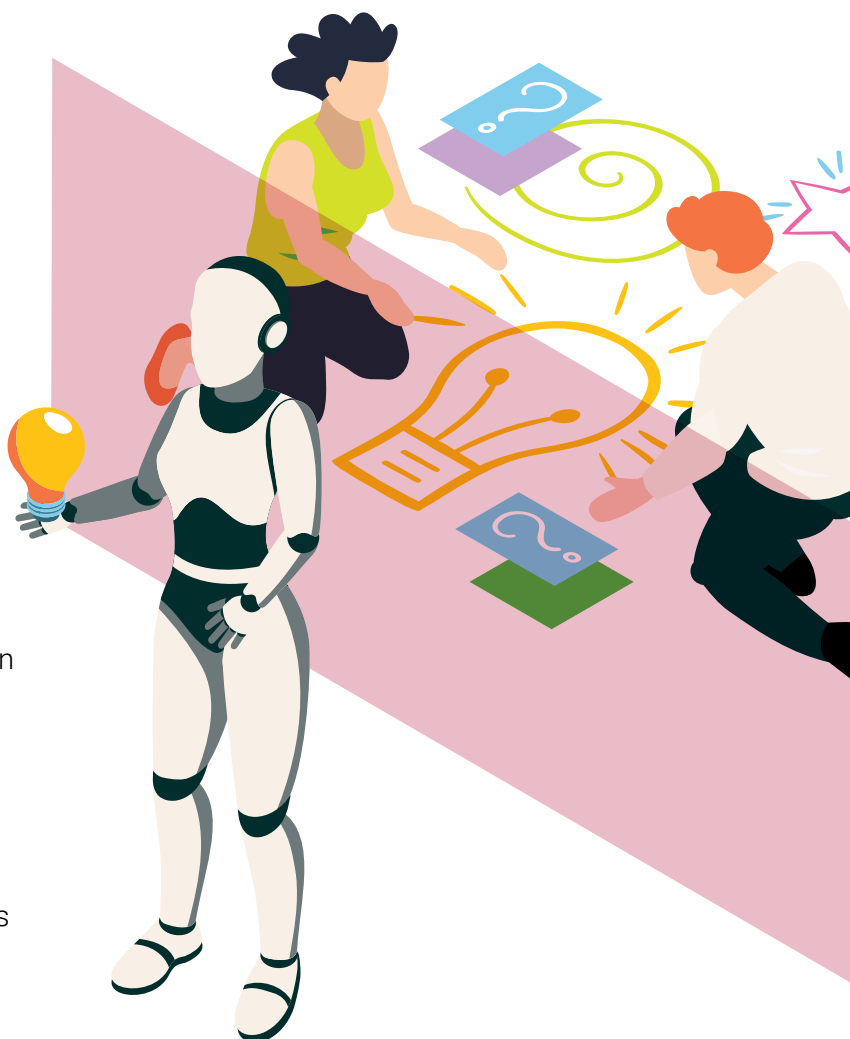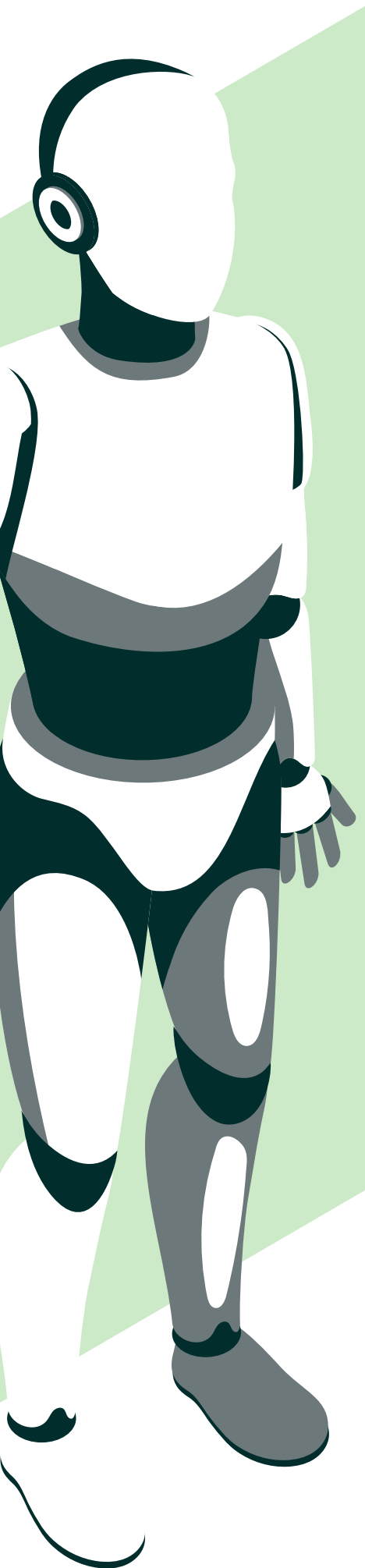
Safeguarding Cognition and Capability

So, how do we do that? Well, consider these ideas...

Redesign workflows so AI supports thinking, not replaces it
For example, instead of asking AI to write the presentation, ask team members to draft it first, then use AI to refine and stress-test their ideas.

Introduce 'AI + You' checkpoints
Require team members to explain why they used an AI-generated output, what they changed, and why. This forces critical engagement rather than passive consumption.

Use AI as a debate partner
Ask team members to generate two opposing perspectives using AI and then evaluate or synthesise them. This encourages deep thinking and argumentation.

Designate manual expert tasks
Create zones in your development programs where AI use is intentionally off-limits.

Run cognitive sprints
Have teams solve problems without AI first, then reintroduce AI to test and compare outcomes. This makes learning visible and deepens capability.

Make depth of knowledge a cultural badge of honour
Recognise and reward not just efficiency, but depth of insight. Shift from celebrating 'speed to output' to valuing the quality of interpretation and insight.

Codify 'critical moments' of leadership development that must remain human
Identify which tasks (e.g., presenting strategy, handling conflict, influencing decisions) are critical learning points and must be developed experientially, not short-circuited by AI.

Create team charters for AI use
Let each team co-author agreements about when to use AI and when not to, with rationale based on learning, ethics, and performance.

Rather than automating frictions out indiscriminately, the key is to curate them.
Ask:

What frictions build our mental muscles?

Which ones drain our momentum?

How can AI become a collaborator in growth, not just a substitute for effort?

Leaders who get this balance right won't just drive efficiency, they'll create conscious organisations that remain deeply human, curious, and capable in the face of change.