ZTR™

BUSINESS CASE

OEM TELEMATICS

PROGRAM

ZTR **BUSINESS** CASE

Business Case for an **OEM** Telematics Program

With technological change accelerating and the Industrial Internet of Things (IoT) becoming a reality, many OEMs in the off-road equipment market are at a crossroads and searching for tangible examples to include in their business analysis. This business case summarizes the monetary benefits and costs of a telematics program for an original equipment manufacturer (OEM) in the construction market. In some cases, the actual numbers are converted to percentages for confidentiality while still outlining a credible example with a quick positive cash flow.

Benefits

Using a real-time view of all equipment in their territory, a dealer became more proactive with end customer contact, resulting in::

- **15% reduction** in truck-rolls, due to web diagnostic tools and proactive phone calls to the customer.
- **8% increase** in parts sales, because the dealer knew about issues first.
- **5% increase** in equipment sales, due to great support that built customer loyalty.

An Engineering team used analytics tools to spot equipment trends and drill-down tools to view data on specific machines, resulting in:

- **50% reduction** in product development field visits for testing of new products.
- **2% increase** in engineering productivity due to remote diagnosis of customer complaints.
- **A new machine launch** aiming at an unserved niche revealed by field data.
- **3 person-week reduction** in time needed for each major warranty investigation due to availability of data.

Using web based support tools a Product Support team was able to “touch the machine”, resulting in:

- **30% reduction** in OEM field visits for remote updates to the ECU.
- **20% efficiency gain** in product support group due to remote diagnostics (this was somewhat offset by an increase in telematics related support).

The Parts Manager used analytics to relate part sales data to fault code data, resulting in:

- **4% increase** in part sales per year, captured from Will Fit suppliers due to part promotions based on predictive analytics.
- **10% increase** in dealer service contracts due to equipment management tools, which drove increased part sales.

Using run hours and data indicating abuse, the Warranty Manager was able to better manage risks, resulting in:

- **5% of claims** rejected with supporting telematics data.
- **50% reduction** in travel costs for warranty related issues, due to telematics data.

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30% reduction in OEM field visits for updates to the ECU.

10% increase in service contracts, resulting in increased part sales.

Using information surrounding incidents, the OEM Legal Counsel painted a clear picture of what actually happened, resulting in:

- A **10 hour reduction** in billable legal counsel hours per event, due to having related data.
- **2 lawsuits per year avoided** due to having equipment data highlighting a misuse situation.

Using equipment usage data sorted by sales territory and customer fleet management tools, the Sales Manager gave sales reps an advantage, resulting in:

- **3% increase** in new equipment sales due to increased customer dependence on telematics data.
- **1% increase** in new equipment sales due to analytics-based channel management changes that leverage telematics data.

Costs

Hardware Investment

The cost of telematics hardware varies significantly depending on the application, the range of data points desired, and volume purchased. It's important to define your Digital Strategy and think through the use-cases for the data before specifying the hardware capabilities. As a result, hardware cost can range from $150 to $650.

Annual Services Investment

Service subscriptions cost will vary depending on the number and frequency of data points, wireless technology used, optional service features requested, and volume purchased. Services should include management of the wireless carrier relationship for several reasons:

- First, this portion of the monthly subscription will typically be lower from a telematics vendor, since they can pool large numbers of subscriptions from many customers.
- Second, managing the wireless network yourself is more difficult and costly than it may first appear. There is overhead associated with it from software tools, labor, and management time. That said, it's important to define your Digital Strategy and think through the use-cases for the data before defining the data needed.

The monthly services will typically range from $8 to $25 per month and can be reduced with annual prepayment or a multiyear contract.

Annual Engineering and Design

Over time, the telematics hardware costs and capabilities will change, giving the OEM opportunities for improvement. There will be some engineering and design support required, similar to that required for an accessory electronic component on the equipment.

Production Line Install

Typical production line labor for installation and activation ranges from 15 to 30 minutes.

Telematics Program Administration/Support

In order to be successful, the program will require a dedicated person to perform the administrative, reporting, and support tasks. This role is typically a mid-level position with coordination and technical skills required.

One-time Telematics Development

Customization of the telematics solution typically results in a one-time development fee from the telematics system supplier. This can vary widely depending on requirements but is common to see this be 10% of total first-year costs.

IT/Business Integration

Integration with IT systems, on-going support, data management, and reporting will require approximately 10% of a person's time. This investment will pay back many times over, because getting the IoT data integrated into your business software is critical to realizing the benefits of the program. As with the other elements of the program, this should be driven by your Digital Strategy.

30% reduction in OEM field visits for remote updates to the ECU.

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Cash Flow Analysis

Assumptions

- A digital strategy has been defined and accepted within the organization, giving purpose and direction for the IIoT program.
- An experienced market leader will be tapped for design and integration of the end-to-end IIoT system. (A home-grown system will incur significant costs that are not included here. These costs are typically driven by equipment integration challenges, IoT device changes, wireless network changes, gateway changes, and software application changes. It's common for these to cause launch delays and limit acceptance by the organization. In addition, keeping all of these components current and in sync over the long run requires incremental overhead that can be draining on the core business.)
- Investment will increase as the program is integrated into business systems and processes. This will taper off within six months of program launch.
- Process improvement and training initiatives will be implemented within nine months of program launch in order to realize efficiency, product improvement, and revenue gains. These initiatives will likely extend to dealers and other enterprise parters.
- The executive and business unit leaders will advocate for these initiatives until they become mainstream in the culture.

Net Cash Flow

- Net cash flow typically turns positive within 12 months of program launch and continues to grow as the program becomes an integral part of the business.