The 17 **Sustainable Development Goals** — also known as the **SDGs** or the **Global Goals** — came into effect on January 1, 2016 following an historic United Nations Summit in September 2015. 193 governments from around the world agreed to implement the Goals within their own countries in order to achieve the 2030 Agenda for Sustainable Development. Over the next fifteen years, with these new Goals that universally apply to all, countries will mobilize efforts to end all forms of poverty, fight inequalities and tackle climate change, while ensuring that no one is left behind.

These new, interconnected goals build on the successes of the Millennium Development Goals, or MDGs, while also identifying new priority areas such as climate change, economic inequality, innovation, sustainable consumption, peace and justice, among others.

Although each country faces specific challenges in pursuit of sustainable development, special attention is given to the most vulnerable countries, in particular, African countries, less developed countries, landlocked countries and small island developing states. There are also serious challenges within many middle-income countries.

For each of the 17 goals, there is a list of specific targets we aim to reach. The targets discussed in this guide have been summarized for ease of reading. For a more detailed list of all the 169 targets, visit [GlobalGoals.org](http://GlobalGoals.org).
BUILD RESILIENT INFRASTRUCTURE, PROMOTE INCLUSIVE AND SUSTAINABLE INDUSTRIALIZATION AND FOSTER INNOVATION

Goal 9 extends the idea of decent work to the development of infrastructure, such as transport, irrigation, energy and information and communication technology, to achieve sustainable development and community empowerment around the world. Investing in the research and development of technological progress, education and the empowerment of marginalized communities can help us achieve our environmental objectives of renewable resources and energy-efficiency.

TARGETS

- Develop sustainable and resilient infrastructure to support economic development and human well-being.
- Improve access for small business and enterprise to financial services and technical support.
- Reduce environmental impact and promote sustainable development in businesses and industries.
- Invest in research for country-specific solutions and technological improvements to economic development.
- Ensure universal access to the Internet and new technologies, particularly in developing countries.

“Never before in history has innovation offered promise of so much to so many in so short a time.”

Bill Gates
American businessman and philanthropist
1 Where did it begin?

- **Sustainable development** promotes the progression and development of sustainable living through sustainable infrastructure. Sustainable development of basic infrastructure, such as water, energy, transport, sanitation and information technology, is a high priority because it affects so much of our daily lives. Increased population growth and climate change have generated a need for infrastructure that is high performing, cost-effective, resource-efficient and environmentally friendly.

- Unequal access to and distribution of resources and infrastructure due to social, political and economic inequalities impacts the well-being of our population. **Overconsumption**, reliance on **nonrenewable resources** and poor protection policies fail to improve the quality of our environment in the face of economic development.

2 Why does this issue matter?

- **Communities still lack basic infrastructure**
  Basic infrastructure like roads, **information and communication technologies (ICT)**, sanitation, electrical power and water remain scarce in many developing countries. More than 2.5 billion people worldwide lack access to basic sanitation, and almost 800 million people lack access to water, many hundreds of millions of them in Sub-Saharan Africa and South Asia. In addition, 1 to 1.5 billion people do not have access to reliable phone services. Quality infrastructure is positively related to the achievement of social, economic and political goals.

- **We need to promote inclusive, sustainable industrialization**
  As the structure of world economies shifts to less energy-intensive industries and countries implement policies for enhanced energy efficiency, almost all regions have shown a reduction in **carbon intensity of gross domestic product (GDP)**. Global carbon dioxide emissions per unit of value added showed a steady decline between 1990 and 2013, a decrease of about 30 per cent.

- **Small businesses need access to credit**
  In developing countries, small-scale industries accounted for an estimated 15 to 20 per cent of value added and 25 per cent to 30 per cent of total industrial employment in 2015. However, access to financial services in those countries remains a problem. Globally, the credit gap for small and medium enterprises (defined as having between 5 and 99 employees) was estimated at $3.2 trillion to $3.9 trillion in 2012. In emerging markets, between 45 per cent and 55 per cent of all small and medium enterprises are unserved or underserved by financial services.
**People need affordable Internet access**
Infrastructure and economic development also rely on information and communications technology. Mobile cellular services have spread rapidly around the world, allowing people in previously unconnected areas to join the global information society. By 2015, the percentage of the population living in areas covered by mobile broadband networks stood at 69 per cent globally. In rural areas, the share was only 29 per cent.

**Who and what are affected?**

**The poor**
Infrastructure is a key element to poverty reduction. Investment in development can act as a catalyst for enhancing the ability for the poor to access assets like human, social, financial and natural capital. However, location, pricing and socio-political factors often reduce access to necessary infrastructure. Without roads, water, electricity and information connectivity, the poor are not able to access new markets, develop their businesses and network. Infrastructure is more than just roads and pipes, it is the capacity to use them.

**The technologically marginalized**
A lack of Internet access means people cannot share ideas, access financial services and ensure their safety through education and communication. At a basic level, expenditure on Internet costs around US$120 per person, per year. Improving access to Internet and new technology must consider cost, connectivity, maintenance, privacy and context to bridge the digital divide.

**Our environment**
Building roads, dams, houses and businesses all help support a growing human population, but can have devastating impacts on our environment. They can endanger fragile habitats and species, pollute our ecosystems and reduce our biodiversity. Governments, industry leaders, citizens and environmental activist groups need to collaborate on innovative strategies to reduce environmental impacts and protect sensitive habitats that could be permanently damaged by these projects.
4 What needs to be done?

- Infrastructure is made up of two dimensions – the physical assets themselves and the services needed to maintain them. Project development and funding is strengthened when public and private groups work together to provide solutions. Developing new infrastructure is important, but using our existing systems more effectively and efficiently is important too.

- The development of information and communication technology (ICT), like the Internet, has developed unevenly throughout the world. This uneven development in ICT intersects with the development of other technologies, human rights, education, labour, democracy and tourism. However, world Internet usage is improving exponentially, with the number of Internet users in Africa alone growing 7,557 per cent between 2000 and 2017. 

- Improving the reach of infrastructure means improving distribution, financial access and training. Mobile phones have come a long way in supporting infrastructure, communication and information exchanges. Continuing to develop and innovate in this area will increase access and lower infrastructure barriers.

- Investing in education, ICT and our workforce is a must if we are going to increase digital literacy, decrease the gender divide and emphasize sustainable solutions to infrastructural development. This will help reduce inequalities and our negative impact on the environment.

“It turns out that advancing equal opportunity and economic empowerment is both morally right and good economics, because discrimination, poverty and ignorance restrict growth, while investments in education, infrastructure and scientific and technological research increase it, creating more good jobs and new wealth for all of us.”

Bill Clinton
Former US president
Investment in infrastructure and industrial development requires the use of natural resources. In order to make our investments sustainable, and ensure future generations the same prosperity, we need to ensure our businesses, governments and institutions understand how to minimize their impact on the environment.

Access to infrastructure must take into account the physical, economic, social, cultural, gendered, racial and ability-based barriers preventing people from participating and benefiting from this development.

Solving issues in access to infrastructure requires a systems-level approach. We need to understand the interconnected reality of the big issues facing our planet and population, such as the role poverty plays in determining access to good infrastructure.
Consequences of Inaction

- The cost of our inaction is steep. Given the role of infrastructure and industrial development as core drivers of a global development agenda to eradicate poverty and advance sustainable development, failure to improve inclusive, reliable, and sustainable development will make ending poverty more difficult.

- Failing to improve infrastructure and promote technological innovation could translate into poor health care, inadequate sanitation and limited access to education.

- Failing to improve and address the sustainability of our businesses, governments, policies and habits will sacrifice our environment for an uncertain future.

REFLECTION AND ACTION QUESTIONS

1. How do you feel about the issue now that you know more about it?

2. How might this issue have been prevented? What could have been done differently?

3. How has this problem changed over time? Where do you see it going in the future?

4. What questions do you still have?

“To get away from poverty, you need several things at the same time: school, health, and infrastructure—those are the public investments. And on the other side, you need market opportunities, information, employment and human rights.”

Hans Rosling
Swedish physician and academic