



PRESS RELEASE

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Reinventing global cooperation through hackathons

A study by the UNIGE and the United Nations suggests that we should focus on citizen participation processes to achieve sustainability and strengthen multilateralism.

Using collective intelligence to solve a problem: that's what hackathons are all about. Historically dedicated to developing IT solutions, these events now also focus on global issues, particularly those related to the UN's Sustainable Development Goals (SDGs). A team from the University of Geneva (UNIGE), in collaboration with the United Nations Library and Archives in Geneva, analysed 5456 hackathons. It shows that 30% of them make a significant contribution to the SDGs, particularly climate change. Moreover, they continually attract new participants and generate long-term collective engagement. These findings, published in the journal *Philosophical Transactions of the Royal Society A*, argue in favour of hackathons to achieve the SDGs and, more broadly, to adapt multilateralism, which is currently in crisis, to the challenges of the digital age.

A contraction of “hacking” (a rapid solution to technical problems) and “marathon”, hackathons have their origins in the hacker movement of the 1950s. Born out of a desire to use technology as a lever for pacifist social change, the movement has had a lasting influence on digital practices. “Historically, hackathons brought together passionate computer developers who worked together to solve complex software challenges in 24 to 48 hours,” explains Thomas Maillart, a senior researcher at UNIGE’s Geneva School of Economics and Management (GSEM).

Today, these decentralised events bring together people from all backgrounds around projects in a wide range of fields, redefining the way they are approached and carried out. Recent work carried out by Thomas Maillart with the UN Library & Archives, and teams from the Bern University of Applied Sciences, the MBS School of Business in Montpellier, the Technical University of Eindhoven and Carnegie Mellon University in Pittsburgh, argues in favour of these processes. First, to align global efforts with the SDGs, in particular through digital development. Secondly, to build the multilateralism of the future. This form of cooperation between more than two states is being undermined by societal changes linked to digital tools, the growing influence of private sector actors and the emergence of global challenges.

High resolution pictures

Over 5,000 Hackathons Analysed

To support this argument, the researchers analysed data from the Devpost platform, dedicated to hackathons, and GitHub, used for the development of open source computer code. The data included 5456 separate hackathons, 184,652 projects, 290,795 participants and over 3.3 million software development events.

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Of these, 1,320 hackathons were linked to at least one of the 17 SDGs. Around 30% of the hackathons surveyed showed a strong correlation to the SDGs, reflecting their clear focus on global issues. Some goals, such as clean and affordable energy (Goal 7 of the SDGs), attract particularly strong engagement. What's more, these events attract an average of 72.6% new people, ensuring a constant renewal of communities - and therefore knowledge - while generating concrete, sustainable solutions over time.

Designed to Help International Organisations

From these observations, the research team has developed a theory: "computational diplomacy". According to it, moments of intense innovation strengthen community engagement in the long term, especially on issues related to the SDGs. "People need to evolve, to become aware of their ecosystems belonging to the planet, in order to reach the necessary level of engagement and thus be able to address the challenges of today's world, such as climate disruption, without going exclusively through states," explains Francesco Pisano, director of the United Nations Library and Archives in Geneva and co-author of the study. "Hackathons, as a participatory tool, are a promising way to strengthen transparency, inclusiveness and collective engagement in global governance in the digital age." They are also a valuable resource for international organisations that need to reinvent themselves to innovate and engage citizens in the long term.

However, Thomas Maillart stresses the importance of further research to better understand the impact of hackathon solutions and the neurobiological mechanisms that foster the emergence of collective intelligence and intrinsic motivation, i.e. the joy of building a collective vision of the future. "By exploring the interface between neuroscience, collective intelligence and psychology, we could optimise these participatory processes to meet the complex challenges of the 21st century, while sketching the contours of a citizen-driven multilateralism of the future."

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