

IMPACT

INNOVATIVE MANAGEMENT PRACTICES
AND CREATIVE THINKING

A JOURNAL FOR MANAGEMENT PROFESSIONALS



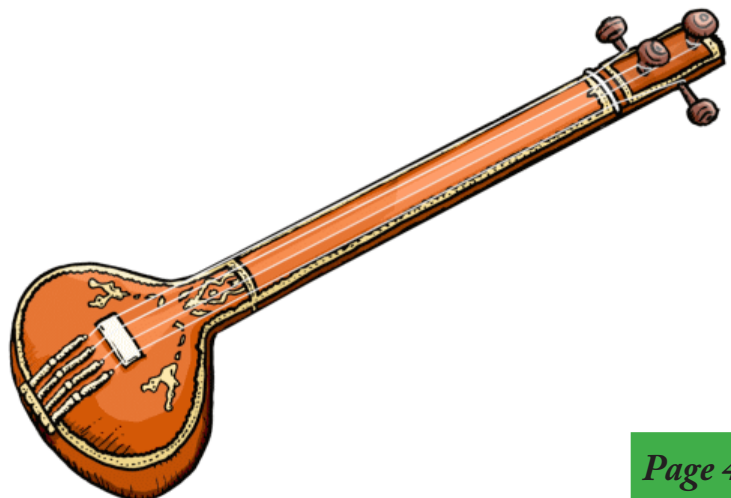
Tyagaraja



Muthuswami Dikshitar



Syama Sastri



Greetings from **IMPACT**



EDITORIAL TEAM

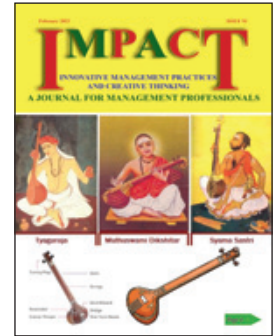
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Dear Readers,

One more year has gone. New Budget has been submitted. As usual oppositions cried foul. Ruling party allies praised. Common man left in lurch as always.

New Technology entered ChatGPT. Techies said doomsday for many professionals. IT sector across the world gave pink slips to millions in one stroke. SundarPichai assured we can back you up for 3 months but buck up to find another job. Google announced Bard, AI rival to ChatGPT!

World economy is down, economists give various reasons. Ukraine – Russia war is still raging. Srilanka, Pakistan's economy are in shambles.

The only common denominator is common man is terribly affected across the world. Governments across the globe turn a blind eye. Reality.

Editorial Team

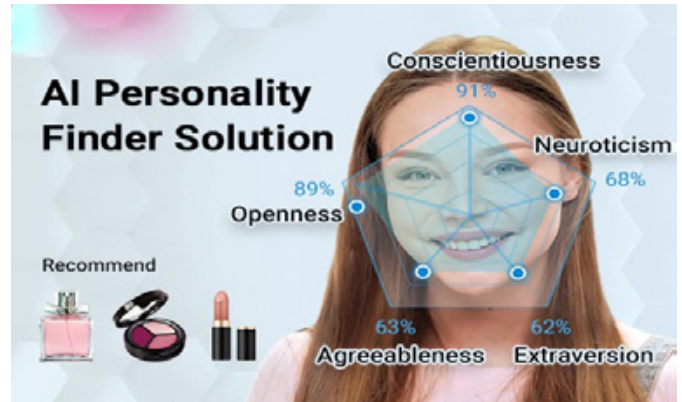
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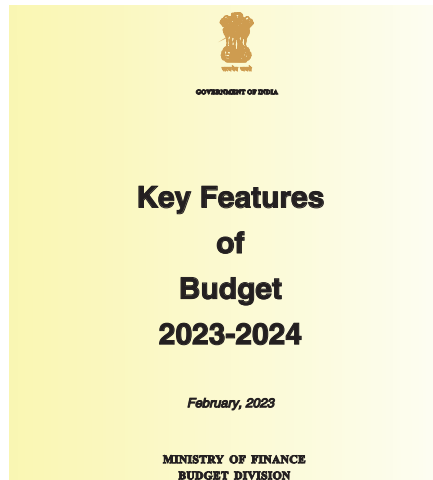
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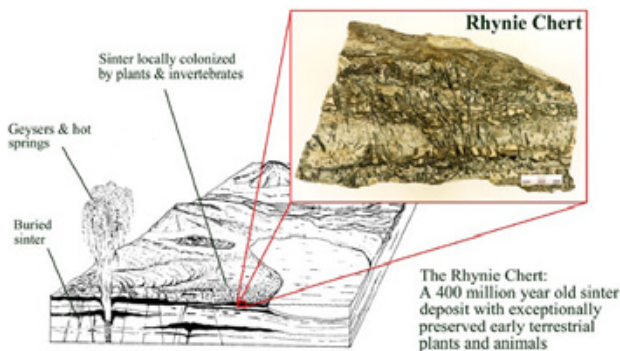
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The Depth and Content of Carnatic Music

Unlike the western music which is full of carnal love, every song of carnatic music, created by the Tirumvarate (Trimoorthy) of Thyagaraja, Purandara Dasa and Shymasastri, is full of devotion to God(Bhakthi), with a divine message, that purifies the human mind.

In this context, I propose to illustrate two compositions of Saint Thyagaraja of Tiruvayyaru. In one instance, as he was walking from Thanjavur to his abode at Tiruvayyaru, Shri Thyagaraja was confronted by a few messengers of Sarfoji Maharaja, the ruler of Tanjavur. They conveyed the desire of Sarfoji Maharaja that

Saint Thyagaraja should sing in the former's court. When Saint Thyagaraja politely refused and said he would sing only before his Lord SHRI RAMA and not before the Maharaja, the messengers said "The Maharaja is giving plenty of NIDHI for the singers performance. Saint Thyagaraja quietly stared at the messengers and instantly composed a song in Telugu in KALYANI RAGAM "Nidhi Caala Sukhama, Ramuni Sannadhi Seve Sukhama? Nijamunu Palku O manasa....." meaning "Does possessing wealth (Nidhi) give greater pleasure or service in Rama's presence gives greater pleasure? Oh mind, speak up".





In another context, a great devotee of Rama, namely sage Sabari was waiting in her hermitage for Shri Rama, with fruits to offer him. On his arrival, Sabari was keen that every fruit she gave Rama should be delicious, and so she began giving him one fruit after another, only after partially tasting each fruit! Astounded by Sabari's devotion, Rama ate every fruit with delight.

Bringing this scenario into his mind, Saint Thyagaraja chose 'Mukhari' Ragam and sang



in Telugu "Enthani Ne Varninthunu Sabari Bhagyamuru....." meaning, 'How shall I describe the good fortune of Sabari whose delicious fruits Rama gladly partook. How shall I describe the merit of Sabari, who thereby attained the state of salvation in the sacred presence of Shri Rama.....'

In sum, one can easily see that every song of Saint Thyagaraja has great depth and meaning with a divine message that has a sublime effect on the human mind.



Dr. H.V. Hande

*Former Health Minister of
Government of Tamilnadu.
Founder & Director of
Hande Hospital.*



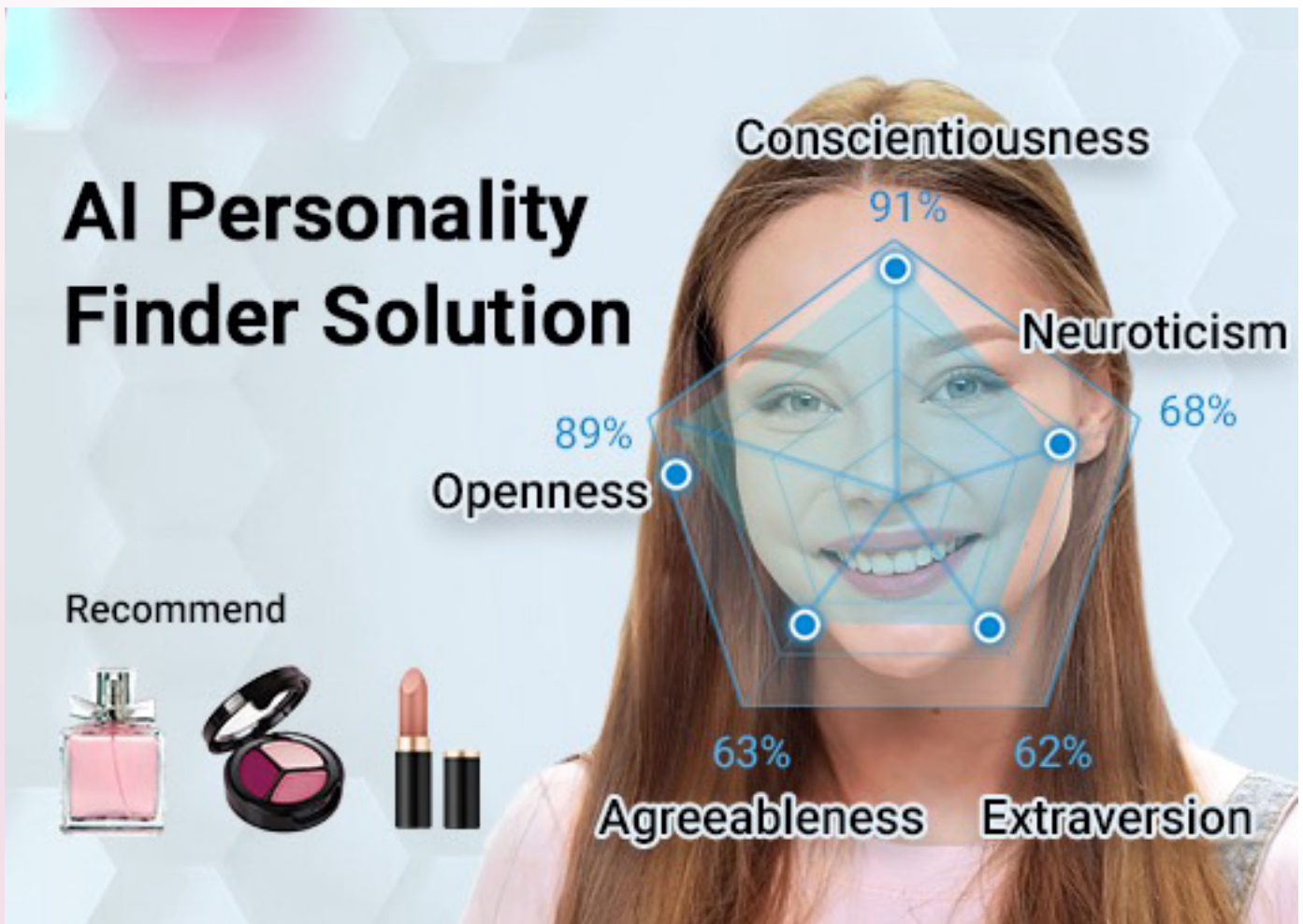
What is Personality AI?

When people ask me what I do for a living, I usually give the same answer: “I talk to people.”

As a leader of a software company, I spend most of my day communicating, whether it’s giving a pitch to a prospect, convincing a potential employee to join the team or explaining our company’s strategy to my coworkers. My responsibilities are not unique; in fact, if you asked a salesperson, recruiter, manager, or consultant that same question, “what

do you do for a living?”, their answer can likely be boiled down to the same thing: talking with people.

While on the surface, “talking with people” is a pretty straightforward job, it has gotten significantly more complex in the last 20 years. On one hand, the rise of social media, smartphones and ubiquitous technology has made it much easier to communicate with anyone. In the past, we may have had to call



or mail an actual letter to someone we were interested in doing business with, today, we can send them a message through LinkedIn or email while barely lifting a finger.

This phenomenon has broken down barriers so it is much easier and cheaper to communicate. However, this easy and cheap method of communication has a side effect: we are all getting bombarded with so many messages that we need to ignore most of them.

When you receive multiple, or even dozens of requests for your time each day, the only option is to be incredibly selective with your attention.

Why communication has gotten so hard

Attention is a scarce resource, but there are exponentially more people and companies competing for it. As a result, people can now afford to be more skeptical than ever, and they can choose to only respond to the messages that are extremely relevant and resonate with them.

People who rely on outreach communication for their living are the ones who feel this pain most acutely.

According to sales advisory firm TOPO, it takes an average sales representative 18 calls to connect with one buyer and 4 emails to get one opened. There is simply too much noise. It can be incredibly frustrating to be on the “sending” side of a message when you know that only a tiny percentage of your recipients will ever read your message, much less respond to it.

Unfortunately, the most common way to combat this challenge is to play the numbers game.

Understanding that they will only get responses from a tiny fraction of their prospects,

many salespeople and marketers have adopted a spray and-pray strategy, where they simply blast out generic messages to as big of a list as they can get and wait for a few opportunities to trickle in. It’s impersonal, inefficient, and ultimately

Fresher’s Required for Digital Marketing

- * Fire to Achieve
- * Willing to Learn and Grow

Send Your Resume to:
inforesource@gmail.com

risks sending email on a death spiral toward obsolescence.

Is there hope?

While this hyper-connected, hyper-skeptical environment can seem daunting, a new opportunity has opened up to cut through the noise. Only a few salespeople, recruiters, and leaders will take advantage of it though.

We are talking about empathy.

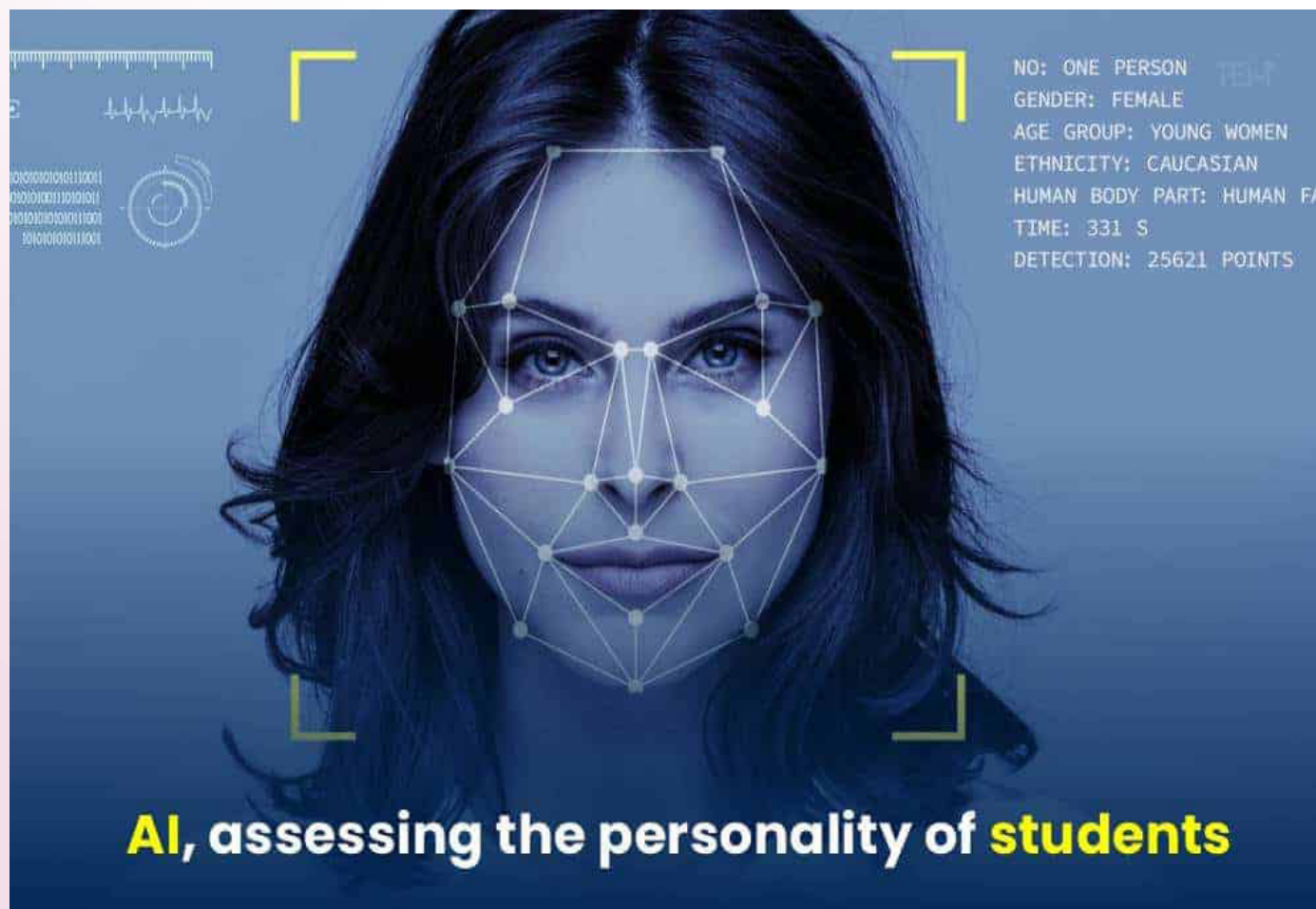
Empathy refers to understanding someone's motivations, desires and communication style, and using that information to treat them the way they wanted to be treated. Rather than treating people like "just another row on the spreadsheet", empathy requires a more personalized, nuanced approach to communication.

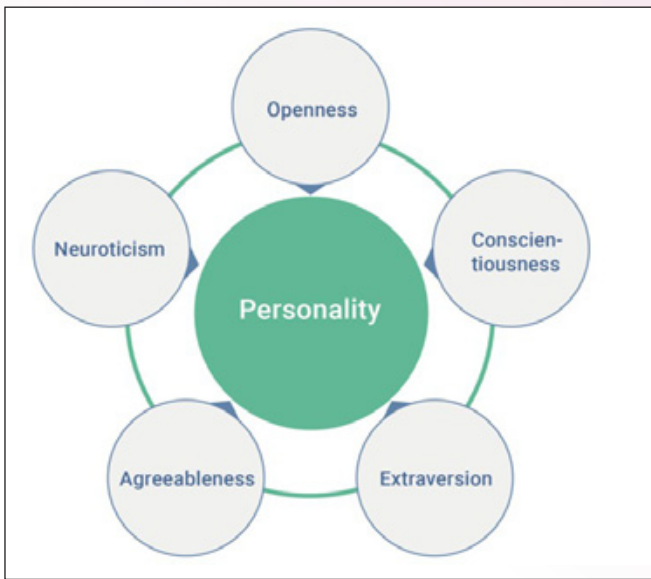
You can probably recognize this in your own life. How much more likely are you to respond to an email from someone who has taken the time to understand who you are, what you want, why you may want it, and how you like to communicate? When most messages are lifeless, impersonal templates, empathy is a powerful force for differentiation.

The Secret Sauce: Empathy

In communication, the Golden Rule, treat others as you want to be treated, doesn't necessarily apply.

We all have our own motivations, goals, and communication preferences, but our recipients may be very different. Instead of assuming they want the same type of email, meeting, or conversation that we do, we can be much more effective by understanding how they want to be treated.





In other words, we need to know about their personality before we can communicate effectively.

Someone’s personality is a complex mixture of their natural tendencies, behaviors, values and past experiences that all influence the way they act today. We learn about each other’s personalities naturally by spending time with each other.

For example, one of my co-workers, Jonathan, is exceptionally detail-oriented and tends to get frustrated if anyone presents a point without backing it up with data. He is highly motivated by accuracy and getting things right. As I have gotten to know Jonathan and work closely with him, I now try to always do some research and have it ready when communicating with him. Now that I understand Jonathan’s personality and motivations, I can communicate in a style that resonates with him and builds trust.

Learning about Jonathan’s personality was relatively easy: he and I interact together every day. It gets a lot harder when we need to communicate with people we don’t know well, like customers, prospects, and potential new employees. These people are the ones faced with hundreds of emails from strangers like me, and are more skeptical than ever in considering to respond. These are the people we need to get

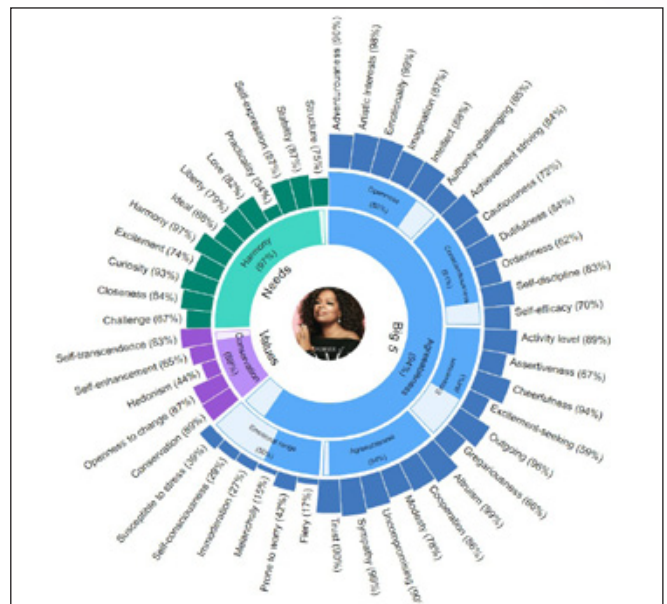
through to, but in order to communicate with them effectively with empathy, we need to understand their personalities.

Historically, understanding someone’s personality without meeting them first was nearly impossible. Unless you could ask other people who knew them well, or convince them to take a personality test, you needed to go into the conversation blind. However, a new technology called Personality AI changes the communication game, so you no longer need to fly blind.

What is Personality AI?

Personality AI is a technology that analyzes millions of online data points to identify someone’s personality, before you ever meet them.

At our company, Crystal, we first brought Personality AI to market in 2015. Since then, we have seen both the technology and adoption advance tremendously, as early adopters have used our products for millions of emails, meetings, and phone calls with amazing results that they often refer to as “magic.” The feeling of magic usually happens when our customers click the Crystal button in LinkedIn and immediately see insights about someone’s personality.





While I'd like to claim our team attended Hogwarts, Personality AI is not actually magic.

It's a convergence of technology, psychology, and personality theory to help us understand how to communicate with anyone effectively.

How AI Works

Artificial Intelligence (AI) is a technology that can analyze massive volumes of data to predict potential outcomes. When we make decisions, our brains quickly process all of our past experience and knowledge to help us come to the right conclusion. AI is very similar, but it's a brain that can be loaded with tremendous amounts of "past experience and knowledge" (i.e. data) to make better decisions. Personality AI, specifically, can be best thought of as a machine that has inputs and outputs.

Personality AI takes multiple types of inputs - text samples, demographic data, real life observations, questionnaire responses - and outputs personality insights.

These insights could tell us, for example, that my coworker Jonathan appreciates research and accuracy, before I ever meet him in person. For most people, the value of Personality AI is in the output. Tools like Crystal provide unprecedented insights to help them communicate more effectively with others, so they make Personality AI a part of their daily meetings, phone calls, and emails.

How To Use Personality AI

At Crystal, our product is powered by Personality AI. It uses a Chrome Extension that adds a "View Personality" button to LinkedIn, Gmail,

Salesforce and other popular platforms that you may use before contacting a person. When you click the button, Crystal uses Personality AI to analyze text-samples on the page, combine it with other demographic and collected data, and identify someone's personality. It looks like this:

With this insightful tool, you can quickly understand someone's behavior, motivations, and communication style. You use that information to communicate more effectively, write more persuasively, and build trust faster.

Communicate more effectively

The core benefit of a technology like Personality AI is more effective communication and the ability to get through to someone you are trying to reach. Cutting through the noise of today's high volume of communication continues to be the #1 challenge for professional communicators like us, and other sales people, managers, recruiters, etc. Personality AI ultimately helps us communicate in a deeply personalized way by recognizing everyone's unique differences.

For example, it can tell us if someone is:

The answers to each of these questions provide fantastic clues on how we can adjust our communication style to resonate with someone's unique personality. If we know a person appreciates formality and structure, we're not going to succeed if we call them unscheduled and invite them for coffee. Instead, we'd likely do much better by sending a well-written email asking their permission to send them more information.

Communicating in the right style for someone often means the difference between a "click", where we both feel as though we "get" each other and want to interact more, or a wall that makes it more difficult for us to build a strong relationship.

Think back to when you've felt that "click" with someone in a conversation. Imagine if you could recreate that feeling for every person you speak to or email with.

Write more persuasively

In the professional world, a significant portion of communication happens in writing. Emails and messages are constantly flowing and these communications are easier than ever to send. Your ability to send written communications that actually get read is now a key factor in determining your professional success.

Not all emails are created equal. Because we get so many emails, we are only going to read the ones that truly appeal to us. Everything from the subject line to the length can resonate -- or turn off -- someone based on their preferred communication style.

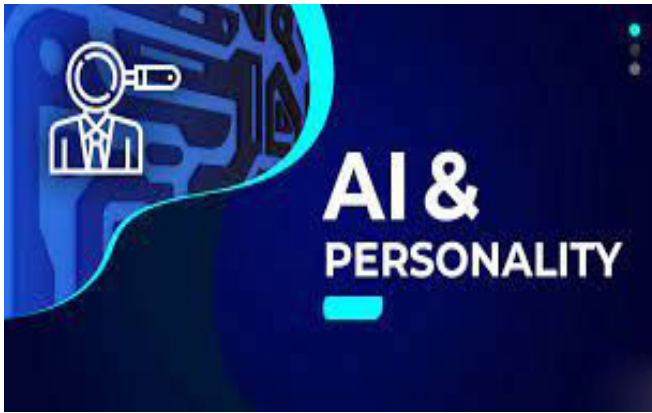
If you use Personality AI to understand someone's personality, you can customize your email to:

- Have a subject line that increases open rates
- Be the right length and not lose attention
- Include the right details and social proof
- End with the right call to action that motivates the reader

Once Personality AI has identified someone's personality, figuring out how to customize an email with each of the points above is as simple as looking in a tool like Crystal.

Build trust faster with new people:

Remember my co-worker, Jonathan? He always responds to my communications because we've built trust with each other. I know him, and I purposefully communicate using empathy to connect with his personality. It has taken a long period of time to build trust as we've slowly,



manually, learned about each other. This is fine for long-term relationships like co-workers, but it isn't PERSONALITY AI 15 nearly fast enough for prospects, candidates, or customers. We need to build trust fast in order to start a conversation and close a deal. Not surprisingly, the right way to build trust is heavily dependent on someone's personality. For example:

You likely experience these differences all the time, and subconsciously adjust as you get to know someone. Sometimes, misunderstanding these differences can cause friction in relationships. For example, if you like to share personal details with others, you might initially perceive someone who is more guarded as cold and unfriendly.

Conversely, they may think of personal questions as a violation of their space, and insensitive. Neither person is right or wrong, it's simply a matter of personality. If I know that someone tends to be more guarded, I can adjust my communication style accordingly when I talk to them and they won't think I'm violating their space.

We can adjust our communication style accordingly when we talk to them, and they won't think we're violating their space.

How to get started

Earlier in my career, my business partner Drew and I hired a Management Coach that helped teach us the basics of communicating with others

based on personality. He would help explain complex situations with co-workers and board members so we could understand their unique motivations. Whenever we found ourselves in a tricky communication situation alone, we'd wish that we could just turn to him and get advice for how to respond.

Tools powered by Personality AI, like Crystal, become your coach for every conversation, helping you avoid communication mishaps and make a great first impression with anyone.

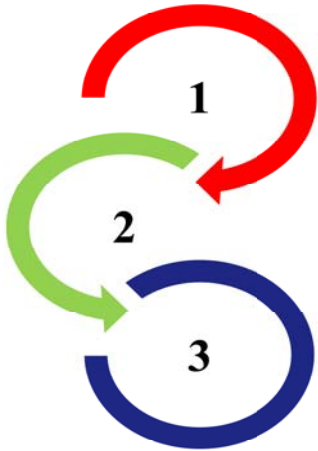
Using the insights gathered, you can understand anyone's personality and use the insights you learn to break through the noise and resonate with anyone when communicating.

By using empathy to communicate with others in the way they want, you'll be more successful in every professional endeavor, from closing more deals to hiring the right people for your team.

*Source Courtesy: <https://www.crystalknows.com/>
Author: Mr. GregSkloot*

Budget 2023-2024

Vision for Amrit Kaal



Opportunities for Citizens with focus on the Youth

Growth and Job Creation

Strong and Stable Macro-Economic Environment

Saptarishi-7 priorities



Sabka Saath Sabka Vikas-Inclusive Development

Agriculture and Cooperatives

Building Digital Public Infrastructure

Building an accessible, inclusive and informative solution for Farmers



Setting up Agriculture Accelerator Fund

For encouraging innovative start-ups in rural areas

ANB* Horticulture Clean Plant Program to be launched

To boost production of high value horticultural crops



Targeted Funding

₹20 lakh crore agricultural credit targeted at Animal Husbandry, Dairy and Fisheries sector

Making India Global Hub For Millets: 'Sree Anna'

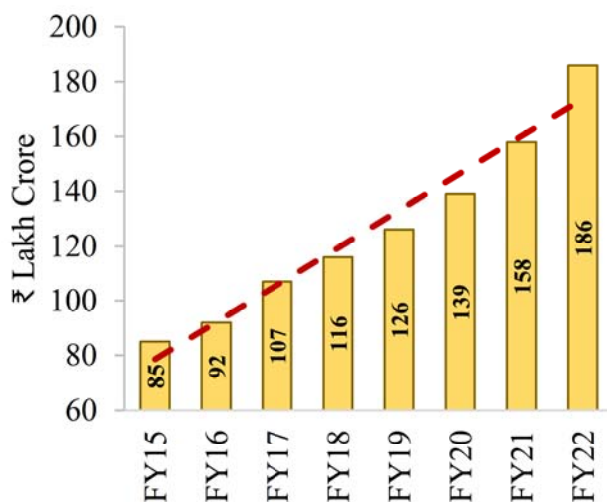
Support to be given to IIMR[^], Hyderabad for promoting research



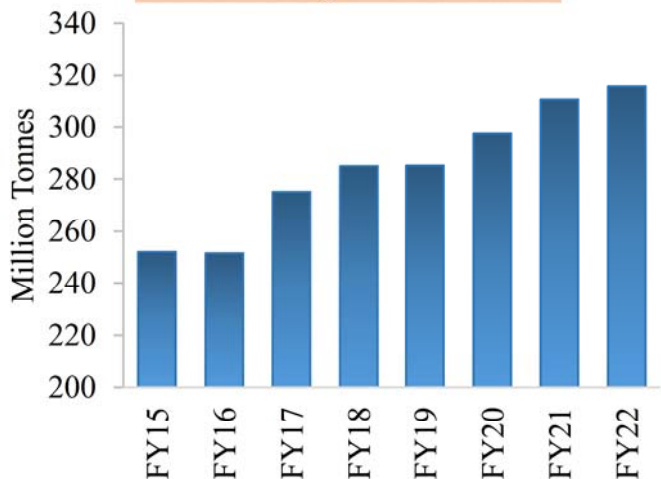
Setting-up of widely available storage capacity

Will enhance Farmers' remuneration by enabling sale at appropriate times

More Credit to Agriculture Sector



Record Foodgrain Production



Sabka Saath Sabka Vikas-Inclusive Development

Health



157 New Nursing Colleges to be established

Sickle Cell Anaemia elimination Mission to be launched



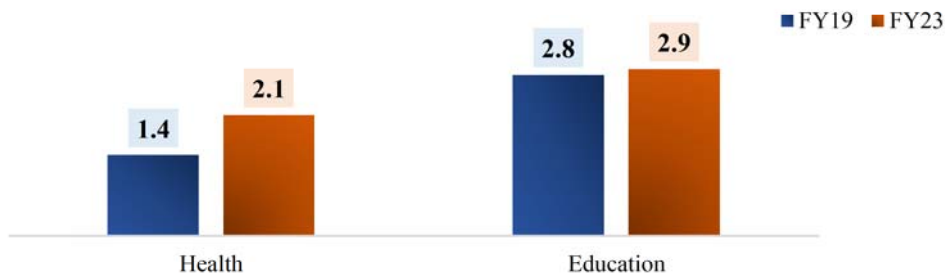
New Programme to promote research in Pharmaceuticals to be launched



Joint Public and Private Medical Research to be encouraged via select ICMR labs



Increase in Expenditure on Health and Education (% of GDP)



Education and Skilling

- ✓ Revamped Teachers' training via **District Institutes of Education and Training**
- ✓ **National Digital Library** to be set up for children and adolescents
- ✓ States will be encouraged to set up physical libraries at Panchayat and ward levels



The Big Tent that accommodates all



9 crore drinking water connections to rural houses



Cash transfer of ₹2.2 lakh crore to over 11.4 crore Farmers under PM-KISAN



Insurance cover for 44.6 crore persons under PMSBY* and PMJJY^

11.7 crore household toilets constructed under SBM



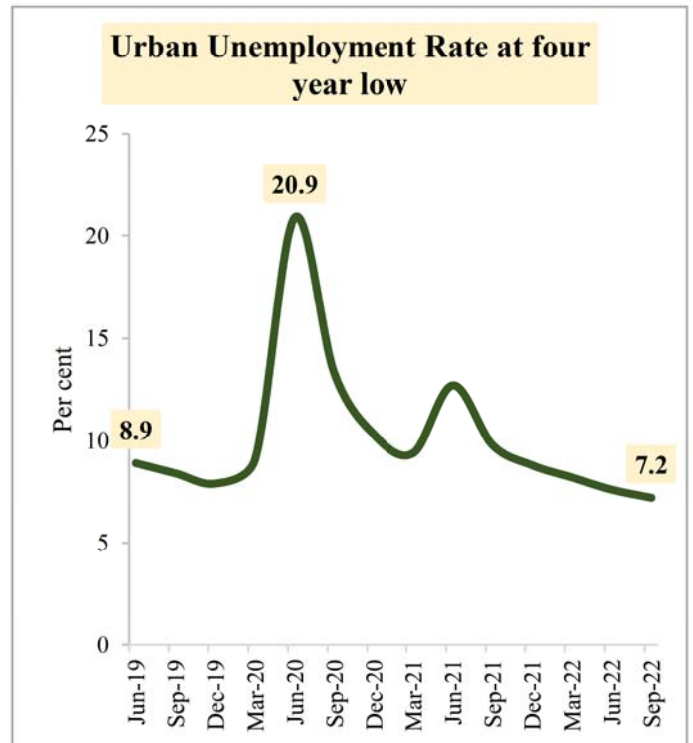
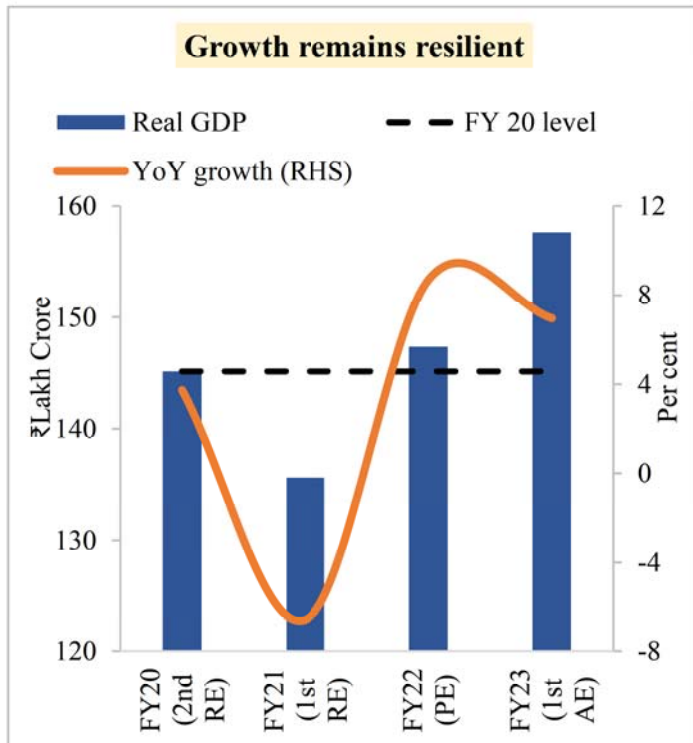
Inclusive Development Achievements

47.8 crore PM Jan Dhan bank accounts

9.6 crore LPG connections under Ujjawala



220 crore Covid vaccinations of 102 crore persons



Reaching the Last Mile



Pradhan Mantri PVTG* Development Mission to be launched

Financial assistance to be given for sustainable micro irrigation in drought prone regions of Karnataka



More teachers to be recruited for 740 Eklavya Model Residential Schools

Bharat (SHRI)^ to be set up for digitization of ancient inscriptions



Infrastructure and Investment

Incentives to boost Investment in Infrastructure and productive capacity

Multiplier
Impact

Rise in growth and employment



Increased capital investment outlay by 33.4% to ₹10 lakh crore



Continuation of 50 year interest free loan to State Governments to incentivize infrastructure investment



Highest ever Capital outlay of ₹2.4 lakh crore for Railways



100 transport infrastructure projects identified for end-to-end connectivity for ports, coal, steel, fertilizer sectors



Creating Urban Infrastructure in Tier 2 and 3 cities via establishment of UIDF**

*PVTG: Particularly Vulnerable Tribal Groups, ^SHRI: Shared Repository of Inscriptions,

**UIDF: Urban Infrastructure Development Fund

Unleashing the Potential-*Trust Based Governance*



Measures



Expected Outcomes



Make AI in India: Three specialized AI centres to be set up in educational Institutes

AI based solutions in agriculture, health and sustainable cities

National Data Governance Policy to be introduced

Enable access to anonymized data for research by Start-ups and academia

Vivad se Vishwas I: Less stringent contract execution for MSMEs

Relief to MSMEs affected during the Covid period

Vivad se Vishwas II: Easier and standardized settlement scheme

Faster settlement of contractual disputes of Govt. and Govt. undertakings

Phase 3 of ***E-Courts*** to be launched

Effective administration of Justice

Entity Digi Locker to be set-up for use by business enterprises and charitable trusts

Facilitating secure online storing and sharing of documents with the business ecosystem

Setting up of 100 ***labs for 5G services*** based application development

To tap employment potential and business opportunities

R&D grant for ***Lab Grown Diamonds (LGD)*** sector

To reduce import dependency by encouraging domestic production

Green Growth

Green Credit Programme

To be notified under EPA to incentivize sustainable actions

Sustainable Ecosystem development

- MISHTI[^] to be taken up for Mangrove plantation along the coastline
- Amrit Dharohar to be implemented for optimal usage of wetlands

Other Initiatives

- Setting up 10,000 bio-inputs resource centres to facilitate farmers to adopt natural farming
- Promotion of Battery energy storage systems
- Promotion of coastal shipping for energy efficient transportation
- Funds to be allocated for replacing old polluting vehicles

PM-PRANAM* to be launched

Will incentivize States/UTs to promote usage of alternative fertilizers

500 new 'Waste to Wealth' plants

To be established under GOBARdhan# scheme for promoting circular economy



Amrit Peedhi - Youth Power



PMKVY 4.0 will be launched

Covering new courses like coding, AI, Robotics, 3D printing etc.



Measures to boost Tourism sector

At least 50 destinations to be selected, through challenge mode, to be developed as a complete package for domestic and foreign tourists



States will be encouraged to set-up Unity Malls

For promotion and sale of ODOP (One District-One Product), GI and handicraft products

* PRANAM: PM Programme for Restoration, Awareness, Nourishment and Amelioration of Mother Earth

[^] MISHTI: Mangrove Initiative for Shoreline Habitats and Tangible Incomes

GOBARdhan: Galvanizing Organic Bio-Agro resources Dhan

Financial Sector

Setting up of National Financial Information registry

To enable efficient lending, promote financial inclusion and enhance financial stability

Setting up of a Central Data processing Centre

For faster handling of administrative work under the Companies Act



Mahila Samman Bachat Patra

One-time new small savings scheme for a 2-year period with a deposit facility of up to ₹2 lakh for women

Benefits for Senior Citizens

Enhanced maximum deposit limit for senior citizens savings scheme from ₹15 lakh to ₹30 lakh

Credit Guarantee scheme for MSMEs

Expanded corpus under a revamped scheme to enable additional collateral free guaranteed credit of ₹2 lakh crore

Other Initiatives

- Initiatives to promote business activities in GIFT IFSC
- Create more trained professionals in Securities Markets via award of educational certificates

Fiscal Management



50 year Interest Free Loans to States

- To be spent on Capital Expenditure within 2023-24
- Part of the loan is conditional on States increasing actual Capital expenditure and parts of outlay will be linked to States undertaking several reforms

Fiscal Deficit of 3.5% of GSDP allowed for States (0.5% tied to Power sector reforms)

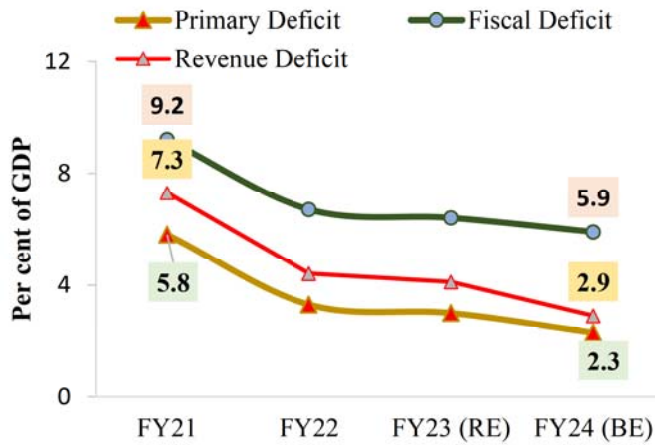


Fiscal Consolidation

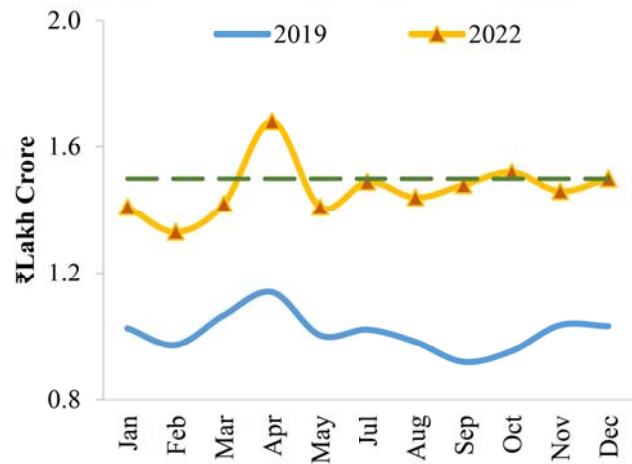
Targeted Fiscal Deficit to be below 4.5% by 2025-26

Indian Economy backed by strong macroeconomic fundamentals

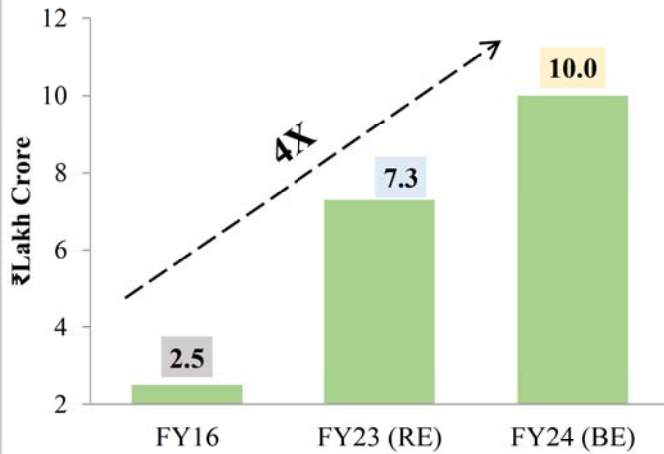
Union Government on the path of fiscal consolidation



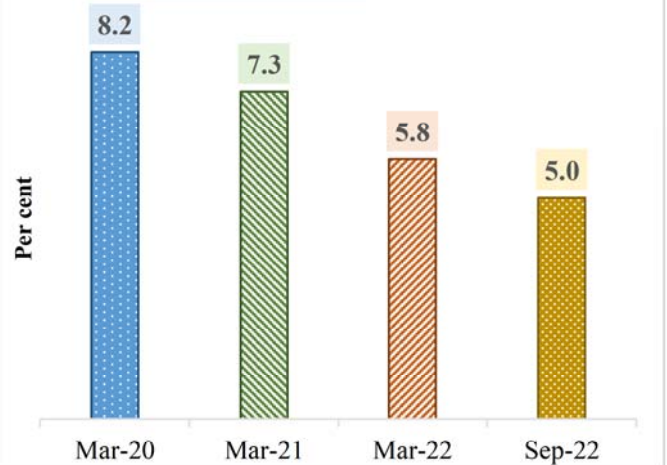
GST monthly revenue continues to remain around ₹1.5 lakh crore



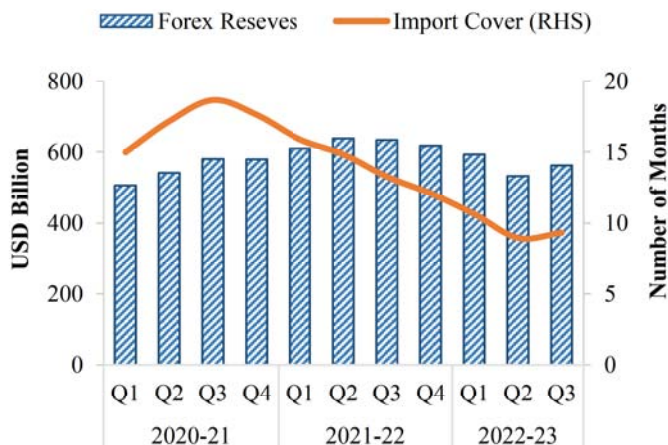
Increasing Capital Expenditure of Union Government



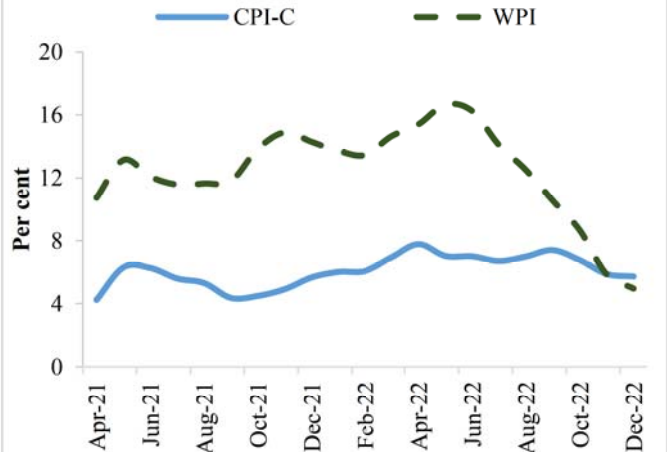
Asset quality in banks improving with lower NPAs



Sufficient Foreign Exchange Reserves to cover 9 months of Imports



Wholesale prices converging to retail prices



Tax Proposals

Simplification in Indirect Taxes to deliver



Higher Exports



Higher domestic manufacturing



More value addition in the economy



Green energy and mobility

Changes to custom duty on

Benefits

Import of capital goods for Li-ion battery manufacturing



For Greener mobility

Import of mobile camera lens



Deepening Value Addition

Denatured ethyl alcohol



For chemical industry

Key inputs for producing shrimp feed



More marine exports

Seeds for manufacturing lab grown diamonds



Export Promotion

Continuing concessional basic custom duty on copper scrap



Augmenting raw material availability for MSMEs

Compounded rubber, to bring it at par with natural rubber



To curb duty circumvention

Direct Tax Proposals

To reduce the compliance burden, promote entrepreneurial spirit and provide tax relief to citizens



45% of the returns on tax payers' portal were processed within 24 hours



Average processing period reduced from 93 to 16 days in 8 years



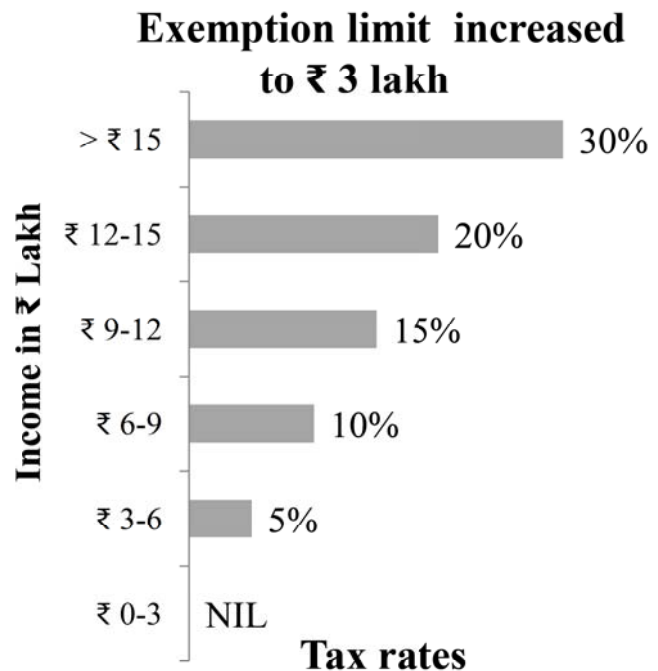
Processed more than 6.5 crore returns this year

Further Simplifying Personal Income Tax



Income limit for rebate of income tax increased from ₹5 lakh to ₹7 lakh in the new regime

New Income tax regime



- Highest surcharge rate on income above ₹5 crore to be reduced from 37% to 25% under new regime
- Extending benefits of standard deduction to new tax regime for salaried class and pensioners
- Increasing tax exemption limit to ₹25 lakh on leave encashment on retirement for non-government salaried employees

Simplifying Tax Benefits for Industry

MSME



- Enhanced limits for micro enterprises and professionals to avail benefits of presumptive taxation ; 95% of receipts to be non cash
- Deduction on payments made to MSMEs to be allowed only when payment is actually made

- Extending 15% corporate tax benefits to new co-operatives, commencing manufacturing till 31st March, 2024
- Higher limit of ₹2 lakh per member for deposits & loans in cash by PACS and PCARDBs
- Higher limit of ₹3 crore for TDS on cash withdrawal for co-operative societies



COOPERATIVES

STARTUPS



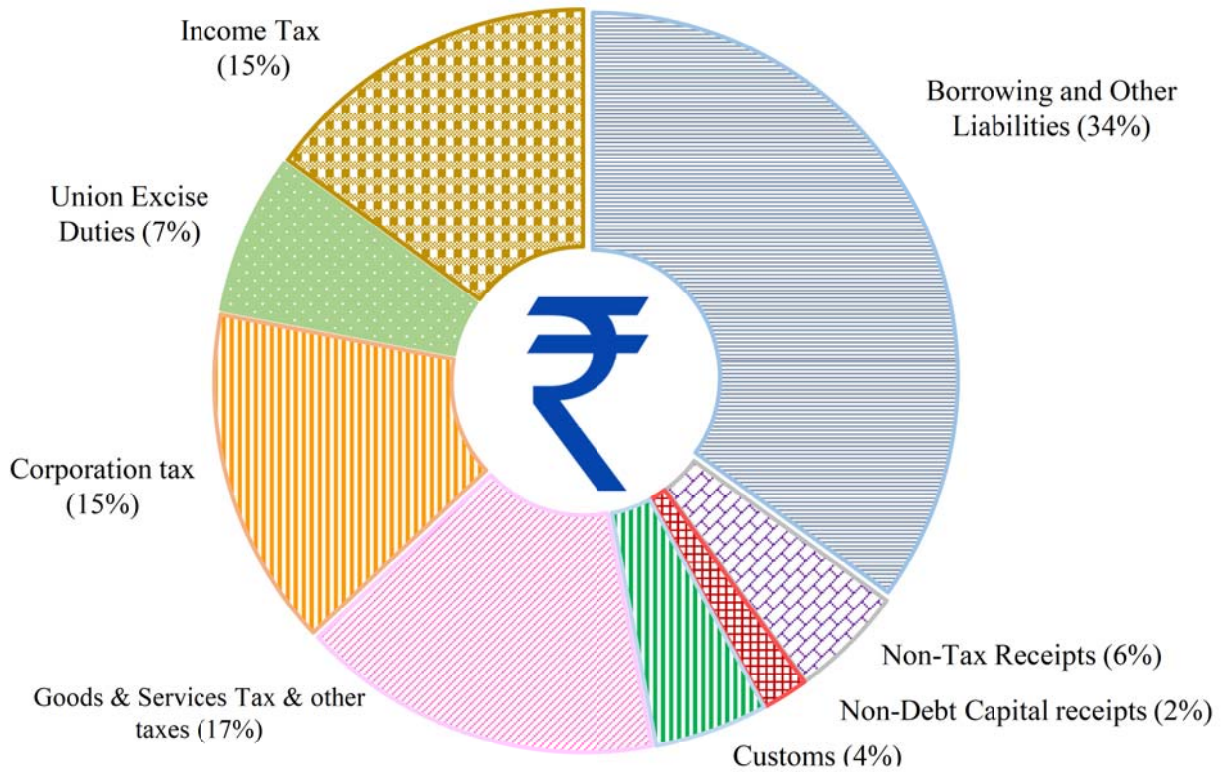
- Extension of the date of incorporation by one year for income tax benefits to start-ups
- Benefit of carry forward of losses on change of shareholding of start-ups from seven years of incorporation to ten years.

- Income of authorities, boards and commissions set up by statutes of the Union or State to be exempted from income tax in certain sectors
- Extension of period of tax benefits to funds relocating to IFSC, GIFT City till 31st March, 2025

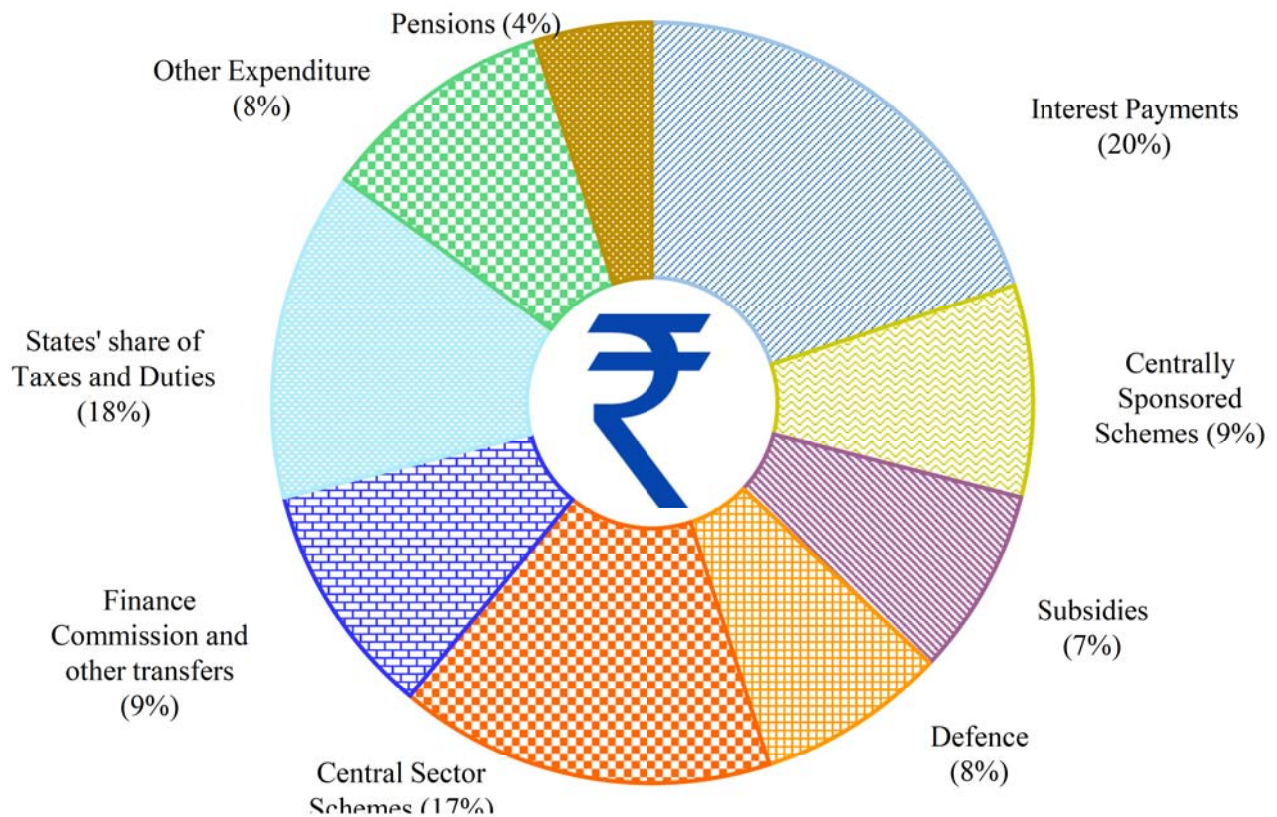


RATIONALISATION

Rupee Comes From

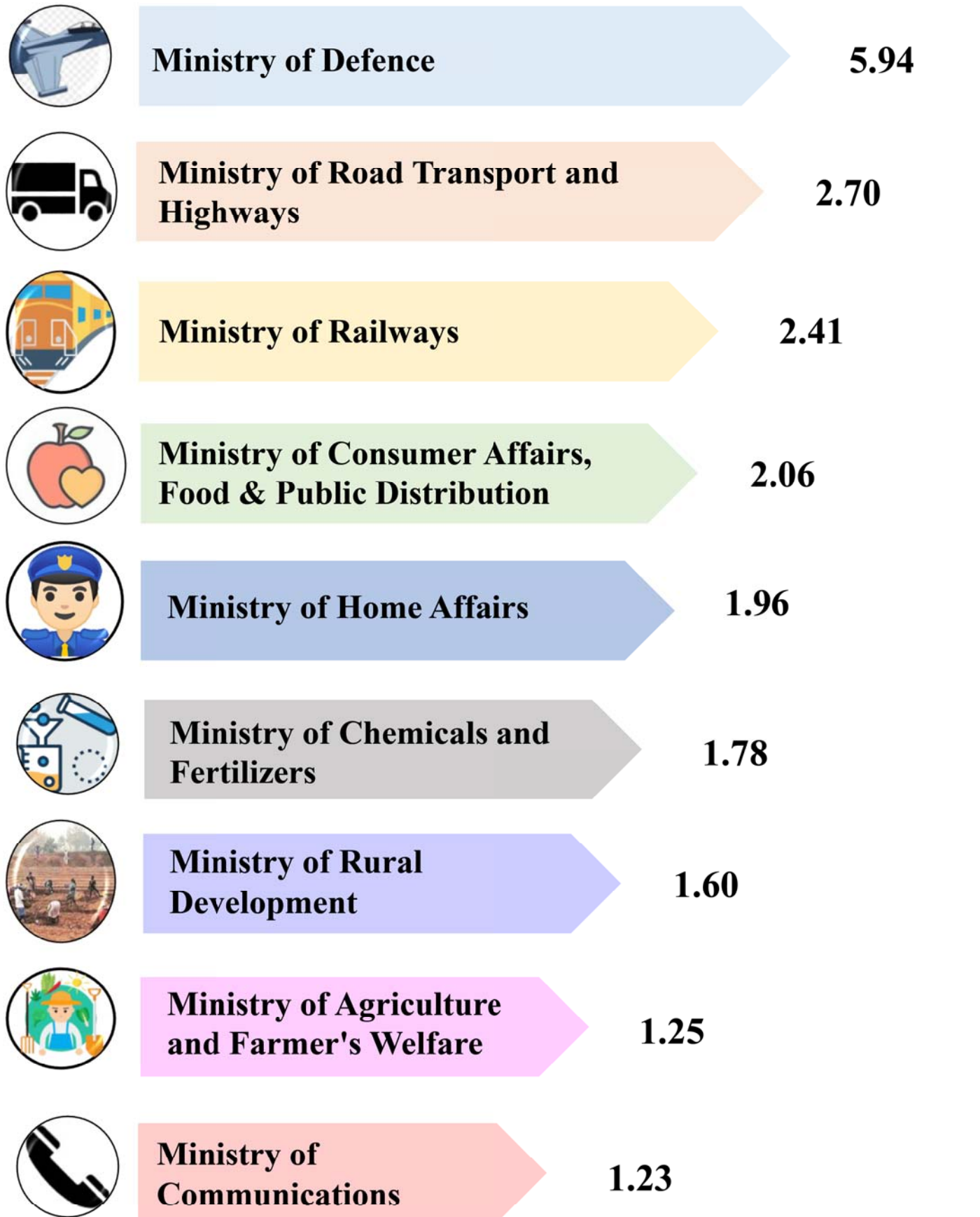


Rupee Goes To



Allocation for Specific Ministries

₹ in Lakh Crore



Allocation to Major Schemes (in ₹ crore)

Development of Pharmaceutical Industry

100



1,250

2022-23(BE) 2023-24(BE)

Jal Jeevan Mission

60,000



70,000

2022-23(BE) 2023-24(BE)

Eklavya Model Residential Schools

2,000



5,943

2022-23(BE) 2023-24(BE)

Pradhan Mantri Awas Yojana

48,000



79,590

2022-23(BE) 2023-24(BE)

Scheme for Faster Adoption and Manufacturing of EV's (FAME)

2,908



5,172

2022-23(BE) 2023-24(BE)

North East Special Infrastructure Development Scheme

1,419

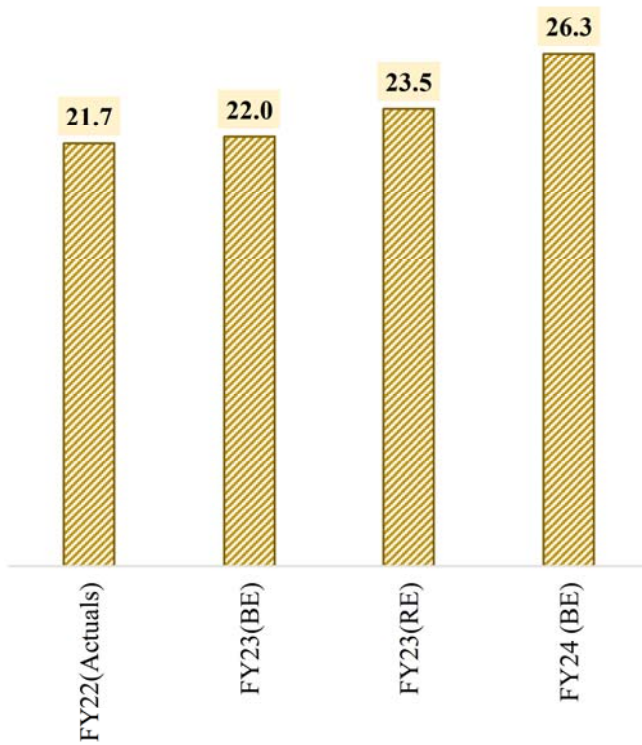


2,491

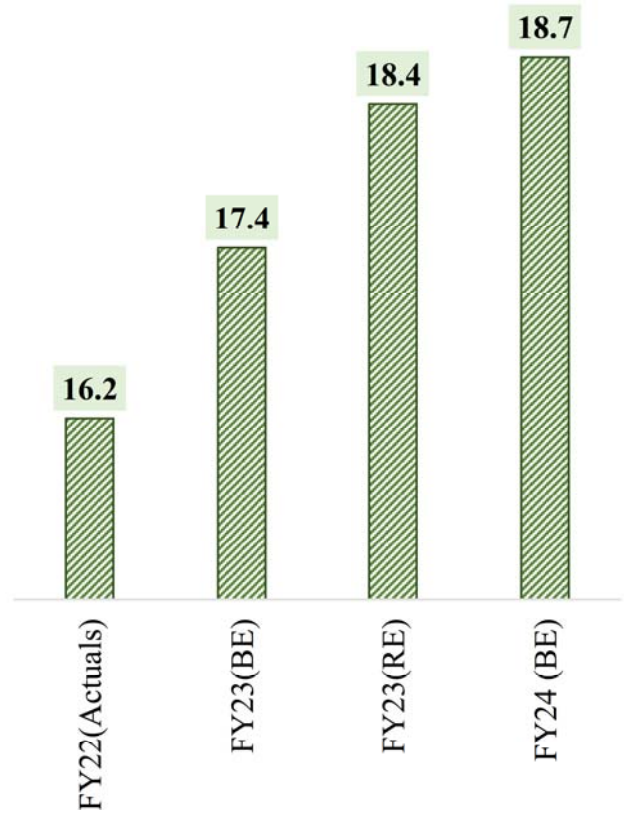
2022-23(BE) 2023-24(BE)

Receipts and Expenditure (₹Lakh Crore)

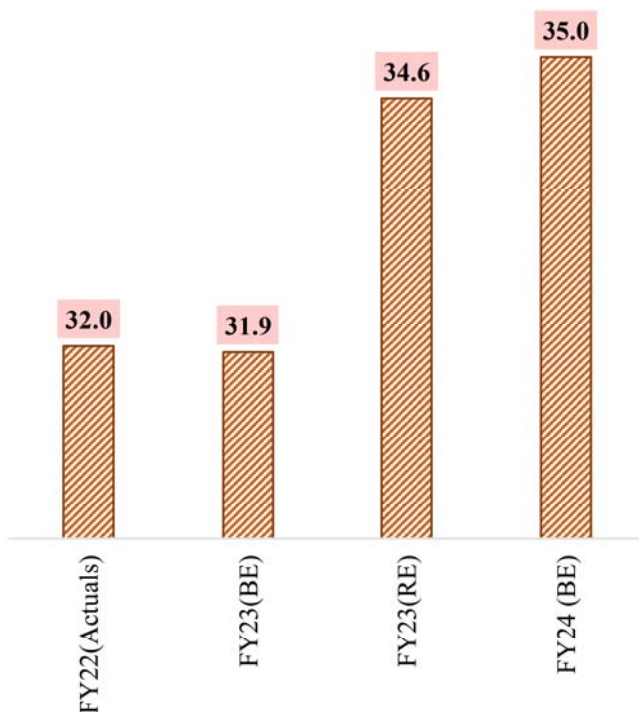
Revenue Receipts



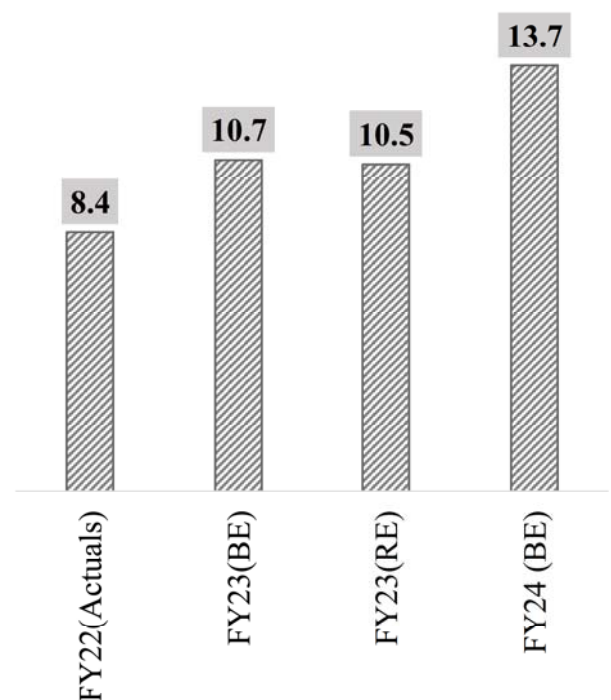
Capital Receipts



Revenue Expenditure



Effective Capital Expenditure



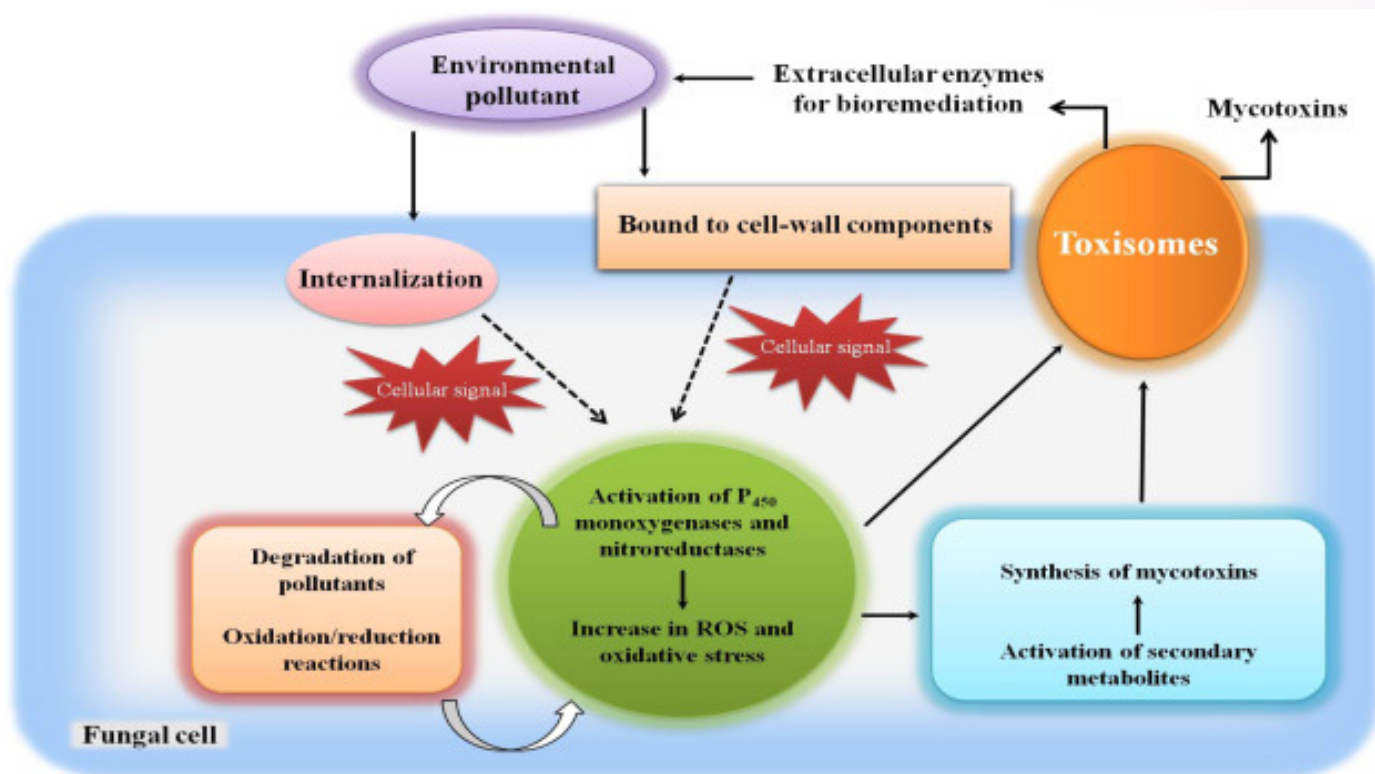
The world's first environmental clean-up happened 400 million years ago

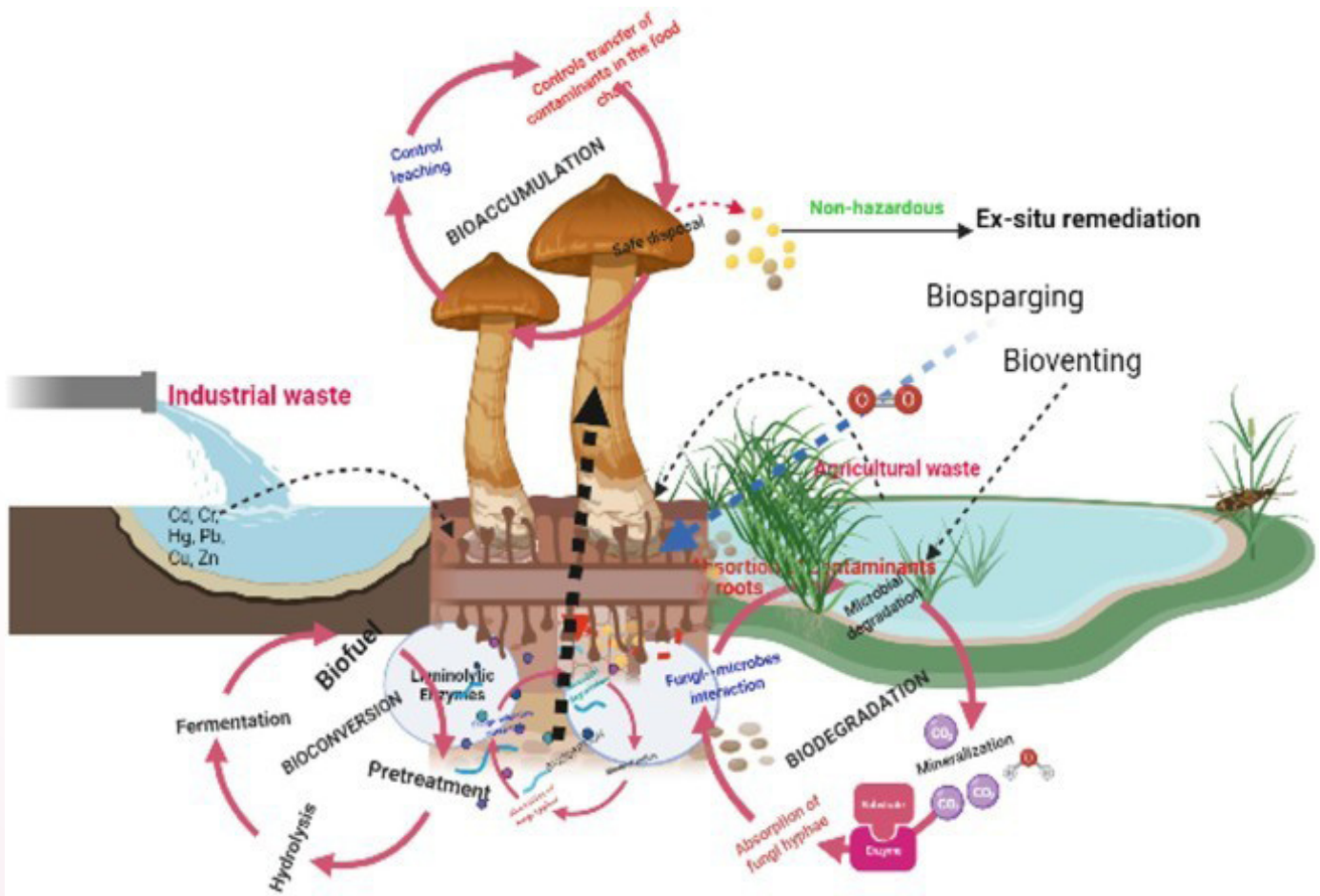
One of the biggest environmental challenges today is to treat land that is contaminated by toxic elements from industrial activity, elements like arsenic, antimony and tungsten.

But these same elements can be brought to the Earth's surface by natural processes such as the bubbling up of hot springs. So it is valuable to understand how they were dealt with by the environment before humans came along. A site

in Aberdeenshire in Scotland which is famous for early fossil life preserved by hot springs, shows us how it could have happened. A round cross section of a fossilised plant stem detailed in cream and brown. A cross-section of a stem preserved as a silica petrification, detailing its cellular structure, found at Rhynie, Aberdeenshire. Wikiwand, CC BY-SA

Some of the world's most well preserved fossilised plants are found in Rhynie, just west of Aberdeen,





in deposits thought to have come from the world's oldest land ecosystem.

Exquisitely detailed plants – as well as spiders, insects, fungi and other life – were preserved there by hot springs about 410 million years ago. These are some of the earliest fossilised plants known, so are important in what they can tell us about plant evolution.

But those hot springs also introduced elements that would have been toxic to most forms of life. Our latest research shows how minerals deposited among the plants extracted the toxic metals from the spring water and limited their impact on the environment.

Minerals and toxic metals

The plants at Rhynie were encased in the mineral silica, which deposits around hot springs. At tourist spots like Iceland, New Zealand and Yellowstone National Park in the US, bacteria in the water are

involved in producing these silica deposits, and this would have been the same at Rhynie.

As well as silica, the fossils contain certain minerals including pyrite (iron sulphide, so-called fool's gold), manganese oxides and titanium oxides. It's these minerals, produced by the bacteria and other lifeforms that would have soaked up the toxic metals.

Pyrite, formed by the bacteria, soaked up arsenic from the spring water. Manganese oxides, commonly deposited by fungi, also absorbed arsenic. Titanium oxides, formed particularly around decomposing plant remains, absorbed tungsten and antimony.

So between them, the minerals formed by biological activity accounted for the main sources of toxicity. The evidence from Rhynie shows how natural processes have helped clean the environment since life first colonized the land.

The magic of mushrooms

Our solutions to man-made environmental problems, such as contamination from industry and mining, typically include a range of chemical treatments. But an exciting “natural” approach is the technique of mycoremediation, where fungi concentrate and store contaminating elements in their substance.

Fungi can be very resilient, and adapt rapidly to substances we regard as toxic. One strategy is to harvest fungi that live on mining or industrial waste and which are predisposed to cope with it, then use the fungi to clean up waste on other problem sites. In this way, fungi can be used to recover land contaminated by harmful metals.

Biologist Merlin Sheldrake, in his award-winning 2020 book *Entangled Life*, argues: “Fungi are some of the best-qualified organisms for environmental remediation ... fine-tuned over a billion years of evolution.”

Evolution is a key word here. The ecosystem (plants, animals and their habitat, including minerals) does not “intend” to clean up toxic chemicals as humans do. However, life is more likely to thrive and reproduce in ecosystems that strip out harmful substances. Just as particular fungi can be selected to help deal with contaminated land, evolution favoured the species that adapted to environmental changes in the geological past, as implied at Rhynie.

Remaining questions

The deposits at this special geological site were formed by hot springs, whose waters preserved the plant cells. But because the hot springs that formed the Rhynie deposit were rich in arsenic, antimony and other trace elements, there is uncertainty about how representative these fossils may be of early plant communities.

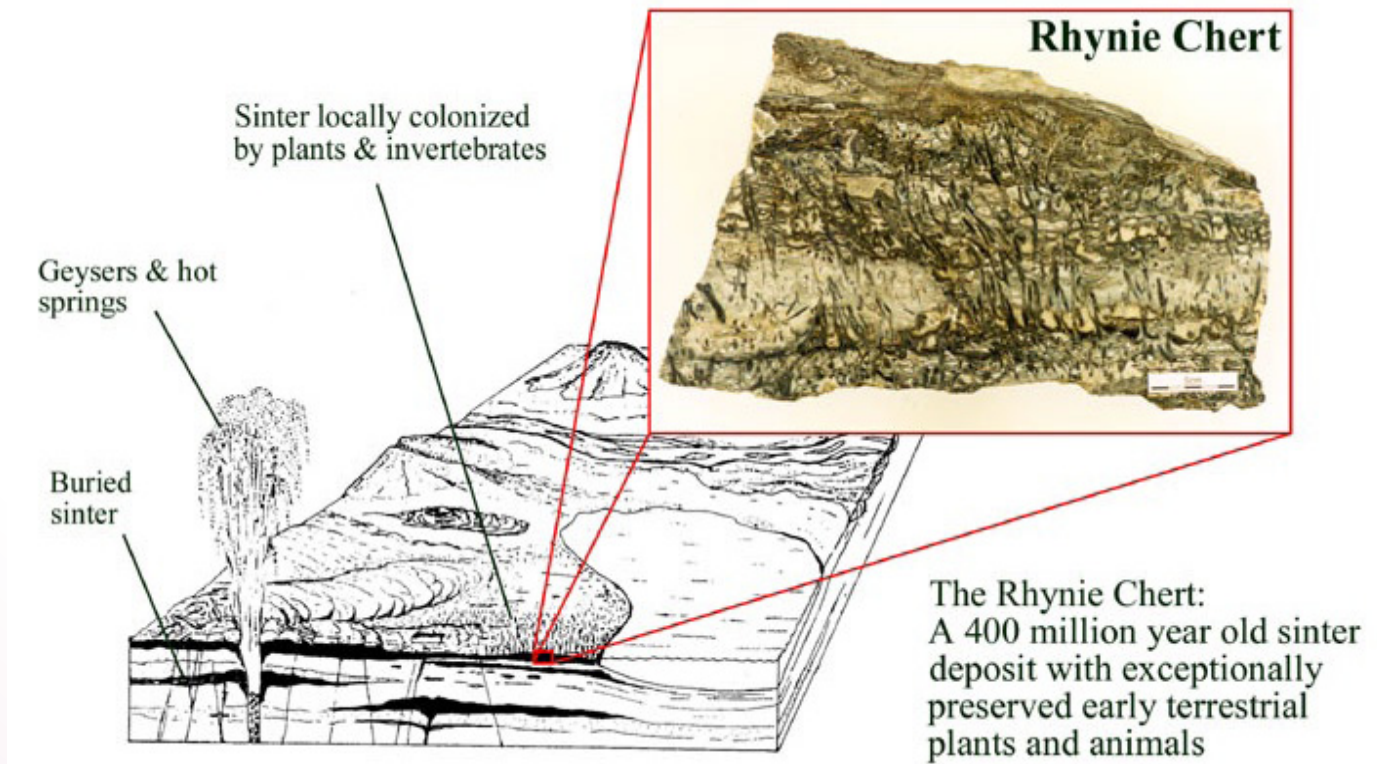
Scientists might argue that the plants found at Rhynie could be an adaptation to an environment that was chemically unusual. There is no clear answer to whether this was so, but our observations

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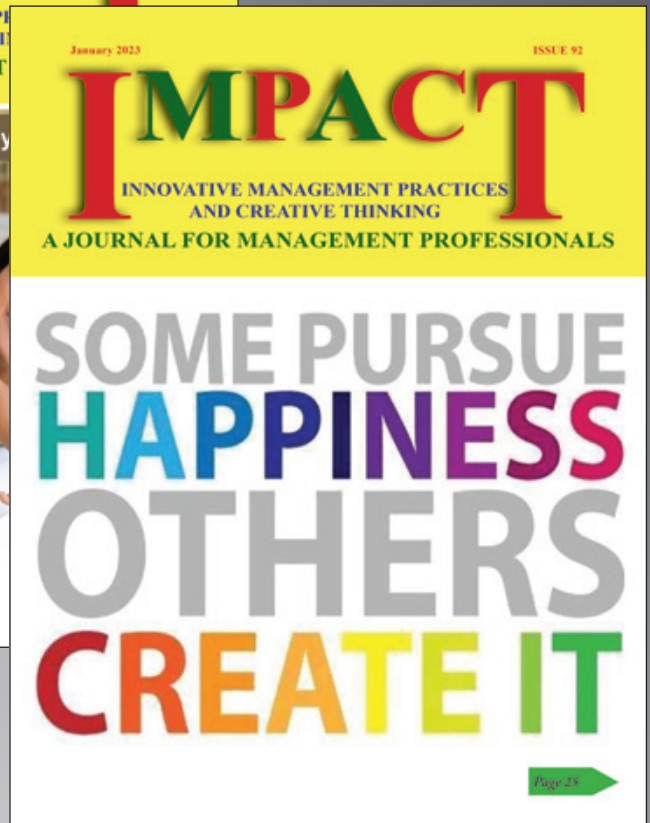
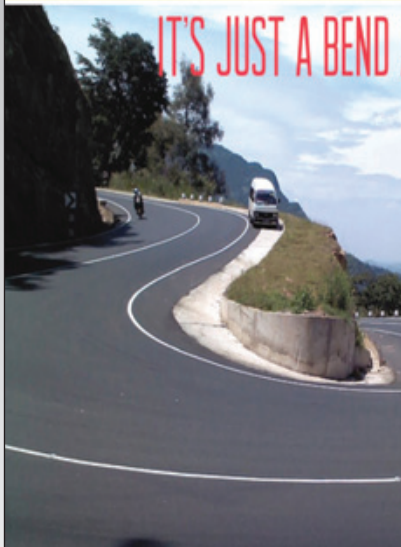
do suggest that the ecosystem was able to respond to the water chemistry, so the existence of these plants was not necessarily abnormal.

Visitors to hot springs in New Zealand and Yellowstone today can see orange and yellow crusts containing the harmful arsenic, antimony and so on, but also precious metals like gold and silver, so the springs attract commercial interest.

Hot springs worldwide also contain an element that was pretty much ignored until recently: lithium. The spring waters provide a renewable supply of this element which is currently fundamental to rechargeable batteries – especially in electric vehicles, which are essential in the quest to achieve carbon emission targets. So hot springs may have more than one role in helping clean up the environment.

*Source Courtesy: <https://theconversation.com>
Ms. Jo Adetunji, Editor, The Conversation UK*

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Insurance for All by 2047

Insurance Regulatory and Development Authority of India- IRDAI- Chairman Mr Debasish Panda has given a call for Insurance for all in India by 2047. It is a desirable and necessary goal but is it achievable? This is a question in the minds of insurance people including me and I have attempted to analyze the different parameters for completing this task in this article.

Insurance Industry in India

India has overtaken China and UK to become the world's 10th largest life insurer and third strongest Brand as per Global Insurance Brand Study 2021.

The insurance market here is expected to reach 200 Billion USD by 2027.

The Insurance penetration which was 3.76% in 2020 has touched 4.2% by 2021 with reference to the country's GDP, although it is still lower when compared to the world's average of 7%.

The total life insurance business for the year 2021-22 is Rs 314263 crores, out of which LIC alone procured Rs 198759 crores and the balance Rs 115503 crores by the Private Insurers.

A Close Look at the position of the Monolith- LIC of India

As on 31-03-2022, LIC has one Central Office, 8 Zonal Offices, 113 Divisional Offices, 2048 Branch Offices, 77 Pension & Group Schemes Units, 4 Salary Savings Scheme Units and 1546 Satellite

Offices. No other Insurance company has so much presence in both Urban and Rural areas.

The total strength of employees is 104079.

The total strength of Agents is 1326000.

The First Year Premium for the financial year 2021-22 is Rs 198759 crores with a market share of 63.25%.

The number of Individual policies is 217.55 lacs, occupying 74.6% of the market.

Total Business in Force is 8.52 crore policies.

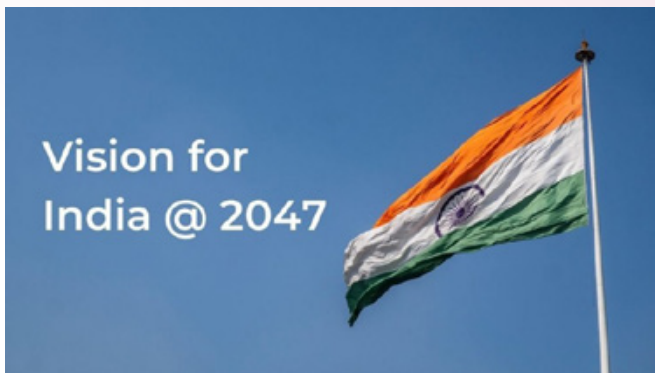
LIC settled Rs 192568 crores on 267 lac policies as claim settlement during the year, achieving 90.9% under Maturity Claims and 98.76% under Death Claims.

Total Income of the Corporation is Rs 7.21 crores.

Only Premium Income out of this is Rs 4.27 crores.

Total Payments is Rs 3.57 crores.





Total Life Fund as on date is Rs 37.35 crores.

Total Assets of the Corporation is Rs 42.30 crores.

Among the world top 500 companies LIC occupies the 98th position surpassing the Reliance Industries- position number 104- and the State Bank of India holding the position number 236 as on 31-03-2022.

The business of the top 5 Private Insurers is given below for the purpose of comparison with LIC of India=

SBI Life Insurance company- Rs 25458 crores- market share 8.1%.

HDFC Life Insurance company- Rs 24301 crores- 7.73%.

ICICI Prudential Life Insurance company- Rs 15035 crores- 4.78%.

Bajaj Alliance Life Insurance company- Rs 9135 crores- 2.9%.

Aditya Birla Life Insurance company- Rs 5665 crores- 1.8%.

Total Group Insurance Business during the year in question is Rs 189004 crores with LIC annexing 76.16% of it- Rs 143938 crores and the balance Rs 45065 crores- 23.8%- having been done by the Private Players.

With LIC being in a commanding position in the industry, it is its major responsibility to realize the objective of the IRDAI Chairman- Insurance for All by 2047. Let us now focus on a few initiatives to achieve this.

A Few Steps for the Future

- A. A stands for Agent. Yes, there is no future for insurance without the complete and full cooperation of the agency force. It is the duty of each insurer to encourage the young agents. These enthusiastic persons should be identified and given a lot of incentives to improve their business year after year. The present number of the MDRT- Million Dollar Round Table- 16564 has to be enhanced manifold. Agent is the backbone of any organization. Lady agents have to be encouraged specifically especially house wives since they can only tap the inner resources in every family and they can more easily win the confidence of the lady at home than by an outside male agent.
- B. The insurer should begin working on a Startup model in its initiative, enterprise and risk taking. Then only results can be seen fast. Skill development among the employees is a must for this objective.
- C. Rural thrust is one of our important aims for increasing our business, especially we should spot both unemployed rural youth and the senior Panchayat Leaders to do our business. Rural Career Agency scheme should be revived expeditiously.
- D. The rental value of the vast buildings of LIC has to be increased manifold particularly in the Metropolitan cities and Urban areas. Much attention has not been given to this aspect so far.
- E. Digitalization has become the buzz word now. 5G Introduction promises high speed Internet Connectivity. Insurance industry too should utilize this situation and bring in Digital reforms in order to procure more business and improve the quality of services

to its customers. This kind of digital solutions will enhance the ease of doing business since this modern approach will bring in changes in the attitude of consumers.

- F. Simplification of existing products and innovation of new products are the requisite of the present times. Some old products which are not sold much by the agents should be removed from our books. This is what the public expects from the industry as it will help in the realization of their financial security.
- G. The two Government Schemes- PMJJBY & PMSBY have got wide response from the public. Pradhan Mantri Jeevan Jyoti Bima Yojana- PMJJBY- has been taken by 6.4 crores of people and Pradhan Mantri Suraksha Bima Yojana- PMSBY- attracted 22 crores of our population. These schemes have settled claims worth Rs 14144 crores- PMSBY- and Rs 2513 Crores- PMJJBY. Hence these welfare measures must be further popularized among the public, especially the poor and the rural.
- H. Under 3.0 stage of LIC of India- 1.0 stage being the Nationalization of life insurance in 1956 and stage 2.0 being the opening of the sector to the Private in 2020- the Chair Person of LIC Mr MR Kumar has declared a slogan called PROMPT- P- Product Mix, R- Reinforce or Relevant Initiatives, O- Operational Efficiency or Improvement, M- Multichannel approach to Marketing, P- Proactive Digital Push and T- Training. This approach will further consolidate the primary position of LIC among the insurance companies and help in tapping large business.

Role of the Regulator

Insurance for All by 2047 is the call and desire of the IRDAI Chairman. It is an excellent objective for our nation. Already the Chairman is paving the way for it by liberalization of procedures in approving



the new products, bringing in the system of ‘ use and file’ instead of the present protocol of ‘ file and use’ and cutting down unnecessary statements to be submitted by the insurers. He has also formed a few Committees headed by insurance veterans to bring about improvements in the functioning of the insurance companies as well as achieving more ease of doing business.

IRDAI is working on BIMA SUGAM- a one stop shop for insurance. It is a new on line platform approved by the Regulator where different types of insurance products will be sold. Those policies will be in the digital form and thus buyers need not worry about the safe keeping of their documents. Besides selling and servicing of policies, Bima Sugam will make it possible for the customers to port their policies from one provider to another.

I am sanguine that with these positive approaches, insurance industry will be able to stand up to the target and dream of the insurance Regulator.

R. Venugopal

Mr. Venugopal has served in LIC of India from 1968 to 2006 for 38 years and retired as an Executive Director.





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