IMA EVENING MEMBERSHIP PROGRAMS
JULY – SEPTEMBER 2018

MONTH	PROGRAM	TOPIC
Wednesday, July 04, 2018	HR Forum	Future of work: Will Robots steal our jobs?
Thursday, July 12, 2018	Contemporary Learning	How yoga and meditation can help managers
Wednesday, July 18, 2018	Readers Clique	The Power of Moments: Why Certain Experiences Have Extraordinary Impact
Thursday, July 26, 2018	COE	LEAN Process Improvement: Delivering More with Less
MONTH	PROGRAM	TOPIC
Wednesday, August 08, 2018	Contemporary Learning	How to tackle Disruptive Innovation
Tuesday, August 14, 2018	COE	Vision to success
Wednesday, August 22, 2018	Readers Clique	Shoe Dog: A Memoir by the Creator of NIKE
Wednesday, August 29, 2018	COE	Challenging Role of ancillary units in Supply Chain Management
MONTH	PROGRAM	TOPIC
Wednesday, September 05, 2018	Contemporary Learning	Search Engine Optimization (SEO)
Wednesday, September 12, 2018	COE	Overview of Six Sigma
Thursday, September 20, 2018	Management Film Show	Mughal - E- Azam
Thursday, September 27, 2018	Learning from Life of Legends	Arjuna, one of the five Pandava brothers

Program Coordinator : **Ms. Suman Agrawal** | 8889996136 | ima@imaindore.com

IMA has constructed a new state of the art training/ conference room which has modern equipments for projection, sound and video conferencing. The facility of Video Conferencing has been made available to our members.

Rates : Rs. 2000/- for the first hour followed by Rs. 1000 per hour.
Contact : Jagvant Singh Mangat | 8889996130
marketing@imaindore.com

IMA Secretariat in New Avatar

Special thanks to the Renovation Committee :
CA Santosh Muchhal, CA Navin Khandelwal, Mr. Vijay Goyal, Mr. Shiv Kumar, Mr. Ravi Nandi and Mr. Ujjesh Sinha.

INDORE MANAGER

TOWARDS AN INTELLIGENT FUTURE

Is your business ready for the next revolution?
The transformational technology is already touching many corners of business like modern wizardry, and yet the technology remains a bit of a mystery. Whether you're a traditional conglomerate embracing digital transformation for the first time or a cutting edge tech startup looking to scale, managing in the digital economy lends a whole set of new managerial challenges. In this issue of Indore Manager let's expose and explore the newest and greatest challenges related to the application of emerging technologies today.
Are you ready for your own cognitive journey?

Editor's Message

Dear Reader,

Technology is here, whether we like it or not. Though it sometimes appears overwhelming, it can be used intelligently to make our lives easier. Communication technology like the internet and related ones like Search alone have simplified our lives, and enabled us to do many things. Similarly, in our workplaces, we can use the enablers like Robotics, Artificial Intelligence or Analytics based on data collected automatically, to make better decisions or to run plants more efficiently. At home too, maybe automation or IoT can help simplify tasks that are mundane and time-consuming, so we can focus on other things, or just have more rest and leisure.

Our life and work both promise to be better, if we can use technology intelligently-or wisely. From medical diagnosis to machines that can do things according to instructions, we are going to see hundreds of applications emerge. To the best of these inventions in software and hardware, let us say cheers. This issue is dedicated precisely to these ideas.

We welcome your feedback, and ideas on the contents.

Sincerely yours,
Professor Rajendra Nargundkar
Editor, Indore Manager
Professor, IIM Indore

President's Message

Dear fellow managers,

Is your business ready for the next revolution?

The transformational technology is already touching many corners of business like modern wizardry, and yet the technology remains a bit of a mystery. Whether you're a traditional conglomerate embracing digital transformation for the first time or a cutting edge tech startup looking to scale, managing in the digital economy lends a whole set of new managerial challenges. In this issue of Indore Manager let's expose and explore the newest and greatest challenges related to the application of emerging technologies today.

Are you ready for your own cognitive journey?

As I reach out to you as the President of the IMA executive council, I want to confess something - I did not write this message. Well, technically I did not! I simply dictated it to my google assistant to do it for me. Famous author Arthur C. Clark said, "Any sufficiently advanced technology is indistinguishable from magic."And magic it is indeed; all that technology can do today. A decade ago we could have only dreamt of driverless cars and cyborgs doing the tasks for us. But we have come a long way and we can only imagine what the future holds.

At IMA as well, it has been our consistent endeavor to keep pace with the constantly evolving technology. During my tenure in the last two years, we have undertaken a massive digital transformation. We have attempted to give a face-lift to the infrastructure by introducing state-of-the-art facilities like a VC enabled conference room and an overall renovation of the various facilities. These are available to members at nominal charges.

These efforts are towards ensuring that the members benefit from the crossing-over of innovation and business technology. This was also the very theme that we explored during the 2 days long International Management Conclave.

I am confident that the future packs many surprises and magics and IMA will do its very best to leverage it for the betterment of its members and the entire community.

Sincerely yours,
CA. Santosh Muchhal
President IMA
Partner - Muchhal & Gupta

ERRATA:
Indore Manager Mar-Apr_Vol XXVII_Issue 1

1. **Page 27** | Session Takeaways & Highlights | Mr. Rajender Singh Sachdeva, COO, Eicher Trucks and Buses name was erroneously mentioned as RAdm. Shekhar Mittal, Chairman & Managing Director - Goa Ship Yard Ltd.
2. **Page 3** | IMA Secretariat| Mr. Devilal Purohit name was erroneously mentioned as Ms. Devilal Purohit.

We welcome your feedback, suggestions and errors that warrant corrections. Messages regarding the same can be mailed to mail@imaindore.com

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Artificial intelligence:
IMPROVING MAN WITH MACHINE

A subfield of computer science, artificial intelligence (AI) develops computers that can do things traditionally done by people. Its solutions can sense or perceive the world and collect data; understand the information collection; and act independently – all underpinned by the ability to learn and adapt over time.
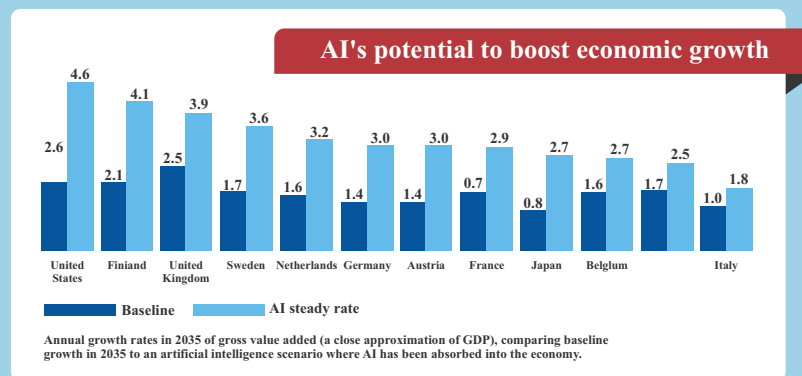
Augmented reality, virtual reality, natural language question answering, machine learning, autonomous vehicles - artificial intelligence powers most of the innovations that dominate today's conversations about the industries of tomorrow.

As those innovations become capable of making significant productivity impacts, business is starting to take note.

Accenture has found that the number of AI start-ups in the United States has increased 20 times over the past four years.[1] Jeff Dean, a senior fellow at Google, said in 2015 that he believed the pace of AI's advancement was "actually speeding up".[2]

Narrative Science has reported that 62% of enterprises will be using AI by 2018.[3] In the longer term, Accenture's own research suggests AI could double annual economic growth rates in 2035, primarily by increasing labour productivity by 40%.?

AI's potential to boost economic growth

Annual growth rates in 2035 of gross value added (a close approximation of GDP), comparing baseline growth in 2035 to an artificial intelligence scenario where AI has been absorbed into the economy.

Source: Accenture and Frontier Economics

As of 2015, the transport and automotive sector held the greatest share of an AI market that Markets and Markets predicts will grow to $5.05 billion by 2020.? In that period, AI is set to grow fastest in healthcare, where it can make treatments more efficient, and improve diagnosis, patient care and drug discovery. Retail, professional services, and oil and gas are among other important sectors.

APPLICATIONS TO INDUSTRY

Automotive and Logistics

Around the world, road traffic accidents kill 1.25 million people a year, injure 20 million to 50 million, cost $518 billion and are predicted to be the fifth leading cause of death by 2030. Crash-avoidance technology in assisted-driving vehicles is already lowering accident rates. When AI-driven autonomous cars reach critical mass, those rates are likely to plummet.

The insurance aspects of this transformation are not fully clear. What is clear, however, is that a liability shift will take place. Instead of driver behaviour, coverage will be placed on a car's manufacturer, the software designer, device maker, map producer, the company that made the sensors in the highway or the vehicle, the operator, the passenger or the vehicle's owner.

CASE STUDY: OTTO - A SELF-DRIVING TRUCK COMPANY

Recently bought by Uber for $680 million, Otto is testing self-driving trucks on roads throughout Northern California.? For now, the robot truckers are only taking control on highways, but the goal is a more automatized, totally functional rollout by 2020.? Trucking is a $700 billion industry in the United States, and a third of costs go to compensating drivers.? Given the size of the industry, it is likely self-driving trucks will be on the market before self-driving cars.?

RETAIL

Already using it behind the scenes for supply-chain cost optimization, retailers are set to deploy AI on the customer-facing front line, where its deeper understanding of consumer behaviour can increase revenues.

In physical retail stores, AI-enabled digital assistants will seamlessly and automatically find, order and deliver the ideal option to customers, and thus help satisfy the growing consumer expectation of instant gratification.

CASE STUDY: PEPPER - THE HUMANOID ROBOT

In Japan, Nescafe deployed 1,000 Pepper robots to retail appliance stores to help consumers pick out Nespresso coffee machines. Japanese telco SoftBank also experimented with Pepper earlier this year, opening a pop-up mobile phone store run entirely by robot sales clerks that speak 19 languages, recognize facial expressions and learn from conversations. It plans to continue testing the robots and deploy them across Tokyo to serve foreign visitors to the 2020 Olympic Games.

HEALTHCARE

The volume of data produced by healthcare organizations has increased tremendously. Driving this increase has been developments such as the digitization of clinical information through the implementation of electronic medical records (EMRs), the generation of significant amounts of real-time data by billions of connected devices,[1]? and lower-cost access to genomic information - not to mention the wealth of information captured on the internet.

This information is feeding next-generation analytics technologies such as big data, cognitive computing and machine learning to, for example, improve the delivery of cancer treatments, personalize medical interventions, predict chronic diseases and drive behavioural change.

CASE STUDY: IBM - USING AI AND MACHINE LEARNING TO HELP PHYSICIANS[11]

Medical images make up at least 90% of all medical data, according to IBM researchers. Aiming to help clinicians extract insights from imaging data, the computing giant's Watson Health and Merge Healthcare arms recently partnered with the Radiological Society to demonstrate some AI-driven solutions. Watson Health has developed cognitive tools for peer review, data summarization and physician support, as well as the MedyMatch Brain Bleed application, designed to help emergency-room physicians diagnose stroke or brain bleed by identifying relevant evidence in patient records. Merge's Marktation augments the work of physicians by raising image-

"If you would convince a man that he does wrong, do right. But do not care to convince him. Men will believe what they see. Let them see." —Henry David Thoreau

"I cannot trust a man to control others who cannot control himself." —Robert E. Lee

reading speeds and accuracy. It also has a cloud application for eliminating common causes of errors in medical imaging, and a Lesion Segmentation and Tracking Module.

PROFESSIONAL SERVICES

There is an unprecedented opportunity to harness the power of artificial intelligence to augment humans' abilities to 'do', 'think', 'learn' and 'feel'. By automating routine tasks, AI frees humans to focus on solving higher-order problems.

In this way, digital innovations are improving workplace productivity (expected to rise by 22% by 2020)[12] and reducing the labour needed to complete a job (by 4% a year to 2019 in consulting)[13].

CASE STUDY: BAKERHOSTETLER - ROSS, THE ARTIFICIALLY INTELLIGENT LAWYER

Law firm BakerHostetler recently employed its first AI lawyer, ROSS, for its bankruptcy practice, where 50 human lawyers currently work. Built on IBM's cognitive computing platform Watson, ROSS is designed to read and understand language, postulate hypotheses when questioned, conduct research, and generate responses (along with references and citations) to back up its conclusions. ROSS also learns from experience, gaining speed and knowledge the more lawyers it interacts with. It also constantly monitors current litigation so that it can notify colleagues about recent court decisions that may affect their cases.[1]?

UNLOCKING VALUE TO SOCIETY

Accenture's work with the World Economic Forum on the Digital Transformation Initiative has uncovered a variety of possible societal impacts stemming from the adoption of AI by different industries.

Integrating predictive intelligence technologies into the design of smart cities promises to improve public safety.[1]? Singapore has already deployed sensors and cameras to monitor public spaces, but its Smart Nation programme has also raised concerns about Big Brother-style mass surveillance.

In healthcare, AI is helping reduce the time it takes to bring new drugs to market.

Artificial intelligence has halved the time it has taken to bring a cancer-combatting drug to market. Today, it takes 12 to 14 years and $2.6 billion to develop one drug. With AI technology, it could take only half of that.

TODAY	TOMORROW
14 years to market	7 years to market
CAN HELP 10,000 PEOPLE	CAN HELP 10 MILLION PEOPLE

Source: 'Turning artificial intelligence into business value.

THERE ARE WIDER, CROSS-INDUSTRY QUESTIONS TO BE ANSWERED TOO:

Unemployment
As machines take over more mundane tasks, how do we prepare displaced humans to fill the roles created by new technologies?

Inequality
How should the wealth created by machines be distributed?

Humanity
How do interactions with machines affect our behaviour?

Artificial stupidity
How can we guard against mistakes?

Racist robots
How do we eliminate AI bias?

Security
How do we keep AI safe from adversaries?

Evil genies
How do we protect against unintended consequences?

Singularity
How do we maintain control over complex, intelligent systems?

Robot rights
How do we treat AI humanely?

AI has the potential to drive significant productivity increases that improve the quality of lives around the world, but its development and use is not without risk. As such, it must be implemented responsibly.

http://reports.weforum.org/digital-transformation/artificial-intelligence-improving-man-with-machine/

"In the end, it is important to remember that we cannot become what we need to be by remaining what we are." —Max De Pree

1."We're here for a reason. I believe a bit of the reason is to throw little torches out to lead people through the dark." —Whoopi Goldberg

IS NEW TECHNOLOGY HURTING OUR PRODUCTIVITY?

In recent years, productivity growth in developed economies has been stagnating. The most prominent explanations of this trend involve technology. Technological progress is supposed to increase economies' productivity and potential growth. So what's going on?

Harvard's **Martin Feldstein** has **argued** persuasively that productivity growth is actually higher than we realize, because government statistics "grossly understate the value of improvements in the quality of existing goods and services" and "don't even try to measure the full contribution," of new goods and services. Over time, he asserts, these measurement errors are probably becoming more important.

Northwestern University's Robert Gordon is less optimistic. He has **argued** - also persuasively - that today's innovations in areas like information and communications technology (ICT) cannot be expected to have as big an economic payoff as those of the past, such as electricity and the automobile.

But it's possible that ICT and other new technologies are not just doing less to boost productivity than past innovations; they may actually have some negative side effects that undermine productivity and GDP growth. One need not be a modern-day Luddite to acknowledge the potential productivity pitfalls of technological innovation.

The first might seem obvious: technological disruption is, well, disruptive. It demands that people learn new skills, adapt to new systems, and change their behavior. While a new iteration of computer software or hardware may offer more capacity, efficiency, or performance, those advantages are at least partly offset by the time users have to spend learning to use it. And glitches often bedevil the transition.

The fast-changing nature of today's digital technologies also raises security challenges. Spam, viruses, cyber attacks, and other kinds of security breaches can impose major costs on businesses and households.

Then there is the impact that connectivity has on our daily lives, including our ability to work and learn. Non-work emails, social media, Internet videos, and video games can easily distract employees, offsetting at least some of the productivity-raising potential of that same connectivity. Such disadvantages may become even more pronounced when workers **telecommute.**

THE DARK SIDE OF METCALFE'S LAW

Executives today receive more than 30,000 external communications every year.

APPROXIMATE NUMBER OF COMMUNICATIONS PER EXECUTIVE PER YEAR

1K	4K	9K	25K	30K+
1970s	1980s	1990s	2000s	2010s

SOURCE BAIN & COMPANY   ©HBR.ORG
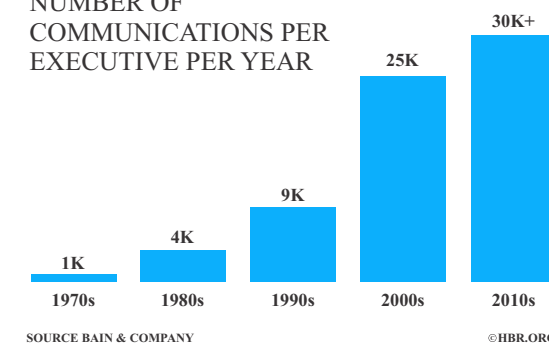
Similarly, the **smart phone** has shaped the minds of young people, who barely remember what it was like before addictive activities - from video games to social media - were constantly at their fingertips. According to **one recent study,** recreational computer activities partly explain a decline in labor supply among men ages 21 to 30. Moreover, **research** shows that **laptops** in the classroom **slow student learning,** even when used to **take notes,** rather than surf the web.

Moreover, smart phones undermine physical safety in some contexts. In the United States, the National Highway Traffic Safety Administration **reports** that 3,477 people were killed and 391,000 were injured in motor vehicle crashes involving distracted drivers in 2015, with texting being the biggest culprit, particularly among young people.

Digital currencies like Bitcoin have also so far **failed to live up to the hype** surrounding them. Far from being more efficient as a means of payment or store of value than conventional money, crypto currencies seem to encourage the **diversion of resources** away from productive uses. They also harm the environment, owing to the energy-intensive "mining" process, while the total anonymity they offer undermines law enforcement.

Beyond new technologies' direct and indirect negative effects on productivity, there is a risk that they are undermining people's quality of life. Few people have positive feelings about, say, the automatic phone calls that have come to plague many of our lives.

Then there is the ever-present "fake news" problem. The advent of digital "new media" was once heralded as a democratizing trend that would give ordinary people a measure of control over the "air waves," at the expense of big companies or established institutions. But it has lately become apparent that "democratizing" information may not actually be good for democracy. For example, **fake news** has been **found to spread** faster on Twitter than true news. This has not only made citizens less informed in many cases; it has also enabled public figures - most notably, US President Donald Trump - to dismiss the truth as "fake."

And these are just the downsides of information technology. Other technological innovations with major obvious drawbacks include opiate painkillers and increasingly advanced weaponry.

To be clear, I am not suggesting that the net effects of recent technological advances are negative. On the contrary, many have delivered huge benefits, and that will probably continue to be the case.

Technologies may have productivity-raising potential that is yet to be tapped. Historians like **Paul David** and technology **experts** like **Erik Brynjolfsson,** Daniel Rock, and **Chad Syverson** argue that it has always taken time for major breakthroughs (like the steam engine, electricity, or the automobile) to yield net economic gains, because businesses, buildings, and infrastructure need to be re-configured. Presumably the same will happen with recent technologies.

But this is not a reason to ignore the negative consequences of new innovations. As a group of Silicon Valley technologists has **warned,** "Technology is hijacking our minds and society." We must take back control, ensuring that we do not just make our world "smarter," but also make sure we are smart about how we use it.

https://www.weforum.org/agenda/2018/01/embrace-the-tech-backlash

"Remember, teamwork begins by building trust. And the only way to do that is to overcome our need for invulnerability." —Patrick Lencioni

"No guts, no story." —Chris Brady

YOU'VE GOT YOUR APPROACH TO INNOVATION ALL WRONG. THIS IS WHY.

Here's the big issue - most organisations/teams/individuals only embark on innovation if they can travel in ways that reinforce existing routines. We seek new results through habitual methods. I call this conundrum the difference between 'action' - busily launching lots of innovation initiatives yet not fundamentally shifting underlying mindsets and ways of operating, and 'movement' - rewiring the very source of how your entity currently generates its results. When you innovate through movement, and not just more action, the system's underlying capacity to innovate becomes second nature. How much more effortless and less costly might that be!

So, the question becomes, how to do innovation in a way that achieves deep movement? In what way does how you approach innovation fundamentally determine where you end up?

In the two decades since Stephen Johnson published his groundbreaking book **Emergence: The Connected Lives of Ants, Brains, Cities and Software,** I have introduced to many organisations the principles and practices of what I call an "emergent" approach to the leadership of change. And to spectacular outcomes. When innovation is approached in this way, both my

experience and my **research shows** that leading change emergently results in rapid adaptation to highly uncertain and complex contexts.

The concept of 'emergence' draws heavily from the study into what are known as **'complex adaptive systems',** entities that can continually innovate to changing contexts in and of their own accord, with no need for a central command-and-control intelligence centre. And isn't that where today's organisations are needing to head?

Here are the six principles I have created that take the insights from complexity science into the practicalities of organisational change and innovation.

Have a loose intention and set of 'hard rules', and within that, 'press play and see what happens'. Innovation is a creative process that needs some overall statement of an unmet need, but it doesn't need a detailed predetermined vision. So, give up a need to control outcomes and articulate instead the biggest question that needs answering. But at the same time, innovation is aided by boundaries, statements of the micro-level behaviour needed to govern the pattern of the overall entity. Just take a look at the four **"Viking Laws"** that for centuries guided the flourishing of a trading nation across the

globe, yet who could operate without the need for a centralized governing body, and how they can inform the world of business today.

Start in a small way around 'ripe issues' that have large consequences. Using the skill of tuning in deeply to your organisational system or wider societal need, uncover the hot spots that appear to be a 'fractal' of the wider issue you are trying to solve, and which hold an innate energy for change. Don't try to launch innovation through a single grand programme. When you can innovate in these hot spots, that hold clues for the whole system, this **'positive deviance'** can be amplified and spread elsewhere.

Work step by step - using trials and experiments, and adjust as you go. When you lead change emergently, you give up any notion of a fixed medium-to-long-term plan. Our contexts are changing too fast for that. Rather, you simply focus on what is needed now, and next. Through iterative processes such as design thinking and rapid prototyping, you create partial solutions that are tested with the intended 'beneficiaries' of the innovation, and then adapted. This, more messy approach to innovation can work against the grain of perfection-seeking and control, and it requires that its leaders create a culture in which 'failure' or disturbance is framed as learning, not disaster.

Build skills in changing the here-and-now moment. You can only change the present, not the past, or the future. The challenge is that the 'default' neural networks in our brains are either obsessing about past events, or, busily planning what is still to come. Unless you can cultivate the capacity to activate the 'attentional' network in your brain, which bends your awareness to what is here, now, then you might miss the unfolding novelty of the present moment. You can't change what you don't notice. The potential for innovation - in a conversation with a customer whose needs are changing, in a chance encounter with a work colleague who has a crazy yet fruitful idea - is simply missed. Just **take a look** at the evidence between the ability to cultivate a greater degree of so-called "mindfulness", and creativity.
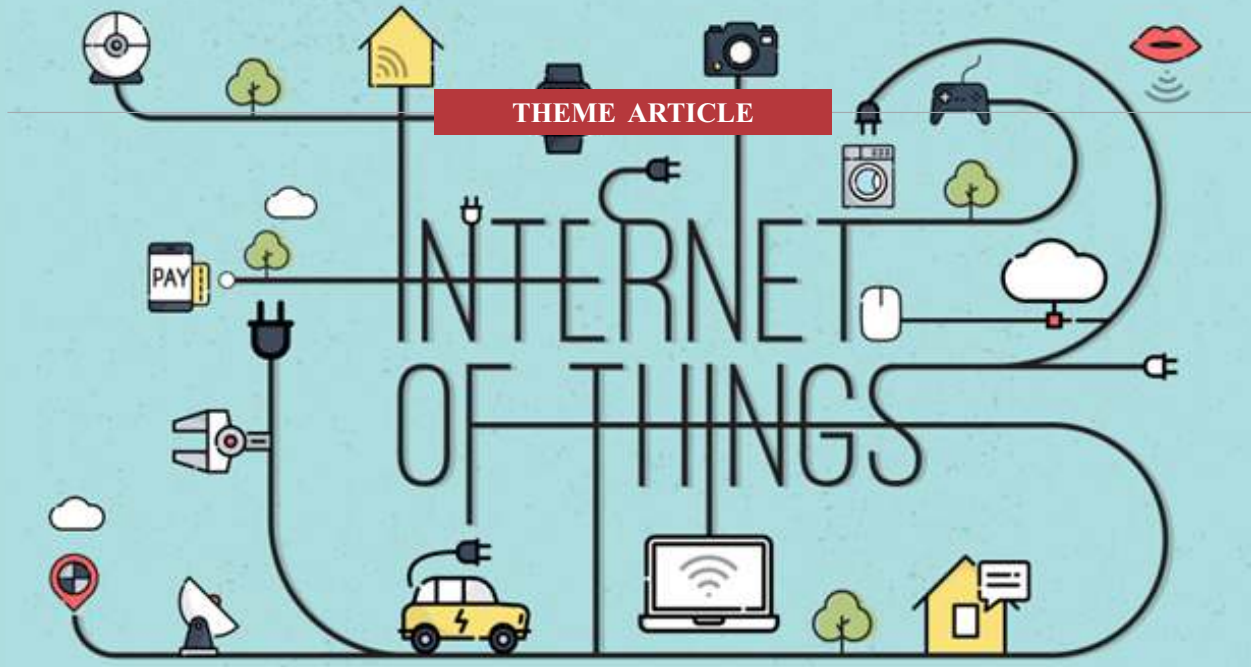
Use informal, lateral networks and volunteers. To spread the innovation, or positive deviance, from the hot spots, make sure you have rich peer-to-peer type common interest groups. Innovation is not amplified by the need to go up and down a formal hierarchy with all its reporting checks and balances. The world is changing around use. Technology and social media can now connect us in ever-increasing circles. Hierarchies are collapsing. In today's world, innovation and change is best fuelled by having an inspiring loose intention and seeing 'who shows up' to help you further it.

At all times, cultivate the emergent conditions of connectivity, diversity and rapid feedback loops. While you can't directly control emergent change and innovation, you can command it. And that is through the continual attention to its **conditions.** Back to the study of complex adaptive systems - they are seen to be most healthily innovative when they contain rich interactions between their multiple parts, have the maximum requisite variety to match the systemic context that is shifting, and operate through the rapid spread of information about how well the system is performing. How does such connectivity across boundaries, more 'whole system' difference, and the empowered building of collective intelligence show up in the system in which you are leading innovation?

So, in summary, I contend that the best way to get to true innovation is to pay as equal attention to the how, the process of innovation, as you do to the what, the subject matter for your innovation. And, that the most appropriate how, or approach to innovation in today's world, is an emergent change one. Final health warning - emergent change does require quite a different leadership style and skill set. One that gives up hierarchical control and fixed outcomes, can deeply tune into a system's unconscious routines, works with simply setting a loose frame and micro-level boundary conditions, and then trusts the people around them to deliver.

"A leader isn't someone who forces others to make him stronger; a leader is someone willing to give his strength to others so that they may have the strength to stand on their own." —Beth Revis

"Always remember, Son, the best boss is the one who bosses the least. Whether it's cattle, or horses, or men; the least government is the best government." —Ralph Moody

HOW THE INTERNET OF THINGS HAS EVOLVED OVER THE LAST 50 YEARS

The Internet of Things (IoT) isn't only for connecting the latest gadgets, like a voice-activated speaker or a smart thermostat, to your increasingly connected home.

In fact, the same circumstances that have led to the explosion in smart consumer gadgets, such as universal wireless connectivity, cloud computing, cheap sensors, and better artificial intelligence, are also being used in conjunction with big data to power the next generation of industry, as well.

This new technological layer, called the Industrial Internet of Things (IIoT), is transforming massive industries like manufacturing, energy, mining, and transportation - and it'll have a multi-trillion dollar impact on the economy as a whole.

THE BIRTH OF THE INDUSTRIAL INTERNET

Today's infographic comes to us from Kepware, and it shows how these technological forces have emerged over time to make the IIoT possible.

INDUSTRIAL INTERNET OF THINGS IIOT

TIMELINE

On January 1, 1968, **Dick Morley had a hangover.** It was not an auspicious start to the day he would draft a memo that led directly to the invention of the **Programmable Logic Controller (PLC).**

68 PLC is born

Machine-to-Machine (M2M) devices that combined telephony and computing were first conceptualized by **Theodore G. Paraskevakos** while working on his caller line identification system.

83 Ethernet Standardized

83 Ethernet Standardized

Tim Berners-Lee implemented the first successful communication between a **Hypertext Transfer Protocol (HTTP)** client and server via the Internet.

89 World Wide Web is invented to share research

92 Ethernet and Transmission Control Protocol/ Internet Protocol (TCP/IP) connectivity for PLCs is introduced

94 The OPC Foundation forms to secure data exchange in industrial automation

95 MS Windows becomes the mainstream OS in the factory

96 OPC Data Access (DA) protocol is released

97 Wireless M2M technology becomes prevalent in industry

'98 Erhernet turns 25 and becomes ubiquitous in industrial environments

'99 "Internet of Things" is coined by Kevin Ashton

02 Cloud technology takes hold with the launch of Amazon Web Services(AWS)

06 OPC Unified Architecture (UA) protocol is released, enabling secure remote communications between devices, data sources, and applications

10 Sensors drop in price

11 Bring Your Own Device (BYOD) becomes mainstream

16 IIot vision emerges

Augmented reality and virtual reality become standard UIs for IIoT

Data scientists move into leadership

06 OPC Historian adoption rises

Devices get **smaller and smarter**

Battery and solar power become more powerful and economic

27 Billion connected things

What does the FUTURE hold for IIoT?

$3 Trillion generated in revenue

BECOMING STANDARDIZED:

Human Machine Interface (HMI) Supervisory Control and Data Acquisition(SCADA)

The interoperability Standard for industrial Automation

The road to the creation of the IIoT started in 1968, when engineer Dick Morley made one of the most important breakthroughs in manufacturing history.

That year, Morley and a group of geek friends invented the programmable logic controller (PLC), which would eventually become irreplaceable in automating assembly lines and industrial robots in factories.

Other major innovations

Here are some other major innovations that were instrumental in making the IIoT possible:

1983: Ethernet is standardized

1989: Tim Berners-Lee creates Hypertext Transfer Protocol (HTTP)

1992: TCP/IP allows PLCs to have connectivity

2002: Amazon Web Services launches, and cloud computing starts to take hold

2006: OPC Unified Architecture (UA) enables secure communications between devices, data sources, and applications.

2006: Devices start getting smaller, and batteries and solar energy are becoming powerful and more economical.

2010: Sensors drop in price, enabling them to be put into pretty much everything

And today, the IIoT is a big deal: it's transforming the backbone of major industries by adding a new layer of technology that helps companies optimize operations, track and analyze equipment, implement predictive maintenance, make sense of massive amounts of data, and make real-time decisions that were never before possible.

And by 2030, the IIoT is estimated by Accenture to have a $14.2 trillion on the global economy - making it one of the most important forces shaping the future business world today.

https://www.weforum.org/agenda/archive/internet-of-things/

"Leadership is an action, not a position." —Donald McGannon

"Surround yourself with great people; delegate authority; get out of the way" —Ronald Reagan

HOW SECURE IS BLOCKCHAIN?

Blockchain technology is transforming the way we do business by allowing consumers to cut out the middleman in numerous vital services, reducing costs and boosting efficiency. In this way it has the potential to reduce poverty throughout the developing world.

But is it secure? More specifically, can blockchain-based technologies simultaneously offer trust and privacy to ensure private and tamper-free records?

This issue should concern those development institutions, businesses and governments exploring blockchain for more efficient delivery of aid, money remittances, smart contracts, health services and more. Likewise, social entrepreneurs must ask the same question as they pursue the potential for cheaper international payments, clearer property rights and broader access to finance.

Blockchain is perhaps best understood as a decentralized ledger that can diminish costs by removing intermediaries such as banks and effectively decentralizing trust. The technology appends entries to the ledger which are validated by the wider user-community rather than by a central authority.

Each block represents a transactional record and the chain links them. The distributed computer network confirms the record and lists the blocks of transactions sequentially - hence the blockchain.

Importantly, nothing of value is on the blockchain, just as with printed money or a bank's database, and the controversial cryptocurrency bitcoin is simply an application of blockchain.

So, is the block really immutable? The answer is no.

Perfect immutability does not exist; blockchain, like any

other network, is technically prone to modification. But because the computers, or nodes, on a blockchain network are distributed, the mathematical puzzle and computing power required to make changes makes modification nearly impossible. To alter a chain, one would need to take control of more than 51% of computers in the same distributed ledger and alter all of the transactional records within a very short space of time - within 10 minutes for Bitcoin. To date, this has never happened.

WHAT ABOUT SECURITY AND PRIVACY?

Although it may be difficult to achieve simultaneous security and privacy in a conventional information system, blockchain can do so by enabling confidentiality through "public key infrastructure" that protects against malicious attempts to alter data, and by maintaining the size of a ledger. The larger and more distributed the network, the more secure it is believed to be.

Other perceived concerns about blockchain include limited scalability, insufficient data privacy and a lack of harmonized industry standards.

For example, even with privacy-enhancing technologies such as encryption and identity management, blockchain transactions can be seen throughout network nodes. These produce metadata and statistical analysis can reveal information even from encrypted data, allowing for pattern recognition.

Data privacy is a particularly thorny issue in the European Union (EU), where the General Data Protection Regulation (GDPR) which takes effect in May imposes stricter conditions for consent and data retention, requiring businesses to protect the personal data and privacy of citizens for transactions in the EU. It also disallows personal data from leaving the EU, giving citizens "full and ultimate control over all their data".

USING PERSONALLY-IDENTIFIABLE DATA

Companies use data to run analytics and develop algorithms that can give them an edge over competitors. Under GDPR, using data like that won't be so easy. That's because the new European regulation makes it more difficult for companies to rely on consent to use personal-ly-identifiable data from consumers in any way. Here are two common options:

OPTION 1
Renew consent from users

- Some companies are enlisting the help of consultants and marketers to run campaigns to help them achieve high rates of new consent.
- Companies must explicitly explain what they intend to use the data for and get consent for those specific cases.

Sources: Anonos; Ebsta; European Union's General Data Protection Regulation; Reuters Research

By Han Huang, Salvador Rodriguez and Jonathan Weber : REUTERS GRAPHICS

OPTION 2
Pseudonymize personally-identifiable data

- Some companies are turning to the help of vendors with software that scrambles the data in question, tightly shielding the identities of specific user with risk-managed, technical measures.
- By pseudonymizing, companies can use the data they already have for analytical purposes without having to get explicit consent from users so long as they're protecting users' identities.

"If you really want the key to success, start by doing the opposite of what everyone else is doing." —Brad Szollose

"The art of leadership is saying no, not yes. It is very easy to say yes." —Tony Blair

This is a problem for both public blockchains, which do not control who hosts a node, and private blockchains (also called permissioned blockchains) as data cannot be deleted here. The new regulation also recognizes the "right to be forgotten", which conflicts with the "immutability of transactions" on blockchain.

SCALABILITY

Vitalik Buterin, co-founder of Ethereum, another blockchain system like Bitcoin and Hyperledger, has noted that there is indeed a "scalability trilemma" in which only two of three properties - decentralization, security or scalability - can be attained.

In distributed ledger protocols, every node stores and processes all transactions and maintains a copy of the entire "state" of account balances, contracts, storage, and so on. Running a full node allows users to have privacy and security but it is cumbersome as the number of transactions is constantly increasing, making scalability difficult.

If developers increase the size of a block in order to accommodate more transactions, the volume of data that needs to be stored also grows. Thus, as each node reaches capacity, only a few large companies will have the resources to run them, putting decentralization and scalability at odds. Developers are looking for ways around the trilemma.

It is worth noting that private blockchains do not face such scalability problems and can handle significantly more transactions per second.

PRIVACY

To get around data privacy issues, a blockchain operator may store personal data and the reference to this data off-chain with a "hash" of the information - a one-way transformation of data to an unreadable piece of information.

Storing data off-chain means that personal data needs to be held by the individuals themselves or in a more traditional database. Know-your-customer documents, such as a scanned driver's licence or passport, can be stored off-chain using traditional technology, such as a standalone database and application systems.

But storing data off-chain reduces transparency and immutability and increases the risk of lost or stolen personal information as it is spread across other networks.

An emerging solution is "self-sovereign identity", a digital concept allowing an individual to control personal information and have better control over with whom they share it. As blockchains become components of businesses, institutions and systems, it will be important to interpret laws and application designs to maximize synergy and balance regulation, innovation, competition and data privacy.

Notably, the privacy of blockchain depends on users. If encrypted, and keys are held securely, it is not an issue. In many ways, blockchains are more secure than a centralized system.

Blockchain's potential is clear

Two major Australian banks have successfully used blockchain for bank guarantees relating to commercial property leasing of a shopping centre operator. The digitized guarantee created a single information source with lower fraud potential and greater efficiency.

Blockchain's "irreversible" and encrypted data blocks can also help to fight cybercrime, as a hacker's attempts to change data will be flagged immediately. As applications of blockchain for cybersecurity emerge, companies and governments are signing up.

US defence contractor Lockheed Martin announced last year that it is integrating blockchain into systems engineering, supply-chain risk management and software development.

Meanwhile, several Indian states are exploring blockchain-based systems to improve information efficiency and enhance cybersecurity. In 2017, Andhra Pradesh signed up Swiss cybersecurity company WISeKey International to ensure citizens' information stored in databases remains secure with blockchain.

Recently, Irish company AID:Tech became the first organization in the world to deliver international aid to refugees transparently using blockchain.

In short, blockchain technology can be robust, secure, trustworthy, and private. Ultimately, security is ensured by solid architecture, secure design practices and effective workflow policies.

So, do the potential benefits of blockchain outweigh the risks? In short, yes, as long as it has been executed properly.

Any system has vulnerabilities. In today's technology-driven financial sector, supervisory and regulatory frameworks need to enable innovation while ensuring stability, consumer protection and competition.

This means that new digital products and services must be designed and developed with regulatory, cybersecurity and data-privacy compliance integrated from the outset.

https://www.weforum.org/agenda/2018/04/how-secure-is-blockchain

IMA ACTIVITIES

LEARNING FROM LIFE OF LEGENDS

Indore Management Association organized Learning from life of Legends on "Colonel Sanders" at IMA Meeting Room on Wednesday, April 04, 2018. The facilitator for the session was Mr. SD Rajkumar, Head – Business Excellence, Tata International Limited.

EXCLUSIVE SESSION ON SMEs

Indore Management Association organized an Exclusive Session on SMEs with Faculties from NIRMA University on Monday, April 9, 2018 at IMA Meeting Room.

A TALK BY MS. PRIYA KUMAR

Indore Management Association organized A Talk by Internationally Acclaimed Motivational Speaker Ms. Priya Kumar for CEOs on the topic - "RE IMAGINE"... The Changing Times of Leadership" on Wednesday, April 11, 2018, at Hotel Radisson Blu, Indore.

READER'S CLIQUE

Indore Management Association organized Reader's Clique on the book "The Goal" for management professionals and students on Thursday, April 12, 2018 at IMA Meeting Room. The Narrator for the session was CA B.P.Inani, Director – Swan Finance.

"Wisdom equals knowledge plus courage. You have to not only know what to do and when to do it, but you have to also be brave enough to follow through." —Jarod Kintz

"Leaders must be close enough to relate to others, but far enough ahead to motivate them." — John C. Maxwell

IMA ACTIVITIES

READER'S CLIQUE: IMA UJJAIN CHAPTER

Indore Management Association - Ujjain Chapter organized Reader's Clique on "Sunderkand" on Saturday, April 14, 2018 at Shriji Polymers (India) Ltd. The facilitator for the session was CA Santosh Muchhal, President – Indore Management Association.

HR-FORUM MEETING

Indore Management Association organized HR-Forum Meeting on the topic Human Resource Trends: 2018 - 2019 on Wednesday, April 18, 2018 at IMA Meeting Room. The Facilitator for the session was Dr. Subodh Shrivastava, HR Expert.

### LEARNING FROM LIFE OF LEGENDS

Indore Management Association organized on Learning from Life of Legends "Chhatrapati Shivaji Maharaj" on Thursday, May 3, 2018 at IMA Meeting Room. The facilitator for the session was Mr. Ashwin Palshikar, Director Business Development, Sapcon Instruments Pvt. Ltd.

READER'S CLIQUE

Indore Management Association organized Reader's Clique on the book "ZERO TO ONE: NOTES ON STARTUPS, OR HOW TO BUILD THE FUTURE" on Wednesday, May 09, 2018 at IMA Meeting Room. The Facilitator for the session was Mr. Abhishek Sanghvi. Co-Founder Swan Angel Network.

IMA ACTIVITIES
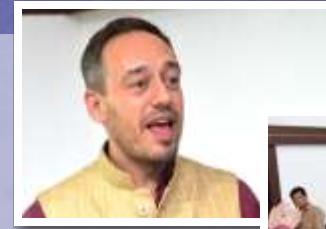
READER'S CLIQUE

Indore Management Association organized Reader's Clique on the book "THE HEARTFULNESS WAY" on Wednesday, May 09, 2018 at IMA Meeting Room. The Facilitator for the session was Mr. Joshua Pollock, Co-author of Book "THE HEARTFULNESS WAY".

MANAGEMENT LEARNING FROM POEMS

Indore Management Association organized a unique program of management learning from Hindi and Urdu Poems on Saturday, May 19, 2018 at Vidorra, The Terrace Tavern. By Dr. Sandeep Atre (Director, Socialigence), Mr. Piyush Mishra (Sr. Copy Writer, Big FM), Prof. Siddhartha K. Rastogi (Associate Professor, IIM, Indore).

CENTER OF EXCELLENCE

Indore Management Association organized Center of Excellence on "How to Give and Receive Feedback" on Thursday, 24 May, 2018 at IMA Meeting Room. The Facilitator for the session was Ms. Nupur Phatak, Director of Human Resource at Potomac Technologies Pvt. Ltd.

TRAINING@DOORSTEP WORKSHOP

Indore Management Association organized Training@Doorstep workshop on the topic "Improving Personal Effectiveness" on Friday, 25 May 2018 at MAN Trucks India Pvt. Ltd Pithampur. Faculty for this workshop was Mr. Rakesh Jain, Corporate Trainer.

"The mark of a great man is one who knows when to set aside the important things in order to accomplish the vital ones." — Brandon Sanderson

"Leadership is not about titles, positions, or flow charts. It is about one life influencing another." — John C. Maxwell

IMA STUDENT CHAPTER

IMA STUDENT CHAPTER

CENTRE OF EXCELLENCE- IMA STUDENT CHAPTER

IMA Student Chapter organized Centre of Excellence on topic- Expectations of Corporate from MBA Students " at Mahakal Institute of Management, Ujjain on Wednesday, April 11, 2018. Speaker for the session was Dr. Sandeep Atre, Director - Socialigence.
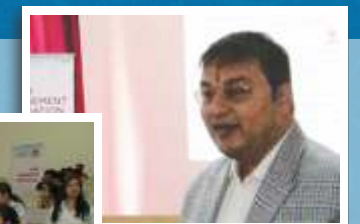
INDUSTRIAL VISIT - IMA STUDENT CHAPTER

IMA Student Chapter organized an Industrial Visit for the students of Symbiosis University of Applied Sciences, Indore at TATA International Limited, Dewas on Thursday, April 19, 2018.

EXCLUSIVE SESSION FOR STUDENTS BY MS. PRIYA KUMAR - IMA STUDENT CHAPTER

Indore Management Association organized an exclusive session for students by Internationally Acclaimed Motivational Speaker Ms. Priya Kumar on the topic - "Dream Big….. They come True" on Wednesday, April 11, 2018, at Daly College auditorium, Indore.

READER'S CLIQUE – IMA STUDENT CHAPTER

IMA Student Chapter organized Reader's Clique on Book "Jonathan Livingston Seagull" at International Institute of Professional Studies (IIPS), DAVV, Indore on Friday, April 16, 2018. Narrator for the session was Mr. Pratik Uppal, Corporate Trainer.
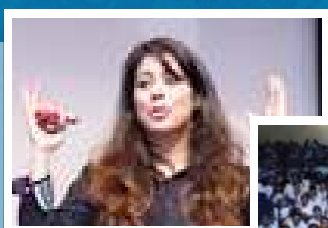
CENTRE OF EXCELLENCE: IMA STUDENT CHAPTER

IMA Student Chapter had organized Centre of Excellence on topic "Know Your WHY" at Shri Atal Bihari Vajpayee Govt. Arts & Commerce College (Dept. of Management), Indore on April 17, 2018. Speaker for the session was Mr. Amber Arondekar, Corporate Trainer

"Leadership is the art of getting someone else to do something you want done because he wants to do it." — Dwight D. Eisenhower

"Example is not the main thing in influencing others. It is the only thing." — Albert Schweitzer

" **SADHGURU**

Chaos is not a choice. The choice that you have made is to reap out of the existing chaos. If you choose to make something chaotic, that will be stupid. It will go somewhere else.

Something looks chaotic not necessarily because it is chaotic but simply because you have a linear mind and something does not fit into your straight line, so you think it is out of order.

For a gardener's mind, a jungle will look chaotic. But no, there is a very deep order there. That is why a forest will live for millions of years and a garden will not last for a month without maintenance. People are thinking of something as chaos because they have an external view of things. They do not have an internal, integrated view of that. If you understand the ecosystem - today, slowly human beings are beginning to understand - we understand that is the greatest order because that is the only thing which has lived for millions of years. "

LEADERSHIP
FINDING THE ORDER IN CHAOS

" **VELLAYAN SUBBIAH**

Sadhguru, your analogy of a manicured garden versus a jungle, it is very similar to this thought of basically, structure versus chaos. Is it important for leaders to manage in a state of chaos, or do they need to bring that chaos down to a more structured way? For the corporate world, how do leaders need to think about that? Should they let the chaos kind of evolve into itself? Do they need to bring more structure to it? "

Stuck in Straight Lines

A snake will not move in a straight line. This does not mean its mobility is not good. Just travel without using your limbs, let me see. Without limbs, the snake has found a way and he is very effective. He finds his own way of life, he chooses his terrain accordingly and he manages.

So this is about different types of lives, different types of people, different types of terrains, different types of activities - to reap the best out of it, you have to harness that, rather than beating everyone into one type of system, because in that, you may produce some level of efficiency, but you will destroy people and situations. Essentially, you will destroy the existing ecology and try to create something new.

For example, to build anything in the ashram, we have never bought a bulldozer and leveled any land. Whichever way the terrain is, I design accordingly and build on that. When I go to the US for example, I see with great distress that if they want to build fifty houses, they just level out fifty acres completely. This is the worst thing you can do. You have no sense of how much life you are disturbing.

You think order means it must be in a particular way. No, there is a different kind of order, and if you do not allow that within the human mind, within the human consciousness and in the actions that we perform, then we become straight lines. Maybe somebody else appreciates

us, but we are miserable doing what we are doing simply because we are straitjacketed all the time about how we should be and how we should do.

Instead of harnessing everything to its best the way it is, you want to turn everything the way you think it should be. This is essentially because you think too much of yourself. You think you are better than the natural forces that are working, which have shaped everything the way it has been shaped.

The Order of the Jungle

So chaos is not a choice. There is always a certain order, which is not logically correct. The order of the jungle is not logically correct, but it is the best order because it has lasted longer than anything else. Everyone is talking about building sustainable businesses. If you want a sustainable business, you must take to the order of the jungle.

Today, in India, we use the phrase "jungle raj" (Referring to the Hindi word - rule) because people believe a jungle means disorder. I am using the word "jungle" as a very superior order. It is a highly sophisticated order where you do not see any straight lines, but still everything is in place. Everything is in such a way that it can function like this for a million years and still last. That is definitely a superior order, isn't it?

https://isha.sadhguru.org/blog/lifestyle/success/leadership-order-chaos/

"Keep your fears to yourself, but share your courage with others."
— Robert Louis Stevenson

"The greatest leader is not necessarily the one who does the greatest things.
He is the one that gets the people to do the greatest things." — Ronald Reagan

WHAT HAPPENS IN AN INTERNET MINUTE IN 2018?

Just a minute, please

The numbers for these services are so enormous that they can only be shown using the 60 second time scale. Any bigger, and our brains can't even process these massive quantities in any useful capacity. Here are just a few key numbers scaled to a monthly basis, for fun:

Facebook logins
42,033,600,000

Google searches
159,840,000,000

WhatsApp messages sent
1,641,600,000,000

emails sent
8,078,400,000,000

On an annualized basis, the data becomes even more ridiculous, with something close to 100 trillion emails sent. (No wonder it's so hard to get to inbox zero!)

In your everyday life, a minute might not seem like much.

But when it comes to the vast scale of the internet, a minute of time goes much further than you ever could have imagined. That's because the internet has a degree of scale that our linear human brains are unaccustomed to operating on.

An internet minute in 2018

Today's infographic is from Lori Lewis and Chadd Callahan of Cumulus Media, and it shows the activity taking place on various platforms such as Facebook or Google in each 60 second span.

It really helps put an internet minute in perspective.

2017
This is what happens in an Internet Minute

Previous minutes

If the internet minute visualization looks familiar, that's because it gets updated and re-released every year using the latest data available. See below for a direct comparison of the last two years:

The biggest and most noticeable jump comes in Netflix hours watched - a number which we believe may be too good to be true. While we have not seen the exact methodology of these calculations, we do know that in December it was announced by Netflix that users were watching approximately 140 million hours per day. This works out to roughly 100,000 hours per minute according to our math, which is still mind-boggling.

2018
This is what happens in an Internet Minute

https://www.weforum.org/agenda/2018/05/what-happens-in-an-internet-minute-in-2018/

HOW 5G WILL CHANGE THE WORLD

It is not an easy time to be an internationalist, to seek global solutions to global problems amid what feels like one of history's periodic inclinations toward divisiveness.

Yet, ironically, we're on the verge of a new age of interconnectedness, when the daily lives of people across the planet will be more closely intertwined than ever. Advances in technology will usher in the age of fifth generation, or 5G, telecommunications. And, if past is prologue, this technological evolution will lead to dramatic societal changes.

The first generation of mobile communications, with brick-sized phones, brought just a handful of users expensive and often unreliable analogue voice calling. The second generation introduced digital voice service that was less likely to be dropped, available to many more people and ultimately cheaper to use. 3G ushered in the mobile internet, mobile computing, and the proliferation of apps. 4G (often called LTE) made possible all we have come to expect of mobile broadband: streaming video and audio; instantaneous ride hailing; the explosion of social media.

We take all this connectivity for granted, but the engineering inside the device in your bag or pocket today would have seemed impossible less than 20 years ago.

So, where will 5G take us?

Think about a world in which not just people but all things are connected: cars to the roads they are on; doctors to the personal medical devices of their patients; augmented reality available to help people shop and learn and explore wherever they are. This requires a massive increase in the level of connectivity.

5G is the technological answer, making possible billions of new connections, and making those connections secure and instantaneous. 5G will impact every industry - autos, healthcare, manufacturing and distribution, emergency services, just to name a few. And 5G is purposely designed so that these industries can take advantage of cellular connectivity in ways that wouldn't have been possible before, and to scale upwards as use of 5G expands.

But generational change in mobile communications doesn't just appear overnight. It requires significant effort in research and development and the resources necessary to support that effort. Work on 4G took nearly a decade and the challenges were not easy. Consider one of tens of thousands of problems that needed to be solved as described by an engineer at Qualcomm, where much of this technology was invented:

"When the signal leaves the base station, it can undergo a loss of up to 130 decibels before it reaches your mobile phone. To put that loss into perspective, if you consider the transmitted signal power to be roughly the size of the Earth, then the received signal power would be equivalent to the size of a tiny bacteria."

That is a tremendous loss of power, and it requires some pretty impressive engineering to compensate for the effect of the loss on the words, pictures, and other data we send and receive across the airwaves in a transparent, seamless and instantaneous way.

But we weren't alone. The international engineering co-operation that goes into development of a telecom standard illustrates how much can be achieved when disparate national, commercial and scientific parties work together for the common good.

Like 3G and 4G, 5G is the responsibility of the standards-setting organization 3GPP, where the handful of companies that invent technologies come together with many, many more companies who will develop products that implement those technologies.

Think about this process for a moment: engineers from rival inventing companies, rival product makers, rival wireless network operators, all from different countries and continents, discussing, testing, striving to perfect tens of thousands of different technical solutions that ultimately make up a standard like 5G.

They judge each technical solution using a merit-based, consensus-building approach. This process has been at the foundation of a technological revolution that spawned myriad new industries, millions of new jobs and well over a $1 trillion in economic growth.

It's the fusion of commercial self-interest with the recognition that some problems are best solved by working together. And it's not a bad model of human behaviour if we are to meet the World Economic Forum's goal this year to address the problems of "a fractured world".

The benefits and advantages of 5G technology are expected to be available sometime in 2019. We believe 5G will change the world even more profoundly than 3G and 4G; that it will be as revolutionary as electricity or the automobile, benefitting entire economies and entire societies.

Developing nations have rivaled or surpassed their industrialized counterparts in benefitting from the deployment of mobile technology, and there's every reason to think 5G will have an even bigger leveling effect than its predecessors.

EXHIBIT 2 | Mobile Innovations Lower Costs and Improve Performance

Consumer cost of data per megabyte relative to data consumption versus data speed
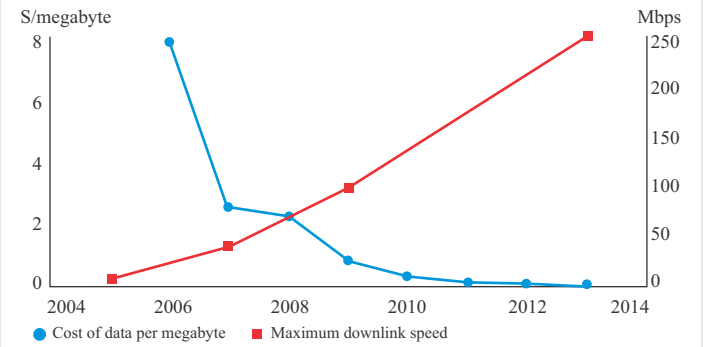
Sources: Cisco Visual Networking Index; International Telecommunication Union; IE Market Research; Deutsche Bank; Qualcomm.
Note: Data speed indicates the maximum downlink speed, not average observed speeds. The average observed speeds depend on many factors, including infrastructure,, subscriber density, and device hardware and software.

Economists estimate the global economic impact of 5G in new goods and services will reach $12 trillion by 2035 as 5G moves mobile technology from connecting people to people and information, towards connecting people to everything.

Many of the benefits probably aren't yet apparent to us. Wireless network operators initially resisted proposals to give their customers mobile access to the internet, questioning why they would want it. At the dawn of 4G's adoption no one could have predicted the new business models that grew on the back of mobile broadband, like Uber, Spotify and Facebook.

4IR patent applications at the EPO 1991-2016

Source: European Paternt Office
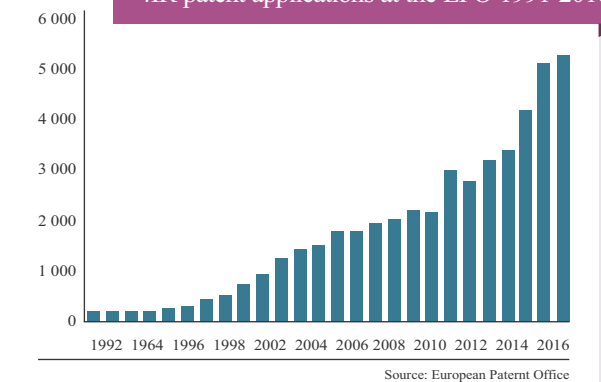
Now, according to the European Patent Office, the number of patent applications related to "smart connected objects" has surged 54% over the last three years, suggesting new, related and as-yet unknown inventions will arrive even before 5G becomes available.

This is news that should encourage us amid glum commentaries on the state of the world. There is promise yet in what we're capable of achieving.

14 WORN-OUT WORDS

& WHAT YOU CAN USE INSTEAD

Instead of actually use 1

absolutely	indeed
as a matter of fact	certainly
indeed	veritably
in fact	genuinely
in point of fact	sincerely
in reality	truly

Instead of amazing use 2

surprising	prodigious
astonishing	shocking
fascinating	stunning
fabulous	surprising
incredible	unbelievable
marvelous	wonderful

Instead of awesome use 3

awe-inspiring	magnificent
breathtaking	mind-blowing
extraordinary	outstanding
fantastic	remarkable
grand	splendid
impressive	wonderful

Instead of nice use 4

attractive	lovely
beautiful	polite
charming	pretty
courteous	striking
cordial	stunning
divine	well-mannered

Instead of fine use 5

ace	fair
admirable	lovely
attractive	neat
elegant	refined
exceptional	superb
exquisite	well-made

Instead of great use 6

astounding	incredible
commendable	legendary
exemplary	noble
first-rate	phenomenal
fantastic	stupendous
incomparable	terrific

Instead of interesting use 7

alluring	engaging
amusing	entertaining
appealing	enticing
captivating	gripping
compelling	intriguing
enchanting	stimulating

Instead of look use 8

check	observe
examine	peek
gaze	review
glance	search
glimpse	stare
inspect	view

Instead of pleasant use 9

amiable	enjoyable
charming	gratifying
cheerful	likable
congenial	lovely
cordial	refreshing
delightful	satisfying

Instead of quite use 10

completely	precisely
considerably	thoroughly
entirely	totally
fairly	truly
fully	utterly
purely	wholly

Instead of really use: 11

absolutely	indeed
actually	legitimately
beyond doubt	surely
certainly	truly
easily	undoubtedly
genuinely	unquestionably

Instead of said use: 12

asked	remarked
called	replied
cried	responded
demanded	stated
exclaimed	shouted
questioned	whispered

Instead of very use: 13

exceedingly	insanely
exceptionally	intensely
extraordinarily	meticulously
extremely	remarkably
highly	supremely
immensely	tremendously

Instead of well use: 14

able-bodied	robust
alive and kicking	sane
fit	sound
flourishing	strong
good	tough
hearty	trim

"In a battle between two ideas, the best one doesn't necessarily win. No, the idea that wins is the one with the most fearless heretic behind it." —Seth Godin

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20 CLUTTER WORDS & PHRASES
WE USE TOO OFTEN

1- ALL OF — **All of** your colleagues will enjoy reading your emails.

2- AS A MATTER OF FACT, — **As a matter of fact,** Your emails have become clearer.

3- AS BEING — You'll be known as **being** a skilled communicator!

4- AS YET — We don't know **as yet** whether we'll close the deal.

5- AT ALL TIMES — Watch out of slacker phrases **at all times.**

6- BASICALLY; — These words **basically** don't add value.

7- ESSENTIALLY — They're **essentially** unnecessary.

8- DURING THE COURSE OF — During **the course of** the writing lesson, acquired useful writing knowledge!

9- BEING THAT — **Being that** because you 're the best writer in your team you'll surely recieve praise and recognition.

10- EACH AND EVERY — Look for lazy words in your writing **each and every day** daily.

11- FOR ALL INTENTS AND PURPOSES,
12- FOR THE MOST PART — **For all intents and purposes,** Your skills have improved.

13- IN ORDER — Get rid of excess verbiage **in order** to clean up your writing.

14- IN THE PROCESS OF — We're **in the process of** learning to reduce wordiness

15- JUST — If a sentence works without it, you **just** don't need to use this word.

16- POINT IN TIME — You're not supposed to stop reading **at this point in time** now.

17- PRETTY — If you easily forget things, it might be a **pretty** good idea to bookmark this infographic now.

18- SIMPLY — **Simply** don't use this word if it doesn't add meaning.

19- THAT — This is a word **that** you should only use when you need it for clarity.

20- UP DOWN — We don't care whether you stand **up** or sit **down** to write, from now on, just try to avoid clutter words and phrases!

You have to be burning with an idea, or a problem, or a wrong that you want to right. If you're not passionate enough from the start, you'll never stick it out." —Steve Jobs

SURPRISINGLY SIMPLE TIPS

That will make you a more efficient writer

When you have an idea-write it down

Don't let ideas float around in your head.
As **BETHOVEN** was quoted saying,

"If I don't write it down immediately I forget it right away
If I put it into a sketchbook I never forget it, and I never
have to look it up again."

Writing is easier when research is done and the framework has been laid out.

ROBERT GREENE: Trying to"find
where you're going "while you're doing it is
begging to get horribly lost.
In addition to making a distinction between research and
writing, we can make an equally important distinction
between writing and editing

Don't edit while you write

WHY: It takes more time and you make
more errors if you constantly switch between the
creative(writing) and the critical (editing) side of your brain.
Each switch might waste onlt1/10th of a second, but if you do a
lot of switching in a day it can add up to a loss of 40% of your
productivity.

SHARON HALE:
'"I'm writing a first draft and reminding myself that I'm simply
shoveling sand into a box so that later I can build castles."

Don't get caught up with pesky details.

When writing a draft, try not to be concerned
with exact dates, facts, or figures. If you remember that a study
conducted by INSERT-UNIVERSITY found that XX% of business
fail in the first FIVE/SIX? months, that's what you can write
(exactly like that). If you're writing that on January XX, 19XX John
F. Kennedy gave his famous inaugural address in front of XXX,
XXX important thing is writing; you can fill the details in later. Just
get the sentences down first.

"Get through a draft as quickly as possible."
is how **JOSHUA WOLF SHENK** put it.

Phone a friend

When you find yourself stuck with writer's
block, pick up the phone and call someone
smart and talk to them about whatever the specific area you're
stuck with is. Not that you're stuck, but about the topic. By the time
you put your phone down, you'll have plenty to write.

As **SETH GODIN** put it, nobody gets **"talker's block."**

Avoid places with wifi

Any place with no Wifi is a great place to
write and even better for editing. Because
there's nothing else to do.

Try to write at least 500 words a day

The more you write and self-correct, the more
you learn about writing, and the better you get.
Try **WORDCOUNRER** (https://wordcounter.net)
if you need help with tracking your word count and progress.

Get rid of all writing mistakes

At last, you need to get rid of any writing mistakes.
HOW TO AVOID WRITING MISTAKES
1. Read it out loud.
2. Revise and proofread your writing twice.
3. Use a dictionary and thesaurus when in doubt.
4. Have a friend or a peer proofread it with a critical eye for
   oversights and errors.
5. For long documents walk away from them for a little while and
   come back with a fresh mind and a critical eye.
6. Proofread it with grammarcheck.net/editor before you send it off
   or publish it somewhere.

But remember that a spelling checker often times won't catch
mistakes with homonyms (e.g.,"they're," "their,""there") or certain
typos(like"he"for"the").

ENGLISH WORDS THAT ARE ACTUALLY GERMAN

ANGST
The anxiety and inner
turmoil often associated with a
person's teenage years.

DACHSHUND
The breed of dog
also referred to colloquially
as sausage dog.

DELICATESSEN
Plural of "Delikatesse"
describing
'delicious things to eat."

DOPPELGÄNGER
Someone who looks
exactly the same as you
but is not related to you.

FAHRVERGNÜGEN
Means "driving enjoymet"
or the "fun in driving."

FEST
A festival or a
celebration.

FRANKFURTER
A thin long hot
dog sausage.

FUSSBALL
A table football
game played mostly in pubs.

KINDERGARTEN
A pre-school for
children.

KITSCH
Most often used to describe
artworks as trashy, even tacky.

LAGER
A type of beer.

NEANDERTHAL
Primitive human
species.

NOODLE
In German, "Nudeln" in the
U.S. and UK often
associated with Asian cuisine.

POLTERGEIST
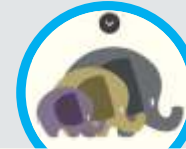Type of ghost, specifically
one who moves and throws things.

RUCKSACK
A backpack.

STRUDEL
A German
PASTRY DESSERT.

ÜBER
Used to mean "extra"
or "extremely."

WANDERLUST
A feeling that you'd like
to travel and see new places.

WUNDERKIND
Means "Wonder Child"

ZEPPELIN
A type of rigid airship
named after the German
count Ferdinand von Zeppelin

Being responsible sometimes means pissing people off." —Colin Powell
"A leader is a dealer in hope." —Napoleon

Art by
DEVDUTT PATTANAIK

MARKING YOUR EXPIRY DATE

Everything in nature has an expiry date. Even the sun. Talk to an astrophysicist and they will tell you when the sun will eventually die. Nothing lasts forever. We know that. Yet, culture is all about 'built to last'. The obsession with defying mortality, defying nature, being immortal is at the heart of human madness. It is what destroys society and ideology and relationships.

The richest man in the world, the most powerful technocrats of the world, are going to die, even if they are being treated by the best dieticians and gym trainers and doctors. Have they imagined a world after them? Do they imagine a world where they are not remembered at all? Do they accept that the world does not really need them? Are they okay with invalidation? Not if you follow American schools of management, where it is all about having a dream, a purpose, and leaving behind a legacy. For all our scientific temper, despite historical evidence that some of the greatest empires in the world have collapsed, that emperors have been forgotten, that scientists and their great inventions are no longer meaningful, management gurus still harp of the fiction that of immortality and permanence. For they serve the mortal man's anxiety, rather than helping us transcend it.

Death, or expiry date, is at the heart of spirituality. Death makes us question the meaning of life, and hence makes us seekers. We turn to holy books and holy men, to gods and prophets, we value ambition and achievement and success. Death makes us anxious. Take away death, usher in immortality, and why would there be stress, for a world without death would be a world without change, without time, without memory or its loss.

It is obsession with death and therefore questions of immortality that shape the religions of the world. In Abrahamic religions, the solution offered is not to think, just follow the rules, and trust God, who is permanent. In Karmic religions, the monks speak of transcending death through introspection and meditation, or surviving through children and family name. The an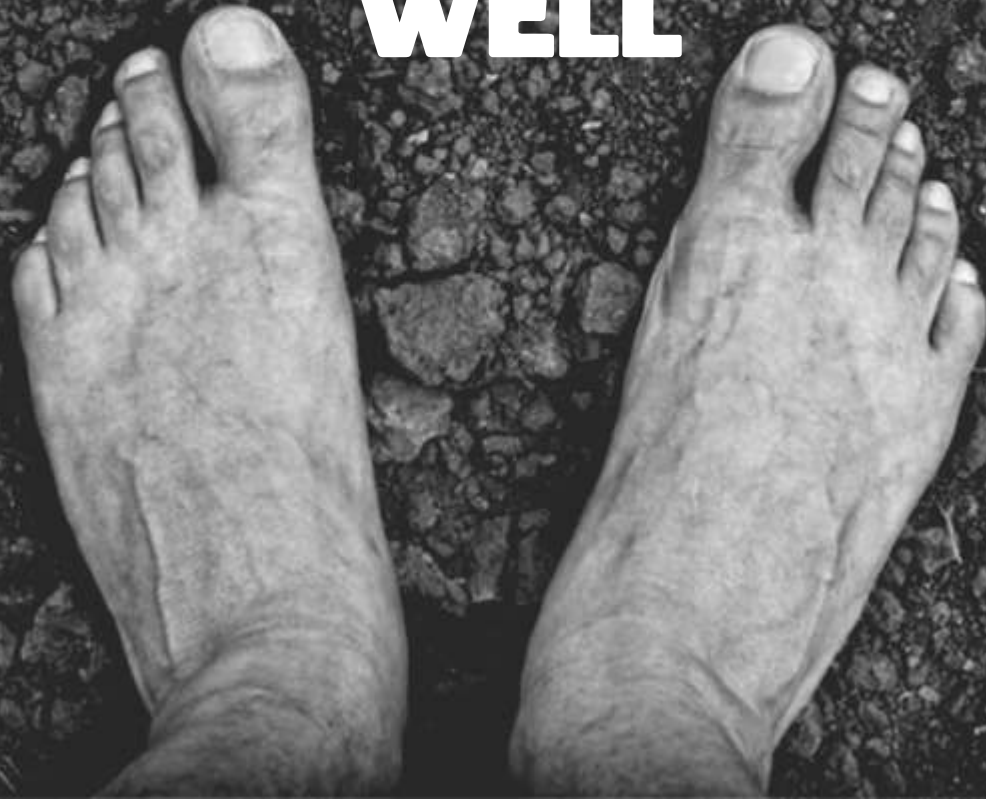cient Greeks and Romans genuinely believed that achievement ensures immortality. Bards sing your legacy forever. And this Greco-roman 'pagan' thought is at the heart of the American dream - the desire to be a hero who does the impossible despite odds and opposition. It's the classic rags-to-riches story in Hollywood.

In Hinduism, the concept of expiry date was acknowledged through the concept of ashrama-dharma. Everyone speaks of varna-dharma or India's ubiquitous caste system, but everyone seems to have forgotten the other half of this system: one that acknowledged that expiry date of your caste, as well as your life. After training (brahmacharya or student), every man was supposed to do his duties and enjoy caste privileges only till his grandson was born (grihastha or householder). Then he had to teach his grandchildren his skills (vanaprastha or retired) ashrama and when their grandchildren had children of their own, he had to renounce the world (sanyasa or hermit), free of caste duties and shorn of caste privileges, ready to accept death, having supported life. In modern corporate management, it means the talent pipeline - not just aspiring to be a CEO (phase 1), or being a CEO (phase 2), but preparing the next CEO (phase 3) and then living without the glamour of the CEO, knowing that every position is temporary, hence a seductive delusion, like life itself. But to let go of a powerful corporate role is tough.

Once we have tasted fame and power it is difficult to let go. And it is to stay relevant even after retirement that government servants, even judges, it is whispered, become more corrupt as the end of their term approaches.

http://devdutt.com/articles/applied-mythology/leadership/marking-your-expiry-date.html

"Victory has a hundred fathers and defeat is an orphan." — John F. Kennedy

"Don't tell people how to do things, tell them what to do and let them surprise you with their results." — George Patton

LIVING HEALTHY AND WELL

The word health comes from the word whole. When your body, your mind, your emotion, your energies are in tune with each other and you feel wholesome within yourself, that is when you feel healthy. A large number of people in the world, including many who are considered medically healthy, are unhealthy. They may not need any medication but their system does not know any wholesomeness. There is no sense of peace or joy in them. You think you are unhealthy only when you get depressed beyond a certain point, but you are unhealthy if you are not bubbling with joy. There is no wholesomeness in terms of the internal composition of who you are.

This has happened because you never paid any attention to it. This whole attitude of trying to fix everything from the outside has to go. No doctor or medicine can ever give you health. They can assist you when you have fallen into ill health and help you out of it a little bit, but health has to happen within yourself.

Health is not just a physical aspect. Today modern medicine says that man is psychosomatic. What happens in the mind naturally happens in the body. What happens in the body in turn happens in the mind. So the way we are living here, our attitude, our emotion, the basic mental state, the level of activity we are going through, how streamlined our minds are, all these are very much a part of your health.

If health has to come from within, we definitely have to do some inner engineering. We definitely have to **create an atmosphere** where our body, mind, emotion & energy are in good harmony.

If people invest about twenty-five to thirty minutes a day in the morning towards their inner wellbeing, towards certain **simple processes** with which they can engineer their body and mind to experience full health and wellbeing, then every human being is capable of living healthy and well.

https://isha.sadhguru.org/yoga/yoga_articles_body_health/living-healthy-well/

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IMA UJJAIN CHAPTER PROGRAM

JULY – AUGUST 2018

DATE	PROGRAM	TOPIC	VENUE
Saturday, July 21, 2018	COE program	Freedom from the "I" Knowing the Real You By:- Mr. Shashank Kasliwal Director of Emotional Intelligence Inc.	PRASHANTI HEIGHTS 9 , Saket Nagar Opp Bank of Maharashtra Indore Road, Ujjain
Saturday, July 28, 2018	Develop Your USP	Meetings – The Cardinal Aspects By: Deepika Munot	HOTEL ANJUSHREE 72, Goyala Khurd, Ujjain - Indore Rd Ujjain, Madhya Pradesh 456010
Saturday, August 18, 2018	Learning from the life of Legend	Dr. APJ Abdul Kalam By:- Prof. Pankaj Kothari	PRASHANTI HEIGHTS 9 , Saket Nagar Opp Bank of Maharashtra Indore Road, Ujjain
Saturday, August 25, 2018	COE Program	"Win –Win Negotiation " By:- Senior Prof. Kamal Kishore Jain (IIM Indore)	HOTEL ANJUSHREE 72, Goyala Khurd, Ujjain - Indore Rd Ujjain, Madhya Pradesh 456010

Timing:-
4:30 PM to 5:00 PM Hi-Tea & Networking
5:00 PM to 7:00 PM Session Timings