

Stories —

Creating the Future of Intelligence with DDI

Imagine you're a CIA officer working overseas in an authoritarian country. You used to be able to stay under the radar of the local security services by meeting with your contacts in discrete locations. But lately, it's becoming harder and harder to maintain that secrecy. Now there are hundreds of devices that know where you are every time you step outside. There are cameras on every street corner connected to the foreign government's facial recognition software.

Even if you're using the most sophisticated tradecraft, this world of ubiquitous surveillance and digital tracking can still present tremendous threats to you and, more importantly, your sources—the very people you've promised to keep safe as they risk their lives to provide critical information to the U.S. Government. Yet, the intelligence you and your sources provide is combined with vast

amounts of unclassified, open source data back at Langley. What normally would have taken weeks or even months to triage can now be analyzed in a fraction of the time, because your colleagues now utilize the latest in data science and AI technologies to help sort and make sense of all the information.

This is the challenge, and promise, of digital technology. It can both help and hinder CIA's mission, because emerging technologies are at once both a strength and a vulnerability. The same tools that have changed our everyday lives are also changing how CIA collects and protects intelligence. Digital technology is disrupting the world of spycraft.



On the Cutting Edge of Technological Innovation

CIA **created the Directorate of Digital Innovation** (DDI) in 2015 in response to our growing need to understand, utilize, and respond to emerging digital technologies. DDI brought together the Agency's missions of cyber collection and security, open-source intelligence, data science, information technology, and so much more—basically the 1s and 0s of our mission. These technologies are increasingly essential for CIA's success in a world of

ubiquitous sensing, growing cyber threats, and the exponential increase in data.

While we can't share too many details on our latest technological developments, we are constantly innovating and looking at how we can utilize modern technologies in a new light.

Some of CIA's most pressing challenges—seemingly limitless sources of disinformation, the rise of authoritarian regimes, and dangerous conflicts—all share a common thread: the use of digital technology to expand the reach and impact of these activities.

Emerging technologies also provide CIA with incredible opportunities. For instance, Artificial Intelligence can help officers make sense of a tsunami of information—triaging data faster than any human could alone, while gleaning greater insights from a mixture of open source (OSINT) and clandestine intelligence collection.

Let's explore some of the exciting challenges inherent in building a new digital ecosystem in what might be the most unique working environment in the world.

“Failure to harness AI and develop robust human-machine teaming will diminish our ability to generate insight, give advantage to adversaries more advanced in their use of AI, and challenge our relevancy.”



Juliane Gallina

CIA's Deputy Director of Digital Innovation

Human-Machine Teaming is DDI's "North Star"

Over the last nine years, since the founding of DDI, the Agency has increasingly embraced blending digital technology into our core human intelligence (HUMINT) mission to tackle our toughest national security problems.

Juliane Gallina, CIA's Deputy Director for Digital Innovation, says that a guiding principle in every aspect of DDI's mission is "human-machine teaming." Human-machine teaming starts with data, is enhanced by artificial intelligence, and is then made a reality by the talented individuals we have across the CIA, working in concert with our private industry partners.

"It is important to remember," says Gallina, "that CIA is not only a HUMINT-focused organization, but we also serve as the **functional manager for OSINT** for the Intelligence Community. Just think about how many news stories from across the world are published each and every minute."

Open Source Intelligence should always be the "INT" of first resort because we want to expend precious resources for clandestine operations only where necessary.

One of CIA's key missions is informing policymakers, and we do so on an incredibly wide breadth of topics. Understandably, today there is an even greater expanse of data from which we can derive these insights, so we are neck-deep in data and information.

A human, even a team of humans, cannot possibly look at every data point and swim through the oceans of news articles, intelligence reports, and other information. We would never catch up. But if we partner with AI, we can better keep up with the ever-increasing amounts of data we encounter every day.

"This is what I mean when we talk about AI as our North Star. The North Star is used to guide travelers on a journey. Our technology goals are guided by the idea that integrating AI into our intelligence cycle will allow individuals to achieve objectives well beyond what either a human or AI could do alone."

Juliane Gallina

CIA's Deputy Director of Digital Innovation

Adapting to an Ever-Changing Global Threat Landscape

As much as digital technologies can help CIA sort through vast amounts of data, we also face a growing range of digital threats fueled by the nearly ubiquitous use of surveillance technologies, dangerous and ever-more pervasive cyber threats, and new ways to spread and create disinformation.

Our adversaries are using new technology to create and spread disinformation more effectively and further than ever before. Authoritarian regimes exploit these incredible tools to create disinformation to discredit dissidents, target and influence vulnerable groups, and perpetuate ideas that have no basis in reality.

An increasing number of countries and non-state actors have dangerous cyber capabilities, and our adversaries are always searching for cracks in our cyber defenses.

The digital environment will also likely be the arena of any future great-power competition given the tremendous importance of technology as an engine for economic and national security power. Yet, as much as the world is changing, espionage remains an interplay between humans and technology. While there will continue to be secrets that only humans can collect and clandestine operations that only humans can conduct, we believe that access to secrets and clandestine operations will continuously increase their reliance on technology for enablement as well as decisive speed and insight.

To be an effective 21st-century intelligence service, the CIA must blend a mastery of emerging technologies with the people-to-people skills and individual daring that have always been at the heart of our profession.

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