Telematics for the airport environment barriers to success........
Our Experience..
Our Experience..
iMATS Technology - Overview

- iMATS Technology offers a complete turnkey solution: preparation, installation, customized software development, data analysis, support, training, operation and maintenance

- Hardware
- Transmission
- Interface
- Reports
- Benefits

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iMATS or Client Servers

Wireless

As a stand alone system

Web access on PCs, tablets

Integrated with Client Systems

- Operational Efficiency
- Maintenance Efficiency
- Procurement
- Health & Safety
- Security
- Environmental Benefits

iMATS Technology offers a complete turnkey solution: preparation, installation, customized software development, data analysis, support, training, operation and maintenance.
iMATS reporting suite

• Report all functions (web/email/tablets/others)
• Central report fed by data from external systems including fleet mgmt, RMS, FIDS, etc.
• Reports can be used to set operational budgets and efficiency targets by vehicle type, terminal and department;
• Reports to drive operational efficiencies and set future targets;
iMATS reporting suite

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• Reports to drive operational efficiencies and set future targets;
Pinnacle iMATS delivering savings/benefits

- Operational
- Maintenance
- Procurement
- Successful pooling
- Environmental
- Health and Safety
Airport telematics – some of the benefits

- Reduce aircraft delays
- Optimised fleet size
- Reduce GSE fuel use
- Battery management regimes
- Reduce GSE maintenance costs
- Monitor and validate SLA’s
- Reduce accident damage
- Assist incident analysis
- Improve manpower efficiency
- Support procurement decisions
- Maintaining warranty compliance
- Facilitated pooling
- Allowed accurate billing
- Environmental reporting
- Prevented hazardous situations
- Drives Safety compliance
If telematics is so good why......

- There are many obstacles. IT’S DIFFICULT!
- We have had to continually invest to improve the solution
- Our latest iMATS system is the culmination of years trialing, testing, learning and of investment
- Pinnacle are leading their clients to the value
- Continuing to develop and adapt
Airport telematics on GSE
the challenges.....

- ROI
- GSE
- Airport environment
- Tamper Proofing
- Hosting requirements
- Hardware robustness
- Using the information
- Stakeholders
- Processes it has to be a partnership
Sometimes when the enemy is all around you... you don't have time to see the how you might win the battle... and telematics is a bit like that!

Machine Gun? Never heard of it! Send him away, I have a war to fight!
To reduce emissions – Telematics success

- A robust system able to deal with the airport environment
- Much more required than how GSE is driven
- Relevant information who/how/action
- Processes that safeguard the operation
- Safeguard the data/support
- All stakeholders able to benefit
- Telematics company is a partner
- Pinnacle is leading our customers to value
THANK YOU FOR YOUR INTEREST
ANNEXES
System Overview iMATS Reports

- Real time location and GSE status, showing equipment allocated, in use, available, out of service, driver ID, engine hours etc.
• iMATS provides an overview of important information for your business, with easy navigation, allowing drilldown into detail if required.
System Overview Utilisation

- iMATS provides historical information, (example shows fleet utilisation) allowing analysis of operation, to pinpoint where cost savings and efficiencies can be achieved.
System Overview Access Control
System Overview Fuel Levels

- iMATS can show a range of information including levels, temperatures, collisions etc.
- iMATS can pin point items that require urgent attention
- iMATS can report an equipment issue, or for example an action required to avoid breaching a service level agreement
System Overview On Time Performance
System Overview Engine Hours
iMATS can notify alarms/alerts on screen or by sending messages to the relevant personnel.

### Equipment Alarm Status Panel

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<thead>
<tr>
<th>System</th>
<th>Status</th>
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<tbody>
<tr>
<td>Engine Temperature</td>
<td>Green</td>
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<tr>
<td>Oil Pressure</td>
<td>Red</td>
</tr>
<tr>
<td>Battery Voltage</td>
<td>Green</td>
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<tr>
<td>Hydraulic Systems</td>
<td>Green</td>
</tr>
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</table>

- Engine Temperature
  - Loader K531033
  - Loader K531034
  - Loader K531035
  - Loader K531036
  - Loader K531037
  - Loader K531038
  - Loader K531039
  - Loader K531040

- Oil Pressure
  - Red

- Battery Voltage
  - Green

- Hydraulic Systems
  - Green

- Loader KS31043
- Loader KS31044
- Loader KS31045
- Loader KS31046
- Loader KS31047
- Loader KS31048
- Loader KS31049
- Loader KS31050
## System Overview

### Speed

#### Speed and Collision Map

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#### Raw Data

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<th>Type</th>
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<th>Threshold</th>
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<td>Speed</td>
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<td>20.00</td>
<td></td>
</tr>
</tbody>
</table>

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**Map**

- Equipment: 8083
- Fleet Type: PUSTRA
- Name/Staff #: C LAMKIE_078434
- Speed: 22.00
- Type: Speed
- Threshold: 20.00

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**Value Solutions**

- **Fleet Type**: PUSTRA
- **Equipment**: 8095
- **Department**: MEL
- **Crg Unit**: MEL
- **Name/Staff #**: C LAMKIE_078434
- **Airport**: MEL
iMATS access control and engine hour reporting allows monitoring of equipment performance in your operation, (e.g. idle hours versus engine hours) as well as restricting operation of equipment to authorised personnel only.
System Overview Electric

- iMATS provides electric GSE Monitoring
- On charge/last charge/battery status
- Range of electric GSE services