

# APRA incubator 2022 updated vs Vision of Rail 2030

## Key directions :

- TRANSFORMING CITIES AND CONNECTING COMMUNITIES
- ENERGY, TECHNOLOGY AND INNOVATION
- INTERMODALITY AND THE SEAMLESS CONNECTION
- CUSTOMER EXPERIENCE VISION OF RAIL 2030

### Freight / Intermodality and seamless connection

1. SWJTU Blockchain-based research for facilitating the customs clearance process of international freight business process (CustomsBC)
2. SWJTU Research on International Railway Freight Safety Based on Blockchain Technology (SafeBC)

### Freight / Customer experience

1. ADY Customer Relationship Management.CRM

### Digital /Energy, Technology and Innovations

1. KTZ Virtual coupling (VIC)
2. NIIAS BIM for railway life cycle (BIM4Rail)
3. SWJTU Network Slicing for 5G Railway Communications (NS5GRC)
4. KTZ Big data for railway maintenance.BDRM
5. KRRRI Development of ballast track maintenance technology based on big data in Asia-Pacific region. BTMonBD
6. KTZ Intelligent automated complex of transportation management systems.IACTMS

### Digital /Customer experience

1. DOTr Guidelines for Data Management and Analysis for Passenger Service and Tools for Feedback, Evaluation, and Monitoring of Inclusive Operations - A complementary study for the Customer Experience Management Platform .CEMP-Ex
2. ADY HSE excellence.HSE

### HSL /Energy, Technology and Innovations

1. CARS 3 New technology of comprehensive detection of vibration and noise for high speed EMU(NTC)
2. .KNR Study on Utilizing Korea's Existing Railway Speed Upgrade Knowhow in Railway Projects in Asia-Pacific Region.SERSUK
3. KRNA Diagnosis of Power Quality in Railway Power Load Facilities (DPQR)

### Infrastructure & Rolling stock / Energy, Technology and Innovations

1. CARS Research on Intelligent Control Technology of Braking System for EMU
2. KTZ Research on the development of technical recommendations for the reconstruction and modernization of traction substations.RMTS
3. KTZ Development of remote control of autonomous trains.DRCAT

4. KTZ Transfer of the mainline diesel locomotive TE33AC to gas engine fuel on the railway network.TMDL