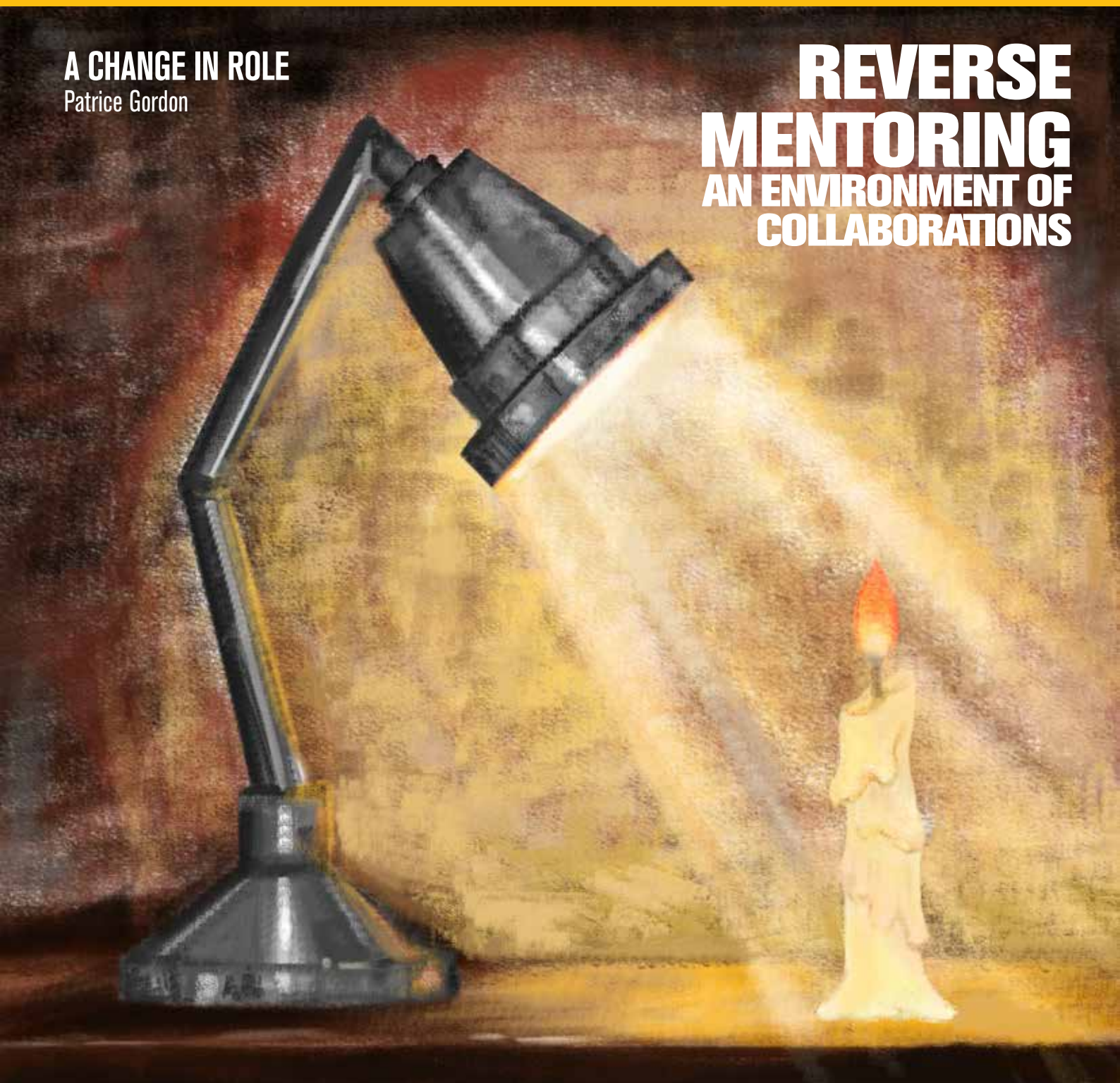
The Journal of
AIMA
ALL INDIA MANAGEMENT ASSOCIATION

indian management

NOVEMBER 2023 VOLUME 62 ISSUE 11 PAGES 38 ₹60

A SPENTA MULTIMEDIA PUBLICATION



A CHANGE IN ROLE
Patrice Gordon

REVERSE MENTORING
AN ENVIRONMENT OF COLLABORATIONS

AIMA
ALL INDIA MANAGEMENT ASSOCIATION

POST GRADUATE DIPLOMA IN MANAGEMENT (EXECUTIVE)

Approved by AICTE, Ministry of Education, Government of India

Objectives of the course: The Post Graduate Diploma in Management-Executive (PGDM-Executive) Programme of 15/18 months duration aims to equip the working executives with requisite conceptual, analytical and personal skills to be successful and groom them for a General Management role. The program shall provide adequate perspective and an integrated overview of core business functions, key concepts and emerging tools and techniques to attain success and sustain growth in a competitive business environment.

Benefits of PGDM (Executive) Program: AICTE Approved Program • 170 hours + blended Learning from Industry Experts • Latest Case Studies (From industry to bring meaning and relevance) • Placement Training Support • Live Industry Interactive Sessions • Over four decades of expertise in Conducting Management education program • Academic Flexibility to optimize student's learning

Target Audience: The PGDM (Executive) programme is specially designed for high-performing professionals with work experience at the managerial/ supervisory level.

Eligibility: Bachelor's degree in any discipline from a recognized university with at least 5 years of working experience at the managerial/supervisory level.

Programme Fee, Code & Duration:

Program	Program Fee	Duration
PGDM (Executive) in General Management (E6)	INR 75,000/-	15 months
PGDM (Executive) (E7)	INR 90,000/-	18 months

Program Delivery: 12 hours of teaching (per subject) via Face to Face Class room/Online teaching on weekends and Online Industry Interactive sessions on weekday etc.

Evaluation: On the basis of two assignments per subject and term-end examination. Term end Examination is Paper pen based and is conducted Pan India in month of June and December.

Companies where our Alumni Works:

HCL | TATA POWER | पावरग्रिड | opto | airtel | genpact | एनटीपीसी NTPC एक महारत्न कम्पनी | TATA TATA CONSULTANCY SERVICES | सेल SAIL | Pearl Academy | ERICSSON

For More details, please contact
Geetika Gumber
AIMA-Center for Management Education
15, Link Road, Lajpat Nagar-III, Nearby Lajpat Nagar Metro Station Pillar No. 26 | Mob: 96546 01397/ Email: ggumber@aima.in

AIMA

ALL INDIA MANAGEMENT ASSOCIATION

PGCM IN DIGITAL MARKETING & STRATEGY

Approved by AICTE*

The digital technology and internet has emerged as a platform to facilitate global businesses and communication. Virtually, every organisation today is using some or the other digital/online marketing tools.

Leveraging the digital marketing tools, and technology to achieve the competitive advantage and building market lead, CRM and innovations is the main objective of the digital marketing strategy programme.

The programme is intended for Sales & Marketing and IT professionals, who want to take, advantage of digital marketing tools and techniques to upscale their career and achieve better revenues for the organisation and create business values.

*in ODL mode

For more details, please contact: Ekta Nayyar
All India Management Association – Centre for Management Education
15 Link Road, Lajpat Nagar – Part III, Near Lajpat Nagar Metro Station, New Delhi – 110024
Ph: +91 011-47673000/49868399 Extn:- 732/709 | Mobile: +91 - 9899056265; +91 9250127573
Email: enayyar@aima.in; digital@aima.in | Website: www.aima.in

indian management
THE JOURNAL OF THE ALL INDIA MANAGEMENT ASSOCIATION
VOLUME 62 I ISSUE 10 I NOVEMBER 2023

THIS ISSUE

COVER STORY
A CHANGE IN ROLE 12
Disrupting traditional workplace practices.
- PATRICE GORDON

MYTH BUSTER
A 'HAPPY PLACE' 18
What's keeping you from your happy place?
- GARY SPROUSE

ORGANISATIONAL CULTURE
A SELF-PERPETUATING DESIGN 22
What leaders must do to create a culture of change.
- TONY SALDANHA AND FILIPPO PASSERINI

STRATEGY
'FUEL' THEIR ENTHUSIASM 26
How leaders can help workers upskill and adapt to AI in the workplace.
- DR HELMUT SCHUSTER AND DR DAVID OXLEY

SUSTAINABILITY
CLEAN ENERGY, GREEN FUTURE 30
Hydrogen economy and the global decarbonisation agenda.
- DR MP SUKUMARAN NAIR

AIMA
ALL INDIA MANAGEMENT ASSOCIATION

AIMA MANAGEMENT TV

Watch II Learn ▶Grow

Insights from management gurus and experts now at your fingertips!

Presenting to you AIMA Management TV Channel,
a one stop shop for latest management thought and updates

- Exclusive views from Indian and global thought leaders
- Stay up to date with the latest management insights and trends
- Close to 200 free videos with over 7000 hours of content and growing!
- Easy to navigate with multiple categories and special series sections
- Subscribe to get access to exclusive management views and outlook

Come watch, listen and learn from the best!

Scan QR Code to watch

All India Management Association House
14, Institutional Area
Lodhi Road, New Delhi
110003, India

PRESIDENT'S MESSAGE

Reverse Mentoring

Nikhil Sawhney is President, AIMA & Vice Chairman and Managing Director of Triveni Turbine Limited, and a Director of Triveni Engineering.

Rapid obsolescence of knowledge, skills and networks is a major worry for corporate leadership. Experience is becoming more of a liability as the wisdom achieved during a relatively stable past becomes an obstacle to acquiring new attitudes and attributes to suit the changing market and competition. Business technology and value capture points are changing and too many legacy companies are losing customers and growth to startups. It is a time for the seniors to swallow their pride and learn from the juniors.

However, it is easier said than done. There is still too much prestige and power vested in ranks and the seniors are scared of a dilution of their authority if they are seen taking lessons and advice from the juniors. A lot of the seniors try to circumvent the need for such exposure by concentrating more power and use the dependency of the juniors to get by. The juniors too get frustrated in trying to transfer new knowledge and knowhow to seniors in a meaningful way because of their own lack of in-depth awareness of business and organisational dynamics.

The key to reverse mentoring is the recognition that in volatile and uncertain times, leadership flows from expertise and not rank.

Still, reverse mentoring is becoming a compulsion to shorten the time and cost of educating the hierarchy in new ways of doing business and doing new businesses. It is also becoming critical to making best use of the experienced leaders and to get the younger staff more involved in transformation and innovation initiatives. Reverse mentoring is also a great way to identify exceptional talent and future leaders.

The key to reverse mentoring is the recognition that in volatile and uncertain times, leadership flows from expertise and not rank. Typically, the younger employees with new kind of education and exposure, especially in the area of technology application and consumer behaviour, are less vested in perpetuating the methods that have worked well in the past and that have served the existing hierarchy well. They are impatient with the seniors who continue to see the future as a reflection of the past and they either want the seniors to catch up or get out of the way. For their own relevance and survival, the seniors need to accept new information from the juniors and allow them more influence.

Reverse mentoring requires not only a mindset of learning but also a structured method with clearly defined processes and outcomes. Occasionally calling a junior to explain novel products and trends can work for some leaders, but to make reverse mentoring work across the organisation

Identifying young mentors can be complicated. Often, the most articulate and ambitious young people attract the most attention and are given the mentoring opportunities.

requires methodical matching mentors and mentees and setting clear deliverables for both. It is imperative that both are required and allowed to make time for reverse mentoring sessions without affecting their routine responsibilities. Reverse mentoring has a high rate of failure because of a lack of incentive for the young mentor and a lack of commitment by the senior mentee.

Another central issue in reverse mentoring is the compatibility between the senior mentee and the junior mentor. Mutual affability and trust is critical to the success of any organised reverse mentoring exercise. The mentor and the mentee must find each other's attitude and behaviour acceptable and they must be able to trust each other with sensitive information about own self and the business. Often, reverse mentoring is reduced to a theatre of generalities because the senior mentee is not sure which information can be shared with the junior mentor. The young mentor lose interest when they find that they are not learning something themselves in the process or influencing leadership thinking.

Identifying young mentors can be complicated. Often, the most articulate and ambitious young people attract the most attention and are given the mentoring opportunities. However, a lot of unusual knowledge and understanding is best derived from specialists who see the business and the organisation analytically and have little immediate interest in being leaders. However, they need to be trained in explaining things and maintaining confidentiality.

Training the junior mentors is critical for reverse mentoring to work well. Not many young people have the patience for ignorance among the seniors who lord over them. The young mentors need to be trained to listen patiently, challenge the senior mentee's experience and understanding, and give feedback without offending. They also need to be trained in structuring the mentoring sessions and logging the progress and the outcomes.

Reverse mentoring, if done well, can be very rewarding for an organisation and the involved individuals. It offers the most economical and scalable way to upskill the leadership. IM

The opinion expressed is personal.

EDITOR'S NOTE

Dear Readers,

Traditional mentoring—in which a senior shares knowledge and experience with a junior—has been an important aspect of business administration. From increased confidence and engagement to reduced turnaround times and costs, mentoring goes a long way in enhancing productivity. But just like the juniors, even the seniors have a lot to learn.

A growing trend among organisations these days is 'reverse mentoring', which comprises a reversal of roles—the mentor becomes the mentee and vice versa. The big idea here is that a typical junior who many lack experience in some field might possesses expertise in some other fields which could be of use to the senior, for e.g., in today's age of technology adoption, youngsters, who are more tech-savvy and like to experiment with the available digital tools, can teach a lot to their seniors.

Organisations with a diverse and inclusive culture encourage reverse mentoring, as it helps form connections and gain perspective. The intergenerational learnings that are gained through reverse mentoring can be especially helpful to the seniors in understanding what is happening in their organisation, how aligned their new workforce is to organisational goals, and what are the problem areas that they need to look into.

So reverse mentoring is also seen as a way to adapt to the disruptive business landscape of today. As Patrice Gordon, author of *Reverse Mentoring: Removing Barriers and Building Belonging in the Workplace*, writes in the cover story of this issue, "In this volatile, uncertain, complex, and ambiguous (VUCA) landscape, leaders have two choices: adapt or get left behind. And let's be clear, adaptation does not mean mere survival; it means thriving in a way that brings everyone along for the ride."

Maneck Davar

Maneck Davar

indian management THE JOURNAL OF THE ALL INDIA MANAGEMENT ASSOCIATION

A SPENTA MULTIMEDIA PVT LTD PUBLICATION

NOVEMBER 2023 VOLUME 62 ISSUE 11

EDITORIAL ADVISORY BOARD

Shiv Shivakumar
Nikhil Sawhney
Rekha Sethi
Maneck Davar
Radhakrishnan Nair

EDITORIAL

EDITOR & PUBLISHER | MANECK DAVAR
SR. ASST. EDITOR | Ashutosh Gotad

DESIGN

ART DIRECTOR | Yogita Iyer

SUBSCRIPTIONS

Robert Gomes | 022-67341024
robert@spentamultimedia.com
Bhairavnath Sutar | 022-67341049
bhairav@spentamultimedia.com

Indian Management, the monthly magazine of Spenta Multimedia Private Limited, is published and printed by Mr Maneck E. Davar on behalf of Spenta Multimedia Private Limited. Printed at Spenta Multimedia Private Limited, Plot 15, 16 & 21/1, Village – Chikloli, Morivali, MIDC, Ambernath (West), District-Thane. Published from 1102, Akashdeep Building, Barakhamba Road, New Delhi – 110001.
Editor – Maneck E. Davar

The views and opinions expressed or implied in *Indian Management* are those of the authors and do not necessarily reflect those of *Indian Management* or Spenta Multimedia Private Limited. Unsolicited articles and transparencies are sent in at the owner's risk and the publisher accepts no liability for loss or damage. Material in this publication may not be reproduced, whether in part or in whole, without the consent of Indian Management or Spenta Multimedia Private Limited.

Top-of-the-line management ideas...

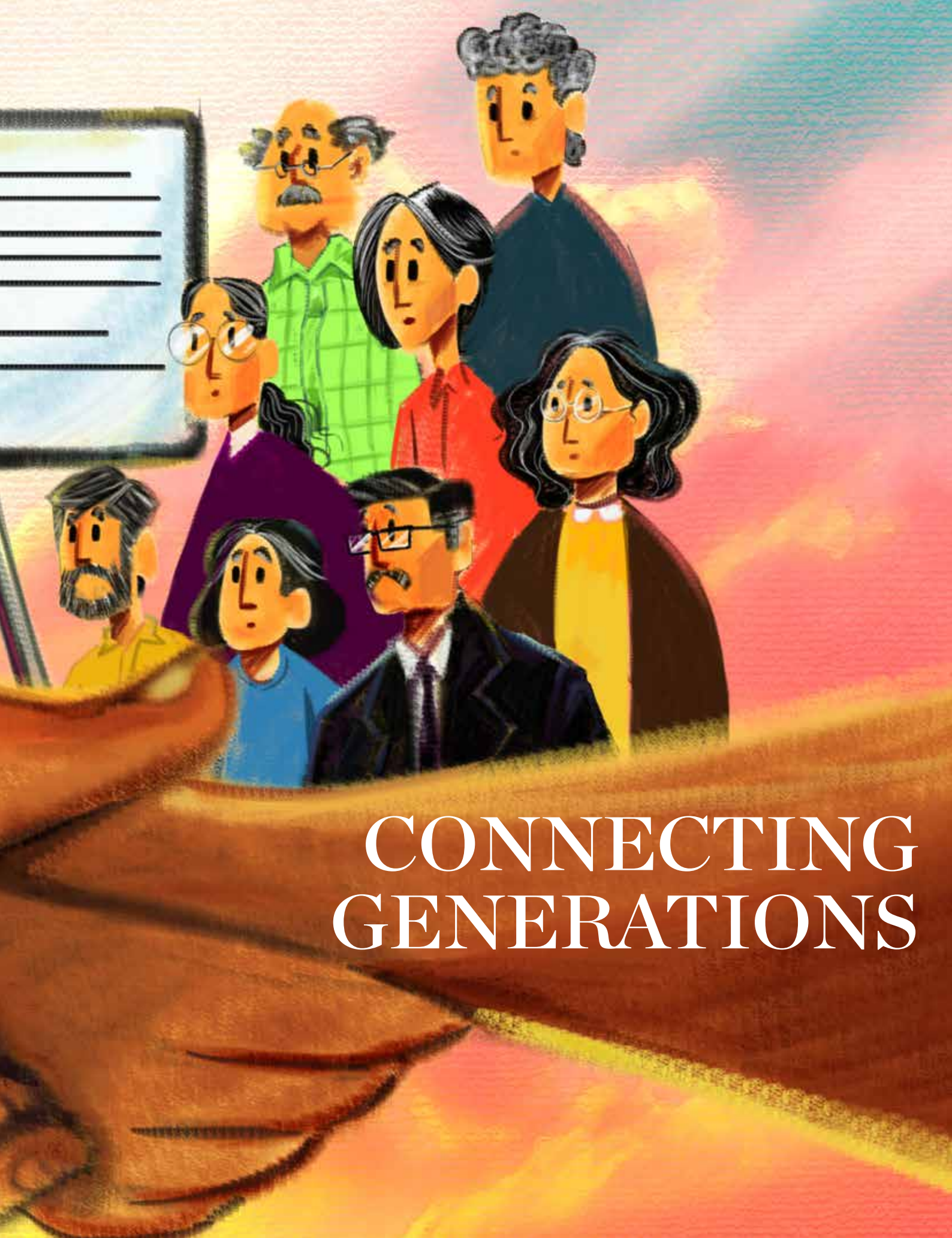
Global ideas and insights. Latest trends, opinion, and practices. Innovative thinking from international gurus. In-depth case studies and more. Backed by the prestigious All India Management Association, it's what leaders in India read to succeed.

SPENTA MULTIMEDIA PVT LTD

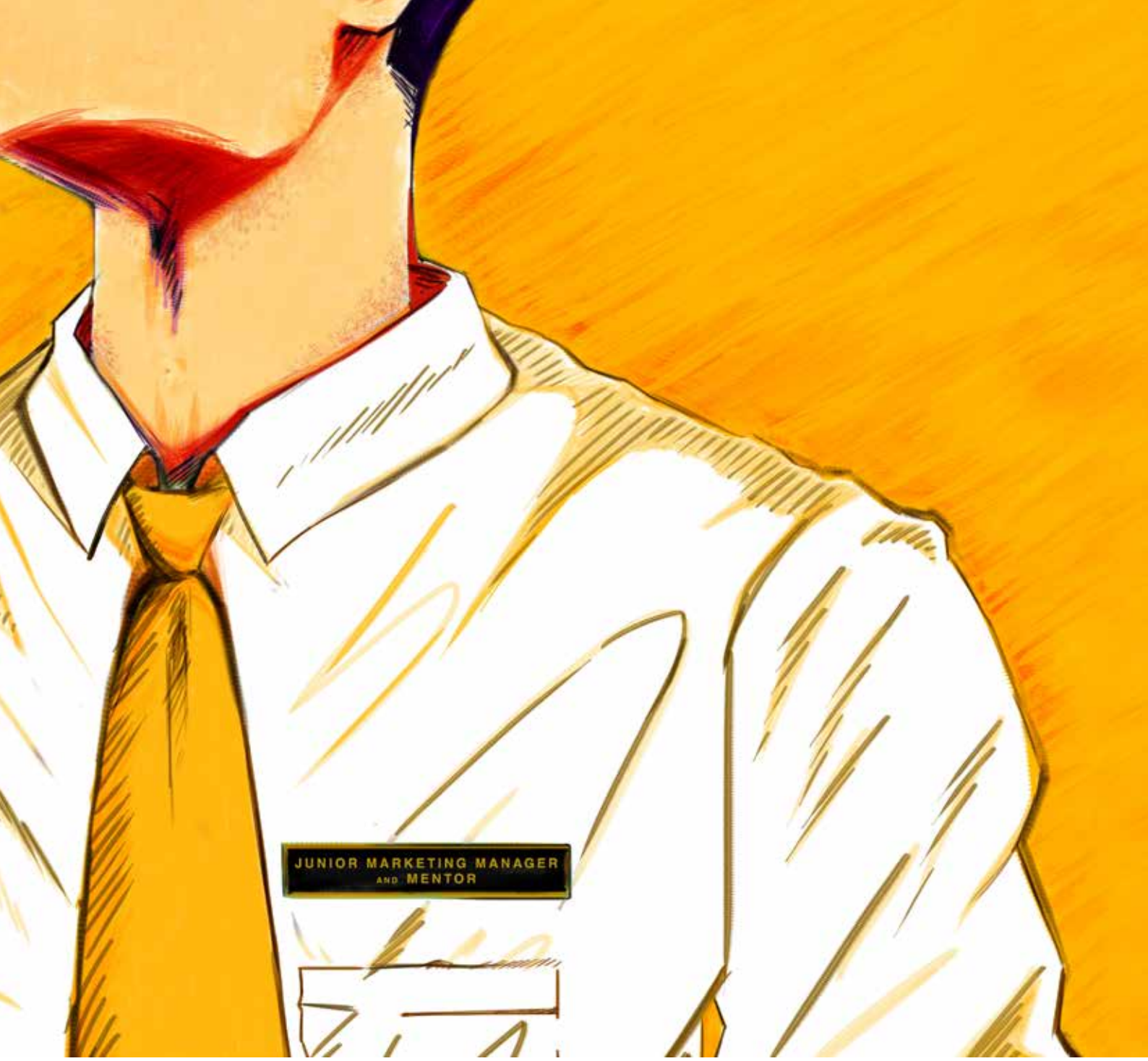
download your digital issue now

Available on: iPad, iPhone, iPod touch and Android devices

Subscribe through Magzter, eZineMart, Magazinos, Readwhere & Readly
www.spentamultimedia.com



CONNECTING GENERATIONS



A change in role

The courage to put in place a system of reverse mentoring in organisations can open new possibilities learning and growth.

✦ PATRICE GORDON, AUTHOR, *REVERSE MENTORING*

Reverse mentoring is when a senior leader is mentored by a person from an under-represented background — by means of gender, age, ethnicity, disability to name a few. They become 'the novice' and lean into their growth mindset to understand their biases and drive change when it comes to equity." - Patrice Gordon

Why it matters

The latest Gallup survey focused on the South Asian region reports that 46 per cent of individuals are 'quiet-quitting' and not engaged in the workplace, with 33 per cent thriving and engaged and 21 per cent 'loud quitting. The figures for the region are almost 30 per cent above i.e., better than that of the global average when it comes to both engaged/not engaged which is interesting.

In addition, Better-up's latest connection survey revealed that 69 per cent of employees are not satisfied with the opportunities for connection inside the workplace, 52 per cent want more connection at work and 38 per cent do not trust their co-workers.

In a rapidly evolving workforce, we find ourselves grappling with complex dynamics that demand our immediate attention:

- **Generational gaps:** Embracing the convergence of Baby Boomers and Gen Z, we find up to five generations sharing the same workspace. This diverse mix of perspectives and experiences offers a unique opportunity for collaboration and growth.
- **Gender equity:** While we strive towards achieving Goal No.5 of the UN's Sustainable Development Goals, we are acutely aware of the long road ahead in realising true gender balance. We must address the existing disparities and create a more inclusive environment where every individual can thrive.
- **Ethnicity and cultural representation:** Building teams that reflect the rich tapestry of our society has undeniable benefits. With a diverse workforce, we tap into a wealth of ideas and foster creativity. However, we must also acknowledge the potential for misunderstandings and actively work towards fostering an inclusive and respectful environment.
- **The Gig Economy:** As the workforce continues to evolve, predictions suggest a rise in short-term contracts and freelancing, particularly among younger employees. This challenges traditional norms of job commitment and requires organisations to adapt to a more fluid employment landscape.
- **The Role of AI and technology:** Automation and artificial intelligence are no longer mere buzzwords; they are becoming the sixth member of our team. This

technological advancement raises questions about the future of roles that were once exclusive to humans, forcing us to re-evaluate and adapt our strategies.

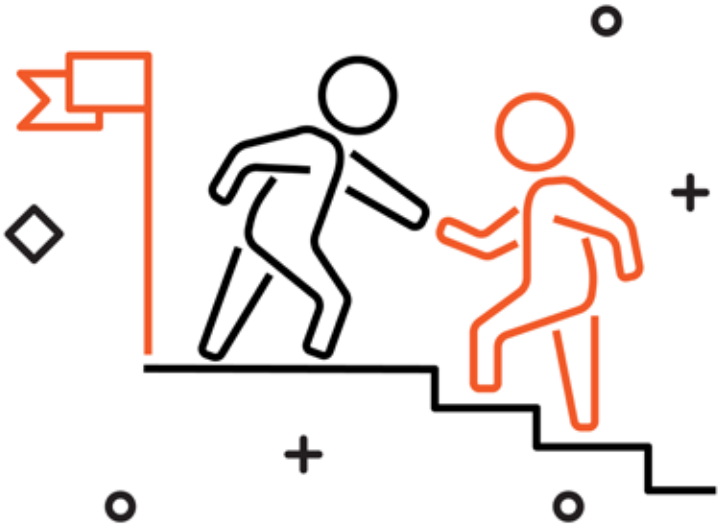
With so many differences, there is a high probability of views and opinions becoming more polarised and disjointed if creating a more collaborative and inclusive organisational culture is not prioritised. Organisations must go beyond mere representation and create environments where employees can truly thrive.

The ability for leaders and organisations to create and maintain an authentic human connection will play a critical role in whether organisations either thrive or survive in this increasingly VUCA business environment and leaders must navigate the complexities of our workforce with confidence and vision.

Essential characteristics for participants of reverse mentoring programmes include:

- **Curiosity:** A natural sense of curiosity drives the desire to discover new ideas and perspectives. Curious individuals eagerly learn, ask questions, and seek knowledge, making them ideal reverse mentoring participants. Their inquisitiveness challenges the status quo and leads to innovative solutions.

- **Courage:** Reverse mentoring demands stepping out of comfort zones and engaging in honest conversations. It takes courage to share experiences, challenge hierarchies, and embrace vulnerability. Individuals with courage actively contribute to personal and collective growth.
- **Openness to change:** In our rapidly evolving world, being open to change is crucial. Reverse mentoring participants



© Shutterstock.com

© Shutterstock.com

should embrace new ideas, approaches, and perspectives. Their willingness to adapt enables success in complex and ever-changing environments.

- **Self-awareness:** Reflecting on strengths, weaknesses, and biases is key to self-awareness. By understanding themselves better, participants can engage in meaningful self-reflection, identify areas for growth, and continuously improve.
- **Desire to be a change agent:** Reverse mentoring programs aim to create a culture of learning and collaboration, where participants actively contribute to positive change. Individuals with a strong desire to be change agents challenge norms and drive meaningful transformations.

By focusing on these attributes, reverse mentoring programs create a diverse learning environment, encouraging the development of skills, broadening perspectives, and fostering a culture of continuous growth.

I have been inspired by the examples of large organisations from diverse industries embracing reverse mentoring within India:

- **Film and entertainment industry:** Renowned film director and producer Mahesh Bhatt has been clear of his support and advocacy for reverse mentoring, supporting the directorial debut of Krishna Bhatt. Ensuring that an alternative perspective was not only present but included within the writers' room, Mahesh states, "Krishna is a representative of today's era. So according to their thinking, we served her the idea and when she okayed it then the final script was prepared".
- **Professional Services:** EY kicked off its GenWHY reverse mentoring programme in August 2023, its pioneering reverse mentoring scheme, the aim was to tap into the fresh, disruptive insights of younger team members to fuel the company's growth trajectory. Among the vibrant minds involved was 25-year-old Kshitij Chauhan from the tech consulting division. "Look,

the face of the workforce is evolving. Our generation is here, not just to fit in, but to shake things up, challenge the norm, and drive innovation," Chauhan points out. "GenWHY isn't just a programme; it's a platform that empowers us to step into leadership roles, brainstorm business growth strategies, spot upcoming trends, and essentially, make EY a magnet for top-tier talent."

- **Insurance:** Alok Rungta, Deputy CEO and Chief Financial Officer of Future Generali India Life Insurance, highlighted how reverse mentoring can help finance leaders to stay updated with time and learn modern skills. "We get youngsters in specific fields to spend time with us so that we don't become dinosaurs."
- **Banking:** In a ground-breaking move, Citi India's Asia Pacific Pride Inclusion Network implemented a LGBTQ+ reverse mentoring initiative across eight nations. Over a transformative six-month journey, LGBTQ+ professionals step into the mentor's shoes, guiding senior leaders—who serve as mentees—through the nuances of LGBTQ+ experiences and perspectives. The end game? Equipping leaders with the emotional intelligence they need to foster and safeguard a culture that celebrates both our unique identities and common humanity.

These organisations are not just ticking boxes, they are pioneering a cultural revolution, one reverse mentoring relationship at a time. But remember, it is not a one-size-fits-all fix. Reverse mentoring is not a silver bullet. It is a piece of a much larger diversity, equity, and inclusion (DEI) puzzle. For it to truly work, it needs to be part of an ecosystem that's ripe for change, driven by individuals who are curious, courageous, open to change, self-aware, and hell-bent on being agents of transformation.

We are navigating a labyrinth of generational divides, gender imbalances, cultural diversity, technological disruptions, and a seismic shift towards a gig economy. In this volatile, uncertain, complex, and ambiguous (VUCA) landscape, leaders have two choices: adapt or get left behind. And let's be clear, adaptation does not mean mere survival; it means thriving in a way that brings everyone along for the ride.

So, here is my call to action: Don't just read this and nod. Take this as your cue to be a trailblazer in your own right. Whether you are a leader or an aspiring one, step up and step into a reverse mentoring program. Be the change you wish to see, because the future waits for no one, and the time for action is now. IM

© Shutterstock.com

ABOUT THE AUTHOR

Patrice Gordon is founder, Eminere. Patrice is also author of *Reverse Mentoring: Removing Barriers and Building Belonging in the Workplace.*

References

- https://theprint.in/feature/its-time-when-we-should-believe-in-reverse-mentoring-says-mahesh-bhatt/1638066/
- https://economictimes.indiatimes.com/news/company/corporate-trends/reverse-mentoring-india-inc-finds-a-lot-to-learn-from-gen-z/articleshow/103724124.cms
- https://cfo.economictimes.indiatimes.com/videos/future-generali-india-cfo-on-the-role-of-reverse-mentoring-in-updating-skills/103744219

SHARE YOUR STORIES WITH THE WORLD

With over 100 titles in print, including Indian and international language translations, Spenta Multimedia's expertise to create bespoke coffee table books is unparalleled.

We pride ourselves on our ability to turn your vision, thoughts and ideas into luxury coffee table books, both in print and digital formats that preserve the story and artistry of your brand, your work, and your passion.

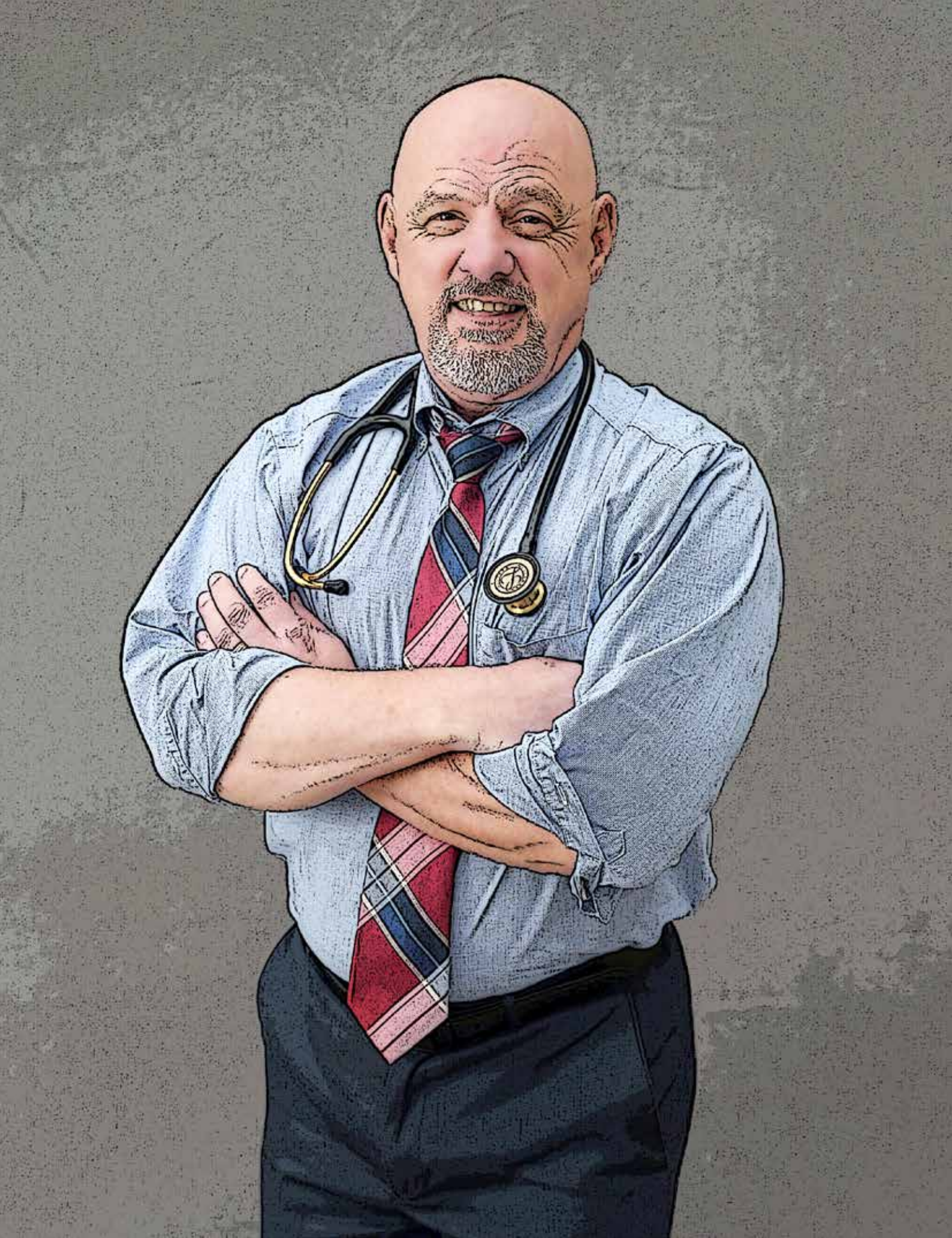
Our turnkey creative platform of talented editors and designers collaborate closely with you to ensure that your history and successes become masterpieces that live on, printed in our inhouse state-of-the-art printing facility.

Our wide collection of engaging, masterfully designed and impeccable quality coffee table books includes brand journeys, architecture, law, cities, cinema, tourism, life stories, jewellery and crafts, flora, culture, cuisine and more.

SPENTA MULTIMEDIA PVT LTD

www.spentamultimedia.com

To know more, write to or call Mr. Vinod Chittal
vinod@spentamultimedia.com / +91 98192 36413



Gary Sprouse, MD, author, *Highway to Your Happy Place: A Roadmap to Less Stress*, writes about identifying and managing stress.

MYTH BUSTER

A 'Happy Place'

Your 'Happy Place' can be as individualised as your fingerprint. But there are some common components. These include contentment, pleasurable events, anticipation, gratitude, and fulfillment. But what is keeping you from your 'Happy Place'?

MYTH 1: THERE IS NOTHING I CAN DO BECAUSE THE WORLD IS SO STRESSFUL.

If there is nothing else you get from this article, get this: you do not have to resign yourself to living stressed out for the rest of your life. You just need to know where your stresses are coming from, where your tools are, and how to use them effectively to tackle the stress.

The big insight from my book, *Highway to Your Happy Place,* is that the majority of human stress is a side effect of our human skills. Humans have the ability to envision the future, but then the side effect is that you worry about what will happen in that future. The implications of this insight are that 1) you can make better, more efficient tools with better understanding and 2) you can control your skills so although you cannot control what happens to you, you can control how you react to it thereby gaining some sense of control.

MYTH 2: GUILT AND REGRET ARE THE SAME THING.

Guilt and regret are not interchangeable. Guilt is about breaking a law or rule. Regret is about making bad choices.

But guilt and regret do have some similarities. They are negative emotions we try to avoid. They are emotional reactions to some event that has occurred in the past. They are both tools that human societies use to shape our behaviour within the group.

Guilt is the group's way of saying, "Don't do that." It is based on right and wrong. The group could be your religious group that decides what you should worship. We want people in our group to internalise the rules and avoid the punishment of guilt.

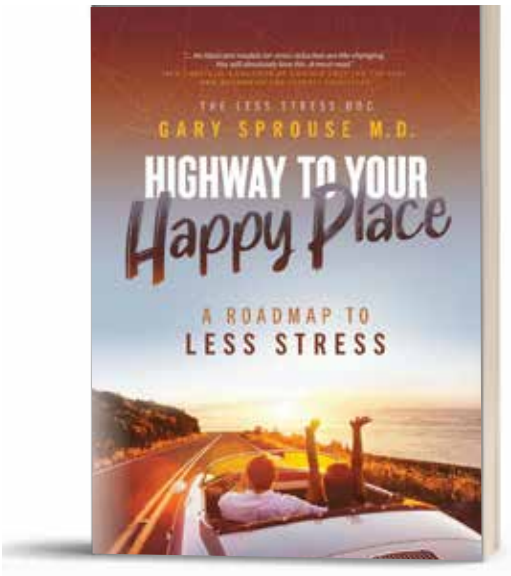
Regret, on the other hand, is about choice. Regret is what occurs when you make a bad choice. You did not break a rule. You made a choice that led to a worse outcome. You picked the wrong line at the checkout counter.

Both of these emotions make people feel bad but there is a way to reduce these feelings. Keep in mind that the negative emotions are about events that occurred in the past and can't be changed. They are meant to change a person's behaviour. If it changes your behaviour, then guilt did its job and you can feel proud that you changed your behaviour.

Regret can be lessened by understanding you made a choice. When you are making a choice, you are really trying to make a decision based on past experience and future outcomes. You can only analyse the information you have on hand at the time. Mothers might regret not spending enough time with their child because of their duties at work and at home. Mothers need to focus on the time spent with their child not what time they did not spend.

MYTH 3: DEPRESSION IS A CHEMICAL IMBALANCE.

Most depression is really being overwhelmed. Most patients I see, who are labelled depressed, are really overwhelmed. They have too much stuff on their agenda, or they react strongly to the stresses they encounter. Medicine does make you feel better, so you feel fewer symptoms, but medicine doesn't take away the underlying cause which is too much stress. My patients see being overwhelmed as fixable without lifelong medicine. Being overwhelmed is scary. Lumping is a common cause of being overwhelmed. This is letting all your stresses merge together. The antidote to lumping is compartmentalisation. Keeping each stress as individual as possible will keep it from being overwhelming.



MYTH 4: BOREDOM ISN'T THAT BIG A PROBLEM.

No, boredom is really bad. Think about it. When criminals have been punished with jail and they break a rule in prison, they are put in solitary confinement. Boredom is the worst punishment we can give to a hardened criminal. But you have to realise there are three kinds of boredom. There is lack of stimulation. There is withdraw from stimulation. There are unenjoyable distractions that keep us from our goal. Each type of boredom needs to be handled differently.

Lack of stimulation is the easiest to fix. We have a world of things to do and see. Different ways to keep us engaged. But we do need a purpose. Finding your purpose in life will keep you from ever getting bored.

Our lives have a lot of stimulation. When the stimulation slows down we have a withdraw and experience boredom. Moving from Mumbai to a small village leads to stimulation withdraw. Withdraw is just like

any addictive drug. The withdraw will stop and your body will adjust the new level of stimulation. Just be patient.

The third form is the feeling that occurs when you want to be a nurse and have to take a chemistry course. You don't like chemistry, but you have to take the class to get to your goal of being a nurse. You don't want to be learning chemistry equations, you want to be helping people heal. But open up your mind and your curiosity. More knowledge can make you a better nurse.

MYTH 5: SELF-ESTEEM IS ALL ABOUT LOVING YOURSELF.

Wrong.

There is a lot of group-say in our self-esteem.

Self-esteem is in three parts. Self-worth, self-respect, self-efficacy.

Self-worth comes from your achievements and your self-portrait. But the group decides how many points each trait or achievement is worth. Having a tattoo could be a positive attribute in one group and horribly wrong in a different group.

Self-respect is thinking we are doing things the right way. Smokers used to be told by the group that they were cool and even healthier because of smoking. Now, smokers are told they are killing themselves and are shunned from indoor activities.

Self-efficacy is about how you think you would perform on a future task. This comes from how you perceive your past experiences and how you envision your future. The group has some say in this too. A girl who wants to become a mathematician has to fight the stereotype that men are better at math.

The group has some say in our self-esteem, but we do have some individual say too. There is a credibility meter in all of our heads. One end of the spectrum is group and the other end is you. To gain control over your self-esteem you need to push the needle to your own credibility. There, you can listen to the group and take their collective values into consideration but still maintain some independence. Your opinion matters.

In conclusion, you can have less stress by having the knowledge, insight, and understanding to bust these five myths. Then by acquiring proper, efficient tools you can take back control of how you respond to the stresses around you. The positive consequence is you get to spend more time in your 'Happy Place'. IM

© Shutterstock.com

There are clear lessons derived from biological DNA-editing on creating a culture of change.

✦ TONY SALDANHA AND FILIPPO PASSERINI, CO-AUTHORS, *REVOLUTIONIZING BUSINESS OPERATIONS*

A self-perpetuating design

An organisation's culture is its DNA. It dictates every action. Given this, what can we learn from biological DNA editing about how to engineer the desired organisational culture changes? Based on research on organisational DNA and our collective seven decades of managing large global organisations in a Fortune 20 company, we believe there are clear lessons for executives derived from biological DNA-editing on creating a culture of change.

Let us back up a bit to examine the underlying issues in change management.

Organisations create value via business models, and then translate these conceptual business models into day-to-day activities via operating models. Within the operating models, business processes—activities within sales, finance, product development, IT, etc.—structure these business operations into tasks. Business processes tend to be regimented and standardised, making up disciplined steps and systems to record sales or expenses. However, creating a culture of change within a company requires balancing the necessary rigour of business processes with an openness to changing them when market forces dictate it. That is tricky. It explains why culture change is slow and difficult.

Biological DNA as a metaphor for organisational DNA editing

Because organisational culture is the DNA driving the internal foundation that influences every activity in the organisation, it is widespread, long-lasting, and it guides the behaviour of every person. Consequently, metaphors based on biological DNA, such as Corporate DNA or Organisational DNA, have become popular over the past few decades.

Booz & Company went as far as identifying the four bases of Organisational DNA—Structure, Decision Rights, Motivators, and Information—deriving them from the four biological DNA bases: adenine (A), guanine (G), cytosine (C), and thymine (T). In living organisms, the DNA informs and directs everything that happens to each cell in the body. In just the same way, Organisational DNA dictates every action in an organisation.

But DNA change is extremely difficult. Biological DNA change happens slowly, either through environmental factors or from progenitor to offspring. This leads us to the question: can we really accelerate changing the DNA of an organisation? The answer can also draw from the biological DNA metaphor: we can change the Organisational DNA quite deliberately by changing the environmental factors and/or the leadership heredity.

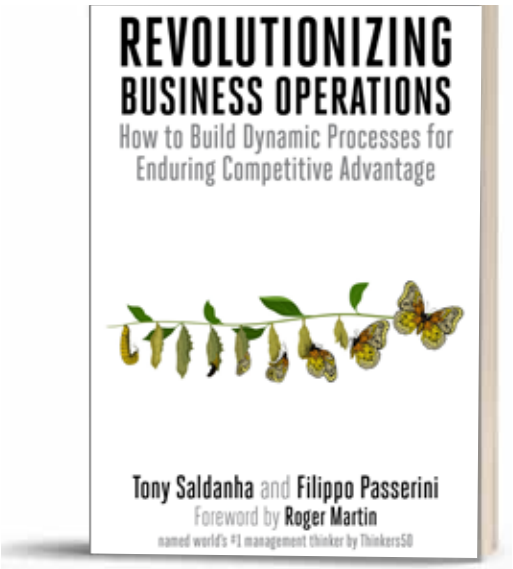
The story of gene editing on a living person

In February 2020, the Casey Eye Institute in Portland, Oregon, performed the first gene editing surgical procedure inside a living human being to prevent blindness from a known genetic mutation. The technology used was CRISPR, which after a decade of research is now being used in myriad applications to edit DNA. CRISPR stands for Clustered Regularly Interspaced Short Palindromic Repeat, and refers to the organisation of certain DNA sequences. The technology is designed to locate a specific piece of DNA inside a cell and replace it, in much the same way that you might cut and paste text in, say, Microsoft Word.

CRISPR had been used several times to edit human DNA. What made this a unique moment in history was that this was the first gene editing procedure carried out inside a living person. The genetic disease that was treated this way is called retinal dystrophy. It manifests itself over time with side effects such as colour blindness or tunnel vision, and can lead to complete blindness. Attacking the disease via DNA editing inside the human body was a big breakthrough.

Various ways that biological DNA can change

This procedure was a first, but it's hardly the only example of DNA change. In daily life, changes to DNA happen every time an organism gives birth. The result is referred to as germline DNA because it comes from the parent DNA and can be passed on to the child.



There's also somatic or acquired DNA mutation. That's caused by environmental factors ranging from ultraviolet radiation from the sun to smoke from cigarettes, diseases like cancer, or simply errors in copying DNA during cell division.

The third way to change DNA is the genome-editing technique CRISPR—more accurately, CRISPR-Cas9 (Cas9 stands for "CRISPR-associated protein 9"). The Cas9 protein sniffs out the exact genes, then the CRISPR makes the change.

The point is that biological DNA change was once considered to be slow-moving and not controllable. But today, it is viewed as fair game for rapid CRISPR-Cas9 modifications.

Is there an equivalent engineered-change mechanism for Corporate DNA? The existing dogma has been that corporate culture is slow to change. However, we believe we can take lessons from how biological DNA editing has been accelerated.

Learning from biological DNA editing

Some key factors can be reapplied to

ABOUT THE AUTHOR

Tony Saldanha is CEO/co-founder, Inixia. Tony is also co-author, *Revolutionizing Business Operations: How to Build Dynamic Processes for Enduring Competitive Advantage.*

© Shutterstock.com

organisational DNA. We mentioned the study that identified the four bases of Organisational DNA (Structure, Decision Rights, Motivators, and Information), which were metaphorically built on the four biological DNA bases. Let's go deeper for lessons on how to edit Organisational DNA.

The work on CRISPR-Cas9 offers three organisational insights:

1. **DNA is an outcome of design and environmental forces.** Biological DNA is made up of chemical elements (called nucleotides), which include the bases adenine, guanine, cytosine, and thymine (A-G-C-T). It can be inherited or modified by the environment. The biological DNA itself is an outcome of these forces of design and the environment. That is true of Organisational DNA too. Since we can only build it based on inherited traits and environmental factors, we can 'edit' Organisational DNA by changing these factors of design and the environment.
2. **We need different DNA edits for different purposes.** The CRISPR edits needed for retinal dystrophy are very different from those related to sickle cell disease. Similarly, the Organisational DNA changes needed for dynamic business process transformation will be different from those needed for, say, effective product innovation.
3. **The use cases are many, but the base units of DNA are few.** Finally, the most exciting insight: while DNA edit uses are plentiful, the bases always come back to the A-G-C-T sequence. The implication, if we use the Booz and Company bases of Structure, Decision Rights, Motivators, and Information, is that we can act on these to create our individual DNA for dynamic business process transformation by editing these four. The challenge then becomes to identify the specific modifications to these four bases.

Our experience of helping dozens of organisations change their Organisation DNA tells us that these three simple principles can help us modify the Organisation DNA bases: Structure, Decision Rights, Motivators, and Information. Yes, company culture will evolve slowly if we do not take on the challenge of organisational DNA editing. But, as with CRISPR-Cas9, we can edit business processes systemically.

Changing business processes creates new organisational rituals, which leads to a changed culture. The exciting result of this approach is to create the ultimate, self-perpetuating business process design. IM

ABOUT THE AUTHOR

Filippo Passerini's is co-founder, Inixia. Filippo is also co-author, *Revolutionizing Business Operations: How to Build Dynamic Processes for Enduring Competitive Advantage*

Dinesh Bhogale

When expecting their team to embrace technology and AI, leaders must remember to make this adoption interesting and persuasive.

✦ DR HELMUT SCHUSTER AND DR DAVID OXLEY, CO-AUTHORS, *A CAREER CAROL*

STRATEGY

'Fuel' their enthusiasm

The speed of new technology disruption seems to be accelerating. Studies have predicted that as many as 375 million jobs may be at risk to automation by 2030. Against this backdrop, you might expect growing enthusiasm to invest in new skills. So why are we not seeing a rush from established professions to become more technology savvy?

As we get older, we become less enthusiastic about new work tools

We spend much of our early careers fighting to establish ourselves, to reach a level of competence and comfort. This shapes how we relate to new things in very specific ways. Everything is new, and nothing is familiar. Consequently, we approach almost everything with a sense of inadequacy and insecurity. A pervasive sense of needing to survive, to prove ourselves and to receive recognition.

As we enter our middle career years, where on average 75 per cent of today's workforce sits, our early naïve enthusiasm and need to prove ourselves are gradually replaced by a growing confidence and sense of security. We move from apprentices to masters in our fields.... from freshers to seniors. At the same time, our lives become more diverse, more complex. Not only does work become less the center of our universe, but the job takes less of our effort... indeed, we put some parts of it on a kind of 'auto-pilot.'

Imperceptibly, but inevitably, we become more complacent. Sub-consciously, we reason, we have fought hard to establish ourselves in our careers and we have now earned the right to relax and breathe. Our state of mind shifts from fighting to be the master of something, to instead seeing anything new as unwelcome inconveniences that disturb our comfortable equilibrium.

Organisations versus individuals perspectives – the 'slothful induction fallacy'

One of the major obstacles all organisations face in introducing change is apathy. Conventional wisdom focuses on rational arguments for adopting change along the lines of why it is important for the company and what the reward/consequence may be for employees. And yet, the generally accepted wisdom of all change initiatives, is that up to 85 per cent seek to avoid, delay, or even actively resist change.

The reason, we believe, is explained by an insufficient understanding of how the

majority of the workforce relate to change. Change is unwelcome, not because the rational arguments are not compelling, or because change programs have not explained the consequences. The fundamental problem is the entirely natural but often overlooked act of self-delusion we practice as we get older.

We believe we must take the time to understand how new technology like AI will be viewed by individuals. How it may be viewed at best as an unwelcome complication to their status quo and at worst an existential threat.

The desire to protect our comfortable cocoon of stability and security is very powerful. We filter company attempts at nudging us from our familiar routines through a lens of cynicism and fallacious logic. "Sure…" we say, "the company is introducing yet another change program… it will be just like the last one… lots of waving of hands and slick presentations but it will blow through just like last time." And "yeah, technology may change everything… eventually… but my time horizon is shorter than that… and my relationships will protect me from anything too bad."

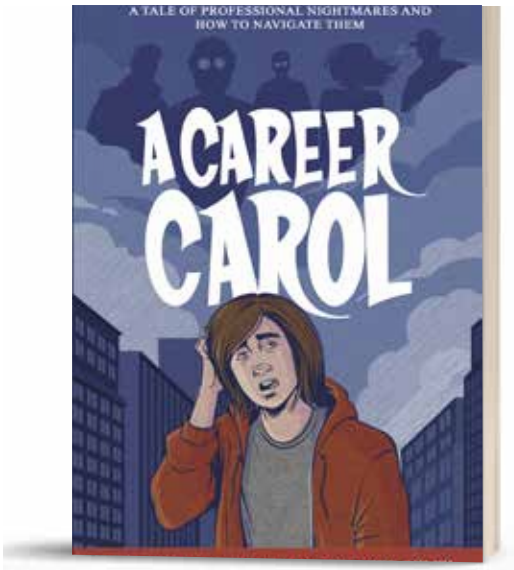
We might liken the challenge to requesting a teenager clean their room. The more an authority figure relies on the familiar tools of rationalisation (this will be good for you), task responsibility (you promised to do this), coercion (you're grounded if you don't), or incentive (ice cream), the greater the risk of witnessing a huff, rolling of eyes, and half-hearted compliance.

ABOUT THE AUTHOR

Dr Helmut Schuster is co-author, *A Career Carol: A Tale of Professional Nightmares and How to Navigate Them.*

The power of reframing and creating powerful individual narratives

There are increasingly few occasions where imposing something new on individuals in the workplace is very effective. Particularly when it comes to knowledge workers, and specifically when it comes to leveraging the benefits of a high impact technology like AI, we are generally looking to engage individuals



in the shared exploration of possibilities. Consequently, the notion of imposing such a tool on individuals would be akin to forcing a farmer to take a coding class and expecting greater crop yields.

This is why we believe we must take the time to understand how new technology like AI will be viewed by individuals. How it may be viewed at best as an unwelcome complication to their status quo and at worst an existential threat. The good news is that once we've taken the time to understand that adopting something like AI, at its heart, requires us to overcome individual behavioural obstacles, we can look at some far more effective approaches.

Early adopters versus laggards

Over the past 40 years, we have helped organisations manage through large scale change. In particular, we have looked at the differences in perspectives of individuals at the beginning, middle, and end of their careers. What we have found is that the

© Shutterstock.com

biggest determiner between the so-called early adopters and everyone else, is how they 'frame' it psychologically.

While it sounds simple and perhaps intuitive, it is remarkable how little we use this knowledge when trying to encourage the adoption of something new. Individuals who relate to something as interesting, fun, useful, or even social, are significantly more likely to embrace it enthusiastically. Obviously, the reverse is also true, those individuals who relate to something as a threat, an imposition, a requirement, will at best adopt it reluctantly, mechanistically, and at worst try to sabotage it.

How do you help your colleagues avoid sleepwalking toward obsolescence?

Consequently, the most effective way for managers to help their colleagues to explore and experiment with applications of AI, is to reframe the subject to make it more appealing and engaging. In basic psychological terms, the best approach is to find ways to make the exploration of new skills something that has independent and personal appeal for each individual.

We have developed a mnemonic to help managers more effectively reframe the adoption of AI- FUEL

F - Make it 'Fun': Gamification is an example of this. Introducing something new in the form of a game or competition. If you can point to examples of new technology that have a fun dimension, you are halfway to reframing it from chore to entertainment.

U - Make it 'Useful': We find it fascinating how many things get done around the house nowadays based on watching a YouTube video. If you can find something small that could be fixed today by applying ChatGPT… suggest your team tries it to see what happens.

E - Make it 'Easy': It is critical that trying something new isn't too daunting. Fortunately, most entry examples to AI are extremely user friendly. Remember, however, to keep the bar modest… at least at first.

L - Make it 'Light': In our experience it is easier for people to experiment and try new things if they are encouraged and not judged. We recommend recognising all attempts kindly and generously. Role model this yourself. Share your own stumbles as a great example of honest and authentic endeavour.

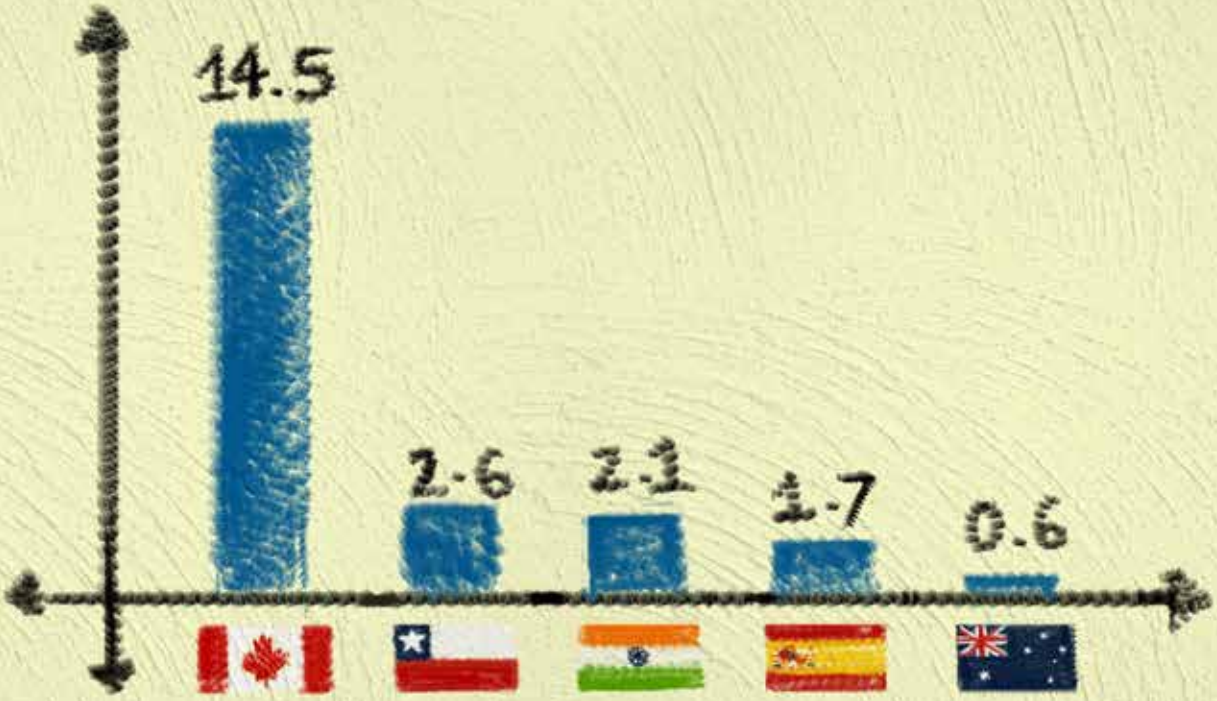
Finally, we are reminded of the deceptively powerful wisdom in the novelist Will Thomas' quote "there's no fear when you're having fun." In our experience, even when it comes to confronting unwelcome change in your professional life, he is absolutely right. IM

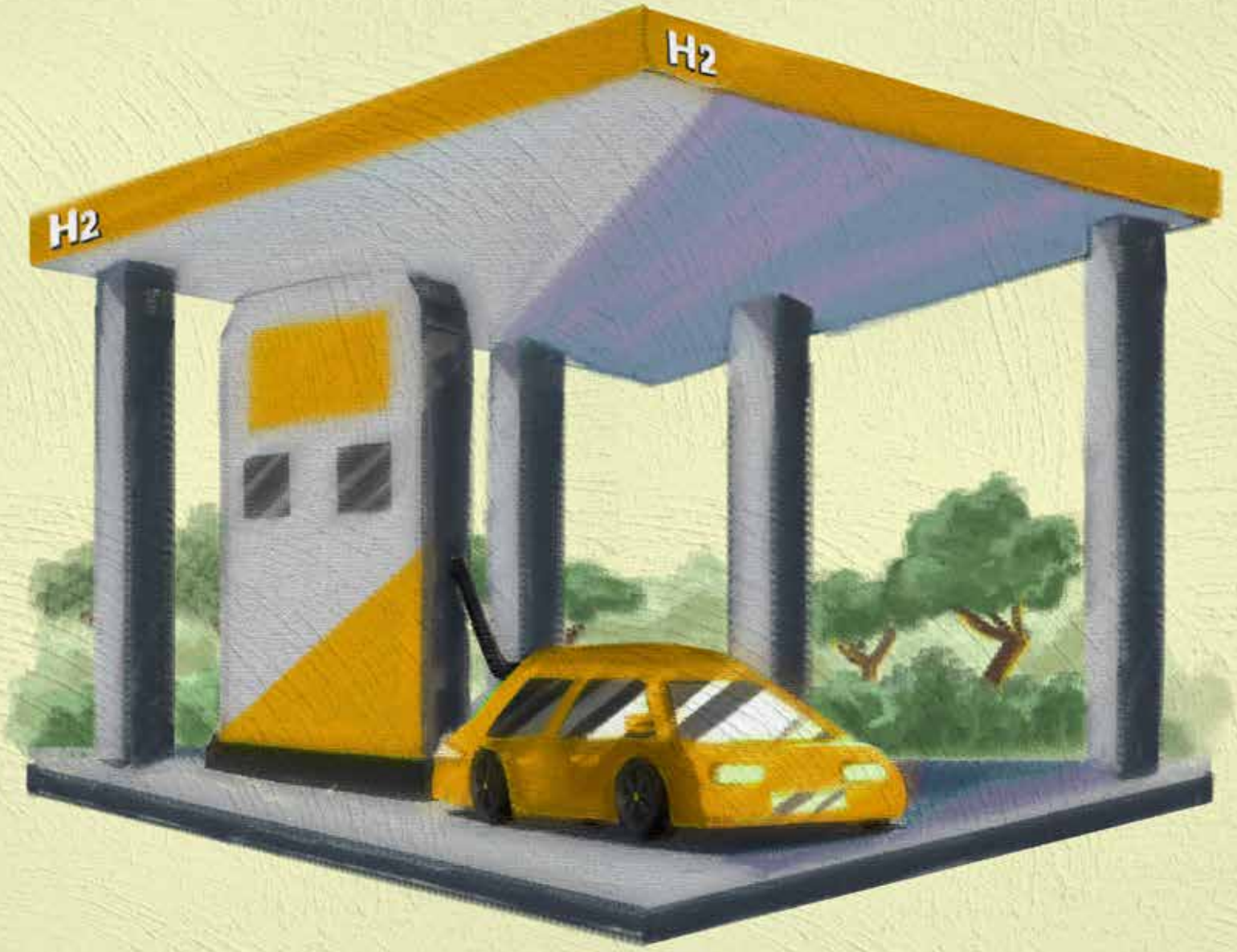
ABOUT THE AUTHOR

Dr David Oxley is co-author, *A Career Carol: A Tale of Professional Nightmares and How to Navigate Them.*

References

- Jobs lost, jobs gained: What the future of work will mean for jobs, skills, and wages – McKinsey, November 2017
- OECD Global Workforce Study 2023
- Barbara Hagerty (the Atlantic) Quit your job.
- Everett Rogers Diffusion of innovations.


14.5
2.6
2.1
1.7
0.6


H2
H2

Hydrogen looks promising as the 'fuel of the future'; but how ready and willing are we to adopt it?

✦ DR MP SUKUMARAN NAIR, CENTRE FOR GREEN TECHNOLOGY & MANAGEMENT, COCHIN

Clean energy, green future

Humanity, in today's world, is facing the dual challenge of rising energy demand propelled by economic growth and the necessity of countering the environmental consequences of carbon emissions into the atmosphere, in line with the Paris Agreement. International Energy Agency (IEA) predicts that the global energy consumption will double by 2050. Intergovernmental Panel on Climate Change (IPCC) and its Conference of the Parties (COP) mandates that global anthropogenic emissions be reduced and achieve a state of net-zero emissions by 2050 to prevent an impending climatic disaster. Greenhouse gases, especially carbon dioxide, emitted from human engagements using fossil fuel and feedstock, currently and over the years, significantly contribute to warming of the atmosphere which results in climatic distortions that started impairing human settlements and threaten life on earth at alarming proportions. Therefore, a consensus has been arrived at the global level that we may have to essentially reduce greenhouse gas emissions and foster a sustainable low carbon economy for our own survival.

How to achieve these two mutually contradicting goals and take human development forward is being widely debated among national governments, policy planners, technology developers, business, and industry. Several international institutions, corporates, networks, and NGOs are working together with the UN taking a lead to develop a sustainable development paradigm for the future world.

Fortunately, in the past over three decades, several advancements in the realm of science, technology and management have paved the way for a host of eco-friendly innovations to curb emissions from carbon intensive human activities. It includes renewable energy sources, improvement in energy efficiency and operational reliability and waste reduction techniques. While renewable energy sources like solar and wind power have no emission inventory attached to it, several other technologies significantly reduce greenhouse gas emissions and help to move away from conventional fossil fuels.

Research and industry have identified hydrogen to play a significant role in the transition from carbonaceous fuels to clean energy resources without CO2 emissions. Hydrogen the lightest gas and the first element in the periodic table of elements is regarded as the long-term sustainable option as the future energy source. Unlike hydrocarbons, all of which are fossil origin and barring a few synthetic fuels, hydrogen, up on

combustion produces only water and no carbon dioxide or other greenhouse gases. Hydrogen, plentifully available in nature, but only in the combined form needs the intervention of high order energy transactions for its liberation to the free molecular form. Hitherto, most manufacturing processes involving hydrogen—ammonia, methanol, and other chemicals—used the energy of fossil fuels for its separation and downstream uses which invariably resulted in the emission of large quantum of CO2. Around 90 per cent of the hydrogen produced today is either through the steam methane reforming (SMR), auto-thermal reforming (ATR) or Gasification process using methane, naphtha, fuel oil, petroleum coke or coal—all of fossil origin.

Colours of hydrogen

In the energy industry, different colours are attributed to hydrogen depending on its carbon intensity—a measure of emissions given out during production. Well known processes like steam methane reforming or partial oxidation of hydrocarbon feedstock like oil or natural gas produce grey hydrogen along with emissions of greenhouse gases predominantly carbon dioxide. If the carbon dioxide emitted is subsequently contained through a process called carbon sequestration—sending the compressed gas to abandoned oil wells or other mines beneath the earth, so that it will not to rise again and cause warming up of the atmosphere and consequent climatic distortions-- the hydrogen so produced is termed as blue hydrogen. Green hydrogen is the gas so produced from electrolysis of water using renewable (green) electricity without any emissions throughout its entire life-cycle from production to end use. Globally, green hydrogen is considered as a critical component of decarbonising manufacturing sectors, besides being an alternative fuel and feedstock.

Several countries including India have plans to build hydrogen hubs which include renewable energy production, electrolysers for producing green hydrogen from water, storages, pipelines, tanks, and other logistics infrastructure, refueling stations and fuel cells for converting it into electricity or hydrogen IC engines. Critical challenges in the development of green hydrogen technologies include development of cost effective and efficient electrolysers and building the necessary infrastructure for handling, storage, and dispensation of hydrogen. The Green Hydrogen Catapult (GHC), a global initiative organised with the support of the UN High Level Champions for Global Climate Action and a coalition of industry leaders in developing the clean fuel, formed in 2020, commits to commission electrolysers from 25 GW to 45 GW by 2027. The coalition says the effort will keep the price below US$2 per kilogram of green hydrogen, which will allow the clean fuel to be cost effective in the short term.

According to McKinsey, hydrogen combustion is a nascent solution but could fill an important niche by harnessing established technologies and supply chains. Among the four zero-emissions technologies—batteries, fuel-cells, hydrogen IC engines and biofuel or synfuel IC engines—hydrogen combustion is still in its infancy, despite a history going back to the 1806 de Rivaz engine, which ran on a hydrogen–oxygen mixture. For a long time, hydrogen combustion engines were disregarded, as the very high costs of hydrogen made the power train uneconomical. Today, however, some automotive OEMs, component suppliers, and start-ups are reconsidering hydrogen combustion as an additional component of their future power train portfolios, alongside batteries and fuel cells.

Renewable power technologies especially

© Shutterstock.com

solar and wind have become proven both in efficiency and scale on account of which generation is increasing and cost per unit power is declining year to year. The ongoing research and innovation in other sectors—biomass, geothermal and tidal—is likely to witness attainment of technical maturity and economic viability in the coming decades. There is also a renewed thinking on nuclear power which is also carbon neutral, but has serious safety and environmental considerations to comply with and much depends on national policies and shifting approaches to technologies.

Electrolysers

The equipment used for splitting water into its elements using electricity is called electrolysers. Water electrolysers are divided into four different types based on the nature of the electrolyte used and the operating temperature. It includes the alkaline water electrolyser, polymer electrolyte membrane water electrolyser (PEM), anion exchange membrane water electrolyser (AEM) and the Solid oxide electrolyte water electrolyser (SOE). Alkaline and PEM electrolysers are mature technologies and are already commercialised, while AEM and SOE are in their early development and near-commercialisation stage.

Major uses of green hydrogen include power generation, steel making, production of cement, manufacturing ammonia for the fertilizer industry and as an energy source to power heavy industry and fuel large vehicles including aircraft and ships. Producers and technology providers are jointly assessing the feasibility of low carbon economic capacity plants in the global fertiliser, chemical, steel, cement, energy, and shipping industries.

Power

According to BP Statistical Review of World Energy 2022, of the 28,466 terawatts of electricity produced in 2020, 17,483 terawatt (61 per cent) is generated out of fossil fuels—coal, oil, and natural gas. The IPCC estimates that production of electricity emits 10 giga tons, or approximately 37 per cent of global

CO2 emissions. Therefore, renewable power generation becomes a priority agenda of producers supplying power to the grid. In the transport sector also, green hydrogen is set to replace fossil fuels.

Steel

Production of steel is estimated to contribute to about 9 per cent of carbon dioxide emissions globally and therefore, a higher carbon footprint due to the burning of fossil fuels. Experimentation is underway to produce direct reduced iron (DRI) from iron ore using green hydrogen instead of natural gas. According to McKinsey, hydrogen-based DRI is, therefore, expected to be a major decarbonisation lever for steel makers, and several companies have already announced plans to introduce DRI, and strong growth is expected in the future. In fact, scenarios based on a carbon-neutral steel industry—a goal many major steelmakers have pledged—have DRI production tripling within the next 30 years.

Ammonia

In 2022 world ammonia production stood at 190 million tons (FAO, 2022) with China, Russia, India, and the US as the major players. Around 80 per cent of synthetic ammonia is used for making mineral fertilisers for enhancing crops yields. Other user industries include plastics, fibers, explosives, nitric acid, and intermediates. In the future ammonia is expected to be useful as an energy storage, zero carbon fuel and a hydrogen carrier for long distance hauling of ocean vessels etc. The International Fertilizer Industry Association (IFA) estimates that approximately 2 per cent of the world's energy is used for fertilizer production of which, 93 per cent is marked for ammonia. Despite the enormous strides made by the industry in bygone years in reducing emissions, current ammonia production methods still contribute to 1.3 per cent of total global emissions in 2022 (IFA, 2022). It is generally agreed in the industry that a further reduction in energy consumption of the order of 6 to 7 per cent is possible even in the most

© Shutterstock.com

efficiently operating plants, although this would come through with an increased capex.

Cement

In 2022 the global cement production was 4.1 billion tons. The emissions from the cement industry arises out of its use of fossil fuels for processing and from the use of limestone as a raw material. It accounts for over 7 per cent of total global CO2 emissions, i.e., for every ton of cement produced it emits 0.6 ton of CO2. Green Hydrogen can be used as a fuel in the cement production process to replace fossil fuels such as coal, coke, and natural gas. The production of clinker, an intermediate in cement production, is responsible for a substantial amount of CO2 emissions and hydrogen can be used to reduce the amount of clinker needed in cement production, as it can be used as a reducing agent in the raw material mix. This can reduce CO2 emissions from cement production by up to 50 per cent.

Indian efforts

India established a clear leadership in the decarbonisation by setting up of the National Hydrogen Mission in 2021 and through its targeted efforts to decarbonise each of the economic sectors. At the recently held G20 meeting in New Delhi, India proposed to establish a Green Hydrogen Innovation Centre and the Global Biofuel Alliance within its borders for facilitating technology sharing, capacity building, and sustainable investments in renewable energy projects. Still the bulk of the energy production in India comes from coal which is the most emission intensive input for power generation. Being the abode of a large section of young people- nearly 70% of the country's population- our development aspirations cannot be put on hold instantly and thus the use of coal as a fuel and feedstock cannot be done away. Instead, the government envisages a gradual transition to greener options for power generation to decarbonise the grid. A great deal of investments both from the public and private sector will be necessary to make the grid carbon neutral. Here a well laid out pathway for decarbonisation at the national level duly supported by clearly defined policy prescriptions are required to facilitate private investment in this area. Government of India's recent notification of Green Hydrogen Standard which specify the emission thresholds during production, is a right step forward in this direction especially at a time when globally acceptable standards in this respect are lacking.

India's NITI Aayog reports that the cost of hydrogen production through electrolysis ranges from $4.10-$7 per kg based on the technology used and including operating costs, transmission and distribution costs, wheeling costs for electricity and the local duties and taxes as against $2 per kg through the SMR route for grey hydrogen. Therefore, the cost of the electrolysers may have to be brought down to produce hydrogen at competitive rates. Globally most green hydrogen technology providers are innovating their designs of electrolysers. India also needs to catch up with these developments with our engineering expertise and through R&D institutions and get recognized as an international market player in the segment. The burgeoning global green hydrogen market is projected to be worth $11 trillion by 2050, as per Goldman Sachs' estimates. This very well auger with the recent report by NASSCOM and BCG which predicted that India's Engineering Research and Development (ER&D) sector is set to increase its contribution to the global ER&D sourcing market which currently is at 17 per cent and valued at $44-45 billion is expected to grow to 22 per cent and $130-170 billion by 2030.

Unlike in the past, about technological advances in several sectors, the approach taken by the Government of India towards fostering a hydrogen economy for the country was quick and timely.

© Shutterstock.com

The Prime Minister himself exhorted the importance to align with the ongoing technology developments in hydrogen sector as a sustainable alternative to fossil energy and the need to build inhouse expertise through active participation in research and innovation in this area. It is also recognized that Government support by way of viability gap funding etc. if needed for projects will come through. Even developed countries like the US are incentivising investments in green power and low carbon hydrogen infrastructure through enactments like the Inflation Reduction Act of 2022. Already the cost of renewable power generation in India is lower and it must come in handy for the country to reap the economic gains of the global energy transition. Government of India's domestic manufacturing support under production linked incentive (PLI) scheme shall be extended to electrolyser manufacturing also.

Challenges ahead

In the prevailing market economy situation, it is difficult to expect that environmental sustainability and mitigation of climate change to prevail over corporate profitability. In such a case final investment decision of several of the 680 large scale green hydrogen projects proposed worldwide (May 2022) are likely to get delayed so that they may not be able to contribute to the planned decarbonisation targets in the coming years. The apprehension on the viability of green hydrogen vis a vis other fuels was raised in a recent study by the Barcelona based OBS Business School and also duly upheld by Mr Yuri Sebregts, Chief Technology Officer, Shell. This situation may be viewed in the context of the IPCC AR 6 report's observation that global initiatives are not progressing well to meet the decarbonisation targets set for 2030 and the lack of commitment and clarity about Climate Funding assistance at COP 26 meeting. The disruption of the global agenda propelled by the onset of the Russia-Ukraine war and now the Hamas-Israel war is yet another hurdle. Thus, looking at the overall crisis from the technology, economics and geopolitical perspectives and taking stock of the progress achieved so far, one may like to conclude that the global decarbonisation effort is likely to lose momentum in the near term. IM

ABOUT THE AUTHOR

Dr MP Sukumaran Nair is Director, Centre for Green Technology & Management, Cochin.

AIMA
ALL INDIA MANAGEMENT ASSOCIATION

JOIN THE MANAGEMENT MOVEMENT

Networking opportunities with Indian and global corporate majors
Platform to interact with other members / thought leaders
Concessional rate for AIMA programmes
Complimentary membership of AIMA library
Affiliation to any one LMA
Free copies of 'Indian Management' and AIMA E-news
Representation on the AIMA Council of Management through election
My AIMA online portal services

So when are you connecting with us?

Become an AIMA Member Today !

www.aima.in

Dr Prabir Kumar Dash, Deputy Director-Membership
All India Management Association, Management House, 14 Institutional Area, Lodhi Road, New Delhi - 110003
Tel: 011-24621323 (Direct), 24645100 Extn-535, Fax: 011-24626689 Email: member@aima.in

AIMA
ALL INDIA MANAGEMENT ASSOCIATION

MANAGE THE FUTURE

Accredited Management Teacher (AMT) Certification

Do you have the desire to be a management teacher?
(You need not be in the academic profession)

If so, apply to be an Accredited Management Teacher

Accreditation of Management Teacher is a service initiated by All India Management Association (AIMA) to overcome shortage of full time and guest management faculty in B-Schools.

The AMT certification process involves

- Screening of Application
- Presentation
- Interview

Applications are invited from

- Trainers
- Corporate Managers
- Academicians/Faculty
- Consultants

Eligibility

Qualification: Post Graduate Degree or equivalent in any discipline relevant to management education.
Experience: Post graduate level regular teaching experience of minimum 3 years OR Industry/ Consultancy/ Training/ Research experience of minimum five years.
Note: Experience will be counted subsequent to achieving the requisite PG Degree or equivalent qualification.

Accreditation Session is conducted normally on the second Friday of each month at Delhi
Accreditation Session is held selectively in other cities also.
Register online at https://applyadmission.net/amt

For further information, please contact:
Manager (AMT), Centre for Management Service,
All India Management Association, 15, Link Road, Lajpat Nagar 3, New Delhi -110024
Tel: 09599024188, 011-47673000, 49868399 (Ext 817), Direct : 011-47673032, Email: amt@aima.in, Website: www.aima.in