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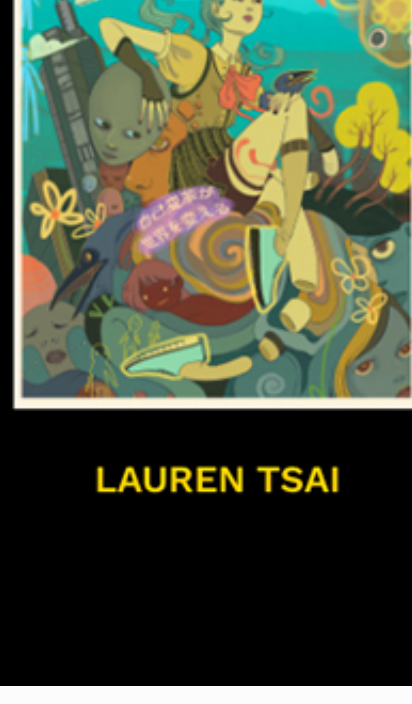
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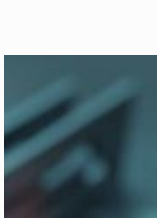


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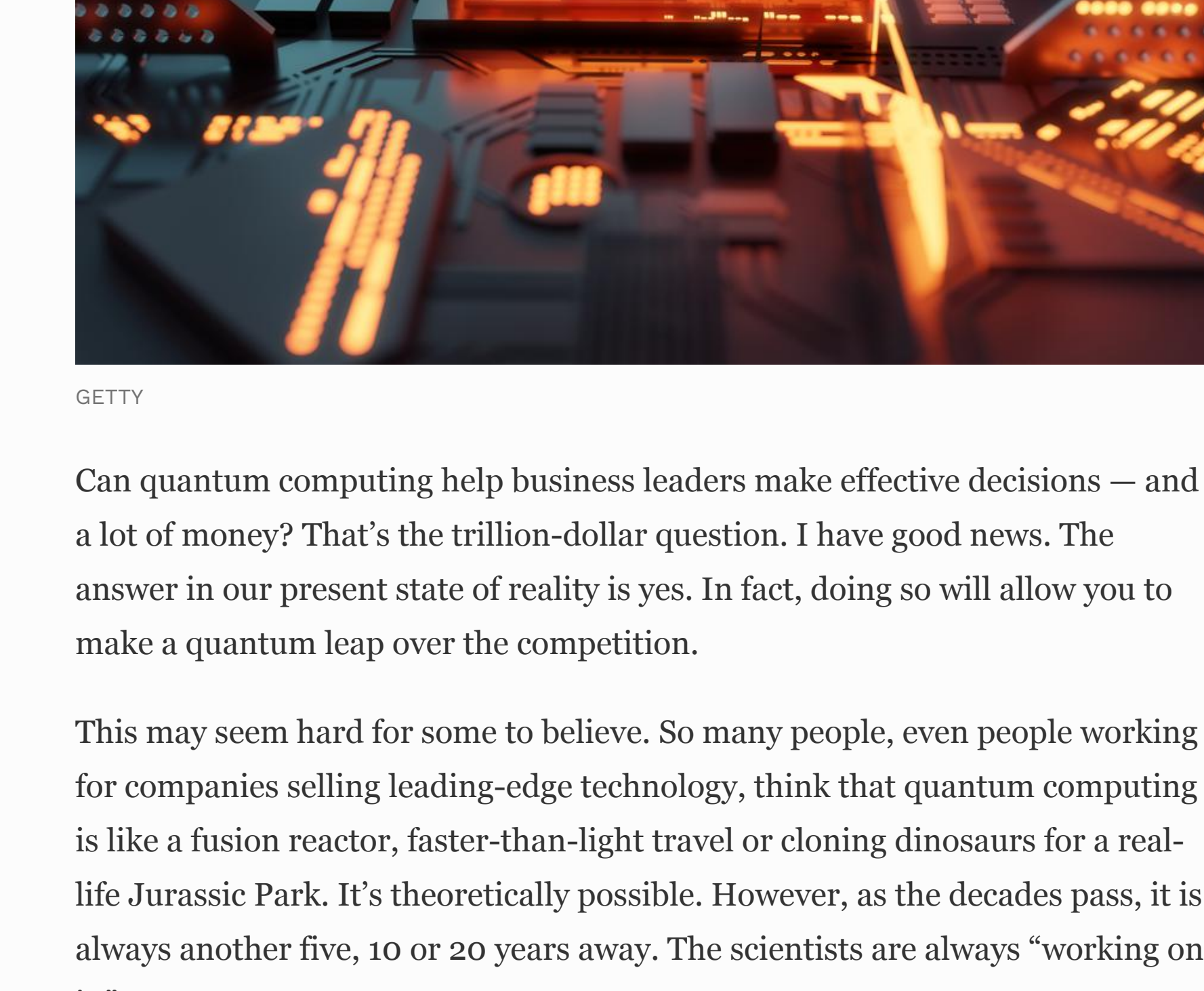
LAUREN TSAI

How Business Can Use Quantum Computing Right Now (Not 10 Years Into The Future)



Vaclav Vincalek [Forbes Councils Member](#)
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CEO of PCIS. Entrepreneur with a deep focus on technology. Helping companies strategize, innovate and grow.



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Can quantum computing help business leaders make effective decisions — and a lot of money? That’s the trillion-dollar question. I have good news. The answer in our present state of reality is yes. In fact, doing so will allow you to make a quantum leap over the competition.

This may seem hard for some to believe. So many people, even people working for companies selling leading-edge technology, think that quantum computing is like a fusion reactor, faster-than-light travel or cloning dinosaurs for a real-life Jurassic Park. It’s theoretically possible. However, as the decades pass, it is always another five, 10 or 20 years away. The scientists are always “working on it.”

In contrast, the quantum computing era is here, and it may matter quite a lot for your business going forward. Early adopters will be able to out-compete others that don’t adopt it.

Companies that have the mindset to prepare for the next big thing should be looking very closely into this area. I’m not saying that quantum computing will deliver instant miracles for your bottom line. But the barrier to entry is not the technology itself — it is understanding how it can be used. Even if quantum computers are not better or faster than classical computers right now, it is only a matter of time before the technology gets there.

Using quantum computing, you can get answers to critical business questions faster than companies that don’t use it. The early adopters can enjoy a “first-mover advantage” over their competitors.

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I compare this to how we used to talk about big data and machine learning only a few years ago. Before, the question was, “Should we start looking into machine learning for our business?” Today, companies are asking a [different question](#): “How do we implement AI or machine learning for our business as soon as possible?” Let me run you through that.

How companies can actually use quantum computing?

This may seem very abstract. Let me show you some examples of how companies, right now, are using quantum computers for profit.

Quantum computers help innovators find solutions where the number of options is so great that it is not feasible to calculate with today’s technology.

That’s why biotech is particularly interested in quantum computing technology. For instance, [Menten AI](#), aside from looking for a cure for Covid-19, is looking at discovering new drugs that sit between small molecules and large [biologics](#).

Going beyond what classical computers can solve, among other problems, the [knapsack problem](#) — basically, trying to fit the most (or best) stuff efficiently into a limited space — applies to logistics companies, loading container ships, packing aircraft, financial institutions and more. For instance, [Amazon](#) is providing access to the technology and providing the collaboration environment between industry and academia.

For logistics companies, you then have the facility location problem: Even if you aren’t interested in mathematics, the problem is often exactly what it sounds like. Where should you locate a warehouse so it can most efficiently take materials and distribute them to retailers or end users? Did we say distribution? Optimizing the whole supply chain management can save the operator millions (and also reduce costs and annoyance of the people whose trips are minimized).

Who are the players in quantum computing?

I have made a very large claim that you can start using quantum computing today, and I have provided examples of problems that fit into the new paradigm. The next question many business leaders would ask is very straightforward: “If I want to buy quantum computing technology (or hire a service provider to do it), where do I get it?”

After all, if you wanted to buy a smartphone, you might name Samsung, Apple or any number of companies. If you want to buy a computer, you might buy it from HP, Lenovo, Dell, etc. If I am correct that quantum computing is not just available but ready for your company, who could you buy this quantum computing technology from?

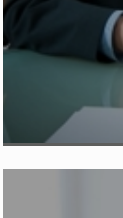
You have many choices, though not all quantum computing companies are the same. Quite to the contrary, there are many different offerings. However, I can quickly give you a lay of the land.

IBM Quantum [partners](#) with companies like [Daimler](#), which is using quantum computing to develop next-generation batteries. [Honeywell](#) claims to have built the highest-performing quantum computer to date. [Google](#) has made similar claims of a [major breakthrough](#) in this space. Microsoft has built [Azure Quantum](#), letting companies test out new innovations such as in cybersecurity. There is [D-Wave](#), which is looking to disrupt automation in the world of car manufacturing. And [engineers at MIT](#) have created the world’s largest quantum chip.

My point is simple: If you want to get ahead of your competition, there are ways to get started right now: Test out innovation on a quantum computer through the cloud, and build an internal team to start solving difficult problems.

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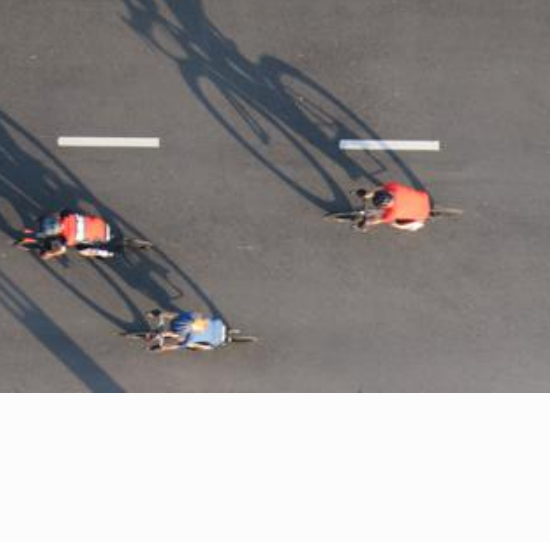
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BIG DATA ANALYTICS CERTIFICATION

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By [Brian Stucki](#), EVP and GM of CustomerXM, Qualtrics

Since the pandemic began, [Net Promoter Scores](#) have collapsed across all 20 industries benchmarked by the XM Institute. As consumer behavior zigzags in response to COVID-19, customer experience gaps have emerged more dramatically and rapidly than ever. With a quarantine-driven shift to digital and the sudden surge of calls to customer care centers, customer experience programs have not kept up.

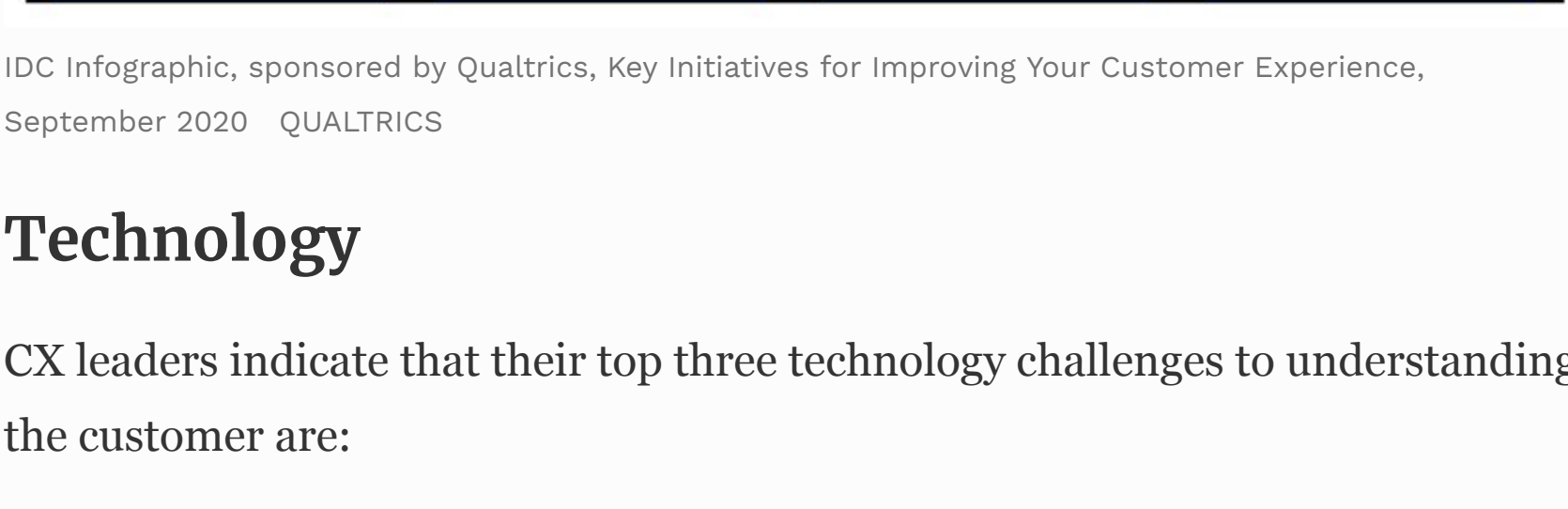
The tide has gone out on pure measurement programs, leaving many CX programs exposed. Previously, you could argue a high score meant a successful program. But as NPS scores plummet across the board, now it’s essential to take targeted action to rejuvenate customer experiences. Do that, and the scores will follow.

The tide has gone out on measurement programs

In a [study](#) led by IDC’s Alan Webber, Program Vice President for Customer Experience, and commissioned by Qualtrics, we uncovered three common themes in what CX leaders at companies with more than 500 employees are prioritizing in their programs:

- Invest in the right **technology** to interpret customer feedback so your team can quickly **take action**. Among these CX leaders, the most cited challenges were the proliferation of tools used for the customer experience (27%) and customer data being siloed across the enterprise (23%).
- Build your team with the right **competencies** to run a best-in-class CX program; 20% of leaders in the study pointed to the inability to identify the right KPIs to measure CX improvement.
- Create a **culture** of continuous listening among your employees and customers, because one-off or infrequent pulses are ineffective and outdated. CX leaders called out lack of a strategic vision among senior leadership (21%) as a key cultural barrier to improving CX.

MAIN CHALLENGES TO IMPROVING CX



IDC Infographic, sponsored by Qualtrics, Key Initiatives for Improving Your Customer Experience, September 2020 QUALTRICS

Technology

CX leaders indicate that their top three technology challenges to understanding the customer are:

- Gathering data on customer perception** (e.g. how a prospect or customer perceives, or thinks of, the experience that a brand delivers)
- Gathering data about customer experience** (e.g. how a customer feels about an actual interaction with a brand at some point along the customer journey)
- Translating data into customer understanding** (e.g. how to interpret customer perception and feedback to understand the key drivers of customer experience)

These technology gaps allow customer experience gaps to proliferate. Our study with IDC found that less than 50% of U.S. consumers say that companies provide a good experience.

To address these three challenges, your CX technology must be **adaptable** and **personalizable**.

Adaptable technology allows you to increase response rates by listening to your customers in the channels they prefer (like SMS, in-person, or voice-response). And listening well requires you to adapt your CX questions to a shifting environment (like a pandemic, decreased buyer demand, or negative publicity).

Personalizable technology allows you to customize how and when you engage with customers. If customers data indicates they prefer texts, don’t send email. If their purchase history shows they’re a high value customer, your tech should trigger white glove resolution instead of automated responses.

“Technology plays a key role – the technology the brand has and the technology the customer uses – in conjunction with culture, business processes, and intelligence. These realizations drive brands to adopt technologies to improve the experience of their customers,” according to Webber.

Unless you implement technology that can gather customer data efficiently and surface actionable intelligence across your team, the gap will only increase over time.

Competency

Acquiring good customer experience technology does not mean you’ve built a good program. As traditional customer services have been forced to shift, companies have had to act quickly, like [Peloton](#), which rearranged key roles and rewrote processes within days to keep customers satisfied.

That kind of action requires a team with the competencies to understand CX data and mobilize a company response. For example, as scores dropped and customer feedback has dried up during the pandemic, organizations have had to tap other sources of insight, like front-line workers or social media trends.

Together, competency and technology help build the culture.

These are examples of the [six core competencies](#) such as “Respond”, which focuses on driving improvements based on customer insights, or “Disrupt”, which emphasizes identifying and creating experiences to differentiate your organization. To help build competencies such as these, find the experts and resources for your team to connect and learn from other CX leaders.

Culture

CX leaders shared that their final obstacle in trying to understand the customer and improve their experiences was creating an aligned culture of employee empowerment and organizational action to adjust to the dynamic nature of the customer journey.

Think of DoorDash, whose [business has surged](#) during the pandemic. A near-weekly [stream of new initiatives](#) since March shows a culture that is dialed into the needs of customers and is capable of acting quickly on what it hears. The result: A surge to 45% market share against fiercely competitive rivals.

Previously, you could argue a high score meant a successful program; now it’s essential to take targeted action

Together, competency and technology help build the culture. “Recognize that the delivering a differentiated experience requires the whole organization and the merging of both operational and customer data,” Webber notes. Without the same ownership mindset or goals on customer experience, no level of technology or competency will be successful.

Technology, competency and culture are the key ingredients of an effective and impactful customer experience program. They will help organizations weather the current storm and be more prepared for the next one.

Learn more about the IDC InfoBrief, sponsored by Qualtrics, Building an Actionable Understanding of Your Customer. View the complete findings [here](#).

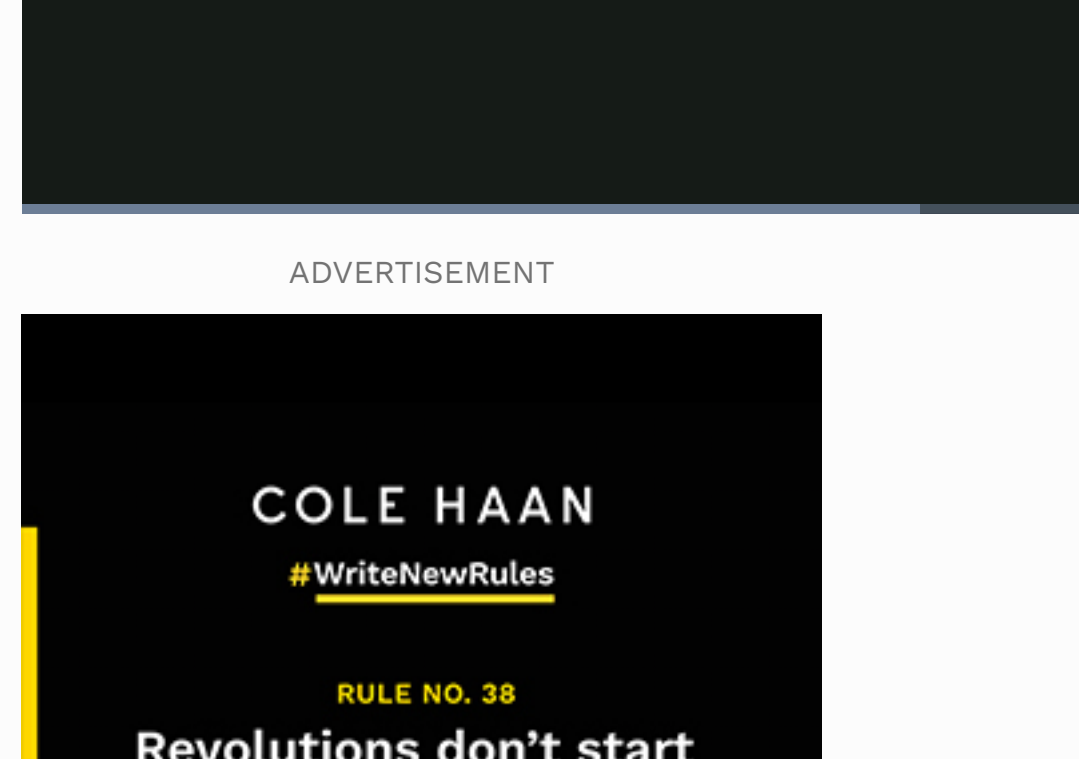
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