









This module highlights the role of digital transformation in strengthening NGOs, enhancing their efficiency, and aligning their strategies with the twin digital and green transition. It explores key technologies such as automation, AI, big data, and collaboration tools, showcasing real-world examples of how NGOs leverage digital solutions to maximize their impact.

By the end of this module, you will understand the opportunities and challenges of digitalization for NGOs, learn how digital tools can drive innovation and engagement, and explore strategies to overcome barriers to adoption while ensuring long-term sustainability.

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Learning objectives

What are you going to learn here?

- Learning Objectives
- Understand what digital transformation is and how it enhances NGO operations
- Explore how NGOs can leverage digital tools to improve efficiency and engagement.
- Recognize the challenges of digital adoption and explore strategies to address them.
- Investigate real-world examples of NGOs successfully implementing digital solutions to drive social impact, capacity-building, and sustainability.

01

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What is the Digital Transition?

As the name suggests, the Digital Transition is the process of integrating digital technologies into all aspects of society, fundamentally changing the way people, businesses, and organizations function.

It is not just a technological evolution, but a profound shift that redefines how societies and organizations operate, enabling them to become more adaptive, efficient, and innovative. At the same time, it is a crucial driver of economic and social transformation. The European Commission's Digital Decade strategy¹ (2019) positions digital transformation as a priority alongside the Green Transition, aiming to empower businesses, individuals, and public institutions with next-generation technologies². The challenge lies in ensuring that digital advancements align with sustainability goals rather than exacerbating environmental degradation.

¹ https://digital-strategy.ec.europa.eu/en/policies/europes-digital-decade

² https://reform-support.ec.europa.eu/what-we-do/digital-transition en

To achieve these ambitions, the EU is pursuing a twin green and digital transition³, integrating sustainability and digital innovation to drive economic growth while reducing environmental impact - an approach that ensures technological advancements support climate goals, making the transition both inclusive and resilient.



³ https://digico.global/the-decisive-twin-green-digital-transition/

"Europe has to lead the transition to a healthy planet and a new digital world. This twin challenge of a green and digital transformation has to go hand-in-hand."

the European Commission

The Twin Transition

The **twin (digital and green) transition**⁵ refers to the simultaneous digital and green transformations shaping Europe's future.

This concept, central to the European Commission's policy agenda⁶, underscores the need for digital innovation to support sustainability goals while ensuring that environmental considerations guide digital advancements. The European Green Deal and the Digital Decade strategic frameworks are closely interlinked, forming a roadmap towards a climate-neutral, digitally sovereign Europe by 2050.

At its core, the twin transition acknowledges that digitalisation is not merely a technological shift but a means to enhance environmental sustainability. Advanced digital technologies – such as artificial intelligence (AI), big data analytics, cloud computing, and the Internet of Things (IoT) – play a crucial role in optimising resource use, reducing waste, and creating more efficient energy systems. Conversely, the green transition demands that digital developments adhere to sustainability principles, limiting electronic waste, reducing energy consumption, and promoting circular economy models

⁵ https://digico.global/the-decisive-twin-green-digital-transition/ ⁶ https://commission.europa.eu/strategy-and-policy/priorities-2019-2024 en

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For NGOs, the twin transition presents both opportunities and challenges

As the social and environmental impact of digital tools becomes more apparent, NGOs must navigate this evolving landscape by integrating digital solutions in ways that align with their missions.

Whether working in social inclusion, education, environmental advocacy, or community development, NGOs can leverage digitalisation to enhance their reach, efficiency, and impact while ensuring that their operations contribute to broader sustainability goals.

A successful twin transition requires investment in digital skills, infrastructure, and policies that support both technological and environmental innovation. European policy initiatives, such as the Fit for 55 package and the NextGenerationEU7 recovery plan, highlight the necessity of an integrated approach where digital progress and sustainability objectives reinforce one another.

For NGOs, the twin transition presents both opportunities and challenges

For NGOs, engaging with these developments means not only adapting to new digital tools but also playing an active role in shaping a fair and inclusive transition "that leaves no one behind". In this overarching context, this module explores the twin tranzition from an NGO perspective, outlining key opportunities, challenges, and best practices for digital transformation — with the aim of enhancing understanding of the interplay between digitalisation and sustainability, enabling NGOs to act as key drivers of a greener, more digitally inclusive Europe.

Digital transformation empowers NGOs to amplify their impact, streamline operations, adapt to complex societal challenges, enhance efficiency, optimise resource management, and deliver services more effectively to the communities they serve.

One of the most significant benefits of digitalisation for NGOs is **automation**, which reduces the time and resources spent on repetitive tasks. Processes such as donor management, reporting, and financial administration can be optimised through digital platforms, allowing organisations to focus more on mission-critical activities.

For example, automation tools⁹ help NGOs maintain transparency in financial reporting while simplifying compliance with regulatory requirements. These systems are particularly beneficial for resource-constrained organisations, where every saved hour and dollar directly supports their mission.

⁹ Ex. https://www.salesforce.com/nonprofit/cloud/;

⁹ https://www.blackbaud.com/products/blackbaud-raisers-edge-nxt

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Digital transformation also enables NGOs to adopt innovative methods of collaboration and engagement.

Cloud-based platforms and virtual communication tools¹⁰ facilitate teamwork across geographical boundaries, allowing staff and volunteers to collaborate seamlessly regardless of location. Such tools are especially valuable for organisations with regional or international operations.

Additionally, **project management tools**¹¹ help NGOs streamline task allocation, track progress, and maintain clear communication among team members. Digital platforms such as Slack further enhance collaboration by enabling real-time communication and fostering a sense of community within dispersed teams.

Beyond internal collaboration, **virtual communication platforms**¹² allow NGOs to engage with external stakeholders, including governments, private companies, and other non-profits, creating opportunities for partnerships and collective impact. For example, virtual roundtables and webinars hosted on these platforms enable NGOs to share insights, advocate for policy changes, and mobilise support for their initiatives at a global scale. Such as Microsoft Teams and Google Workspace

¹⁰ Such as Microsoft Teams and Google Workspace

¹¹ Ex. https://asana.com/; https://trello.com/

¹² Such as Zoom and Webex

Education and capacity-building represent transformative areas for NGOs leveraging digital technologies.

E-learning platforms have been instrumental in scaling up training efforts, equipping both staff and volunteers with the skills required to address modern challenges, enabling flexible, accessible, and engaging learning experiences through video tutorials, interactive modules, and virtual workshops.

During the COVID-19 pandemic, many NGOs successfully adopted virtual training models using e-learning platforms¹³, ensuring continuity despite restrictions on in-person gatherings.

This flexibility allows organisations to provide consistent, high-quality training opportunities even in under-resourced or remote areas. Examples include Moodle or Edmodo

¹³ Such as Moodle or Edmodo

A standout example – highlighted in the series of reports on best practices in digital education across the EU by the European Digital Education Hub of the European Commission (Curaj, Geantă, Hâj, & Holeab, 2024), (Holeab & Geantă, 2024)¹⁴ – is **Croatia's e-sfera**¹⁵ https://www.e-sfera.hr learning platform, which combines traditional textbooks with over 20,000 **digital resources**, including interactive quizzes, simulations, and 3D models.

Tailored to various educational levels, e-sfera has streamlined lesson preparation and facilitated individualised learning plans through its complementary Assistant application, which automates administrative tasks for teachers.

¹⁴ A third report in the series is under publication (as of January 2025) ¹⁵ https://www.e-sfera.hr/

¹⁶ *All national practices in digital education (involving NGOs) cited here are described and analysed in detail in the series of reports published by the European Digital Education Hub of the European Commission.

Romania's Let's Click on Romania project, led by the NGO Ateliere Fără Frontiere¹⁷, bridges the digital divide by refurbishing and distributing computers to disadvantaged communities.

These reconditioned devices support educational initiatives, social inclusion, and professional training in underprivileged areas, demonstrating how technology can transform access to education.

Slovenia's **E-bag 2023** project¹⁸ further exemplifies the integration of digital tools into education, providing interactive textbooks, real-time feedback, and digital learning environments for primary and secondary schools. The platform promotes independent learning, enhances teacher engagement, and ensures alignment with national curricula.

¹⁷ https://atelierefarafrontiere.ro/

¹⁸ https://etorba.sio.si/etorba/sl/help/project

Another notable initiative is the **Learning Passport Poland**¹⁹, developed and managed by UNICEF in collaboration with Microsoft and a local NGO. This platform supports the integration of Ukrainian refugee children into the Polish education system and equips teachers with the skills needed to address the psychosocial and educational challenges of refugee learners. It provides specialised courses focusing on stress management, intercultural communication, and trauma-informed teaching practices, ensuring educators are well-prepared to create safe and inclusive learning environments.

Capacity-building encompasses more than education, extending to organisational development and access to essential digital resources. Digital transformation processes support NGOs in strengthening their internal capacities through tools that optimise operations and build resilience. For example, resource management platforms²⁰ and analytics tools²¹ enable organisations to streamline their workflows, improve financial management, and track program outcomes effectively. Such systems help NGOs scale their activities while ensuring transparency and accountability.

¹⁹ https://www.learningpassport.org/

²⁰ Ex. https://www.sap.com/products/erp/business-bydesign.html; https://www.microsoft.com/en-us/dynamics-365

²¹ Ex. https://www.tableau.com/; https://lookerstudio.google.com/navigation/reporting

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Access to shared digital resources and infrastructure also plays a crucial role in capacity-building

Initiatives like **BeCentral²²** in Belgium exemplify how shared digital spaces foster innovation and collaboration, offering NGOs access to cutting-edge tools and expertise. These hubs act as centres of excellence, offering training, resources, and networking opportunities that empower organisations to improve their impact.

Capacity-building efforts also focus on **expanding networks** and **fostering partnerships**. Digital transformation enables NGOs to connect with peers, policymakers, and private sector collaborators through virtual conferences, online communities, and webinars – opportunities which allow organisations to share best practices, access funding opportunities, and develop innovative solutions collaboratively.

Furthermore, digital tools enhance NGOs' ability to **engage with their beneficiaries and communities.** Social media platforms, mobile apps, and digital outreach campaigns allow organisations to build stronger connections with their audiences, gather feedback, and adapt their programmes to meet local needs. Communication technologies also simplify volunteer mobilisation, event management, and fundraising, opening new avenues for growth and engagement.

The opportunities provided by digital transformation are not limited to operational improvements. By leveraging big data and analytics, NGOs can make evidence-based decisions that enhance their programs' effectiveness

For example, **big data tools** are increasingly used to map vulnerable populations, assess disaster response needs, and track long-term community development outcomes, allowing organisations to allocate resources strategically and maximise impact. Examples include platforms like UNHCR's **PRIMES**²³, which supports refugee services globally, and the **ACAPS**²⁴ analysis platform, designed to help NGOs interpret complex datasets during humanitarian crises. These technologies demonstrate the transformative power of data in addressing complex challenges.

As highlighted in the European Commission's digital education reports, NGOs can draw inspiration from successful practices across sectors. Initiatives like Germany's **Digital Learning Campus²⁵**, which fosters digital skills development at scale, and Belgium's **BeCentral digital hub** showcase how digitalisation can create inclusive and innovative solutions and provide actionable insights for NGOs aiming to enhance their strategies and achieve greater impact.

https://www.unhcr.org/what-we-do/protect-human-rights/protection/registration-and-identity-management/primes

²⁴ https://www.acaps.org/en/

²⁵ https://dlc.sh/

Open-ended index of digital

technologies for NGOs

01 — Artificial Intelligence (AI)



- Chatbots: automate communication with donors and beneficiaries (ex. ChatGPT for Nonprofits, Zendesk AI)
- Predictive Analytics: analyse trends to forecast needs and optimise resource allocation (IBM Watson, SAS Analytics)
- Content Moderation tools: filter inappropriate content in community platforms (Moderate Content, Azure Content Moderator)

Big Data and analytics



- Data visualisation tools: create insights from large datasets (Tableau, Looker Studio)
- Impact measurement platforms: track program outcomes and community changes (Keela, Submittable)
- Mapping tools: visualise vulnerable populations or crises (Google Earth Engine, Mapbox

03

Extended Reality (XR)



- Virtual Reality (VR): simulate training scenarios (Oculus for Business, CoSpaces Edu)
- Augmented Reality (AR): enhance engagement in educational projects (ZapWorks, Vuforia)
- Mixed Reality (MR): blend physical and digital spaces for collaborative workshops (HoloLens)



- Customer Relationship Management (CRM): manage donor and volunteer databases (Salesforce Nonprofit Cloud, Blackbaud Raiser's Edge)
- Task automation tools: automate routine workflows (Zapier, IFTTT)
- Financial reporting software: simplify compliance and transparency (QuickBooks, Xero)

05

Project Management Tools



- Task management platforms: track and assign tasks (Asana, Trello, Monday.com)
- Collaboration tools: facilitate communication and document sharing (Slack, Google Workspace, Microsoft Teams)
- Integrated planning systems: manage complex, multistakeholder projects (Smartsheet, Wrike)

Social media and digital marketing tools



- Content scheduling tools: plan and automate posts (Hootsuite, Buffer)
- Engagement analytics: monitor and measure community interaction (Sprout Social, Brandwatch)
- Email marketing platforms: reach broader audiences (Mailchimp, Constant Contact)

07

Open-Source Solutions



- Data collection tools: gather and process field data (KoboToolbox, Open Data Kit (ODK))
- Crisis mapping platforms: visualise real-time data in emergencies (Ushahidi, Sahana EDEN)
- Digital resource libraries: share and access knowledge globally (LibraryBox, GitHub for collaborative projects)

Education and capacity-building platforms



- E-Learning tools: deliver online training for staff and beneficiaries (Moodle, Edmodo, Coursera for Nonprofits)
- Training simulators: practise real-world scenarios (Serious Factory, SimScale)
- Skill assessment platforms: evaluate and improve digital competencies (Pix platform, SkillSurvey)

Brief discussion on challenges,

risks, and the future

While digital transformation offers significant opportunities, NGOs face several challenges and risks that must be addressed to ensure successful implementation

One of the primary obstacles is the lack of digital skills among staff and volunteers, which can hinder the adoption of new technologies — a gap which highlights the need for targeted training programmes and capacity-building initiatives to equip organisations with the knowledge required to navigate the complex and evolving digital landscape.

Another critical challenge is **unequal access to technology**, particularly for NGOs operating in under-resourced areas. Limited internet connectivity, insufficient hardware, and outdated infrastructure can prevent organisations from fully embracing digital transformation. To address this, initiatives such as Romania's **Let's Click on Romania** project, which refurbishes and distributes computers to disadvantaged communities, showcase how targeted interventions can bridge the digital divide.

Data security and privacy concerns also pose significant risks, as NGOs often handle sensitive information about their beneficiaries and stakeholders. Cybersecurity breaches can lead to reputational damage and loss of trust, and therefore implementing robust data protection measures while adhering to compliance standards such as GDPR are critical steps in mitigating these risks.

Finally, the **financial burden of digital transformation** remains a key consideration. For many NGOs, investing in new technologies, maintaining software licenses, and upskilling staff can strain already limited budgets. In this context, partnerships with technology providers and accessing grant opportunities for digitalisation can help alleviate these pressures.

To adapt successfully to this transition, NGOs must prioritise investments in digital literacy, embrace cost-effective solutions such as open-source platforms, and advocate for equitable access to technology.

Building strategic partnerships and leveraging collaborative networks will also be essential in overcoming these challenges, ensuring the sustainability of digital initiatives, and fostering the long-term development and resilience of NGOs.

In addition, accessing knowledge resources such as tech trends reports can help NGOs anticipate and navigate technological change. Reports like Deloitte's "Tech Trends"²⁶ and the Future Today Institute's annual analyses provide insights into emerging technologies, from AI and Web3 to metaverse applications and multicloud environments. These resources serve as roadmaps, equipping NGOs with the tools to align their strategies with technological advancements, identify opportunities for innovation, and maximise their impact in an evolving digital landscape.

https://www.deloittedigital.com/au/en/insights/research/deloitte-tech-trends-report-2023.html; https://www2.deloitte.com/ro/en/pages/about-deloitte/articles/deloitte-tech-trends-2024.html; https://www2.deloitte.com/us/en/insights/focus/tech-trends.html; https://futuretodayinstitute.com/trends/

PRACTICAL EXERCISE - Digital Strategy Reflection & Action Plan

Activity: Reflect on the role of digital transformation in NGOs and apply key concepts from this module to a practical scenario

Step 1: Digital Readiness Assessment (Self-Reflection - 10 min)

Consider the NGO you are involved with (or imagine one) and assess its current level of digital adoption. Answer the following:

- What digital tools (if any) does the NGO currently use for communication, operations, and engagement?
- What are the biggest digital challenges it faces (e.g., lack of skills, funding, outdated infrastructure)?
- What opportunities could digital transformation bring to enhance its impact?

PRACTICAL EXERCISE - Digital Strategy Reflection & Action Plan

Step 2: Identifying Key Digital Tools (Application - 10 min)

Based on what you've learned in this module, select three digital tools that could help improve your NGO's efficiency, outreach, or sustainability.

Briefly explain:

- Why these tools are relevant.
- How they can address specific challenges.
- Any potential barriers to adoption.

PRACTICAL EXERCISE - Digital Strategy Reflection & Action Plan

Step 3: Group Discussion or Written Reflection (10-15 min)

If completing this exercise in a group setting, discuss findings and compare insights.

If working individually, write a brief action plan outlining one step the NGO could take toward digital transformation, considering funding, skills, or partnerships.

Outcome:

This activity will help you connect theory to practice, empowering you to think critically about digital transformation in real-world NGO settings.

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Module 4

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