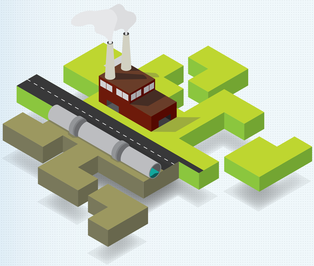
LAYING THE BRICKS

FOR RESILIENT COMMUNITIES

Today, you must stay resilient no matter what challenges your community faces. Governments must operate efficiently regardless of any crisis or event. That's where GIS comes into play.



TRANSPORTATION AND INFRASTRUCTURE

Transportation officials use GIS to analyze ways to decrease commutes, carbon emissions and promote green infrastructure and technologies. With GIS, transportation officials can:

- Analyze air quality.
- Conduct assessments on infrastructure needs.
- Spot opportunities to promote healthier living.

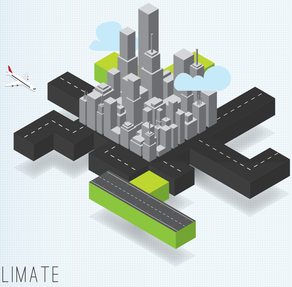
The New Jersey American Water's Community Pipeline Revival (CPR) program is investing hundreds of millions of dollars to replace aging facilities and infrastructure that delivers water to citizens. LEARN MORE HERE.

PUBLIC SAFETY

Resilient communities also have looked at policies and procedures to improve the safety of their citizens. With GIS, government public safety officials can:

- Gain clarity from complex crime data.
- Understand at risk areas, and where threats exist for communities.
- Allocate resources more efficiently when a fire or crime breaks out.

The City of Naples, Florida, has created a crime mapping application that allows residents to search for crimes in their neighborhood, and helps police staff allocate resources better. LEARN MORE HERE.



ECONOMIC DEVELOPMENT

Economic development requires forward-thinking and innovative solutions that connect data from various resources. With GIS, communities can:

- Make smarter decisions and drive economic development within their community.
- Encourage better economic policy.
- Create communities that can be protected from economic downturns, or react quickly to mitigate impacts.

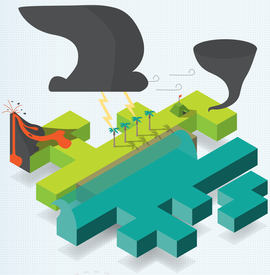
Access to data is crucial for the economic development industry. Agencies must provide business leaders with the most up-to-date and easy to understand information. Grant County has been a leader in this space. LEARN MORE HERE.

CLIMATE

Climate change is one the biggest challenges facing our society. With GIS technology we are able to:

- Track weather changes and patterns.
- Monitor sea-level changes.
- Prepare communities for changes to weather.

The Minneapolis Resilience Map shows important areas for resilience efforts for the City of Minneapolis. The map covers everything from Minneapolis water supply to storm water management and infrastructure needs. LEARN MORE HERE.



DISASTERS

GIS has transformed how first responders and communities respond to disasters. With GIS, agencies can:

- Improve the way they plan, respond and recover from a disaster.
- Show where shelters and key community resources are.
- Have access to pertinent documents and resources, and make everything available across a variety of platforms, whether it be any mobile device, web-apps or desktops.

The US Wildfire Activity Web Map is a map of US wildfire locations, and other sources of information that are related to wildfires. The map displays large and active fire incidents that have been entered into the National Interagency Fire Center (NIFC) database by emergency response teams. LEARN MORE HERE.

RESILIENCY AREA: GLOBAL

The United Nations Office for Disaster Risk Reduction is working to reduce political and economic instability from disasters in cities around the world. In support of this program, GIS is used to:

- Connect cities, governments, and private organizations
- Reduce risk exposure to threats in communities, like disease
- Increase resiliency and ability to bounce back from crisis

The Projects for Urban Sustainability and Resilience has provided maps from numerous cities around the globe and is implementing real projects to bring about smart growth, equitable access to services, and sustainable use of resources.

RESILIENCY AREA: FOOD

The effects of a changing climate will have significant impact on the world's food supply. Producers need tools like GIS to:

- Better understand how to adapt to changing landscapes.
- Grow crops and raise animals.
- Help farmers who depend on specific climate conditions.
- Help growers understand conditions, impacts, and how to adapt.

The Voices of Food Insecurity in Maryland map shows issues related to food shortages within the state, and how to more properly deliver resources to those most in need.

RESILIENCY AREA: HEALTH AND SOCIAL SERVICES

Resilient communities use GIS to improve the way they deliver health and social services. Social services and health professionals use GIS to:

- Understand the best places to build clinics and hospitals.
- Serve changing and aging populations.
- Prepare for potential outbreaks.

The EPI Water Effects on Ecosystems map is from the Environmental Performance Index (EPI), and ranks 163 countries on 25 performance indicators tracked across ten well-established policy categories covering both environmental public health and ecosystem vitality.

10 QUESTIONS EVERY RESILIENT COMMUNITY SHOULD ASK

1. What kind of data is important to our organization?
2. Have we prioritized our data?
3. How is data currently accessible to employees during a crisis? What can we do to improve?
4. What location based solutions already exist to start addressing my problem?
5. What role does technology play and what's our technology roadmap?
6. How often are we planning and preparing for a crisis?
7. How do we become more agile and proactive to address complex problems our community faces?
8. How have we encouraged collaboration? Have we engaged the right stakeholders to discuss how to become more resilient?
9. What are the biggest threats to our community? Environmental, infrastructure, transportation, climate change, other? How do we mitigate the threats?
10. What kinds of opportunities exist for us?

GIS AS THE FOUNDATION FOR RESILIENT COMMUNITIES

To learn more visit: esri.com/resilientcommunities

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Effective and efficient technology is the foundation of resilient communities. More and more, governments are moving to GIS, which provides the foundational needs for a resilient community.

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