

FAQ-1

GRAPHICS

Introduction to OV-1 Graphics in Question & Answer Format

US Army Critical Artificial Intelligence/Machine Learning and Wearables Solutions for Soldiers

OV-1

- HQ
- Military Hospitals
- AI/ML Analysis

AI/ML for Trusted AI and Autonomy:

- Synthetic data generation
- Automated detection and prevention
- Automated data labels
- Biometric authentication
- Natural language analysis
- Pattern recognition
- Stress profile modeling
- Decision support

ATAK transmits data to HQ and medical facilities for monitoring and analysis

Wearable devices continuously stream data to ATAK via wireless links

Wearable Device Data Acceleration

WEARABLE DEVICES

- IMU
- Shot Sensor
- ATAK/Audio Recorder
- Shot Sensor
- SGS
- IMU
- Chest Strap
- Wrist

Android Tactical Awareness Kit (ATAK) collects and transmits data to medical personnel and hospitals as well as HQ command and control to provide for a faster response to combat casualties and quicker progress through the treatment stages

Inertial Measurement Units (IMUs) detect acceleration and shots, as well as orientation

Polar GRIT wrist watches monitor heart rate, provide GPS, and track overall activity

Chest straps provide a back-up heart detector and GPS system

FIFTH GENERATION WIRELESS CELLULAR TECHNOLOGY

5G

TACTICAL NETWORK

Key Network Specifications

Maximum Bandwidth	50 MHz @ 5G; 15 MHz @ 4G	User latency	< 2ms
Minimum Bandwidth	10 MHz	Download Speed	20 Gbps
Maximum Carrier Aggregation	16	Uplink Speed	10 Gbps
Modulation	256-QAM	Coverage	Small Cells
Modulation Access Scheme	OF-CDM/OFDM	Channels	200+ 400 MHz
IFT Size	OF-CDM/OFDM	Frequency Bands	28-40 GHz
Subframe Length	1ms and 0.5ms	Spectral Eff. Down	30 ops/MHz
Channel Coding	LDPC (data), Polar (control)	Spectral Eff. Up	15 ops/MHz
		Traffic Capacity	1000 Mbps/MHz
		Density	1 Million Connections/50 km

Military Base Infrastructure

Digitized Installation Planning

- Planned & Projected Futures
- Energy & Water Resilience
- Climate Resistance
- Facility Investment

Smart Installation Common Operating Picture

Digital Fusion, Workflow, DAS, & Metrics

- Situational Awareness
- Water Sensors / Metrics
- Vehicle Traffic Flow on Major Roads
- Bldg Energy Sensors / Metrics
- Installation Energy Sensors / Metrics
- Emergency C2 Info
- Comms Ops SAT - Cellular - Emergency
- Predictive Bldg Maintenance
- Comms Ops -Weather -Media/News



What is an OV-1 Graphic?

Answer: An OV-1 graphic is a high-level operational view, typically used in systems engineering, defense, technology, and government sectors. It provides an overview of a concept, operation, or system, using a visual format that makes complex ideas easy to understand. Unlike technical diagrams, OV-1 graphics focus on presenting an operational context or “real-world” scenario rather than detailed engineering specifications.

Who uses OV-1 graphics?

Answer: OV-1 graphics are commonly used by the Department of Defense (DoD) and other U.S. government agencies. They’re also valuable in sectors like aerospace, defense contracting, cybersecurity technology, and infrastructure, where organizations need to communicate complex systems to stakeholders, clients, and decision-makers.

OV-1 graphics seem to be increasingly required by DoD organizations and prime contractors—why have they become so essential in the U.S. defense and related technology sectors?

Answer: OV-1 graphics have become increasingly critical within the DoD and related markets of national security, homeland security, and aerospace because they provide a clear, high-level visual representation of complex operational concepts, making it easier for stakeholders to quickly grasp mission objectives, resource allocations, and system interactions. As missions and technologies grow more complex – and more interdependent, OV-1 graphics provide a simplified overview that supports faster decision-making and clearer communication across teams. Within the DoD, OV-1 graphics are valued for their ability to bridge the gap between technical details and strategic goals. They help align diverse stakeholders—from technical experts to high-level decision-makers and government oversight subcommittees—by providing a common visual language that clarifies how systems and resources work together in real-world scenarios. Additionally, as the DoD emphasizes interoperability and joint operations, OV-1 graphics facilitate interagency and partner nation collaboration by offering standardized, easy-to-understand visuals that enhance operational alignment. The rising demand for OV-1 graphics reflects their essential role in making complex information accessible, supporting mission planning, and strengthening communication in high-stakes environments.

What are the primary uses of OV-1 graphics?

Answer: OV-1 graphics serve multiple purposes, including:

- **Operational Planning:** Provide a high-level view of operational concepts and systems.
 - **Marketing and Business Development:** Showcase capabilities to clients and differentiate offerings.
 - **USG Interagency Collaboration:** Facilitate communication between teams or agencies with standardized visuals.
 - **Training and Education:** Help internal teams understand complex systems or processes.
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In general, what are the benefits of using OV-1 graphics?

Answer: OV-1 graphics provide several key benefits:

- **Simplify Complex Systems:** Break down technical information into understandable visuals.
 - **Enhance Decision-Making:** Give decision-makers a quick overview to assess and understand scenarios.
 - **Improve Communication:** Establish a consistent visual language for communicating across teams and stakeholders.
 - **Support Business Development:** Serve as a visual asset in proposals, presentations, and marketing materials to engage clients.
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What are the key elements of an effective OV-1 graphic?

Answer: Effective OV-1 graphics typically include:

- **Backgrounds:** Visual and realistic elements representing specific locations, settings, or environments (e.g., desert, urban, maritime).
- **Foreground Elements:** Key operational components, like vehicles, buildings, sensors, or personnel.
- **Labels and Callouts:** Explanatory text to clarify important elements or capabilities.
- **Clear Layout:** An organized arrangement that makes the information easily digestible and formatted based on presentation layouts.
- **Consistency:** Standardized elements, colors, and styles to ensure visual clarity and alignment with organizational branding.

What software is available for creating professional OV-1 graphics?

Answer: Traditionally, OV-1 graphics were created using general-purpose design and photo-editing software that lacked the specialized features necessary for OV-1 development. These tools were often complex, required advanced skills, and were difficult to use, resulting in extended development times, lower image quality, and limited realism, which diminished the graphic's visual impact. Now, user-friendly OV-1 graphics development tools are available based on the Microsoft® PowerPoint® platform, equipped with features specifically designed to meet the unique demands of the defense, aerospace, and technology sectors. These are:

OV-1PRO™ OV-1 Template Sets are ideal for efficiently creating high-quality OV-1 graphics. OV-1PRO™ offers specialized OV-1 template sets designed to meet the unique needs of various operational contexts, making it easier than ever to develop highly relevant OV-1 graphics. With subject-matter-specific combinations of realistic backgrounds and foreground elements, users can select from a range of tailored scenes—from military environments and urban landscapes to natural terrains like deserts, mountains, and forests. Each template set is purpose-built, providing users with a collection of elements that align with their specific operational scenarios. This targeted approach enables teams to create accurate, impactful OV-1 visuals with minimal customization, ensuring that each graphic resonates with both technical and non-technical stakeholders.

OV-1PRO™ OV-1 Background Sets provide an array of location-specific, ultra-realistic backgrounds that serve as dynamic canvases for developing OV-1 graphics. Each background is expertly designed to reflect real-world environments, from rugged mountainous terrains and dense forests to urban centers and arid deserts, providing users with highly accurate settings for their scenarios. These backgrounds also feature ample space for integrating foreground elements and textual entries, allowing users to strategically position equipment, vehicles, or personnel in realistic locations while maintaining visual clarity. This intentional layout design supports clear, informative visuals that enhance storytelling and situational understanding across a variety of operational settings.

OV-1PRO™ OV-1 Foreground Sets are crafted to seamlessly integrate with OV-1PRO™ Background Sets, creating cohesive and realistic operational visuals. Each foreground element is designed with perspective angles that complement the common low-angle view of OV-1PRO backgrounds, ensuring depth and realism in each graphic. The sets feature subject-specific options tailored for various domains, including naval, artillery, missile systems, ISR (Intelligence, Surveillance, and Reconnaissance), space, and air operations, providing users with an extensive library to suit their unique requirements. With transparent backgrounds, these foreground elements are easy to position over any chosen background, giving users effortless control to place and scale items for maximum visual impact, accuracy, and clarity in their OV-1 graphics.

ezOV-1™ OV-1 Template Sets offer preconfigured OV-1 graphics that streamline the OV-1 development process, allowing users to quickly produce polished visuals with minimal effort. Each template set features expertly placed foreground elements, including vehicles, equipment, and personnel, on a diverse selection of backgrounds tailored to specific terrains and operational contexts. With options covering a range of subject matter—from urban and rural settings to specialized terrains such as coastal, forested, or desert landscapes—users can quickly adapt these templates to meet their exact needs. The easy customization features allow users to modify elements, adjust layouts, and tailor details, delivering professional OV-1 graphics in a fraction of the time without sacrificing quality or relevance.

OV-1MAX™ OV-1 Template Sets elevate OV-1 graphic creation by introducing dynamic weather, time of day, and lighting variations for selected ezOV-1™ Template Sets, giving users unparalleled control over environmental details. This powerful tool allows users to select from a range of situational conditions—sunny, cloudy, rainy, dusk, or dawn—to ensure that their OV-1 graphics accurately represent operational scenarios and add impactful realism. With these options, OV-1MAX™ enhances each graphic's responsiveness and immersion, helping users convey situational context with precision. This capability transforms static OV-1 graphics into vivid, narrative-driven visuals, optimizing communication and bringing operational scenarios to life in a way that engages and informs stakeholders effectively.

Each tool offers a powerful and efficient OV-1 design capability, including flexibility in design, user-friendliness, and accessibility.

What are some common challenges in OV-1 graphic development?

Answer: Challenges include:

- **Balancing Detail and Clarity:** Including enough detail without overcrowding the graphic.
- **Maintaining Realism:** Ensuring backgrounds and elements reflect real-world scenarios accurately.
- **Resource Limitations:** Developing high-quality OV-1 graphics requires time, skilled designers, experienced artists, and OV-1 graphics development software, which may not always be available.
- **Frequent Updates:** Operational changes may require frequent revisions to keep graphics current.
- **Ensuring Standardization:** Without a consistent visual style, OV-1 graphics across teams or projects can appear disjointed.

As a solution architect, what are the best visualization practices for creating effective OV-1 graphics?

Answer: Best practices include:

- **Define Your Audience:** Tailor the graphic to the audience's needs and familiarity with the subject.
 - **Use a Clear Visual Hierarchy:** Organize solution elements in a way that highlights the most important components.
 - **Focus on Key Information:** Avoid overloading the graphic with details; include only essential elements.
 - **Incorporate Standardized Templates:** Use templates and libraries for consistent design and quicker turnaround.
 - **Gather Feedback Early:** Collect input from stakeholders during the initial design phase to ensure alignment and execute reviews before publishing.
 - **Use High-Quality OV-1 Graphics Design Software:** Select software that meets the graphic's complexity needs while allowing for professional design.
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How do OV-1 graphics enhance marketing and business development?

Answer: OV-1 graphics support marketing and business development by:

- **Simplifying Technical Concepts:** Making complex solutions accessible to non-technical clients and stakeholders.
 - **Increasing Engagement:** Visuals attract attention and make presentations, proposals, and digital content more engaging.
 - **Differentiating Offerings:** High-quality visuals set a company apart from competitors who may rely on text-heavy or overly technical presentations.
 - **Improving Proposals and Presentations:** Clear visuals increase comprehension and help clients make faster, more informed decisions.
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How can organizations ensure consistency across OV-1 graphics?

Answer: To maintain consistency, organizations can:

- **Establish an OV-1 Graphics Repository:** Create a library of standardized backgrounds, foreground elements, previous OV-1 graphics, and templates for easy access.
- **Define Visual Standards:** Set guidelines for fonts, colors, layouts, and icons to create a cohesive style.

- **Provide Training:** Offer training to team members on best practices for OV-1 development.
 - **Use Version Control:** Track updates and ensure only the latest, most accurate graphics are used.
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What are the key considerations when updating OV-1 graphics?

Answer: When updating OV-1 graphics, consider:

- **Relevance of New Elements:** Only add new elements if they are essential to the operational or marketing message.
 - **Alignment with Current Standards:** Ensure new visuals match the latest visual standards and templates.
 - **Impact of Changes on Existing Materials:** If updates change core information, ensure consistency across all related graphics and materials.
 - **Feedback from Stakeholders:** Confirm that updates meet the needs of those using or presenting the graphic.
 - **OV-1 Graphic Development Tools with Editable Features:** Utilize OV-1 development software that allows for easy updating and editable features to facilitate changes.
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What Role Does Feedback Play in OV-1 Graphic Development?

Answer: Feedback is critical in the OV-1 graphic development process:

- **Early-Stage Alignment:** Collecting feedback at the beginning ensures that the design aligns with stakeholder expectations and operational requirements.
 - **Improves Accuracy:** Feedback from subject matter experts verifies that elements are represented accurately and realistically.
 - **Refines Usability:** By involving potential users, you can ensure that the graphic is clear, intuitive, and tailored to the audience's needs.
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How often should OV-1 graphics be updated?

Answer: The frequency of updates depends on the context:

- **DoD Operational Graphics:** Update as frequently as needed or as required by contract to reflect new capabilities, technologies, or operational changes.

- **Marketing and Business Development:** Refresh OV-1 graphics periodically to ensure they reflect the latest offerings, branding, and design standards.
 - **Proposal-Based Graphics:** Tailor updates to align with each new proposal or client pitch, ensuring relevance to the specific project.
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What are some key tips for creating OV-1 graphics that resonate with non-technical audiences?

Answer: For non-technical audiences:

- **Simplify Layouts:** Avoid complex arrangements that may overwhelm viewers.
 - **Use Plain Language:** Replace technical jargon with simple, descriptive language.
 - **Highlight Key Takeaways:** Use labels, callouts, or color emphasis to draw attention to essential points.
 - **Incorporate Real-World Context:** Use familiar environments or scenarios to make the information relatable.
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How can organizations measure the effectiveness of OV-1 graphics in business development?

Answer: Effectiveness can be measured by:

- **Client Feedback:** Positive feedback from clients and stakeholders indicates that the graphic effectively communicated the intended message.
 - **Proposal Success Rate:** Track the win rate for proposals using OV-1 graphics to assess their impact on client decisions.
 - **Engagement Metrics:** For digital use, measure engagement metrics like click-through rates and time spent on page.
 - **Sales and Conversion Rates:** Monitor if OV-1 graphics lead to increased client inquiries, sales, or conversions.
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Why are OV-1 graphics difficult to create?

Answer: Creating OV-1 graphics is challenging due to the need for a precise balance between simplicity, clarity, realism, advanced artistic design, and overall visual impact. Unlike technical diagrams that convey exact specifications, OV-1 graphics must capture complex, high-level concepts deployed in real world situations in a way that is visually accessible, conceptually accurate, and engaging for diverse audiences.

Here are the primary reasons why OV-1 graphics are difficult to create:

Balancing Detail and Clarity

OV-1 graphics must include enough information to represent the key operational elements without overwhelming the viewer. Adding too much detail risks clutter and confusion, while oversimplifying can lead to a loss of essential context. Designers must carefully select which elements to include and how to arrange them to convey the full scope of the mission or system without losing clarity.

Creating Realistic and Relevant Visuals

OV-1 graphics need to represent specific environments (like urban areas, coastal regions, or deserts) and entities (vehicles, equipment, personnel) realistically to be effective. Achieving this level of realism often requires specialized visual elements that may not be readily available, necessitating custom design work. Inaccurate or overly generic visuals can mislead stakeholders, making it difficult to capture the true operational environment or convey credibility in mission planning.

Aligning with DoDAF Standards

OV-1 graphics are part of the Department of Defense Architecture Framework (DoDAF), which means they must be consistent with the framework's standards and align with other DoDAF views. This requires a deep understanding of DoDAF and its structure, as well as careful design to ensure consistency. Without alignment, OV-1 graphics risk becoming disconnected from the broader architecture, reducing their usefulness for stakeholders who rely on cross-view coherence in DoDAF.

Audience Diversity

OV-1 graphics are typically viewed by a wide range of stakeholders, from technical experts to high-level decision-makers. Each group has different levels of familiarity with the operational details, requiring the graphic to be both technically accurate and easy to interpret. Designers must balance technical detail with simplicity, ensuring that the graphic is accessible to non-technical viewers while still informative for experts. This balance is difficult to achieve and often requires iterative design and feedback.

Resource Constraints

High-quality OV-1 graphics require software and skilled designers who understand both technical and visual requirements. Not all organizations have these resources readily available, and time constraints can further limit the ability to refine designs. Organizations without sufficient design resources may struggle to produce OV-1 graphics that meet the necessary standards of professionalism and clarity, leading to suboptimal or inconsistent visuals.

Updating and Version Control

Operational requirements and systems can change frequently, requiring updates to OV-1 graphics to reflect the latest configurations or scenarios. Each update must be consistent with previous versions and align with other DoDAF views, making changes complex and time intensive. Keeping OV-1 graphics current while maintaining quality and consistency is challenging, especially when multiple teams or projects require different versions of similar visuals.

Maintaining Consistency with Organizational Standards

Many organizations, especially within DoD and government agencies, have established visual and brand standards that OV-1 graphics must adhere to. Designers must ensure that the colors, fonts, symbols, and layout align with these standards across all visuals. Ensuring visual consistency across OV-1 graphics, while also tailoring each one to its specific mission context, can be difficult. Inconsistency can lead to confusion, especially when multiple teams rely on different OV-1 graphics for planning and coordination.

What are the recognized best practices for developing OV-1 graphics?

Answer: To maximize the effectiveness of OV-1 graphics, it's essential to adhere to best practices and design guidelines that prioritize clarity, accuracy, and relevance:

Define the Audience and Purpose

- Identify the primary audience, whether military planners, decision-makers, or agency stakeholders.
- Tailor the level of detail and choice of elements to ensure relevance to the viewers.

Focus on Key Elements and Interactions

- Highlight only essential entities, relationships, and environments to prevent information overload.
- Use a clear visual hierarchy, ensuring that primary elements stand out and secondary details remain subtle.

Maintain Consistency with Other DoDAF Views

- Ensure the OV-1 graphic aligns with other DoDAF views in terminology, style, and structure.

- Use standardized elements, colors, and iconography to maintain visual coherence across views.

Emphasize Realism and Relevance in Visuals

- Use accurate background environments and realistic representations of deployed locations, environments, systems, and entities.
- When location-specific details are necessary, tailor the visuals to reflect real-world conditions.

Simplify Without Losing Essential Context

- Avoid unnecessary detail that could detract from the core message.
- Retain critical elements that ensure viewers understand the scenario's operational purpose and structure.

Collect and Incorporate Feedback

- Share drafts with stakeholders early to ensure the graphic aligns with operational needs and objectives.
- Incorporate feedback iteratively, refining the visual for both accuracy and clarity.

Our team is required to develop an OV-1 graphic for a DoD customer - is it best to try and design the graphic from scratch or start with an OV-1 template?

Answer: Starting with a professionally designed OV-1 template is generally the best approach for developing an OV-1 graphic, especially if you're new to the process or need to ensure consistency with established standards. Templates provide a structured foundation, saving you time and helping you align with typical OV-1 design conventions, such as layout, labeling, and visual hierarchy. Additionally, templates from VisualPros include pre-made realistic backgrounds and foreground elements tailored to different operational contexts, which can make it easier to accurately represent your scenario.

Using an OV-1 graphic template also promotes standardization, particularly important if your graphic needs to align with the Department of Defense Architecture Framework (DoDAF) or your organization's visual guidelines. You can still customize the template to fit the specific mission or operation you're depicting, but starting with a template gives you a professional, consistent foundation to build upon, saving time and reducing the likelihood of errors and ensuring a more polished result.

Is it better to try and develop an OV-1 graphic inside our organization or subcontract the work out to a professional OV-1 graphics development firm?

Answer: Whether to develop an OV-1 graphic in-house or subcontract to a professional firm depends on the complexity of the graphic, the resources available within your organization, and your timeline. If your team has design and artistic expertise, access to specialized OV-1 graphic development software, and a deep understanding of the operational scenario, creating the OV-1 graphic in-house can be effective, particularly for standard or less complex visuals. In-house development allows for greater control over the design process and can be more cost-effective if the necessary skills and tools are readily available.

However, subcontracting to a professional and experienced OV-1 graphics development firm can be advantageous when high-quality, precise, and highly realistic visuals are required, especially for complex operational environments or when accuracy is paramount. Professional firms specialize in OV-1 graphics, meaning they bring both design expertise, engineering and technical experience within DoD and USG projects, and familiarity with the Department of Defense Architecture Framework (DoDAF) standards. This ensures that your graphic will be visually consistent, compliant with DoDAF, and clear to a wide range of stakeholders, from technical experts to decision-makers. Additionally, a professional firm can expedite the process and reduce the burden on your team, making this option ideal for time-sensitive projects or when in-house resources are limited.

What skills does a team need to develop an effective and clear OV-1 graphic, including both technical and non-technical abilities?

Answer: Creating an effective and clear OV-1 graphic requires a mix of technical and non-technical skills that ensure the graphic is both visually engaging and accurately represents complex operational scenarios. Here's a breakdown of the key skills involved:

Technical Skills

- **Graphic Design:** A strong foundation in graphic design principles, such as layout, color theory, typography, and visual hierarchy, is essential to create an aesthetically pleasing and clear graphic.
- **Software Proficiency:** Familiarity with design software and OV-1 graphic templates used for OV-1 graphics development, such as OV-1PRO and ezOV-1, is crucial. Proficiency in these tools allows designers to efficiently manipulate elements precisely and use advanced features to enhance realism and clarity.

- **Data Visualization:** An understanding of how to visualize data and system interactions helps designers represent complex information clearly and concisely. This skill is particularly valuable for illustrating operational flows and resource relationships.
- **Understanding of DoDAF Standards:** Familiarity with the Department of Defense Architecture Framework (DoDAF) is essential, as OV-1 graphics must align with its standards and terminology. Knowledge of DoDAF ensures that graphics remain consistent and useful across DoD applications.

Non-Technical Skills

- **Operational Knowledge:** A basic understanding of the operational context being represented (e.g., defense, aerospace, border security) is essential. This knowledge helps ensure that the graphic accurately represents the mission, resources, and environmental factors.
- **Attention to Detail:** Precision in representing key elements and relationships is critical, as small inaccuracies can lead to misunderstandings. Attention to detail ensures that the graphic is both accurate and effective in conveying its intended message.
- **Communication Skills:** Clear communication with subject matter experts, stakeholders, and other team members is necessary to capture the right details and align with the project's goals. Strong communication helps bridge any gaps between technical and visual requirements.
- **Project Management:** The ability to manage timelines, incorporate feedback, and adjust designs based on evolving requirements is important for delivering high-quality OV-1 graphics on schedule. Project management skills are especially valuable when balancing design time with review cycles.
- **Storytelling and Simplification:** An understanding of storytelling principles helps designers convey complex information as a clear, compelling narrative. This includes simplifying complex systems and highlighting only the most relevant components to make the graphic accessible to diverse audiences.

In summary, creating effective OV-1 graphics requires a blend of technical skills, such as graphic design and software proficiency, and non-technical skills, such as operational knowledge, communication, and the ability to simplify complex concepts. Teams that bring together these skills are better equipped to develop OV-1 graphics that are visually impactful, accurate, and accessible to both technical and non-technical stakeholders.

Conclusion

OV-1 graphics are a powerful tool for both operational and business development purposes. By following best practices, maintaining consistency, and tailoring graphics to specific audiences, organizations can effectively communicate complex concepts, enhance client engagement, and differentiate their offerings in competitive markets. This FAQ provides a foundation for developing OV-1 graphics that support both functional and strategic goals across sectors.