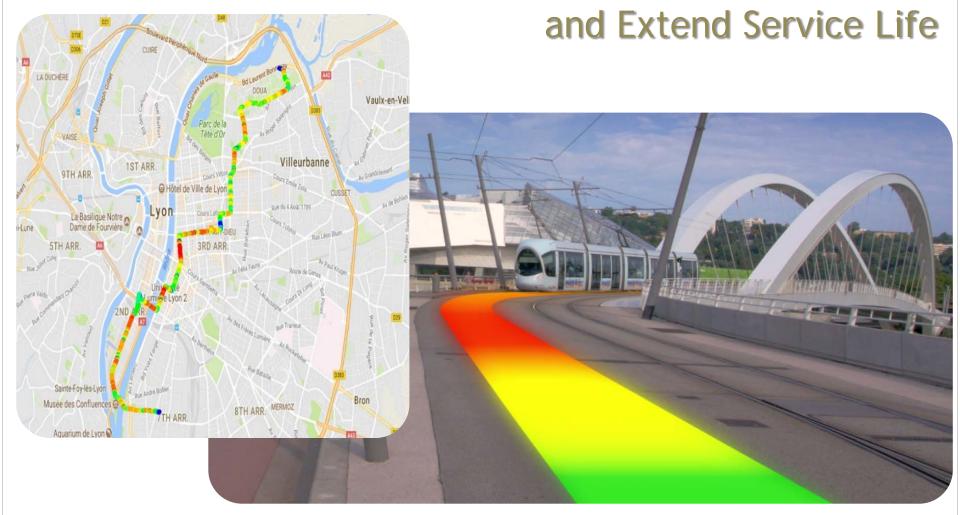
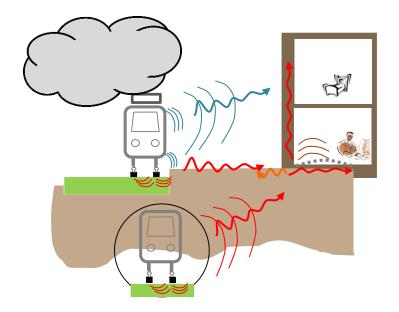
# Smart Railway Maintenance to Reduce Noise Pollution





# **Railway Noise**



WHO: « railway noise has **demonstrated** adverse health effects on nearby residents »

Railway is safe but railway noise kills!



Railway systems must be remain competitive.

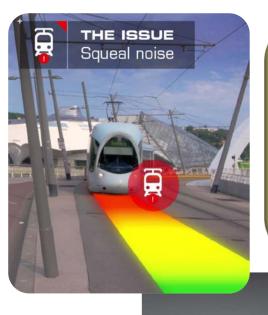
Infrastructure costs are internalized, including noise protection!





### VibRail: a Tool for Smart Maintenance

Pole de Confluence de Loisirs de



 $\triangleright$ 

 $\geq$ 

On-board and wayside monitoring systems:

- Reduce noise and vibration
- Reduce Infrastructure maintenace







Bogie mounted sensors

Reduce wear on rolling stock

Extend service life of rolling stock

### Smart Maintenance for Asset Management



#### Measuring Rail Network Condition

- ✓ Reduce Noise & Vibration for Residents
- ✓ Infrastructure Maintenance Planning

#### **Monitoring Rail Condition**

- ✓ Optimal Condition-Based Maintenance
- ✓ Anticipate Noise & Vibration Issues

#### **Real-time Squealing Detection**

- ✓ Fight Squealig more Effectively
- ✓ Anticipate Noise Issues



#### Monitoring Service Load

- ✓ Reduce Vibration Damage on Rolling Stock
- ✓ Extend Service Life

VibraTec - VibRail

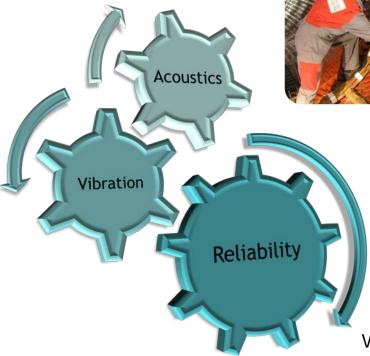
# The VibraTec Group

Headquarters in Lyon, France

French Engineering SME since 1986 Mechanical Engineering, Vibration, Acoustics 120 highly-specialized engineers and PhDs Certified RTD Performer

Measuremen





Looking for cities interested in integrating the VibRail technology in their Smart City policy to improve living conditions and help promote modal shift by reducing externalities and increasing competitivity of rail transportation.

Simulatio

VibRail in action: <u>https://www.youtube.com/watch?v=0zZwvd1EAUY</u>