

LET'S TALK DIGITAL

Case studies: using digital technologies
in the context of governance and conflict

THE 2030 AGENDA

A global economy that protects the environment, decent working conditions for all, and a society free from hunger, poverty and inequality – the 2030 Agenda for Sustainable Development is certainly the most ambitious undertaking the international community has ever embarked on. The Agenda revolves around 17 Sustainable Development Goals (SDGs) with a total of 169 targets. The SDGs are based on the following five overarching principles that make the 2030 Agenda truly innovative:

UNIVERSALLY APPLICABLE

To achieve sustainable development, every country needs to develop or change. The 2030 Agenda therefore applies universally to all countries of the world – developing countries, emerging economies and industrialised nations alike.

LEAVE NO ONE BEHIND

All human beings should be able to lead a decent life free from poverty and hunger. In future, no one should be left behind or excluded from social development.

INTEGRATED GOALS

The integrated nature of the SDG's means, that they are indivisible. In a balanced way they take account of three dimensions of sustainable development: economic, social and environmental.

SHARED RESPONSIBILITY

The Agenda aims through partnerships to preserve the world's vital natural resources and promote prosperity and peace. Governments, business, civil society groups, citizens, and the scientific and academic community will all play their part in this.

ACCOUNTABILITY

Implementation of the Agenda will be reviewed at national, regional and global levels. Regular progress reports will be published.

WORKING TOGETHER FOR CHANGE

As a provider of international cooperation services for sustainable development and international education work, we are dedicated to building a future worth living. GIZ has over 50 years of experience in a wide variety of areas, including economic development and employment promotion, energy and the environment, and peace and security. The diverse expertise of our federal enterprise is in demand around the globe – from the German Government, European Union institutions, the United Nations, the private sector and governments of other countries. We work with businesses, civil society actors and research institutions, fostering successful interaction between development policy and other policy fields and areas of activity. Our main commissioning party is the German Federal Ministry for Economic Cooperation and Development (BMZ).

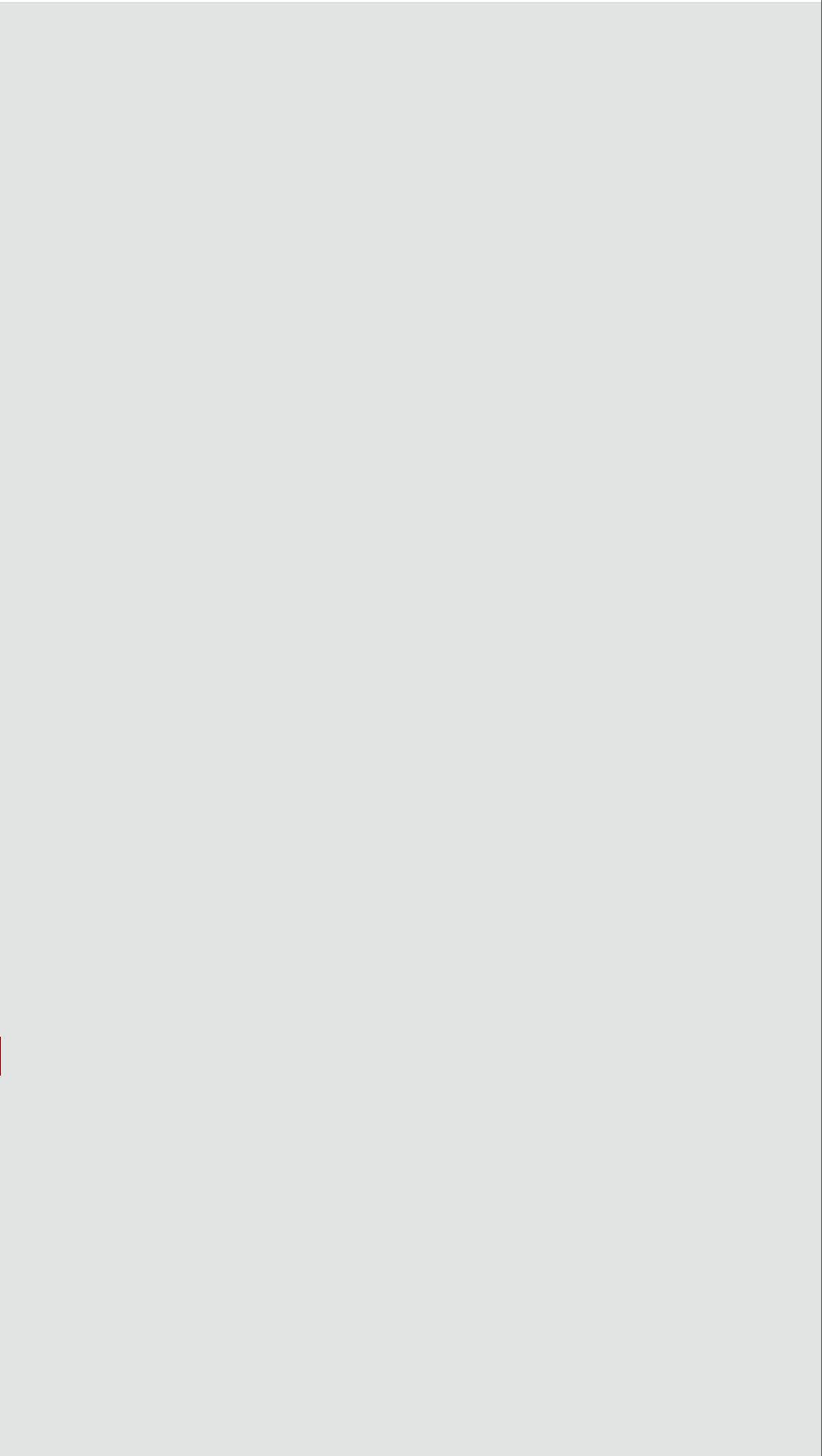
Commissioning parties and cooperation partners all place their trust in GIZ to work with them to generate ideas for political, social and economic change, to develop these into concrete plans and to implement them. Since we are a public-benefit federal enterprise, German and European values are central to our work. Together with our partners in national governments worldwide and cooperation partners from the worlds of business, research and civil society, we work flexibly to deliver effective solutions that offer people better prospects and sustainably improve their living conditions.

GIZ's registered offices are in Bonn and Eschborn. In 2017, we generated a business volume of around EUR 2.6 billion. Our 19,506 employees, almost 70 per cent of whom are national personnel, work in around 120 countries. As a recognised development service provider, we currently have 590 development workers in action in partner countries. Furthermore, in 2017, the Centre for International Migration and Development (CIM), which is run jointly by GIZ and the Federal Employment Agency, placed 385 integrated experts and 484 returning experts with local employers in our partner countries or provided them with financial support, advice or other services.*

*Personnel and business figures as at 31 December 2017

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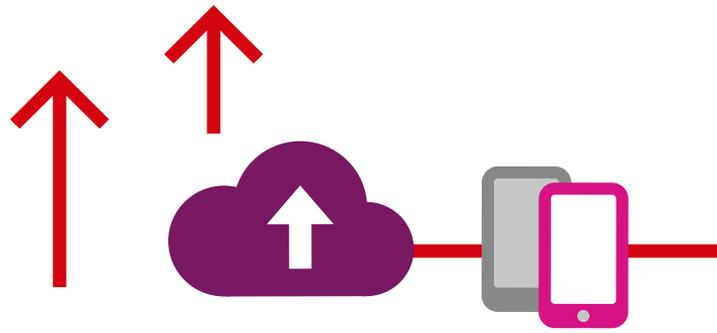
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DIGITAL TECHNOLOGIES IN DEVELOPMENT COOPERATION

Digital technologies have fundamentally changed development cooperation and the work of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. Ideas that were deemed as futuristic fantasies, have become routine. Digitalisation enables us to support social, economic and political development in our partner countries with entirely new methodological and conceptual approaches. We take our orientation from the German Federal Government's Digital Agenda.

The Governance and Conflict Division has cooperated with partner institutions over recent years to make use of new technological opportunities in diverse contexts. For example, by using digital technologies, we have made local administrations more efficient, improved warnings of natural disasters, and increased the accountability of state institutions to citizens.

On the basis of our work in the field, we have gathered a wide range of practical experience in using digital technologies. Twelve examples spanning our partner countries are reproduced in this publication. Three findings stand out as particularly important.



BUILDING ON RELIABLE DATA

We have learned that data is increasingly central to development cooperation. In planning, managing and evaluating projects, we depend on reliable data as much as our partners do in developing and implementing reforms, providing public services and boosting transparency and citizen participation.

The data revolution is both an opportunity and a challenge. Working with our partners, we have explored in great detail how data can be used to promote sustainable development, as the following examples illustrate.

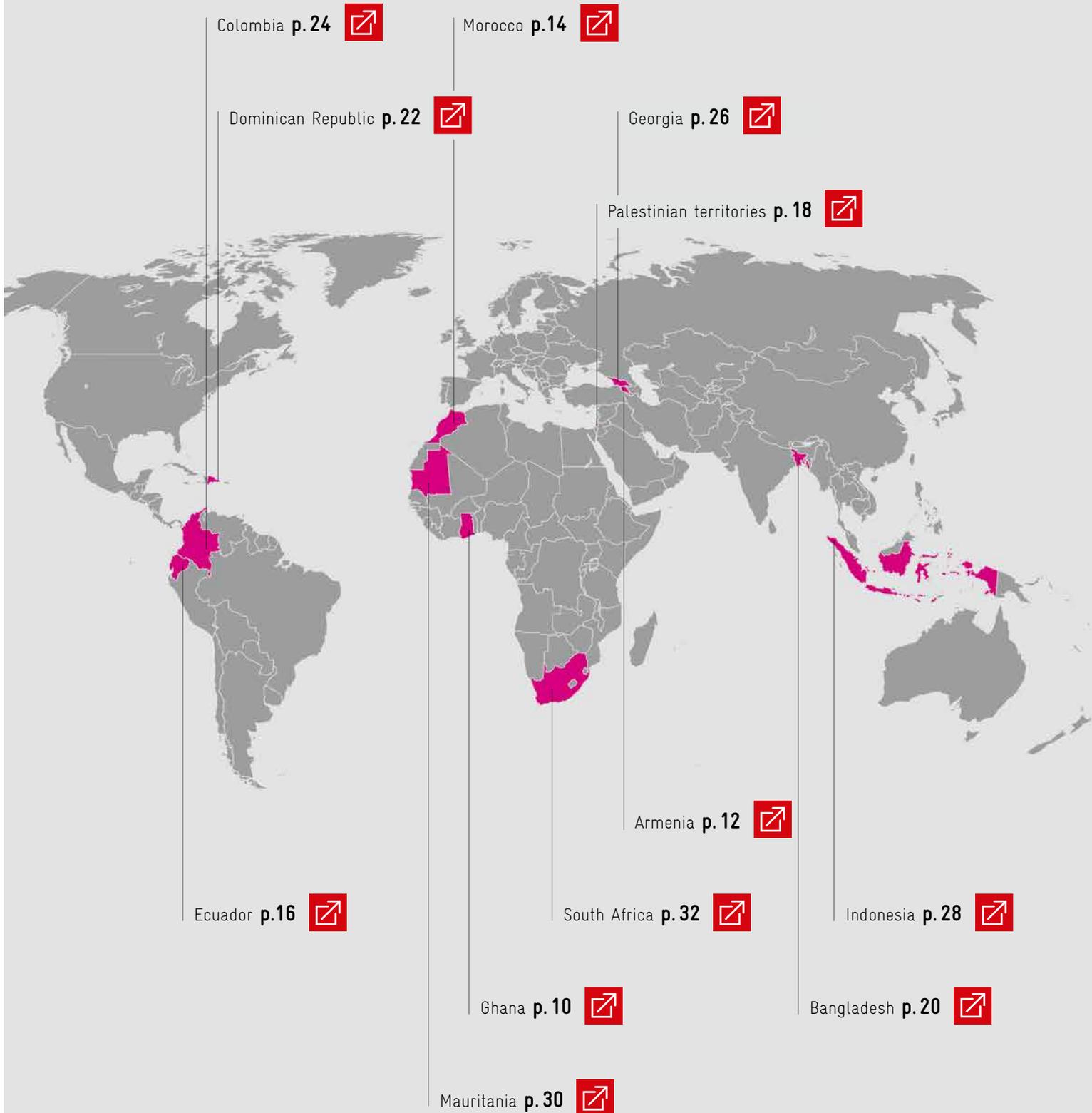
- In **Ghana**, the wide-ranging registration of land ownership and cadastre data in a central database is making it easier to collect local taxes.
- In **Bangladesh**, extensive digitalisation of existing data means that many prisoners serving sentences for crimes of which they have not yet been convicted can hope to have their cases dealt with more speedily.
- Development of a modern IT infrastructure for digital analysis of administrative data has helped improve municipal services in **Mauritania**.
- Introduction of a management information system is giving more than 250 municipalities in **Armenia** the tools to manage themselves efficiently and in a way that reflects citizens' needs.

DIGITALISATION IS NOT AN END IN ITSELF

Despite the range of opportunities digital transformation brings, digitalisation is not an end in itself. Whether working digitally or with analogue solutions, we always prioritise human rights, gender equality and sustainability in our support for social change. Digital applications are just one of the many instruments we use and embed in long-term development strategies, as is clear from the following examples.

- In **Indonesia**, a combination of training courses for local civil society organisations and the use of a mobile app is facilitating reporting of maladministration and corruption in municipal services.
- Thanks to innovative online campaigns and intensive cooperation with civil society, and with support from GIZ, the **Moroccan** Government has raised public awareness of the need for care when handling personal data online.
- In the **Palestinian** territories, the combination of face-to-face events and virtual exchange via the Dooz online platform is creating greater transparency in political decision-making and consolidating dialogue between the government and the population.
- In **South Africa**, young people and women have used the online game Minecraft to express their views in public participation processes and influence measures to prevent urban violence and crime.

OVERVIEW OF OUR CASE STUDIES AROUND THE WORLD





RETHINKING COOPERATION

We have also learned that we are now relying much more than in the past on outside expertise to provide support for digital change in our partner countries. The rapid pace of technological development, combined with the growing complexity of the tasks we face on a daily basis, requires far-reaching change in the ways in which we work.

Our projects have always involved close cooperation with a very wide range of partners. And now, we are expanding our cooperation models to enable us to find appropriate partners and are stepping up exchange with organisations that help us to respond rapidly to the fast pace of change in the digital world and identify the opportunities and risks at an early stage. We are focusing on cooperation arrangements with international organisations and the private sector, including emerging start-ups and local technology companies in our partner countries. We are also increasingly supporting our partners in using digital applications to strengthen cooperation between the state and its citizens.

- In the **Dominican Republic** we are working with German specialist organisations, including the Fraunhofer Institute for Open Communication Systems, to develop a digitalised early warning system for natural disasters, improve communication between individual agencies and make warnings more easily understandable for the population.
- Cooperation with a local telecommunications company in **Ecuador** has enabled us to develop an app to maximise awareness of violence against women.

- In **Colombia** we have supported an interdisciplinary team of designers, programmers and trainers in developing an online game to raise awareness among young people of the complexity of the long-running armed conflict and the need for peaceful solutions.
- To boost the user-friendliness of legal texts, in **Georgia** we are bringing in experts to help with the drafting of specialist literature and commentaries on legal texts. They participate via an online platform.

Our aim for this collection of case studies is to stimulate the exchange of ideas and mutual learning and to continue to provide effective and competent support for digital change in our partner countries, with all its opportunities and challenges. We hope the case studies provide you with encouragement and we would be delighted if they inspire you to share your own case studies with us.

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Joachim Fritz

Head of the Governance and Conflict Division,
Eschborn, 31 August 2018



In **South Africa**, GIZ is supporting the city of Johannesburg in making public spaces safer. In a wide-ranging participatory process, small and large organisations alike are being mobilised to help redesign parks. Turn to **page 32** to see what part an online game has played.



Read about our projects
at www.giz.de



OUR PROJECTS

GEO-SURVEYING AND TAX SOFTWARE HELPS DISTRICTS IN GHANA BECOME FINANCIALLY AUTONOMOUS



GHANA

Project title:

Support for decentralisation reforms

Contact:

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Project start date: 2014

SDGs: → 16 17

In Ghana, the naming of streets and the registration of land in a fiscal cadastre improves the collection of property taxes. Thanks to an additional tax software, there is a sustainable contribution to the decentralisation process.

CONTEXT

The decentralisation reform that began in Ghana more than 20 years ago has given 254 districts in the country greater decision-making powers but also now requires them to levy local taxes independently. The proportion of the district budget funded by local tax revenues was previously low. One major reason was that local authorities in Ghana lacked basic information about the number of taxpayers and where they lived: in many areas, there was no register of streets or land register.

APPROACH

As part of the decentralisation programme, GIZ is supporting 60 districts in the country's 10 regions in improving their collection, planning and administration of finance. This includes developing geodatabases. The first step was to digitise satellite images using geo-information systems and process them as vector charts. These digital maps enable parcels of land, public spaces and local attractions to be identified and labelled

with street names and numbers.

The owners and occupants of properties are then visited, surveyed and registered.

The second stage is to feed the data collected in this way into a taxation software package that helps districts to manage local tax revenues and to forecast revenue on the basis of existing data. The software is linked to the digital maps, so it clearly illustrates where individuals have not paid their taxes. It also helps staff generate, print out and dispatch tax demands.

RESULTS

Some district administrations have already set up a complete tax register including geodata, particularly to collect property tax. In other districts, progress is slower, partly because the process is resource-intensive. However, says Naku Kwei Adama, the advisor working on introducing

'Those districts that have already recognised the potential of these measures are the pioneers and are already benefiting from the advantages.'

Naku Kwei Adama,
software introduction consultant



^

The newly registered streets now have official street names for the first time. A range of stakeholders have been involved in naming streets.

the software, ‘those districts that have already recognised the potential these measures represent are now pioneers and are already benefiting from the advantages’.

Bibiani-Anhwiaso-Bekwai in Western Ghana is one of these pioneers. Before the programme was launched, Bibiani had just 100 registered plots of land; the total is now 3,289. As a result, tax revenues for the local council are up 39%.

LOOKING AHEAD

As decentralisation progresses, districts can be less and less reliant on national support through transfer payments and they are increasingly reliant on collecting their own taxation revenues efficiently. The introduction of fiscal cadastres linked to tax software in the districts is therefore a very important step. Until the project ends in 2019, GIZ will be supporting district councils and the Ghanaian Government in rolling out the software across the country. The roll-out will also include communication measures to raise awareness of the relevance of revenue collection among citizens and to involve them in budgetary planning.

Following digitisation of satellite photographs, land is being divided into cadastres and allocated identification numbers.



^

The new software enables municipal staff to see at a glance where tax has been collected and where it is still outstanding.



^

In district-level planning offices, satellite images are validated using data collected in the field.

CITIZEN-ORIENTED AND TRANSPARENT: LOCAL GOVERNMENT IN ARMENIA



ARMENIA

Project title:

Good local governance in South Caucasus

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Project start date: 2013

SDGs: → **11** **16**

Newly opened Citizen Offices and the roll-out of administrative software are giving citizens across Armenia better access to municipal services and allowing them to see how local decision-making works.

CONTEXT

Armenia is highly fragmented in both territorial and administrative terms, with half of its 915 municipalities having fewer than 1,000 inhabitants (2015 figures). Many of these small municipalities have until recently been unable to manage their administrative role satisfactorily. In 2015, the Armenian Government therefore launched a wide-ranging territorial and administrative reform designed to reduce the number of municipalities to below 200 by the end of 2018. The aim was also to improve the access that citizens across the country have to municipal services and to give them direct insight into administrative processes and local decision-making.

APPROACH

With financial support from Germany, Switzerland and the USA, GIZ put two measures in place to modernise municipal government and to strengthen democracy at local level. In 28 municipalities, it supported the opening of Citizen Offices to give Armenians more direct access to municipal government.

A municipal management information system (MMIS) has also been introduced in more than 270 municipalities. The MMIS equips local government with the tools to run their affairs efficiently and meet citizens' needs, from informational material, directories and e-services to internal and external communications tools. As a web-based system, the MMIS also supports the operation of municipalities' official websites, including a range of online participation tools. The municipal budget is published online in an easily understandable form. This shows citizens what financial resources the municipality has and what it is spending them on. Citizens can access many of the services online and are able to track progress of requests and applications easily and comfortably from home. Finally, the system also facilitates smooth sharing of data between municipal, regional and national government. Where an administrative process is launched in any part of the municipality using the MMIS, it is immediately digitally registered with the responsible Citizen Office and can then be processed by the local municipal staff. This ensures that citizens continue to benefit from local services even after municipalities are merged.



RESULTS

Around 600,000 citizens – more than 30% of those living in rural areas – are already benefiting from better services, and both they and the municipalities are seeing substantial advantages. For example, the measure has greatly improved administrative efficiency. It previously took up to two weeks to obtain a building permit; now, with the MMIS in place, applications are processed within three to seven days. Citizens are able to track the processing of their enquiries online and find out what is happening locally. An online platform displays projects from the planning phase through to completion, and the public is invited to post comments in an online discussion.

LOOKING AHEAD

These successes have attracted wide-ranging approval: as early as 2015, Armenia won the global Open Government Partnership prize in the Smart Municipality category. The following year, the MMIS software was awarded the prize for best municipal online solution at the Cyber Security and ICT Innovation Conference in Georgia. The system is due to be rolled out in further regions and localities in Armenia and will be linked with other state information systems, such as the population registry. There are plans to install the MMIS in more than 450 municipalities and districts, with Citizen Offices planned in a further 19 municipalities.



The website of the Ashtarak municipality is being run via an information system. Individuals can now download the municipal budget and reports on land management at the click of a button. The website also features a range of online participation tools enabling the population to participate in current debates.



In one of the more than 270 participating municipalities, two employees enter data into the municipal management information system (MMIS). This means that data can be easily shared with other offices at regional and national level.

'TAKE CARE ONLINE' – RAISING AWARENESS OF DATA PROTECTION IN MOROCCO



MOROCCO

Project title:

Fund for Regulatory & Policy Advice in Morocco

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Project start and end date: 2011 to 2018

SDGs → **16**

Over recent years, Morocco has become a regional data protection pioneer. Through innovative online campaigns and intensive cooperation with civil society, the Moroccan Government has raised public awareness of better handling of personal data online.

CONTEXT

Morocco faces enormous political, economic and social challenges. Over recent years, many different reforms have been launched and a number of institutions have been set up to reflect the modern principles of the 2011 Constitution. In this context, protection of personal data and the constitutional right to privacy are important, also because they help citizens to regain trust in state institutions.

However, little has been done to raise citizen's awareness of the need to protect own data. Despite a range of measures, most Moroccans remain largely unaware of the risks and dangers of the use of social media in particular. While the number of data misuse cases is growing continuously, only a small number of users know how to stay safe online and protect their privacy. Many are also unaware that they can approach state bodies to get help with protecting their data.

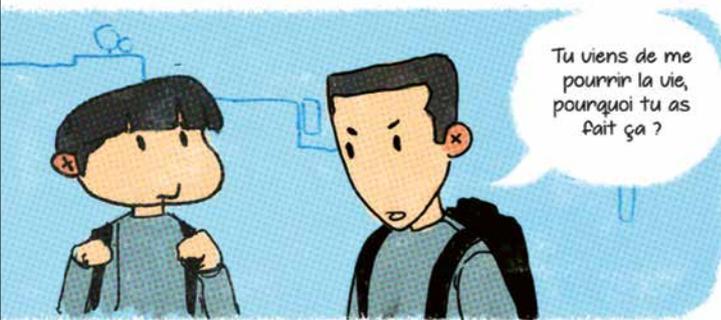
APPROACH

GIZ cooperates closely with the Moroccan national data protection authority to use information briefings and awareness-raising campaigns to make citizens more aware of data protection and their rights to use their own information. A range of target groups are approached and be made aware about using comics, YouTube videos and radio advertising clips. For example, the 'Koun3labal' ('Be careful!') YouTube video invites viewers taking a creative approach to tackle the issue of data protection. The aim is to make young, social media-savvy Moroccans more aware of both the opportunities and the risks and threats posed by the internet and social media. GIZ has also supported the civil society organisation 'La Voix de la Femme Amazigh' ('the Voice of the Amazigh [Berber] woman') in informing women below the age of consent of their rights and protecting them.



'We are using a comic book format to raise awareness of relevant legislation in a simple way. In 2016, we also ran a competition for the best YouTube video on the issue of data protection.'

Lahoussine Aniss,
Secretary General of the Moroccan national data protection authority



'If you don't want everyone to know what you are doing, then don't spread your life all over Facebook': the comic 'Take care online' portrays situations that young people face on a daily basis.

This was a particular response to the fact that young women's personal data is being shared on social media by family members to secure promises of marriage – often without the consent of those involved. Young women often find themselves falling rapidly into a situation in which their personal data is exploited and misused.

RESULTS

Morocco is now rightly considered as a pioneer in the area of data protection. The country's data protection authority is promoting data protection, which is viewed by civil society, companies and journalists alike as a major achievement. The rapid rise in the number of complaints the authority is receiving about inadequate data protection or misuse of data demonstrates that understanding of the relevance of this issue is growing. The popularity of and trust in the agency and the state bodies that cooperate with it, such as the police and

the judiciary, have also grown over recent years. The high number of hits for the YouTube competition, the award given to the comic and the successful 38th International Data Protection Conference in Marrakesh all show that Germany's cooperation with Morocco over this issue is achieving results.

LOOKING AHEAD

The Moroccan data protection authority will be continuing its campaigns to raise public awareness. As is the case in Germany and other countries, the authority is also responsible for promoting and protecting freedom of information. However, it is not yet clear whether it will retain this responsibility or will pass it to a new agency.

ECUADOR: USING AN APP TO REACT TO VIOLENCE AGAINST WOMEN



ECUADOR

Project title: The Junt@s initiative as part of the Combating violence against women in Latin America (ComVoMujer) regional programme

Contact:

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Project start date: 2015

SDGs: → **5** **10** **17**

As part of the regional project ComVoMujer, the Ecuadorian telecommunications giant CNT has developed an app to provide information about violence against women and to enable women affected to raise the alarm at the click of a button.

CONTEXT

Despite legislation and national action plans, violence against women remains an everyday reality in Latin America. Seven out of ten women in the region have experienced some form of violence over their lives. This has a massive impact not only on the personal development of the victims and their families but also on businesses: violence against women costs Micro, Small and Medium Enterprises in Ecuador around USD 8.7 million a year, as a study conducted by GIZ and the San Martin de Porres University in Lima shows. It found that male staff who perpetrate violence and female staff who experience it are often unable to concentrate properly on their work, make more mistakes and are more prone to accidents at work, which has an impact on the company's productivity.

Against this background, GIZ's ComVoMujer regional programme works closely with the private sector in Bolivia, Ecuador, Paraguay and Peru to protect women more effectively and to take long-term action to combat violence against women.

APPROACH

The Ecuadorian telecommunications company CNT is a major partner and has made preventing violence against women a priority of its corporate social engagement. CNT worked with ComVoMujer to develop the Junt@s app – the name means 'Women together' in Spanish. The app is aimed primarily at women suffering violence. However, it is also intended to raise awareness among those who witness violence against women they know or work with.

Junt@s helps users to recognise the early signs of violence and to access information about sources of support and help and ways of protecting themselves and strengthening women. The app sends out encouraging messages and supportive advice to encourage the women affected to break their silence. It also includes short awareness quizzes aimed at both women and men. For example, male users are asked questions like 'If you get mad with your partner, do you hit out at objects around you or destroy them?' And the quizzes enable women to gauge their own self-determination. One of the questions for female

users is 'Do you give in to his sexual desires primarily because you are pressurised to do so or frightened not to?'

Quizzes and messages of this kind create awareness of behaviour that promotes violence or is illegal. But that is not all: the app also gives women direct help in emergency

situations. At a single click, the app sends an encrypted request for help to friends or family members or direct to the emergency number 911.

RESULTS

'I find the quizzes particularly interesting', reports one user. 'You can use them to determine whether you are the victim of violence or are engaging in violent behaviour yourself. The quizzes enable you to recognise the early signs of violence.'

There is no reliable information about user numbers – for the good reason that the app collects as little data as possible.

User behaviour or calls to the emergency numbers are deliberately not stored, because this might put those affected in even greater danger.

However, it can be assumed that the app is reaching many women and men in Ecuador because it is being installed on all new mobile phones sold by CNT, the country's largest mobile phone company. To complement the app, CNT has partnered with ComVoMujer to run an awareness-raising campaign. 350 staff have so far attended face-to-face workshops and a further 7,000 have received online training about dealing with violence against women.

The app can also be used free of charge by other organisations and is adaptable to other country contexts. Colombia and Panama have already expressed an interest in Junt@s.

LOOKING AHEAD

Building on the positive experience with this app, the ComVoMujer project has developed further apps. One example is the 'Game Over' app, which aims to prevent violence. Using songs, videos and comics, the app targets young people aged between 12 and 16. Like the Junt@s app, it is designed to help them to recognise situations that could lead to discriminatory and violent action. Quizzes enable young people to check the progress they are achieving in their awareness.

'There are no degrees of violence. Violence is violence. And together, we can prevent it.'

This is the message on a flyer that the cooperation partners are using to draw attention to Junt@s.



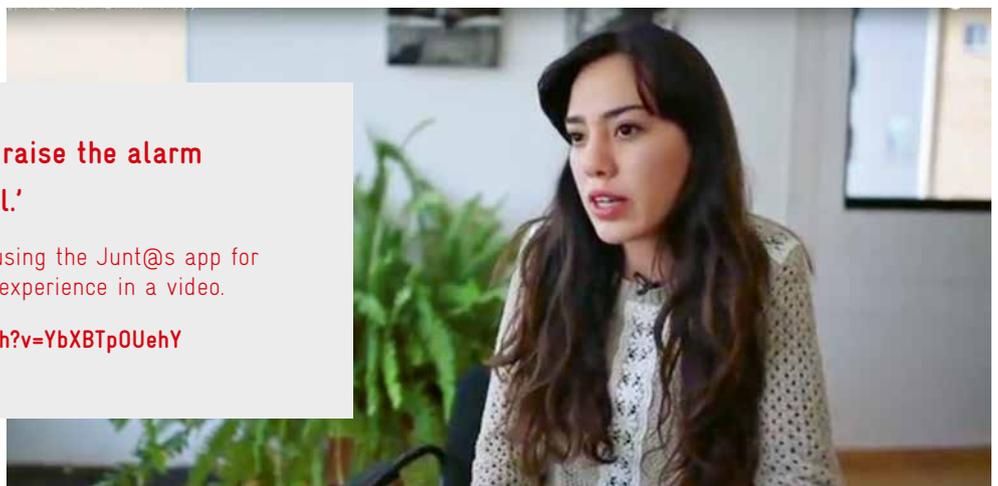
The main menu of Junt@s covers a number of areas, such as quizzes or the chance to access information about woman shelters and contacts.



'I think the ability to raise the alarm is particularly helpful.'

A woman who has been using the Junt@s app for six months describes her experience in a video.

→ www.youtube.com/watch?v=YbXBTpOUehY



DOOZ – A PLATFORM FOR THE POPULATION OF NABLUS



PALESTINIAN TERRITORIES

Project title:

Local Governance Reform Programme

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Project start date: 2015

SDGs: → **5** **11** **16**

The Dooz internet platform provides information for citizens of the city of Nablus in the Palestinian territories on relevant issues in their region and involves them in discussion. This also increases pressure on local politicians to reflect citizens' needs.

CONTEXT

Political decisions in Nablus are usually made behind closed doors. Overall, citizens of the Palestinian territories have only very limited opportunities to contribute to decision-making processes. And they have no idea how, for example, their taxes are being used, because most media reporting focuses on major international issues. However, these issues are not directly relevant to the citizens of Nablus and the surrounding villages and towns or those living in the four major refugee camps of Balata, Askar Al-Jadid, Askar al Qadīm und Ein Beit al-Ma'.

APPROACH

Working with the Deutsche Welle Akademie, GIZ has developed new instruments to promote transparency and political participation in the Palestinian territories. One of the outcomes is the Dooz platform, a news portal, exchange platform and 'watchdog'. The web platform and its accompanying Facebook page are a digital complement to the moderated public hearings that bring citizens together directly

with representatives of their local councils.

This makes Dooz a vital interface between the online and offline worlds.

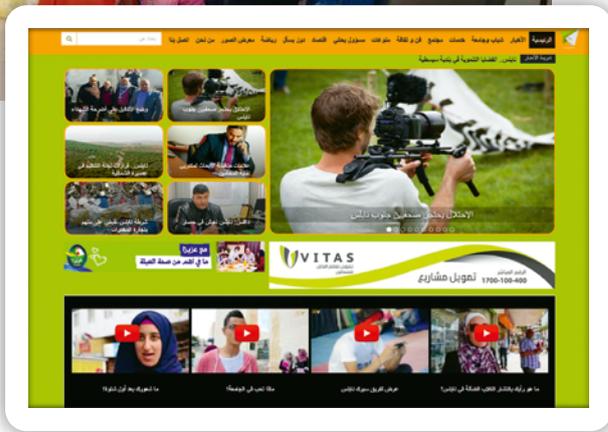
Personal stories and street surveys under the heading 'If I were mayor...' give citizens a voice. There are dossiers, listings of services and calendars to keep them up to date with what is going on. And in another section, local representatives answer questions on specific issues.

'We raise issues that affect individuals directly, the things that are happening on their doorstep.'

Jalaa Abu Arab,
Dooz editor

Dooz deals solely with local issues, including budgetary plans, municipal spending and local transport. 'We raise issues that affect individuals directly, the things that are happening on their doorstep,' says Dooz editor Jalaa Abu Arab. 'We allow citizens to speak and take up their concerns.' Another reason why Dooz is so successful is that the individuals running it are concerned about empowering the next generation and are training new young editors.

Dooz journalists discuss upcoming issues at an editorial meeting.



In a public meeting organised by Dooz, decision makers are questioned. The platform provides online support through articles and vox pops.

Information at a glance: in addition to articles with a local focus, the website has a large number of videos expressing the views of the population in the region.

RESULTS

Dooz increases the accountability of administrative bodies and policy-makers, this helping to improve basic services for the local population. The platform is now widely known and accepted by stakeholders. When it reports on malpractice in public service, agencies normally respond very quickly to avoid damage to their reputation. One example is the refurbishment of a public playground. A young child was badly injured on a metal strut. The child's grandmother contacted Dooz via Facebook. Dooz journalists visited the playground the same day, filmed the story, reported on the accident and asked the town council for a comment. The incident attracted huge public attention. The town council eventually agreed to refurbish the playground.

As part of the training concept, 15 citizen journalists have been trained and 10 students have completed an official placement

with Dooz. 90% of the staff are young women. Dooz gives them and other women a voice and opens up opportunities to shape their environment actively.

LOOKING AHEAD

Work has now started on creating a Dooz office in Tulkarem, and experts are currently assessing the scope for expanding Dooz's work in the Gaza Strip. GIZ is currently providing around 85% of Dooz's budget. However, the platform generates part of its financing through advertising. Its success has also attracted additional funding: the Konrad Adenauer Foundation in the Palestinian territories is now financing part of the training for citizen journalists in Tulkarem.

RELIABLE DATA MEANS A FAIRER JUSTICE SYSTEM IN BANGLADESH



BANGLADESH

Project title:

Justice and prison reform for promoting human rights and preventing corruption

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Project start and end date: 2012 to 2018

SDGs: → **16**

Comprehensive data collection and the digitisation of existing data have enabled Bangladesh to carry out urgent and fundamental judicial reforms, in particular to improve the situation of prisoners and their families.

CONTEXT

The justice system in Bangladesh faces enormous challenges: prisons are operating at an average of 200% of capacity – up to 700% in extreme cases – and the courts are overwhelmed. More than three million cases are still awaiting trial, so many of those held on remand have to wait years for their case to come to court. More than two thirds of those currently in prison in Bangladesh have not been convicted of any offence. This means that many individuals involved in petty crime end up in prison for lengthy periods, with serious consequences for them and their families.

Reform initiatives have frequently failed, not least because of a lack of reliable data. Although information is collected regularly on the situation in prisons and courts and on individual cases, it is often paper-based and therefore not easily accessible for processing. And although the government was aware of the need to act in relation to the justice system, it has not had the overview necessary to decide on specific reforms and an action plan.

APPROACH

In discussions with the Bangladeshi Justice Minister in 2013, GIZ agreed a far-reaching process to collect, digitise and archive data. This process, known as the Justice Audit, was piloted in five administrative districts and surveyed the data held by institutions such as prisons, police authorities and courts relating to prisoners, sentencing, legal aid measures and institutional capacity. Data from a range of sources was digitised, anonymised and summarised.

This information was not only anonymised and visualised for public use but also evaluated in workshops in the various districts together with decision-makers from administration and civil society, such as courts, the district council, lawyers' associations and social welfare offices.

'The Justice Audit provides a particular insight into the country's penal system, both for politicians and government officials and for the media, civil society and the public at large. This transparency will stimulate the debate in this area and is therefore an important contribution to further reform of the justice system.'

Anisul Huq,
speaking at the official launch of
the Justice Audit pilot in September
2014



CASE STUDY

The case of Taher Ali is a good example of the challenges facing the justice sector.

Taher Ali was sentenced in 2004 to four years' imprisonment for theft. However, the prison management team was not properly informed of the length of his sentence. As a result, Taher Ali remained in prison after completing his sentence and feared that he might be spending the rest of his life in prison. In 2016, Taher Ali's case was taken on by paralegals who were trained by the GIZ project and work in the prisons. They

established that there were no documents relating to Taher Ali's case.

After more than 12 years in custody, Taher Ali was freed on 20 October 2016. The paralegals had presented his case to a committee set up under the project. All institutions relevant to the resolution of such cases were represented on the committee, which concluded that all the evidence spoke for his release. Taher Ali is now a free man.

209 %

is the average occupancy rate of Bangladeshi prisons*



◀ Paralegals on the way to support serving prisoners. The GIZ programme supports their training.

Source: Report by the Supreme Court of Bangladesh (2016), national prison authority (2017, Bangladesh)

Evaluation of the information offered specific insight into particular issues and helped ensure appropriate management of prisoners. For example, the project established that many of the outstanding cases involved drug-related offences. This led to closer cooperation with the Ministry of Health to improve prevention, information and treatment.

RESULTS

Thanks to the Justice Audit, it has been possible for the first time to gain an overview of the situation within Bangladesh's justice system. Previously, there were virtually no statistics on matters such as the confidence that citizens have in the police and justice system, a breakdown of the case backlog or types of criminal activity. Following the audit, bottlenecks within the judicial system can now be clearly identified. This enables politicians and local councils to take decisions on budgets, staffing and rehabilitation measures on the basis of reliable information.

LOOKING AHEAD

The next Justice Audit was due to be published in mid-2018. The project was rolled out from the initial 5 districts to all 64 districts in 2016, making it possible for the first time to form a comprehensive overview of the state of the justice system in Bangladesh. Initial analysis shows that the data provides a completely new picture of the possible causes of problems and potential ways of improving justice and the penal system. As part of a follow-on measure, GIZ will continue to support Bangladesh in formulating and implementing specific reforms within the justice system by providing advice on the new Penal Code and its implementation and driving tailored measures – including digital applications – for improving legal assistance and speeding up the processing of cases.

DEVELOPING THE EARLY WARNING SYSTEM IN THE DOMINICAN REPUBLIC



DOMINICAN REPUBLIC

Project title: Information technologies for early warning of disasters

Contact:

Katharina Schaaff, katharina.schaaff@giz.de

Project start date: October 2013

SDGs: → **16**

Every year, the Dominican Republic experiences flooding and other natural phenomena, often with disastrous consequences for individuals and their homes as well as for public infrastructure. An effective and citizen-oriented early warning system that reaches the population via all the relevant channels and is easily understood can significantly boost safety.

CONTEXT

The people of the Dominican Republic have faced repeated natural disasters. Even in the capital, Santo Domingo, the Río Ozama regularly bursts its banks, flooding nearby parts of the city. Although the responsible agencies are very well aware of the importance of timely warnings to the population, warnings often fail to produce the desired results. In the past, warnings were often not aimed primarily at the population and had not been designed to give clear and understandable instructions for action. They were also not disseminated using all relevant channels. As well as radio and television – the main channels used for warnings – smartphones are a popular source of information in vulnerable areas.

There was a further problem: there were no clearly defined and cross-institutional warning levels which the population could use as a guide. For example, a local organisation might issue an ‘amber’ warning to prepare for evacuation, but the national meteorological service used the same colour simply to forecast the level of rainfall. This was not so much of a problem for

the institutions communicating with each other as for the population, who found it difficult to interpret sometimes contradictory warnings.

The responsible state disaster protection agencies were seen as being primarily responsible for organising evacuations, so for many years, the focus was not on how people could protect themselves.

APPROACH

Working with its partners, the Dominican Institute for Integral Development and the country’s Ministry of Environment and Natural Resources, and commissioned by the “Climate Technology Centre and Network”, GIZ scrutinised the existing warning system and the scope for using new technologies.

‘Initially, we used the technology mainly to encourage the exchange of information and coordination between institutions on ways of improving the early warning system,’ says Katharina Schaaff, GIZ project manager. Later on, new technologies entered the picture for implementing the necessary reforms that had been identified. To make the system more

citizen-oriented in future, the priority now is to develop a communications platform that coordinates local early warning systems with national institutions and uses an integrated app to warn the population rapidly and effectively.

RESULTS

‘The greatest impact so far has been the major shift in thinking. The institutions now have a clearer picture of their role as service provider to the population,’ says Schaaff. The focus now is not communication between institutions but better and prompt information for citizens and local organisations, so that they can react appropriately to the dangers they face.

‘Initially, we used the technology mainly to encourage the exchange of information and coordination between institutions on ways of improving the early warning system.’

Katharina Schaaff
GIZ project manager

LOOKING AHEAD

Now that work is progressing on a clear warning level system across the institutions, the next stage is to implement it technically. The aim remains a communications platform with a connected warning app that can be activated at different levels and will warn the population in much the same way as Germany’s KATWARN app – accurately, unambiguously and via a number of channels, including mobile devices. An initial demonstration application developed by the Fraunhofer Institute for Open Communication Systems (FOKUS) is now available, and institutional partners have expressed great interest in it. The Dominican Republic is now much closer to an effective and citizen-oriented early warning system.



KATWARN The demonstration application illustrates the many ways the new app can be used. The red icon tells citizens in a vulnerable area that an extreme weather event is likely. At a glance, citizens can see which institution has declared a particular warning level, why, and when it did so. The ‘Details’ function gives further information about what has happened and what response is recommended. The full German version can be downloaded from: → <http://katwarn.com/>



◀ Poor areas of Santo Domingo in particular are repeatedly affected by flooding from the Río Ozama.



A VIDEO GAME IN COLOMBIA TEACHES THAT VIOLENCE IS NEVER THE SOLUTION



COLOMBIA

Project title:

Innovation Fund for Colombia, 'Reconstrucción' app

Contact:

Barbara Häming, barbara.haeming@giz.de

Project start date: January 2017

SDGs: → **4** **16**

Many years of armed conflict have left deep scars on Colombian society. A video game that can be played on mobile phones is now raising awareness among young Colombians of the complexity of the conflict and the need for peaceful solutions.

CONTEXT

Although the peace agreement between the FARC guerrillas and the government has been in place since late 2016, many Colombians are still haunted by images of the conflict: according to official sources, around 218,000 individuals lost their lives between 1958 and 2012, 81 per cent of them civilians.

Today, Colombian society faces the task of coming to terms with guilt, reconciliation and reintegration. Individuals need to process what has happened and overcome mistrust and hostility, but there is also a need for education. The young generation in particular need to know what their parents and grandparents went through or how they became perpetrators.

APPROACH

An interdisciplinary team of designers, programmers and pedagogues from the Colombian projects ViveLab-Bogota and Pathos Audiovisual developed a video game with support from GIZ's Innovation Fund for Colombia. The game was called 'Reconstrucción' (Reconstruction). It tackles both the

reconstruction of history and the rebuilding of the country and its society. There are, in fact, many video games about the Colombian conflict, but so far they have all been violent games. Reconstrucción has an entirely different aim. Using the slogan 'La guerra no es un juego' – 'War is not a game' – it aims to give players a different kind of understanding of Colombia's past. Gamification is used as a tool to build peace.

Victoria is the protagonist of the game, which is available as a free app. After the war, Victoria returns to her home village. Users can click on the books in her old school to learn about the conflict. They can travel back in Victoria's memory and experience the day when paramilitary soldiers arrived in the village and accused the local people of collaborating with the guerrillas. As in many other situations in the game, players have to make rapid decisions, which determine what happens next for Victoria: Should she flee her village or remain there? Or should Victoria join the FARC to fight the paramilitaries?



On the basis of workshops with eye witnesses, the designers created a game that illustrates the complexity of the conflict and the diverse motivations of those involved. In a review of the game, one player wrote: 'I am surprised by this part of my country's history and I'm learning about it from an entirely different perspective.'

The intensive academic support and pedagogical input the video game has had were key to ensuring that the idea received both financial and technical support from GIZ's Innovation Fund for Colombia. Between 2013 and 2017, the Fund supported a total of 29 innovative approaches to peacebuilding and their development and dissemination.

RESULTS

Since January 2017, the game has been available for Android and iOS devices and has been downloaded more than 10,000 times. The app educates users about the key points of the

conflict but can also be linked directly to Twitter, so that facts can be shared via social media. The app's homepage provides background information about individual characters, based on extensive research. Videos also illustrate the experience of eye witnesses. The game is an important counterweight to conventional videogames, but its central message is that violence is never the solution.

LOOKING AHEAD

The Colombian Government has also recognised the major relevance of this approach. In 2017, Reconstrucción was selected for its Computers for Education programme. The initiative disseminates technologies for educational purposes in schools. Now, Reconstrucción is pre-installed on computers and tablets destined for use in schools, ensuring that it can be used in classrooms. A major contribution to this success was the ongoing technical support provided by GIZ as part of its Peacebuilding programme.

'66,000 people have disappeared': these and other facts about the armed conflict are available to players of the game and can be shared via Twitter.



Nunca más se volvió a saber de más de 66.000 personas que fueron reportadas como desaparecidas en Colombia.



Victoria faces a major decision – one that will determine the rest of her life. As she is escaping, she is captured by the FARC fighters, who invite her to join them.



The Colombian Government's Computers for Education programme enables students to play Reconstrucción in the classroom as well as at home. The game is pre-installed on school computers.

CROWDSOURCING BOOSTS ENFORCEMENT OF LEGISLATION IN GEORGIA



GEORGIA

Project title: Legal approximation towards European standards in the South Caucasus

Contact:

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Country/region: Georgia, Armenia and Azerbaijan

Project start date: 2015 (with predecessor project since 1992)

SDGs: → **16**

To make legal texts user-friendly, GIZ and its partners in Georgia set up an online platform and invited experts from the field to comment on legislation and accompanying specialist literature.

CONTEXT

Since independence, governments in the South Caucasus have been working intensively to reform their legal systems. However, although new legislation has long been in place, the population still lack confidence in the judicial system in their country. One reason for this is that lawyers, judges and the staff of government agencies have not been confident in applying the new texts, so the progressive changes being made have remained unknown.

One of GIZ's objectives for this project, Legal approximation towards European standards in the South Caucasus, is therefore to make legal documents more user-friendly. To this end, GIZ is advising the responsible ministries, supporting in-service training for legal professionals such as lawyers, notaries and administrative staff, and feeding the outcomes into the formulation of texts. An important part is played by soundly based commentaries on legal texts and specialist literature, which help to anchor the laws in the public mind and boost accurate application in practice.

APPROACH

The commentary accompanying the Georgian Civil Code illustrates the benefits of involving experts from the field. As part of the Georgian Civil Code Commentary project, more than 30 legal experts have written over 4,000 pages of commentary on existing legislation since 2013. The commentary has been uploaded to an interactive platform, which interested parties can use to access and comment on the documents. The platform has a search function, so users can quickly find content and topics in the database, and the various arguments concerning interpretation of the law are clearly documented. Users – mostly judges, lawyers, notaries and civil servants – are able to add to the commentaries written by experts and to stimulate discussion on the platform. 'One of the prerequisites for access to law is that citizens and those using the law are able to find the

'It is a prerequisite of access to law that citizens and those using the law are able to find the information they need. We are making a major contribution to this objective by supporting appropriate search and information-sharing platforms.'

Dr. Thomas Meyer,
project manager in the South
Caucasus.

Publications and videos about Azerbaijani administrative law can be accessed on inzibati.az.

→ <http://inzibati.az/> >



inzibati.az has already been accessed **43.000** times



The website of the Georgian Civil Code Commentary project contains all the commentaries on the text → www.gccc.ge

Recent surveys show a marked increase over recent years in trust in the rule of law across the region. This can undoubtedly be attributed to a series of factors, but the sharing – and the improvement in the application of civil law accompanying it – has also helped achieve this.

LOOKING AHEAD

The existing internet platform is due to be converted into a wiki format over the coming months. In future, all authorised users will be able to consult the key legislation, amend, correct and complete commentaries, and offer alternative versions. This will give rise to a commentary on the Georgian Civil Code that reflects academic standards and current expert debates as well as recent judicial practice.

information they need. We are making a major contribution to this objective by supporting appropriate search and information-sharing platforms,' says Dr Thomas Meyer, who heads the South Caucasus project.

RESULTS

Users can help write the commentaries themselves, so they contain specific and detailed examples to guide practice rather than general principles. This boosts understanding of the texts and ensures a lively exchange of opinions between legal experts. That not only makes the work of lawyers easier but also enhances the quality of legal judgments, because it promotes consistency of practice.

GIZ has developed a similar platform in Azerbaijan. It provides access to publications and videos on administrative law. Judges are also able to use the website to ask questions of German experts. Visitors are able to see the questions and answers online.

APP AGAINST CORRUPTION IN INDONESIA: TECHNOLOGIES FOR GREATER TRANSPARENCY



INDONESIA

Project title: Preventing and fighting corruption

Contact:

Dorothea Grieger, dorothea.grieger@giz.de

Project start and end date: 2016 to 2018 (with predecessor project since 2007)

SDGs: → 16

Indonesia's Anti-Corruption Commission is receiving support from GIZ in introducing digital technologies in an attempt to stem rampant corruption in the world's largest island state.

CONTEXT

Over the past 20 years, Indonesia has seen rapid development from autocratic power systems to a stable democracy. However, corruption still pervades the country and impedes its economic, democratic and social development. Many Indonesians are therefore putting their trust in the country's Anti-Corruption Commission, which has consistently achieved impressive successes since being set up in 2003. Major areas of progress include the exposure of cases of corruption involving high-ranking politicians and government officials from a range of parties and ministries. Nonetheless, corruption is slowly decreasing. One reason for this is that the population lacks information about the state's actions and has limited scope to interact with state agencies. In remote rural areas of the Indonesian archipelago in particular, it is difficult for the population to obtain information, to hold local government to account and demand transparency, and to combat corruption.

APPROACH

With support from GIZ, the Anti-Corruption Commission is working on a range of digital applications to involve the population in preventive measures in a targeted way. An anti-corruption clearing house enables citizens to access research, statistics and practical recommendations online. An online database provides insight into the financial position of public servants, while the Commission's own radio and TV channels provide information about its work and valuable hints for tackling corruption. Recently, there has also been a focus on the municipal level. The JAGA app and online platform enable citizens to use their mobile phones to gain an overview of local services, such as schools, health centres and citizens' offices.

They also now have the chance to assess these services and identify any cases of abuse and maladministration. The app complements existing channels and gives citizens the chance to make local government more accountable. Alongside the ongoing further development of



The JAGA app and web platform are in great demand. Information about public services is more easily available, and maladministration and possible cases of corruption can be reported more easily.

→ <https://jaga.id/berita>



the mobile app, GIZ is supporting the Indonesian Government in running workshops to improve its understanding of what information citizens need, among other areas. The project also cooperates with civil society groups in a large number of municipalities and provinces across Indonesia. These groups will act as multipliers and help to identify and publicise abuse and corruption, for example by checking the information on the construction and equipment of schools.

by official agencies, including the addresses of the agencies and information on municipal budgets and the number of teachers each school has. It covers more than one third of the total national budget and is giving millions of Indonesians access to information relevant to their daily lives. The deployment of public funds has become more transparent, and these bodies are now more accountable to the population.

'It is now easier for us to report fraud, corruption and maladministration in public institutions and services, such as schools and hospitals. We simply use our smartphone or the website.'

Putri Artika Resyakasih,
public user of the JAGA app

RESULTS

These various platforms, communications channels and mobile apps are very popular with the Indonesian population, and are seen as being reliable sources of information and instruments for interacting with official bodies. The Anti-Corruption Commission's electronic whistle-blower system receives around 2,000 complaints a year. And each month, more than 35,000 users access the portal that publishes politicians', government representatives' and civil servants' assets. Civil society organisations benefit particularly from the new digital applications, which enable them to notify instances of corruption more effectively and to inform the public of the impact of corruption and potential solutions.

The JAGA app now contains data from 48,000 local councils, 404,000 schools, 2,777 hospitals and 10,501 health centres alongside information on 536 different licence-granting procedures run

LOOKING AHEAD

Over the next few months, GIZ's work will be focusing more on support for civil society organisations and citizens using the information accessed through the JAGA app to campaign for transparent and citizen-oriented government and a substantial reduction in corruption at local level. GIZ will also continue to support the Anti-Corruption Commission in tailoring the app to the needs of users. For example, further detailed information is to be made available on schools and their funding, infrastructure and assistance.

'MAURITANIA GOES DIGITAL': IMPROVING MUNICIPAL SERVICES



MAURITANIA

Project title: Strengthening decentralisation and public finances

Contact:

Andreas Schlotterer, andreas.schloetterer@giz.de

Project term: 2018 to 2019 (with predecessor project since 2011)

SDGs: → **5** **16** **17**

Public services have been improved following Mauritania's far-reaching and systematic collection and digitisation of data relating to municipal services and the creation of a portal to make the data available to the public. A constructive social debate about local government is also under way.

CONTEXT

Since the 1980s, Mauritania's Government has launched a wide range of reform measures designed to make municipal policies more citizen-oriented and administration transparent and accountable. The aim is to provide people with public services that are appropriate in both scale and quality. However, there has so far been a lack of reliably documented data, for example on municipal expenditure and income, the investment budget, and the provision of services within municipalities.

Without data relating to budgets, staffing and service provision, neither government bodies nor international donors have been able to plan local investment to drive forward the implementation of reforms and to help municipalities. In 2012 and 2013, therefore, information was collected on the evaluation of local services and the provision of municipal services, for example waste disposal or the construction and maintenance of schools and hospitals. However, little of this information was digitised or made publicly available.

APPROACH

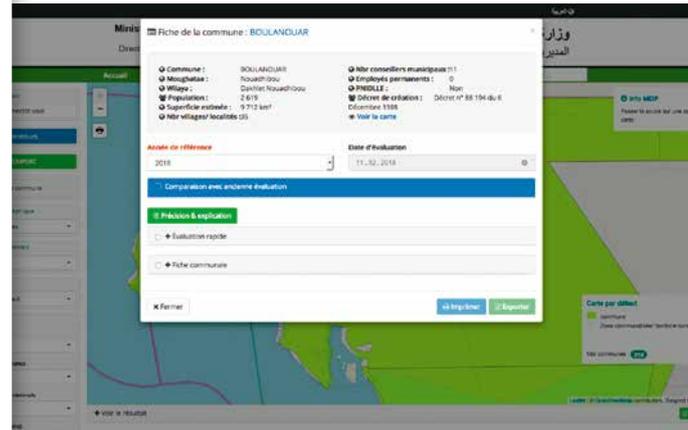
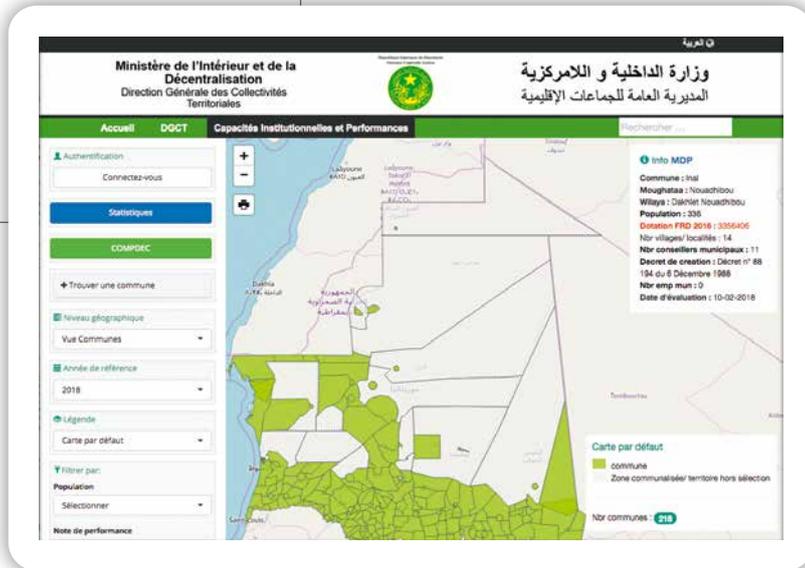
On the basis of existing cooperation arrangements to do with modernising public finance, the Mauritanian Government asked GIZ for support in developing modern IT infrastructure to support decentralisation. The aim was to improve the collection, processing and publication of data relating to the administrative, economic and social position of municipalities.

The first stage was to train teams and deploy them in the country's 218 municipalities to collect information and verify the findings of earlier surveys. The next stage was to digitise the information and lay down standards for the subsequent analysis stage. The data was then fed into a central database and made available via a data portal to the municipalities themselves and government agencies, but also to journalists and the general public. The platform enables users to access a wide range of information, including on municipal expenditure and tax revenues, the number and gender composition of local government staff, and the availability of services



The website and app make a range of information available. The information can be filtered according to specific criteria, enabling users to access targeted information about their own municipality.

→ <https://www.dgct.mr/sictm/public/>



in the various municipalities. An Android-based app means that data can be accessed on the move and offline, too.

RESULTS

Just a short time after the introduction of electronic data collection and publication, lively interest in the data portal was already apparent. Now, citizens ask questions about local services and are able to compare the availability and quality of their local services with those in other municipalities. Students, meanwhile, are using the data to research Mauritania's decentralisation policy. And a civil society organisation that campaigns for greater involvement of women in politics is using the system to determine how many of those working in local administration and local agencies are women.

The introduction of the new system has revealed many challenges and scope for potential improvement in areas ranging from basic public services to human resource management at municipal level. International donors including the World Bank are using the system to

cooperate directly with municipalities most urgently in need of support.

LOOKING AHEAD

The annual data collection exercise for 2018 was just finalised. Questionnaires were updated, training courses run and technical systems overhauled. GIZ is also working with the association of mayors for the Tagant region, using the collected data as the basis to improve the quality of local government and the provision of municipal services. Further GIZ is promoting the sharing of knowledge between Mauritanian municipalities.

OFFLINE MEETS ONLINE: PARTICIPATORY PARK DESIGN TO PREVENT VIOLENCE



SOUTH AFRICA

Project title:

Inclusive Violence and Crime Prevention

Contact:

Terence Smith, terence.smith@giz.de

Project start and end date: 2012 to 2018

SDGs: →  

Towns and cities in South Africa are using digital applications to involve citizens in planning, designing and maintaining safe parks.

CONTEXT

When apartheid ended, the number of violent attacks initially fell, but violence remains a part of everyday life for many South Africans. Over recent years, the number of homicides has been rising again and is now one of the world's highest at an average of 34 cases per 100,000 inhabitants. Young people aged between 15 and 24 are particularly affected, with this age group alone making up half of all murder victims.

Extreme economic inequality, rapidly rising unemployment and a lack of prospects are fuelling violence in South Africa. Further factors include the impact of socially and spatially segregated development during apartheid. Urban centres are particularly unsafe. However, town councils often lack the necessary resources and institutional capacity to help improve the situation.

APPROACH

Involving the population in planning and decision-making processes is closely linked with safety and the prevention of violence and crime. In the past, young people in particular

have been largely ignored as active members of society who could help prevent violence and crime. This is where the GIZ programme comes in.

With a focus on densely populated urban areas, GIZ is supporting local government in developing wide-ranging measures to bring rates of violence down in the long term. The stated aim is to make public spaces safer. Digital applications underpin the strategy.

In a pilot project, the city of Johannesburg has received support from GIZ to regenerate the End Street North Park with involvement from local residents and park users. In a participatory process, the park was used as a central meeting point for local residents and for a wide range of activities, such as weekend neighbourhood getting-to-know-you events, sports courses, health education campaigns, lectures and discussion groups on the safety situation in the area.

One highlight of the process, which ran for several months, was a workshop with UN-



Left: Using the computer game Minecraft, young people are able to explore their ideas for the park in game format.

Right: Offline in action: local residents living around the End Street North Park are being mobilised to encourage active use of public spaces through joint sports activities.

Habitat using the computer game Minecraft to redesign the park virtually. Using photos, construction plans and digital maps, the park was reconstructed in virtual form as a Minecraft landscape. Participants were able to use the software to express their own ideas and wishes for the End Street North Park in Minecraft worlds they had created themselves. The outcomes were presented to the landscape architects for the project, who fed them into their detailed plans.

RESULTS

The participatory and integrated approach has had a positive impact on the redesign of the park. Suggestions for leisure activities, including a basketball court, a giant chessboard and play equipment for children, have been implemented. Improved street lighting, wider pavements around the park and the installation of public toilets in the park have made the park safer for users and local residents.

The pilot project has also motivated residents in other parts of the city to take the first steps towards regenerating and making more active use of 'their' parks. The systematic involvement of young people in the redesign has promoted a sense of responsibility for public spaces and not only prevents vandalism but also promotes acquisition of key social skills through sport and leisure activities. Joint design and active management of public green spaces may also help to reduce violence and crime in the inner city in the long term.

Minecraft has proved an effective and innovative instrument for reaching young people in particular and stimulating their interest in processes such as the design of green spaces. Joint small-group discussions via computer facilitated an intensive exchange and also encouraged population groups who might otherwise not be heard in other processes to become involved. The work with Minecraft also enabled participants to suggest design elements that fed directly into the plans. This made the process more personally relevant to local residents. Some of those involved were actually using a computer for the first time. However, the crucial element in the success of the project was the fact that the use of digital applications was embedded in a comprehensive strategy and close cooperation between the town council, civil society and international partners on the basis of trust.

LOOKING AHEAD

While the End Street North Park is being refurbished and regenerated by a construction company, UN-Habitat provides wide-ranging training for local government staff and volunteers in the use of Minecraft. The city department responsible for parks and green spaces is particularly keen to continue using the computer game for the redesign of other public open spaces.



Turn to **page 13** to find out why citizens in the citizen office in the Armenian city of Ashtarak can now expect quicker responses to their concerns.



Read about our projects
at www.giz.de

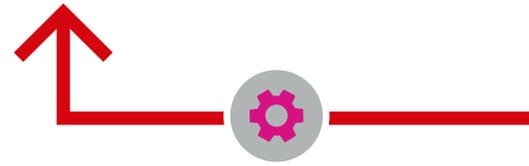


TRENDS AND LOOKING AHEAD

OPPORTUNITIES AND RISKS OF FIVE KEY TECHNOLOGICAL TRENDS

The project case studies in this brochure demonstrate the diversity of the use of digital technologies by the Governance and Conflict Division to tackle complex, multilevel challenges in cooperation with our partners. However, rapid technological development requires us constantly to question whether we have selected the right approaches, instruments and methods to get maximum benefit from technology and minimise risk.

In dialogue with experts, through research and in pilot projects, we attempt to boost our understanding of where opportunities are, whether and how we can use new technologies in our work, and what measures we need to take to avoid negative consequences. In programme planning and implementation, we consistently use the 'do no harm' approach for our work on and with digital technologies. We follow the Principles for Digital Development and use formats such as the GIZ Innovation Fund to promote and test new, creative ideas.



We are currently focusing most intensively on the following five trends.

_01 DIGITAL DATA

The increasing dissemination, networking and use of digital devices is creating a flood of data that is being generated actively or passively. We see enormous potential in this, in the field of public finance and in the promotion of democracy. State actors in our partner countries are already using the potential of data from social media to increase their understanding of citizens' needs. Data from public procurement processes is being used to reveal corruption and nepotism, while digitalised processes also make public financial management available more widely, more rapidly and to a higher quality, facilitating targeted and efficient work in areas ranging from budgetary planning and management of cash flow and debt to increasing transparency and monitoring of public finance.

But where there are opportunities, there are also risks. There is some evidence that greater data networking benefits only some people and can, in fact, damage some individual groups. It is becoming increasingly challenging to protect individuals' right to privacy, something that especially as a development organisation we must take seriously. The issue of how we can ensure the security of systems and databases via cybersecurity measures is also increasingly urgent.

The Responsible Data Guidelines we have published are providing a company-wide orientation framework for the safe and responsible use of data, including – and particularly – in countries with poor data protection¹. A Data Lab planned with the African Union will also explore the issue of how digital data can be used in conjunction with an interactive information platform to boost participation by citizens in decision-making processes within the African Union.

¹ <http://rdg.giz.digital>



GIZ INNOVATION FUND – PROMOTING INTRAPRENEURS

The second round of GIZ's in-house Innovation Fund is under way for 2018. The ideas competition is a space for pioneers and a training space for intrapreneurs within GIZ's global network. GIZ colleagues submit innovative ideas in response to a specific problem. Through a digital community voting process, teams are selected and as part of an accelerator programme are supported

by external experts in using toolkits, tests and prototypes to produce a minimum viable product (MVP). In a final pitch event, one idea is selected to receive ongoing support for specific implementation with partners. The theme of the Innovation Competition 2018 is 'Data4Development – how can digital data improve the impact of our projects?'



_02 ARTIFICIAL INTELLIGENCE

The advance of systems and applications that make use of different kinds of artificial intelligence is also evident in the issues of good governance, peace and conflict transformation. Automation, algorithms and machine-assisted processing procedures and decision-making processes will have an impact on administrative reforms as they fundamentally change the way in which administrative services are delivered. Completing routine tasks using algorithms, responding automatically to enquiries using chatbots and automatically generating documents are just some of the opportunities currently being used. But new types of computer-assisted processes also pose entirely new challenges, especially in relation to the protection of human rights. For example, how can we guarantee that decisions made by algorithms are fair? Who is accountable if these decisions cause harm? And how do we ensure that these processes are transparent? We also need to be ready for the institutional consequences for our partners: the roles of staff working for public bodies will change, jobs will be lost, and training for the public sector will have to be rethought.

It is still largely unclear how exactly these trends will impact on our work and what mechanisms will be effective in making use of opportunities and avoiding risks. We are therefore seeking dialogue, engaging in exchange with experts, running workshops and commissioning research². Internally, we have convened a working group to explore the ethical issues around the use of algorithms. In programme planning and implementation, we follow the ‘do no harm’ approach to carry out an appropriate risk analysis and assessment before adopting solutions so that we are able to weigh up opportunities and risks with the right sense of perspective.

2 <https://webfoundation.org/2018/03/data-for-development-whats-next-new-research/>

_03

APPS, ONLINE PORTALS AND COMMUNICATIONS PLATFORMS

We believe that the use of apps and platforms will continue to widen the scope for networking, provision of information and involvement and will make it easier for people to participate in social and political forums, no matter where they are. We see particular potential for involving previously disadvantaged or excluded groups, such as those living in rural areas, socially marginalised groups or people with disabilities. Citizens can use complaints platforms to report weaknesses in public administration, providing important momentum for efficient, citizen-oriented administration. They can also access and use services more easily, rapidly and transparently.

These new channels of communication will also help us to address difficult issues better in future, such as those relating to violence prevention. By using digital applications, we can reach young people more easily, for example, and show them alternative ways of resolving conflict or offer them content for countering gender stereotypes. It is therefore important that these channels are anonymous. Anonymity means that people have the confidence to express opinions or to seek help and advice with difficult issues, such as gender-based violence.

However, the challenges are enormous: when cyber-attacks and censorship increase, it becomes risky to participate in digital processes. We are

also seeing that the growing number of attacks – including cyber-attacks – on civil society and restrictions on freedom of expression are becoming a major threat to democratic processes. In particular where institutions are weak or there is little legal certainty, a citizen participation app can rapidly become a fig-leaf. We are also seeing how the digital divide now goes way beyond a lack of access to IT infrastructure: language and digital skills may also be key factors. Already disadvantaged groups run the risk of being excluded from services and resources to an even greater extent.

We are seeking to reflect these challenges in the design of our projects and to address them directly through targeted initiatives. In our municipal development project in Cameroon, for example, we are working with local universities to develop a network for existing tele-centres, to improve their services and to use ‘mesh networks’ to expand internet coverage in rural areas. With the #eSkillsforGirls initiative and the Girls Innovation Camp³ in Indonesia, we are also seeking to boost inclusion and to protect girls and women on the internet. In Uganda, we are strengthening the skills of civil society organisations in the areas of digital security and digital rights, for example, by working with them to ensure that they can protect themselves from potential attacks online and are able to use their space for action effectively.

³ Details of these two case studies can be found at <https://www.eskills4girls.org>.



Principles for Digital Development



PRINCIPLES FOR DIGITAL DEVELOPMENT

In February 2018, we officially signed the Principles for Digital Development. These nine principles give us and our partners a specific and easily understandable guide to planning and implementing effective digital solutions. The Digital Impact Alliance (DIAL) networks us globally with other practitioners and enables us to share experiences and learn from each other.

→ <https://digitalprinciples.org/>



_04 BLOCKCHAIN

Blockchain is a transaction technology that enables the storage and processing of dataset to be decentralised, with all authorised changes being synchronised as additional blocks. This means that every dataset contains all previous transactions and that a dataset cannot be changed without the changes being evident. Blockchain offers huge potential for boosting transparency and accountability in interactions between the state, citizens and the private sector. Hopes are growing that the use of these technologies may help to combat corruption and boost transparency in supply chains. Blockchain applications could also be used to distribute and deploy development funding, to develop public registers that cannot be manipulated or to manage and document the use of public services. However, achieving the broader benefits offered by blockchain

means tackling the challenge of the high energy consumption that this technology entails. There is currently little experience of using blockchain in the area of development cooperation. To test the practical implementation of the new technology, the GIZ Blockchain Lab⁴ is therefore working on developing and testing new models at the interface between government, research, the private sector and blockchain start-ups. In some countries, including Georgia, initial pilot projects are already under way.⁵ National land registry entries are made available digitally via blockchain technology. This guarantees the authenticity of the dataset chain and limits scope for manipulation and corruption.

4 <https://www.giz.de/de/weltweit/67045.html>

5 <https://www.giz.de/de/mediathek/65457.html>

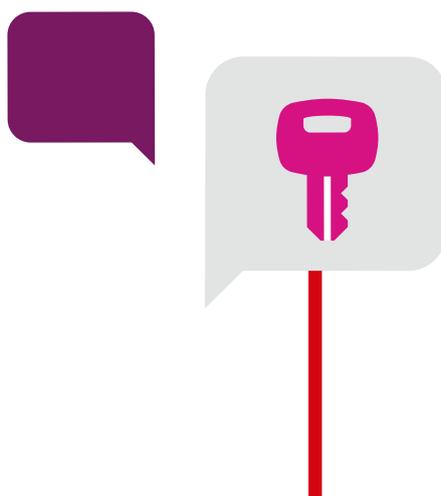
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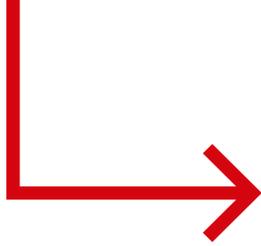
DIGITAL TECHNOLOGIES IN FRAGILE CONTEXTS

Digital technologies are also increasingly being used in fragile and politically unstable contexts marked by conflict, inadequate infrastructure and weak jurisprudence. In remote and inaccessible areas in particular, innovative hardware such as satellites and sensors is being used to collect data. Drones and balloons are also being used to connect refugee camps to the internet, to give refugees online access. New technologies promise a better response to crises and disasters. In Colombia, for example, we are testing the use of satellite technology and algorithms to search for missing persons in remote and inaccessible parts of the rain forest. However, in fragile states more than in other contexts, the use of digital applications also poses the risk of potentially negative consequences. For example, data can be used in a targeted way to discriminate against disadvantaged population

groups if it falls into the wrong hands. The use of technology also requires infrastructure, and in some cases, depending on local conditions, this has still to be created. This infrastructure may then be vulnerable to abuse by parties to conflict. Moreover, communications systems and online platforms also create an opportunity to incite violence and persecution of specific groups.

In fragile contexts in particular, our top priority is protecting privacy and human rights. While we make use of a variety of technological innovations, ranging from the use of drones to transport medicines to the use of video calls to provide psychosocial support for refugees, we also, for example, run training courses for journalists and activists in particular so that they can effectively protect themselves and their networks when using digital applications.





Ban Ki-moon, United Nations Secretary-General between 2007 and 2016

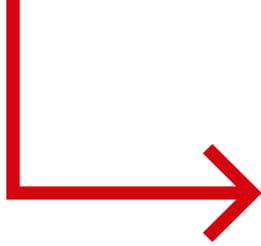
'WE ARE THE FIRST
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GIZ AND THE SDGS

Implementation of the 2030 Agenda is in full swing around the world. GIZ's orientation to international cooperation for sustainable development means that the company is very closely aligned with the 2030 Agenda and is helping achieve the SDGs. This includes supporting BMZ and other German federal ministries in implementing the 2030 Agenda in developing countries, emerging economies and industrialised nations – and delivering results. GIZ can also operate on behalf of other clients and co-financiers to implement the 2030 Agenda.

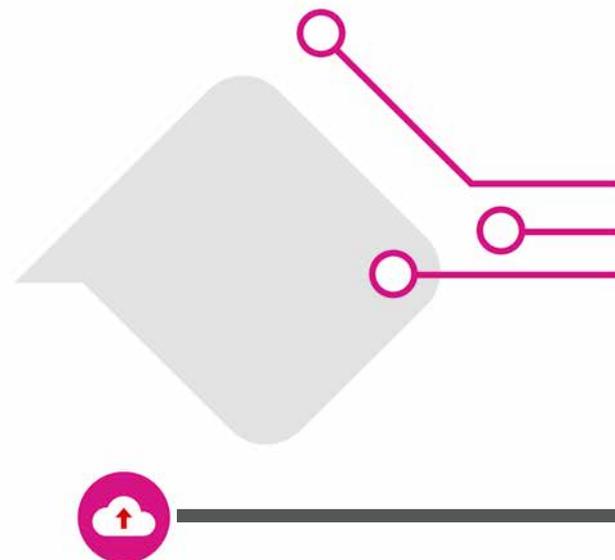
In this publication, we highlight to which SDG(s) the different examples are contributing. You will see icons indicating the Goal(s) involved.





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As a federally owned enterprise, GIZ supports the German Government in achieving its objectives in the field of international cooperation for sustainable development.

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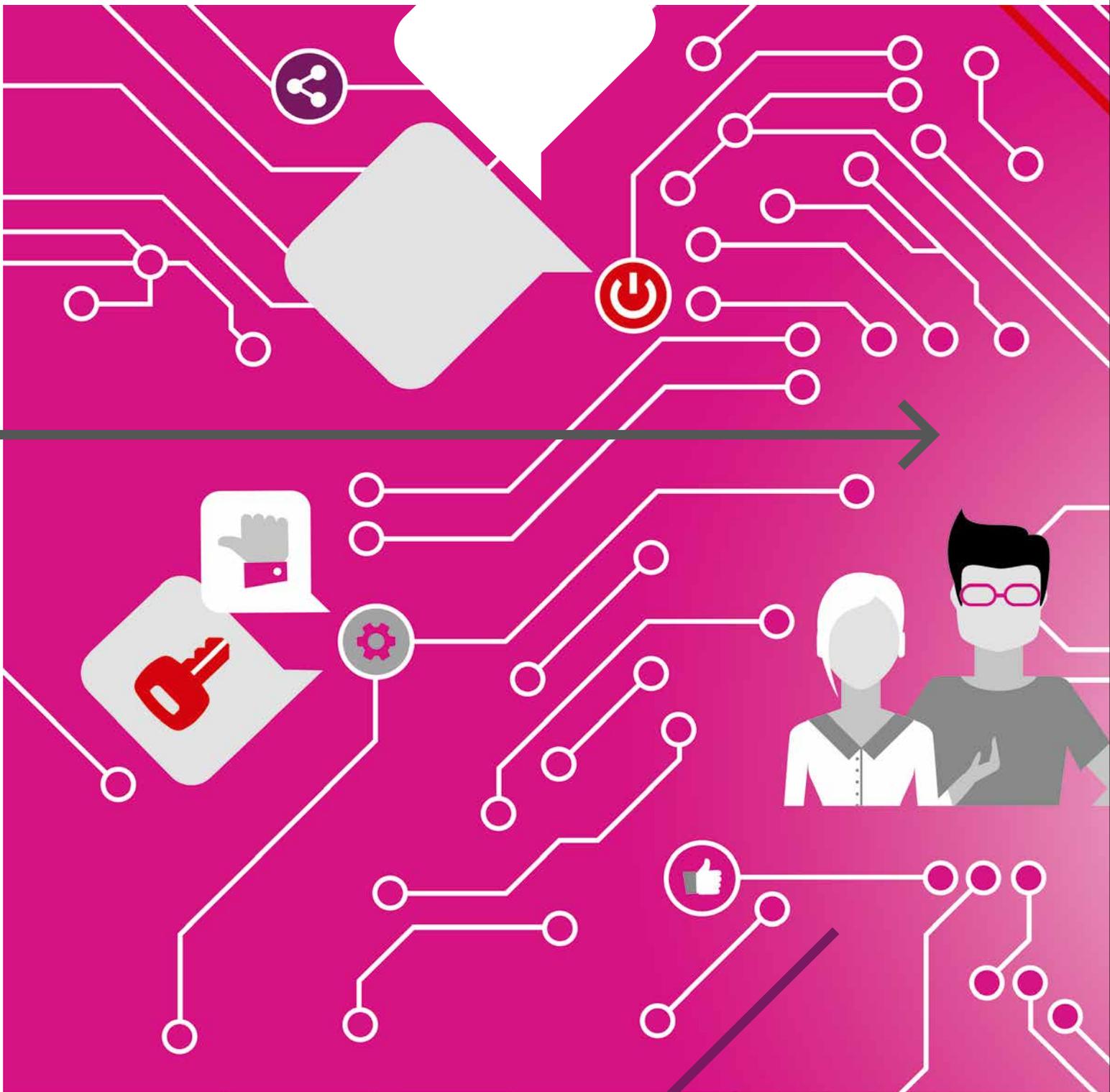
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