

# Number Tracker

How the chartered accountant in railway minister Suresh Prabhu is coming to the fore in the endeavour to make the Railways more efficient, profitable and safe

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 New Delhi & Vadodara

*"Aapke paa dekhe. Bahut haseen hai. Inhe zameen par mat utariyega. Maile ho jayenge. – Aapka ek humsafar (I have seen your feet. Those are beautiful. Please do not place them on the ground. They will become dirty – A fellow traveller)"*

Professor KK Goyal of Vadodara-based National Academy of Indian Railways (NAIR) shows this movie clip to a group of accounting probationers after bombarding them with numbers pertaining to the Indian Railways (IR) that run into 12 digits. For the probationers, this train scene from the timeless 1972 film *Pakeezah* turns into a refresher before getting into the next round of numbers and accounting processes.

In another class, professor Deepa Chawla quizzes her students, all from the Indian Railway Accounts Service, to analyse numbers that she writes on the blackboard. She is teaching what traffic accounting is all about, and how the cash collected from a platform ticket makes a long journey from the ticket counter to the Nagpur branch of the Reserve Bank of India.

A thousand kilometres away from Goyal and Chawla's classrooms, railway minister Suresh Prabhu wants all his officers to brush up their numerical skills and use existing data more meaningfully. Prabhu, a chartered accountant with a penchant for numbers, has also decided to convert the IR's data collection cell into a data analysis department. After all, the IR in 2014-15 received a mind-boggling 100.3 terabytes, or 100.3 trillion bytes of data. If you're wondering how much of data that would be consider this: If all that data was stored physically on two-sided sheets of paper, its storage would call for three towers of New York's World Trade Centre, the largest private office building in the world till it was destroyed in 2001 by a terror attack.

Volume, however, is one thing, and its value quite another. "Raw data has no value unless analysed properly... We should not just collect data, we should be able to analyse those data for our decision-making processes. We must use the data for outcomes," Prabhu told *ET Magazine* in an interview (see "*I have Begun with a Number: 8.5 Lakh Crore*"). Prabhu places numbers ahead of policies. "The railways is a story of numbers. Falling operating ratio is a number; falling electrification is a number; falling track renewal is a number..." He points out that the ₹8.5 lakh crore, or close to \$150 billion, that he started out with as the investment outlay for the Railways for five years – as was announced in his first

**1.36%**

**The percentage of passengers travelling in first class & AC**

**BUT: IR earns 27.8% of its passenger earnings from them**

**Q: Is IR focusing too much on the segment that is most likely to migrate to air?**

**19.2%**  
**IR's freight market share in POL (petroleum, oil & lubricants)**

**BUT: Market share drastically fell from a high of 34.5% in 2000-2001**

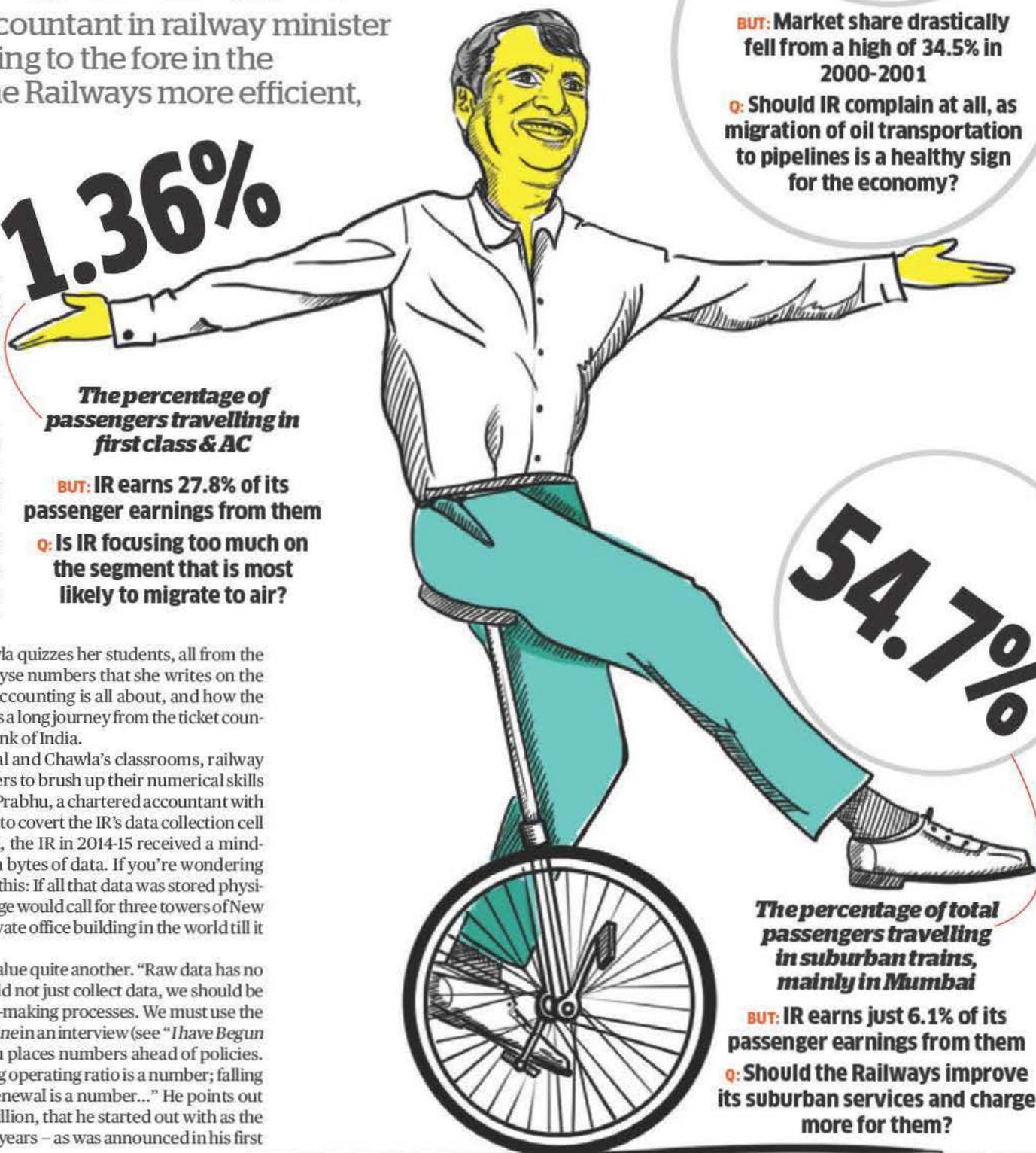
**Q: Should IR complain at all, as migration of oil transportation to pipelines is a healthy sign for the economy?**

**54.7%**

**The percentage of total passengers travelling in suburban trains, mainly in Mumbai**

**BUT: IR earns just 6.1% of its passenger earnings from them**

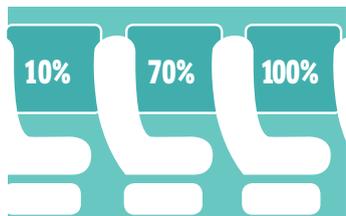
**Q: Should the Railways improve its suburban services and charge more for them?**





## Numbers of the Future

Berth Confirmation Probability



### WHAT'S THAT

A number that may pop up when you book a wait-listed ticket in Indian Railways. It will indicate the probability of getting your ticket confirmed.



### HOW

An Expected Fill Rate for every train will be calculated to find out the berth confirmation probability; **3 years' day-wise data on bookings and cancellations to form the basis**

**Seasonal rush to be factored in** (e.g.: a daily average of bookings goes up during festival seasons)



### BY WHEN

IR will convert its data collection cell into data analysis department to expedite this plan and other number-related work

The berth confirmation probability is expected to be **functional in two Rajdhani trains next month on a pilot basis**



### MAPPING AND GEO-TAGGING

IR plans by **March 31, 2016 to map and geo-tag all rail properties** including track, trains and land

Data collected from the locations will help **better track management, stop encroachment on its land**

Rail Budget in February this year – can be doubled to \$300 billion in five years. “This number is required for the railways to be up and going,” Prabhu adds.

### The Number Journey has Begun

If railway officers engaged in data mining are to be believed, the process of analysing data has already begun. And the first key outcome is likely to be seen next month when the IR comes out with “Berth Confirmation Probability” for every waiting list ticket, initially for two Rajdhani trains on a pilot basis. To put it simply, this exercise will ensure that a wait-listed ticket buyer will get a fair idea of whether the ticket will be confirmed or not, though IR is going to make it amply clear that the number is only indicative and will in no way give a guarantee of ticket confirmation to its customers. While zeroing in on the number, the data on seasonal rush, classes and trains will be factored.

Further, there is a move in the IR to collect data using Google maps. “We are planning to geo-tag all rail properties including track, trains and land by March 2016. Once it’s done, we will have quality data from across the country. For example, sitting in Rail Bhawan, we will be able to spot encroachments in stations and take a decision on monetising some underused assets,” says a railway officer on the condition of anonymity.

Former railway minister Dinesh Trivedi is, however, not convinced with Prabhu’s big-bang idea of overhauling accounts and using numbers more meaningfully. “The easiest thing in the Railways is to fudge numbers. And the Railways has an accounting system that does not tell how efficient it is. We

brought out many of those issues in the parliamentary committee that I headed (in a April 2015 report),” says Trivedi, who couldn’t resist the quip: “Also, chartered accountants are known for fudging numbers.”

For his part, Prabhu does not shy away from stating in clear terms that profit is a clear motive of the railways. “Unless IR is commercially driven, it can’t serve social interests,” the minister says. In fact, IR in its bid to woo debt from the market has already tied up with the government-run Life Insurance Corporation for ₹1.5 lakh crore, to be disbursed over the next five years, with a clause of a repayment moratorium for five years. The IR, which usually banks on internal accruals and grants from the finance ministry to keep it running, may soon clinch another debt deal – a \$30 billion loan from the World Bank.

Yet, the multi-billion dollar question is how easy it will be for IR to raise funds against a backdrop of sub-normal indicators: its financial health is abysmal (an operating ratio of over 90% is perhaps the biggest indicator), decisions are often driven by political considerations, project delivery is below average and, above all, the accounting system it uses is alien to global investors. Like all other departments, IR too uses the cash-based accounting system (as against accrual accounting), which does not reflect receivables, one parameter that investors always want to figure out before putting their money on the table.

“Potential investors in the Railways want us to speak the same accounting language. So, IR has been undertaking pilots on commercial accounting,” says Hemant Godbole, an IRAS officer and professor in Vadodara’s NAIR. Already,

*“The easiest thing in the Railways is to fudge numbers. And the Railways has an accounting system that does not tell how efficient it is”*

Dinesh Trivedi, former Railway minister

# I have Begun with a Number: ₹8.5 Lakh Crore

Railway minister **Suresh Prabhu** says he has been working around that one key number, ₹8.5 lakh crore, which he plans to invest in five years in Indian Railways (IR). In a freewheeling interview with **Shantanu Nandan Sharma** in Rail Bhawan, Prabhu delves into aspects of that plan, including revamping the railways’ data collecting cell into a department that analyses data and helps in the railway board’s decision-making process. Excerpts:

### On key numbers that are driving the IR

Railways has to be a profitable organisation. It has to be economically sound. So, unless it is commercially driven, it can’t serve social interests. The Railways has suffered in the past mainly because of lack of investments. In fact, the Railways is a story of numbers. Falling operating ratio is a number; falling electrification is a number; falling track renewal is a number. But the question is how we will arrange the money to correct those numbers. But arranging money should not be just going to the finance ministry (with a begging bowl). The finance ministry is not waiting with unlimited amount of money to be splurged. The finance ministry is not Bill Gates or Emir of Kuwait – sitting with a lot of money and not knowing how to spend it. So, I began with the number of ₹8.5 lakh crore (total investments in IR for five years, as was announced in his first Rail Budget in February this year). In my opinion we should be able to double that number to (close to) \$300 billion in the next five years. This number is required for the railways to be up and going.

### On analysis of 100 terabytes of annual data

Raw data has no value unless those are analysed properly. Pentagon may be collecting more data than us. Google every day collects so much of data. But data finally needs to be used for management solutions. So, I am converting our data collection department into a data analysis department. Data per se has no meaning unless you convert those data into actionable points. We should not just collect data, we should be able to analyse those data for our decision-making process. We must use the data for outcomes.

### On overhauling the railway accounting system

We are changing the accounting system completely. It’s not just about moving from single entry to double entry accounting as has been suggested by some committees. We are going beyond it. We are converting budgeting to expenditure to output to outcome. We are integrating management information and management accounting, costing etc all into one. We are in the process of roping in some of the best IT companies to provide us the software solution.

Because of the sheer volume of data that we have, it’s far more important for IR than any other department to work on a management information system. And the management information system must capture the operating data in a manner that those can be interpreted and used. Our ultimate objective of data is to take informed management decisions.

