Humanav operational benefits

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White paper 2

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A. Introduction - Vehicle Tracking

"The aid world is in an increasingly complex and dynamic state of evolution. There are calls from all quarters for rationalisation, increased efficiency and more accountability."

The problems facing the delivery of development and humanitarian aid are a reflection of the multiplicity of complex challenges faced. The uncertainty and unpredictability of events, the difficulty of access from a geographical, political and security perspectives are becoming greater. The increasing number of actors plus the limited professional and experienced capacity of responding agencies to meet the expanding demand compound the challenge. Furthermore, there are few comprehensive or standardised methods to ensure the effectiveness of development and humanitarian aid delivery.

The global humanitarian caseload in both development and emergency contexts is growing while competition for limited funding is increasing. In the past the Red Cross or 'Blue Helmet' were symbols of neutrality now, in some insecure environments, they have become targets for aggression. The demand for increased accountability of aid and development organisations to donors, beneficiaries of humanitarian assistance and to staff working in the field delivering that assistance provides yet another operational constraint.

One of the greatest challenges facing the humanitarian community is the need to be effective and efficient in an increasing complex and challenging operating environment.

For the daily activities required to deliver their programmes aid and development organisations operate a combined global fleet of more than 70,000 units. These vehicles are often deployed in difficult terrain and inaccessible locations, either following major natural disasters or in complex crises and armed conflicts. These challenging operational environments require more than traditional means of communication and monitoring.

The cost of operating this huge global fleet is, for many agencies, the second highest programme cost after personnel. Vehicle emissions also account for a very significant proportion of the 'carbon footprint' generated by the same organisations.

Within the aid & development community increasing emphasis is being placed on the safety and security of personnel on the ground and on vehicle fleet operations and management.

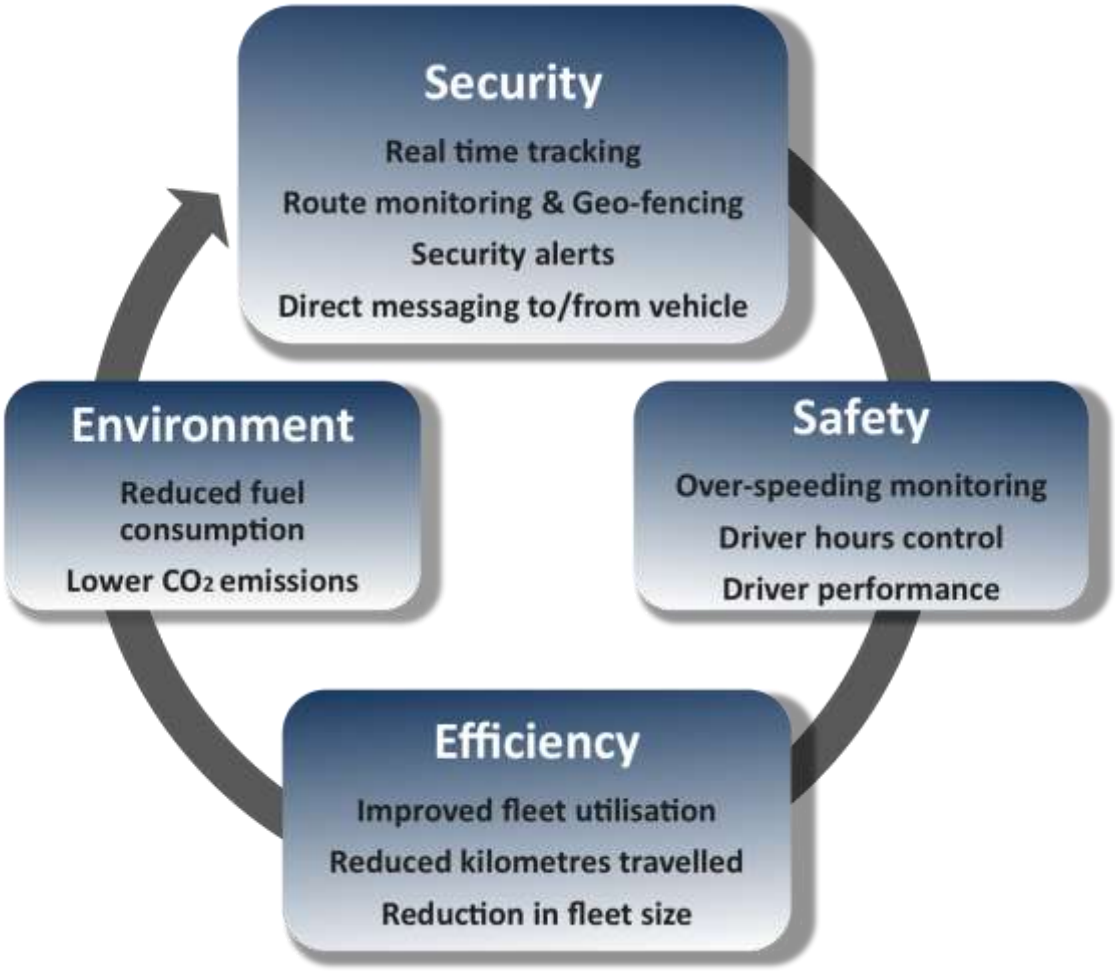
There is an increasing awareness of the value and utility of satellite-based technologies in the effort to address these challenges. However, the aid & development community generally do not have the in-house knowledge and experience to implement and fully benefit from these available technologies. There is a strong interest in developing a neutral, innovative and reliable vehicle navigation, tracking and data capture service specifically aimed at the aid & development sector.

The Humanav Project was established to directly to provide such a service.

B. Good Practice

"Since installing vehicle tracking and data capture systems Sakhalin Energy has experienced a measurable and sustainable improvement to drivers' performance and behaviour in every measured parameter of the system." [1]

The Humanav project aims to improve the safety, security and effectiveness of humanitarian transport missions by providing tracking, navigation and data capture for vehicle fleets of operational agencies by combining various space and terrestrial technologies to address the four principle needs of the participating organisations:



[1] Evgenia Rodina, Road Safety Team Leader, Sakhalin Energy

The benefits and utility of in-vehicle monitoring systems (IVMS) have been known and adopted for many years in private industry. For the aid and development community the increasing operational pressures outlined above combined with the increasing availability and accessibility of vehicle tracking solutions combined with a reduction in costs of hardware and data transmission has resulted in a number of agencies piloting or adopting a number of variations of the available technologies. All organisations do not have the same operational priorities and may therefore identify different primary purposes for adopting tracking equipment. However, whatever the main focus of an agency's needs a range of operational benefits may be realised.

For example, an organisation interested in reducing the amount of unauthorised use of mileage of its vehicles may adopt IVMS to maintain a closer supervision of vehicle use. Reduction in kilometres driven will have a consequential reduction in cost (fuel, maintenance), lower CO_2 emissions and lower risk of road crashes.

1. Security – for staff, vehicles and cargo

The equipping of vehicles (or even individual staff members or cargo) with geo-localising equipment allows for 24 hour real time tracking and transmission of critical information.

Routes can be monitored and geo-fencing created, with alerts or notification if a tracked asset diverts from the authorised route or zone.

Vehicle can be fitted with alert buttons which trigger a pre-specified message to identified users and can in some cases be used to initiate a security response.

In-cab terminals can be used for short messaging or voice communication between the driver and base.

2. Safety – for staff and other road users

"In the history of the organisation more UN Peacekeepers have been killed in road crashes than in combat."[2]

The greatest single occupational health and safety risk faced by the field staff. A significant proportion of deaths and injuries to humanitarian field staff occur in vehicle related incidents and crashes.

Accident damage to vehicle is costly and negatively affects programme delivery.

The reputation of an organisation is negatively impacted when one of its vehicles causes death, injury or material damage within the host community

The monitoring and control of over-speeding, monitoring of drivers' behaviour and driving hours and driver performance monitoring through on board data capture results in significantly fewer crashes.

2 Phil Scarr Transport Officer UNLB

3. Efficiency – more effective fleet management

"When we calculated the savings realised through recovered vehicles, lower fuel consumption, reduced maintenance costs and improved vehicle utilisation the figure came to more than $1.5 million dollars in one year."[3]

A large number of vehicles are under-utilised to leading to oversize fleets; conversely, some vehicles are over-used due to poor journey scheduling and lack of fleet rotation.

Vehicle utilisation rates can be monitored and analysis provided to assist effective fleet management. Unauthorised usage can also be monitored and controlled.

4. Environment – improved performance

"The project resulted in an 11.7% reduction in emissions, which is the equivalent of around 140 tonnes of CO2. Because we have reliable data from before and during the trial, we can be confident that any improvements are due to the installation of the boxes, and their impact on driver behaviour."[4]

A fleet of many thousand heavy-duty 4x4 vehicles produces significant amount of carbon and other noxious emissions.

Improved effectiveness fleet and improved journey management will lead to smaller fleets and fewer kilometres travelled with a commensurate reduction in fuel consumption and CO^2 emissions.

3 Martin Bettelley, former Head of Fleet, WFP Sudan oversaw a project where satellite tracking equipment was fitted to the truck fleet.
4 Tim Moyle, Regional Logistics Coordinator, East Africa, Oxfam GB on a tracking based green fleet project

C. Case Studies

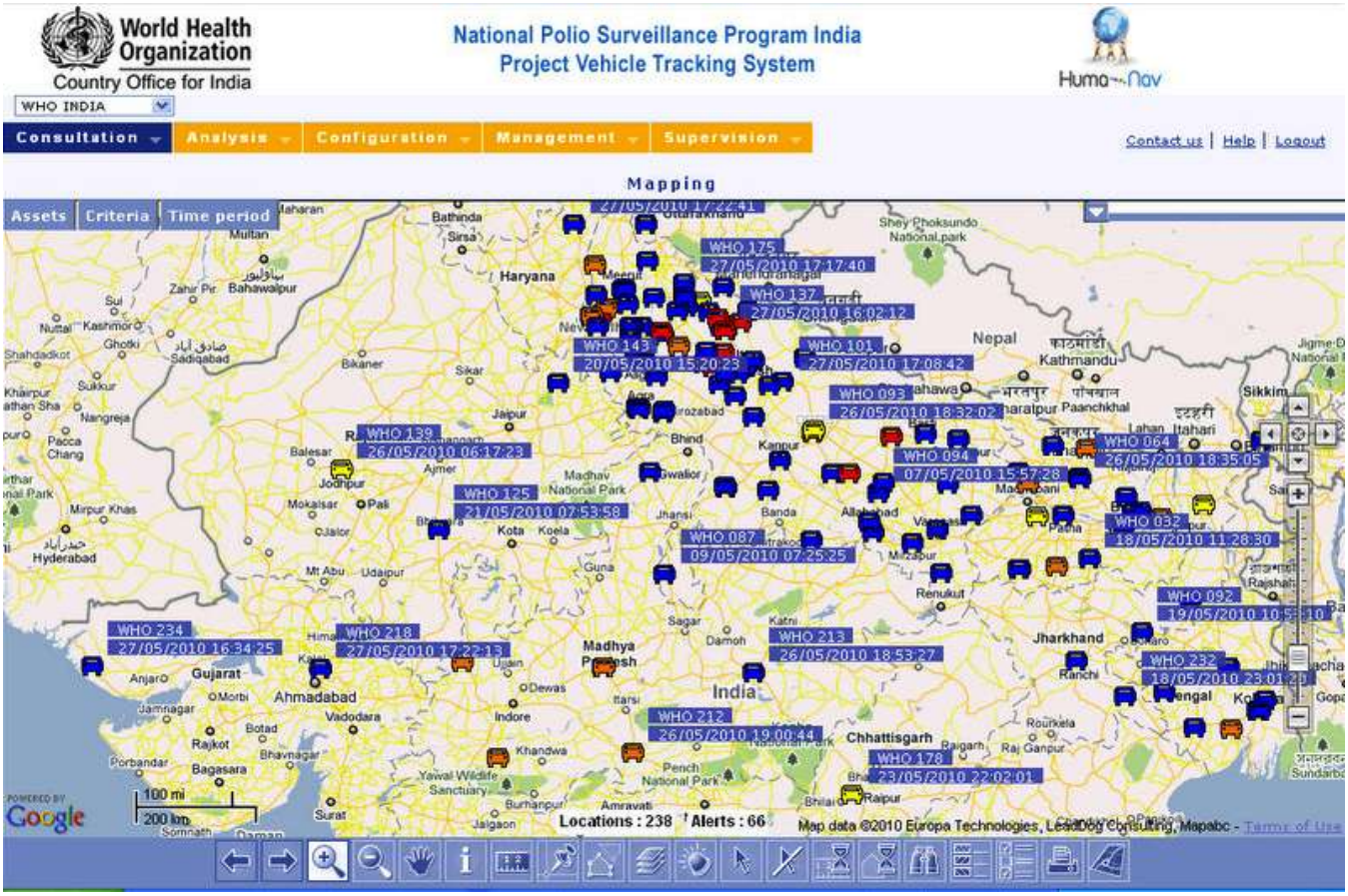
The experience of Humanav partner agencies has demonstrated immediate and measureable benefits to the users.

1. WHO India

"Following the installation of vehicle monitoring equipment and the management follow we have seen a significant improvement in driver behaviour."[5]

The WHO Polio Eradication Project in India operates more than 230 vehicles equipped with GSM based vehicle tracking equipment throughout the subcontinent.

Within the first three months of operation the tracking equipment has facilitated the successful recovery of 2 stolen vehicles, the investigation into 2 serious accidents involving project vehicles and a reduction in night driving and over-speeding.



5 MK Rajan, WHO Polio Project Fleet Manager

2. ICRC Somalia

In addition to monitoring light vehicle operations in Nepal and Zimbabwe and trucking operations in Kenya and West Africa the ICRC is piloting the use of autonomous tracking units that can be attached to sub-contractors vehicles at the beginning of journeys and detached on return. This allows for the remote monitoring that the contracted routes have been followed and the delivery points serviced.

3. UNHCR South Sudan

In areas where road conditions are poor and alternative routes are often required due to insecurity or climatic conditions the use of tracking equipment allows for route monitoring

4. Triangle South Sudan

The French based small NGO Triangle has all of its South Sudan vehicles based vehicles equipped with satellite tracking equipment that has lead to a reduction in journey times – particularly where vehicles divert to non-authorised routes and the recovery of one stolen vehicle.