EDGE® Innovation Network Overview

The EDGE Innovation Network is a collaborative open environment enabling industry and academia, with government input, to work together to enhance the delivery cycle of new technologies and innovative capabilities to military, government agencies, law enforcement personnel, first responders and end users of technology worldwide.

The EDGE offers significant benefits to government and end users based on three key tenets: end user involvement, honest-brokerage, and its human centered design process. EDGE customers and end users provide continuous feedback and thought leadership in shaping existing and future requirements and assisting with product improvements. Focused collaboration among a broad network of EDGE members and EDGE Innovation Network centers leads to rapid development of new technologies and innovative capabilities.

The EDGE validates and demonstrates sustainability of general research concepts establishing a lifecycle for continued technology insertion. The bottom line is a best value approach to getting new capabilities and technologies into the hands of users and operators (including military, homeland security professionals and first responders) quickly at a reduced cost and with the lowest risk possible.

The EDGE consists of five key components:

- **User/customers** – Define urgent needs/gaps in technology and capabilities that need to be filled
- **Network of Members** – Includes Industry, Academia and Non-profit organizations that establish solutions that are mapped to user and customer needs/gaps
- **Network of EDGE Innovation Centers** – Support rapid prototyping and integration of capabilities through facilities, Subject Matter Experts, tools and other resources
- **Knowledge Management System (KMS)** – Supports the intelligent mapping of gaps/needs to solution providers and seekers through a database and analysis tools
- **EDGE Processes**– Visioneering, Human Center Design, Calls for Innovation and personalized networking by EDGE Staff members

Table of Contents

What Makes the EDGE Different . . . 2
Network of Members 2
The Network of Centers 4
EDGE KMS 7

How The EDGE accelerates new technologies and innovative capabilities

Creating an Open Community Model

Developing a "Network" of Networks

- Vast Membership
- EDGE Innovation Centers

Maintaining an End User Focus

Linking all stakeholders

- EDGE Knowledge Management System

EDGE Innovation Network Information Papers

Crowdsourcing with CFIs

How the EDGE Employs HCD

Interaction with EDGE

Discover the Value of Visioneering

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EDGE® Innovation Network Overview

What Makes the EDGE Different?

The EDGE focuses investments on the most current and emerging technology available.

Technology is changing faster than most requirements can be written. Pressure to reduce budgets persists making it critical to hone investments on emerging technologies and to insert relevant technologies that users demand as opportunities present themselves.

The open collaborative environment of the EDGE helps industry and academia members to better understand user needs and more rapidly develop emerging technologies in a very flexible agile nature.

For members, the EDGE Innovation Network can potentially increase business opportunities in the government sector and between industries, by focusing research investments on technology and capabilities that customers and users truly need.

For customers and end users, the EDGE provides a forum for "idea incubation" on the art of the possible and affordable using emerging technologies. To create this "idea incubation", the EDGE draws from a broad range of technologies that are often not visible to government agencies. The outcome is a larger set of potential solutions.

The EDGE validates sustainability of basic research concepts and products. This, coupled with its Human Centered Design process, allows members to build a solution that gives the end-user what he or she needs in the format he/she prefers to work with. Finally, the EDGE establishes a lifecycle for continued technology insertion to keep technology relevant at any insertion point.

Customers, end-users and operators are able to to leverage the power of the EDGE Innovation Network without having to join the EDGE.

"If I gave the customer what he asked for, I would have given him a faster horse." ~ Henry Ford

How can customers, end-users and operators use the EDGE?

The EDGE brings the innovation of the EDGE membership to the customer with no obligation or commitment

To leverage the power of the EDGE Innovation Network, customers, end-users and operators need only to request an innovation forum to help discover and define user needs and incubate innovative ideas. EDGE member companies participate in these forums and in the development of solutions using their own funding - therefore, there is not cost to leverage the EDGE Innovation Network.

In concert with the open and collaborative nature of the EDGE Innovation Network, any information developed as part of the "idea incubation" forums can be publicly made available through the EDGE communication channels. This alleviates potential concerns regarding competitive advantage to any single company as the EDGE shares information to all EDGE participants.

The EDGE Innovation Network is open for any organization to join:

- **Industry**
- **Academia**
- **Non-Profit**

Participate with the EDGE Innovation Network

The EDGE Innovation Network is open to any organization that is interested in rapid technology development and transition to the end user. The EDGE Innovation Network allows members to participate at different membership levels (Executive, Technology, Academic, Non-Profit, Business Services or Contributing) with different membership benefits. Members may join at the contributing level at no cost (free); creating a truly open, inclusive and collaborative innovation environment.

If you are interested in joining the EDGE Innovation Network as a member, start the process here.

If you are interested in participating with the EDGE Innovation Network as a government or end user participant, read more here or begin actively participating with the EDGE.

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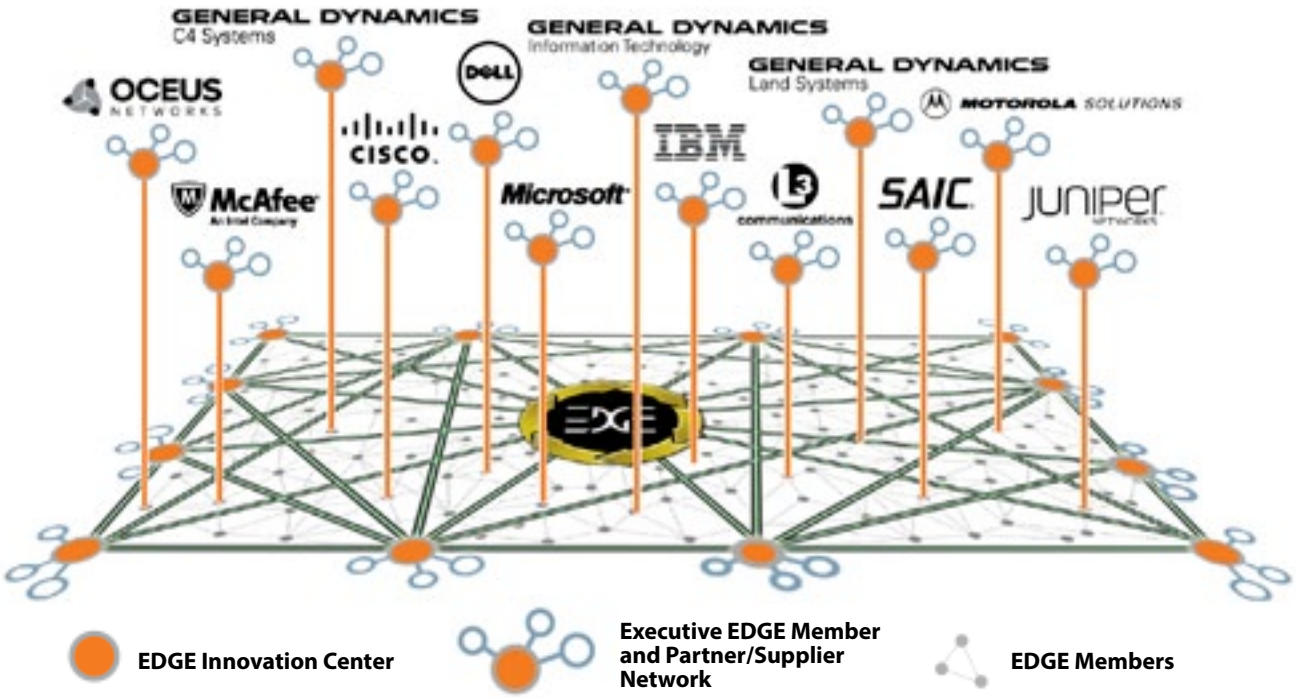
Further Extending the Open Network via the EDGE Executive Members



EDGE executive members can be viewed as access points to their partner and supplier networks; thereby expanding the reach of EDGE members and innovation centers further.

Network of Members

The EDGE Innovation Network draws on a worldwide network of over 450 member organizations members who partner to solve operational needs.

The EDGE Innovation Network is a group of academia, industry and non-profit organizations working with government participants together in physical and virtual environments. This broad network of members collaborates using an open community model approach which encourages each member to bring its capabilities to a joint project venture. The result – rapid transition of individual technologies into an integrated capabilities solution.

The EDGE Innovation Network is not confined to any single domain such as vehicles or dismounted technologies. Rather it encourages communities of interest to align with technology domains and fosters collaboration for cross-domain solutions at the macro level.

Working within an open community model allows all participants to rapidly team in response to an emerging need or problem. Some of the key benefits to both government and members include:

- Access to a large pool of technologies and capabilities
- Focused Industry research and development dollars to enhance offerings and lower government development costs
- Effective integration of capabilities into holistic solutions

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Types of EDGE Innovation Network members

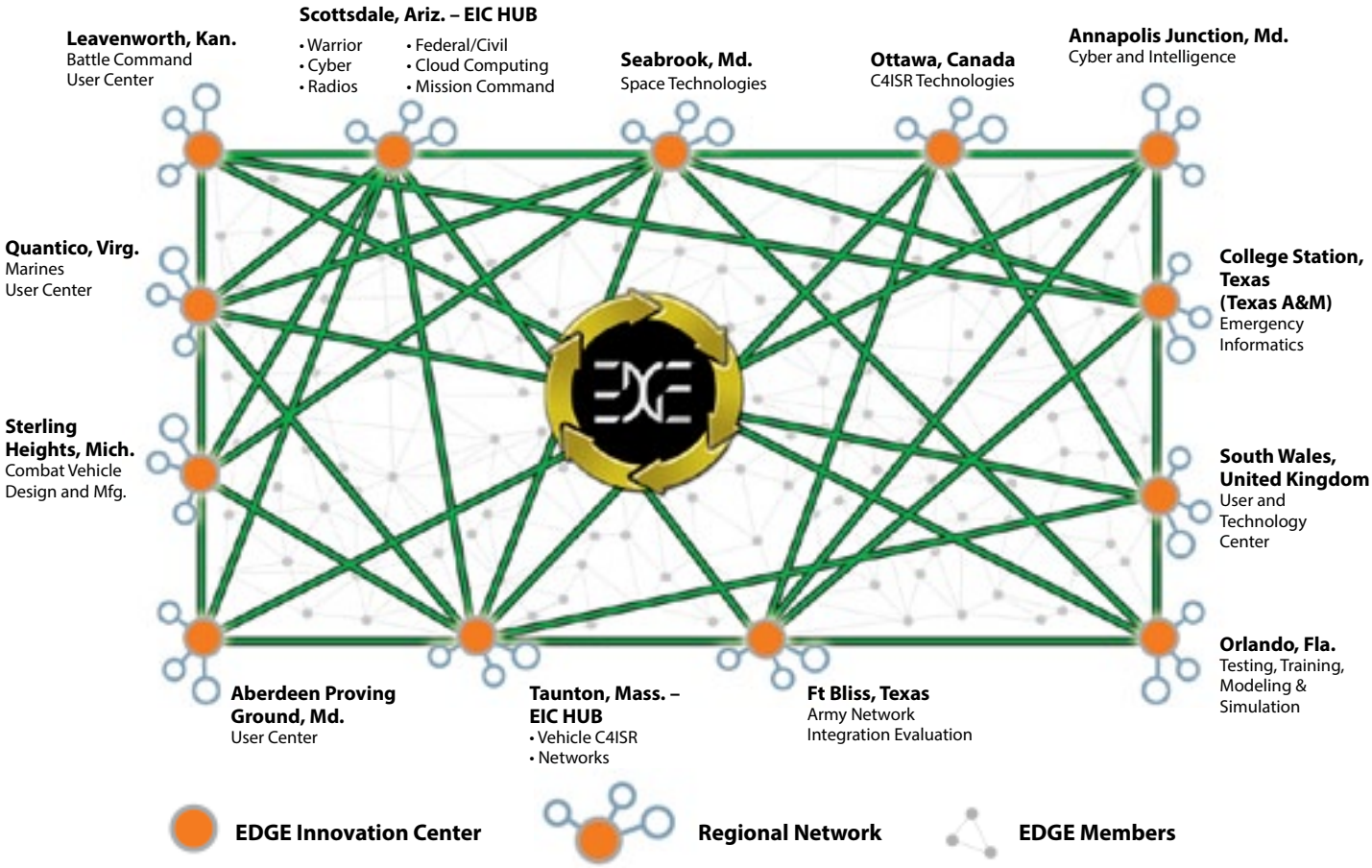
The EDGE Innovation Network is comprised of different types of technology and capabilities providers. Over 70% of EDGE member organizations are small businesses that employ less than 50 people. Small business plays a big part in the EDGE.

- **Industry** –Includes large, medium and small companies focused on Department of Defense / Department of Homeland Security / Department of Justice and commercial sectors. Industry members are for profit organizations that are technology or service providers.
- **Academia** – Universities on the cutting edge of technology development are a critical component to ensuring the best technology is available to the end user. The EDGE actively works to assist university partners in transitioning their technology from the research stage into acceptable commercial and military Technology Readiness Levels (TRLs).
- **Non-Profit** – These organizations provide a key attribute because of their own broad network of technology and capability providers. Through them, EDGE Network of members gain an additional network of research partners and technology providers.

Network of EDGE Innovation Centers (EICs)

To help achieve rapid integration and transition of emerging technologies, the EDGE Network leverages available space and existing laboratories within its Innovation Centers to foster collaboration by providing convenient access to customers, users, engineers, equipment and technology.

An Open, Virtual, Collaborative Network, And Access Hub to Other Networks



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All EDGE Centers collaborate under the strategic umbrella of the EDGE Enterprise

Each Innovation Center typically is focused on a functional area or capability. The openness of our model allows each center to leverage other Innovation Center capabilities/knowledge and draw on the specific expertise that resides there to help ensure cutting edge technologies are available for the development of a potential interoperable/holistic solution.

For example, if there is a need for soldier technology, there is probably also a need for the training system to support that technology. Collaboration between the Warrior Innovation Center and the Testing and Training Innovation Center and meshing of their capabilities and development efforts early on can lead to smarter more intuitive systems and solutions for the end user.

Types of EDGE Innovation Centers

There are two types of Innovation Centers:

- **Technology Centers** –Available to EDGE members, these centers are essentially industry laboratories with the necessary equipment and expertise to facilitate rapid technology development and integration. Most technology centers also provide members with lab space that can be reserved, as well as meeting and office space. Some centers that focus on a multitude of technology sets in one location are referred to as EDGE Innovation Center hubs; currently there are two: Scottsdale, Ariz. and Taunton, Mass.
- **User Focused Centers** – These Centers are located near end user areas of operation and offer the end user the opportunity to see and use technology firsthand. Users can provide feedback before and during the development of new technologies and capabilities. User Centers are also great environments to conduct Visioneering sessions (small group exercises led by EDGE stakeholders that identify, clarify and capture the need in a way that a wide audience of industry and academia can understand the user's problems. Findings from Visioneering sessions are put into the hands of innovators who can identify practical methods of technology application to quickly solve the needs.)

Current EDGE Technology Centers

Scottsdale EIC Hub – *Scottsdale, Ariz.*

The Scottsdale EIC Hub is the headquarters for the EDGE Innovation Network leadership and includes EDGE Innovation Center facilities that encompasses over 8,000 square feet of lab space and collaboration areas. The Hub houses subject matter experts and innovators that focus on end user technologies; supporting all Soldier/Marine/Airmen/First Responder individual equipment technologies (Warrior Systems), Federal Civil technologies involved with Homeland Security, Cyber Security, Radio, Cloud Computing and Mission Command Technologies. These multiple technology efforts are tied to current programs of record (PORs) as well as new and emerging opportunities.

Taunton EIC Hub – *Taunton, Mass.*

This center houses subject matter experts and innovators with two focus areas: 1) vehicle C4ISR and 2) Networking technologies. Taunton EIC Hub specializes in the harmonious interoperation of the vehicle, its electronics, C4ISR equipment, and the vehicle occupants. Members here work to significantly reduce size, weight, power, cost, while improving safety and mission effectiveness constantly remaining fine tuned to end user needs. Taunton EIC Hub's second area of focus is the Network. The network enables battle command on the move, keeping highly mobile and dispersed forces connected to one another and to the Army's global information network. With essential voice, video and data services, commanders can make decisions faster than ever before and from anywhere on the battlefield.

This hub works closely with the Maneuver Collaboration Center (MC2) EDGE Innovation Center.

EDGE Innovation Center for Testing and Training Technologies – *Orlando, Fla.*

Located in the heart of Central Florida's Research Park with direct proximity to Program Executive Office for Simulation, Training and Instrumentation, PEO STRI, the Testing and Training EDGE develops simulation and training innovations in intelligence, surveillance and reconnaissance, command and control, individual to collective live training, instrumentation, electronic warfare and cyber threats, as well as in the emerging field of medical simulations through advanced modeling and simulation.

EDGE Innovation Center for Cyber and Intelligence Solutions – *Annapolis Junction, Md.*

Located in close proximity to the Fort Meade Cyber epicenter, this is the first EDGE Innovation Center to operate at a classified level. It houses a classified community space for Cyber innovation in addition to an unclassified collaboration and conference facility. The EDGE Innovation Center for Cyber and Intelligence Solutions focuses on leveraging the expanding cyber capabilities and bringing rapid cyber innovation to its on-site users at other EDGE Centers.

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EDGE Innovation Center for Emergency Informatics –
College Station, Texas

The EDGE Innovation Center for Emergency Informatics, located on the campus of Texas A&M University, supports the adaptation of game-changing military and first-responder communication and information technologies to civilian emergency prevention, preparedness, response and recovery.

The innovation complex is comprised of three training facilities: Brayton Fire Fields, Emergency Operations Training facility and TEEX/TCAT. The Brayton Fire Fields includes the ability to train firefighters and HAZMAT teams on a plethora of scenarios including Live/ actual training for an industrial complex. The 32,000 square foot Emergency Operations Training Center (EOTC) uses state-of-the-art simulation and computer-based technologies to train incident managers, supervisors, executives, public officials, and military personnel to manage a large-scale crisis using a unified command approach. Since 2003, the EOTC has provided some of the best large-scale incident management training available anywhere. Combining quality training methodologies, adult learning processes, emergency management experience, and computer-supported simulation, the EOTC offers one of the most realistic, scenario-driven incident management environments in the country. The facility adapts existing incident management systems and procedures to the unique requirements of responding to large-scale incidents at all levels. The center can be configured as an incident command post or emergency operations center for full-scale, functional exercises held on the campus. The EDGE Innovation Center for Emergency Informatics is sponsored by Texas A&M University.

EDGE Innovation Center – Maneuver Collaboration Center (MC2) for Vehicle System Technologies –
Sterling Heights, Mich.

A state-of the-art facility that is an "alpha to omega" life cycle laboratory, the facility features many collaborative innovation zones, and extensive laboratory space. The center brings together engineers, customers, suppliers, academia and warfighters all focused on producing innovations that increase warfighter safety, survivability, effectiveness, mobility and lethality.

Space EDGE Innovation Center
Seabrook, Md.

The EDGE Space Innovation Center is located just minutes away from National Aeronautics and Space Administration (NASA) Goddard Space Flight Center in Seabrook, Maryland. The Center brings together industry, academia, non-profit and government organizations in the space community to collaborate and rapidly deliver new technologies and innovative capabilities.

The Center supports space technology innovations across all space-oriented government entities including NASA, Air Force, Navy, National Reconnaissance Office (NRO), National Geospatial-Intelligence Agency (NGA), and National Oceanic and Atmospheric Administration (NOAA).

Innovations may span from single algorithms and tools for integrating space-bound hardware to complex ground data systems and optical communication systems and their components.

Current User Focused Centers

EDGE Innovation Center C4ISR and User Center –
Aberdeen Proving Ground, Md.

This center is located on Aberdeen Proving Ground and is ideally suited to support interface and integration efforts with tenant organizations such as Systems of Systems-Integration (SOS-I) Directorate which, is the key organization responsible for the Network Integration Evaluations (NIE) with the Army, the Army Communications and Electronics Command (CECOM), the Army Research & Development Command (RDECOM) and its subordinate Communications & Electronic Research Development and Engineering Center (CERDEC), the Program Executive Office for Command and Control Communications – Tactical (PEO C3T), the Program Executive Office for Intelligence Electronic Warfare and Sensors (PEO IEW&S), the Army Research Laboratory (ARL), and the Army Test & Evaluation Command (ATEC). This center provides office, conference room and demonstration area space. It also can support limited integration efforts.

EDGE Innovation Center Capabilities Integration Evaluation User Center
Fort Bliss, Texas

The Fort Bliss EDGE Innovation Center is a unique, open environment that encourages military personnel to visit and engage with the EDGE team and its global members to experiment first-hand with advanced technologies and products ranging from soldier-worn, networked

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communications to new technologies and products integrated into military vehicles. The EDGE facility is part of General Dynamics C4 Systems' Fort Bliss Regional Support and Training Center, assists members and end users with the integration, testing and training needs in support of the Army's Network Integration Evaluation (NIE) exercises at Fort Bliss and White Sands Missile Range, N.M.

EDGE Innovation Center Mission Command Technologies and User Center – *Leavenworth, Kan.*
Located directly outside the gates of Fort Leavenworth and the U.S. Army's Combined Arms Center, as well as the home to United States Army Mission Command. This Innovation Center is ideal to bring together EDGE Members with end users to gain immediate user feedback that can be incorporated into rapid prototyping. EDGE members have access to the Kiva collaboration space, a large classroom type environment for large or multi group collaboration, a private member lab, and a prototyping lab for command and control software integration.

EDGE Innovation Center Marine Corps User Center – *Quantico, Va.*
Located outside Marine Corps Base Quantico, this Innovation Center hosts Marine Corps users from the Marine Corps Combat Development Command, the Marine Corps Systems Command, the Marine Corps Warfighting Lab, and the Marine Corps Training and Education Command. Its Tactical Unified Communication Benchmarking Environment lab allows EDGE members to demonstrate and conduct engineering level hardware and software testing on tactical unified communications solutions in a notional Marine Organizational command and control environment at Battalion/Squadron or Regiment/Group levels.

International

EDGE Innovation Center Canada C4ISR Technologies – *Ottawa, Canada*
The Canadian EDGE Innovation Centre in Ottawa, Canada is sponsored by General Dynamics Canada Ltd. This EDGE facility is focused on bringing small- and medium-sized business together to extend the capabilities in joint and coalition interoperable command, control and information sharing solutions from the strategic core to the tactical edge. Its capabilities include an EAR Controlled / ITAR-free development initiative with multi-platform and multi-domain solutions. This facility also provides access to a distributed joint operations centre across three remote locations for developing, testing and demonstrating with partners and customers.

Recently, the Canadian EDGE Innovation Centre was instrumental in the development and demonstration of the CoCommand visualization and collaboration solution for warfighters and first responders worldwide. CoCommand is an executive level decision support system that provides situational awareness and situational understanding for the commanders and their staff. This solution is a leading example of how the EDGE enables partners to bring together multiple technologies in a rapid innovative process for extending customer capabilities.

EDGE UK User and Technology Center – *South Wales, United Kingdom*
The EDGE United Kingdom is a state-of-the-art facility located at the General Dynamics site in South Wales. It provides partners, from small- to medium-sized enterprises, academia and customers with access to virtual and physical collaboration environments. It encourages close collaboration between the partners, to enable the rapid deployment of best-of-breed science and technology innovations into fieldable technologies and demonstrators.

General Dynamics UK's leadership in the C4ISTAR land domain positions EDGE UK to lead the development of cutting-edge technologies, harnessing the necessary collaborative efforts across academia and industry, to deliver the next evolutionary step-change in mission-winning capabilities and solutions our customers demand.

Planned/Future Innovation Centers

The network of EDGE Innovation Network centers continues to grow. Potential new centers could focus on satellite ground systems, public sector and underwater ISR technologies.

EDGE Knowledge Management System (KMS) - Virtual Collaborative Environment

The explosive growth of the EDGE Innovation Network dictates the use of a collaborative tool for members and EDGE enterprise team to share and implement EDGE processes. The Knowledge Management System supports the intelligent mapping of gaps/needs to solution providers and seekers through a database and analysis tool. This system will become the "crowdsourcing" tool for EDGE members, EDGE staff and government participants to collaborate.

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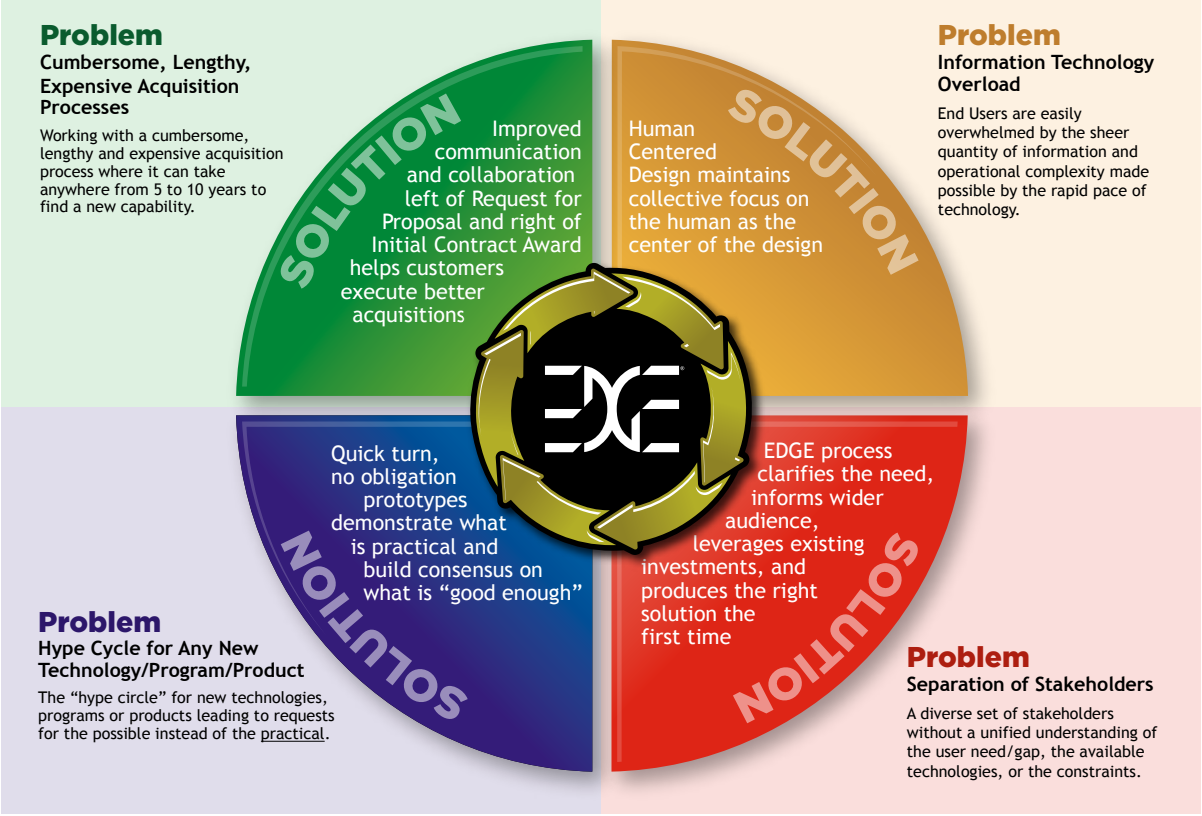
EDGE® Innovation Network Overview

The EDGE Innovation Network fosters continuous innovation and thought leadership to accelerate new technologies and innovative capabilities for warfighters and first responders. The EDGE construct is truly agnostic as it brings together many industry participants, academia and non-profit organizations harnessing their best of breed capabilities and technologies. This creates new innovations that meet end user needs while promoting a continuous life cycle of innovation.



The diagram above demonstrates the EDGE methods to solve complex challenges.

Visit us at www.edge-innovation.com to find out more.

Other Information Papers Available:

Crowdsourcing with CFIs

How the EDGE Employs HCD

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Discover the Value of Visioneering

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