



EXECUTIVE SUMMARY OF ACCOUNTING REFORMS IN INDIAN RAILWAYS





I. Project Background

A. ACCOUNTING SYSTEM IN GOVERNMENT OF INDIA:

Government accounting system in India, in all three tiers of Governance, i.e., the Union, States and Local bodies including Autonomous or Statutory Bodies, is pre-dominantly on Cash based Accounting system. The basic principles of government accounting are enunciated in the General Financial Rules and other related legislations, manuals, etc. In recent times, there has been a paradigm shift in the priorities of public finance management from identifying resources of public finance management to fiscal prudence, efficiency and transparency in public spending. These shifts in priorities have been reflected in initiatives such as the *Fiscal Responsibility & Budget Management Act* and Outcome Budget. It is felt that there is a need for Financial Reporting to be in sync with the shift in priorities of Public Finance. In order to achieve this, Accounting systems the world over are being revisited with an emphasis on transition from rules to standards based Accounting and migration from Cash to Accrual based system of Accounting.

B. BENEFITS OF ACCRUAL ACCOUNTING SYSYTEM

Accrual Accounting provides meaningful information both for accountability and decision-making. Financial information prepared on an accrual basis allows users to:

Gain deeper understanding of managing resources.

Make better/balanced comparisons between alternative dispositions of resources; Make a better evaluation of performance in terms of service costs, efficiency and accomplishments;

Gain clearer insight

into how to finance

activities;

Make a better assessment of performance, financial position and cash flows of the entity; Benefits of Accrual Accounting System

Make a better evaluation of the ongoing ability to finance activities and to meet liabilities and

commitments;

II. ACCOUNTING REFORMS IN IR

Accounting Reforms envision a much larger canvas in IR, treating Accrual Accounting as a means to achieve an enterprise wide focus on performance and cost parameters derived from the wealth of data resident in the accounting system. The budget announcement of 2015-16 identifies three broad functional areas of Accounting Reforms which are as under:

A. Introduction of Accrual Accounting:

The worldwide trend of shifting from Cash based Accounting to Accrual based Accounting is a key building block in progress towards the broader context of public sector Accounting Reform. The primary objectives of Accrual Accounting are:

- i. Improved decision-making to enhance efficiency and effectiveness of public spending through the creation of more accurate and accessible financial information.
- ii. Improved resource allocation due to a better insight into costs of policy and transparency of results.

B. Performance Costing, by making available online availability of costing data:

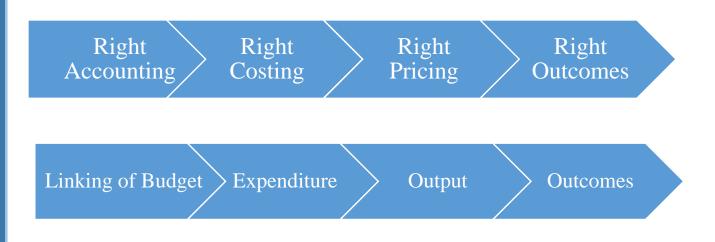
Reforms in the area of system of Accounting i.e. introduction of Accrual Accounting would no doubt give a true and fair picture of IRs financial position and bring about transparency in the way it represents its accounts. However, lasting benefits would accrue to the system by identifying appropriate cost and profit centres and allocating costs to them in a seamless and system driven architecture. Once the costs and benefits become available in a timely manner, management decisions of pricing, efficiency measurement, and investment priorities would automatically acquire a measure of objectivity that eludes the system presently.

C. Outcome Budgeting i.e. tracking of expenditure to desired outcomes:

A further step in achieving a holistic transformation would be provided by adopting Outcome Budgeting at the core of which lies the philosophy of linking outlays to outcomes. Thus before outlays are committed, well defined outcomes in areas of operations, maintenance, procurement and infrastructure creation would be identified.

All the above three reforms form an integrated approach to Accounting Reforms in IR. This was highlighted in the budget speech of Hon'ble Minister for Railways in 2016-17 wherein he stated that right accounting would determine right costing and hence right pricing and right outcomes.

Vision of Hon'ble Minister of Railways



Mission beyond book keeping

Source: Para 121 (f) of Budget Speech 2016-17

"Being a Government undertaking, IR does not follow practices in accounting which aid detailed assessment of unit costs. Though we are moving from single entry to double entry systems and from cash based to completely accrual based accounting, I do not consider them as great reforms. As a thriving commercial entity, we also want IR to go a step further and establish an accounting system where outcomes can be tracked to inputs. This is a structural change which forms the bedrock of our transformation, as right accounting would determine right costing and hence right pricing and right outcomes. We intend taking up its implementation over Railways in a mission mode and complete the entire roll out in next few years."

Source: Para 88 of Budget Speech 2015-16

"Madam Speaker, we have limited resources and thus must ensure that all public expenditure results in an optimal outcome. We, therefore, intend to set up a working group to modify the present system of accounting, to ensure tracking of expenditure to desired outcomes. The data on costing would be available online including costs incurred on constructing, augmenting, maintaining and operating railway lines. This would also help in undertaking post commissioning evaluation studies."

III. FUNCTIONAL AREAS OF ACCOUNTING REFORMS IN IR:

ACCRUAL ACCOUNTING

- 1. Existing Accounting system in IR: Indian Railways, being a Government Department, primarily maintains its Finance Accounts under Cash based Government Accounting in the form and format mandated by Controller General of Accounts and the Comptroller and Auditor General of India. However consistent with the mandate given by the Separation Convention to IR in 1924, to become self-sufficient in Financial Management, IR evolved its own classification of Accounts and moved towards a hybrid system of Accounting by adopting a few aspects of Accrual Accounting through Link Accounts. Linkages of Accrual Accounting were provided by means of Suspense Heads viz. Traffic Suspense, Stores Suspense, Demands Payable etc. to capture the accrual impact of revenue, stores and establishment transactions. To this extent, the Accounting system of IR is distinct from that of the Government of India.
- 2. **Proposed system of Accounting in IR:** Ministry of Railways have periodically examined the existing Accounting System of Indian Railways with a view to improve the quality of financial reporting. However, a decisive thrust towards Accrual Accounting has been provided by the Hon'ble MR, articulated through his Budgets in 2015-16 and 2016-17. As a result, transition to Accrual Accounting has been adopted as one of the Mission areas aimed at transforming the financial and operating landscape of IR.

The central theme in Accrual Accounting involves recording financial transactions in the accounting period in which they accrue and arise, whether or not a receipt or payment occurs. In contrast, Cash basis of accounting records revenue and expenditure only when the money is received or paid out. Thus the main difference between Accrual and Cash basis of Accounting is the timing of the recognition of revenue and expenses.

A. PERFORMANCE COSTING

1. Existing system of Costing in IR: The present system of Cost Accounting at the Zonal Railways is carried out by the Traffic Costing Branches. It comprises of preparation of

costing returns related to passenger, parcel, luggage and goods train services on the basis of performance (physical and financial) parameters. These returns are consolidated and further analysed at the Statistics and Economics Directorate of Railway Board. Further at Railway Board, costing of some new and special trains is carried out as per the provisions of the statistical manual. In addition, unit costs of certain field activities is computed based on statistical data collected from the Zonal railways and published in a book titled Annual Statistical Statements. However the existing costing system in IR has certain limitations which are as follows:

- a. The basis of costing is on a fully distributed cost principle and not variable cost which enables and facilitates marginal costing for dynamic price fixation
- b. The cost data and cost reports are available after a lapse of over one year.
- c. The bases of apportionment of joint costs were fixed long time back and need a review and updation.

Proposed System of Costing in IR:

As per the budget announcement 2015-16 it is proposed to make available costing data online in key performance areas such as construction, augmentation, maintenance, operation and post asset commissioning evaluation. The idea is to capture costs online and apportion them activity wise into lines of business and lines of service so as to measure their profitability. It is endeavored to conduct activity based unit costing.

Indian Railways – Lines of Business / Services Network (Tentative concepts under discussion)

| Primary Lines of Business/Service | Ancillary Lines of Business/Service | Maintenance & Support Services | Administrative & Other Services | Zonal Railways / PSUs |
|--|---|---|--|---|
| To Provide Passenger Services • Suburban • EMUs • Non-suburban • Mail/Express/ Superfast Trains • Rajdhani Trains | To Undertake Construction & Augmentation Activities New Lines (Construction) Gauge Conversion Doubling Yard re-modeling Road safety - level crossings; road over/under bridges Track renewals Signalling and telecom works | <i>To facilitate</i> <i>Operation of Trains</i> • Track • OHE System • Signal System • Telecom Network • Stations • Terminals <i>To Extend Yard</i> | Administrative Services Railway Board Engineering Electrical Mechanical Signal & Telecom Environment & House Keeping Mgmt. | Central Eastern East Central East Coast Metro, Kolkata Northern North Central North Eastern Northeast |

| • Electrification projects | facilities for | o Finance/Budget | • North |
|---|---|---|--------------------------------|
| o Janshatabdi Trains | loading/unloading | Statistics & | Western |
| • Gribrath/Yuva To Undertake | and temporary | Costing | Southern |
| Trains | storage of goods | Human Resources | South Central |
| • Duronto Trains • Deposit Work | storage of goous | o Health | South Eastern |
| • Tourist Trains • PPP Projects | • Yards | o Traffic | South East |
| • Special Trains • CSR Projects | | o Safety | Central |
| • Special Hill Trains | To Maintain Tracks | o Stores | • South |
| To Produce Rolling Stock | & Rolling Stock | o Security | Western |
| Class of Services | | o Vigilance | • Western |
| • Production Units | Workshops | o Legal | West Central |
| • AC Sleeper • CLW, Chittaranjan | • Sheds | • Official Language | |
| • AC 3 Tier • DLW, Varanasi | • Depots | • Computerization | |
| • Sleeper Class • ICF, Chennai | - | & IT | |
| (M&E) • RCF, Kapurthala | | • Planning & | |
| • Second Class • RWF, Bangalore | To Provide | Infrastructure | |
| (M&E) • MCF, Rae Bareli | Administrative & | • Public Relations | • IRFC |
| • Sleeper Class • DLMW, Patiala | Other Services | • Other Units & | • CONCOR |
| (ordinary) o RWP, Bela | A. 1. 1. 1 | Research | • RITES |
| • Second Class • Locomotives | • Administrative | Centres | • IRCON |
| (Ordinary) o Diesel | Services | RDSO, Lucknow | • DFCCIL |
| • AC Chair Car • Electric | Research Facilities | o CORE, Allahabad | • Railtel |
| • Executive Class | Training Institutions | NF Railway | • IRCTC |
| • Coaches | • Other Institutions | (Construction) | • RVNL |
| <i>To Provide Parcel</i> 0 1A – First class AC | Autonomous Bodies | o COFMOW, New | • MRVC |
| & Freight Services 0 2A – AC two tier | Zonal Railways | Delhi | • KRCL |
| \circ 3A – AC three tier | | o IROAF, Delhi | |
| Parcel & Luggage O 3E – AC three tier (economy) O CC – AC chair car | | Contral Part | |
| Services • CC – AC chair car • EC – Executive class chair car | | Centralized | |
| • Freight Services – O Double Decker | | Training | |
| transport goods o SL – Sleeper class | | Institutions | |
| | | • NAIR, Vadodara | |
| | | • IRICEN, Pune | |
| Concert | | IRIEEN, NasikIRIMEE, | |
| o Cement | | | |
| • Food Grains • New types of coaches | | Jamalpur o IRISET, | |
| • Fertilizers • Petroleum & • Wagons | | • IRISET, Secundrabad | |
| | | IRITM, Lucknow | |
| | | o JRARPF, | |
| | | Lucknow | |
| Other Goods O Flat Wagons O Refrigerator Vans | | | |
| o Tankers | | • Other | |
| o Containers | | Institutions | |
| | | o Railway | |
| | | Recruitment | |
| | | Boards | |
| | | Railway Rates | |
| | | Tribunal | |
| | | • Railway Claims | |
| | | Tribunal | |
| | | Autonomous | |
| | | Bodies | |
| | | o CRIS | |
| | | o RLDA | |
| | | |] |

B. OUTCOME BUDGETING

1. Existing System of Budgeting in IR: The budgeting exercise in IR is closely linked to the Accounting structure where the budget is provided in accounting heads of expenditure in Revenue and Capital.

The budget is allotted as per production plan, traffic plan, growth/trends of expenditure and earnings and other factors. The capital budget is segregated into Plan heads based on generation of Internal Resources, Budgetary support, IRFC's loan and extra budgetary resources. Work wise allocations are made through Pink Book.

2. Proposed system of Outcome Budgeting in IR: The current thinking on Outcome Budgeting is to determine Outcomes at various levels viz. Organisational, Zonal and Divisional and link them to the Capital and Revenue Budgets. While the Capital Budget Outcomes viz. throughput enhancement, route decongestion, safety, productivity gains, asset optimization, skill development, capacity building, knowledge management, employee engagement etc. can be linked to the mission areas identified by the Hon'ble Minister for Railways in Budget Speech 2016-17 viz. Mission Raftaar, Mission Zero Accidents etc. the Revenue Budget Outcomes can be identified, demand wise, as enhancement of safety, efficiency etc. However, these concepts will have to be evolved through inter disciplinary teams formed at various levels which would determine the Outcomes expected from both Capital and Revenue budgets. Similarly, identification of Lines of Business/Lines of service/cost/profit/responsibility centres would also evolve through the mechanism of multi-disciplinary teams.

It is to be noted that unlike the area of introduction of Accrual Accounting which is largely the domain of the Accounts Department, introduction of Performance Costing and Outcome Budgeting mandates an inter departmental approach. This functional aspect of Accounting Reforms requires formation of multi-disciplinary teams cutting across all departments, to identify the cost centres, outputs and outcomes.

IV Present Status of reforms in the three functional areas:

ACCOUNTING REFORMS: Phase I

A. ACCRUAL ACCOUNTING:

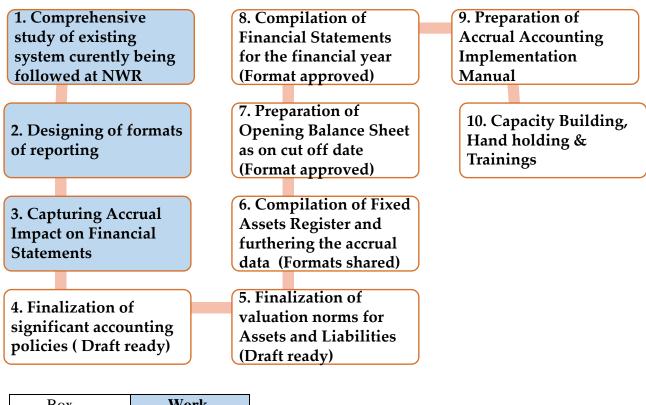
1. Ministry of Railways has engaged the Accounting Research Foundation of the Institute of Chartered Accountants of India (ICAI ARF) to conduct a pilot study at North Western Railway for introduction of Accrual Accounting in a Zonal Railway. A similar exercise has been initiated at RCF/Kapurthala with the aim to introduce Accrual Accounting and an upgraded Costing system in a Production Unit. Pilot study in NWR is likely to be completed by August 2016 and that in RCF/Kapurthala by December 2016. This would be followed by Rolling out of Accrual Accounting across all Zonal Railways and production units. It is endeavoured to roll out Accrual Accounting in Zonal Railways by September 2017 and that in Production Units by January 2018. During the Pilot studies at NWR/Jaipur and RCF/Kapurthala the financial statements of the Zonal Railway/Production Unit would be prepared for the year 2014-15 which would inter alia include the P&L Account, Balance Sheet and Cash Flow statements of the entire North Western Zone/ RCF Kapurthala.

2. METHODOLOGY ADOPTED IN PILOT STUDIES:

ICAI ARF is preparing the financial statements of NWR and RCF/Kapurthala on grafting basis, i.e. based on existing financial statements with some additional information in respect of accrual elements. Same strategy will be adopted in preparing financial statements of other Zonal Railways and Production Units during the roll out phase. However it is proposed to work in parallel to extend the online accounting software by creating capabilities for preparing financial statements by capturing data on accrual impact on transaction basis, so as to eliminate the lag in conversion of existing accounts to the desired format. Both the methods would require building up a detailed Chart of Accounts which would map the existing Cash based accounts to the proposed Accrual Accounts. Whereas in the grafting methodology the mapping would be done at the account current level, in the transaction based methodology mapping would be done

at the allocation level. Both the methodologies would require development of an IT based application for which CRIS has been identified as the IT partner.

3. ROADMAP OF NWR PILOT STUDY:



| Box | Work |
|-------------|-----------|
| Highlighted | Completed |

4. Brief overview of the Comprehensive Scope Evaluation Report (CSER)

As a part of the pilot study at North Western Railway, a Comprehensive Scope Evaluation Report (CSER) has been prepared by ICAI ARF. The CSER has been designed to address the task of bringing together, in a detailed manner, all the components of the existing accounting system. CSER presents a detailed description of the existing accounting system for recording and processing of revenue and capital receipts and revenue and capital expenditure. It also prescribes formats for capturing of data relating to fixed assets, current assets, current liabilities required for the purposes of accrual accounting. CSER also provides mapping of the existing processes and identifies the gaps that exist in the present system from the perspective of accrual based

accounting, and the impact those gaps might have on the proposed double entry accounting system. CSER outlines the changes required for the implementation of accrual accounting and also lays down the way forward for implementation of Accrual Accounting.

Objectives of CSER:

- i. Bringing together in a detailed manner all the components of the existing accounting system and the prudence and propriety of the existing system;
- ii. To present a detailed description of the present accounting system for the purpose of recording and processing of revenue receipts, capital receipts, revenue expenditure and capital expenditure;
- iii. To present detailed internal organization chart of Finance and Accounts department;
- iv. To present flow of data/information in respect of all kind of assets and liabilities and also the validity thereof.
- v. To present the methodology for converting cash based financial statements into accrual based financial statements and roadmap to achieve.

Scope of CSER:

- i. Project Background
- ii. Approach and Methodology
- iii. Observations on Existing Accounting System
- iv. Gap Analysis
- v. Proposed Accounting System
- vi. Way Forward plan for Implementation of Accrual Accounting which would further enable preparation of opening Balance Sheet as on 1st April, 2014 and the Financial Statements for the year 2014-15 on accrual basis. The financial statements include the P&L Account, Balance Sheet, Cash Flow statement, notes to accounts and Significant Accounting Policies.

5. FIXED ASSET REGISTER:

In order to prepare the Balance Sheet of NWR/Jaipur the Fixed Asset Register of the Zone is under preparation. Project Team categorized the fixed assets of Indian Railways and based upon categorization, designed the formats for collecting information relating

to Fixed Assets for the purpose of compiling Fixed Assets Register (FAR). These formats are primarily designed on the basis of FAR formats of National Municipal Accounting Manual and some other Government departments/organizations.

- i. Land (FA-1) Details of all land belonging to IR will be given in this format. Land may be vacant or any temporary construction made on it. If land is taken on lease same should also indicated in relevant column. Where assets such as buildings, roads, bridges, etc., are constructed on land, all land should be shown under the head'Land'.
- Building (FA-2) Details of all buildings such as office building, station buildings, workshop, etc., will be given in this format. Each building is required to be identified separately.
- iii. Bridge/Tunnel/flyover/Subways (FA-3) Details of all bridges, tunnel, flyover, FOB is required to be given here.
- iv. Roads/Streets (FA-4) Details of all roads will be given in this format. However detail of land on which road is constructed is to be given under the details of Land.
- v. **Railways Tracks (FA-5)** Details of all Railway Track belonging to IR will be given in this format.
- vi. **Tracks Components (FA-5A)**–Track components are required to be replaced periodically. Details of the replaced components whose useful life is more than one year, is required to be given in this format. It may be noted that details of those component which are lying in stores and not used on Railway Tracks will be given separately.
- vii. **Furniture & Fixtures (FA-6)** Details of all furniture and fixtures will be given here. Furniture and fixtures include:
 - a. Tables
 - b. Chairs
 - c. Almirah
 - d. Safe
 - e. Refrigerators
 - f. Invertors
 - g. Coolers, etc.

viii. Office Equipment (FA – 7) – Office equipment includes the following:

- a. Scanner
- b. Photostat machine
- c. Projectors
- d. Telecom equipment, etc.
- ix. Vehicles (FA-8) Vehicles include both heavy vehicles as well as light motor vehicles viz. trucks, staff bus, cars, jeeps, two wheelers, etc., However, if vehicles are taken on lease/hire, details are not required to be given.
- x. Plant, Machinery & Equipment (FA-9) Plant, machinery & equipment includes any plant and machinery which is being directly used by IR in connection with providing services. For example, machinery used in workshop for repair and maintenance of Loco/Coach/Wagons, machinery used for construction of tunnels, etc.
- xi. **Computers & Peripherals (FA-10)** Computers and peripherals include the following:
 - a. Computers
 - b. Laptops
 - c. Printers
 - d. Networking equipment/servers, etc.
- xii. Medical Equipment (FA-11)-Equipment specially used for medical purposes.
 Details of all such equipment will be given in these formats such as equipment used in hospitals.
- xiii. Loco/Coach/Wagon (FA-12) Details of all coaches, locos, wagons belonging to IR will be given in this format.
- xiv. Capital Work-in-Progress (FA-13) Details of any civil construction or otherwise in progress and not completed till reporting date will be given in this format. However, it may be noted that any minor work such as white washing, flooring, etc., which is just a part of repair and maintenance is not a capital work.
- xv. **Plant, Machinery & Equipment (Signal) (FA-14)** All equipments/machinery which are being used for signalling purpose will be mentioned in this format.
- xvi. Plant, Machinery & Equipment (Telecom) (FA-15) All equipments/machinery which are being used for telecom purpose will be mentioned in this format.

- xvii. Electric Equipment Fittings (FA-16) Details of electrical equipment like power stations, DG sets, motor pump, etc., required to be given in this format.
- xviii. Intangible Assets (FA-17) Intangible assets will also become part of fixed assets. Intangible assets include copyrights, trademarks, software, etc., Details of any such assets owned by IR will be given in this format.

6. DETAILS OF FIXED ASSET REGISTER:

- i. **Description:** In this column description of asset in prescribed format is required to be mentioned. For example, in case of details of furniture, description will be that table, chairs, almirah or safe, etc.
- ii. **Cost of acquisition/construction**: Cost of acquisition shall also include, in addition to the cost incurred in acquiring/constructing the said assets, costs incidental to the acquisition/construction. For example, in case of acquiring land, cost of registry would also be part of cost of acquisition.
- iii. **Cost of improvements**: Any cost incurred for improvement of assets, which results in increasing life or utility of asset, should be considered as an improvement cost.
- iv. **Date of acquisition**: Date of acquisition is the date on which the property was legally vested. For instance, in case of civil structure date of completion would be taken as date of acquisition while in case of other assets such as office equipment, furniture etc., actual date of purchase would be taken as date of acquisition.
- v. **Mode of acquisition**: Mode of acquisition is required to be explained. For example if asset is received as gift than its mode would be 'Gift', if it is constructed than its mode of acquisition is 'constructed,' etc.
- vi. From whom acquired: Name of person/institution from whom the asset is purchased.
- vii. **Reference of available title documents:** It has to be ensured that all the relevant documents like title deeds, contracts, invoices, etc., are available. A reference of the same would also be provided in the formats in the prescribed column. If documents are not available then same is also required to be given.
- viii. Codal Life of Assets/Normal useful life: Useful life of assets is the period of time over which an asset is expected to be used by the entity. Determination of

useful life of assets is not an easy job. It requires technical knowledge and experience as well. In, IR life of assets has been prescribed in the Indian Railway Finance Code Vol. I. Life of assets is required to calculate the rate of depreciation.

- ix. Fund Allocation Code: In Indian Railways, there are many sources of funds for acquiring/constructing new assets, e.g., DRF, Capital fund, RSF, etc. Source of fund, out of which asset is created, is required to be mentioned,.
- Rate of Depreciation: Depreciation rate which is used for depreciating the asset.
 For example, if we are using straight line method (SLM) and the life of assets is 10 years with no salvage value, the rate of depreciation shall be10%.
- xi. Accumulated Depreciation: Accumulated depreciation is depreciation from the date of acquisition to the balance sheet date.
- xii. **Net book value/Written down value:** This value will be derived after deducting accumulated depreciation from the cost of acquisition.
- xiii. **Remarks:** If any other thing which is required to be given in respect of any asset then same may be mentioned in 'Remark'. For example – pending litigation in respect of any asset, any unauthorised use or encroachment on the assets, assets for condemnation, etc.

7. VALUATION METHODOLOGIES FOR ASSETS

Generally, as per the GAAP fixed assets shall be valued at 'historical cost', i.e., at the value originally paid for it, but in practice, these values may not be readily available. This is especially so in the case of older units of the IR where assets were acquired some 50 or even 100 years ago. Valuation of assets in such case is more difficult. There are many things which are relevant for the valuation of assets like expiry of useful life, availability of cost, etc. So it is advisable, that valuation of assets where cost is not available should be made according to methodology given in IGFRS 2 on property, Plant and Equipment. These IGFRS are issued by GASAB for the purpose of accrual accounting and are recommendatory in nature for all Government Department that are shifting from cash based system of accounting to accrual based accounting system.

i. Valuation of Composite Fixed Assets

In some cases, a single asset may comprise several components of different nature.

Where each of these assets have been purchased/constructed separately, their attributable cost, i.e., purchase price and incidental costs or the cost of construction, as the case may be, of each asset should be capitalized under the respective account head. However, if the composite asset has been acquired for a consolidated amount, such amount should be apportioned among the various components of the assets on a reasonable basis, i.e., in the proportion to their respective market prices on the date of acquisition.

ii. Valuation of Land in Indian Railways

All the land under the ownership or permissive possession of IR (like land taken on perpetual lease), received from other Government agencies, shall form part of the opening Balance Sheet;

- a. All land will be recorded at the purchase price paid/payable and other incidental costs such as registration charges incurred to bring the asset to its present condition. Original cost of any improvement to land such as land development and land filling shall be capitalized as part of the cost of the land forming part of approved capital project.
- b. In case where the original documents are not available, valuation can be done on the basis of value mentioned in the records of Land Revenue Department or on the basis of transaction value of a similar plot in the similar area around the estimated year of transaction.
- c. Leasehold lands acquired by the IR are taken as a part of assets at a total value payable as lease charges over the entire lease period and amortized/charged equally over the lease period. Initial premium paid should be capitalized and amortized/charged over the lease period. However, annual lease charges/ground rent paid after capitalization should be treated as revenue expenditure.
- d. If any land is acquired through compulsory acquisition, then same will be recorded at the total compensation paid/payable for the acquisition of the land. If the amount of compensation were in dispute, then the amount that will be recorded would be based on orders passed by the competent authorities. The

extra amount, if determinable that may be payable at a later stage, will be shown as contingent liabilities and will be added to the cost of land when it is finally determined to the previous owner.

- e. If ownership of the any land has been transferred to the Indian Railways free of cost from Government/individuals or has been donated to the IR, then such lands would be recorded at nominal value of Re. 1/-. Any development work done on that land should be capitalized. However, nominal value of Re. 1/- is to be shown separately in the value column of the register.
- f. Where the ownership of the land has not been transferred in favour of the IR, but the land is in the permissive possession of the IR, such lands should be included in the Register of Land with Re. 1/- as its value. However, there should be a clear mention in the Register that in case the Government takes back the land at any point of time in future, reversal of entry shall be made in the Register of Lands. Cost of developing such lands, if any, should be charged to revenue at the time of giving back the possession of land.
- g. Where consideration has been paid by the IR but the ownership of the land has not been transferred in favour of the IR and the land is in the permissive possession of the IR, such lands should be included in the Register of Land with the cost of consideration as its value with a note in the 'Notes to Accounts' in the financial statements.
- h. If IR has purchased land from the government grants, then the cost of the land will be shown in the financial accounts at the net value i.e. cost paid/payable less grant received/receivable from the government.

iii. General Guidelines for Valuation of Building

Building also consist major portion of fixed assets. Generally building includes the following structures:

a. Residential buildings

- b. Commercial buildings including office buildings
- c. Rest house etc.

Apart from the general valuation principle applicable for assets, following specific norms with respect to valuation of buildings may also be followed:

- a. If building is purchased, then it should be valued at its purchase price and all other incidental costs such as registration charges and other cost incurred to bring the building to its present location and condition.
- b. If the building has been constructed by the IR, then the total cost of the construction will become part of its cost.
- c. If any grant whether directly or indirectly has been received by the IR for the Construction or purchase of the building, then the cost of the building will be taken at net amount, i.e., amount spent on the construction or purchase less the grant received/receivable.

iv. Capital Work-in-Progress

Capital work-in-progress (CWIP) is also a major category of Fixed Assets. This includes cost of constructing fixed assets before construction is substantially complete. The identification of an item of construction as CWIP means that the item is intended to be capitalized once it is complete. Following should also be kept in mind:

- a. CWIP is not recorded in any asset register. However, a separate CWIP register is maintained to record progressive bills for construction. The total expenditure on Capital Assets which are in the process of construction or near completion should be accounted for under the head CWIP. CWIP is valued at the amount of money spent and paid plus the amount of bills passed but not yet paid. However, upon completion asset is transferred to its respective head of account.
- b. No depreciation is charged on CWIP since the asset has not been put to use.
- c. Asset should be transferred from CWIP to fixed asset register, once asset is complete and put to use. It is advisable to review CWIP register regularly for such items.

v. Valuation of Infrastructure Assets

Infrastructure assets are those assets with the characteristics of being, a part of a system or network, specialized in nature and do not have alternative uses, immovable, and subject to constraints on disposal. In other words, they may also be defined as the assets associated with and generally arise from Government activities and are long-lived capital assets that normallyarestationaryinnatureandnormallycanbepreservedforasignificantlygreater number of years than most capital assets. Buildings, except those that are an ancillary part of a network of infrastructure assets, should not be considered as infrastructure assets.

The details of these infrastructure assets may be made available from the records maintained generally by the relevant department. The initial capitalization amount of the infrastructure assets should be based on historical cost. If determining the actual historical cost of these infrastructure assets is not practical because of various reasons such as inadequate records available, it should be recorded at the estimated historical cost for major general infrastructure assets. Infrastructure assets in Indian Railways are as under:

a. Roads

b. Flyover

- c. Subways
- d. Tunnels
- e. Railways Tracks, etc.

vi. Norms for Valuation of Infrastructure Assets

- i. All the infrastructure assets which are under the ownership and permissive possession of Indian Railways shall be accounted for.
- All the infrastructure assets should be recorded at historical cost. The cost of construction of these assets should include such items as cost of materials, labour costs and construction overheads.
- iii. If it is not possible to calculate the historical cost, then IR may estimate the current standard cost of a similar asset and deflating this cost through the use of

Cost Inflation Index (CII) till the acquisition year to calculate historical cost.

- iv. Land pertaining to Roads and Pavements, Bridges, Tracks, and Tunnel, etc., including the cost of development of land should be booked under 'Land'.
- v. If both the cost and date of construction/purchase are available then asset should be valued at original cost.
- vi. If neither the cost nor the date of construction/purchase of the asset is available then the valuation of the asset shall be taken at Re. 1/-, the same being considered as the residual value.
- vii. However, if the cost is not available/ascertainable but the date of construction is available and if the asset has outlived its estimated useful life then it shall be valued at Re. 1/-. The estimated life of the asset shall be calculated by the technically qualified engineers.

vii. Valuation of Intangible Assets

AS -26 describes "An intangible asset is an identifiable non-monetary asset, without physical substance, held for use in the production or supply of goods or services, for rental to others, or for administrative purposes". Intangible assets include software, patents, copy rights, goodwill, etc.

- i. The cost of an internally generated intangible asset comprises all expenditure that can be directly attributed, or allocated on a reasonable and consistent basis, to creating, producing and making the asset ready for its intended use.
- ii. However, if intangible assets is purchased then the cost of an intangible asset comprises its purchase price, including any import duties and other taxes (other than those subsequently recoverable by the enterprise from the taxing authorities), and any directly attributable expenditure on making the asset ready for its intended use. Directly attributable expenditure includes, for example, professional fees for legal services. Any trade discounts and rebates are deducted in arriving at the cost.
- iii. If an intangible asset is acquired in exchange for shares or other securities of the reporting enterprise, the asset is recorded at its fair value, or the fair value of the securities issued, whichever is more clearly evident.

viii. General Valuation Principle for Assets/other Assets

Following are the general valuation principle which will equally applicable for all assets:

- Every asset initially be measured at its cost (Historical Value) i.e., cost of acquisition. Following will also become the part of cost of the asset:
 - Cost of acquisition includes its purchase price, any import duties and nonrefundable purchase taxes. However, any trade discounts and rebates will be deducted;
 - Any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management;
 - c. The initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located, the obligation for which an entity incurs either when the item is acquired or as a consequence of having used the item during a particular period for purposes other than to produce inventories during that period;
 - d. Costs of site preparation;
 - e. Initial delivery and handling costs;
 - f. Installation and assembly costs; and
 - g. Professional fees directly attributable to the asset.
- However, following will not become the part of cost:
 - a. Costs of introducing a new product or service (including costs of advertising and promotional activities);
 - b. Costs of conducting business in a new location or with a new class of customers.
 - c. Administration and other general overhead costs.

- b. Where an asset is acquired through a non-exchange transaction, its cost shall be measured at its fair value as at the date of acquisition; (refer note 2 given below).
- c. Where determination of cost or fair value of any asset is difficult due to first time recognition under migration to accrual accounting, such assets should be value at nominal value i.e. Re. 1/- (refer note 3 given below).
- d. An asset may not have a determinable cost because of inadequate or non-existent record. For example, an historic building of national significance may have been acquired several hundred years ago and no record of its acquisition cost may be available. Similarly, an entity may have only recently adopted accrual accounting, prior to which it did not maintain any records of assets. Where an asset does not have a determinable cost, its fair value should be established as at the first reporting date it is recognized in the financial statements as an asset. If the fair value is difficult to determine, a nominal value of Re. 1/- may be taken for financial statements' purposes.

Note: All above are under finalisation

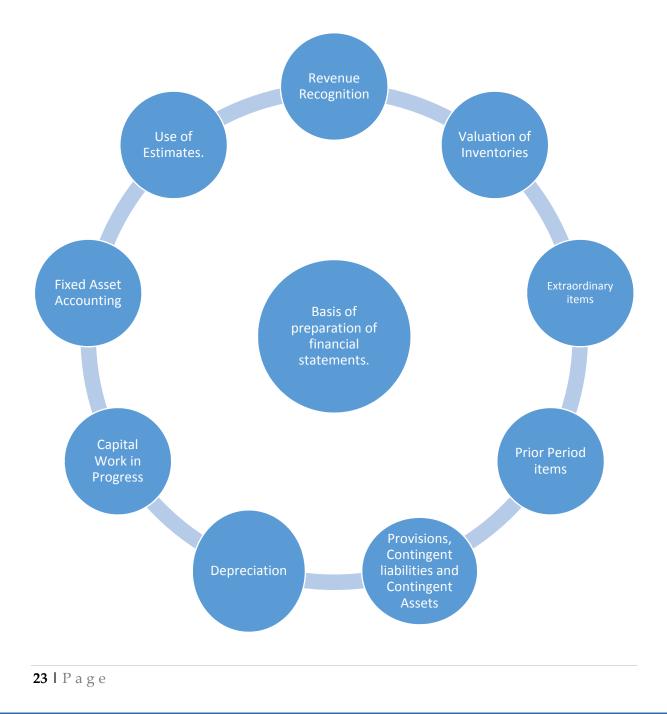
8. AREAS OF ACCRUAL IMPACT:

The CSER has also identified several areas of accrual impact which are hitherto not shown as current assets and current liabilities. Formats for capturing data about these accrual impact areas have also been devised. Once data is captured in these formats it will form part of the current assets and current liabilities in the Balance Sheet. A total of about 60 such areas have been identified, some of which are as under:

- 1. Work/measurement done but bill not received
- 2. Bill received but payment not made
- 3. Revenue received but service not provided
- 4. Employees liabilities viz. Pension
- 5. Demands payable, Salary payable
- 6. Advances to employees
- 7. Demands Recoverable
- 8. Inventory Closing stock

9. SIGNIFICANT ACCOUNTING POLICIES:

CSER has also highlighted the need for Significant Accounting Policies and Notes to Accounts based on the Generally Accepted Accounting Principles (GAAP) to enable conversion of the existing cash based system of accounting into accrual based system of accounting. An Expert group, comprising of senior professionals from the Central Council of ICAI ARF including the past President of ICAI and senior officers from IR, has been constituted to deliberate upon and finalise the Significant Accounting Policies that will form the basis of the accrual based financial statements of NWR. Some of the Significant Accounting Policies are as under:



ACCOUNTING REFORMS: Phase II

B. OUTCOME BUDGETING:

Ministry of Finance, Government of India has recently circulated guidelines for preparation of Outcome Budgets in January 2016. Outcome Budget 2016-17 will broadly indicate the physical dimensions of the financial budgets, as also the physical performance in 2014-15 and the performance till December for the year 2015-16 and the targeted physical performance during 2016-17. The Outcome budget will be prepared separately by each Ministry/Department in respect of all Demands/appropriations controlled by it, except those exempted from this requirement.

Though sufficient ground work has been done by IR towards introduction of Accrual Accounting, steps are underway towards the second phase of Accounting Reforms in IR i.e. Performance Costing and Outcome budgeting.

An Advisory Body and Working Group were established vide Railway Board order No. ERB-I/2015/23/41 dated 19-10-2015. ICAI was engaged to conduct a preliminary study and propose a draft concept paper on Outcome Budgeting in IR. A concept paper on this subject was drafted by ICAI and uploaded on the IR website for feedback from various stakeholders. A detailed integrated accounting framework is envisaged to be developed shortly with the assistance of professional agencies.

| ISSUE | REVENUE BASED OB | CAPITAL BASED OB |
|-----------------------------|---|--|
| Board level outcomes | To be defined annually from a base year | Can be adopted from targets set in Budget speech - 6 Missions |
| Cascading of target setting | IR -> ZR ->Div -> Section | IR -> group of ZRs / ZR ; also selectively -> Div. |

Tentative Concepts on Outcome Budgeting under discussion

| Period / Term of target setting | Annual ; carry forward only in exception | 3 – 5 years ; carry forward permitted |
|------------------------------------|---|---|
| Parameters of Target setting | Linked to Function wise targets | Linked to targets set for overall Mission outcomes. |
| Target setting increments | Year on Year ; optimizing it over a full route covering > 1 division / Zone | As per projected DPR / Detailed Estimate / Traffic projections etc |

| ISSUE | REVENUE BASED OB | CAPITAL BASED OB |
|----------------------------------|--|--|
| Lead indicators | Set and Driven by respy directorates in RB | Set and Driven by respy Mission Directors in RB |
| Lag indicators | Set and Driven by respy GMs / DRMs in Zones | Set and Driven by respy CAORs in Zones |
| Responsibility Centres | AMs / GMs / DRMs / Br.HoDs | AMs / CAORs / ConstnHoDs / RVNL / others |
| Dept. / demand responsibility | Single dept - 4,5,6,7,8, 9,13,14,15 ; multi dept - 3, 10, 11, 12 | All plan heads / mission targets are multi dept ; non-tech depts will also have outcomes |
| Performance Monitoring | Zone wise and Demand wise (not HoD / function) | Mission outcome wise ; not project wise |

| REVENUE OUTCOME | LEAD INDICATORS | LAG INDICATORS |
|---|--|--|
| SAFETY - D.No 4 (Engg) | Accidents due to P Way failure – poor R&M | Rail weld failures ; CTR works ; |
| SAFETY – D.No. 5 (Mech/Elec) | Accidents due to Motive Power failure – poor R&M | Diesel & Electric Locos – derailments , bogie / brake /Tr. Motor / X'former / panto / coupling failure etc ; Trip Sheds – replacement perf. |
| SAFETY – D.No 6 (Mech/Elec) | Accidents due to C&W failure – poor R&M | C&W – derailments , bogie / brake / hot axles / other failures Running repairs – replacement perf. |
| FUEL EFFY – D.No 10 (Optg / Elec / Mech) | Cost Optimization – Track Group wise consumption / PKm or GTKm | KLs or KWHs / type of loco / type of load / type of track section / type of permitted speeds etc |
| OPERATION EFFY – D.Nos 8,9 (Optg) | Cost optimization - Capacity utilization of line capacity | Increase in throughput / line capacity (Pkm / GTKm) ; idling / turnaround of R Stock (Locos,Coaches, Wagons) |

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C. PERFORMANCE COSTING:

1. Indian Railways [IR] has well laid down accounting and budgeting architecture and computerized application systems in several areas that generates financial and non-financial data at regular intervals. Presently, IR's financial, statistical and costing wings help to determine cost of each of its business. But the current system in place doesn't support the management to have online availability of costing, budgeting and performance data.

A Performance Based Costing (PBC) system focuses on performance (in terms of financial and non-financial) rather than activities themselves, which avoids distorted product or service cost information produced by the application of traditional costing systems in the IR. PBC provides more accurate cost information. The basic principle of PBC is to identify the lines of business or lines of service that add value to the IR and to calculate related costs for the purpose of accurately estimating business or service cost.

This essentially requires identification of Value Creation Areas (VCAs) and Critical Success Factors (CSFs) and linking the costs associated with VCAs and CSFs.

PBC is akin to Activity Based Costing that would enable the IR to find onboard costs of each activity viz. train, route, sections etc., to take timely strategic decisions related with cost management, outcome analysis, and performance improvement of the system as a whole.

2. ADVANTAGES OF ACTIVITY-BASED COSTING (ABC)

ABC is a method of measuring the cost and performance of activities and cost objects. It assigns costs to activities based on their consumption of resources and then allocates costs to cost objects based on their required activities and appropriate cost drivers. It is a more reliable method to find accurate information about the true cost of products, services, processes, activities, distribution channels, customer segments, contracts and projects. It leads to more accurate pricing or tariff decisions. It enables effective challenge of operating costs to find better ways of allocating and eliminating overheads and supports performance management techniques such as continuous improvement and scorecards. It allows the managers to better understand the product or service and customer net profitability. This will provide the Indian Railways with better information to make it value-based and therefore more effective decisions. **The activity-based costing process can be briefly presented as follows:**

Identify activities and activity pools Directly trace or estimate costs to activities and cost objects

Assign costs to activity cost pools Calculate activity cost drivers' rates

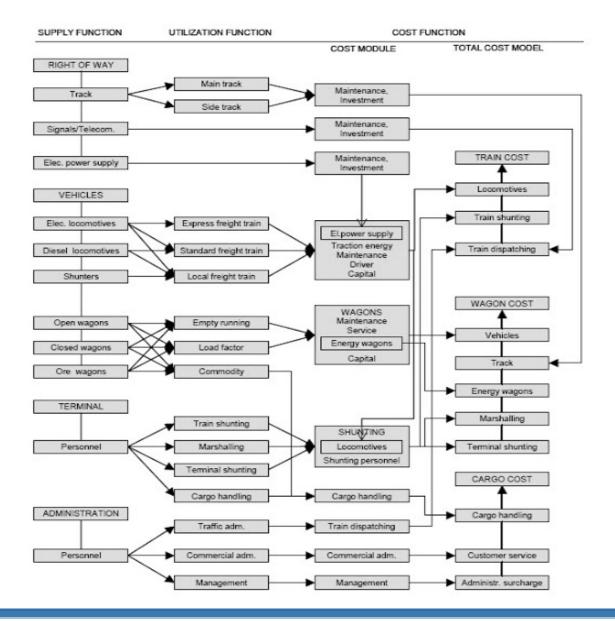
Assign costs to cost objects

Prepare reports

3. ACTIVITY BASED COSTING [ABC] – THE TWO APPROACHES

ABC by Top down Approach, presently followed by IR, where aggregate values are used as numerators and denominators. There is no longer any direct connection to the factors causing and determining the costs; instead, the total costs are simply distributed over some measurement units (train-kilometers, working hours, tons, etc), although no linear connection necessarily exists at all.

ABC by Bottom up approach, where each cost element is valued based on the actual units consumed multiplied by the unit cost. In this approach, each activity's cost is determined by absorbing the element cost to the cost object based on the most appropriate cost driver. This approach takes into consideration specific characteristics of an activity, as well as changes in the relevant cost determining factors.



ABC MODEL FOR CAPTURING COMMON & JOINT COSTS

4. OBJECTIVES OF IR

IR's objective is to have a system in place that would enable it to facilitate calculation of per unit cost of operations, cost of sales and margin for each of its product, activity, line of business or service on monthly/ quarterly/ half-yearly or annual basis. Further, the online cost accounting system would enable the IR to undertake activity-wise outcome analysis, formulate correct policies, take correct business decisions, reduce costs, and improve efficiency, productivity, cost competitiveness, profitability, and sustainability. The revised cost accounting mechanism would provide requisite data analytics that helps the management in other strategic areas such as value creation, resource utilization, product/service pricing, strategic planning, risk management, etc. thereby giving value proposition to the consumers and public at large.

In this backdrop, broad objectives of this project are to install a robust IT based system as well as an effective online MIS that would enable Indian Railways to measure actual onboard costs, revenue, profitability, performance & outcomes of each activity/line of business or service viz.

- passenger and freight traffic [for each class and each commodity]
- train, section, route, etc. including sub-urban trains, EMUs, special trains, tourist trains, etc.
- production units, service units, utilities, etc.
- geography, location, zone, division, field units, etc.
- locomotive, coach, wagon, etc.
- rail accidents & other abnormalities
- deposit work

5. SCOPE OF THE STUDY ON PERFORMANCE COSTING

- Study the existing accounting & budgeting architecture; financial codification system [finance code]; statistical information system; and costing system.
- Study the existing computerized application systems with a view to ascertain the online availability of relevant data/information:

- Identify the IR's business segments, production units, service units, utilities, support service centers, etc. and suggest suitable activity centers, cost centers, revenue centers, cost objects, etc.
- Identify limitations/gaps/areas of modifications required at each stage of sourcing/capturing of operational and costing data from the existing computerized systems.
- Identify the IR's common costs, joint costs, overheads, incremental or marginal costs and suggest appropriate cost drivers to allocate or apportion such costs to each activity/line of business or service.
- Measure actual onboard costs, revenue, & profitability of IR's each activity/line of business or service to achieve the expected objectives and outcomes, as listed above.
- Link all costs/expenses to the measurable outcomes and prepare outcome analysis report.
- Conduct Pilot Study of one passenger and one goods train for validating the recommendations for the upgraded online cost accounting system.
- Prepare and submit detailed report on the modified cost accounting and outcome budgeting system.
- Help IR [CRIS] to develop IT based integrated accrual accounting, cost & management accounting and outcome budgeting framework.
- Prepare detailed Cost Accounting & Outcome Budgeting Manual.
- Undertake post-implementation review and suggest changes/modifications, if any.

6. CAPACITY BUILDING AND HAND HOLDING:

Strengthening and capacity building of human capital for the sustainability of Accrual Accounting is one of the most important steps of the implementation of Accounting Reforms. In pursuance of this objective a number of initiatives have been undertaken both by IR and ICAI ARF. A structured course on Accrual Accounting is being regularly held since November 2015 in the Centralised Training Academy of Railway Accounts (CTARA) at

Secundrabad and 750 supervisors and 147 officers of the Accounts Department from all Zonal Railways have undergone training to end of May 2016. Several Workshops and Seminars have jointly been organised by IR and ICAI ARF to acclimatise senior officers of the Accounts and Executive Departments to the concept of Accrual Accounting. Besides ICAI ARF is organising a core training session for its Central Council members for sharing its experience of North Western Railway.

7. CONCLUSION:

Phase I of the Accounting Reforms Project in IR covers the introduction of Accrual Accounting. With the likely completion of the Pilot study in NWR by August 2016 accrual accounting would be rolled out in other Zonal Railways. A Project Management Unit has been established in Northern Railway, headed by a Chief Project Manager (CPM) in Senior Administrative Grade, to assist in the rolling out of Accrual Accounting in Zonal Railways. A similar set up is envisaged in the other Zonal Railways during the roll out phase. Similarly based on the outcomes of the pilot study at RCF/Kapurthala Accrual Accounting and upgraded Costing system would be rolled out in the other Production Units.

Introduction of Accrual Accounting in Zonal Railways and Production Units is just the beginning of Accounting Reforms in IR. This would be followed by introduction of Performance Costing and Outcome Budgeting in all the units. The roll out of Accrual Accounting across Zonal Railways is likely to be completed by September 2017 and that of Performance Costing and Outcome Budgeting by March 2018.

8. EXPECTATIONS BY IR FROM ACCOUNTING REFORMS (Accrual Accounting + Outcome Budgeting + Performance Costing)

- To improve usage of limited resources to ensure optimal outcome of all public expenditure; hence, modify the present system of accounting to ensure tracking of expenditure to desired outcomes;
- To shift from 'cash based accounting' to 'accrual based accounting' and from 'historical budgeting' to 'outcome budgeting';

- To make online availability of activity-wise costing data including costs incurred on constructing, augmenting, maintaining and operating railway lines;
- To undertake outcome analysis and post asset commissioning evaluation studies;
- To take correct pricing/tariff decisions for passenger services, freight services, production and other activities;
- To identify money makers or money losers and non-value-adding activities; find controllable and uncontrollable costs; discover areas/opportunities for cost optimization/cost improvement; and workout economic break-even points;
- To improve movement of goods and services; thereby to improve efficiency, productivity, cost competitiveness, profitability, and sustainability;
- To improve business planning, budgeting, resource allocation, resource utilization, and investment decisions; and
- To give improved value proposition to the consumers and public at large.

NOTES