Fingerprint –
Data & Asset
Management
Software

LBFoster®

Fingerprint
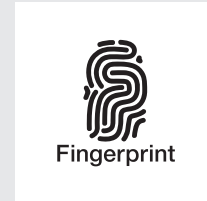
"Is there such a thing as too much data? Only if you don't know how to use it or get value from it."

Big Data is everywhere. And so is data management.
The fundamental reason behind the process of managing data is to develop ways of collecting information, real time collation and sorting, then innovative ways to allow users to see the information and mine it enabling the visibility of trends, cost savings and benefits.

This is the driver behind Fingerprint. A bespoke software platform designed for a base level root cause analysis for Engineers and Managers, but also as a portal for onward operational and personnel data management to help businesses grow and develop.

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Requirement

Arriva (part of Deutsche Bahn) had a requirement to invest in a system which would be designed to help individual depots streamline certain activities. Arriva depots operate a mostly paper based recording system for tasks and activities surrounding the day to day running of Vehicles and the Workshop. Paperwork generated is often manually duplicated and subsequently entered into a database system for centralised recording.

L.B. Foster Netpractise agreed to fund and deliver a pilot scheme which was designed as a proof of concept and enables Arriva to see the benefits of the data management system.

"The primary aim of root cause analysis is: to identify the factors that resulted in the nature, the location, and the timing of the outcomes (consequences) of one or more past events; to determine what behaviors, actions, inactions, or conditions need to be changed; to prevent recurrence of similar outcomes; and to identify lessons that may promote the achievement of better consequences."

Damian McCracken, Technical Operations Manager for Netpractise

Pilot Scope

Supply of hardware to 2 depots

> 2x Touch enabled displays
> 2x PCs
> 2x Floor mounted stands
> 22x Tablets
> With lockable cabinet or other PC secure device

Supply of pilot system to 2 depots

> Tottenham – London
> Speke – Liverpool

Development and Supply of Touch Screen enabled application for:

> Recall and display of limited vehicle details for depot as provided by Oracle
> Entry of interventions on vehicle (replication of 'Touch Book') via touch screen system
> Recall and display interventions on vehicle via touch interface
> Dashboard display of recent interventions and top statistics for depot

Supply of Professional Services to support pilot

> Physical installation of Touch Screen Hardware into depot
> Training of Arriva staff – train the trainer
> Remote support services
> Enhancements to system based on user feedback

Development and Supply of workstation accessible web portal for:

> Recall and display of vehicle details from Oracle
> Ingestion of data from relay data feed for automated creation of incidents (London based only)
> Manual entry of initial incidents (as a replacement of the paper based form)
> Recall and review of incidents
> Entry of root cause information
> Reporting of root cause data into printable/exportable format
> Reporting of breakdown/intervention data into printable/exportable content

"Fingerprint is designed for scaling."

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Challenges

> High engineering lost mileage in some areas.
> TfL penalties for the lost mileage in London.
> Revenue/patronage drops across the UK which is compounded by unreliable service.
> Engineers too reliant on paper based systems that take time to manage and can go missing.
> Duplication of paperwork and spreadsheets for different management levels which consumes valuable management time.

> No visibility of engineering jobs done on running shift as these are not always recorded.
> No visibility of spikes in parts usage.
> No visibility of similar faults on different vehicles within a depot/region or UK.
> Engineering fault diagnosis is challenging in some areas, which can lead to parts being changed several times before the root cause is found.
> Duplication of parts changed by different members of staff as they have no visibility of repeat defects.

Benefits

> Vehicle down time will reduce.
> Engineering fault diagnosis will be quicker.
> Part usage will be lower.
> Increased patronage as a result of improved service reliability.
> Reduced TfL engineering penalties in London.
> Increase in skill levels by identifying training needs and individual development.
> A reduction in labour hours spent on reactive maintenance.

> Personal safety alarm for lone working.
> Less breakdowns and changeovers.
> Happier workforce and customers.
> Better attraction and retention of staff if we use modern technology.
> A reduction in spare vehicle requirement as vehicle availability improves.
> Analysis of parts quality and supplier performance.
> Knowledge capture and sharing throughout the engineering function.

Scaling

As we establish the pilot, we are seeing a daily demand for new ways to use the data being inputted into the system. The system is designed to become a portal for other areas of the business to use. The hardware being rolled out across sites is available for employee interaction in other areas as well as engineering. Any information requested can be expanded and used, in real time, across the business.

There is the opportunity to vastly reduce the amount of time spent on low and non-value added activity, which is inherent in manual and paper based recording systems.

This information can be identified as the "touchpoints" of the business; Employees and Assets. By design, Fingerprint can link to other data sets or independent software platforms to become a cohesive hub of knowledge and intelligence.

Based on a pilot project for Arriva in two depots from Easter 2016 to Easter 2017.
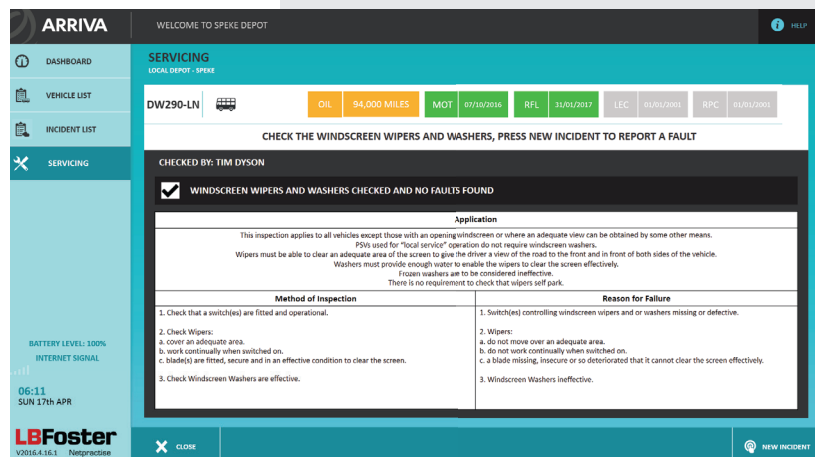
Areas which Fingerprint could include:

> Parts, Stores Management and Procurement
> Human resource management including timekeeping, scheduling, benefits etc
> Asset management including Servicing
> Legal Safeguards – licenses and minimum status levels
> Health and Safety – checks and standards
> Training – video collateral, toolbox talks and online help