



SOLUTIONS FOR THE AUTOMOTIVE INDUSTRY



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Introduction

The automotive supply chain is one of the most sophisticated and demanding of any industry, with a range of geographically diverse partners working together to deliver the just-in-time manufacturing of vehicles and their associated components. This complex supply chain extends not only from the supplier to the manufacturer, but then across the outbound delivery of finished vehicles and parts to a range of destinations.

Delivering and managing this diverse just-in-time and just-in-sequence supply chain requires the end-to-end visibility of all parts and their associated reusable assets. In addition, given the high costs associated with each asset, it is equally important to manage the usage, shrinkage, wear-and-tear and location of each of these.

The Intellident automotive solution portfolio has been designed specifically to address the challenges of part and asset movement across the automotive supply chain, with particular focus on the accurate and efficient dispatch and receipt of items between locations.

At the heart of the solution is the ability to generate immediate benefits for all partners, which ultimately leads to a more efficient and cheaper supply chain.



What are the challenges faced today?

Automotive manufacturers, logistics providers and suppliers are globally experiencing a broad range of similar problems that are driving the need for newer, faster and smarter systems to help manage, report and control all aspects of the supply chain.

The increasing need for all partners to reduce costs, whilst improving service levels is leading to:



The need for cost-down manufacturing

Each partner in the supply chain is constantly pressured to deliver more value for the same (or reduced) cost, or to maintain service levels for less investment. This means that supply chain costs need to be constantly analysed and improved.



Diverse range and geography of supply base

Parts are now supplied from a range of geographically diverse suppliers, and manufacturing plants are increasingly challenged to build in the country of sale - these combined factors lead to extensive and complex supply arrangements.



Conformance with regulatory pressure

The need to reduce carbon footprints and respond to RoHS and WEEE European regulations are certainly high on the agenda of all conscious organisations, but conforming, and proving conformance, adds more complexity and cost.



Increasing cost of transportation

The actual cost of moving parts from A to B is constantly on the rise, together with the increase in the cost of shipping, returning and disposing of all associated single trip and returnable packaging.



The requirement for complete traceability of products

Increasingly, the automotive supply chain is required to become smarter in terms of product recalls. No longer is it acceptable to withdraw entire vehicle batches due to limited production faults.



High volume of visually similar products

As components become shared on more vehicles and manufacturers are asked to provide more pre-built parts, the massive array of components provided have become increasingly visually similar - requiring smarter means of identification.

These challenges are complex enough when dealing with the movement of products and assets direct from the supplier to the OEM, however, there are further complexities and potential for costs savings to be considered. These include:

The extended supply chain

The automotive supply chain extends not only through manufacture and assembly of the finished vehicle, but into the extended parts supply chain. This supply chain is concerned with the delivery and maintenance of dealership parts for spares and repair - not only for vehicles that are on active manufacture, but also the supply of parts for historic model versions. How parts are tracked into this separate supply chain is of equal importance to the OEM.



The need to use emergency logistics services

Failing to control the accurate production, dispatch and receipt of parts creates demand for a range of emergency logistics services. If returnable packaging is not available for filling, the supplier must resort to temporary packaging, which is expensive to both make and recycle. If delays in production and filling mean that regular transport slots are missed, then dedicated transport services are often required - again at huge cost to the supply chain.

Operating a build-to-order supply chain

The ultimate aim of the automotive industry is to hold minimal stock and manage a 100 percent build to order supply chain, however, the current complexities around variation of delivery schedules would simply not allow this vision to become a reality. There will always be issues around the timings of dedicated deliveries, however, how can systems be implemented that minimise this impact and provide the information and capabilities around a build-to-order supply chain?

The Intellident automotive solution makes the supply chain quicker and more effective by removing human error, decreasing loading and intake times and providing better circulation of reusable assets.

What are the significant benefits?

Our automotive solutions have been deployed to over 150 suppliers and OEMs around Europe to-date, with each receiving a range of functional and cost-down benefits, significantly improving accuracy, speed and quality of deliveries. Some of the specific benefits that our clients have realised include:



Reduction in supply chain duration

More efficient and accurate dispatch, transit and receipt allows items to pass through the supply chain from supplier to OEM much more efficiently and quickly, leading to significant benefits in infrastructure optimisation.



Immediate visibility of parts and assets

Through accurate dispatch, intake and monitoring we provide our clients with immediate visibility of assets, down to current or last known location. Associating the asset content allows us to also understand the location of physical parts.



Better utilisation of the asset pool

Visibility of location and usage of assets allows the whole asset pool to be better managed and utilised. This includes more efficient circulation around the supply chain and a significant decrease in replenishment costs.



Reduction in labour costs

Radio Frequency IDentification (RFID) requires no human intervention, thus eliminating manual scanning of each item on dispatch and receipt. As RFID-enabled items depart or arrive through a dock-door information is updated automatically.



Improved accuracy of information

Due to the automated receipt and the lack of human intervention required, the solutions are proven to cut mistakes and offer the additional accuracy required to turn operations from 98 percent accurate to 100 percent.



Elimination of temporary packaging

Knowing the precise location and turnaround time of your returnable packaging means that empty assets are returned to the right location as quickly as possible. This ensures suppliers have the right containers and don't need to resort to temporary packaging, which is expensive to create, use and dispose of.



Improved collaboration between OEM and supplier

Digital information is shared between all parties quickly and efficiently, providing advanced notification of product movements and allowing both supplier and OEM to better manage their delivery schedules.



Reduced administrative overheads

The supplier dispatch solutions provide absolute guarantees of what has left the facility and when, virtually eliminating the need for expensive administration around proving that items were incorrectly delivered or received.



Reduction in warehouse costs and inventory levels

Operating a more efficient supply chain allows suppliers to dispatch later and OEMs to operate close to just-in-time receipt. These combine to ultimately help reduce the amount of inventory that an OEM needs to carry for production.



Enhanced traceability and recall capability

Parts can be tracked down to batch or item level, providing unparalleled information on production and movements. This information can prove critical when a recall is required, enabling only affected parts to be requested for return.



Increased visibility of warranty-replaceable parts

Measures can be implemented to allow for absolute identification of unique parts. Information retrieved can show not only that the part is genuine, but more importantly which vehicle it was originally applied to and when.



Conformance with international standards

Our experience as an integrator and our associate memberships allow us to ensure that your solutions are 100 percent compatible with industry standards such as ODETTE and EPCglobal.

Automotive solution overview

Our range of automotive solutions are designed to deliver significant benefits to all parties within the supply chain, with particular focus on increasing the speed and accuracy of asset and part movement from supplier through to lineside. Amongst the many benefits that can be derived, the following are specific to particular stages of the supply chain:



Production / Supplier

- Item-level tracking of components direct from production through to delivery
- Fool-proof labelling of individual items and assets for compliant delivery into the OEM
- Highly efficient put-away and pick of items, with full audit trail
- 100% accurate dispatch of orders, with Advanced Shipping Note (ASN) confirmation to the OEM



Transit

- Faster and more efficient pick-up of packaged items from suppliers
- Optimised pick-up routes based on dynamic status information from suppliers
- Pre-notification to OEM of pending delivery, with exact content expected
- Faster turnaround of product drop-off and empty asset pick-up from OEM location



Distribution Centre

- Automated receipt of items from suppliers and confirmation / validation against ASN
- Location put-away or notification of direct to line side product ranges
- 100% accurate dispatch to line side in, optimised to vehicle build order
- Full audit trail of all intake and dispatch processes



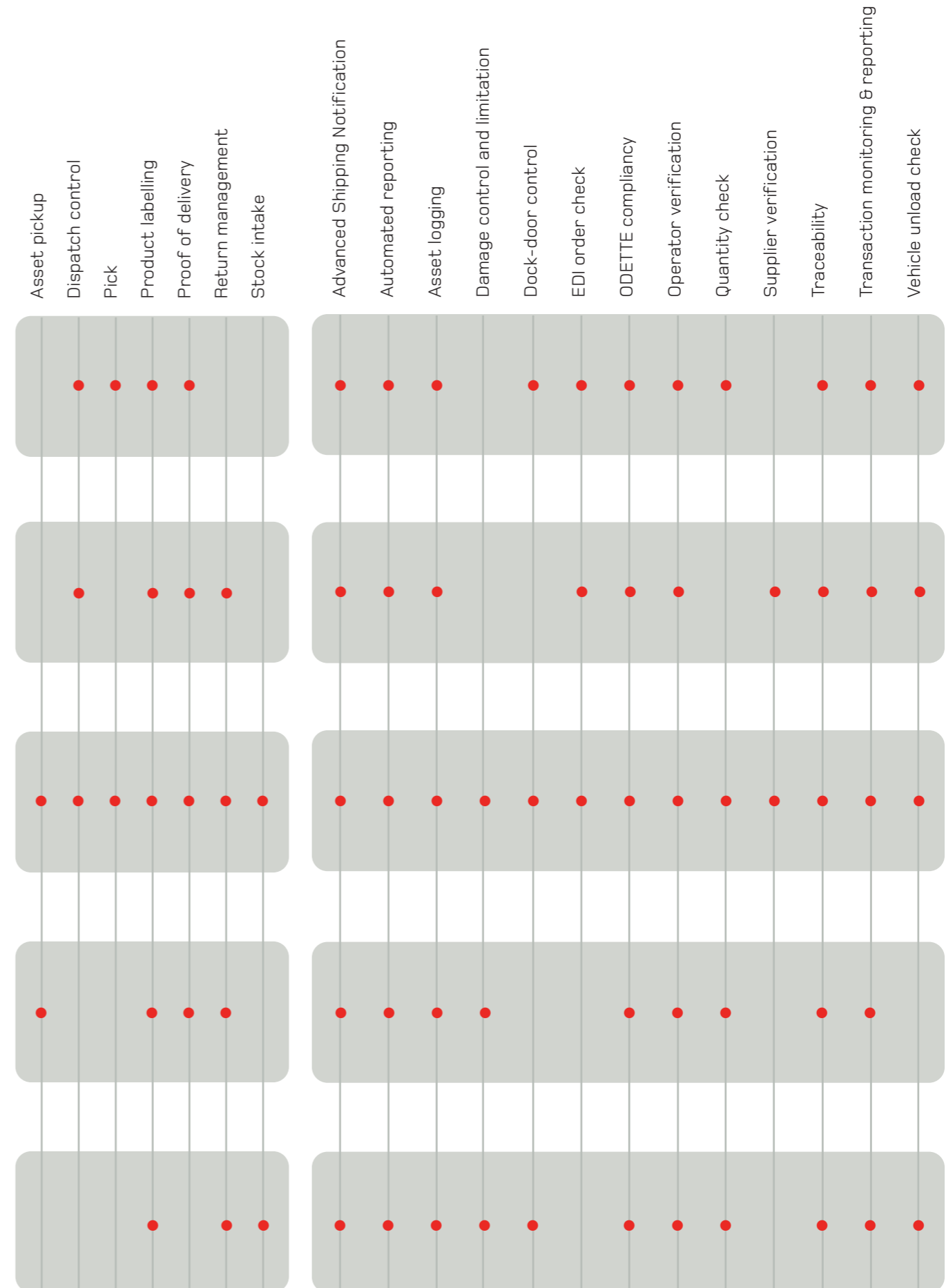
Delivery

- Optimised last on, first off filling of vehicles
- Better utilisation of vehicles due to optimisation of part delivery
- Reduced asset handling and improved dispatch speed to line side
- Improved collection, handling and dispatch of used returnable packaging



Line side production

- Direct delivery to line side, off-loading in vehicle build order
- Efficient return of empty containers back to DC for re-circulation
- Reverse traceability of critical fitted items (seat belts, air bag sensors, child seats, etc.)
- Improved guarantees of line side delivery : right product, right place, right time



Implementing the solution

In order to make the implementation of our solutions a success, we have a dedicated team of specialists that guide you through the process of selection and implementation to ensure that the solution returns the maximum amount of benefit for your investment.

To achieve this, we follow the 7-stage implementation plan, which allows us to deliver to you a range of project benefits, including:

Building on our experience

Using this model, you are able to use the experience of our application consultants and engineers to help you build a plan that not only suits your business, but also allows you to benefit from the wealth of experience we have derived from over ten years of deploying solutions.

Delivering maximum return

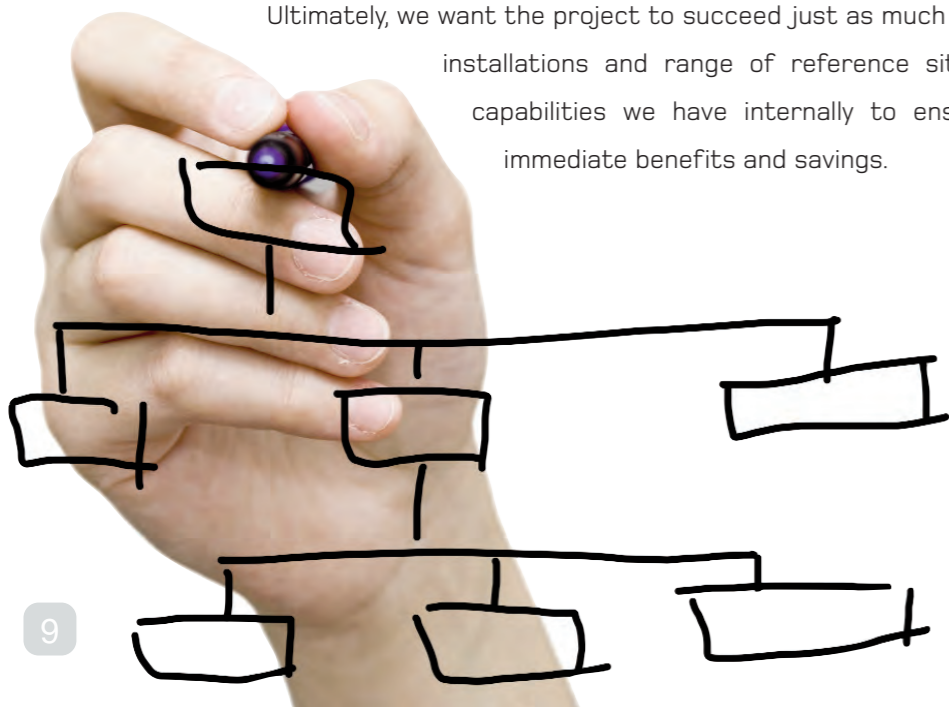
A significant step in the project is for us to aid you with the development of a robust "Return on Investment" plan, which identifies the benefits and savings that will be received over the project duration and gives you important metrics to monitor the project against.

Choosing the right technology

The plan is designed to ensure that the project scope is well defined and that, most importantly, the right technology solution is chosen for your business. You will notice that the technology choice is actually not even considered until stage five in the plan.

Ensuring absolute project success

Ultimately, we want the project to succeed just as much as you. Our history of successful installations and range of reference sites are now testament to the capabilities we have internally to ensure that your project delivers immediate benefits and savings.



1

Understand the application

The first stage of the process is to fully understand the overall supply chain in order to appreciate where the biggest problems occur and therefore where the most significant returns can be realised. This first stage is key in ensuring that the project scope is well defined.

2

Identify a single step in the supply chain

Once the key problem area has been identified, a single step should be highlighted for improvement. This step is one of our point solutions: product labelling, stock dispatch, intake, management and on-shelf availability. Defining a single step will further define the project scope.

3

Identify all possible solution benefits

Once a single area of concern has been identified, each solution benefit will be examined in line with your current processes to understand how the solution can be tailored to your unique implementation. The project team will work closely with your key staff to develop this stage.

4

Develop a "Return on Investment plan"

The most critical stage of the implementation plan is to ensure that the selected solution will provide you with significant returns as quickly as possible. At this stage, our team will help you to define the investment plan and calculate the return on investment.

5

Define the technology and solution plan

Only at this stage will technology be defined, based on the specific problem areas identified earlier. The hardware, software and solution plan will be scoped to understand how the solution maps onto existing processes and solution costs can be finalised.

6

Implement the solution

Working with our experienced team of project managers and engineers, the solution will be implemented. Initially this may involve hardware installation at our dedicated development centre, before the solution is rolled-out to the sites defined in the project plan.

7

Project completion

Although the equipment has been installed and the solution is delivering its performance and financial rewards, the relationship with Intelligent extends much further. At this point you can rest on the assurance that our dedicated support team will keep your investment running 24 hours a day, 365 days of the year.

About Intellident



Intellident are Europe's leading provider of control systems based on the use of Radio Frequency IDentification (RFID) and barcode-technologies, with experience that extends across multiple vertical markets and solutions.

We specialise in supplying complete systems, which provide our customers with immediate benefit and rapid pay-back on their investment.

Together with our supply chain solutions, Intellident also provide a specialised barcode print, apply and verification package; a sophisticated document management solution, and are the UK's leading provider of RFID-based self-service solutions to public, academic and private library sectors.

Our philosophy is to offer our customers a complete end-to-end service, which is why we have dedicated and qualified staff capable of assisting at every step, from pre-sales advice all the way through to project management and after-sales support.

In October 2003, the company joined the LINPAC Allibert group, a global organisation with core business interests in the provision of returnable plastic packaging and material handling equipment to the retail and automotive sectors - a perfect fit for Intellident. LINPAC Allibert has an annual turnover of over €1.7 billion, manufacturers in all five continents, has over 11,000 employees and sells products in almost every single country in the world.

www.intellident.co.uk/automotive