Agricultural Equipment Rental Monitoring System

Story

Jacob, Agro Equipment Rental Manager of his own farm. He uses to rent the equipment and make a record of it. After the farmer returns it back, he makes a health checkup of the equipment before he rents it to someone else. It is hectic and time-consuming. He wants to increase his business with increasing number of equipment but unable to do so only because of lack of manpower, to maintain the record and in checking the health of the equipment every time.

Is there any solution for him?

Yes !! There is..

SAP Leonardo, Revolutionizing IoT!!

With IoT- Connected Goods, now he can monitor all the equipment he has given on rent to run his business with an ease. He can track the efficiency of the equipment to minimize the downtime so as to optimize the usage and profit. At the same time he can know the location, usage pattern, usage time, maintenance schedule, cost benefit analysis and many more at real time, with advanced sensors. Now happily he can bill the farmer as per the usage hours of the equipment, to serve better, rather than rent on per day basis.
Responsibilities

- Maintaining rental records of all the equipment.
- Periodic health checkup of the equipment, to reduce downtime.
- Rent collection from the ‘Farmer’.

Needs

- Improve rental management system using IoT, to make better time management.
- To get rent based on usage of the equipment.
- Predictive Maintenance of the assets to reduce Downtime.
- Troubleshoot the equipment remotely for any kind of issues.
- Helping novice farmer to use the equipment remotely.

Main Goals

- Being a tech savvy person, I want to use advanced technology based solutions to ease the rental management process.
- Connecting all similar equipment together and analyzing them at real time (Connected Goods)
- Ease the maintenance of equipment using sensor data at real-time.
- Serving the Farmer with low rent (usages based rent rather than per day based).

Pain Points

- Maintaining rental records manually is a hectic and time consuming job.
- Equipment downtime is very high, and thus faces a huge loss in business.
- Answering farmer if equipment fails while working in the field.
- Unable to take smart decisions to run the business.
- Unable to help novice Farmer to use the equipment.

About

- 38, married, 16 years in Agro Equipment Rental Service.
- I am a Tech Savvy person, want to run business smartly and take real-time decisions with the help of advanced technologies to improve the business.
Point of View of Manager:

As an Equipment Rental Manager, I need a way to monitor all the equipment from one platform so that, I can make better decision and optimize the profit by reducing maintenance cost and downtime of equipment.

Point of View of Farmer:

As a Farmer, I need a way to avail all the necessary equipment for farming at minimum rent so that, I can increase my return on farmland investment.

At the end of the Day, both are Happy with IoT- Connected Goods. The Rental Manager as well as The Farmer.
## User Experience Journey:

<table>
<thead>
<tr>
<th>ACTIONS</th>
<th>MINDSET</th>
<th>FEELING</th>
<th>TOUCH POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>➢ Rent Equipment ➢ Check availability of the equipment and rent it to the farmer.</td>
<td>➢ Sensor Data shows that the health of the Equipment is good. Thus no chance of failure.</td>
<td>😔</td>
<td>Equipment, Farmer, Rental Manager</td>
</tr>
<tr>
<td>➢ Check Usage Status of the Equipment at real-time.</td>
<td>➢ Is the equipment being used?</td>
<td>😞</td>
<td>Equipment, Real-time Graph and statistics, Historical Data</td>
</tr>
<tr>
<td>➢ Alert!! ➢ Alert has been sent to the Rental Manager and the problem can be fixed remotely by troubleshooting.</td>
<td>➢ Health of the equipment was good. Then why has it failed? ➢ Need to find root cause.</td>
<td>😇</td>
<td>Alert in mail or message, Remote Access to the equipment</td>
</tr>
<tr>
<td>➢ Notification ➢ Need help to run the equipment for a novice Farmer.</td>
<td>➢ Happy to Help Novice Farmer to use Advanced Equipment.</td>
<td>😊</td>
<td>Notification in mail or message, Remote Access to the equipment</td>
</tr>
<tr>
<td>➢ Return Equipment ➢ Auto Health Checkup is done at real time and it has been made ready for the next rent.</td>
<td>➢ Check Usage Status of the Equipment at real-time</td>
<td>😊</td>
<td>Equipment, Farmer, Rental Manager</td>
</tr>
<tr>
<td>➢ Rent Collection ➢ It has been very easy to collect rent due to integration of “SAP Hybris Billing” with the app.</td>
<td></td>
<td></td>
<td>Equipment, Hybris Billing</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Equipment Data</th>
<th>Rental History</th>
<th>Product Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product ID:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>XPW-750T</td>
<td></td>
<td></td>
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<tr>
<td>Supplier:</td>
<td></td>
<td></td>
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<tr>
<td>Xtra Power</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Description:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xtra Power 7 HP Power Weeder XPW-750T (PTO)</td>
<td></td>
<td></td>
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<tr>
<td>Reviews:</td>
<td></td>
<td>★★★★★★</td>
</tr>
<tr>
<td>Powerful 7 HP Petrol Engine, Direct PTO Transmission. Efficient Power Usage, Flough Stick, Suitable for wet and Dry Land Operations. Key Features: Driving mode: Gear, Gear: -1, 0, 1, 2, 3, Tilling width: 80 cms</td>
<td></td>
<td></td>
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</tbody>
</table>