

# OV-1 Graphics Development

## Challenges & Solution Strategies



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### Solution Overview

-Whitepaper

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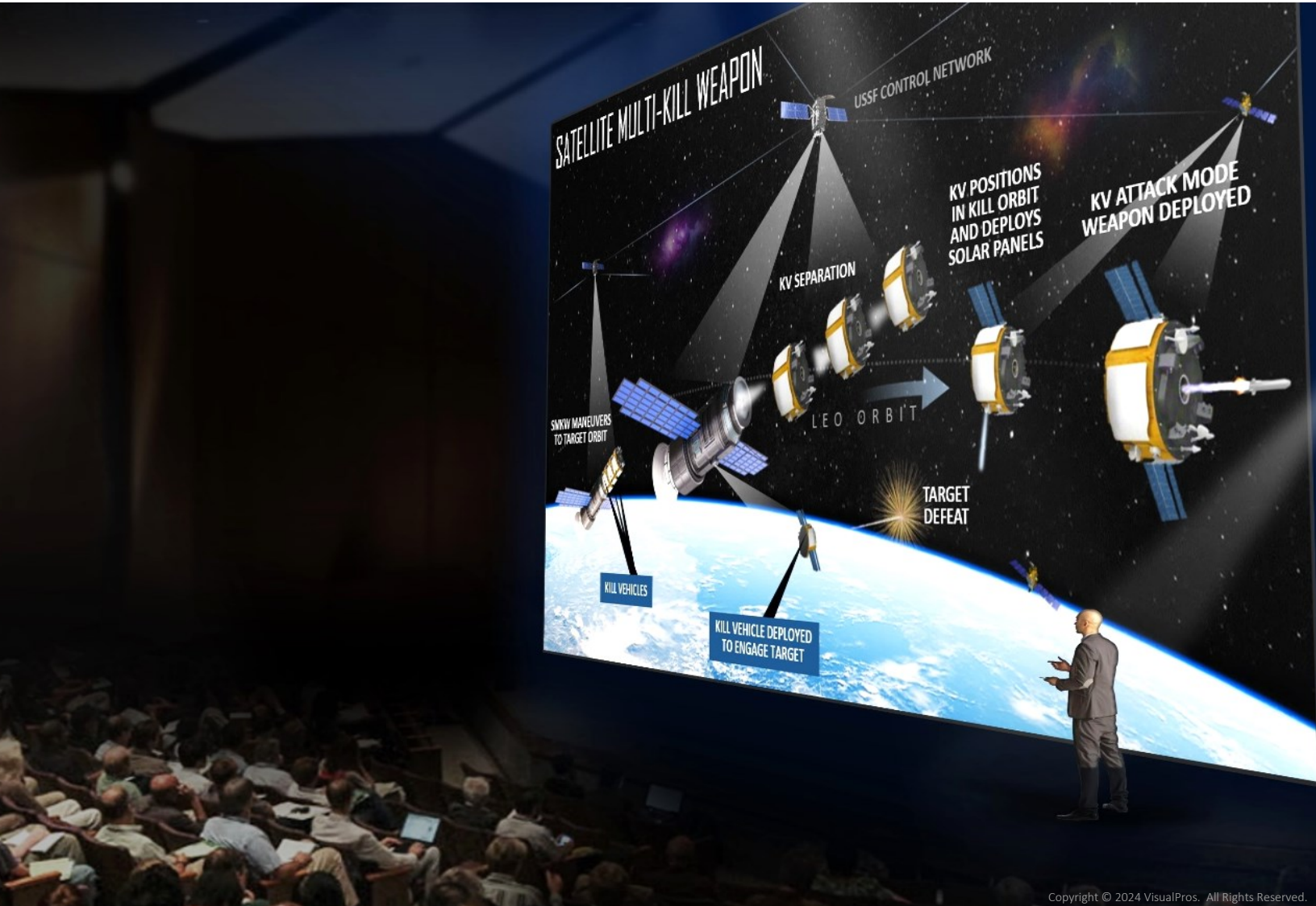
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Cover Image: The presentation OV-1 graphic shown was developed using the VisualPros OV-1PRO™ Space Defense Template Set.

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## Introduction

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OV-1 graphics are critical across the military-industrial complex, but are challenging to develop

OV-1 graphics are foundational to effective communication within system architecture frameworks, including the Department of Defense Architecture Framework (DoDAF), Ministry of Defence Architecture Framework (MODAF), and The Open Group Architecture Framework (TOGAF). The OV-1 graphic serves as a visual "big picture" that captures the operational environment of a system or enterprise. However, creating these complex graphics is often a time-consuming, iterative, and detail-intensive process, fraught with unique challenges. Often described as a combination of engineering, science, and art, OV-1 graphics are the most difficult to create among the many DoDAF graphics. This whitepaper explores why OV-1 graphics are challenging to develop, the common roadblocks, approaches, and potential solutions to mitigate these difficulties.

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## Problem Statement

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The rapid increase in OV-1 usage by DoD and other U.S. government agencies has intensified the need for enhanced development capabilities

The OV-1 graphic provides stakeholders with a high-level operational view, helping them quickly grasp complex systems' purpose, goals, capabilities, and interactions. OV-1 visuals play a vital role in the decision-making process, as they facilitate understanding between parties with varying technical knowledge. As a result of systems becoming more complex and interdependent, DoD is significantly increasing the requirements for the submittal of OV-1 graphics for a variety of uses, including proposals, programmatic reviews, and project updates. Given the critical function they serve, creating accurate, realistic, and effective OV-1 graphics is essential in conveying complex ideas simply and clearly.

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Complexity of abstracting information

The primary purpose of OV-1 graphics is to summarize complex operational details in a way that is easily understandable for all stakeholders. However, balancing simplicity and completeness is challenging. OV-1 graphics must:

- Capture the most important system elements and interactions with other systems and sub-systems.
- Avoid overwhelming detail that could confuse viewers.
- Communicate a clear, and realistic singular message that aligns with the overall project vision and mission statement.

This balance is hard to achieve, especially when working with intricate systems that have multiple layers of interactions, dependencies, operational flows, and environments. Missteps in

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### Ambiguity in requirements

abstraction can result in oversimplified graphics that omit critical information and lack realistic operational scenarios and settings - or overcomplicated visuals that fail to serve their purpose.

Often, OV-1 graphics are required to be created in the early stages of a project when high-level operational requirements are still evolving. As a result:

- Requirements may be ambiguous or open to interpretation.
- Designers may not have a clear understanding of the project's full scope or the specifics of each system and sub-system interaction.
- Frequent requirement changes can lead to continuous rework of the graphic, increasing development time and resource costs.

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### Stakeholder alignment and approval

OV-1 graphics must meet the needs and expectations of multiple stakeholders, including project managers, business development analysts, engineers, and end-users. Each group brings their own unique perspective:

- Technical stakeholders may want a high level of detail to ensure technical accuracy.
- Non-technical stakeholders, however, may prioritize simplicity and conceptual clarity.
- Misalignment between stakeholder groups can lead to prolonged review cycles and multiple rounds of revision to address differing viewpoints.

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### Visual representation and design constraints

Creating a high-quality OV-1 graphic requires not only technical knowledge but also creative, artistic, and graphic design skills. Many challenges arise from this unique combination of requirements:

- Designers must understand complex systems and be able to represent these systems in operational scenarios and deployed settings accurately - while maintaining a professional, visually appealing layout.
- Poor design elements, such as low-resolution visuals, inconsistent iconography, or lack of color contrast, can undermine the effectiveness of the OV-1 graphic.
- Designers often struggle to find the right balance between aesthetic appeal and functional clarity, leading to additional iteration and refinement cycles.

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#### Tool and software limitations

Creating OV-1 graphics requires the use of specialized design and architecture software, but some tools can pose limitations:

- Some outdated and low quality design tools lack the specific imagery or templates that are needed to represent operational architectures clearly, requiring customizations that consume additional time.
- Software interoperability is often limited, which can create roadblocks when moving assets between platforms or collaborating across teams.
- Inadequate visualization tools in architecture-specific software make it challenging to produce high-quality, realistic, professional graphics - forcing some designers to turn to generic and “stick-man” graphic design tools that lack built-in OV-1 artistic and technical features.

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#### Maintaining accuracy with constantly evolving systems

Systems evolve throughout a project’s lifecycle, and OV-1 graphics must reflect the current operational view. As the system undergoes changes:

- Keeping OV-1 graphics updated to reflect new elements, modified workflows, or emerging technologies becomes increasingly challenging.
- Changes to the operational structure can lead to cascading updates across multiple diagrams, requiring significant time and coordination.

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#### Need for consistency across DoDAF views

OV-1 graphics are only one part of a larger architecture framework, and consistency across views is crucial. Issues arise when:

- The elements in OV-1 graphics must align with other DoDAF views and diagrams, such as systems views (SV) and services views (SvcV).
- Inconsistent visuals or terminology can lead to confusion and undermine the credibility of the entire architecture framework.

## Strategies for Overcoming OV-1 Development Challenges

Early and regular stakeholder engagement

Engage stakeholders early and gather continuous feedback to ensure that the OV-1 graphic meets their needs. This process can help in reducing the risk of misalignment by understanding each stakeholder's priorities as well as minimizing rework by identifying issues early.

Organizations need an integrated OV-1 development solution that can evolve as the system matures and changes.

Prioritize key messages and use a layered detail and design approach

Identify the most critical aspects of the operational context and structure the graphic around these elements. Use a layered design approach to simplify visuals:

- Start with the main elements and interactions, then gradually add more detail in subsequent versions or supporting documentation.
- This approach ensures clarity without sacrificing comprehensiveness.

Adopt standardized practices, imagery, and templates

Establishing standardized OV-1 backgrounds, foregrounds, colors nomenclature, and templates can reduce design time, improve consistency, and enhance understanding across stakeholders. Adopting consistent visual standards and practices:

- Ensures that OV-1 graphics align with other architectural views.
- Reduces the need for extensive revisions due to inconsistencies in style or terminology.

Invest in the right tools and training

Using purpose-built OV-1 design and development software, can streamline OV-1 graphic development. Training graphic designers and architects on best practices can further enhance:

- Quality and visual appeal of OV-1 graphics
- Efficiency in creating graphics that meet both technical and graphic design standards



Implement version control  
and document changes

To manage evolving requirements and design changes, establish version control to:

- Track modifications to OV-1 graphics and their impact on related documents.
  - Ensure alignment across architecture views by regularly updating documents as new changes arise.
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## Why VisualPros?

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Efficiently develop  
professional  
OV-1 graphics

To meet the growing demand for OV-1 graphic development, some organizations opt to build custom OV-1 tools internally or work with external marketing firms for production of specific OV-1 graphics. While feasible, these approaches divert valuable resources away from core innovation and system development, as teams often find themselves assembling OV-1 graphics at the last minute. This rushed process frequently leads to subpar visuals and missed opportunities for strategic alignment. Instead, organizations require an integrated OV-1 development solution that adapts seamlessly with their evolving business strategy, ensuring quality and consistency without sacrificing valuable time and resources. **VisualPros provides a comprehensive portfolio of professional, user-friendly OV-1 development tools, empowering SMEs, designers, engineers, graphic artists, solution architects, and program managers to create impactful and compelling OV-1 graphics with ease.**

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A wide selection of  
OV-1 development  
tools by subject matter  
and location

Whether you manage multiple product lines, serve diverse customer needs, operate across varied environments, or handle complex systems, VisualPros OV-1 development tools ensure your latest systems and features are showcased professionally and consistently in every context. VisualPros tools span the spectrum from desert, littoral, space, riverine, jungle, as well as notional terrain found in Syria, Lebanon, Ukraine, China and other areas of interest. VisualPros foreground elements consist of U.S. Military ground systems, missile systems, C4 assets and systems, as well as artillery, general purpose vehicles, ISR, personnel, and satellite systems.

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Create professional OV-1  
graphics efficiently and faster,  
without the need for advanced  
design or artistic skills

VisualPros tools enables users to quickly produce high-quality OV-1 graphics without requiring specialized graphic design expertise. By simplifying the design process, VisualPros allows subject matter experts, engineers, and program managers to create visually compelling, professional-grade OV-1 graphics that effectively communicate complex operational concepts. With intuitive tools, pre-built templates, a wide selection of stock imagery, and customizable elements, users can streamline development time

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	<p>and focus on presenting their solutions and systems clearly and impactfully. This ease of use ensures that even those without formal design skills can achieve visually polished results, enhancing communication and alignment across teams and stakeholders.</p>
<p>COTS solution with no special software required and little to no learning curve</p>	<p>VisualPros offers a powerful commercial-off-the-shelf (COTS) solution based on the Microsoft® PowerPoint® platform that requires no specialized software or complex installation, making it accessible and easy to implement for any organization. Designed with user-friendliness in mind, VisualPros has an intuitive interface that minimizes the learning curve, allowing users to start creating professional OV-1 graphics almost immediately. With pre-loaded templates, drag-and-drop functionality, and straightforward customization options, VisualPros eliminates the need for extensive training or onboarding. This simplicity allows teams to focus on producing high-quality visuals right away, enhancing productivity and ensuring a smooth, efficient workflow.</p>
<p>Template-based tools provide preconfigured, yet customizable OV-1 visuals for optimum and tailored design flexibility</p>	<p>VisualPros' template-based tools deliver OV-1 backgrounds and foreground images that are both professional and fully customizable, providing users with the flexibility to tailor each graphic to their unique needs. Templates are designed to capture key operational elements, enabling users to quickly convey complex information without starting from scratch. With easy-to-adjust layouts, backgrounds, foregrounds, and labeling options, VisualPros allows for a high degree of customization, ensuring each OV-1 graphic aligns with project requirements and branding standards. This remarkable combination of ready-made structure and creative freedom empowers users to efficiently produce visually cohesive and impactful graphics that resonate with diverse stakeholders.</p>
<p>OV-1 graphics development tools are located on your internal IT systems with no external cloud resources required</p>	<p>VisualPros provides OV-1 graphics development tools that are securely hosted within your organization's internal IT environment, eliminating the need for external cloud resources. By keeping everything on-premises, users can ensure maximum control over data security and compliance, allowing organizations to work confidently within their own protected infrastructure. This approach safeguards sensitive information and aligns with strict security protocols, making VisualPros ideal for industries that prioritize data protection, such as defense, national security, and intelligence. With local deployment, users can access powerful OV-1 development capabilities without compromising data integrity or relying on risk-laden external networks.</p>
<p>High-quality and realistic OV-1 background and foreground imagery at your fingertips</p>	<p>VisualPros offers high-quality, realistic imagery options for both background and foreground elements, enabling users to craft OV-1 graphics with stunning visual depth. With an extensive selection of customizable scenes—including mountainous terrains, expansive desert vistas, urban landscapes, and more—users can set the perfect operational context for their visuals. This flexibility allows users to precisely match the visual setting to real-world scenarios,</p>



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Capability to output final OV-1 graphic files in industry-standard graphic file formats, while maintaining editable versions for future use and updates

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enhancing the effectiveness, impact, and realism of each OV-1 graphic.

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With VisualPros OV-1 graphic development template tools, users can effortlessly export their completed OV-1 graphics in industry-standard JPG, PNG, and PDF formats, ensuring compatibility with presentations, reports, and any digital or print platforms. This flexibility allows for seamless sharing and high-quality output that meets professional standards. Additionally, VisualPros OV-1 tools can retain editable versions of each project, allowing users to revisit and update their OV-1 graphics as project requirements evolve. This dual capability means teams can easily keep graphics current without recreating visuals from scratch, saving time and preserving the visual consistency needed across project stages.

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Solution and project teams in disparate locations have the ability to collaborate real time on OV-1 designs through shared file capabilities

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Solution design and project teams, regardless of their geographic location, can now collaborate seamlessly on OV-1 designs in real time with VisualPros' shared file capabilities since VisualPros OV-1 development templates are compatible with the SharePoint® environment. This collaborative functionality not only streamlines the solutioning and OV-1 development process but also enhances productivity by enabling team members to review, edit, and update graphics together in a shared environment. With instantaneous access to file revisions and change tracking, teams can conduct reviews and implement feedback on the spot, eliminating delays typically associated with back-and-forth communication. This collaborative approach significantly shortens the time required for overall OV-1 graphic development, allowing for faster project completion and quicker alignment across teams, ultimately accelerating project success and stakeholder satisfaction.

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## Components of the VisualPros OV-1 Graphics Development Tool Portfolio

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### OV-1PRO™ OV-1 Template Sets

-Subject matter-specific and location-specific combinations of OV-1 backgrounds and foregrounds

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 backgrounds and foregrounds, 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**

- Location-specific selections of realistic, notional backgrounds
- Specially designed with ample space for foreground elements and text entries

OV-1PRO™ OV-1 Background Sets offer an array of location-specific, ultra-realistic backgrounds that serve as dynamic canvases for developing operational 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.

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**OV-1PRO™****OV-1 Foreground Sets**

- Designed to work with OV-1PRO Background Sets
- Perspective angles complement common low-angle OV-1 backgrounds
- Subject matter-specific selections include naval, artillery, missile systems, ISR, space, and air elements
- Foreign military system elements available

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.

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**ezOV-1™****OV-1 Template Sets**

- Preconfigured OV-1 graphics featuring foreground elements placed on a variety of backgrounds
- Subject matter-specific and area/terrain-specific selections
- Easily changed and modified to provide professional 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.

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## OV-1MAX™

### OV-1 Template Sets

- Weather, time of day and lighting variations for selected ezOV-1™ Template Sets
- Amazing & powerful OV-1 development tool that gives you optimum situational selections to make your OV-1 graphics more responsive and impactful

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.

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## Summary

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Developing effective OV-1 graphics is complex, requiring both technical understanding and specialized design expertise. From aligning diverse stakeholder perspectives to managing the limitations of traditional graphic design software, organizations face significant challenges in creating clear, consistent, visually appealing, and accurate OV-1 visuals. VisualPros addresses these issues directly with a portfolio of OV-1 development tools that streamline the entire process, delivering efficiency, cost savings, and time reduction without compromising quality. VisualPros' user-friendly tools and familiar interfaces simplify OV-1 graphic creation, empowering users to collaboratively achieve professional, high-quality results quickly. By enabling structured processes, improving communication, and providing purpose-built functionality, VisualPros equips organizations to overcome obstacles effectively. This ensures that each OV-1 graphic produced offers a compelling, precise view of operational architectures, enhancing understanding and alignment across teams.