



Accounting Reforms Project  
On Indian Railways  
“Mission Beyond Book keeping”  
Right accounting- Right Costing- Right Outcome

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## We carry both freight & passenger traffic

Freight carried – 1.165 billion tons/p.a. (4<sup>th</sup> largest in the world)

Passenger carried – 23 million /day (largest passenger carrier in the world)

No. of trains per day -13,000 passenger trains, 8,000 freight trains

No. of stations – 8500

No. of employees – 1.3 million approx

Annual earnings- INR 1,88,998 cr (USD 29 billion appx) (BE 2017-18)

Annual Expenditure- Rev– INR 178,350 cr (USD 27 billion appx) (BE 2017-18)

Capex- INR 131,000 cr (USD 20 billion appx) (BE 2017-18)

Capex breakup - GBS- INR 55,000 cr, Internal Resources- INR 14,000 cr, EBR- INR 40,000 cr,  
PPP- INR 22,000 cr

# We transport bulk commodities



## ➤ Indian Railways carries

- 70% of Coal
- 87% of Fertilizer
- 81% of Iron ore
- 42% of Cement
- 17% of POL
- 20% of Foodgrains



# Need for 'Accounting Reforms'



Complete, realistic and current information for managerial and strategic decisions

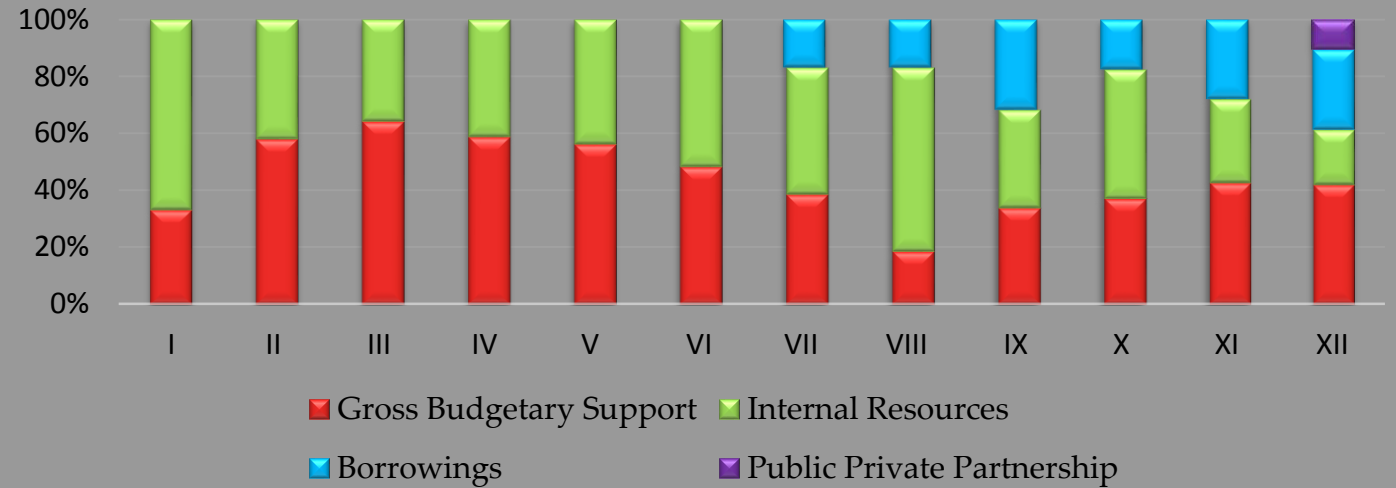


Paramount need for responsive and reliable costing framework



Meeting the funding challenge

## Plan funding since independence



From VII Plan onwards, debt has been bridging the funding gap

Accounting reforms would help in making Indian Railways' finances self-sustainable

# Accounting Reforms Project- overview



## Accrual Accounting

**Rollout of Accrual Accounting on All Indian Railways**

**Preparation of Accrual based Financial Statements (FS) in addition to existing Cash Based FS**

**Article 150- Form and substance of Accounts as per advice of C&AG**

## Performance costing

**Pilot Study of Existing Costing System and development of Upgraded Costing System**

**Measure costs, revenues & profitability of each activity/ line of business/ line of service**

## Outcome Budgeting

**Pilot study on Outcome Budgeting**

**Development of design framework linking outlays with outputs and outcomes**

# Accrual Accounting



- Implementation undertaken in association with **ICAI-ARF - CA Atul Gupta** as Mentor.
- Modus Operandi:
  - Pilot scale implementation at one ZR and Production Unit under **Grafting method**
  - Scaling up to transaction based accrual accounting
- **Documents released in National Conference held on 20-12-2016 at Vigyan Bhawan by Hon'ble FM and MR:** Opening Balance Sheet of NWR as on 31-03-2014; Financial Statements for year ended 2014-15 – Balance sheet, Statement of Profit and Loss, Cash Flow Statement, Accounting Policies and Notes to Accounts
- Key Findings:
  - CWIP of Rs. 2,102 Crore segregated
  - Assets Count of 63000 – of which for 13000 values not available – taken at Nominal Value of Re. 1
  - Depreciation – Rs. 499 Crores (Whereas appropriation was only Rs. 291 Crore)
  - Outstanding Lease Liability of Rs. 2,271 Crore identified
  - Capital commitment of Rs. 11,274.70 Crore identified
  - Actuarial liability of Rs. 28253 Crore identified
  - Findings and Way Forward shared with C&AG and CGA also.

# Actuarial Liability and Net Worth



## Actuarial Liability as on 31.03.2015

S. No.	PARTICULAR	AMOUNT (IN CRORES)
1.	GRATUITY	1,707
2.	EARNED LEAVE	1,250
3.	MEDICAL	1,277
4.	PENSION	23,907
5.	COMPOSITE TRANSFER GRANT	111
	<b>TOTAL</b>	<b>28253</b>

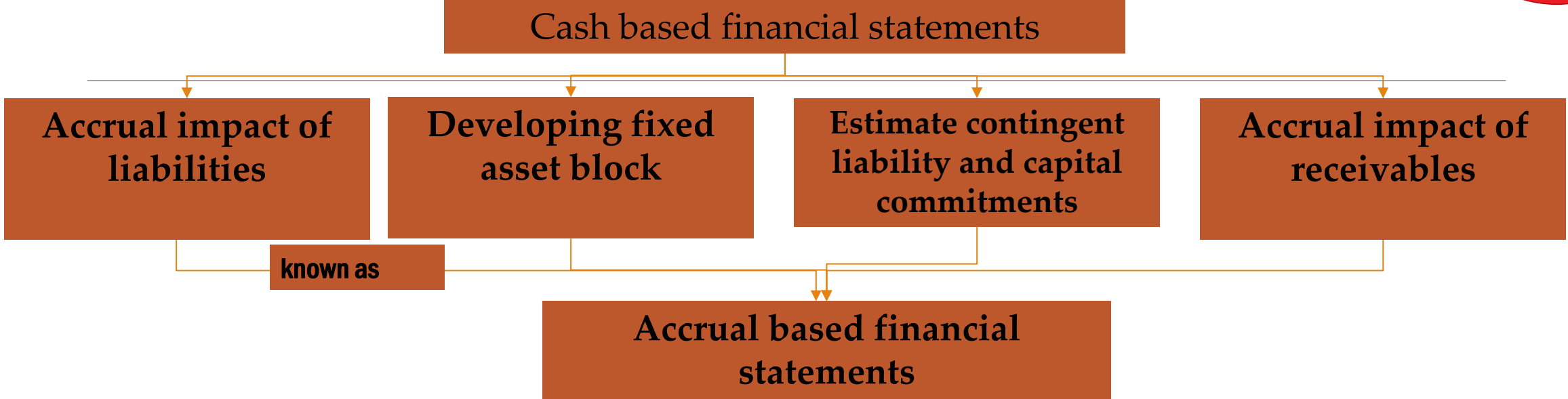
## Net Worth of North Western Railway (NWR) as on 31.03.2015

S. No.	PARTICULAR	AMOUNT (IN CRORES)
1.	TOTAL ASSETS	23,648
2.	CURRENT LIABILITIES	(9,961)
3.	NON-CURRENT LIABILITIES	(3,912)
4.	NET WORTH	9,775

\*Actuarial Liability is not provided in the Financial Statements as on 31<sup>st</sup> March 2015



# Accrual accounting- Process (Grafting Method) from cash to accrual system





# Accrual Accounting



- Expert Group under CA Amarjit Chopra, Chairman, National Advisory Committee on Accounting Standards (NACAS) finalised IR's standard Accounting Policies.
- Position in various countries and industry viz National Rail Road Passenger Corporation (Amtrak)/US, Australian Rail Track Corporation, Kiwi Rail Holdings Ltd, China Railway DMRC and KRCL referred.
- **Following Accounting Policies framed for Indian Railways**
  - Basis of Preparation of Financial Statements Purpose/Objectives,
  - Use of Estimates,
  - Fixed Assets Accounting,
  - Capital work in progress,
  - Depreciation, Provisions,
  - Contingent Liabilities and Contingent Assets,
  - Valuation of Inventories,
  - Revenue Recognition,
  - Lease Accounting,
  - Investments,
  - Retirement Benefits
- **These policies are being reviewed in line with IGFRS/ IPSAS**

# Accrual Accounting



- **Rollout of Accrual Accounting on all Indian Railways :**
  - ICAI-ARF is the channel partner.
  - Up-dated CSER and Implementation Manual circulated to Rlys to assist in Roll out.
  - **130+ CAs** assisting Railways all over India.
  - Details of **approx 20 lakhs fixed assets** being captured in **FARs**.
  - **18 categories of fixed assets** identified, viz, land, building, Track, Rolling stock, S&T, RE etc.
  - Details captured in **15-20 columns** for each asset
  - **Actuarial based assessment of Staff Benefit liabilities** towards **13 lakh+ employees and 15 lakh + pensioners** is being done through an Actuarial firm.
  - Web enabled IT Dashboard developed for collation and progress monitoring.
- **Capacity Building** : Webinars; Field training by CA Firms and Central team of ICAI-ARF; Training of Officers and Staff at NAIR/ Vadodara and C-TARA, Secunderabad

# Performance Costing



## Objectives:

- Design an information system with different access levels for categories of users to:
- Provide information about various costs in key performance areas viz. construction, augmentation, operations and maintenance.
- Measure performance of each activity/line of business and line of service.
- Measure costs, revenue & profitability of the following, but not limited to:
  - Passenger and freight traffic [for each class and each commodity]
  - Train, section, gauge, traction, route etc. including sub-urban train, EMUs, special trains, tourist/luxury trains etc.
  - Production Units, service units, utilities etc.
  - Zone, Division, field units etc.
  - Locomotive, coach, wagon etc.
  - Rail accidents & other abnormalities

# Performance costing- an integrated system



**Step I**

## Budget formulation

- Preparation of revenue and capital budget allocations

**Step II**

## Expenditure accounting

- Correlate detailed head of expenditure to activities/ functions

**Step III**

## ABC analysis

- Cost centre/ profit centre (line of business/ services) wise detail of expenditure, development of 'measurable' indices of performance

**Step IV**

## Costing per unit of output

- Unit cost of delivery of services, variance analysis, identification of cost cuts, money makers (or losers) and non value-adding activities

**Step V**

## Outcome budgeting

- Measurable outcome to ensure accountability

# Outcome Budgeting



- **Objectives:**
- Outcome Budgeting aims at developing a design framework linking outlays with outputs and well defined outcomes in the areas of operation, maintenance, safety, throughput enhancement, route decongestion, productivity gains, asset optimization etc.
- **Pilot Studies:**
- Pilot Studies initiated on NR and SCR.
- Possible outcomes identified under Capex:
  - Capacity (Asset)- Creation , Utilization , Reliability
  - Customer Related- Safety , Punctuality/Speed , Customer experience
  - Key Internal processes- PACE , Sustainability / Cost Reduction , Productivity
- Interaction with Niti Ayog for refinements to the OB framework of Ministry of Railways Outcomes.
- A team of three Central Council Members namely **CA Atul Gupta, CA M.P. Vijay Kumar and CA K. Sripriya** nominated by ICAI for assisting in the Pilot Study.

# Outcome Budgeting



	Input	Activity	Output	Outcome	Impacts
Mission					Mission objectives
Initiatives			Aggregated outputs (as applicable)	Outcomes	Initiative level impacts
Individual program/project	Inputs	Activities	Output	Program specific outcomes	Program specific impacts

Implementation monitoring

Outcome monitoring

Impact evaluation

Monitoring is real time (or near real time) progress tracking for reporting and decision making

Evaluation is identification and reflection of what went wrong, what went right, trends, root causes. learnings

Data collection, trend analysis, best practice gathering

Impact



# Challenges/ Solutions

Challenges	Solutions
Non- availability of cost	Where the cost data not available, assets were valued at Re. One.
Non- availability of Date/Year of acquisition	<ul style="list-style-type: none"><li>• Where only year of acquisition was available then 1<sup>st</sup> April of that year was considered as date of acquisition.</li><li>• Where neither date nor year was available in this case it was considered that life of that has been expired.</li></ul>
Non- availability of useful life/codal life of Buildings, Railway track, Roads/streets and furniture & fixtures	Codal life of Building, Tracks, Roads, Furniture and Fixtures were determined by AR directorate in due consultation with ICAI ARF.
Administrative issues	Resistance to Change

# Special solutions



Category of Assets	Challenges	Way Forward
<b>LAND</b>	<ul style="list-style-type: none"> <li>• Historical data was not available in respect of Date of acquisition;</li> <li>• Non existence of record for financial data of land.</li> </ul>	<ul style="list-style-type: none"> <li>• As land is a non depreciable assets, therefore for the preparation of financial statements cumulative value of the land taken from the Block Account of Railway.</li> </ul>
<b>RAILWAY TRACKS</b>	<ul style="list-style-type: none"> <li>• Consisting of several component having different useful life;</li> <li>• Cost data of each and every component was not available;</li> </ul>	<ul style="list-style-type: none"> <li>• A track valuation methodology developed based on Track Estimates;</li> <li>• Track classified into 4 part for the purpose of FAR</li> <li>• Physical data obtained from the Track Management System;</li> <li>• Cost data obtained from the Railway Board (For Rails and Sleeper) and Divisions (For Ballast)</li> <li>• Codal life of Rail, Sleeper and ballast is taken route wise.</li> </ul>
<b>ROLLING STOCK</b>	<ul style="list-style-type: none"> <li>• Rolling stock consisting of owned assets and Leased Assets;</li> <li>• Non existence of bifurcation of owned assets and leased assets;</li> </ul>	<ul style="list-style-type: none"> <li>• Data of leased Rolling Stock obtained from the IRFC to compute the lease liability;</li> <li>• Data of Rolling stock obtained from the Zonal Railways to prepare Fixed Assets Register.</li> <li>• Life of rolling stock obtained from Railway Codal Provisions ( Finance code volume I).</li> </ul>



# Way Ahead



- Grafting method to Transaction based accrual accounting
- IT integration
- Actuarial based assessment of Staff benefit liabilities
- Assessment of accounting depreciation based on useful life of assets
- Capacity building & Hand holding
- Line of Business/ Line of service wise costing
- Outcome Budgeting
- Right Accounting — Right Costing — Right Pricing — Right Outcomes



*THANK YOU*