Cost-efficient location tracking as a Ready Business strategy
Introduction

With competitive pressures intensifying and the pace of innovation accelerating, recognising key trends, understanding their implications and, where appropriate, responding decisively is essential to remain successful. Vodafone has created five insight papers which discuss many significant business and technology trends shaping Enterprises today and the future. We discuss their implications and make recommendations as to the steps businesses need to take.

- The new customer relationship in the digital age
- The rise of the borderless enterprise
- Understanding the impact of the connected revolution
- The changing role of the IT department in a cloud-based world
- The importance of mobility for tomorrow’s enterprise

This paper discusses our thinking relating to understanding the impact of the connected revolution for making businesses ready for the next mobile revolution – location-based services. If you are interested in how businesses can use location-based services to transform businesses and improve productivity, this paper is for you.
Executive Summary

Rise in fixed and mobile assets indicates growth of an organisation. Organisation’s need a low-cost solution to ensure both its physical assets and field force on the road are on the right track, and well-coordinated. Asset underutilisation poses a threat of loss for companies in terms of downtime, security, cost and safety of personnel. Location-based tracking using GSM solutions is not only simple and cost effective, but also meets the needs effectively.

Business, be they small, medium or large, acknowledge that employees are an asset without which it cannot deliver on its promise. Therefore, businesses with teams in the field, selling and interfacing with clients, or vehicles moving to and fro, delivering men and material to different locations, need to be well-coordinated to improve efficiency and productivity. Businesses therefore are aware of the need to track the movement of their assets to coordinate their activities better and minimise wasteful detours and trips.

While tracking is the only solution, it also comes with caveats. Employees may be tracked without their knowledge, and it is also an unethical practice. Consent-based tracking is the only solution where the employee agrees to be tracked for the sake of his organisation and indirectly, himself.

Though GPS-based tracking solutions exist and can be extremely accurate, they come with a cost attached that cannot be justified.

Location tracking is a simple and elegant solution that addresses the need for employee privacy protection and at the same time provides employers with an assurance that their goals are being achieved in the most efficient manner.

Location Tracking – A Customer Perspective

Simple activation to track
Employee consent to protect privacy
Improved operational costs
Enhanced productivity
Location Tracking – A Market Perspective

A Markets and Markets study elucidates what is meant by location based services thus: Location-based service (LBS) is a solution that stands for applications which integrate geographic locations information with business processes, thus helping in analysis of location information. The location-based information is required in distinct business data sets for relating, comparing, and analyzing relationships in the data. The service also provides an economical alternative to agencies with existing internal GIS resources. As a result of these multidimensional benefits of location information, operators are considering it as an asset, leading to numerous investments being made to extract, use and market it.

The study forecasts the LBS market to grow from $8.12 billion in 2014 to $39.87 billion in 2019, registering a compound annual growth rate (CAGR) of 25.5 per cent from 2015 to 2019.

A Research and Market report on Location-Based Services shows location based services are popular across regions due to the increasing demand for real time services, widespread availability of highly sophisticated portable device and the development of new location-based applications. In the LBS market, navigation still remains the largest segment, followed by friend finder applications and traffic management. The market for location-based services is expected to grow to US$12.9 billion in 2014.

26% CAGR of location-based tracking market from 2015-2019

- Current India market is about USD 60mn to 80mn
- India market to reach to USD 130mn to 150 million by 2015
Market Information

A report by Juniper Research indicates that the rapid evolution of mobile phones, be it hardware or software, and higher-capacity network infrastructure along with developments in positioning technologies can drive revenues from mobile location-based services to more than $12.7 billion by 2014.

According to co-author Dr Windsor Holden, “Location-based applications are extremely interesting for brands and retailers in that they allow those companies to direct consumers to outlets in their vicinity while simultaneously providing information about the products on offer. When these are allied to measures such as mobile coupons and vouchers, you have the combination of information and financial incentive which can be compelling for consumers.”

Here we see the possibility of mobile based location services to be used not just in tracking employees and other assets, but improving sales by tracking customer location and encouraging localised sales promotion.

The Need of the Hour

Organisations with large feet-on-street workforce need to track and optimize movement of their sales team and reduce associated operational costs.

Businesses that transport people and consignments need to know that the vehicles are adhering to the route planned. Geofencing, as this is called, is one of key technologies used in Location Based Marketing. It refers to a virtual boundary created around a specified physical location or point on a map. It is used to test whether the consignment is being taken along a preplanned route and trigger some sort of predefined action if it transgresses the limits. Geofence can be defined by a series of latitude/longitude coordinates or radius of a particular distance around a specific point.

LBS clocked more than $12.7 billion in 2014
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**Geofences are of three types:**
- Static: User’s position relative to a fixed point or fixed area
- Dynamic: User’s position relative to a changing data stream
- Peer-to-Peer: User’s position relative to other users

Organisations use geofences to alert management when employees leave or enter pre-determined area.

**Predictive tool to reduce production loss – Location based services**

- Track employees instead of cabs (not all employees may use cabs)
- Get alerts on who is likely to turn up when
- Plan for contingency 1 hour ahead of shift start

**Limitations of GPS-Based Solutions**

GPS-based solutions have been the mainstay of location-based tracking. But they have several limitations:
- They need additional investments to fit tracking device
- They are device dependent solutions requiring intervention of individual.
- They require high investment in hardware and software
- It is difficult to track high value individual consignments
- They do not include individual’s consent, ignore privacy and face issues such as tampering of high cost GPS devices.
The VLT solution is ideal for organisations – large or small – that need to monitor movement of their people and vehicles to improve operational efficiency.
People are considered an asset for any organisation. Location based solution from Vodafone helps organisations manage and optimise their asset utilisation.

**How it works**

The solution is ideal for organisations – large or small – with people and vehicles on the road and the need to monitor their movement to improve operational efficiency.

For instance, a cable operator with a team of 10 can use this solution to track the movement of his team after getting their consent, which is mandatory. The operator’s team needs to be on the Vodafone network – whether provided by the operator or their personal phone. The operator can monitor the location of the team on a web portal and track the path the sales people take. If a phone is switched off, then an alert about a possible emergency is also sent to the operator after 45 minutes, if the phone does not come on.

This helps calculate the travel expenses accurately and improves productivity through better coordination of the team.

A similar example would be in the FMCG segment where the team needs to assess stock in the distribution channel and visit stores periodically. Location based solution will help organisations ensure that all stores are checked as mandated and alert in case of any anomalies.

Companies that operate vehicles can also make sure that the vehicle follows the mapped route through a feature called Geo-fencing. The specific or the indicative route can be mapped and any deviation will be automatically reported to the manager.

Even internally this solution is used by ready business to rectify problems with the fibre optic cables. Sometimes a fibre optic cable gets cut due to digging work undertaken by the municipal corporation in a region, disrupting the services. Locating the specific part can be a challenge.

**Features**

- Remote Asset Management: People are considered an asset for any organisation. Location based solution from Vodafone helps organisations manage and optimise their asset utilisation.

- Protects privacy: The solution is provided only once the consent has been obtained from the team for tracking.

- Safety: If the phone is switched off for more than 45 minutes, or if a vehicle being tracked is off the route, the manning office gets an alert. The deviation could be due to an emergency and this feature helps take timely action.

- Simplicity: The solution leverages the existing infrastructure and does not need any additional software or effort to make it functional. It is accurate up to 200 m, which is enough for tracking purposes for many organisations.

- Cost: This is based on a pay per use model and charged very nominally. Thus, on weekends or on days the tracking is not required, the feature can be switched off.

- Bundling offer: The feature comes bundled with several other Vodafone services, thus improving an organisation’s connectivity with its employees and customers.
Businesses can up their state of readiness in the following way:

Each enterprise is provided with a secure login and user name. Once logged in, the enterprise has access to a minefield of data about its business. The user is directed to the Dashboard where multiple charts are displayed for a quick status of assets. The application also allows users to search for assets based on Asset Mapping, Current Location and also Asset Number. Here, alerts can be set for various assets basis likely and predictable events. These alerts categorise the assets into safe and critical, depending on whether the asset is traceable or not. Periodicity of tracking an asset can also be set. For instance, if a customer defines periodicity as 30 minutes, then location of asset will be tracked every 30 minutes.

Users also get access to the tracking centre, where the location tracker actually comes alive with a map that plots the assets' location and displays the same on a route map. The application also allows users to search for assets based on Asset Mapping, Current Location and also Asset Number. Here, alerts can be set for various assets basis likely and predictable events. These alerts categorise the assets into safe and critical, depending on whether the asset is traceable or not. Periodicity of tracking an asset can also be set. For instance, if a customer defines periodicity as 30 minutes, then location of asset will be tracked every 30 minutes.

The companies can reduce their OPEX mainly by tracking the vehicle or consignment, thereby reducing the risk of fraud.

Vodafone Location Tracker – Tracking made easy!

1. Identify Assets
2. Onboard VLT
3. Track!

Key Points
- Urban: 200m to 500m, Rural: 1km to 3km
- Tracking frequency – 15 minutes

Pay per asset | Pay as you use | No Capex | Low Cost of Ownership | Inclusive: Privacy and Consent handled
Vodafone Group Enterprise
Cost-efficient GSM Tracking As A Ready Business Strategy

VLT solution has been implemented in 900+ companies across Industries such as FMCG, Pharma, Manufacturing and SME, with 50000+ active asset base.

The journey of each asset can be tracked through the Trip Trail feature which indicates the 'Start Date' and 'Start time' of the TRIP with corresponding real-time monitoring on Google Maps. These reports can be downloaded in excel form.

The key benefits of Vodafone Location Tracker are that the model is purely OPEX based, businesses pay for usage only, and it is cloud based, enabling it to meet requirements of different industry segments. The other benefit of the product is increasing productivity. With a dashboard that marks predictability of timelines, resources can be arranged and mobilised in a manner that can restrain waste of time for delivery of consignments or for a sales person to reach a particular point. With live data feeds, the field force can be deployed to locations according to the area they are currently visiting, thereby reducing travel time thus increasing the number of sales calls a day.

Lastly the application allows companies to reduce their OPEX mainly by its ability to track the vehicle or consignment, thereby reducing the risk of fraud, whilst improving supply chain visibility and predictability.

**Improving Client Efficiency**

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**Finance:** Insurance Companies can use it to monitor and mobilise its collection agents. A manager, for instance, gets a call from the customer to collect documents from Lokhandwala Complex in Andheri. Through location tracker, the Manager can locate the field officer closest to customer’s residence or point of collection, and direct him towards the customer. This not only helps in operational efficiency, but also helps in improving customer satisfaction through timely collection.

A finance company faced the problem that instead of visiting customers, collection agents were calling customers to office. VLT enabled the finance company to proactively correct the action of collection agents within a month’s time by tracking their movement. It not only helped customer in increasing satisfaction but also in preserving brand image.

**Retail:** The growth of retail industry in India has increased the need for improved supply chain management. Timely delivery of goods is essential for the retail outlets, and the use of location tracker enables SCM companies to track goods as well as account for inventories based on predictable events based on data available. Companies can ensure that perishable items are delivered on time based on average time taken to reach from Start Point to End Point and establish contact with asset in case of any delay or departure from the prescribed route.

For instance, a leading plastics manufacturer with pan India operations deploys a 100 member sales team to procure orders from multi brand and exclusive outlets across various locations. However, they were faced with a problem. They were unable to verify authenticity of travel claims related to customer visits by sales force. This resulted in escalation of travel costs. They needed a reliable means to verify sales efforts by identifying visited locations and optimize travel spends.

Vodafone implemented a consent based people tracking model that helped the organisation verify sales team visits in real time and use this data for validating travel claims.

**IT & ITeS:** With a high reliance on third-party vendors to transport their employees, IT & ITeS companies are at the constant risk of being exposed to fraud in terms of inflated mileage clocked by these vehicles. By requesting their vendors agree to using Location Tracker in their vehicles, companies can keep a check on the distance covered and get near accuracy in terms of amount of mileage clocked thereby reducing OPEX.
A Win-Win Solution

Mobile technology offers more than mere communication. Through location based services (LBS) businesses can enhance productivity and contain operational costs by keeping employees on the field and employers connected in more meaningful ways.

Vodafone Location Tracker is a GSM based solution aimed at ready business to track mobile assets such as sales people and vehicles to improve operational efficiency, control costs and ensure safety. It is consent-based, overcoming the concerns about compromise on privacy. The solution indicates the route and the location of the asset, thus ensuring adherence to the planned trail to be taken as well as calculating travel costs accurately. Any deviation from the route planned could be indicative of emergency and thus helps the base office to take timely action.

The uses for this solution are many. While on the one hand it can be used to track sales people and vehicles, on the other hand, it can be used to customise messages to customers based on the location they are present in.

With BPO industry reporting a high number of untoward incidents, Location Tracker can act as a security platform for most companies to ensure their young workforce is secure and safe. These employees are already empowered with mobile phones. All they need is a product/service to complement this.

With the government’s plan to increase mobility in rural areas and connect India by 2020, the scope for Location Tracker only increases, as greater the connectivity, better the accuracy. And as the government continues to construct bridges, roads and highways, India will continue to be on the move, the question remains - are we tracking every move?

Why Vodafone?

Better Operational Agility
To make your business more agile, we make the way you communicate more flexible, more resilient and more secure. We ensure all your different ways and means of communicating work together seamlessly. And we make sure all this combines to make your business more efficient and more profitable.

Better Customer Engagement
We help you grow by enabling you to give your customers a consistent, better experience across all contact channels – an experience that increases satisfaction and loyalty. We also help you take full advantage of the latest communications technology so that you can develop attractive and rewarding new products, services, routes to market and business models.

Better Connected Employees
We help you be more productive. Improve employee engagement and get to market faster by enabling your employees to work how, when and where they need to, whilst ensuring you keep control of usage, costs and security.