



LEARNERS LIVE



Expanded from Bill Attardi's EnergyWatch.com

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<http://attardimarketing.com/>
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In times of change, learners inherit the earth, while the learned find themselves beautifully equipped to deal with a world that no longer exists.

Eric Hoffer

Something to Think About...

The Critical Need for a Crisis Communication Plan for Your Business by Frank Grobmeier -

What is one of the biggest mistakes any business can make? It's believing that nothing bad will ever happen to it. As a result, leadership doesn't prepare for the inevitable crisis.

The reality is every business faces challenges that they never see coming. But taking a little time to prepare a crisis communication plan would allow them to quickly and effectively respond to their employees, customers and stakeholders with a unified message and the critical details that will protect its reputation, maintain public trust, and minimize negative impacts.

We've watched recent crises unfold, like the California wildfires and Hurricane Helene, which have shown us that unexpected situations can alter our day-to-day business dramatically. However, natural disasters are not the only unexpected things that can impact our business. Other crisis situations can include corporate scandals, bankruptcies, product recalls, severe weather closings, and technical failures, just to name a few.

A thorough crisis communication plan provides your employees with the knowledge and direction that guides how they appropriately respond to customers, stakeholders, and media requests.

A strong plan can help your organization maintain operational efficiency during a crisis and provide employees with clear guidelines on how to engage with first responders, contractors, and media, while minimizing damage and restoring regular operations.

The following 10 simple steps can help you develop a comprehensive crisis communication plan:

1. Anticipate the crisis. Take your head out of the sand and begin to list out all the potential crisis situations that could put your business at risk. Today's "anticipations" could be tomorrow's "situations."
2. Assemble a crisis team. No matter how competent you are as a leader, a crisis requires multiple people to execute the plan. You should also identify backup personnel for each of those roles in anticipation of what could happen if someone on the crisis team is directly involved in the crisis.

Consistent Innovation / Steady Progress

3. Decide on a spokesperson for the organization. This person will provide a unified message to the media, stakeholders, and if applicable, shareholders to update these key constituencies on the situation.
4. Assign a leadership point person. This role is different from the spokesperson. This point person oversees managing the crisis situation while the spokesperson is solely responsible for informing people and speaking on behalf of the business.
5. Create a place to centrally store the crisis communication plan. This will need to be a software / cloud storage area that can be readily accessed by the crisis management team. You will also need to develop email groups / text chains / virtual links that the team can use to communicate with each other during a crisis situation.
6. Protect employees. The first, critical piece of every crisis plan is to ensure the safety and security of your employees. Create an action plan that is specific to your employees and your facilities.
7. Identify all stakeholders, other than your employees. In a crisis you will want to reach out personally to key stakeholders, such as board members, investors, vendors, and key customers. Others, such as smaller customers and prospective customers, you can alert through social media, while friends and small vendors may also be contacted via email. Rely on general media to inform industry folks and the surrounding communities. Make sure your plan identifies each type of stakeholder; the action required, for example notifying customers of warehouse closures; and the method of notification.
8. Develop information management processes and protocols. These include how to interface with first responders, government officials, and other agencies, as well as how to protect employees, etc.
9. Establish a company media policy and make sure employees fully understand the guidelines. In larger organizations, the Human Resources team will need to have a media policy in place not only for crises but also to guide how employees regularly represent the company in social media posts. In your crisis communication plan, your employees need to know who the spokesperson is and understand that they should not comment on the situation but direct all questions to that spokesperson.
10. Create holding statements. While it's not possible to create detailed statements about every potential crisis, it is possible, and even desirable, to write several crisis statement templates that can be easily and quickly reworked into specific statements and releases during the early stages of the event. Being prepared with holding statements speeds up response time during the event and increases the odds of successful communication with stakeholders—protecting the business reputation and relationships.

The whole idea of crisis planning is to mitigate risk during unexpected situations. The operative word is unexpected. So, there's no time like the present to devote time and resources to developing a comprehensive crisis communication plan because you never know when you might need it.

[The Critical Need for a Crisis Communication Plan for Your Business by Frank Grobmeier](#)

National News

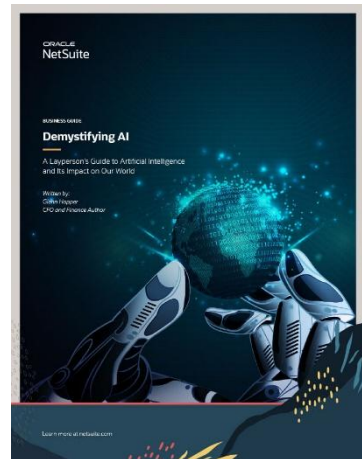
- 1. *Bill Introduced to Prevent Supply Chain Disruptions, Protect American Producers*** - The bipartisan Promoting Resilient Supply Chains Act would authorize the Department of Commerce to strengthen American supply chains for critical industries and emerging technologies by working with the private sector and U.S. government partners to anticipate and prevent future supply chain disruptions before they happen. In the process, it will also identify opportunities to grow manufacturing capacity and jobs, and reduce costs for American consumers. Geopolitical conflicts, natural disasters and the pandemic have highlighted the fragility of supply chains. These events have already caused significant delays and shortages, impacting everything from critical medical supplies and driving up the costs of consumer goods. The U.S. is heavily reliant on single countries for critical supply chain segments, including manufacturing components, critical minerals, and active pharmaceutical ingredients. This concentration poses a significant risk of disruption.
[Bill Introduced to Prevent Supply Chain Disruptions, Protect American Producers – tEDmag](#)
- 2. *GE Vernova Outlines \$600M US Expansion*** - GE Vernova Inc. outlined a capital investment program for U.S. manufacturing and development operations totaling close to \$600 million through 2027. It projected the investments would address issues involving energy affordability, national security, and manufacturing growth, and would prompt the creation of more than 1,500 new jobs. GE Vernova, which is the former General Electric portfolio of businesses that manufacture industrial and alternative energy systems, pegged the new U.S. investments as part of its broader, \$9-billion global capital investment and research program. Among the planned U.S. investments:
 - Greenville, SC (\$160 million)
 - Niskayuna, NY (\$100 million)
 - Parsippany, NJ, Bangor, ME, Schenectady, NY (\$50 million each)
 - Clearwater, FL, Charleroi, PA (\$20 million each)
 - Also Pensacola, Grand Forks, Amarillo, Wilmington, Pittsburgh[Energy Giant Outlines \\$600M US Expansion | GE Vernova | American Machinist](#)
- 3. *Lafayette College Partners with Sollum Technologies to Advance Precision Agriculture Research*** - Lafayette College, under the leadership of Dr. Robert Elliott, is embarking on a groundbreaking research initiative to measure the effects of advanced [LED lighting](#) on the growth and quality of various crops. The lab, based in Easton, Pennsylvania, uses Sollum Technologies' dynamic [LED](#) lighting solution to tailor optimal growing conditions for each crop. The research area consists of 12 independent cells, each measuring 1m x 1m, equipped with advanced control and monitoring systems. These systems regulate temperature, humidity, vapour pressure deficit (VPD), light timing, CO₂ levels, irrigation volume, substrate electrical conductivity (EC), and more. This design allows precise replication of varied growing conditions, and tests of ecosystem responses along environmental gradients, setting a new standard for agricultural research. [\[News\] Lafayette College Partners with Sollum Technologies to Advance Precision Agriculture Research - LEDinside](#)

4. [Electrical Wholesaling: Bill Attardi Launches LearnersLive.com as Lighting Industry Training Resource](#)
[TED Magazine: Bill Attardi Launches New Website](#)
Much appreciated.....

5. ***Elon Musk Unveils Grok 3, Says It Outperforms All AI Rivals*** - Tesla CEO Elon Musk announced that Grok 3, the latest version of his AI chatbot developed by xAI, is in its final development stages and will be released in one to two weeks. Speaking at the World Governments Summit in Dubai, Musk claimed that Grok 3 surpasses all existing AI chatbots in reasoning capabilities. In the tests we've done so far, Grok 3 is outperforming anything that's been released, Musk stated, adding that the model analyzes its own mistakes to improve accuracy. The AI will compete with ChatGPT (OpenAI), Gemini (Google DeepMind), Claude (Anthropic), Mistral AI, and Meta's (META) Llama. This article first appeared on GuruFocus. [Elon Musk Unveils Grok 3, Says It Outperforms All AI Rivals](#)

6. ***Demystifying AI by Oracle NetSuite*** - AI is no longer confined to the realms of science fiction or cutting-edge research labs. It is becoming increasingly pervasive in nearly all aspects of our lives, as businesses and governments harness the power of AI to streamline operations, enhance customer experiences, and solve complex problems. The time for action is now; understanding AI is no longer a luxury but a necessity as we strive to adapt, thrive, and shape the world around us. This guide written by author and CFO, Glenn Hopper, provides a comprehensive introduction to AI, shedding light on core concepts and technologies that fuel it. [Demystifying AI](#)
Download it now to gain insight into:

- Making informed decisions around AI.
- Harnessing the potential of AI-driven solutions.
- Navigating the ever-changing landscape.
- And so much more!



7. ***Meta's Dual-Brand Smart Glasses: Oakley for Performance, Ray-Ban Goes High-End*** - Meta is expanding its smart glasses lineup with fresh offerings under both the Oakley and Ray-Ban brands—two labels united under Luxottica. Ray-Ban Meta smart glasses



offer hands-free photo and video capture and voice-activated AI assistance. The new Oakley smart glasses esigned with athletes and fitness enthusiasts in mind, feature a reconfigured camera mounted at the center of the frame to improve balance and tracking accuracy during high-intensity activities like cycling or running.

Introducing Hypernova: The Premium Upgrade:

Hypernova will feature a display on the bottom of

the right lens, where information is directly projected into the wearer's field of view, nudging the device closer to being a lightweight, wearable computer that might one day rival smartphones. While standard Ray-Ban Meta glasses are priced at around \$299, Hypernova could fetch nearly \$1,000 due to its advanced features.

https://www.ledinside.com/news/2025/2/2025_02_17_02

8. ***Apple Will Spend More Than \$500 Billion in the U.S. Over the Next Four Years*** - Today, Apple supports more than 2.9 million jobs across the country through direct employment, work with U.S.-based suppliers and manufacturers, and developer jobs in the thriving iOS app economy. As part of its new U.S. investments, Apple teams and facilities to expand in Michigan, Texas, California, Arizona, Nevada, Iowa, Oregon, North Carolina, and Washington, and hire 20,000 people.
- Opening a New Manufacturing Facility in Houston
 - Doubling Apple’s U.S. Advanced Manufacturing Fund
 - Growing R&D Investments Across the U.S.
 - Supporting American Businesses with a New Manufacturing Academy in Detroit
- [Apple will spend more than \\$500 billion in the U.S. over the next four years - Apple](#)
9. ***Your Guide to LEDucation 2025 and the EdisonReport Media Network*** - As LEDucation 2025 approaches, attendees can look forward to an exciting lineup of **virtual sessions, in-person events, and special recognitions**. Below is everything you need to know, including schedules and registration details. 13–14 March: Virtual Sessions LEDucation 2025 offers **15 virtual sessions** over two days, covering a diverse range of **lighting industry topics**. Attendees can register for individual sessions (\$20 per session) or purchase a full virtual pass (\$50) for access to all. [Register here.](#) [Your Guide to LEDucation 2025 - EdisonReport](#)
10. ***Why The ‘Redheaded Stepchild’ of Renewable Energy Is Poised to Rise Under Trump by Saul Elbein*** - Even as President Trump slashes support for wind and solar energy, another renewable energy source is finding unexpected favor under his second administration. In early February, newly confirmed Secretary of Energy Chris Wright [named geothermal energy](#), which uses underground heat to generate clean heat and electricity, as one of the prime areas for department research and development. With bipartisan political support behind its efforts and skyrocketing energy demand from data centers bolstering the potential market for its offerings, the geothermal industry is getting excited. [Geothermal energy finds favor under Trump administration](#)
11. ***Positioning American Energy for the Next Century*** - On February 14, President Donald J. Trump signed an Executive Order establishing the National Energy Dominance Council.
- The National Energy Dominance Council will be established within the Executive Office of the President, chaired by the Secretary of the Interior Doug Burgum and vice-chaired by the Secretary of Energy Chris Wright, and comprised of members of President Trump’s cabinet and key government agencies.
 - The Council will advise President Trump on strategies to achieve energy dominance by improving the processes for permitting, production, generation, distribution, regulation, and transportation across all forms of American energy.
 - It will recommend a National Energy Dominance Strategy to the President aimed at cutting red tape, enhancing private sector investments, and advancing innovation.
- [Fact Sheet: President Donald J. Trump Establishes the National Energy Dominance Council – The White House](#)

e-Learning Showcase

1. *Selling in the Executive Suite* –
[LearnersLive – Selling in the Executive Suite.mp4](#)



Selling in the Executive Suite
6 steps

1. **Contacting the Decision-Maker(s)**
2. **Establish an “Executive Team” Mindset**
3. **Create Relevancy for the Executives**
4. **Create the Incentive to Change**
5. **Create the Confidence to Invest**
6. **Create Measurable Results**

Improve the business of your customers!

2. *America’s Tech Giants Are Taking Over! The \$15 Trillion Power Shift Explained* -
Technology isn’t just shaping the future—it is the future. And at the top of the global market?



American tech giants. Apple, Microsoft, NVIDIA, Amazon, Alphabet, and Meta now dominate the global economy with a combined market cap of over \$15 trillion—more than the GDP of most countries! In this video, we break down the power shift, the rise of AI, cloud computing, and digital ecosystems, and what this means for the future. Will tech dominance continue, or will new industries rise to challenge these giants?

[America’s Tech Giants Are Taking Over! The \\$15 Trillion Power Shift Explained](#)

<https://www.youtube.com/watch?v=kvqnjTnt8rE>

Education Resources

3. ***Free Learning Opportunities for Electrical Professional*** - With a special focus for electrical professionals, the Facilities Expo has solutions for any building challenges you might face. Here you will learn from industry experts, network, and explore our solution packed exhibitor floor—all for free! The Facilities Expo is a premier destination for facility managers, maintenance managers, and energy managers seeking innovative solutions, industry insights, and networking opportunities to optimize facility operations, enhance sustainability, and drive business success. Register at events throughout 2025 at: [EXPOS | Facilities Expo 2025](#)

4. ***Commercial Lighting Rebate Trends for 2025 by BriteSwitch*** - Despite concerns of LEDs reaching market saturation and legislation restricting fluorescent lamp sales passed in [15 states](#), commercial lighting rebates are still as strong as ever. Programs may have evolved to adapt to current market conditions, but overall, these incentives remain widely available across North America and continue to be an important tool for improving the payback of lighting upgrades. Now that most programs have been updated for 2025, we take a look at the biggest trends, how rebate programs are evolving, and how to take advantage of them.
 - [Lighting Rebates Cover Most of the US](#)
 - [Rebate Amounts Increase By A Modest 3%](#)
 - [Lighting Controls Get a More Prominent Role](#)
 - [Bonuses Available As Programs Try to Increase Participation](#)
 - [Rebate Applications Streamlined, But Challenges Remain](#)[Commercial Lighting Rebate Trends for 2025](#)

Publications of Learning

5. ***What to Know About AI Agents and Their Impact on Lighting by David Shiller*** - AI agents differ significantly from traditional AI systems in terms of functionality. AI agents possess higher autonomy, making independent decisions without constant human oversight. AI agents are poised to reshape the lighting industry, bringing next levels of intelligence, efficiency, and personalization to lighting systems. Here's how AI agents will transform various aspects of the lighting industry:
 - 1) **Intelligent Lighting Control**
 - 2) **Personalized Lighting Experiences**
 - 3) **Automated Commissioning and Maintenance**
 - 4) **Energy Optimization**
 - 5) **Enhanced Design and Planning**
 - 6) **Integration with Smart Building Systems**
 - 7) **Market Growth and Innovation**

More information is available [here](#). [What To Know About AI Agents And Their Impact On Lighting | LightNOW](#)

New Technologies



6. **Cooper Lighting Solutions Designs Ultra Efficient LED Track Luminaire** - Cooper Lighting Solutions has developed a new track head light set to revolutionize general, accent, and display lighting applications across various industries. The [HALO 808E Essential LED Track Luminaire](#) delivers up to 2500 lumens and 120 lumens per watt, making it one of the most efficient options on the market. The HALO 808E luminaire features field-interchangeable optics, which include 17° spot, 24° narrow flood, and 32° flood options. Compatibility with HALO Power and Lazer 120V track systems ensures seamless integration into existing lighting infrastructures. It offers smooth dimming capabilities down to 5% to provide unparalleled lighting control and ambiance management. [HALO 808E Essential LED Track Luminaire data sheet](#)
7. **Samsung Teases New Way to Interact with Mobile Through Hologram Experience Ahead of Galaxy Unpacked 2025** - Samsung Electronics illuminated the cityscape of London with a live hologram showcase, transforming urban spaces into vibrant canvases in anticipation of Galaxy Unpacked 2025 and bringing the world a sneak peek into the next era of mobile AI. With live holographic activation and voice elements, The hologram projections showed a variety of images representing common memories users might capture and share through mobile devices, from marine life and exotic plants to sports highlights and a lantern-filled sky. These displays hint at the more intuitive mobile experience users around the globe can expect from Galaxy AI, while also giving a glimpse of the new features set to arrive with the next Galaxy S series lineup. The immersive experience debuted January 15, projecting the never-before-seen holographic installations and featuring large-format, scalable 65-foot by 50-foot visuals positioned 100 feet above the ground. In addition to the installation going live in London, on-site social posts have further amplified expectations worldwide. <https://www.youtube.com/watch?v=Lh7X6wdrz5E&t=4s>
8. **Revolutionary Colorscaping System Introduced by WAC GROUP** - On the cutting edge of landscape lighting technology, WAC Group introduces the groundbreaking **Colorscaping Smart Landscape Lighting System**. This innovative, patented line of exterior LED luminaires is designed and engineered to illuminate landscapes with tunable white light and an unlimited color palette. Colorscaping integrates a full selection of WAC Landscape Lighting fixtures, including adjustable accent, wall wash and path lights, hardscape, tape light, and with existing landscape lighting fixtures, too. New and existing landscape fixtures are installed quickly using the innovative Smart Transformer Control Panel, which connects fixtures directly for immediate testing while cycling through preset tunable white and primary colors at various intensity levels. Offered with 150-watt and 300-watt capacities, the smart transformer enables robust wiring, a shielded ethernet cable, and a surge protector against power surges and voltage spikes. <https://www.youtube.com/watch?v=ccaPfvLftgA>



9. *naturaLED® Type A & B Universal T8 U-Bend Tube* - The naturaLED® Type A+B U-Bend T8 lamps with 3 adjustable wattages and 5 adjustable color temperatures is the most versatile

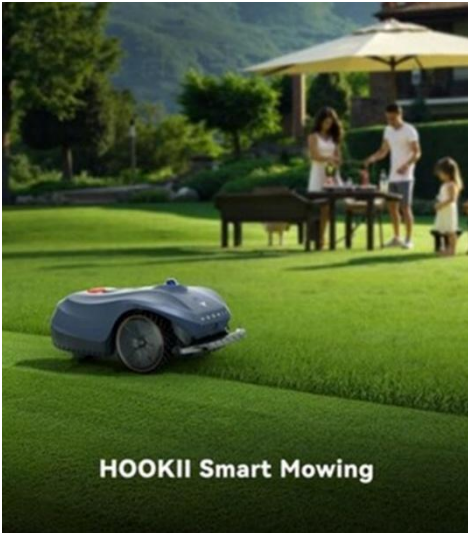


LED T8 U-Bend on the market. Really an outstanding product naturaLED® T8 U-Bend Type A + B fitting into your existing linear fluorescent fixture without the need to reinstall. Simply plug-and-play with Type A compatibility, or bypass the ballast for Type B luminaries. Replaces 32-watt fluorescent tubes according to the existing system. Fast and easy LED upgrade with

better quality of light instant-on provides 2X longer lifespan than fluorescents.
 APPLICATIONS Retailers, Restaurants, Hospitalities, Offices, Schools, Industrial Shop.
[T8 Tube U-Bend – naturaLED](#) Spec Sheet: [T8 Ubend CCT5AB UNV 4614](#)

10. *HOOKII 3D LiDAR & Vision Fusion Mower for 2X Faster, 95% Coverage* - HOOKII

introduces the world's first consumer robotic lawn mower powered by 3D LiDAR & Vision Fusion, delivering AI-driven precision cutting.



Designed to mow 2X faster than manual methods with 95%+ coverage, it eliminates patchy results while dodging everything from toys to small animals.

- Smart 3D LiDAR & Vision Navigation – Scans your yard 200,000 times per second, adjusting in real time for unmatched precision (95%+ coverage, <2 cm accuracy).
- Mow Day or Night, Rain or Shine – AI-powered vision sees through fog and darkness with 98% accuracy.
- Wire-Free Setup: Map lawns via app in 3 mins – 15X faster than boundary wire systems
- Visit hookii.com to secure your exclusive offer.

[Robotic Lawn Mowers](#) | [HOOKII Neomow](#)

11. *Neuralink's Brain Chip Technology & Patents* - Can you imagine moving a cursor just by thinking about where you want it to go? Crazy tech, right? Elon Musk has a track record of turning technically challenging engineering tasks into profitable ventures, and this time, it's Neuralink we're talking about. *In a major milestone, Neuralink recently announced that it received FDA approval to begin human trials of its brain chip technology in early 2024. This marks a significant step forward in the company's mission to develop advanced brain-computer interfaces (BCIs) that can help restore functionality for individuals with neurological conditions and enhance human capabilities.* Neuralink, a company founded by Elon Musk, aims to revolutionize brain-computer interfaces (BCIs). By developing advanced technologies that allow direct communication between the brain and external devices, Neuralink seeks to restore functionality for individuals with neurological conditions and enhance human capabilities. The initial focus is on addressing paralysis and treating complex neurological conditions. [Neuralink's Brain Chip Technology & Patents](#)
 Video: [Elon Musk's Neuralink gets FDA Approval: See How It Works](#)

LearnersLive Special Feature

Where Humans Still Have the Edge on AI by Marc Zao-Sanders - www.marczaosanders.com

Since ChatGPT's launch two years ago, generative AI (gen AI) has been promising to reshape how work gets done. The [use cases](#) are many and varied, and we're still discovering what's going to work best, for us as individuals, in teams, and as organizations. In a surprising twist, it's the white-collar work of the office that seems to be more imminently replaceable than the [blue-collar work](#) of the field and factory.

Gen AI has several attributes that we humans lack. It's always on. It draws on a vast segment of the web. It generates output instantly. It can scale endlessly. This new era of AI can feel intimidating for the limited, lumbering life forms that created it. We now need to look harder to see where our unique value still lies. [Where Humans Still Have the Edge on AI](#)

Areas Where AI Has Already Surpassed Human Capability

Silicon-based intelligence has improved substantially over the past few decades. Long before the arrival of LLMs and gen AI, AI had surpassed humankind in many specific areas:

- Checkers (1994)
- Chess (1996)
- Passable language translation (2006)
- Handwriting recognition (2014)
- Reading comprehension (2017)
- Conversational response (2023)
- Human-level language translation

We don't know which domains AI will dominate next, but candidates include fully autonomous (level 5) driving, surgery, writing a bestselling book, developing AI systems themselves, and the holy grail: [artificial general intelligence \(AGI\)](#) — the term [popularized by Shane Legg](#) referring to AI achieving human-level proficiency across a wide range of cognitive tasks. With the heightened current media and [investment interest](#), it's clear that AI progress will continue in some vein. What, then, might be difficult for AI for the foreseeable future? What moat can humans continue to own and defend?

Areas Where Humans Still Have an Edge Over AI

In speaking to hundreds of experts, consumers, and skeptics of AI over the past few years, four strongholds for humans keep coming up:

- **Emotion:** Understanding, connecting with, and responding sensitively to human feelings.
- **Complexity:** Navigating ambiguous, broad-context challenges with holistic problem-solving.
- **Physicality:** Tasks requiring dexterity and interaction with the physical world, particularly where human presence and responsiveness matter.
- **Creativity:** The ability to generate original, novel ideas and solutions.

Let's look at each one in turn.

Emotion

Humans are still the world experts when it comes to soft skills. Gen AI can convincingly and usefully mimic some of what we have thought, felt, and said about empathy, ethics, negotiation, etc. Some people are even starting to use AI for therapy and companionship. But for most of us, with our unfathomably nuanced individual circumstances, we still look to another person to understand us best. A human expert, friend, or colleague is also more likely to give unfiltered, contrarian, surprising, or even controversial opinions — and in many situations, this will be a lot more useful than safe, generic, clinical machine output.

Humans also have the advantage of being interesting to other humans. We've evolved to pay attention to what other human beings think, feel, say, and do. This is the value and impact of the [human-interest story](#) and has been the fuel and the fire of social media for two decades. We love sports, music, and comedy because of the people that play, perform, and make us laugh. An AI-generated forehand, pop song, or joke — however objectively good — doesn't and won't make the same impact. After AI [unequivocally demonstrated](#) its superiority over all human chess players, interest in chess continued, but that interest has been in the exciting fallibility of human play, not the soulless perfection of machine games. Human skills that remain valuable (for now) include: persuasion, self-awareness, ethics, listening, storytelling, and sales.

Complexity

The world is still too complex for AI. AI has dominated humans in well-defined, limited, controlled arenas such as the boards of checkers, chess, and Go. AI and gen AI also perform well with a second wave of technical skills in broader domains. The frontier models can predict code snippets as developers type, generate code to solve problems, translate code between programming languages, fix bugs, and write supporting documentation. They can produce [marketing copy](#) and [legal documents](#), and [streamline financial accounting](#). But the world is full of much harder problems than these. Climate change, poverty, social justice, business strategy — described as “wicked problems” by professors Horst Rittel and Melvin Webber in a [1973 article in Policy Sciences magazine](#) — require an understanding of data drawn from a range of contexts. AI can't yet read across such disparate domains.

Indeed, Meta's chief AI scientist, Yann LeCun, and other AI luminaries [have argued](#) that because gen AI is trained only on text (albeit vast amounts of it), which is a measly subset of the data that human beings are able to draw on — such as our DNA encoding, sensory and embodied experiences of the world, emotions, etc. — we can't expect it to make much headway with the complex, wicked problems we face. Human skills that remain valuable (for now) include: complex problem-solving, sense-making, risk management, strategy, vision, and intuition.

Physicality

Gen AI doesn't interact directly with the physical world.

If you need to send a letter, put up a shelf, show the new employee around the office, or look someone in the eyes in a negotiation, gen AI can't do it for you.

Robots will take a while. Experts say [it will be a decade](#) before we have robots at home. Even Elon Musk, one of the world's most enthusiastic and influential robotics champions, concedes that [it will be 2040](#) before they're ubiquitous. Fully autonomous cars have certainly [taken much longer than](#) Musk and others once predicted.

And there are some professional interactions for which the human physical touch is a hard prerequisite. Care workers, chefs, athletes, nurses, waste collectors, hairdressers, and craftspeople have to be somewhere, doing something in the real world, to add their much-needed value. Human skills that remain valuable (for now) include: dexterity, body language, physical strength, balance, coordination, tactile sensitivity, poise, and hand-eye coordination.

Creativity

If we're training our AIs on data the world has already seen, isn't it hard for the technology to generate anything truly novel? Of course, gen AI can produce a sentence, paragraph, or image the world has never seen before. But can it bring about [authentic creativity](#) — output that is new in a way that stirs us and feels important to us? Despite the fanfare surrounding the launch of new AI media-

generating technologies, we don't care much for it as consumers. Spotify now includes [AI music](#) in its catalog, but all the big hits are by flesh-and-blood musicians. Very few people are watching AI-generated films, [nor do they want to](#). And although an AI-generated painting recently [sold for \\$1 million](#), it's a long way off the [\\$450 million paid for da Vinci's Salvator Mundi](#). We value history and scarcity, and these two qualities are beyond AI.

High-quality writing is safe, too — for now. Trained substantially on a couple of decades of web-based content marketing, gen AI can't help but produce undistinguished prose. Articles on this very website are still written and edited by human experts. I wrote a book in 2023, the year ChatGPT captured the world's attention, and for a week or two (around the time GPT-4 was released), I became concerned that my effort, along with all future human literary endeavors, would be rendered futile. That worry was short-lived as the actual quality of gen AI writing became apparent. Nicholas Thompson, The Atlantic's CEO, [describes the challenge and opportunity](#) for journalism: to "...make and create the stories that are hardest for LLMs to create...stories with new facts, based on human reporting, that are written with style and that are complex."

Collaborating with AI

How humans and machines can best work together. Notice that human creativity often draws on the other three categories — emotion, complexity, and physicality. Our proudest achievements in science, music, architecture, engineering, and other essential fields have always demanded a depth of feeling and thought, along with dexterity and industry. What could be more human? John Ruskin, the nineteenth-century English polymath, [once defined fine art](#) — arguably the epitome of human creativity — as "that in which the hand, the head, and the heart of man go together." Human skills that remain valuable (for now) include: imagination, ideation, aesthetic judgment, lateral thinking, artistic expression, and curiosity.

How Humans and AI Can Complement Each Other

Taking your skills in one or more of the directions above will help make sure that your contributions are not replicable by gen AI. But there's a nuance that should bring further comfort and success. The choice between us and AI is not binary. AI can augment human capability, and vice versa. That's a more precise and productive way of viewing what's possible already. For example, a government advisor may use meteorological data from AI systems as an input for a complex geopolitical decision. A care worker might use AI-based language translation to better connect with their patient. AI can also help augment human [creativity](#) and idea exploration: the 2024 Nobel Prize in Chemistry went to Demis Hassabis and John Jumper for their and their AI model's ([AlphaFold2](#)) ability to [predict proteins' complex structures](#).

The potential of this fusion of human and AI capabilities becomes clearer when we take a more forensic view of skills. It's mostly at the task or sub-task level where human contribution may become obsolete. AI [can't yet replace whole skills](#) (let alone [whole jobs](#)). Take, for example, the writing of a blog. We can prompt gen AI to write the entire piece and achieve a certain, limited standard of output. But expert bloggers will use gen AI for much smaller legs in the writing journey — for example, to provide a selection of examples to evidence a point, to find the word on the tip of their tongue, to prompt *us* into an epiphany. AI is often still at its best when carrying out *micro-tasks* for us, alongside us. . . .Much work and many skills, then, remain in our purview. We'll do better ourselves in the coming years by being more aware of what skills are still hard for AI while we [nurture our own curiosity](#). Try picking one of the two dozen skills listed here and generate a [learning pathway](#) for yourself. [Set dedicated time aside](#) to follow that path and develop that skill. And all the while, consider when and how to utilize gen AI for sub-skills and sub-tasks, as help for the exploits of hands, head, and heart.