The Internet of Things is Talking, Are You Ready to Listen?

NUTC Business Advisory Council

October 27, 2015
1. Time (& Date)
2. Location
3. Speed
4. Distance Traveled
5. Activities
Customer Questions have Evolved Over Time

Location isn’t enough anymore. Customers want to know “How do I monetize the data I’m collecting?”

Today, customers are asking questions they couldn’t prior to the data ecosystem from the IoT:
- What are my drivers’ behaviors costing me?
- How do I prevent unexpected downtime?
- How can I reduce my fuel consumption?
- How do I motivate and retain top talent?
- How do I load balance growth vs. capacity?
- How can I increase productivity without adding costs?
Use technology to improve production, understand key operating metrics and reduce costs from production
Haul Truck
Production Optimization

- Payload
  - Weight
  - Scale sensors
- Cycle times
  - Waiting time
  - Load time
- Machine Health
  - Telemetry
  - OEM fault codes
  - Alerts
- Informed Operator
  - Idle
  - Speed
  - TPM
- Fuel
  - Utilization
  - Control

Data Analytics

<table>
<thead>
<tr>
<th>Machine ID</th>
<th>Cycle Time</th>
<th>Idle Time</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>K313</td>
<td>6</td>
<td>19</td>
<td>30</td>
</tr>
<tr>
<td>K316</td>
<td>7</td>
<td>16.9</td>
<td>16</td>
</tr>
<tr>
<td>K317</td>
<td>6</td>
<td>18.3</td>
<td>19</td>
</tr>
</tbody>
</table>

[Images and logos]
Data Monetization and ROI

– 13% reduction in fuel costs
– 95% reduction in speeding events
– $19,000 per haul truck annual savings
Thank You!

Darryn Faulkner
Vice President – Latin America
Navman Wireless
Darryn.Faulkner@navmanwireless.com