

INDIAN RAILWAYS **VISION & PLANS**

2017 - 2019

JANUARY 2017





INDIAN RAILWAY'S
VISION IS TO BE A
KEY DRIVER OF
INDIA'S
GROWTH AND
DEVELOPMENT

VISION

Indian Railways aims to be the **engine** for India's economic growth and development by being **safe**, financially **viable**, **environment-friendly** and **caring** for its customers and employees

ZERO FATALITY

IR will provide safe travel by achieving a 'Near Zero fatality' performance

INFRASTRUCTURE UPGRADATION AND PREFERRED FREIGHT CARRIER

IR aspires to add 1.5% to India's GDP by building infrastructure to support 40% modal freight share of India's economy

PREFERRED FREIGHT CARRIER

IR will develop integrated business solutions to capture new traffic

PASSENGER EXPERIENCE

IR will provide air cooled/temperature controlled services for long distance travel to all segments of passengers in India

IR shall aspire to become the epitome of 'Swachh Bharat'

COST FOCUS

IR will value engineer its processes to ensure transparency, cost effectiveness & expeditious decision making

ORGANISATION CULTURE

IR will imbibe a culture which fosters team work, innovation, accountability and encourages proactive initiative taking

LEVERAGING TECHNOLOGY

IR is committed to leveraging latest technology, employee trainings and infrastructure upgrades on stations and trains to increase customer satisfaction

SUSTAINABILITY

IR will take a proactive approach to ensure sustainability especially environmental in its pursuits

ACTION PLAN/ STRATEGIC ROADMAP

**TO ACHIEVE
THE VISION**



The strategic road map to support this Vision is detailed out across 4 levels

9 Themes

8 themes from Rail Vikas Shivr and an additional theme on Sustainability

Sub-themes

Each of the 9 themes has been subdivided into relevant sub themes

Initiatives

Under each sub theme distinct strategic initiatives have been identified

Action Plans

For each initiative key elements have been defined:

Goals

Milestones

Resource requirements

Outcomes

Responsibilities



For each initiative, an action plan needs to be developed

Theme



'Zero' fatalities

Sub-Theme



Infrastructural
upgrades

Initiative Goal



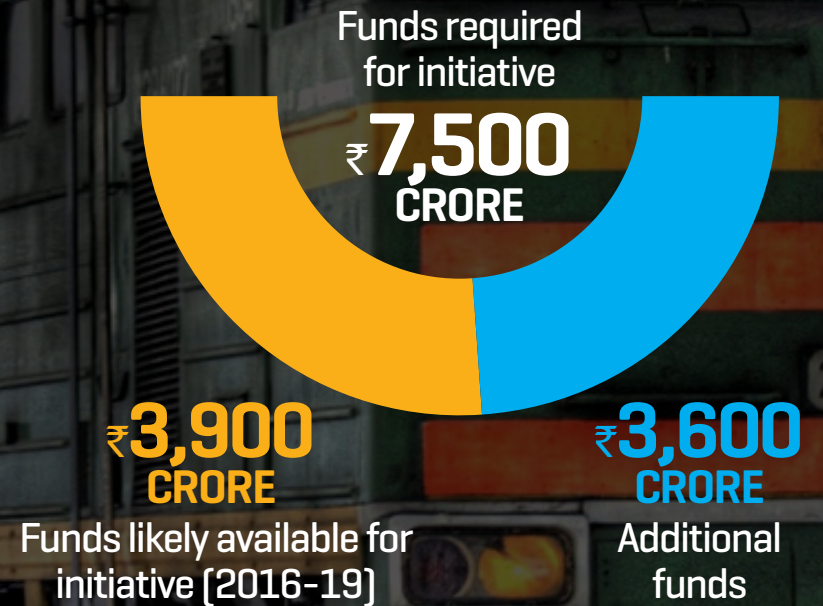
Elimination of 6,113 Unmanned Level Crossings
(UMLCs) on Broad Gauge Lines

ACTION PLAN

METHOD OF ELEMINATION

	2016-17	2017-18	2018-19	TOTAL
By Closure	24	13	20	57
By Merger	144	119	148	411
By Provision of Subway/ RUB	630	1030	1068	2728
By Manning	642	1124	1151	2917
TOTAL	1440	2286	2387	6113

RESOURCE PLANNING



OUTCOME



Reduction in accidents by 66%



Improvement in throughput and speed

RESPONSIBILITIES



Member Engineering

Action plan for each initiative to include goals, milestones, resource requirements, outcomes and responsibilities

INDIAN RAILWAYS' MISSION & VISION

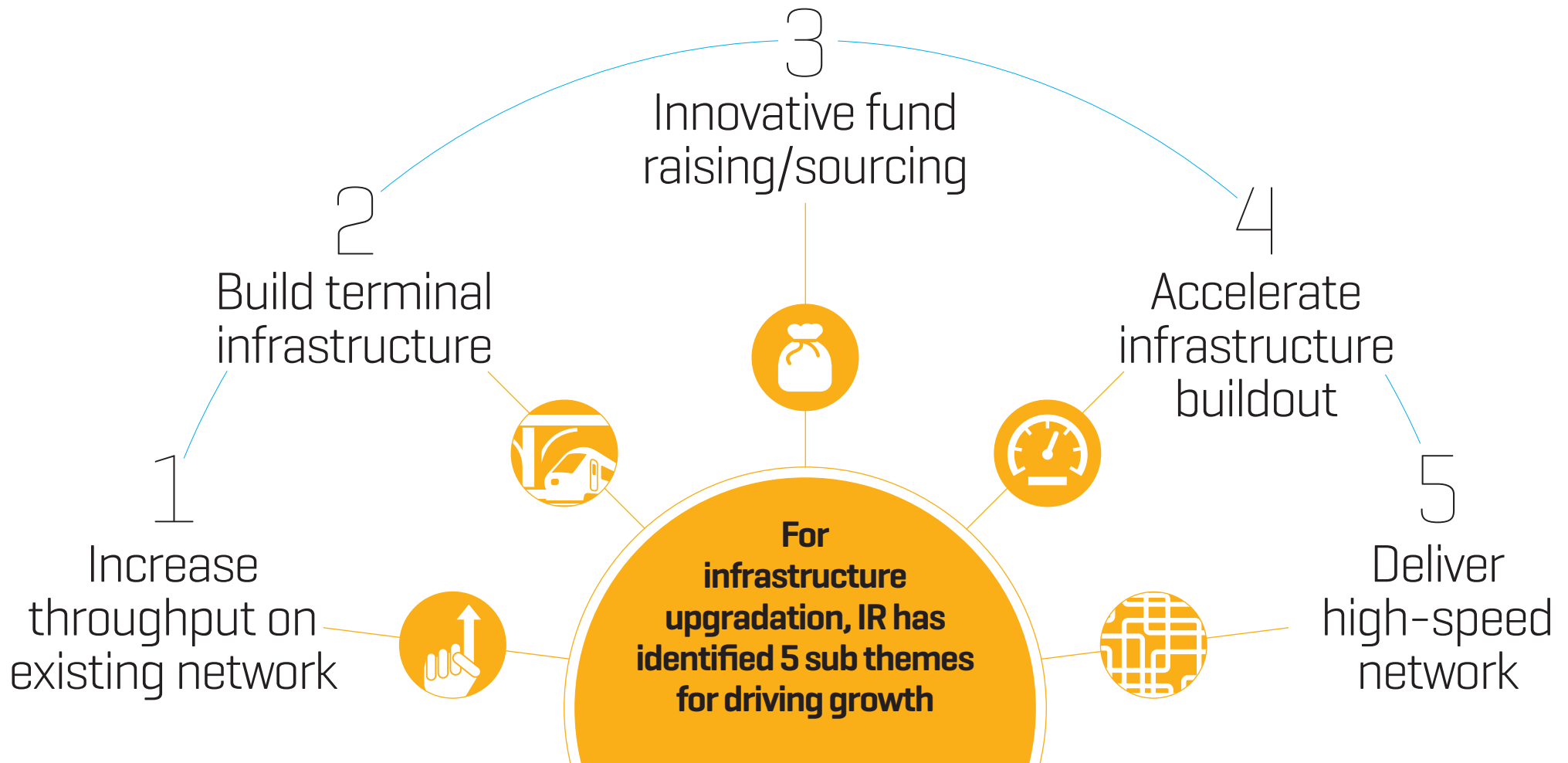




INFRASTRUCTURE UPGRADATION

Create a 3X bigger Indian Railways that is economically viable:

Leverage INR 8,50,000 cr. of capex to expand the railways infrastructure to support the aspirational modal mix in freight volumes





INFRASTRUCTURE UPGRADATION

SUB-THEME

INITIATIVE

DESCRIPTION



Increase throughput on existing network

Integrated corridor approach

Increase throughput by 10% by an integrated approach across 2-3 critical corridors [Removal of PSR and TSRs, improved signaling, bridges and track upgrades, enhanced horse power to trailing load ratio etc.]

Best in class Rolling Stock

Reduce the differential in maximum rated capacity of freight wagons
 Propagate 25 Ton, and low tare freight wagons
 Reduce different types of rolling stock on the system



Build terminal infrastructure

Upgrade good sheds

Upgrade operating conditions of goods sheds based on pre-defined infrastructure requirements via PPP arrangements

Multi-commodity, multi-modal freight parks

Expand capacity and scope of terminal services by partnering with existing government agencies [e.g., DMICDC, State Governments, NHA] to build multi-commodity, multi-modal freight logistics parks

Outsourced Goods sheds

Conversion of Existing Goods sheds to Outsourced Goods sheds by Outsourcing Goods shed activities : policy change, retaining ownership, railways as common carrier



INFRASTRUCTURE UPGRADATION

SUB-THEME

INITIATIVE

DESCRIPTION



Innovative fund raising/
sourcing/
structuring

JVs with state governments	→	Equity participation of MoR (limited to maximum 50%) and concerned state governments to undertake rail infrastructure works
JVs with PSUs	→	Project specific subsidiaries (SPVs) with equity participation from Public Sector Undertakings (PSUs), industries etc.
	→	PSUs to leverage free reserves/ equity for providing funds upfront for undertaking projects
Off budget debt	→	Assured funding of ₹1.5 lakh cr available through LIC; other similar options to be explored
RIDF	→	Proposed to set up Railways of India Development Fund - To tap sovereign wealth funds, insurance and pension funds
	→	Projects capable of servicing debt to be financed
	→	Funds to be available for MOR, Rail SPVs, PPPs etc
Internal process reforms	→	Merge plan heads to facilitate greater flexibility in allocation of capex
	→	Pool all available resources from budgetary support and internal surplus for financing capex including replacements and renewals
Multilateral funds	→	Continue to source funds from World Bank, JICA, ADB, AIIB etc. as required
CSR	→	Create a mechanism for pooling and utilizing CSR funds from corporates
Holding Company	→	Seek approval and set up a holding company to give Railways access to disinvestment receipts of its PSUs



INFRASTRUCTURE UPGRADATION

SUB-THEME

INITIATIVE

DESCRIPTION


 Accelerate
 Infrastructure
 buildout

Rail Planning and Investment Organization

Prioritize and fast-track project development of financially viable as well as socially desirable projects through a central Rail Planning and Investment Organization (RPIO)

Improve rate of construction

From ~7 to 14 km per day through better-quality DPRs (e.g., quality expertise and use of cutting edge technology, such as Light Detection and Ranging), financial empowerment of field executives

Contracting Process improvement

EPC/turnkey contracting and sophisticated project management systems, rigorous monitoring through technology

Review contract conditions in line with best practices

Expedited electrification

Complete electrification of 4000 km of track in the next 3 years

DFCs

Set up a strong project review mechanism to ensure completion of Eastern and Western DFCs by 2019

Complete the planning of the new DFCs and commence execution

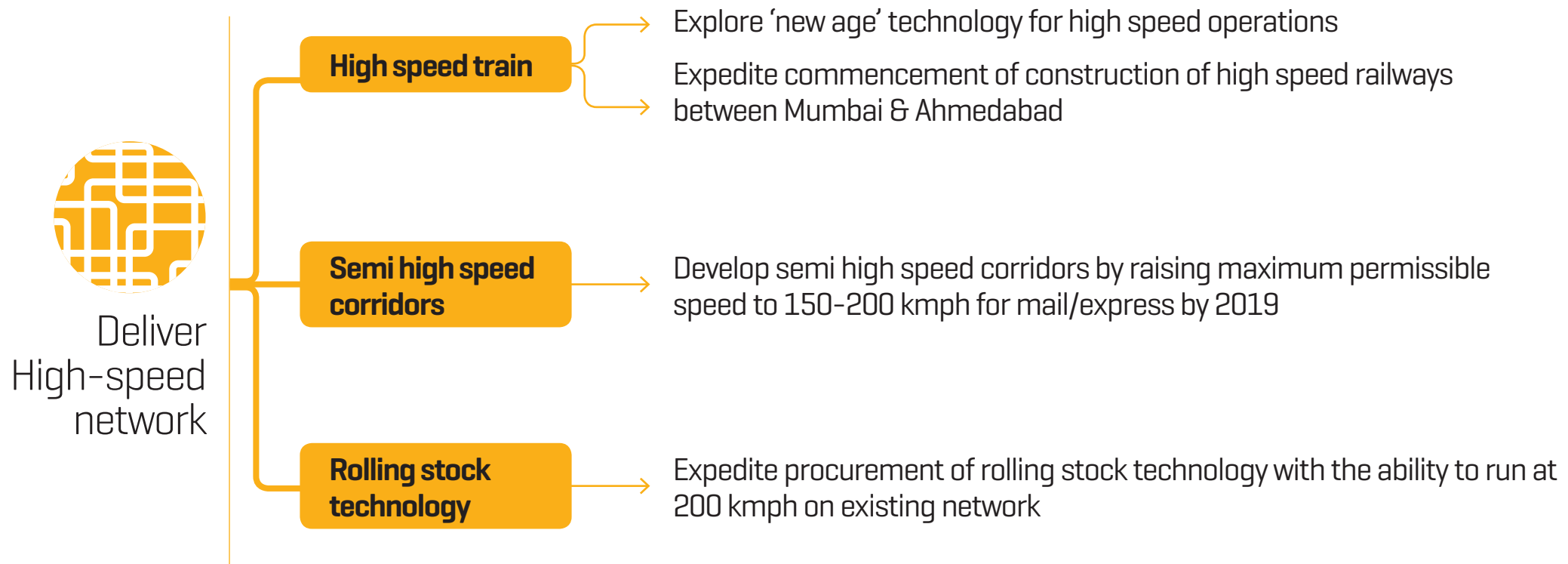


INFRASTRUCTURE UPGRADATION

SUB-THEME

INITIATIVE

DESCRIPTION

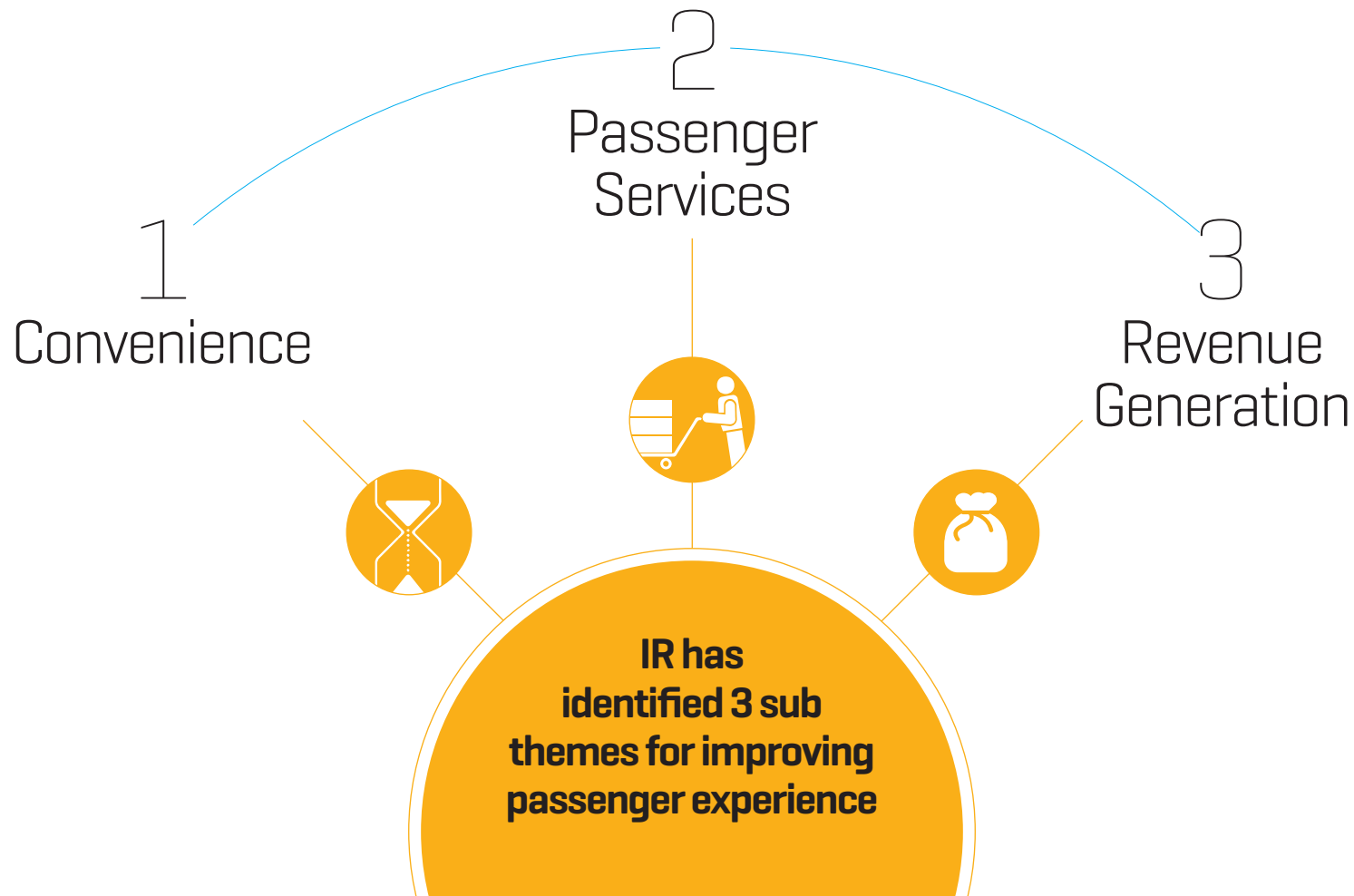




PASSENGER EXPERIENCE

Ensure every train journey for Indian citizen is a pleasurable experience:

Fundamentally redefine the customer value proposition by positioning key metrics like cleanliness, convenience, punctuality and service orientation





PASSENGER EXPERIENCE

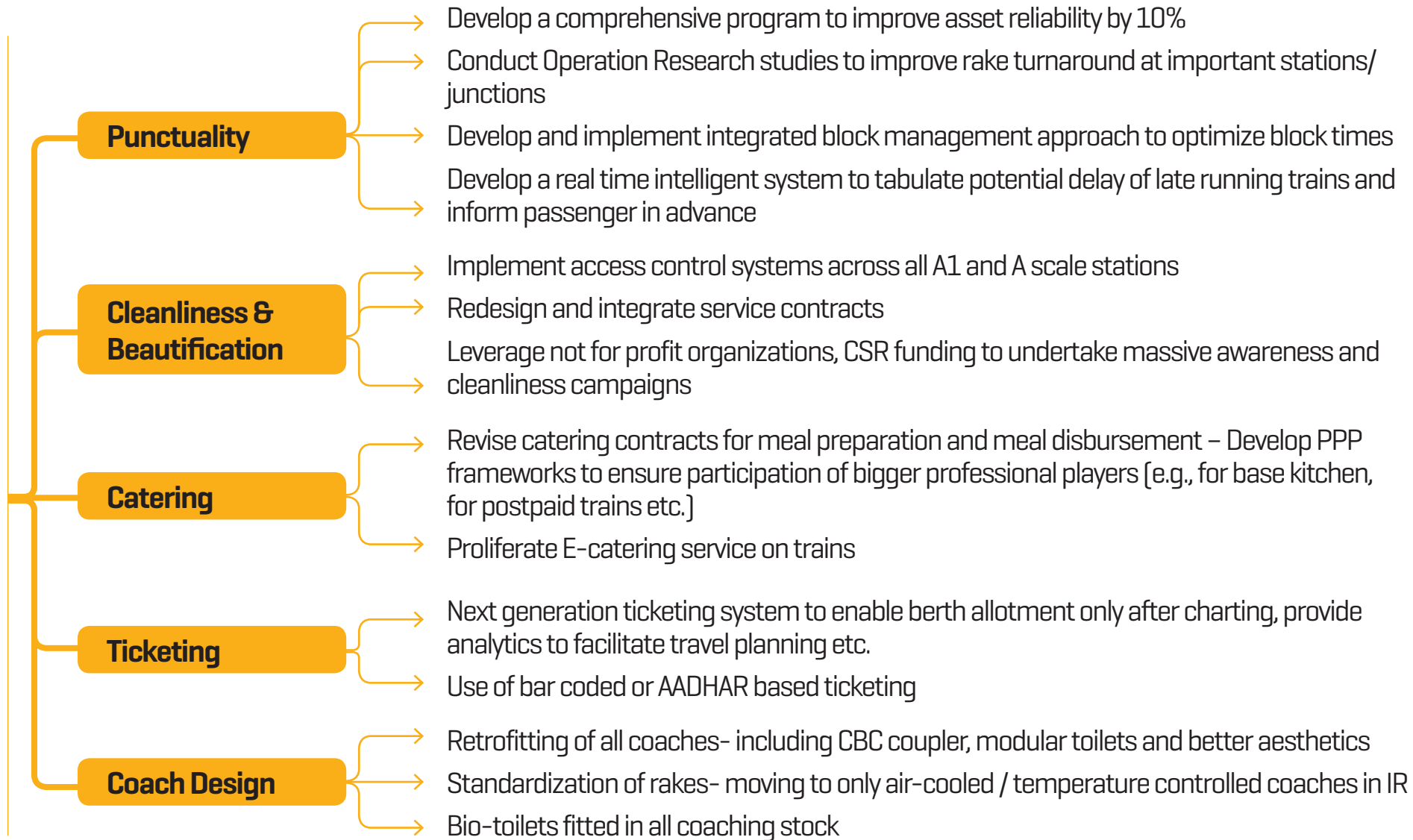
SUB-THEME

INITIATIVE

DESCRIPTION



Convenience





PASSENGER EXPERIENCE

SUB-THEME

INITIATIVE

DESCRIPTION



Passenger services

Mobile apps


Integrated app to provide all Railways affiliated services including ticketing, taxi etc

Passenger feedback

Hire third-party for every division/zone to continuously undertake passenger feedback representing fair percentage of passengers travelling
Develop an integrated metric for passenger satisfaction and make this metric as the basis for payment of service contracts

Complaint redressal

Develop an integrated dashboard for receiving and processing complaints from various channels including online



Revenue generation

User-fee

Develop a user fee model for select stations/passenger services to supplement the funds available from internal revenue generation for development of passenger amenities at stations

Price strategy

Develop an inflation indexed pricing model for various segments / train products
Making passenger services financially self-sustainable

Analytics

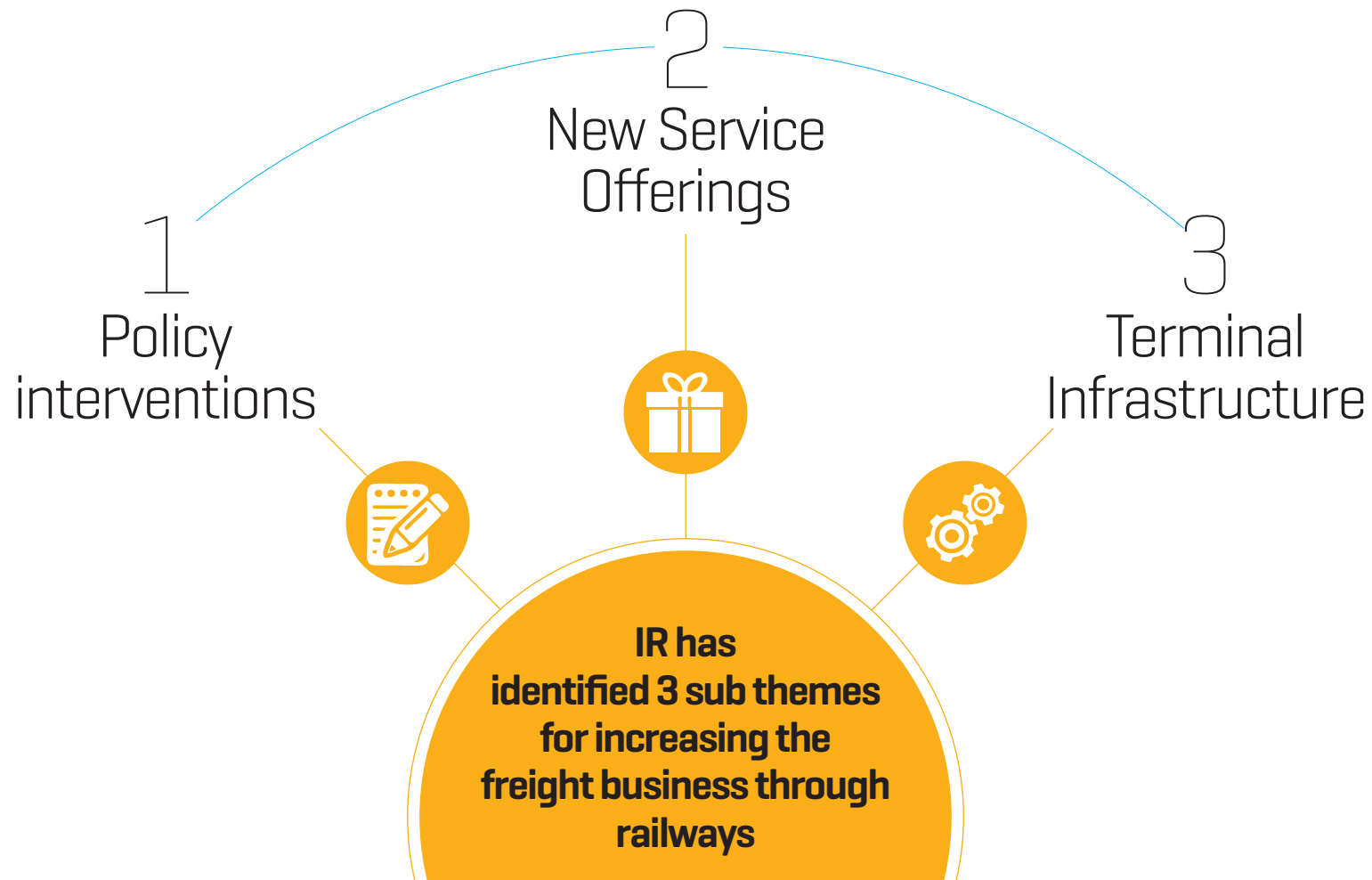
Conduct analysis on suburban, reserved an unreserved passenger flows to identify interventions which would help enhance passenger revenues



PREFERRED FREIGHT CARRIER

Make Indian Railways the preferred freight carrier in India:

Improve modal share to 37% in 10 years through dynamic pricing, key account management, expanding the freight basket and incorporating a customer focused approach





PREFERRED FREIGHT CARRIER

SUB-THEME

INITIATIVE

DESCRIPTION



Policy intervention

Digitalized Operations

Develop a road map to digitalize operations across Indian Railways including setting up of SUTRA

Pricing Strategy

Redefine freight pricing model to incorporate route utilization, transit time assurances, type of service offering, market dynamics, etc.

Time Tabled Structure

Develop the roll out plan to offer time tabled freight services

Organizational changes

New organizational structure which is more market oriented and possesses rigorous analytical horsepower



New Service Offerings

End to end service

Implement end-to-end integrated transport solution for selected commodities through partnership with national road logistics player

Domestic Cargo

Conduct accelerated trials for new service models e.g., Dwarf containers to capture domestic cargo market

Rolling Stock Design

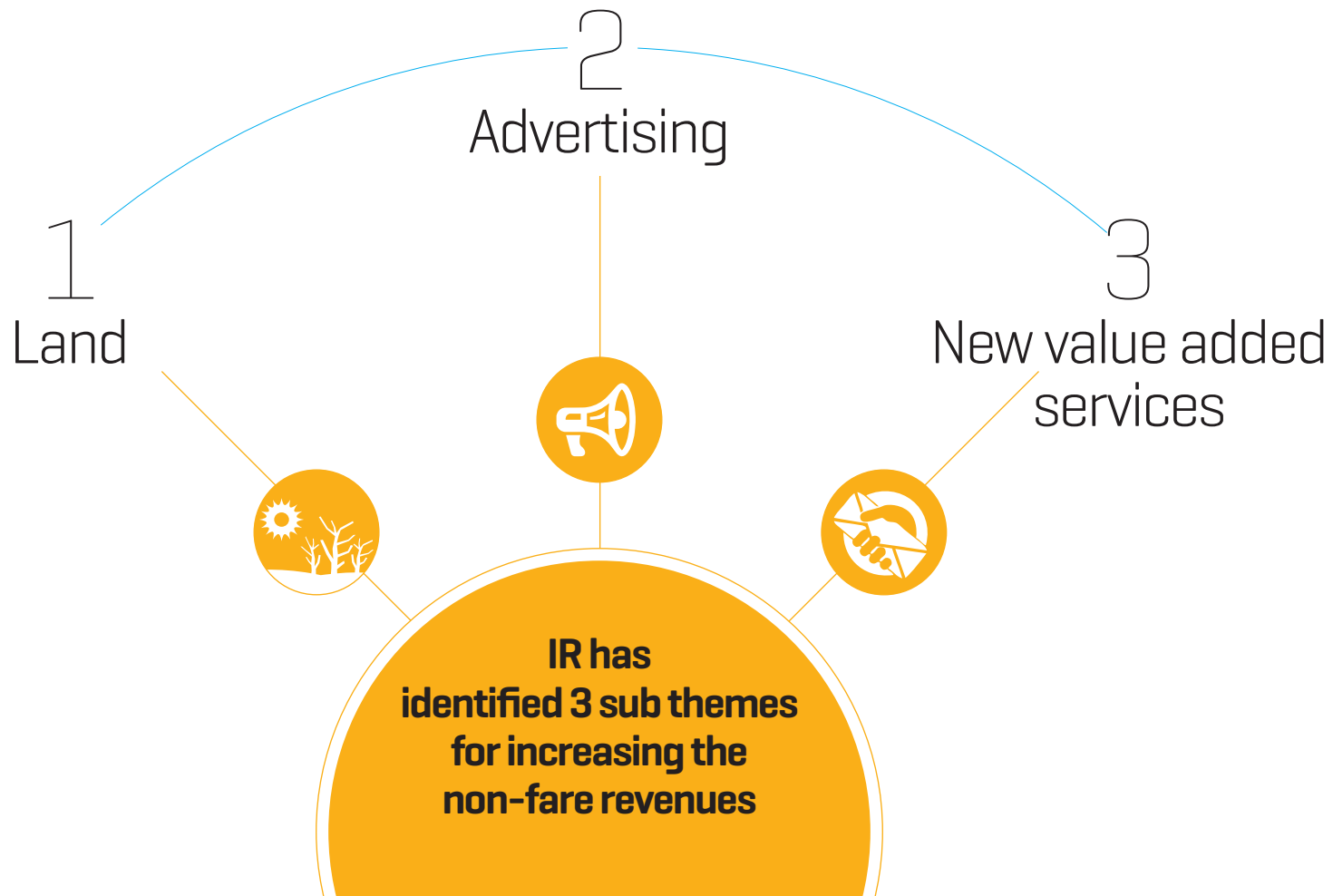
Develop 3-4 new rolling stock design which would help capture new commodity traffic



NON-FARE REVENUES ENHANCEMENT

Looking beyond fare: Dramatically improve non-fare revenues through advertising and real estate development:

Increase non-fare revenues to at least 15% in 5 years by fully redeveloping at least 100 stations, getting full potential from advertising, and other innovative measures to monetize lands and other assets and services





NON-FARE REVENUES ENHANCEMENT

SUB-THEME

INITIATIVE

DESCRIPTION



Land and Buildings

Monetize land parcels

Prioritize 30 most profitable land parcels & monetize them in the next 2 years

Shifting of Goods Sheds from City Municipal Area

Shifting of Goods Sheds from City Municipal Areas and Use of Released Prime Land for Real Estate Development : developed into a modern commercial / hospitality complex

Development of Satellite Passenger Terminals

Development of Satellite Passenger Terminals through Monetization of Land Assets : satellite terminals can be developed through the real estate development route

Station Redevelopment

Expedite the program to redevelop stations leveraging many approaches e.g., PPP including Swiss challenge, collaborations with MoUD, State Governments, Nomination to PSUs etc



NON-FARE REVENUES ENHANCEMENT

SUB-THEME

INITIATIVE

DESCRIPTION



Rail Display Network

Set up 2 lakh screens across 2,175 stations, to build a dedicated platform for not only adverts but also passenger information

Out of Home Advertising

Develop a liberalized policy framework to encourage participation of bigger professional players in advertising in Indian Railways

Train and Station Branding

Develop and implement policy framework for branding of trains and stations

Monetization of Soft Assets

Maximizing the revenues from all digital and soft assets of IR e.g., Apps, Websites



Create a separate parcel business unit

Hive off a separate business unit to handle parcel business
 Professional handling of cargoes | Smooth booking experience | End-to-end solution

Smart Cards

Smart Cards - Cashless Digital Railways : open loop Smart Card, outsource fare collection, paper ticket can be printed from ATVM/booking counters

Entertainment and other VAS for Passengers

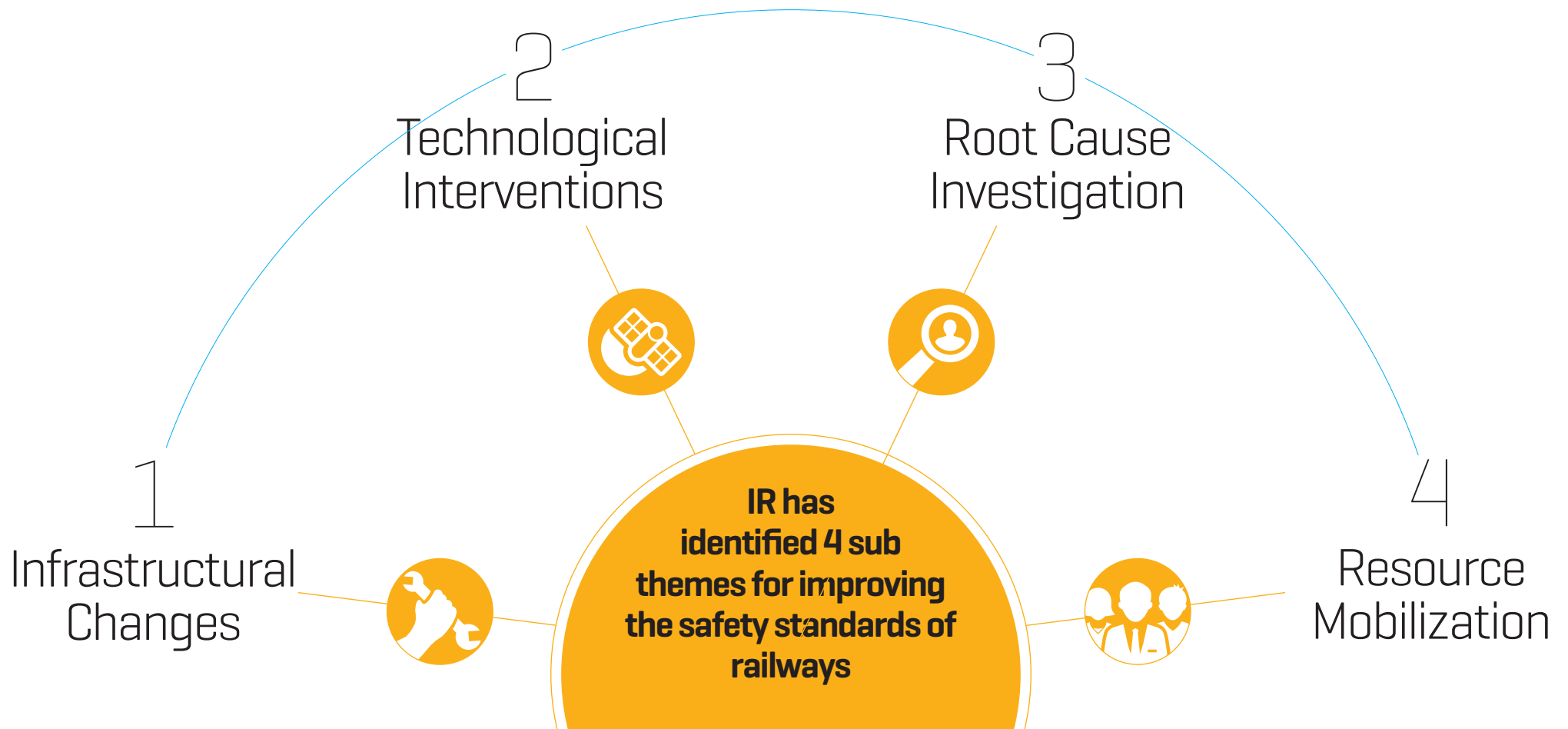
Develop and implement a framework for providing onboard entertainment to passengers



ZERO FATALITY

Move towards near zero fatalities on Indian Railways:

Leverage technology, infrastructure upgrades and training to move Indian Railways to near zero fatalities in 5 years





NEAR ZERO FATALITIES

SUB-THEME

INITIATIVE

DESCRIPTION



Infrastructural changes

Eliminate unmanned crossings

Eliminate all unmanned level crossings on the broad gauge network in the next 3 years and provide alternative paths (e.g., RUBs/ROBs)

Improvement in Rolling Stock

Minimize fatality impact of accidents by upgrading rolling stock to be more accident-resistant e.g., CBC couplers, increasing crash worthiness

Accelerate Track Renewal

Expedite renewal of overdue tracks of 5100 km and ensure absence of backlogs in future



Technological Interventions

TCAS/TPWS

Implement TCAS/TPWS technology across the high density network in the next 3 years

Broken Rail detection

Shortlist the technology with in the next 3 months and then plan for implementation across the high density network in the next 3 years

Monitoring of Rolling Stock

Implement onboard condition based monitoring and online monitoring for rolling stock

Flood Warning System

Flood Warning System at Major Bridges and Flood-affected Locations: Float Generated SMS/ Signal System at Bridge, Inclinometer - SMS/ Signal System at embankment, SMS sent when danger water level reached

TRINETRA

Technology to facilitate enhanced mobility during fog



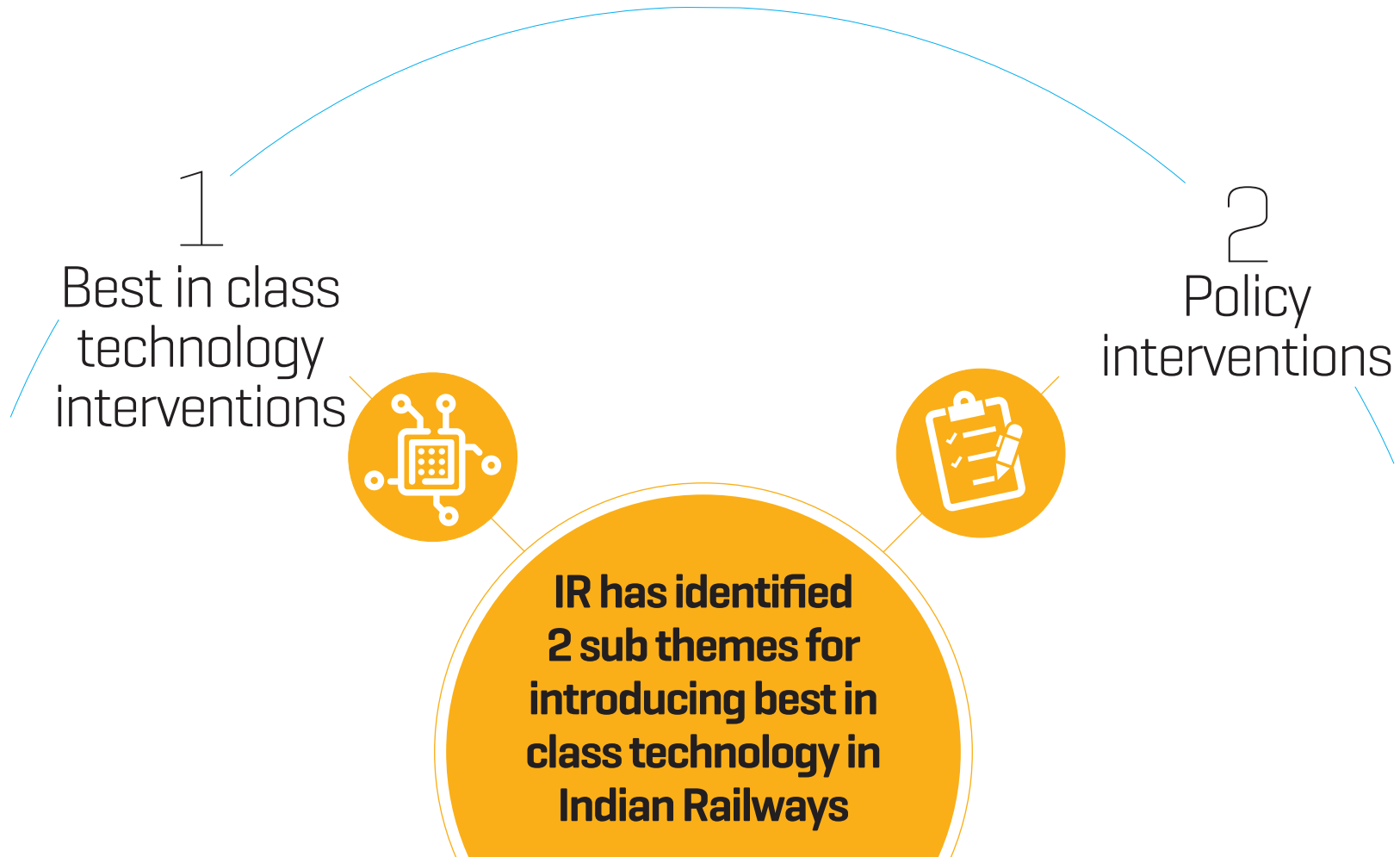
NEAR ZERO FATALITIES

SUB-THEME	INITIATIVE	DESCRIPTION
Technological Interventions [contd]	Neuroscience Approach to Minimize Deaths due to Trespassing	Displaying horror/ frightening signboards to break overconfidence and status quo biases, Provision of reference points on train exterior helping in judging size and speed of trains at bare landscapes, Enhanced trespasser alertness by erecting whistle boards prompting drivers for two short bursts instead of one long
 Root Cause Investigation	Dedicated investigative team	Strengthen root cause investigation by establishing a dedicated investigative agency team with external experts and capabilities
	Tracking all accidents	Commence tracking of all accidents and fatalities that take place on the system
	Open reporting culture	Encourage open culture of reporting even near-misses via safety training for all staff and a revised penalty system
 Resource Mobilization	RRSK	Proposed to set up INR 120,000 Cr. Special Railways Safety Fund to undertake safety related work Fund to be provided by contributions from MoF and internal resource generation from IR
	Innovative Funding	Develop frameworks for innovative funding of Safety projects e.g. Annuity, Asset Upgradation etc.



MODERNIZATION BY DIGITIZATION & CUTTING-EDGE TECHNOLOGY

Modernize Indian Railways by using best-in-class technology: Evaluate root causes for Indian Railways sedate progress in adopting best in class technology and determine 5-6 strategic shifts





MODERNIZATION BY DIGITIZATION & CUTTING-EDGE TECHNOLOGY

SUB-THEME

INITIATIVE

DESCRIPTION



Best in class technology interventions

ERP

→ Launch Pan-IR Enterprise Resource Planning (ERP)

Wireless corridor

→ Ultra high speed wireless corridor along IR's network

Heavy haul trains

→ Heavy haul trains to improve bulk- freight business

High Speed trains

→ Reinvent passenger business by introducing high speed trains (350 kmph) from current highest speed of 160 kmph



Policy interventions

Private Partnership

→ Develop a policy framework to jointly develop technological solutions for priority areas with a private player

New R&D org

→ Expedite setting up of SRESTHA, the new world class R&D organization

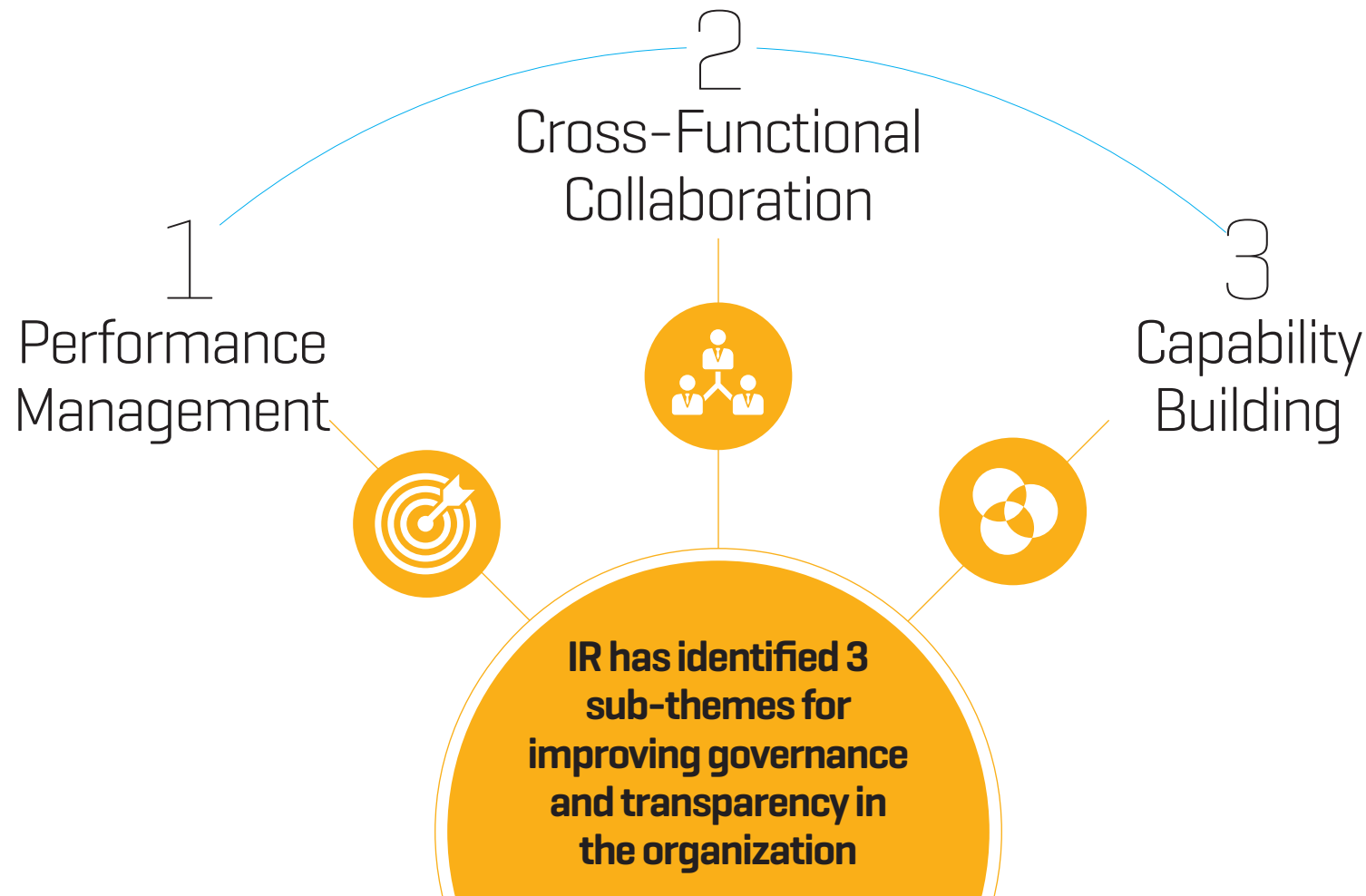
RDSO Overhaul

→ Identify key process interventions at RDSO and redesign the same to encourage participation by larger vendors



ORGANIZATIONAL CULTURE

Team Railways: Foster collaborative, agile and innovative culture in railways: Learn from other railways and internally to come up with big shifts to foster collaborative, agile and innovative railways – create a roadmap to make it happen





ORGANIZATIONAL CULTURE

SUB-THEME

INITIATIVE

DESCRIPTION



Performance Management

Outcome based performance management

Redesign performance management system to be outcome-based and encouraging initiative taking by employees e.g., KRAs for key posts



Cross-Functional Collaboration

Cross departmental exposure

Earmark 25% posts above Junior Administrative Grade in each department for a job rotation scheme to be manned by officers from other departments
Mandate cross-departmental exposure as a condition for promotion above Senior Administrative Grade



Capability Building

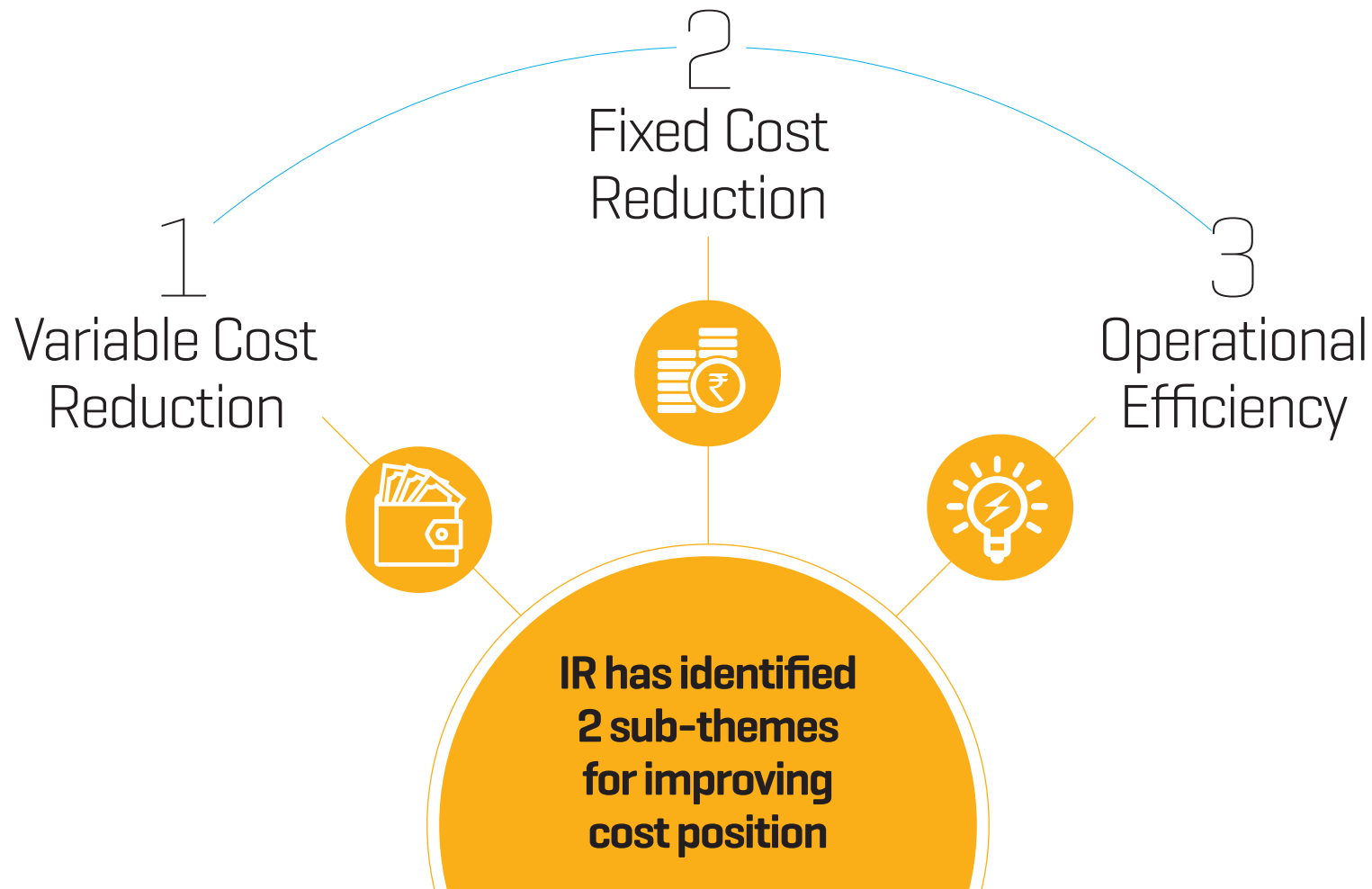
Redefining Training

Redesign training module for key management positions to make them more pertinent and useful
Setup Railway University
Provide customer centric training to all front line employees



COST FOCUS

Significantly improve cost positions across functions : Aim to reduce operational cost by 10% in 5 years





COST FOCUS

SUB-THEME

INITIATIVE

DESCRIPTION



Variable Cost Reduction

Reduce fuel cost

Reduce fuel cost by 20% through accelerating electrification & strategic procurement of diesel

Fuel cost saving in Diesel Locomotives

Open sourcing of power to ensure reduced per unit costs

Procurement efficiency

Retrofitting of AFEK [Advanced Fuel Efficiency Kit] and Guidance for Optimized Loco Driving [GOLD] module in 4400 nos. Vehicle locomotives. Total fuel savings of 8-10%

Conceive a rigorous program to achieve procurement efficiency for the top 10 spend items in Indian Railways besides fuel



Fixed Cost Reduction

Adoption of EOTT in IR

Expedite replacement of Goods Train Guard by installing End of Train Telemetry (EOTT) system

Right sizing of IR

Right sizing can be done at optimum manpower reduction rate of 3% [attrition rate] by multi-skilling, redeployment and intake reduction. Various skills can be bundled into same roles.



Operational Efficiency

Accounting Reforms

Expedite implementation of accounting reforms to ensure co-relation between input parameters and organisational outcomes

Asset utilization

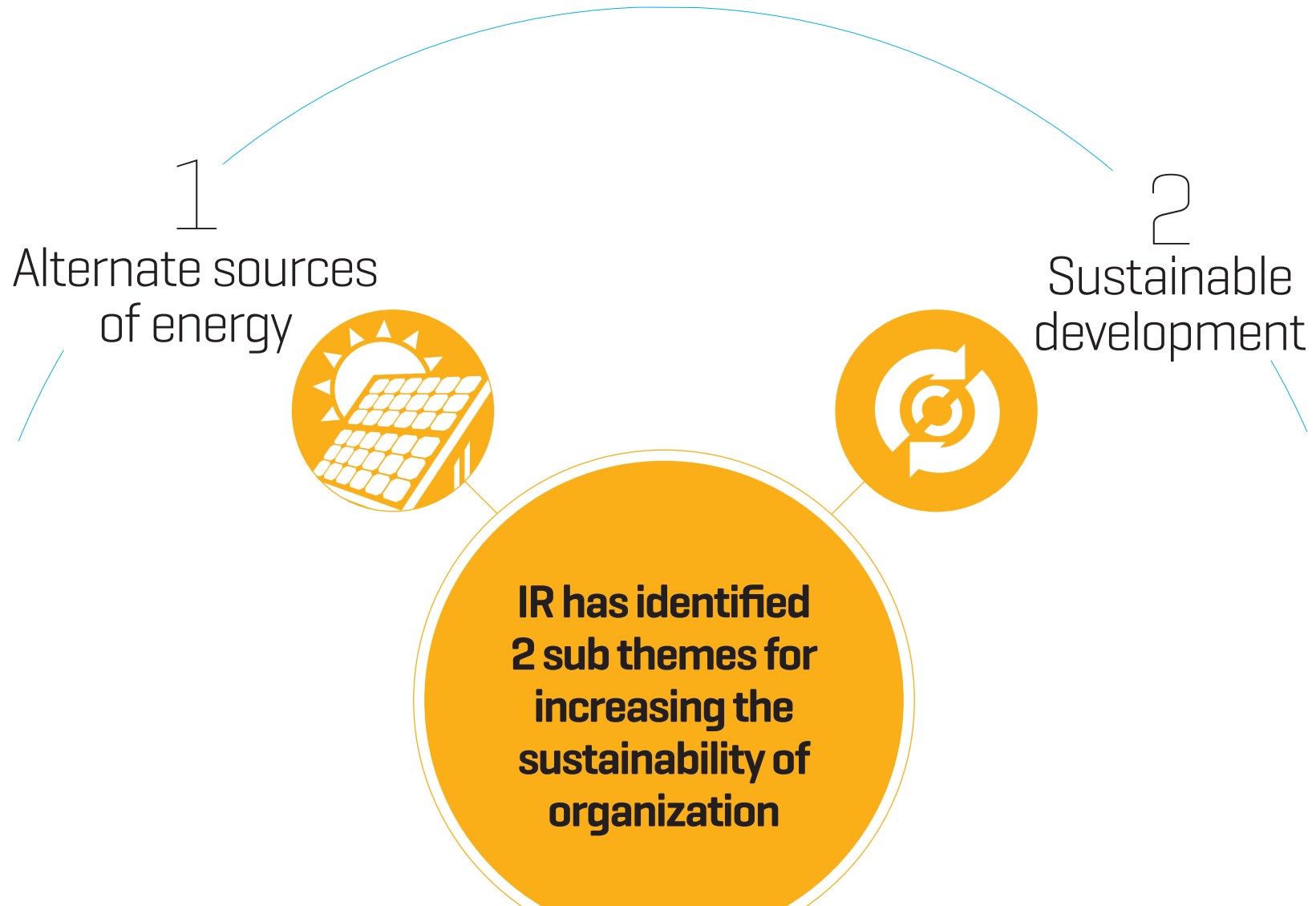
Conceive and implement a program to enhance asset utilization for priority assets e.g., Rake turnaround at stations, Wagon utilization, Coach utilization

Regulatory

Set up a regulator to not only recommend passenger and freight fares but also give productivity benchmark for IR to meet



SUSTAINABILITY





SUSTAINABILITY

SUB-THEME

INITIATIVE

DESCRIPTION



Alternate sources of energy

Solar and wind energy powered trains

Commission 1000 MW of solar energy over 5 years
Commission 130 MW of wind energy

Railway land lease

Target to plant 5 crore trees over land leased out for horticulture

Development of industrial unit

Convert all production units and at least one workshop in each zonal railway as green industrial unit

Generate electricity savings

Install LEDs to reduce electricity consumption
Cover all railway stations with LED luminaries

Outsourced Goods sheds

Rainwater harvesting on roofs larger than 200 sq. meter
Install discharge free railway bio toilets in all coaches



Sustainable development