

# ATAK PLUGIN DEVELOPMENT OVERVIEW

110 KAPSIA WAY  
CLARKSVILLE, TN 37040  
+1.931.266.0888

<https://vkintsys.com>

<https://sat.vkintsys.com>

CAGE CODE: 7B1D1

The logo for VK Int Systems features the letters 'VK' in a bold, sans-serif font, followed by a large, stylized white integral symbol (∫) that serves as a separator, and then the letters 'SYS' in the same bold, sans-serif font. The entire logo is centered within a blue rounded rectangular border.

**VK Integrated Systems**

# VK INTEGRATED SYSTEMS (VKIS)

## WHO WE ARE

### About Us

VK Integrated Systems (VKIS) specializes in three domains: Situational Awareness Systems, Weapon Systems, and Energetics.

VKIS develops and manufactures cutting-edge inertial sensor products, situational awareness software and related technology for weapon systems and precision navigation + timing applications.

### Mission

Providing exceptional solutions to our customers by supplying them with innovative tools to help protect and serve.

### Vision

To produce products that increase global security and save lives.

# BACKGROUND

VKIS and its employees have a history of developing hardware and software solutions for military, law enforcement, and commercial customers.

VKIS has accomplished mechanical, electrical and software engineers with a proven ability to invent, design, build, and integrate hardware and software solutions.

VKIS has past performance of designing, implementing, and delivering plugins for the Android Team Awareness Kit (ATAK-CIV).

VKIS is on the cutting edge of network, radio, and hardware integration.

VKIS has the intellectual property, experience, and past performance to create your TAK Plugin.

# VKIS SMARTAK® OVERVIEW

SmarTak® is a technology advanced system that when paired to relative devices, enhances situational awareness and safety of its users during real world operations and training.

SmarTak® seamlessly integrates electronics into modern firearms to create a real-time network of communication and coordination between the operations center, team, and individual users. This network provides up-to-date information and improves overall situational awareness, making it a valuable tool for military, law enforcement, and first responders.





# VKIS SMARTAK® API

The SmarTak® API is an elegant, highly modular system designed for flexibility and the ability to enable communication between VKIS SIOS Platform and third-party software systems.

The SmarTak® API defines several packets that will contain data from the VKIS SIOS Platform. Our ATAK plugin, SmarTak® inForce, provides several tools to interact with the SIOS Platform including a built-in pair and connect feature, configuration, calibration, and more.

The SmarTak® API characterizes communication packets including Bluetooth and an encrypted mesh network.





## Unique Plugin

- Shot location, count, and direction
- Displays team status / information
- Collects data

## Robust data packet broadcast

- Enhanced position location info (PLI+)
- Both user and weapon locations
- Weapon and ammo type

# VKIS SIOS-C11BV2

The SIOS-C11Bv2 is a high-tech, electronic buttstock designed for use with any Mil spec six-position buffer tubes and offers enhanced situational awareness by giving real-time information about the location and engagement direction of other team members.

- Provides awareness of team movement, shot direction, and shot count.
- Improves after-action reporting for mission or training exercises.
- Easily integrates into the TAK Network and pairs with our SmarTak® inForce Plug-in.



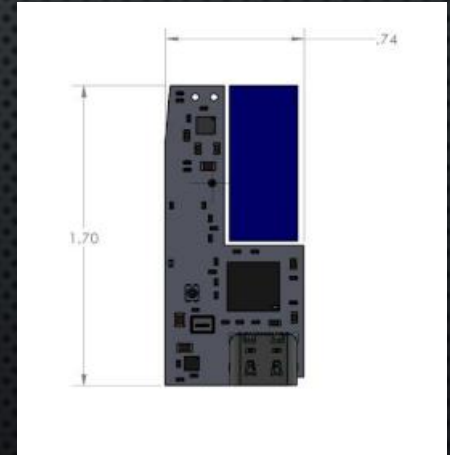
## SIOS-C11B v2

- Electronics
  - Dual Band (L1/L5) GPS, On Chip Ant.
  - Upgraded IMU.
  - High resolution Microphone.
  - Bluetooth Low Energy (BLE).

# VKIS VICE-100

The VICE-100 is a high-tech, electronic component designed for use with our VK320 Grip Module, or as a stand alone for integration with other hardware and electronic devices.

- Provides awareness of team movement, shot direction, and shot count.
- Improves after-action reporting for mission or training exercises.
- Easily integrates into the TAK Network and pairs with our SmarTak® inForce Plug-in.





# CUSTOM TAK SERVERS

TAK Server is an information management platform that provides data access and encryption across disparate networks. TAK Server secures, brokers, and stores data in standalone and federated configurations. TAK Server is required whenever TAK clients are not in a peer-to-peer network or there is a need to encrypt and store data.

## We Handle Server Hosting

- We take care of hosting your secured server so that you can concentrate on your mission without any worries.

## Rapid Deployments

- Quickly connect your entire team and outside organizations with no technical setup.



## What we offer

- Robust encryption standards
- Real-time user reporting
- Customizable TAK configurations
- Flexible User management
- Mapping After-Action Review System (MARS)
- Video Streaming Capabilities

# VKIS TAK STACK



Hyperlinks on images

TAK Stack is a mobile application developed by VKIS for Android and iOS devices, that allows users to have control of their TAK server management from the palm of their hand.

TAK Stack is the central location for all things TAK. Inside TAK Stack users can download the latest version of ATAK-CIV, MARS, latest Plugins, and Map Data from one application.

## Features

- Review all user data collected from your VKIS custom TAK Server.
- Latest versions of ATAK-CIV available for easy access.
- Hub for downloading the latest ATAK plugins approved for VKIS release and map packages.

# TAK-MIL / TAK-CIV



Tactical Assault Kit  
(TAK-MIL)  
Team Awareness Kit  
(TAK-CIV)  
is a geospatial collaboration  
platform developed by the  
United States Department  
of Defense (DoD) to support  
military and civil authority  
operations.

TAK provides a suite of tools  
for situational awareness,  
communication, and  
coordination among team  
members in the field.

TAK enables users to share  
real-time location data,  
exchange messages,  
overlay maps, view, and  
update shared information,  
and conduct various other  
collaborative tasks, all  
within a secure  
environment.

# CURRENT TAK PRODUCTS

## VKIS CORE FOCUS

### ATAK

The flagship TAK product in MIL, GOV, Civ, and Partner applications.

### TAK Server

A modular data-brokering platform for cloud, on-prem, and edge.

### TAKX

The marriage of RaptorX and ATAK for mounted mission planning use.

### iTAK

A lightweight iOS product for Blue Force Tracking (BFT) and connected SA.

### WinTAK

The Windows app for Fires, Datalinks, and Common Operating Picture (COP).

### VR-TAK

A powerful Unreal Engine-based Virtual Operations Center capability.

### TAK Tracker

A lightweight Android app for tracking personnel over TAK Server.

### WebTAK

An extensible browser-based COP web application for cloud-based Command and Control (C2).

# ATAK-CIV

The Android Team Awareness Kit (ATAK-CIV) offers matching capabilities to the ATAK-MIL baseline with minor changes from the military lexicon.

The primary difference between MIL & CIV is the baseline signing key that restricts military specific capability from being loaded through plugins.

Just like ATAK-MIL, ATAK-CIV is network-agnostic and works with many tactical communication systems. ATAK-CIV supports DoD and commercial formatted maps, imagery, and overlays.

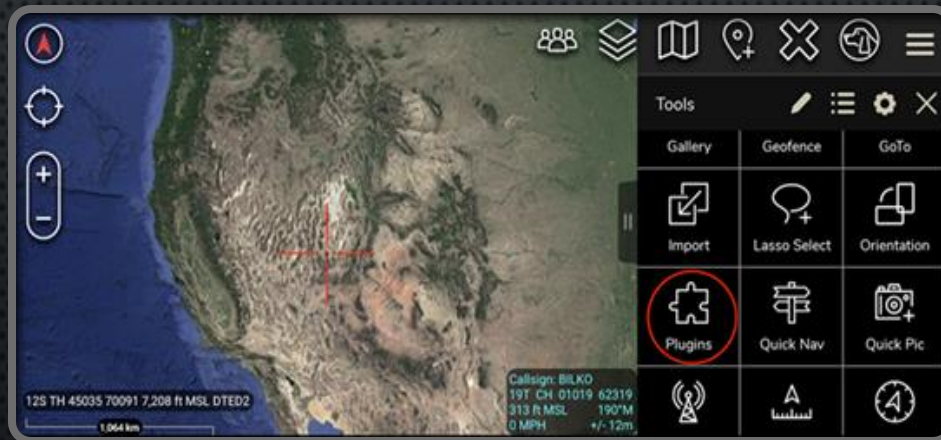


# ATAK-CIV PLUGINS

Developing plugins for ATAK extends its functionality by adding new features or integrating with external systems and devices.

Plugins enable users to interact with hardware seamlessly on the TAK platform, enhancing situational awareness and operational effectiveness.

Integrating hardware with TAK and developing plugins to facilitate this integration can greatly expand the capabilities and versatility of the platform, making it more adaptable to a wide range of operational needs and scenarios.



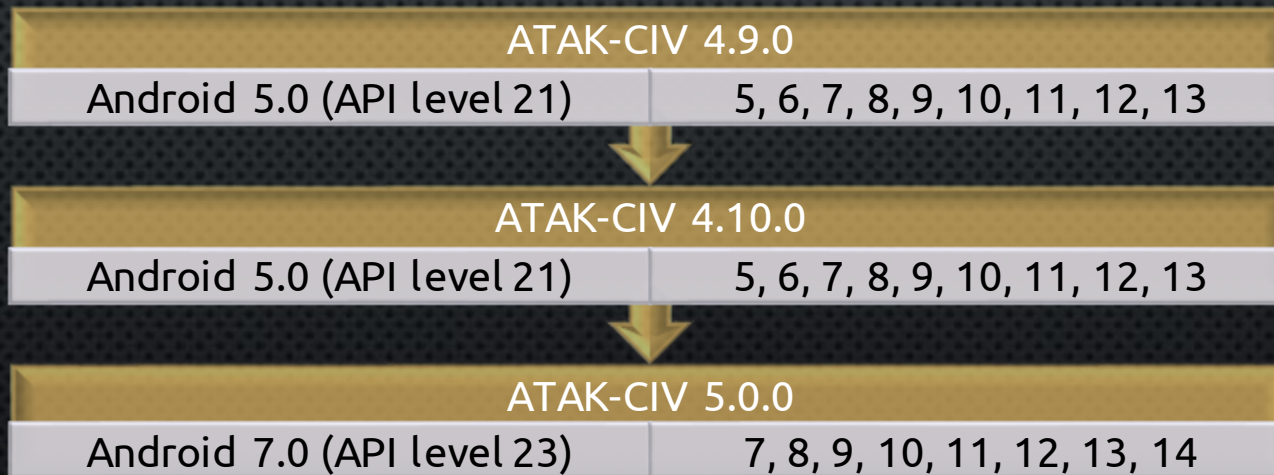
# CUSTOM ATAK-CIV PLUGINS

The VKIS Engineering Team offers tailored plugin development ensuring seamless integration with your operational requirements and needs.

Should you have access to the Mil/FVEY/Gov release SDK from TAK.gov the plugin(s) can be built against that SDK. (This option requires a government sponsor.)

Equipment / Software Required:

- ATAK-CIV requires a graphics processor that supports GLES 3.0.
- ATAK-CIV does not have any specific requirements for storage, memory or processor, however, performance of the application will depend on the configuration.



# DISCLAIMER

TAK-MIL is a restricted use product for United States Government military use only. NO distribution is authorized except through properly vetted Program Management Offices.

Plugins developed for TAK-CIV will operate on TAK-MIL. Plugins developed for TAK-MIL will not operate on TAK-CIV.

Testing of TAK is generally done across a range of SAMSUNG devices since they are primarily what has been fielded.

It is recommended: for optimal experience, at least a Samsung S9 equivalent hardware or newer is used and for a tablet style device Samsung S2 equivalent or newer.





# SOURCE CODE

Should you have access to the Mil/FVEY/Gov release SDK from TAK.gov the plugin(s) can be built against that SDK. (This option requires a government sponsor.) Source code for the developer version will be delivered to a specified POC in the form of a zipped Android Studio project OR it can be committed to a git repository. A compiled developer version of the plugin and the matching developer version of ATAK will be delivered for convenience.

If you do not have access to the above SDK the project will be built against the public release open-source TAK project on GitHub. This SDK is identical to the other SDK in all ways that matter for 3rd party commercial developers. Source code for the open-source version will be delivered to a specified POC in the form of a zipped Android Studio project OR it can be committed to a git repository.

The result of either option is that you have a version of ATAK and a plugin that you can demonstrate to your employees, users, clients, and customers. The project source code will be closed source and the property of your company to the extent that one can own ATAK Source code. The TAK Project Management Center retains certain rights because ATAK is a government owned framework.

# COMPATIBILITY

The latest version of ATAK accessible on TAK.gov at the time of development start will be used unless a specified version is requested.

VKIS does not certify, warrant, or make any guarantees that source code created for this project will be backward or forward compatible with past or future ATAK versions or past or future Android OS versions.

VKIS does not certify, warrant, or make any guarantees that Android applications, ATAK, or ATAK Plugins will function as expected on devices other than phones and tablets produced by SAMSUNG.

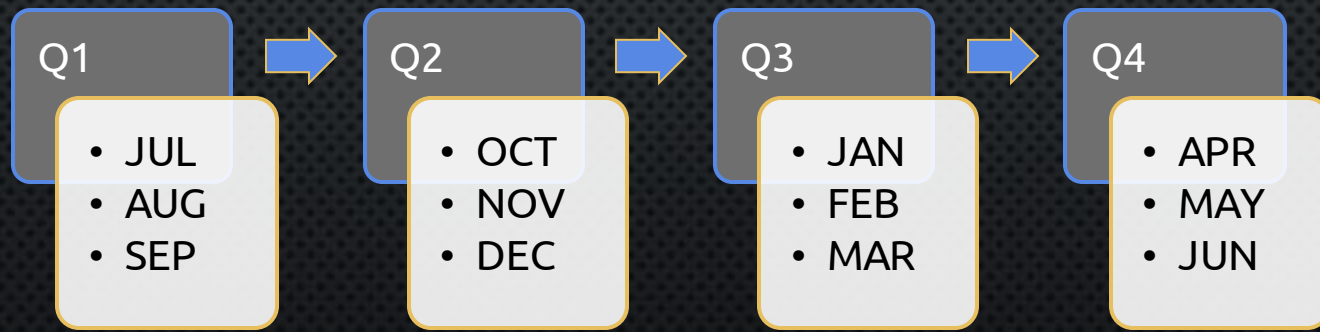
Code Maintenance and plugin compatibility with ATAK versions is a separate VKIS service. We offer a Service Level Agreement (SLA) which provides three (3) years of ten (10) hours annually for maintaining and updating software.

# SCHEDULE

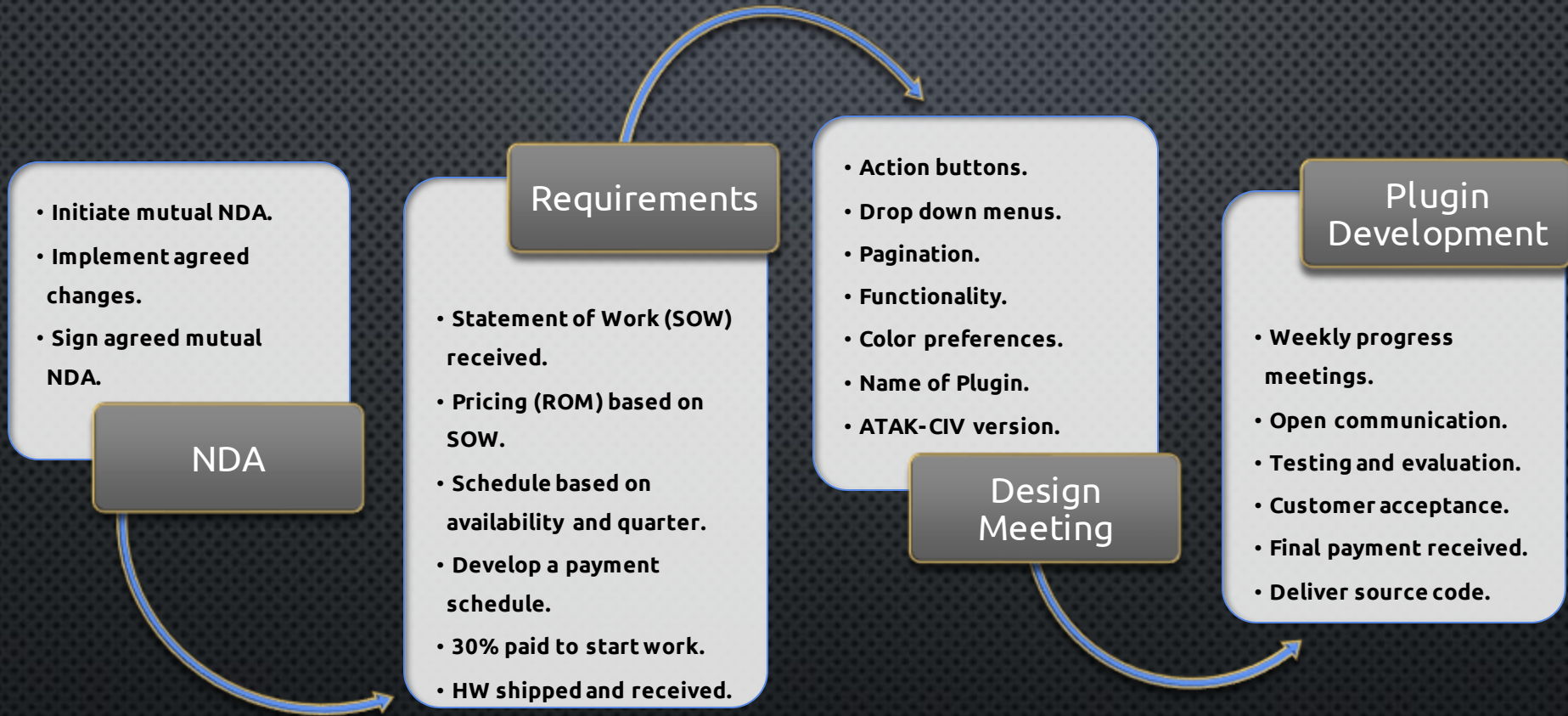
Projects cannot begin until the start payment (30%), fully executed NDA, requirements / Statement of Work (SOW), and hardware have been received.

Projects must start at the beginning of a quarter to guarantee prompt delivery. VKIS works on a quarterly basis and books quarters in advance.

VKIS Engineers have limited “Development Slots”. If your project starts late, we cannot guarantee we can deliver on time because we will NOT start other customers’ projects late if they have all the required materials ready to go for their scheduled development slot.



# DEVELOPMENT PROCESS



# CONTACT INFORMATION

**VASILIOS KAPOGIANIS**

**CEO**

[vkk@vkintsys.com](mailto:vkk@vkintsys.com)

**JEREMY KROHNFELDT**

**PROGRAM MANAGER**

[jeremy.k@vkintsys.com](mailto:jeremy.k@vkintsys.com)

**110 KAPSIA WAY**

**CLARKSVILLE, TN 37040**

**+1.931.266.0888**

<https://vkintsys.com>

<https://sat.vkintsys.com>

**CAGE CODE: 7B1D1**