

Roshan selects Creativity Software for advanced vehicle & asset tracking



Roshan implements location-based service solution in Afghanistan to increase safety and security

Challenge

Roshan, the leading GSM operator in Afghanistan, has witnessed extraordinary growth in the short time since it was awarded the country's second national GSM license in 2003. Roshan, which means "light" in the local Dari and Pashto languages, is owned by a consortium of investors, including the Aga Khan Fund for Economic Development, Monaco Telecom International (part of Cable and Wireless) and TeliaSonera.

Roshan continues to innovate and develop a portfolio of services that allows it to address multiple market segments. In particular, Roshan has delivered mobile communications services to many remote and rural areas, and recognised the potential for leveraging this reach with the evolution of special services targeted at some of its larger clients, such as Non-Governmental Organisations (NGOs) and logistics companies active in supporting a variety of initiatives.

For such services to be attractive and successful, it was for Roshan vital to demonstrate clear financial benefits to existing and potential customers. In addition, the new services had to blend capabilities that added genuine value to existing communications models and extend them in novel directions. Afghanistan is a large country and provides some spectacular, yet challenging geography. One of the biggest problems in such an environment is the safe and timely distribution of goods to all required locations. Developing, but still limited, internal infrastructure means that existing distribution costs are high. So Roshan needed to find a way to provide a service that reduces these overheads for its customers while leveraging its communications network.

Central to this challenge was the ability to track assets in real-time. For example, security issues meant that conventional, network-based solutions were not appropriate. While network-based solutions, such as those derived from the combination of a Gateway Mobile Location Centre (GMLC) and Serving Mobile Location Centre (SMLC), provide extremely granular positioning in dense, urban areas, the large amount of remote terrain in Afghanistan limits their accuracy. Therefore, Roshan needed to provide a solution that could both guarantee accuracy, and integrate seamlessly into their communication infrastructure, irrespective of distance from areas of higher coverage and dense population.

A further challenge was the lack of appropriate mapping data available for determining the exact position of assets.

Key benefits:

- » Implementation of an interactive vehicle tracking solution - with remote management, control and monitoring of services for the assets in question, in addition to real-time location updates and reporting.
- » Solution that guarantees accuracy and integrates seamlessly into any communications structure.
- » Optimal mapping interface was created for Afghanistan.
- » Points of Interest added to enhance the user experience and ensure best context for the positioning service.
- » Roshan uses TrackCare to protect their own employees in Afghanistan.



"TrackCare was launched to satisfy demand in Afghanistan for fleet management services. Whilst there are particular security challenges in Afghanistan, TrackCare can help our customers monitor their vehicles' location and safety, allowing for efficient fleet management, saving time and reducing fuel costs.

As Afghanistan's largest mobile operator, we can support a nationwide deployment and provide cost effective packages that provide coverage and service support around the clock. We are pleased to add TrackCare with the support of Creativity Software to our portfolio of innovative product offerings."

Altaf Ladak, Chief Operating Officer, Roshan.

Roshan needed the best source of digital map and satellite information available in order to provide organisations with reliable data to track and protect their assets.

In addition, although Roshan's network supported 2.5G data services based on General Packet Radio Service (GPRS), these data rates could not be guaranteed across different regions. Therefore, any solution requiring communications with centralised control and distribution points had to allow for a contingency 'best effort' approach, where necessary, to ensure timely delivery of updates and information from assets being tracked in the field.

Solution

The solution for Roshan was to launch the TrackCare GPS Vehicle Tracking Solution. TrackCare, enabled by GPS positioning technology, allows customers to track the movement of assets throughout Afghanistan. In order to add value to customers and hence increase demand, Roshan decided to make the service interactive. TrackCare also provides remote management, control and monitoring services for the assets in question, in addition to real-time location updates and reporting.

After an extensive vendor-selection process, Roshan chose location-based services specialist, Creativity Software, as its partner. Creativity Software's TransportWise application sits at the core of the TrackCare solution and, while its advanced capabilities are compelling, that was just one of the reasons why Roshan chose the UK-based company. For example, Creativity Software's expertise in the broad field of location-based services was another major factor, allowing it to operate as a specialist 'one-stop shop', and to provide the complex integration of the different elements of the service.

A further key differentiator was Creativity Software's partnership model, providing vital training and support services for service launch. Its full lifecycle approach ensured that Creativity Software was an integral part of Roshan's project management and fulfilment team.

The solution itself consists of a tracking device, which is mounted inside the vehicles or assets being tracked. The device integrates GPS functionality to provide advanced and accurate tracking of assets throughout Afghanistan. As well as providing location information, the device can be used to control a number of features of the vehicles. For example, the vehicle can be locked remotely, or the status of the engine, doors and locks can be provided to the control centre. By knowing the engine's status and the speed of the vehicle, operators can ensure that it follows the prescribed route and maintains an efficient speed – excessive speed or deviation from a planned route can lead to increased fuel consumption, so awareness of vehicle movement and location can generate cost savings and efficiencies. With many organisations having large fleets of vehicles, the cumulative impact of such savings can be significant.

Creativity Software's TransportWise application provides the underlying intelligence behind the solution. Using the GPS positioning information, the location, speed and direction of vehicles and assets can be viewed and managed by users. The solution can provide a view of all resources, or a focus on individual items.

In addition, by relating positioning information to the landscape of Afghanistan via mapping resources, advanced geo-fencing rules can be constructed.



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The launch of TrackCare is particularly instructive for other operators, particularly those in regions where such solutions are relatively undeveloped. Few mobile network operators have capitalised on the revenue generation opportunity behind the service.

MNOs are in a unique position to service the entire enterprise market with advanced vehicle tracking solutions that utilise different location technologies.

For example, when an asset moves outside a defined area, the in-vehicle devices generate alarms that are collected and processed by the TransportWise applications. These alarms are typically generated via Short Message Service (SMS), although GPRS data can be used when it is available. This means that control personnel know instantly if vehicle behaviour deviates from the normal rules of operation. The real-time alerting and remote control capabilities of the in-vehicle device provide further reassurance and confidence that appropriate action can be taken in response to the unexpected event.

TransportWise also offers open interfaces to external mapping software and solutions, which allowed Roshan and Creativity Software to carefully select the best resources for deployment in Afghanistan. With no single solution available, the open interface allowed several mapping resources to be used in combination to produce an optimum result. Points of Interest were added to enhance the user experience and to ensure the best context for the positioning service.

Finally, the rich set of features enabled by the solution also required users to act responsibly – vehicles cannot simply be disabled remotely; protocols were required for responses to unexpected events. Creativity Software played an important role in training Roshan in the safe and consistent use of the features and capabilities, and helping it to develop best practice procedures and metrics. This joint learning experience proved invaluable in preparing the solution for service launch and in ensuring its success.

Results

Thanks to Creativity Software's innovation and committed partnership, Roshan was able to launch its new TrackCare service in a timely and efficient manner. Creativity Software's TransportWise application could be white-labelled and branded by Roshan, allowing its brand to be developed and enhanced through the launch of the innovative service.

TrackCare offers existing and potential customers immediate financial benefits, primarily through more efficient resource management. For example, fuel costs are a significant overhead for all companies involved in logistics. With TrackCare, different target segments can achieve real and dramatic cost savings through efficient speed management. For NGOs, this can result in cost savings of up to \$145,000 per year in fuel alone. TrackCare also has the incidental benefit of reducing the costs of accidents by more than 60% and the occurrence of such events by 50%.

Studies also suggest that the solution can increase the amount of service calls completed each day by as much as 23%, ensuring that tasks are completed quicker and with greater efficiency. With clear historical and real-time information available, agencies and fleet owners obtain better information, leading to enhanced planning and co-ordination of resources, and helping them evolve more effective strategies. Over time, this can also generate significant efficiencies and cost savings.

Furthermore, the in-vehicle device can be installed in a discrete or hidden location, ensuring that it is invisible to outsiders.

In the event that a vehicle is misappropriated, controllers can quickly spot any deviation from the expected route and take steps to stop the vehicle remotely, through cutting off the fuel supply or disabling the ignition, pending recovery through the appropriate agencies.





About Creativity Software

Creativity Software is a UK company that specialises in Location Based Services. The company provides Mobile Network Operators globally (GSM & CDMA, 2G & 3G) with Location Positioning Infrastructure, Middleware and Applications, enabling them to:

- comply with lawful intercept government legislation for security or emergency services purposes
- deploy zone billing (preferential mobile phone rates for calls within the user home zone for example), and
- deploy new revenue-generation services for both consumers (e.g. Family & Friend Finder, Travel, Social Networking) and enterprises (Vehicle Tracking, Field Staff Management, Location Based Advertising)

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- (2) deploy zone billing, and
- (3) deploy new revenue-generation services for both consumers and enterprises (Vehicle Tracking, Field Staff Management, Location Based Advertising).

The insurance factor offered by this technology provides additional reassurance to potential customers.

Roshan was able to present a well-supported and validated business case to its customers, channelled through a clear proposition that encompassed a number of key benefits:

- » Reduced costs by strategically managing routes and driver efficiency;
- » Monitoring location of vehicles 24 hours a day, seven days a week;
- » Increased asset protection;
- » Increased employee security - with geo-fences that alert you when a vehicle leaves a safe zone;
- » Customised reports to track organisation's fleet management;
- » Faster response in emergency/security situations with real-time web interface;
- » Recovery of lost and stolen assets.

In partnership with Creativity Software, Roshan can demonstrate the benefits of the solution to its customers and enhance its reputation and brand through the launch of a valuable service which it was uniquely equipped to offer.

Creativity Software's unrivalled expertise in location-based services and its understanding of the entire value chain enabled it to provide a full service to Roshan.

The TrackCare project called for clear understanding, not just of technical issues, device integration and application development, but also of service marketing to end customers and the development of a winning proposition. Creativity Software's "lifecycle" approach differentiated it from other potential vendors and allowed it to become Roshan's trusted partner for the project.

The launch of TrackCare is particularly instructive for other operators, particularly those in regions where such solutions are relatively undeveloped. Although vehicle tracking services are relatively well developed in many countries, few mobile network operators (MNOs) have capitalised on the revenue generation opportunity behind the service.

In fact, vehicle tracking services are, in the main, offered by third party service providers.

Market research, however, suggests that such third party providers can only reach around 15% of the total market available, as customer acquisition costs tend to inhibit the potential to address the whole of the market. MNOs are in a unique position to service the entire enterprise market with advanced vehicle tracking solutions that utilise different location technologies (for example, GPS, Enhanced Cell-ID, and SIMapplets) in a cost effective manner. With Roshan's TrackCare providing a model, there is significant opportunity for other operators to digest the lessons of this innovative, all-encompassing service and to consider launching their own versions.

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