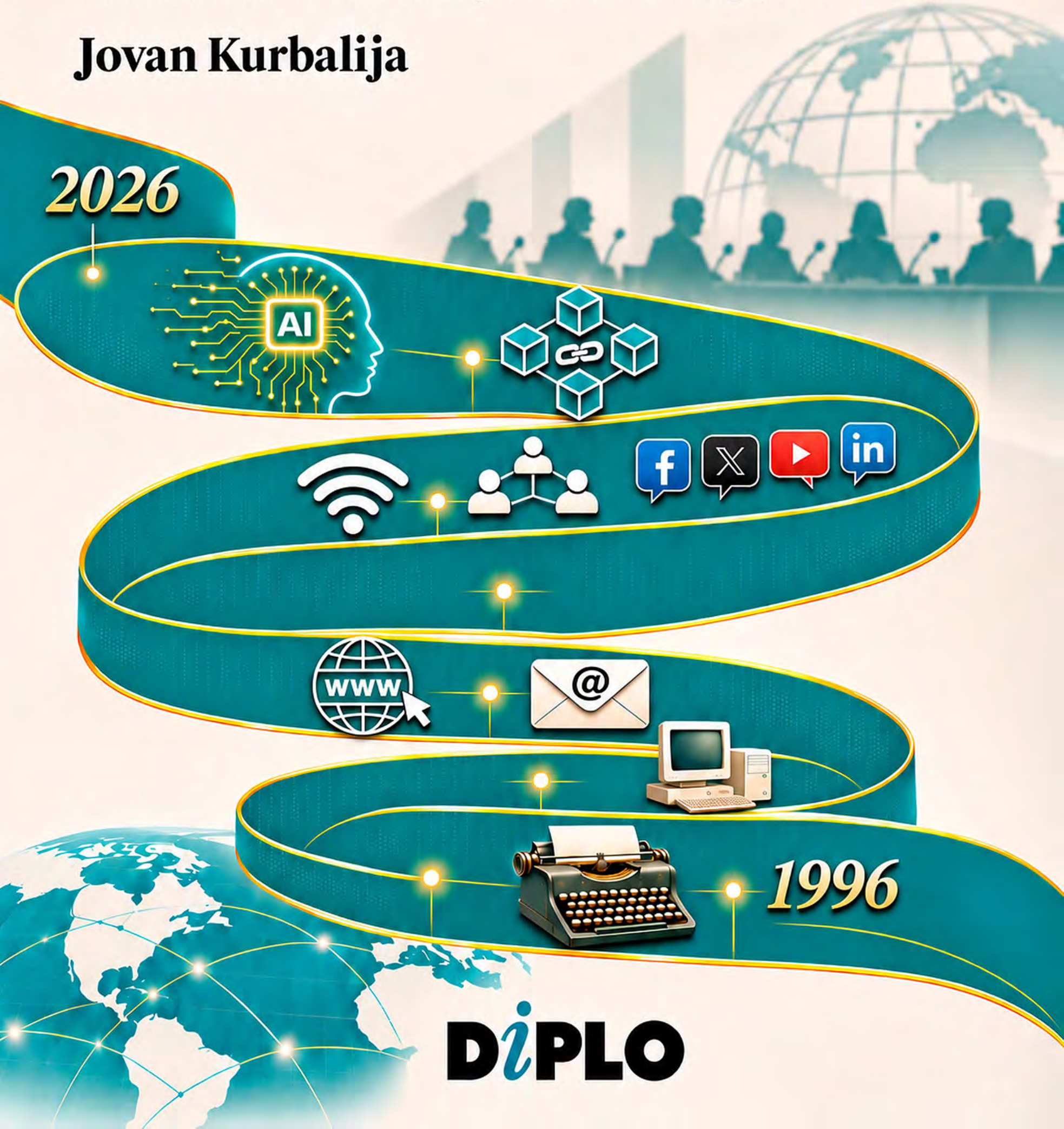
Thirty years of technology and diplomacy: *Between continuity and change*

Reflections on three decades of digital discussions at the International Forum on Diplomatic Training (1996–2026)

Jovan Kurbalija



DiPLO

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Reflections on three decades of digital discussions at the International Forum on Diplomatic Training (1996–2026)

By Jovan Kurbalija

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www.diplomacy.edu
diplo@diplomacy.edu

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Introduction

On 6 November 1996, in Ankara, I delivered a presentation on Information Technology and Diplomacy at the 20th Meeting of Deans and Directors of Diplomatic Academies and Institutes of International Relations – the original name of what is now the International Forum on Diplomatic Training (IFDT). The internet was still in its infancy, with approximately 36 million users worldwide. A few diplomats used email; even fewer were familiar with websites. At the Ankara meeting, it was agreed that I would provide annual updates on technological developments relevant to diplomatic training.

Thirty years later, we meet in Doha for the 52nd IFDT meeting, with technology and artificial intelligence (AI) high on the agenda. Meanwhile, the internet has grown from **36 million users to approximately 6.2 billion**, becoming a critical infrastructure for much of humanity.

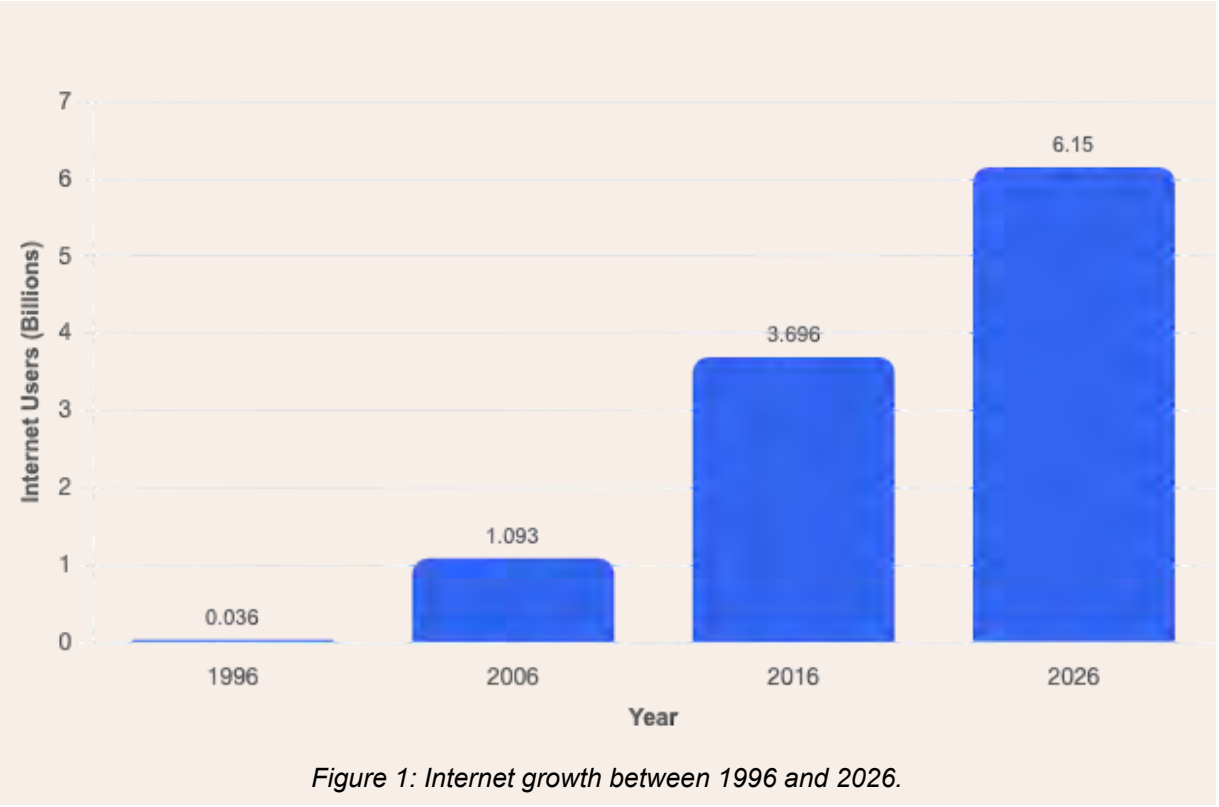


Figure 1: Internet growth between 1996 and 2026.

Its geographical distribution has also changed dramatically, with North America's share declining from approximately 65% of global internet users in 1996 to around 6% today. Asia-Pacific, meanwhile, has grown to account for more than half of internet users worldwide.

Region	1996	2006	2016	2026
North America	65%	19%	8%	6%
Europe	22%	28%	17%	12%
Asia-Pacific	11%	38%	50%	54%
Latin America	1.5%	10%	11%	11%

Table 1: Evolution of shares of global internet users.

Our daily routines have undergone an equally profound transformation. In 1996, going online typically meant connecting through a noisy dial-up modem, often to check email. Today, we spend several hours daily communicating, reading, watching videos and working online. The internet has moved from the margins of society to the centre of our personal, professional and political lives.

Year	Average time online	Dominant environment
1996	20–30 minutes per week (indicative)	Dial-up connections at work and universities
2006	1 hour 40 minutes daily	Broadband and home computers
2016	Around 6 hours daily	Smartphones, mobile applications and 4G
2026	Around 6 hours 40 minutes daily	Continuous connectivity and mobile platforms

Table 2: Illustrative historical comparison of daily routines.

But what has happened to diplomacy during these thirty years? Has technological progress made diplomacy more effective at communicating, negotiating and resolving conflicts peacefully? Have diplomatic institutions adapted to the opportunities and challenges created by successive technological waves? And, most importantly for IFDT, have we changed the way we train diplomats to prepare them for these transformations?

These questions are particularly relevant as AI begins transforming not only how diplomats communicate but also how they read, write, analyse and make decisions. Unlike previous technological waves, AI is becoming more involved in activities closely connected to diplomatic judgement and responsibility. This brings us to the central question of this paper: **How can diplomatic training institutions prepare diplomats for a future that is difficult to envisage?**

To answer this question, we need to look backwards before looking forwards. While browsing through three decades of notes and reflections on tech and IFDT, the following illustration emerged in the style of the Gartner hype cycle, as well as 4 echoing reflections.

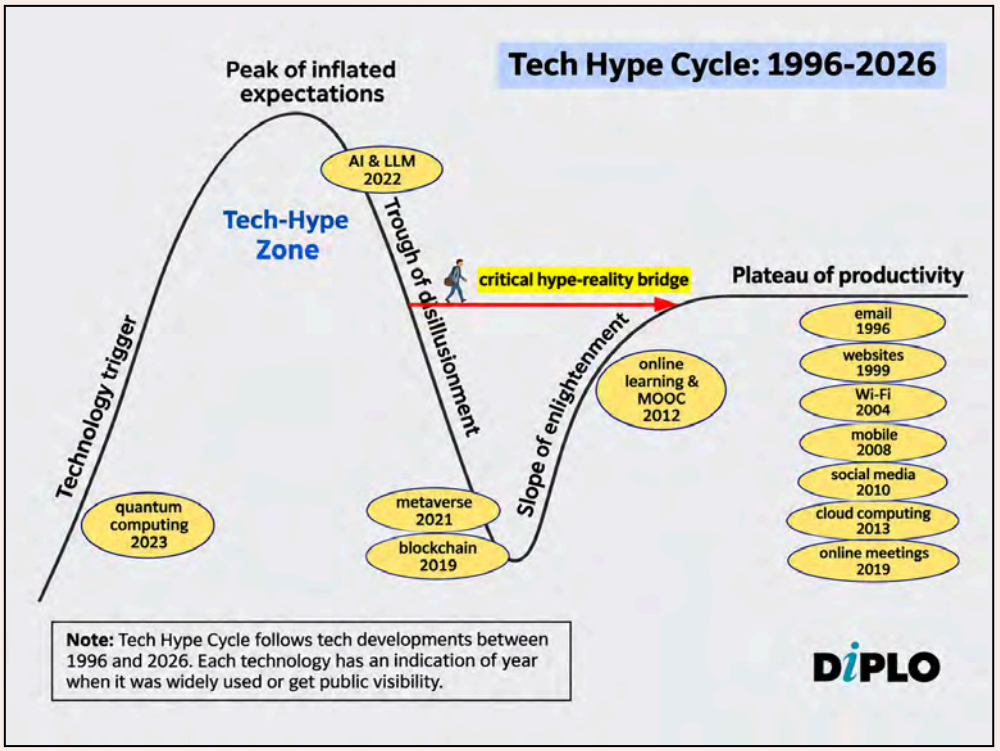


Figure 2: Tech Hype Cycle: 1996-2026.

First, technological hype is difficult to resist. Technology has an almost magical impact, helping us to overcome our physical and cognitive limitations, from flying across continents to communicating instantly over enormous distances. This sense of technological magic also makes us vulnerable to commercial promises, media excitement and exaggerated expectations. How often has an impressive presentation or article convinced us that a new technology would fundamentally transform our daily routines or society?

We have seen such promises with blockchain, the metaverse and, more recently, AI and quantum computing. Some of these technologies have produced important changes, but their actual impact has often been more gradual, limited or different from what was initially promised. Meanwhile, less-hyped technologies such as Wi-Fi have sometimes had more consequential effects on diplomatic practice, changing, for example, the dynamics of conference rooms and international negotiations. As illustrated by the Gartner-style hype cycle, one lesson of the last thirty years is that we should judge technologies less by their promises and more by what they actually change.

Second, technological change in diplomacy has been more evolutionary than revolutionary, but no less profound. Predictions about the end of diplomacy have accompanied technological innovations since the arrival of the telegraph in the 19th century. Yet the core functions of diplomacy – representation, negotiation, and communication – have remained remarkably stable, while the ways they are performed have changed profoundly. Technologies such as email, Wi-Fi and cloud computing have transformed everyday

diplomatic practices through the accumulation of changes rather than the sudden replacement of existing institutions. **Diplomacy has been transformed without losing its fundamental purpose.**

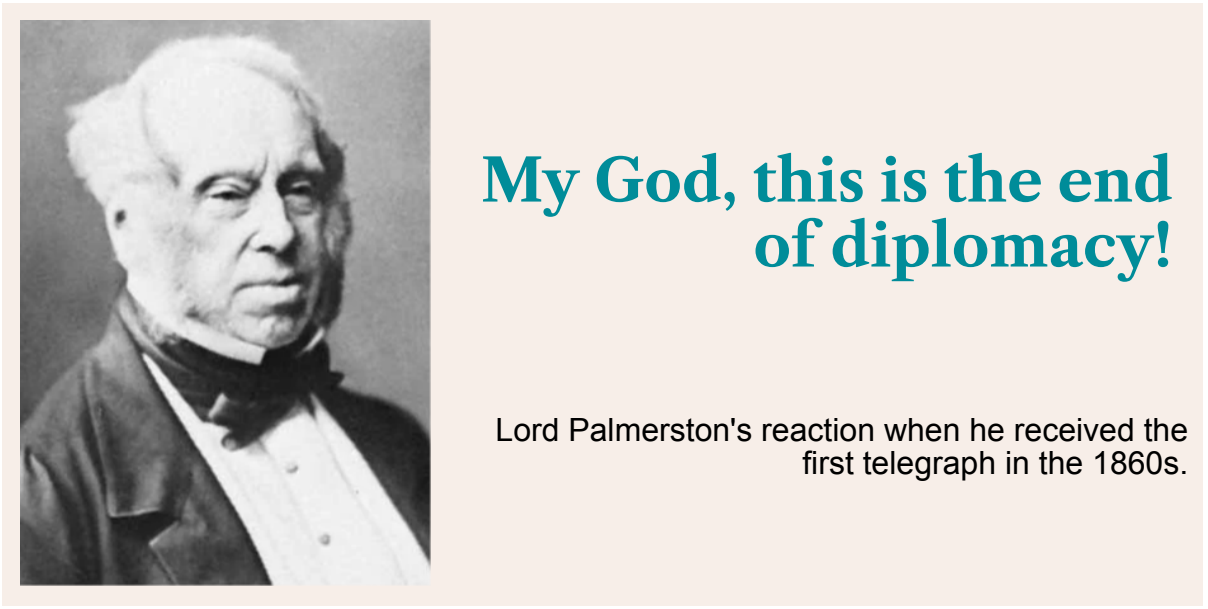


Figure 3: Lord Palmerston on the future of diplomacy.

Third, technology changes diplomacy through three interconnected dimensions: geopolitics, topics and tools. It reshapes the geopolitical environment by creating new centres of economic and political power, as illustrated by the growing diplomatic importance of Silicon Valley compared with traditional industrial centres such as Detroit. It introduces new topics onto diplomatic agendas, including submarine cables, cybersecurity, human rights in the digital space, data governance and AI. It also provides diplomats with new tools for performing their traditional functions, from representation and negotiation to the protection of citizens' interests abroad.

Fourth, all these changes eventually reach diplomatic training institutions through their curricula and pedagogy. New tools require new skills, emerging policy issues demand new knowledge, and geopolitical changes create new strategic challenges. Yet the fundamental competencies of diplomacy – listening, judgement, negotiation and compromise – remain essential. In a sense, we are not so different from our distant predecessors, who realised that it was better to listen to a messenger than to kill him.

These observations provide the framework for our journey through the last thirty years. We will examine each decade through four dimensions: the **tools** of diplomatic practice, the **topics** of international negotiation, the geopolitical **environment** and the evolution of diplomatic **training**.

Throughout this journey, we should keep one fundamental question in mind: **has technological progress helped diplomacy fulfil its primary mission of resolving**

conflicts peacefully through negotiation and compromise? The answer is far from straightforward, particularly in today's world of growing geopolitical tensions, conflicts and mistrust.

Evolving language: Different prefixes, similar meaning

Over the last three decades, the terminology describing the impact of technology on diplomacy has evolved, starting in the 1990s and early 2000s, with **e-diplomacy** emerging alongside terms such as e-commerce, e-government and e-learning, reflecting the growing use of electronic communication and services. **Cyber diplomacy** gained prominence as cybersecurity, cybercrime and cyber defence became important issues on the international agenda, particularly following the adoption of the Budapest Convention on Cybercrime in 2001.

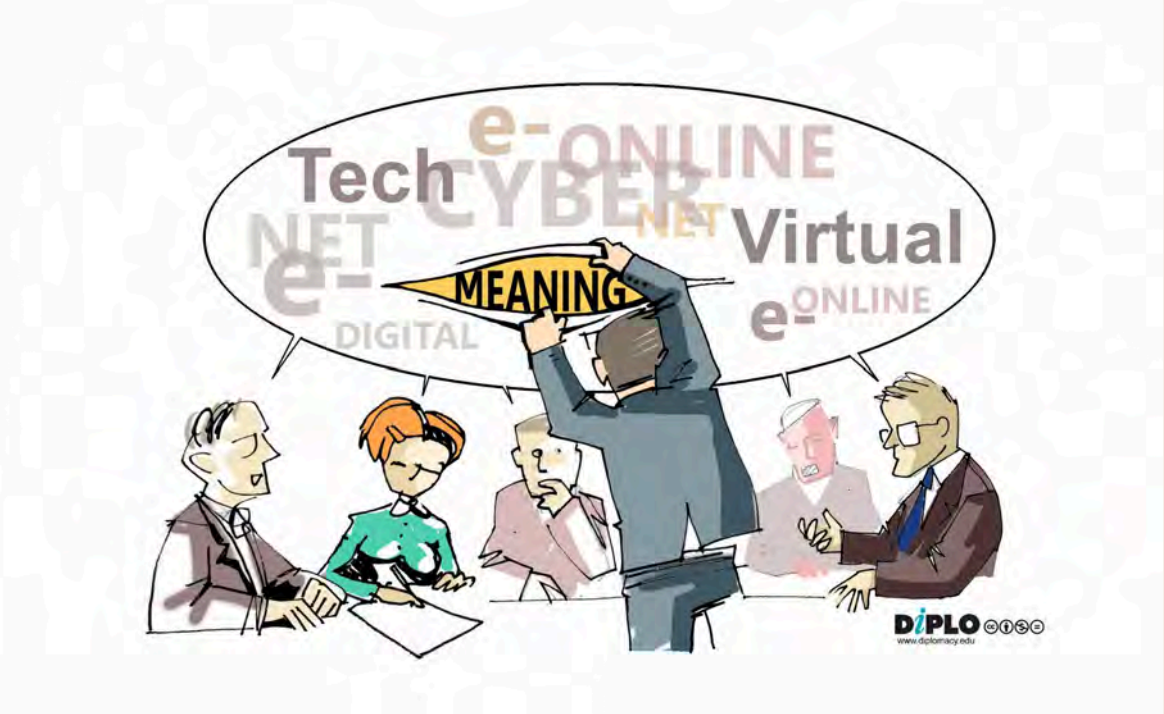


Figure 4: Internet prefixes cloud.

During the 2010s, **digital diplomacy** became the dominant umbrella term, but its meaning also narrowed in some circles, creating considerable confusion. The growing use of social media, particularly during the Arab protests, popularised expressions such as *Twitter diplomacy* and *Facebook diplomacy*. As communication specialists entered the field, digital diplomacy was often equated with the use of social media in public diplomacy. This narrow interpretation overlooked other core diplomatic functions, including representation and negotiation, as well as the wider geopolitical and policy implications of digital technology.

More recently, **tech diplomacy** has gained prominence, particularly in describing relations between governments and major technology companies. **AI diplomacy** has also emerged, referring both to the use of AI in diplomatic practice and to international negotiations on AI governance.

Altogether, close to 30 different terms and variations have been used to describe the relationship between technology and diplomacy. Other examples include **net** diplomacy, **online** diplomacy, and **virtual** diplomacy, the latter used to highlight the non-physical aspect of diplomacy such as virtual embassies and meetings.

This proliferation of terminology also reflects how different policy communities frame issues: *cyber* tends to emphasise security, *digital* suggests a broader economic and societal perspective, and *AI* focuses on emerging technological capabilities and their governance. Yet these fields overlap considerably, and the proliferation of terminology can reinforce institutional silos and complicate coordination, particularly for smaller diplomatic services. **In many cases, new prefixes indicate nuanced distinctions rather than fundamentally different diplomatic activities.**

Rather than debating **terminological purity**, at Diplo we focus on the **semantic coverage** of each term: what it includes and what it leaves out. We use **digital diplomacy** as an umbrella term because it is more specific than *tech diplomacy*, which could encompass any technology, from writing and printing to aviation, yet broader than *cyber diplomacy* or *AI diplomacy*.

In our approach, digital diplomacy covers three interconnected impacts of digital technology on diplomacy: **the geopolitical environment in which diplomacy operates, the new topics diplomats negotiate, and the tools they use to perform their core functions**, from representation and negotiation to communication and the protection of national and citizens' interests. This framework helps us look beyond changing technological labels and focus on how digital technologies are reshaping diplomatic practice while its fundamental purposes endure.

1. The 1990s: The digitalisation of diplomatic communication

The 1990s were, in many respects, a golden decade for both diplomacy and technology. The peaceful end of the Cold War created expectations of a new era of international cooperation, reinforced by economic growth, technological innovation and renewed confidence in multilateral institutions. On the technological side, the internet expanded rapidly beyond its original academic and research communities, with email and the World Wide Web emerging as its most visible applications. Yet the first major transformation in diplomatic offices was more modest: the replacement of typewriters with word processors.

This seemingly simple innovation began a much longer process of digitalising diplomatic text, from word processing and email to social media and AI. Its significance should not be underestimated, as text has always been the principal medium of diplomacy, from diplomatic correspondence and notes verbales to reports, agreements and treaties. Technologies that change how texts are drafted, transmitted, stored and interpreted inevitably affect the organisation and practice of diplomacy. The 1990s marked the beginning of an evolutionary transformation whose full implications are becoming clear only in the AI era.

Tools: From typewriters and diplomatic cables to word processing and email

In the early 1990s, personal computers began replacing typewriters in diplomatic offices. The possibility of revising a document without retyping entire pages may seem trivial today, but it represented a major improvement in diplomatic work. Word processors simplified drafting, editing and the preparation of official documents. They also began changing the processes through which diplomatic texts were developed and preserved.

By the middle of the decade, email had begun entering diplomatic communication, initially among diplomats posted in technologically advanced countries and often for personal rather than official correspondence. Towards the end of the decade, it began complementing diplomatic notes, letters and cables. Yet email brought more than speed and convenience: it began challenging established hierarchies and procedures within diplomatic services. Messages could be copied, forwarded and answered across organisational boundaries, sometimes bypassing the formal pathways connecting diplomatic missions and foreign ministries.

The growing immediacy of communication also affected the operational autonomy of embassies, which were now only a click away from their headquarters and political superiors. Email introduced new uncertainties about confidentiality, authorisation and the distinction between formal and informal communication. These questions would become even more significant with the rise of social media, when informal online statements could acquire official political significance. The transformation was organisational as much as technological.

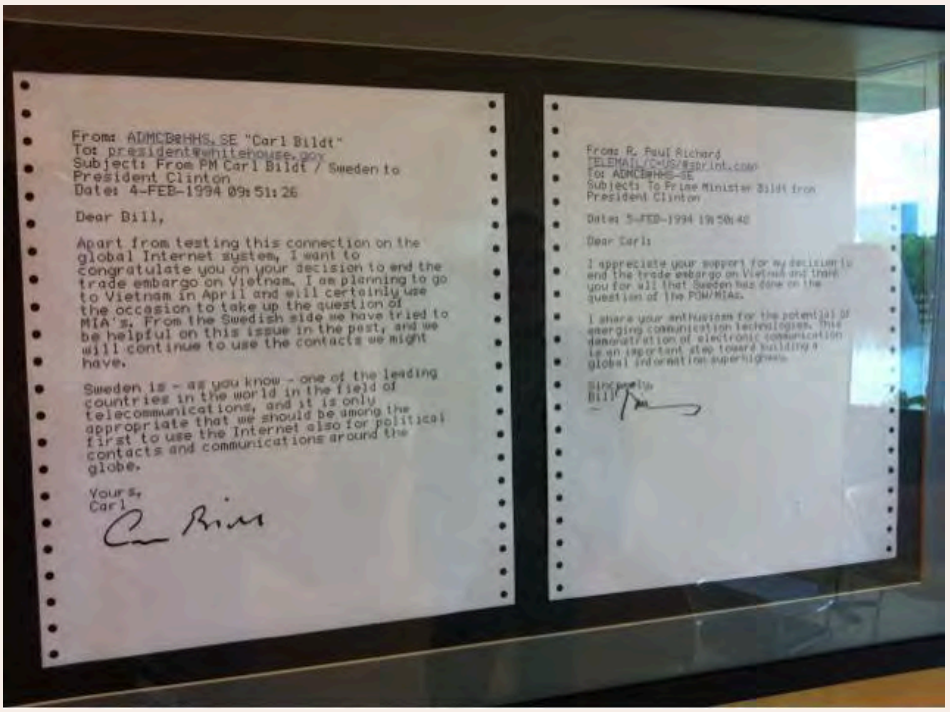


Figure 5: First ever e-mail exchange between two heads of government (Carl Bildt and Bill Clinton in 1994).

Websites brought another important change by enabling foreign ministries and diplomatic missions to communicate directly with international audiences. Statements issued in one capital could quickly be read around the world without relying entirely on journalists and traditional media. Domestic and international audiences started sharing the same information environment, introducing new opportunities and risks for public diplomacy. The United States was an early leader in diplomatic websites, but technological innovation was not limited to major diplomatic services.

In Malta, we began research and training on technology and diplomacy in 1992 through the Unit for Computer Applications in Diplomacy. Our first training activities followed in 1994, and the domain diplomacy.edu was registered on 15 August 1996. These initiatives explored how relatively modest technologies could help small countries overcome limitations of geography, resources and institutional capacity. They also demonstrated that technological innovation in diplomacy did not necessarily require large budgets or sophisticated infrastructure.

Another, less visible transformation was taking place in the way diplomats accessed and processed information. For centuries, one of their main challenges had been obtaining information, often through slow and carefully organised communication networks. The internet gradually reversed this problem by making information abundant and accessible. Diplomacy was beginning its transition from information scarcity to information overload, with filtering, verification and contextual analysis becoming essential professional competencies.

Topics: The foundations of internet governance

The political importance of the internet became evident remarkably early. In 1998, several developments established the foundations of internet governance that remain relevant today. The Internet Corporation for Assigned Names and Numbers (ICANN) was established to coordinate key internet identifiers, including domain names and internet protocol addresses, while the World Trade Organization adopted a moratorium on customs duties on electronic transmissions. Cybersecurity (under the name 'information security') also entered the UN agenda, notably through discussions initiated by Russia in the First Committee of the UN General Assembly.

In November 1998, the ITU Plenipotentiary Conference in Minneapolis adopted a resolution calling for a World Summit on the Information Society (WSIS). Together, these developments brought internet governance, digital trade and cybersecurity into international diplomatic discussions. They also illustrate an important pattern: technologies may change rapidly, but the institutions and policy questions emerging around them can remain relevant for decades. Many contemporary debates about digital governance continue to build on questions first raised in the late 1990s.

Geopolitics: From American origins to a global internet

During the 1990s, the internet expanded from its predominantly American origins towards a global network. The United States enjoyed considerable advantages through its universities, technology companies, infrastructure and early adoption. These factors helped establish American influence over digital technology and internet governance. Yet rapid global expansion was already creating the conditions for a more geographically diverse digital order, whose geopolitical consequences would become much clearer in subsequent decades.

The rise of Silicon Valley also signalled a shift in the geography of economic and political influence. Technology companies had a part in shaping communication networks, innovation and the emerging digital economy. For diplomats, understanding the United States would gradually require greater attention to technology hubs alongside traditional political and industrial centres. This shift anticipated the growing importance of tech diplomacy, including direct engagement between governments and technology companies.

Training: New skills and the first warnings about loss of institutional memory

Our early diplomatic training activities focused on practical questions about the use of new technologies. Could an email bind a state in the same way as a formal diplomatic note, and should foreign ministries centrally manage diplomatic websites or allow embassies greater autonomy? These questions may sound familiar because many have never been conclusively resolved. Instead, they have reappeared in new technological contexts, from social media to AI.

By the end of the decade, another concern was emerging: the possible loss of diplomatic institutional memory. In my 1999 IFDT presentation, I warned that digitalisation could create

a black hole in diplomatic archives. Traditionally, diplomatic documents passed through multiple drafts containing handwritten corrections, annotations and comments, which provided valuable insights into how positions and compromises developed. Word processing made drafting faster and easier, but institutions preserved only final versions, losing intermediate drafts and the reasoning behind them.

A paradox was already becoming visible: **technology made it easier to produce information but could make it harder to preserve institutional knowledge.** This concern would return with particular force in the AI era, when entire stages of research, drafting and analysis could be delegated to automated systems. The challenge was not simply to store more documents, but to preserve the knowledge and professional judgement behind them. Digital efficiency could create long-term institutional costs if it was not accompanied by appropriate organisational changes.



Figure 6: Transition from paper-based to digital archives.

Another persistent training challenge was communication between diplomats and engineers. We began bringing them into the same room to overcome what was often lost in translation, starting with basic terminology such as the word *protocol*. For diplomats, it referred primarily to the rules and practices of diplomatic relations; for engineers, it described the rules through which computers communicate. Yet the differences went beyond terminology, reflecting distinct professional cultures and approaches to problem-solving.

Diplomats were accustomed to ambiguity, contextual interpretation and political compromise, while engineers often approached problems through formal rules and technical specifications. Bridging these differences became essential during internet governance negotiations and remains equally important for AI governance today. The experience demonstrated that technological literacy was not simply about knowing how computers worked, but also about understanding the people and professional cultures behind them. **The main lesson of the 1990s was that technological efficiency did not automatically translate into institutional effectiveness.**

2. The 2000s: The internet enters negotiation rooms and multilateral diplomacy

The 2000s marked the mainstreaming of the internet in society and diplomacy. Broadband gradually replaced dial-up connections, websites became part of everyday communication, and interactive platforms transformed the internet from a predominantly publishing medium into a participatory environment. For diplomacy, two technological developments were particularly consequential: Wi-Fi changed communication inside negotiation rooms, while social media changed communication between diplomacy and wider society. At the same time, WSIS brought digital technology firmly onto the multilateral agenda.

Tools: Wi-Fi and social media transform diplomatic communication

One of the most consequential changes in diplomatic practice came from an apparently modest technology: Wi-Fi. Before its widespread adoption, diplomatic negotiations depended heavily on face-to-face conversations, written notes and informal exchanges in corridors. Wi-Fi introduced an additional, largely invisible layer of communication inside negotiation rooms. Its impact became particularly noticeable during the WSIS process between 2002 and 2005.

Wi-Fi changed the social dynamics of negotiations by allowing delegates to communicate discreetly without leaving their seats. Traditional diplomatic signalling through physical movement, informal consultations and visible exchanges was complemented by electronic messages. At the same time, negotiators gained real-time access to their capitals and other government departments, reducing their operational autonomy while potentially improving coordination. Negotiation rooms were becoming connected to wider institutional networks rather than functioning as relatively self-contained diplomatic spaces.

Wi-Fi also created new opportunities for smaller delegations. Some small states, including small island states, used electronic communication networks to coordinate positions, respond to amendments and organise interventions without the resources of larger diplomatic services. This allowed them to react more quickly to developments during negotiations and coordinate without physically moving around conference rooms. Wi-Fi changed both the speed of communication and the distribution of information and coordination capabilities among delegations.

This example illustrates the importance of distinguishing technological hype from practical impact. While much attention was devoted to the revolutionary promises of the internet, a relatively simple connectivity technology was quietly transforming the everyday conduct of diplomatic negotiations. Wi-Fi did not change the fundamental purposes of diplomacy, but it altered the balance between formal and informal communication, delegation autonomy and coordination. Its influence was evolutionary in form but consequential in practice, demonstrating that profound transformation does not always arrive through dramatic technological breakthroughs.

Social media introduced a different transformation by shifting communication from the one-to-many model of websites to many-to-many exchanges. Governments, journalists, civil society organisations, companies and individuals could now participate directly in public

debates. Diplomats had to respond to public reactions while negotiations were still under way, as political statements could circulate, be challenged or distorted within minutes. Communication became faster and more interactive, but also less predictable and more difficult to control.

Two early cases depicted the challenges of this new environment. In 2006, the blog of Jan Pronk, the UN Secretary-General's Special Representative for Sudan, contributed to his expulsion by the Sudanese government. Croatian diplomat Vibor Kalogjera also faced professional consequences following controversial blog comments about American politics. These episodes demonstrated that the apparent informality of online communication did not exempt diplomats from professional responsibility.

The question was no longer simply how diplomats should use new technologies. It was also how they could preserve discretion, judgement and accountability in public communication environments. Social media blurred the distinction between personal expression and official representation, while increasing pressure for immediate reactions. These challenges would become even more significant in the following decade as social media platforms acquired greater political influence.

Topics: WSIS brings digital technology to the UN agenda

The most consequential diplomatic development of the decade was the World Summit on the Information Society, held in Geneva in 2003 and Tunis in 2005. WSIS brought digital technology firmly into multilateral diplomacy and connected communities that had previously interacted relatively little. Diplomats, engineers, technology companies, civil society organisations and international institutions had to find ways to communicate and negotiate across different professional cultures. The resulting discussions exposed deep differences in political interests, institutional approaches and visions of internet governance.

China, Russia and several developing countries favoured stronger governmental and intergovernmental roles in internet governance. The United States and its allies defended arrangements involving governments, business, civil society and technical organisations. The debate was often framed as a confrontation between multilateral and multistakeholder approaches. The Tunis phase of WSIS produced an important compromise through the establishment of the Internet Governance Forum (IGF) under the UN umbrella, while retaining a multistakeholder character.

This arrangement allowed different actors to participate in discussions without requiring agreement on a single institutional model for governing the internet. It demonstrated that multilateralism and multistakeholderism were not necessarily mutually exclusive. WSIS also became a laboratory for new diplomatic practices, bringing governmental and non-governmental actors into closer interaction. These experiences would influence the development of digital governance over the following two decades.

Other developments widened the digital diplomatic agenda. The Budapest Convention on Cybercrime was adopted in 2001, establishing an early international treaty framework for addressing cybercrime. In 2004, the first UN Group of Governmental Experts on information security began its work, initiating a process that would influence international cybersecurity

negotiations for many years. By the end of the decade, internet governance, cybersecurity, digital development and the participation of non-state actors were firmly established topics of multilateral diplomacy.

Geopolitics: The arrival of digital China

One of the most significant geopolitical developments of the decade was the rapid expansion of the internet in China. China's internet population grew from approximately 22 million in 2000 to more than 400 million in 2010. China also began developing its own digital platforms and services rather than relying entirely on American companies. This expansion challenged the early geographical concentration of internet development and laid the foundation for growing geopolitical competition over digital technologies.

Yet American digital power remained formidable, as highlighted by an episode during the 2009 protests in Iran. The US government asked Twitter to postpone scheduled maintenance because Iranian protesters were relying on the platform to communicate. The episode showed how privately operated digital platforms could acquire geopolitical significance and become instruments of political influence. The digital geopolitical landscape was being shaped by governments and telecommunications operators, as well as technology companies.

Training: From technological literacy to multistakeholder diplomacy

The growth of social media introduced new challenges for diplomatic training. Diplomats needed to learn how to communicate in environments where audiences could respond immediately, preserve confidentiality during public debates and distinguish personal from official communication. The rapid circulation of information also increased the importance of verification, professional discretion and judgement. Training could no longer focus only on the technical operation of communication tools.

WSIS added another dimension by demonstrating the importance of understanding different professional communities. Beyond technical issues, diplomats needed to understand the interests, perspectives and working methods of engineers, companies and civil society organisations. Technical experts, in turn, needed to appreciate the legal, political and institutional dimensions of diplomatic negotiations. **Effective digital diplomacy required both technological and diplomatic literacy, because neither could substitute for the other.**

The Wi-Fi experience reinforced this lesson by showing how seemingly simple technologies could change negotiation dynamics in unexpected ways. Electronic coordination could empower smaller delegations while reducing negotiators' autonomy through continuous contact with their capitals. Social media could widen participation while making confidential negotiation more difficult. **The lesson of the 2000s was that connectivity changed not only how diplomats communicated, but also how they negotiated and interacted with the wider world.**

3. The 2010s: Digital realism, dependence, and sovereignty

The 2010s can be described as the decade of digital realism. The optimism surrounding the early internet gave way to a more complex understanding of its political, economic and societal consequences. Social media became an important instrument of political mobilisation, notably during the Arab uprisings of 2011, while cybersecurity, data protection, digital trade and platform regulation rose rapidly on diplomatic agendas. Yet perhaps the most consequential transformation was less visible: digital infrastructure, platforms and data eventually concentrated in the hands of a relatively small number of companies.

The convenience of digital technology came with new dependencies. Governments and diplomatic institutions could perform tasks more efficiently while losing direct control over some of the systems and infrastructure on which they relied. The same technologies that expanded access to information and communication could also create new vulnerabilities and asymmetries of power. These tensions defined much of the decade's digital diplomatic agenda.

Tools: Cloud computing and the relocation of diplomatic archives

Cloud computing changed where information was stored, processed and accessed. Computing resources moved from individual computers and institutional servers to large data centres operated by companies such as Microsoft, Amazon and Google. For diplomatic services, with staff dispersed across capitals, embassies and international organisations, these services offered considerable advantages. Documents could be accessed from different locations, collaboration became easier, and institutional information could be shared more rapidly.

Yet these benefits also created new dependencies. Diplomatic archives, historically central to the organisation and continuity of foreign ministries, became reliant on infrastructure outside their direct physical control. A document drafted in one country could be stored in another and accessed from a third, potentially becoming subject to multiple jurisdictions. The implications went beyond technical security, raising questions about sovereignty, confidentiality, institutional autonomy and control over diplomatic knowledge.

Digital information systems also created new opportunities to connect documents with meetings, people, countries, negotiations and earlier correspondence. At the same time, they introduced new vulnerabilities through the concentration and accessibility of large amounts of sensitive information. The WikiLeaks disclosures of US diplomatic cables showed how digital systems could amplify the consequences of security failures, even though the episode was not simply a problem of cloud computing. Better access to information needed to be balanced against the risks of unauthorised access and disclosure.

Meanwhile, social media continued transforming diplomatic communication and public engagement. The US Virtual Embassy Tehran, launched in 2011, showed how digital platforms could reach foreign audiences even in the absence of normal diplomatic relations.

Yet the experience of the decade also highlighted the difference between communication and negotiation, as confidential consultations and personal relationships remained essential for exploring compromises. A comment made during negotiations could rapidly become a public controversy, reducing the space available for flexibility and concessions.

Another wave of technological enthusiasm emerged around blockchain in the second half of the decade. Promoted as a means of decentralising record-keeping and transactions, blockchain generated considerable interest among governments and international institutions. Yet many proposed applications proved difficult to implement, while apparently decentralised systems could still depend on concentrated technical and commercial intermediaries. The experience reinforced a recurring lesson from earlier technological waves: diplomatic institutions must distinguish technological possibilities from practical needs and sustainable institutional solutions.

The blockchain experience also demonstrated the limits of predicting technological change from its initial promises. Some applications, particularly cryptocurrencies and specialised record-keeping systems, continued developing, while many wider expectations remained unfulfilled. The contrast between the excitement surrounding blockchain and the quieter, more consequential adoption of cloud services conveys why technological hype is an unreliable guide to diplomatic priorities. Institutions need to evaluate technologies through their practical effects rather than their promotional narratives.

Topics: From internet governance to digital cooperation

Internet governance remained an important diplomatic issue throughout the decade. A major institutional development was the 2016 transition of the Internet Assigned Numbers Authority (IANA) stewardship functions, ending the US government's historic oversight role in these functions. Meanwhile, cybersecurity became a significant national security and diplomatic concern. The focus of digital diplomacy was expanding from the management of the internet itself to the regulation and governance of a wider digital ecosystem.

Data protection, cross-border data flows, digital trade and platform regulation generated new international negotiations and regulatory initiatives. The European Union's General Data Protection Regulation (GDPR), adopted in 2016 and applied from 2018, demonstrated how domestic and regional regulatory decisions could influence digital practices beyond territorial borders. In 2018, the UN Secretary-General established the High-level Panel on Digital Cooperation, opening a new phase of international discussions. Digital governance was turning into a broad field, connecting technical issues with economic development, human rights, security and geopolitics.

Geopolitics: Infrastructure, platforms and data become strategic assets

The 2010s made clear that digital power depended on much more than the number of internet users. Control over cloud infrastructure, digital platforms, data and technological standards started shaping the global distribution of power. While the internet had originally developed as a relatively decentralised network, major services were becoming concentrated around a few large companies. States could benefit enormously from these

services without controlling the infrastructure or data-processing systems on which they depended.

Digital sovereignty became an important policy concern. For foreign ministries, this was not simply an abstract geopolitical debate, since the same cloud services that improved efficiency could create dependencies on external providers, jurisdictions and technical standards. The central concern came to revolve around the degree of control countries retained over their digital assets, processes and knowledge, as well as their ability to connect to digital networks. The tensions between technological convenience and institutional autonomy would become even more pronounced with the rise of AI.

Training: Understanding the dependencies behind digital tools

Diplomatic training had to broaden its scope once again. It was no longer sufficient to teach diplomats how to use email, websites or social media, as they also needed to understand data governance, cybersecurity, cloud infrastructure, digital regulation and technological dependence. Foreign ministries required capacities to negotiate international technology policies, assess digital risks and understand the interests of powerful technology companies. Digitalisation was becoming an issue of foreign policy rather than simply internal information management.

This expansion was particularly important for small and medium-sized countries. Their diplomatic services could benefit substantially from digital tools while facing significant constraints in developing and controlling technological infrastructure. Training was needed to help diplomats recognise these trade-offs, evaluate technological choices and understand their strategic implications. **The lesson of the 2010s was that technological convenience could improve diplomatic capacity while simultaneously creating new forms of dependence.**

4. The 2020s: From digital communication to AI-supported cognition

The 2020s began with a dramatic disruption as the COVID-19 pandemic moved a large part of human activity online almost overnight. Diplomacy was no exception, with meetings, negotiations and diplomatic training shifting to video platforms, often with little preparation. Then, on 30 November 2022, the public launch of ChatGPT accelerated another technological transformation. AI began affecting how diplomats communicate and manage information, as well as how they produce, interpret and analyse diplomatic content.

AI also brought a new wave of technological excitement, with predictions ranging from extraordinary productivity gains to the disappearance of entire professions and even existential threats to humanity. As with earlier technologies, the challenge is to distinguish real capabilities and emerging risks from speculation and commercial narratives. Some changes may indeed prove profound, but their precise effects on institutions, professional roles and international relations remain uncertain. The thirty-year historical perspective encourages neither technological enthusiasm nor rejection but careful experimentation and critical assessment.

The central challenge concerns the relationship between technology and human judgement. Earlier digital technologies transformed communication channels, information flows and document management, while AI extends this transformation into cognitive activities closely connected to diplomatic decision-making. This distinction is particularly important because diplomacy depends on interpreting political contexts, understanding intentions and formulating compromises. AI may profoundly transform these activities without necessarily replacing the fundamental functions of diplomacy, continuing the evolutionary pattern observed over the previous three decades.

Tools: Online meetings, AI, and diplomatic judgement

During the pandemic, online and hybrid meetings became essential for maintaining diplomatic communication. In September 2020, heads of state and government addressed the high-level segment of the UN General Assembly largely through prerecorded video messages. The experience demonstrated that meetings could be organised without travel, participation could be widened, and diplomatic training could continue despite restrictions on physical contact. Yet it also revealed the limitations of virtual communication for activities that depend on informal interaction and trust.

Formal meetings could often be reproduced online, but the informal spaces surrounding them were much harder to replace. Corridor conversations, spontaneous encounters and informal consultations are frequently where trust is established, and compromises begin to emerge. These interactions rarely appear in official records, yet they remain essential to diplomatic practice. The pandemic reminded us that diplomacy is a human process built around relationships, confidence, judgement and trust.

AI introduces a different challenge by participating directly in the drafting, interpretation and analysis of diplomatic texts. AI can assist diplomats with drafting, summarising, translation, research, analysis and the comparison of negotiating positions. It can also help examine alternative formulations and identify patterns across large collections of documents.

But diplomatic texts are more than collections of words. Each expression may reflect a political compromise, a legal obligation or a carefully preserved ambiguity. A negotiator must understand what a sentence says, why it says it, what it leaves unsaid and how different parties are likely to interpret it. AI can support this process, but it cannot assume political responsibility for the outcome.

The main challenge is determining how to use AI without weakening human judgement and responsibility. This is where the concept of **cognitive proximity** becomes important, requiring diplomats to remain sufficiently close to the evidence, reasoning and context behind AI-supported work. Human involvement should not be reduced to approving an AI-generated result, as diplomats must be capable of evaluating outputs, challenging assumptions and taking responsibility for decisions. The more convincing AI outputs become, the more important this capacity will be.

AI also presents an important opportunity to strengthen diplomatic practice. Diplomats spend increasing amounts of time on administration, reporting and compliance requirements, sometimes at the expense of substantive diplomatic engagement. Used responsibly, AI could reduce these burdens and allow diplomats to devote more attention to negotiation, analysis and relationship-building. In this sense, AI could help restore some of diplomacy's core functions rather than diminish them.

Topics: AI governance raises in diplomatic relevance

The rapid development and adoption of AI have brought AI governance to the centre of international diplomacy. Countries face questions about how AI should be developed, distributed, regulated and used. Three families of risks have become particularly prominent: existing risks, existential risks and exclusion risks. Although often discussed separately, they are closely interconnected and require a comprehensive diplomatic response.

Existing risks include issues such as discrimination, misinformation, cybersecurity vulnerabilities, labour disruption and military applications. **Existential risks** concern the possibility that advanced AI systems could escape effective human control and threaten humanity. **Exclusion risks** arise from the concentration of computing power, AI capabilities and human knowledge in a small number of companies and countries. Together, they show that AI governance involves preventing harm and deciding how technological power and benefits should be distributed.

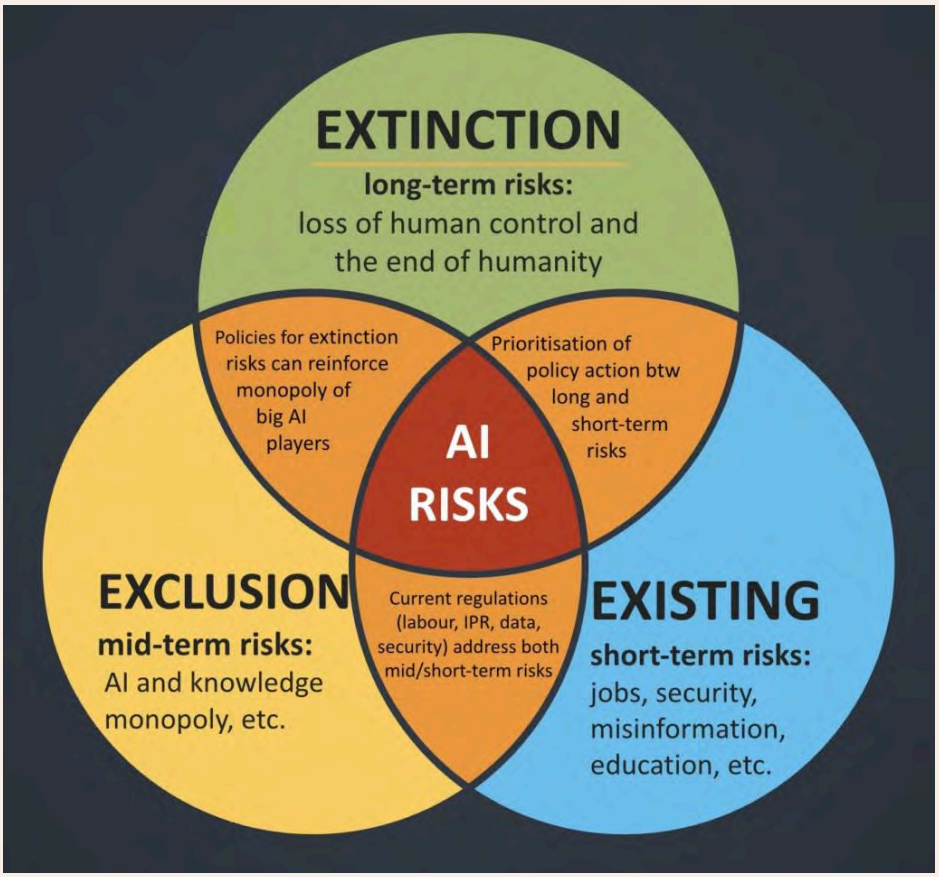


Figure 7: AI risks taxonomy.

These concerns create difficult policy trade-offs. Measures designed to reduce existential risks could reinforce technological concentration if they restrict access to advanced AI capabilities. Conversely, wider AI diffusion could reduce exclusion while creating new challenges for security, accountability and safety. The diplomatic task is to address AI risks holistically, without allowing responses to one risk to aggravate others.

International initiatives have multiplied, including the UN Global Digital Compact, the Global Dialogue on AI Governance, the Independent International Scientific Panel on AI, and various other governmental and intergovernmental processes addressing AI governance. Yet countries differ considerably in technological capabilities, economic interests, regulatory traditions and perceptions of risk. One of the most important diplomatic tasks is to build common understanding and negotiate compromises across these differences. This requires diplomats who can connect technological realities with political priorities, legal principles and institutional possibilities.

Familiarity with AI terminology alone is not sufficient for such negotiations. Diplomats must understand enough about the underlying technologies to ask relevant questions, identify unrealistic proposals and assess the consequences of different governance arrangements. Not every diplomat needs to become a programmer, but diplomats involved in AI governance

should not depend entirely on technical briefings they cannot critically evaluate. Technological understanding has become an essential component of diplomatic judgement.

Geopolitics: AI and the concentration of knowledge and power

AI is reshaping geopolitics through computing infrastructure, advanced models, specialised talent, data and the organisation of knowledge. The capacity to develop frontier AI systems remains concentrated in a relatively small number of countries and companies. This creates new asymmetries of power and dependence, as countries may be able to use advanced AI systems without controlling the infrastructure, models or standards on which they rely. AI extends the questions of digital sovereignty that emerged during previous decades.

Moving beyond the question of who controls networks, platforms and data, more consideration needs to be given to the issue of **who controls the systems through which human knowledge is organised, interpreted and used**. This is particularly relevant for smaller countries and institutions, which may lack the resources to develop frontier AI models but possess valuable local knowledge, languages, professional expertise and institutional experience. Their challenge is to use AI in ways that strengthen this knowledge rather than transfer control over it elsewhere.

The geopolitical consequences of AI depend both on technological capabilities and on the political, economic and institutional arrangements surrounding them. Access to powerful AI tools does not necessarily guarantee control over the knowledge and processes on which diplomatic institutions depend. Countries must consider how AI affects their capacity to act independently and preserve their institutional expertise. These questions make the organisation and protection of knowledge a central concern of contemporary digital diplomacy.

Training: AI apprenticeships and cognitive proximity

AI poses perhaps the most profound pedagogical challenge of the last thirty years. Earlier digital technologies mainly required diplomats to acquire new operational skills and technological understanding, from email and websites to social media and cloud services. AI requires something more because it affects how diplomats read, write, analyse and think. The main challenge is not learning how to formulate prompts but developing the judgement needed to evaluate AI outputs, identify errors and decide when to rely on the technology.

These competencies cannot be developed through lectures and demonstrations alone. Diplomats need to work with AI on real professional tasks, experience its strengths and failures, and reflect on the consequences. At Diplo, we have approached this challenge through AI apprenticeships, based on practice, reflection and continuous feedback. Rather than treating AI as a collection of software tools, apprenticeships focus on the actual work of diplomats.

Participants use AI to prepare reports, analyse documents, compare negotiating texts and organise knowledge. They learn to verify outputs, identify omissions, question assumptions and understand why plausible AI-generated answers can still be wrong. The approach combines task-based learning, collaboration, reflection and the documentation of successful

practices. It also encourages participants to understand the data, knowledge and processes from which AI-generated answers emerge.

This brings us back to a problem already identified in my 1999 IFDT presentation: the preservation of institutional memory. The transition from typewriters to word processors made drafting easier but risked losing the history of how diplomatic documents developed. AI creates a related challenge because reports and analyses may become easier to produce while institutions lose visibility into the evidence, assumptions, discussions and professional judgement behind them. The risk is not simply losing documents, but losing the intellectual and institutional processes through which diplomatic knowledge is created.

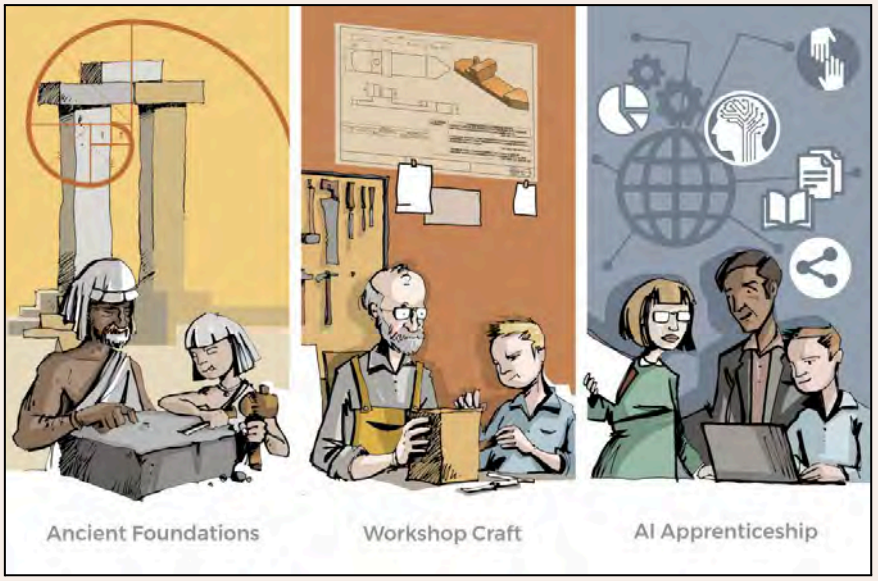


Figure 8: Evolution of apprenticeship pedagogy.

At the same time, AI offers new opportunities to make diplomatic archives, previous negotiations and institutional experience more accessible. These benefits depend on how institutions organise, preserve and control their knowledge, as well as on the ability of diplomats to evaluate AI-supported interpretations. The goal should not be to replace diplomatic knowledge with AI-generated answers, but to make that knowledge more accessible, usable and transferable across generations. In this sense, the most important AI transformation may be organisational rather than technological.

Foreign ministries will need to rethink how knowledge moves between individuals, departments, diplomatic missions and headquarters. Diplomatic training institutions can play a central role by helping professionals understand technology while maintaining cognitive proximity to their work. AI apprenticeships offer one practical approach by combining technological experimentation with professional reflection and institutional learning. **The main lesson of the 2020s is that learning to use AI is not enough: diplomats must also learn how to preserve their judgement, responsibility and institutional knowledge while working with it.**

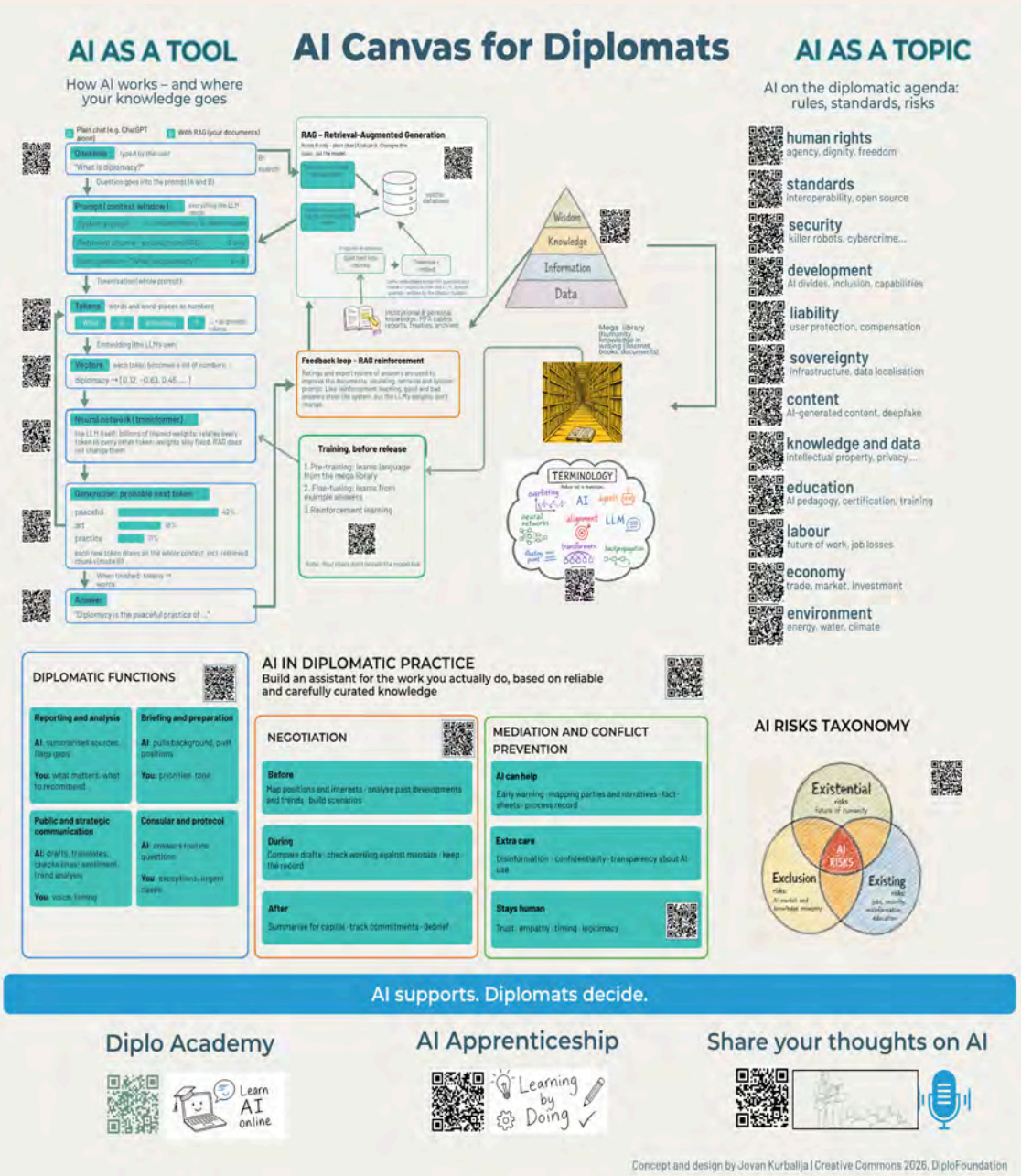


Figure 9: AI Canvas for Diplomats: Visual summary of AI Apprenticeships curriculum.

5. Thirty years later: Better technology, better diplomacy?

Thirty years after the Ankara meeting, we gather in Doha with technologies that would have been difficult to imagine in 1996. Email transformed diplomatic correspondence, websites changed public communication, Wi-Fi altered negotiations, social media reshaped political engagement, and cloud computing relocated institutional memory. AI is now entering the cognitive processes through which diplomacy is conducted. Yet, despite these extraordinary changes, many of the fundamental questions we discussed thirty years ago remain strikingly relevant.

From technological hype to diplomatic reality

The history of the last thirty years reminds us that the technologies attracting the greatest attention are not necessarily those that produce the most consequential changes. The revolutionary promises surrounding blockchain and the metaverse contrast with the less spectacular but far-reaching effects of email, Wi-Fi and cloud computing. AI may eventually transform diplomatic practice more profoundly than any of these technologies, but we should assess its effects through evidence and experience rather than predictions alone. **Our task is to distinguish what technology promises from what it actually changes in diplomacy.**

This distinction is particularly important for diplomatic training institutions, which face pressure to respond quickly to each new technological development. Curricula cannot be redesigned around every innovation, especially when technologies evolve faster than institutional planning cycles. At the same time, ignoring technological change would leave diplomats unprepared for new tools, negotiation topics and geopolitical realities. The challenge is to combine technological curiosity with institutional judgement and continuity.

Three speeds of change

Looking back, one important pattern emerges: **technology, diplomatic institutions and the fundamental purposes of diplomacy evolve at different speeds**. Technological innovation unfolds in months or years, with new systems emerging, spreading and sometimes disappearing in rapid succession. Diplomatic institutions evolve more slowly, through changes in laws, procedures, organisational structures and accumulated experience. The fundamental purposes of diplomacy – representation, negotiation, communication, compromise and trust-building – change more slowly still.

The different speeds of technological, institutional and diplomatic change help explain why the evolution of diplomacy can be both gradual and profound. Technologies may transform everyday practices while diplomatic institutions adapt more slowly and their fundamental purposes endure. This continuity should not be confused with resistance to change; it provides the institutional foundations on which technological innovations can become

effective diplomatic practices. **Diplomacy can undergo profound transformation without experiencing a revolution in its fundamental purposes.**

These different speeds are not necessarily a weakness. Diplomatic institutions need to adapt to technological change, but they also need continuity, stability and institutional memory. Rules governing diplomatic responsibility, representation and confidentiality often embody lessons accumulated over decades, sometimes centuries. **The challenge is not to make diplomacy move at the same speed as technology, but to ensure that technological innovation strengthens rather than undermines the capacities that make diplomacy possible.**

Impact on diplomatic training

The experience of the last thirty years suggests that diplomatic training should focus on **three priorities**. First, it must strengthen enduring diplomatic competencies, including listening, critical thinking, negotiation, empathy and political judgement. Second, it must help diplomats understand technology rather than simply learn how to operate the latest tools. Third, it must preserve institutional knowledge and ensure that diplomats remain sufficiently close to AI-supported processes to exercise informed judgement and responsibility.

The distinction between learning to operate technology and understanding it is particularly important in the AI era. A diplomat trained only to use today's AI applications may find those skills outdated within months, while an understanding of the underlying technology will remain useful as applications change. This is the rationale behind our AI apprenticeships, which combine practical experimentation, reflection and critical evaluation of AI outputs. Through learning by doing, diplomats develop technical competence as well as the judgement needed to decide when, how and whether to use AI.The paradox of technological progress

We return, finally, to the question raised at the beginning: **have thirty years of technological progress made diplomacy better at preventing wars, resolving conflicts and building peace?** The answer is far from clear, particularly at a time of growing geopolitical tensions, conflicts and mistrust. Technology has made communication faster, information more abundant and analysis more sophisticated, but it has not necessarily made us better listeners or more willing to compromise. Indeed, the speed and abundance of communication can sometimes make these essential diplomatic tasks more difficult.

AI brings this paradox into sharper focus. It can free diplomats from routine administrative tasks, improve access to knowledge and create more time for negotiation and relationship-building. Yet it can also weaken diplomatic judgement if professionals become overly dependent on automated outputs and lose touch with the evidence, people and contexts behind them. The central question is not how much AI diplomats can use, but whether its use makes them more capable of fulfilling their diplomatic responsibilities.

From Ankara to Doha: Thirty years of lessons

This brings us full circle, from Ankara in 1996 to Doha in 2026.

In Ankara, thirty years ago, we asked **how to use technology in diplomacy.**

In Doha, we must ask a more important question: **how can technology support better and more effective diplomacy?**

Technological progress in diplomacy should ultimately be judged by its contribution to understanding, trust, negotiation and peaceful cooperation.

Sources and relevant links:

- What are diplomatic competencies for the AI era?
- Why AI will make diplomacy more important
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- History of Diplomacy and Technology: From Smoke Signals to Artificial Intelligence, Jovan Kurbalija, DiploFoundation, 2026
- Masterclass Series on the History of Diplomacy and Technology
- Digital diplomacy topic page
- AI in Diplomacy online course
- AI Apprenticeship online course
- Reports from the IFDT meetings

About the author

Jovan Kurbalija is Executive Director of DiploFoundation and Head of the Geneva Internet Platform (GIP). A former diplomat with expertise in international law, diplomacy, and information technology, he has been a leading figure in cyber diplomacy since the early 1990s. In 1992, he founded the Unit for Information Technology and Diplomacy at the Mediterranean Academy of Diplomatic Studies in Malta, laying the foundation for DiploFoundation, which has since trained thousands of diplomats and policy professionals worldwide.

He has played key roles in global Internet governance, including membership in the UN Working Group on Internet Governance, service as Special Advisor to the Chair of the Internet Governance Forum, participation in NETmundial, and leadership within the UN High-Level Panel on Digital Cooperation Secretariat. Since 1997, his research has shaped policy debates on the impact of the internet on diplomacy and international relations, complemented by lectures at leading institutions worldwide.

Dr Kurbalija is the author and editor of numerous influential publications, including *An Introduction to Internet Governance* (7th edition, translated into 11 languages), *The Internet Guide for Diplomats, Knowledge and Diplomacy, Modern Diplomacy, Language and Diplomacy*, and the *Information Society Library*. He also authored *History of Diplomacy and Technology* (2023; 2nd ed. 2025; 3rd ed. 2026), further consolidating his contribution to the field of digital diplomacy.

This publication reflects on three decades of digital discussions at the International Forum on Diplomatic Training (IFDT), from 1996 to 2026. It traces how technological change has transformed diplomacy, communication, negotiation, training and judgement – from typewriters and early email to the internet, mobile connectivity, social media, blockchain and artificial intelligence.

Rather than a linear story of disruption, it highlights the continuity of core diplomatic functions – representation, negotiation and conflict resolution – while exploring how new technologies have expanded the tools, topics and skills of diplomacy.

Key themes

- From typewriters to AI
- Digital discussions at IFDT (1996–2026)
- Continuity and change in diplomatic practice
- Skills and training for the digital era
- Implications for the next decade

Online version