To Measure

1] Tyre Inflation Pressure. → measured in PSI
(pounds per square inch)

1] Proper assessment of TKPH.
2] Proper maintenance of tyre Pressure.
3] Proper tyre performance analysis.

∴ TKPH (Tonne - kilometer - Per - Hour)
How much average load is carried by an individual tyre, for average speed condition.

∴ $TKPH = \frac{\text{(Mean load of tyre in tonne)}}{\text{(AWSS in km/hr)}} = \frac{W_e - W_l}{AWSS}$

Average speed in work shift

∴ W_e = Weight when empty
W_l = weight when loaded.

* User has to seek a particular TKPH tyre from Manu.

∴ TKPH ↑ Heat-resistance ↑ cut-resistance ↓
if TKPH is very very less than the actual designed TKPH then their are more chances of cut-failure.

What CIL already have.

Given.

1] They have payload monitoring system

2] Operating speed / shift

They want us to make an IOT system & app to where the payload & operating speed are analysed

∴

⁂ So To find correct value of TKPH using app.

Suitable Tyre Pressure Sensors with data transfer

→ Real time capturing of tyre pressure from all tyres.

→ Real time tyre pressure must be displayed to operator with suitable alarm

⁂ Incase of low tyre pressure.

in App.

→ Mobile Apps

→ tyre fitment position wise records.

→ linked to costing, compute cost / work hours of tyres.