



The Hague,	18/10/2019		
EDOC #	1073366	v	4
Department / Team	Innovation project		
Author	[REDACTED]		
Phone	[REDACTED] -		

---

# *Europol*

# *Innovation Strategy*

---

---

## Introduction

The advent of new criminal models fuelled by exponential digitalization, disruptive technologies and diverse international legal frameworks are some of the major challenges for today's law enforcement community. Europol's ambition is to continue developing as a forward-looking organisation, so that we can address evolving security threats in an effective and efficient manner. While technological tools are often seen as the main solution to solving crimes, they are, however, only one piece of a larger puzzle. Organizational structure, training and policing concepts are just as important if law enforcement want to get ahead of today's criminals. Law enforcement agencies across the EU are driving the change, pioneering creative ideas, adapting to shifting contexts and regulatory frameworks, and incorporating insights from officers and community partners. To further enhance these endeavours and ensure streamlining of efforts, Europol's Innovation Lab will act as an EU hub for law enforcement to focus on the main components of innovation, while enabling Member States to overcome well-known innovation pitfalls (i.e. failure aversion, development of solutions in silos, fragmented and conflicting outputs, poor sustainability or scalability of deliveries).

As laid out in Europol Strategy 2020+, Europol aims to be at the forefront of law enforcement innovation and research for the benefit of the Member States. Europol will link diverse communities in real time (i.e. law enforcement, academia, private sector) and will act as a sustainable platform for coordination, empowerment and support for "EU innovators" in the field of Security. With this in mind, a solid innovation strategy is essential for Europol to deliver its goal.

Europol in its innovation strategy articulates its vision for innovation within the realm of Internal Security. With the Member States needs in its core, it indicates the strategic objectives for the years to come, key partnerships and critical investments for EU law enforcement to be ready for future disruption and have an agile and pro-active response to the challenges ahead.

Innovation is the process of adapting to existing ideas, finding breakthroughs, and ways to look for the most effective recombination of methods in order to improve organisational outputs. Innovation is not only about products, but also the reinvention of social processes. In the context of Law Enforcement, innovation is a **human-centred process**. This process requires experimentation and iteration, a diverse team, and a desire to learn while failing. Innovative solutions might result in new technologies, but innovation does not equal technology. Beyond novel technological solutions and new ways to handle data, innovation in law enforcement primarily entails a workforce embodying a culture of innovation, adept to manage technological disruption and change, while guaranteeing and safeguarding fundamental rights. Europol in its strategy has identified four drivers that will enable innovation within law enforcement: **Technology, Workforce, Data, and Ethics**. Innovation is fostered when all these forms come together, therefore Europol's strategic goals on innovation will be centred around these pillars. This strategic approach to innovation is envisioned to assist EU law enforcement agencies have greater insights and higher impact, in a world shifting from bricks and mortar to bits and bytes.

---

## **Vision and values**

In order to address the emerging and future challenges in the field of EU Security, Europol's vision and values on Innovation are directly linked to the strategic priorities as laid out in Europol Strategy 2020+, i.e. "be at the forefront of law enforcement innovation and research".

### **Vision**

Europol's vision is to become the central point of reference for EU law enforcement on innovation, nurturing a culture of innovation within the organisation and beyond, while investing and actively pursuing novel solutions and business models for the benefit of the Member States.

### **Values**

Europol places importance on a set of values that guide its conduct, activities and goals. Europol's strategy on innovation is in line with the values as laid out in Europol Strategy 2020+, especially pinpointing partnership and diversity:

#### **Partnership**

We build sustainable relations across the law enforcement community and beyond, nurturing a culture of innovation, to provide agile operational support to Member States and cooperation partners.

#### **Diversity**

We foster diversity and uphold an inclusive innovation culture. Following compelling evidence from several studies that diversity unlocks innovation, we embody and embrace the power of differences to champion innovation in EU law enforcement.

### **Strategic Goals**

In the coming years, Europol's strategic goals on innovation will be:

1. **Technology:** Be the EU capability to analyse the security threats associated with emerging and disruptive technologies and support the EU Member States in effectively countering these threats.
2. **Workforce:** Be a knowledge hub to support EU law enforcement in fostering a culture of innovation for their workforce.
3. **Data:** Provide solutions to the EU Member States to manage the exponential growth of heterogeneous big data flows and transform data into operational insights.
4. **Ethics:** Be the model EU law enforcement organisation for ethical data governance and technological solutions, safeguarding fundamental rights.

## Strategic goals and multiannual objectives<sup>1</sup>

██████████ Europol will be the EU capability to analyse the security threats associated with emerging and disruptive technologies and support the EU Member States in effectively countering these threats.

In recent years, technology has had a fundamental impact on the nature of crime, with criminals quickly adopting and integrating new technologies into their *modi operandi* or building brand-new business models around them. At the same time, disruptive technologies present a set of opportunities for law enforcement in countering the new landscape of criminal threats. Due to technological innovation, law enforcement authorities now can have a greater and more impactful set of tools at their disposal to fight crime.

To manage this double-edged feature of technology, Europol will act as a central EU capability for all EU Member States and third partners to help identify and analyse the new criminal threats associated with emerging and disruptive technologies, while exploring new technological opportunities, to support its partners in responding to these threats.

Europol will focus on two actions: firstly on becoming a centralised capability for strategic foresight on disruptive technologies to inform EU policing strategies; and secondly on enhancing strategic partnerships to deliver novel technological solutions that address the needs of the Member States.

### **1.1. Be a centralised capability for strategic foresight on disruptive technologies to inform EU policing strategies**

Europol will act as an EU Hub for strategic foresight on disruptive technologies, in the field of Security. It will identify and categorize common challenges in the area of emerging technologies, analyse the impact and provide insights for opportunities for EU law enforcement in these areas. It will deliver scenario planning to analyse the drivers and trends behind new criminal *modi operandi* and set recommendations to law enforcement to leverage technological advances for operational opportunities.

As a centralised capability for foresight on disruptive technologies, Europol will be able to raise awareness on the training priorities in the area of future policing. It is also foreseen to make valuable contributions in policy discussions to highlight the requirements of law enforcement in order to operate effectively and ensure a safer Europe for its citizens.

Europol's production of strategic foresight will be in a coherent and systematic manner or as single instances on specific themes and is envisaged to inform and feed the EU policy discussions in the field of Security.

---

<sup>1</sup> In the framework of the Europol Programming Document (EPD) 2019–2021.

**1.2. Strategically enhance partnerships to deliver novel technological solutions that address the needs of the EU Member States**

An enhanced multidisciplinary approach is becoming increasingly more relevant for Europol in delivering its mission on innovation, bringing together necessary expertise and information from an expanding range of partners.

Serving as a sustainable EU platform for law enforcement innovation, Europol will bring together the most suitable partners to build a network of innovation, tailored to the needs of Member States' law enforcement agencies. The aim will be to connect a network of innovators across law enforcement and beyond, notably within civil society, academia, industry, international organizations or alike, through agile projects, delivering novel operational solutions to end users. Innovative technical solutions and business models in law enforcement are envisaged to be co-developed, tested and hosted by Europol for the benefit of the Member States.

The delivery of novel technological solutions through the enhancement of key partners will contribute to the EU's ability to articulate an operational vision on innovation within the realm of internal Security, decide on critical investments and be ready for future disruptions.

Europol will be a knowledge hub to support EU law enforcement in fostering a culture of innovation for their workforce.

Beyond technology, innovation for law enforcement is a human-centred process and as such Europol considers the investment on human capital of paramount importance.

In the field of law enforcement, innovation also entails adapting the organisational mindset to the new challenges related to the implementation of disruptive technologies and cultivating among workforce a shared culture of innovation.

Europol will be a knowledge hub, where sharing of best practices and expertise will be actionable to the EU law enforcement leadership, while reflecting the diverse challenges that workforce are confronted with today and tomorrow.

## 2.1 Knowledge sharing and trainings

According to several studies, skills gaps across all sectors, including law enforcement, are expected to grow in the Fourth Industrial Revolution. Rapid advances in emerging technologies such as artificial intelligence and robotics are changing the very nature of the jobs - and the skills needed to do them - faster than ever before. Law enforcement leadership is called to re-think policing, especially in the light of changing regulations, and consider solutions that would enable sustainable skill development within existing workforce and in untapped talent pools.

Europol will be the platform to enable EU law enforcement leadership connect and discuss challenges with experts, analyse effective approaches for workforce skill development and identify success factors that would contribute to a sustainable innovation culture within their organisations. As an EU platform for knowledge sharing, Europol will provide awareness sessions and training material to middle and higher EU law enforcement management that would assist workforce in endorsing and adapting successfully to change and the challenges of innovation. It will also host trainings with experts to provide advice on new job profiles that would be required for policing in the future (i.e. data scientists or cyber psychologists).

As technology is currently a key component of most crime activities, systematic and focused attention is required in protecting workforce from the unforeseen consequences of technology. As an example, a significant number of law enforcement staff are required to go through an ever-increasing volume of disturbing online content for hours daily. Europol, as a knowledge hub, is also envisaged to provide information packages and host trainings with skilled professionals to raise awareness among workforce on the unforeseen effects of technology in their health and promote resilience mechanisms against online disturbing content.

Europol will provide solutions to the EU Member States to manage the exponential growth of heterogeneous big data flows and transform data into operational insights.

Law enforcement investigations in the digital world are currently very time-consuming and resource-intensive. Law enforcement agencies are required to further adapt their processes for the collection, analysis and exchange of data, and invest heavily in new tools and techniques. The massive generation of electronic evidence due to the increasing digitalisation of society will make it increasingly difficult for law enforcement to find the relevant data and transform it into operational insights.

Europol will seek for novel avenues to overcome the “Big Data” challenges. It will support the EU Member States to develop the right technical means to facilitate the entire data governance cycle and transform data into reliable operational outputs. To achieve this goal, Europol will focus on two actions: firstly on fostering data science capabilities, tailored to the law enforcement needs to leverage the full value of criminal data; and

secondly on supporting EU law enforcement with tools and methodologies to detect data bias and manipulation.

**3.1 Foster data science capabilities tailored to the law enforcement needs to leverage the full value of criminal data.**

Historically, law enforcement information sets have stemmed from systems that were primarily developed to manage criminal cases without a digital aspect, focusing on text-based entities, obtained from the analysis of off-line criminal activities. The management of other types of information, such as biometrics, media, logs, sensors and other complex data sets, does not seem to be efficiently supported at scale. Furthermore, beyond the criminal datasets, law enforcement has not invested sufficiently on capabilities to harvest insights from non-digitalized historical data ("Dark Data"), nor from new sources of abundant publicly available information. This poses a challenge to law enforcement, in the scope of Data Science, where the way that data is organised affects the effort required to retrieve information.

In order to articulate a data driven operational strategy, Europol will develop an EU law enforcement data science capability, designing the most efficient processes and field knowledge to harvest, process and organise data, allowing law enforcement to derive operational insights and foresights from heterogenous data sets.

**3.2 Support EU law enforcement with tools and methodologies to detect data bias and manipulation.**

New technology services and systems are increasingly relying on data sharing, tracking, profiling, and artificial intelligence. These systems should empower law enforcement, allowing them to make informed decisions to prevent and combat criminal threats. However, the multiplication of data-tempering capabilities such as Deepfake are having a direct impact on law enforcement operations. In addition, unforeseen data bias has a negative impact in the reliability of data.

Data manipulation and unfair bias must be circumvented, as it could have multiple negative implications, from the erroneous criminal analysis and misleading operational assessments to marginalization of vulnerable groups and increase of discrimination. Europol will support Member States, informing them about appropriate tools and methodologies to detect data bias and manipulation, while providing them with expertise on building robust technical systems with non-prejudice and integrity of data.

Be the model EU law enforcement organisation with ethical technological solutions and data governance, safeguarding fundamental rights.

In full agreement with the first priority of the European Council’s Strategic Agenda for 2019-2024, “protecting citizens and freedoms”, any innovation initiative for law enforcement needs to guarantee the respect of ethical principles and citizen’s fundamental rights.

Europol will lead by example in responsible innovation, setting ethical standards in the development of technological solutions and data governance, fostering fundamental rights.

#### **4.1 Setting ethical standards in the development of technical solutions and data governance.**

In a complex era full of disruption, innovation in law enforcement is human centred and should be carefully considered in relation to the positive and negative consequences associated. It is in the nature of artificial intelligence that creators do not and often cannot, predict what their creations do. This poses challenges that cannot be resolved by compliance rules alone. Law enforcement ought to take responsibility on the moral consequences of their work and ensure that the advanced technological tools that they employ and the means used to manage data are in full respect of human rights.

Europol will work closely with all its partners to examine how emerging trends (technology, data, and regulations) affect ethical policing and will support Member States in setting the highest ethical standards in data governance and technology. Europol will lead by example for EU law enforcement units engaged in technology and data analytics, in applying collaborative, standardised and transparent principles, while safeguarding human rights. The agency will create the conditions for a culture of responsible innovation, by incorporating transparency, configurability and accountability in data governance and technology, with auditability being a key.