

Simplifying the Railways

Merging of Departments

- *A Case Study of the Mechanical, Electrical & Stores Cadres*

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Most observers and commentators today agree that unless the monolith called Indian Railways changes itself or the way it works, it has an extremely bleak future. Most such observers also agree that this would be a massive tragedy, for not only is this an organization with a glorious past, it has to continue playing an important role in sustaining the Indian Economy.

While voluminous reports have been written on the possible roadmap for change – the McKinsey Report and Rakesh Mohan Committee being amongst the prominent last few -- none could be accepted or implemented because, amongst other things, the organization appears to have already become too unwieldy and complex to grasp the essentials of change, and perhaps lacks the integrated management vision required to accept and implement change unanimously.

The management structure needs to be simplified internally before it can negotiate any roadmap chalked out for it. The proposal below is only one of the many simplifications that may be attempted.

Merging of Departments

A Case Study of the Mechanical, Electrical & Stores Cadres

Introduction

Indian Railways has as many as 10 organized services or cadres, each managing their own separate Departments.

Amongst these, Mechanical, Electrical and Stores Departments have been the backbone of Indian Railways' operations. Together they total over 500,000 employees – almost a third of the total, and manage/spend almost 50% of the Revenue Budget and almost 30% of the Capital and Plan Budgets.

Literally anything that moves on rails needs the direct contribution of one – or usually more than one -- of these Departments!

History

There was a time, not so long ago, when these three Departments were unified at the apex level by a common Head -- the Member Mechanical of the Railway Board – who oversaw the three Departments till 1985.

The Mechanical Engineering Cadre, the IRSME, the oldest amongst the three Cadres, or Services, was in existence as way back as 1927 when the need for a separate and specialist Mechanical and Power Department was first felt. Later, as Traction diversified from Steam to Diesel and then to Electrics, the IRSEE – a new separate cadre of Electrical Engineers to man the Electrical Department – came into existence in the 1950's but remained in a nascent stage due to the recruitment of a large number of Temporary Engineers who could not give the cadre its due place in the Railway setup. The last recruitment of such temporary engineers finished sometime in the mid 1960's. At about the same time, the IRSS – the specialist cadre of Stores Managers – was also created. Till that time, and till much later when IRSS Cadre officers were unavailable or unable to man all the posts, IRSME and IRSEE officers routinely manned many of the positions of the Stores Department.

All along during this time, the three cadres remained tied at the top as one cohesive unit, at least for policymaking purposes, under the leadership of the Member Mechanical.

Indian Railways took momentous decisions regarding their technology and Traction choices for the future during these times. The ambitious plan to Electrify the Golden Quadrilateral, and the choice and adoption of 25kV AC Traction System was a major milestone. It took the rest of the world much later to realize the superiority of the 25kV system over other competing systems, and this right and appropriate choice by Indian Railways so early is still admired in Traction circles the world over. Europe is still grappling with multi traction systems wrongly chosen at those points of time. Diesel and Electric Locomotive technologies were imported, indigenised and assimilated in this early period of the 60's and 70's. These technologies brought the need for a qualitative and quantitative change in the managing of Inventories and specialized handling of the Stores Depots attached to Workshops and Loco Sheds. Systems for Inventory management of these sophisticated spares were set up by the Stores Department.

The point being made here is that the Railways managed these momentous changes successfully and in a satisfactorily balanced manner under a common titular head of these three Departments.

Aspirations of Cadres

As the three cadres became better organized and specialized, they also got confined to their own limited areas of work, and the officers perhaps gradually became aware of the differences in the avenues of progression available to them in the organization. This must have been especially glaring in the allotment of the prestigious ex-cadre positions like DS's, DRM's, and GM's; and finally the absence of a seat in the Board, although none of the three cadres were explicitly debarred from the top post !

It was perhaps this perception that led to the demand and proposal for a separate Member for the Electrical Department/Cadre in the Railway Board, and its final creation in 1985/86. Even today, a proposal for creation of a separate Board Member for the Indian Railway Stores Service seems to be under active consideration and, but for a last moment hitch, would have been a reality by now. One may assume that just as for the Electrical Department then, the demand must stem as much from the desire to have an equal opportunity to rise to the topmost position as the other sister departments, as from the perception that their due representation in the important ex-cadre positions is denied or blocked due to their absence at the apex level.

Did the creation of a separate Member Electrical help?

Yes, it probably did! Pace of Electrification definitely picked up, growing from a rate of about 400 km/year to over 600 km/year enabling quick completion of the Quadrilateral and the Diagonals, achieving the avowed aim of moving most of the bulk, long distance freight traffic on the busy trunk routes on Electric Traction, bringing tremendous economies in operation. Electric loco manufacturing, Loco Sheds and other associated facilities also developed at the desired pace.

But alongside came the competition and rivalry with the Mechanical Department. Less viable new lines and projects for Electrification were justified and approved, even while the Mechanical Department cried foul and went about with their own plans for expansion. Both wanted independent establishments where a common facility would have done. Board's repeated instructions for Integrated Maintenance in Coaching Depots remained unimplemented!

More than the loss due to investments in financially less viable, and at times, duplicated assets was the unfolding of the sad spectacle of two branches openly fighting each other at all levels, blocking each other's proposals and generally vitiating the working atmosphere.

Growth of Departmentalism

It is a fact that severe departmentalization has seeped into the Railways, so much so that severe strain has become visible in the day-to-day working at the Divisional, Headquarters and Board level. Decisions beneficial to the Railways are sometimes getting postponed due to these differences. The disease is in no way restricted to the Mechanical and Electrical departments. Differences exist amongst most pair of Departments. DRM's and GM's now spend a large amount of their time reconciling differences and competing demands of the various departments. As this departmentalism grows deeper, even DRMs and GMs are sometimes being seen as being partisan.

Hence the common refrain that all Railway men are busy running their own Departments, with none running the Railways.

And hence the need for reducing the cadres or services thereby Simplifying the Railways. !

While one can argue in favor of abolishing some cadres altogether, this study would like to concentrate on the imperative need for merging of the Mechanical, Electrical and Stores Cadres for the benefit of the Railways without any loss to the prospects of the constituents.

Possible Synergies

The two main challenges facing the Railways and which will be our focus area in the years to come will be a) optimizing investments, and b) reducing manpower, even as Traffic and workload – hopefully -- increases. This will require tremendous synergies amongst Departments.

Nowhere is the potential of achieving Synergies visible to a greater extent than the way Railways produce, maintain and operate their main assets -- namely, the Motive Power and the Trailing Stock (Locomotives -- both Diesel & Electric, Coaches, EMUs, MEMUs, DEMUs, and Wagons).

Locomotive Running Repair and Maintenance:

A close look at today's Diesel and Electric Locos would reveal that more than 50% of the components are almost exactly same, functionally. In fact, Bombardier have recently come out with train-sets which have dual traction, i.e., Diesel and Electric, on the same premise. In their design, 90% of the components which come into play are the same in both the modes. However, on IR, Diesel Locos are exclusively maintained by Mechanical Engineers, Electric Locos by Electrical Engineers since the late sixties. It may have made sense then, but today's staff and inventory costs, and operating requirements call for a fresh look. The nature of work, method of working, responsibility, skills and expertise required on the part of the staff are also largely the same in both the Electric and Diesel Sheds.

Coaching Stock Running Maintenance:

In the present set-up, both departments are involved in maintenance of Passenger Coaches. While this maintenance is primarily under the Mechanical Department, the Electrical Department maintains the air-conditioning and train lighting part. This amounts to dual responsibility for "Service fitness" of coaches, which creates coordination problems, as also some duplication of facilities. Each of the three wings -- Mechanical, Train Lighting and Air-conditioning – maintain their separate establishments, stores, budgets, supervision, clerks in separate buildings and separate data compilation and reporting systems. Even then, there are areas of

the coach which remain un-cleaned or unattended because it is not clear whose responsibility it is! Recent examples are the cases of derailment of coaches due to dropping down of battery boxes.

Repeated instructions for integration from the Board level have remained unimplemented.

EMU/MEMU/DEMU Maintenance and Operation:

EMU running maintenance, remained under single control for a long time, till extension of the EMU into non-suburban areas with the MEMU threatened the Mechanical Department making them strike back with the DEMU. Today, these three types of stock, which are perhaps almost 90% identical, are being maintained by the two Departments in their own way, with new sheds and facilities being created all over the country.

Crew Management :

In this area also, as Electrification has spread, Electric and Diesel Drivers have been segregated into separate seniority groups, their own Lobbies, Running Rooms, Inspectors, Training establishments, Controls and Controllers. But for a few exceptions, there is a constant effort, in the name of specialization, to keep amalgamation efforts at bay even where there is a strong case for having a common pool, not only for better management but also for operational flexibility and economy of numbers.

Not only are wastages in supervisory, clerical and other support staff clearly apparent, there are instances of shortages in one group and excess in the other leading to wastage both in crew and train idling !

To top it all, both Departments are eager to develop their own computerized Crew Management Systems, Training upgrades, Simulators and other initiatives in isolation, and sometimes in competition of the other.

Workshops :

While this remains the basic responsibility of the mechanical Department for all types of stock including Electric Locos, grey areas have started emerging with turf fights and competing facilities being justified and developed by the Electrical Department, and resisted by the Mechanical Department. Within the Workshops, the two departments work in their tight compartments, in separate buildings and are forever making their own *grandiose* plans of development and improvement, often trampling on each others toes, obstructing, and complaining against each other while working on the same coach or locomotive.

There is the case of one workshop which has two CWM's – one Mechanical, one Electrical !

Production Units :

All but the one PU producing Electrical Locomotives is under the control of the Mechanical Department. While Electric and Diesel Locos are almost 50% similar, as earlier mentioned, the two Loco PU's have no dealings with each other to examine possibilities of inventory or design sharing. While very few countries adopted the three phase propulsion technology which emerged in the nineties, Indian Railways have the rare distinction of having adopted 2 different technologies, one each for new generation of Diesels and Electrics !

Stores :

The efficacy of working of each of the above areas is critically affected by the working of the Stores Department, which remains the conduit for supply of materials in time. Both Electrical & Mechanical Departments nurse a permanent grudge against the Stores Department for letting them down by not arranging timely and adequate supplies, or being unconcerned or detached from the needs of the "field". They often seem to be working for diametrically opposite objective – one attempting a low TOR, the other high availability. Similarly, the Stores Department blames these Executive Departments for unrealistic expectations without regard to available resources, advance planning or other constraints. The Stores Cadre Officers feel suffocated that in spite of their possessing the same professional qualifications as their Mechanical and Electrical counterparts, they are forced to play a peripheral, secondary role with rather limited opportunities

The case for Merger

The case for some sort of merger of these three Departments, with closely overlapping work areas and specialties, is as apparent as the case for reinventing of the Railways put forth by Committee after Committee.

The question is, how?

Merger of the departments, as a first step appears almost impossible because of the enormity of the task, and the possible and unaffordable chaos that could result in the interim period. While many possibilities can be cited, an obvious and simple prerequisite, and a first step could be to adopt **the Traffic Cadre Model** suggested below:

The Traffic Cadre Model

- Continue the three departments as they exist but merge the cadres into one common cadre i.e. **Three departments, one cadre** similar to that existing for the Traffic cadre which mans the three separate departments namely Operating, Commercial & Safety.
- The advantage of this model is that it can be applied immediately with prospective effect even while efforts may continue to extend it retrospectively also. This would be a “bottom up” approach, and, much better than the “ Do nothing” option as it will definitely create the ground for future cooperation and synergy should all other efforts fail as there will be no perceived loss or gain by the future generations. In the worst case scenario it will take 35 years for full amalgamation, when all old timers would have retired!
- Efforts can also continue to merge the functions along integrated Locomotive Maintenance, Locomotive Operations, Coaching Maintenance, Crew Management and Workshop Repairs lines with no distinction between Mechanical and Electrical streams either at the Divisional, Zonal Headquarters or at Railway Board levels. Of course technical expertise in the respective areas would continue to be nurtured within each Wing, just as Wheel Maintenance, Bogie Maintenance, Roller Bearing, Hydraulics, Pneumatics etc. within the Mechanical Department, and sections for Traction Motor, Transformer, Electronics etc. within the Electrical Department. Needless to say, functions like Electrical General Services (minus the Train lighting and AC Coach Maintenance portions), Electrical Traction Distribution and Wagon Maintenance would also continue separately, as would Stores Procurement and Distribution --- all managed by the common cadre officers.

It is relevant to mention that the Gupta-Narain Committee, set up in the year 1995 to examine the Tandon Committee Report on “Organizational Restructuring of Indian Railways” also favored the merger of Mechanical and Electrical cadres as one of their recommendations. Whatever may have been the compulsions of not accepting these recommendations then, we will have to embrace change sometime. Maybe the time has come as far as this is concerned!

Road Blocks

The biggest Road Blocks, as in any other such case of Organizational change, may come from the higher management itself, i.e. from within the Electrical, Mechanical and Stores Cadre Officers themselves.

This would be most unfortunate, because, actually they are the ones who would be the biggest gainers of such an amalgamation. This is because it would put this combined cadre in a position of tremendous strength within the Railway. Also, the inherent broadband capabilities these Officers would possess would enhance their market value which would come handy in the event of Corporatization of Railway Production Units and PSU's in the future.

In any case, the cadre Officers should have nothing to fear because the combined cadre would still have a very adverse Staff-to-Officer ratio of about 160, compared to 60 of S&T, the closest comparable department. Thus, there would be no case for reduction in the Gazetted cadre strength of the combined cadre vis-à-vis the individual cadre strength now. Of course, after amalgamation of some functions like Locomotive Maintenance, Operations and Coaching etc., separate Gazetted cadre Officers may become infructuous, but there are many areas, especially in Mechanical/C&W & Electrical General Departments, where the level of Gazetted supervision is so thin, that a redistribution of the Gazetted cadre would be possible. This would not only benefit the working conditions of these deficient functional Departments, it would help improve operational efficiency in these areas without increase in the overall Gazetted strength.

The real benefits, anyway, are not proposed to emerge from any reduction in the Gazetted cadre, but from the merger of functionally similar establishments all over the system; reduction in the wastages due to continuous creation of new, duplicate facilities; improvement in the morale and spirit of the Departments due to a positive frame-of-mind, rather than the present "mutually confrontationalist attitude", and of course, substantial staff savings which will accrue due to the reduction in the duplicate establishments in many areas of Railways working.

Road Map

The Road Map appears very clear –

- (i) Merge cadres prospectively with immediate effect – all new Gazetted induction into the merged service of Rolling Stock & Electrical Installations Engineers, or Electrical-Mechanical Engineers, or any other suitable name.
- (ii) The FROA and AIPOA should be consulted and assured of no reduction in the promotional prospects of officers
- (iii) Till a satisfactory method of posting/transfer of these new inductees, as is done for Traffic cadre officers, is established, this can be arbitrated by GM's/DRM's
- (iv) Set up Working Groups for re-distribution of the functional departments on the lines mentioned above.
- (v) Ensure that all new set-ups are on the proposed integrated functional lines;
- (vi) Continue effort to integrate existing facilities along suggested integrated functional lines in a “bottom up” approach.
- (vii) Simultaneously, create working groups to attempt amalgamation of the cadre retrospectively also, ensuring equal opportunities of promotion and advancement to all the three existing cadres.

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A slightly different version of this paper was prepared by the author while working as ADRM/Allahabad jointly with Shri G.K.Khare, Ex-Chairman Railway Board, and submitted to the then MM in 2002. The same fundamental Ideas have been developed further and presented in this paper.